ASSESSMENT REPORT

ON

EXPLORATION PROGRAMS 2012-2014

BUCKTON AND BUCKTON SOUTH ZONES AND VICINITY, SBH PROPERTY

Birch Mountains, Athabasca Region, Alberta, Canada

DNI METALS INC.
(formerly Dumont Nickel Inc.)

by
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Signing Date: September 30, 2014
(Effective Date: September 30, 2014)

Part-B

Technical Report

Metallic and Industrial Minerals Permits against which assessment expenditures are being applied 9308060406, 9308060407, 9308060408, 9308060409, 9308060410, 9308060411, 9308060412, 9308060413, 9308060414, 9308060415, 9309010692, 9310080630, 9310080631*, 9310080632*, 9310120510, 9310120511, 9310120512*, 9310120513, 9314030426, 9314030427, 9314030428*, 9314060287, 9314060288, 9314060289 and 9314060290. *(permits being forfeited marked with *)*.

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B2: Analytical Control Standard LBSTD2

- B2.1 Analytical Certificates [Actlabs Rpt# A12-07662; DNI#SB120717]

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- C1.1 Report: Preliminary Memorandum on 2012 Drilling at Buckton and Buckton South Mineralized Zones, SBH Property, Northern Alberta. Completed for DNI Metals Inc. Apex Geoscience Ltd., McMillan K., Bahrami B., November 12, 2012.
- C1.2 Report: Summary of Re-Investigation of 2012 Buckton and Buckton South Drill Cores, Apex Geoscience Ltd., Eccles R., McMillan K., Jan 24, 2013.
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- D1.1 Report: Assessing The Bioleaching Capacity Of Alberta Polymetallic Black Shale: Composite samples BK5BF and BK5LB. Prepared by Alberta Innovates Technology Futures (AITF) for DNI Metals Inc., Budwill K., December 20, 2013.

  (incl analytical certificates [Actlabs Rpt# A12-12232, and A12-12240])

D2: CANMET 2012-2014 Bioleaching Testwork

- D2.1 Report: Leaching of a Black Shale from Alberta - Final Report. Cameron R., Langley S., Thibault Y. and Lastra R., Canmet Mining, Natural Resources Canada, Project P-001336.001, Report Canmet Mining 13-046(CR), January 9, 2014. Sample List and Descriptions.
- D2.2 Sample ID Key Legend

D2.3 Analytical Certificates [Actlabs Rpt# A12-09369; DNI#not-available; Actlabs Rpt# A12-11942, DNI#SB121016; Actlabs Rpt# A12-13911, DNI#SB121206; Actlabs Rpt# A13-01036, DNI#SB130108; Actlabs Rpt# A13-01525, DNI#SB130205; Actlabs Rpt# A13-02810, DNI#SB130304; Actlabs Rpt# A13-04405, DNI#SB130417; Actlabs Rpt# A13-04897, DNI#SB130425; Actlabs Rpt# A13-06046, DNI#SB130529; Actlabs Rpt# A13-09130, DNI#SB130530; Actlabs Rpt# A13-10360, DNI#SB130718]

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E1: Technical Report, Inferred Resource Estimate Of The Labiche Formation And Its Potential To Add To The Overall Metal Content Of The Buckton Mineralized Zone, SBH Property, Northeastern Alberta. Prepared by APEX Geoscience Ltd., effective date September 11, 2012. Eccles R., Dufresne M. and Nicholls S..

E2: National Instrument 43-101 Technical Report, Consolidated And Updated Inferred Resource Estimate For The Buckton Zone, SBH Property, Northeast Alberta. Prepared by APEX Geoscience Ltd., with effective date of January 9, 2013. Eccles R., Dufresne M. and Nicholls S.

E3: National Instrument 43-101 Technical Report, Updated And Expanded Mineral Resource Estimate for The Buckton Zone, SBH Property, Northeast Alberta. Prepared by APEX Geoscience Ltd., with an effective date of September 9, 2013. Eccles R., Dufresne M., Nicholls S. and McMillan K.

E4: National Instrument 43-101 Technical Report, Maiden Inferred Resource Estimate For The Buckton South Zone, SBH Property, Northeast Alberta. Prepared by APEX Geoscience Ltd., with effective date of March 1, 2013. Eccles R., Dufresne M. and Nicholls S.

APPENDIX F: PRELIMINARY ECONOMIC ASSESSMENT - BUCKTON ZONE

F1: Report: Initial Metal Economics Evaluation Report. Report# H3442090000-090-124-0001 prepared by Hatch Ltd., Godwin J. and Schwartz L June 14, 2013.

F2: Report: Buckton Zone Heap Leach & Processing Scoping Study Report. Report# H344209-0000-90-124-0002 prepared by Hatch Ltd. , Godwin J. and Schwartz L., September 26, 2013.

F3: Memo Addendum: Buckton Heap Leach & Processing Scoping Study Supplemental Memo - Separation Plant Study. Memo addendum to Report# H3442090000-090-124-0001 prepared by Hatch Ltd., Schwartz L., October 17, 2013.

F4: Report: National Instrument 43-101 Technical Report. Preliminary Economic Assessment For The Buckton Deposit, SBH Property, North-East Alberta", prepared by P&E Mining Consultants Inc., Apex Geoscience Ltd. and Cron Metallurgical Engineering Ltd.. P&E Report#276, dated January 17, 2014, with an effective date of December 5, 2013. QPs: Eugene Puritch, P.Eng. , Roy Eccles, M.Sc., P. Geol. , Michael Dufresne, M.Sc., P.Geol. , Steven Nicholls, BA.Sc., MAIG , Kenneth Kuchling, P.Eng. , Gordon Watts, P.Eng. , Kirk Rodgers, P.Eng. , Bruce Cron, P.Eng.

F5: Memo Addendum: Buckton Heap Leach and Processing Scoping Study Supplemental Memo - Scandium Recovery. Memo #H344209-0000-90-220-0003, addendum to Report# H3442090000-090-124-0001 prepared by Hatch Ltd., Schwartz L., March 3, 2014.

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TERMS OF REFERENCE

This Report summarizes exploration work and programs carried out during the period Feb1/2012-Sept30/2014 by DNI Metals Inc. at its 100% held SBH Property, Alberta. The Report was prepared for DNI by S.Sabag PGeo, who was commissioned by DNI for its preparation, for filing toward assessment work requirements for the Property. The Report was prepared with assistance from DNI staff, notably Mr.J.Gillett, Manager of Information Systems for DNI, who was responsible for data compilations and presentation.

This Report concerns itself mainly with exploration work completed over the Buckton and Buckton South Zones consisting of leaching testwork, a summer 2012 drilling program, subsequent resource studies updating prior mineral resources for the Buckton Zone, delineation of an initial maiden mineral resource for the Buckton South Zone, and completion of a positive Preliminary Economic Assessment (PEA) study for the Buckton Zone which identified a mineral deposit which is potentially mineable with positive economics which can be enhanced. Completion of the Buckton PEA represents a milestone in development of the Buckton Zone and concludes DNI's work programs to advance the SBH Property through the work programs recommended by its Technical Report prepared upon assembly of the Property in 2008 relating to polymetallic black shale hosted mineralization.

This report also presents results from other work focusing on evaluating the Pelican Formation at the Property as a potential source of sand which might be suitable for use as fracsand, in addition to initial findings from work during 2012-2014 to evaluate other non-metallic assets on the Property which can provide collateral logistical benefits to any future mining operations to extract metals from the black shale hosted zones, namely; identification of potential sand/gravel over parts of the Property, and preliminary evaluation of run of river hydro as a seasonal source of power.

A number of reports from third-party consultants to DNI are appended herein summarizing their findings from studies and work programs commissioned by DNI or programs implemented by them on DNI's behalf. Salient sections from the foregoing reports have been extracted and collated into this Report. The reader is referred to the respective reports for details.

As at the date hereof, work in progress consists of ongoing review of sand samples collected during July with a view to proceeding to submit select samples for rigorous fracsand tests.

Shahé F.Sabag PGeo
President & Chief Executive Officer
DNI Metals Inc.
September 30, 2014

1. SUMMARY

Property

DNI's Alberta SBH Property (the "Property") consists of twenty-five (25) contiguous Alberta Metallic and Industrial Mineral Permits (previously 36 permits) comprising an aggregate of 1,812 contiguous square kilometers (181,248 ha, previously 272,032 ha). Remote lower priority permits were allowed to lapse in March 2014 to focus future work on the eastern parts of the Property wherein the Buckton Deposit, the Buckton South resource and the Asphalt Zone are located. DNI also acquired additional adjoining permits in April 2014 to secure localities over new fracsand targets. **Once filing of assessment expenditures relating to work programs presented in this report has been completed, the SBH Property will consist of a 1,218 square kilometre (121,856 ha) land position held under 21 permits (the "Permits").** The Permits extend over an approximate 20kmx90km quadrant defined by R12-R14 and T95-T103, W4 Meridian, in northeast Alberta. The Property is located over the Birch Mountains approximately 120 kilometers to the north of Fort McMurray, Alberta, in the Athabasca oil sands region. DNI commenced assembly of the Property in 2007 relying on extensive third-party historic exploration records and has periodically modified the Property through ongoing prioritization by downsizing certain permits or altogether abandoning certain other permits of lesser importance.

DNI's 100% interest in the Property is subject to a traditional royalty retained by the Province of Alberta against metal production revenues therefrom. There are no other overriding royalties encumbering DNI's interest. The Permits grant DNI the exclusive right to explore for metallic and industrial minerals for fourteen years subject to traditional assessment work performance biannually, and also grant use of the surface for the purposes of mineral exploration work.

Coexisting rights to oil sands, oil and gas over the Property are held by third parties. There are four active oil sands projects under different stages of development adjacent to the Property's east and south boundaries (Horizon, Pierre River, Equinox and Frontier). The Horizon oil sands mine is adjacent to the south boundary of the Property has been in production for several years. An active gas distribution pipeline network straddles the south-western boundary of the Property.

DNI has been actively exploring the Property since its acquisition, predicated on recommendations of its NI-43-101 technical report prepared for the Property in 2008. The foregoing report relied on extensive third-party public exploration records and databases from prior work dating back to the 1990's some of which has been superceded by subsequent work completed by DNI. DNI's work has been modified to respond to findings from its various work programs completed since 2008, including drilling and leaching testwork. DNI's work programs completed prior to those discussed in this report are outlined in Alberta Mineral Assessment Reports.

Permits Status & Assessment Work Expenditures

The permits comprising the Property have commencement dates ranging 2008-2014. The permits are contiguous and are grouped for assessment filing purposes. DNI has previously filed an aggregate of $3,108,593 toward assessment work ($958,362-Aug/2010; $2,150,231-Apr/2012) to renew portions of the Property, including in excess expenditures "banked" for future renewals.

An aggregate of $4,297,010 was spent on the above permits during the period Feb/2012-Sept30/2014 (including a 10% administrative overheads provision of $390,637). The aggregate expenditures (including an excess of $2,459 for future use) are being applied against 21 of the permits to extend their anniversary dates to 2020-2023 dates. Some of the foregoing permits are being downsized.

Bulk of the expenditures incurred relate to DNI's 2012 summer drilling program, four subsequent resource studies and a preliminary economic assessment study. The drilling program was implemented under metallic mineral exploration permit MME120002, and was conducted over Permits #930806412, #9308060410 and #930806408. The resource studies related to resources identified on Permits #9308060412, #9308060410 and #9308060408. The preliminary economic assessment study relates to mineral resource on Permits #930806412 and #9308060410. DNI's leaching testwork was conducted on samples from the foregoing drilling or on samples from prior sampling located over the foregoing permits. Field exploration work relating to evaluation of fracsand potential relates to work on Permits #9310120511 and #9310120510. Expenditures are distributed over the permits comprising the entire Property which are grouped for assessment filing purposes.

Exploration Focus

DNI's primary exploration targets on the Property have been metal accumulation zones hosted in polymetallic black shales associated also with considerable exhalative volcanogenic debris, bentonite development and extinction markers. The shales were discovered in 1995 by others but could not be exploited at the time by then available metals recovery technologies. Advances over the past decade in the application of bioleaching to economic extraction of metals has significantly enhanced merits of polymetallic black shales worldwide as a long term future source to metals, and has similarly transformed the Alberta polymetallic shales from geological curiosities into prospective mineral opportunities.

The polymetallic zones of interest are hosted in three Cretaceous black shale Formations which collectively comprise a continuous mineralized shale package consisting of the Second White Speckled Shale Formation, the Labiche Formation black shale overlying it, and the Belle Fourche Formation black shale beneath it. The three near-surface flatlying black shale Formations are locally enriched in recoverable Base Metals, Uranium, Specialty Metals (eg:Li,Sc,Th) and Rare Earth Elements (REE).

Of the three prospective black shale Formations, the Second White Speckled Shale Formation is the better enriched with base metals and uranium, although the Labiche Formation and the Belle Fourche (Shaftesbury) Formation black Shales contain equivalent amounts of REEs and slightly higher amounts of Specialty Metals. The Second White Speckled Shale is typically a 20m-40m thick "blanket" which extends under the entire Property, and is exposed or is under thin cover throughout the eastern one third of the Property, whereas the Labiche shale is often exposed at surface or under thin overburden cover of till which has been glacially scoured from it. Ultimate thickness of the Formation over the area is unknown since its upper portions have been eroded away predominantly by glaciation (estm thickness 10m-110m per drilling and Labiche resource study).

Although the Second White Speckled Shale Formation had until recently dominated DNI's exploration focus as its primary target at the Property, recognition of recoverable mineralization in the Labiche Formation black shale overlying it and the Belle Fourche Formation black shale beneath it compelled DNI to broaden its work in 2012 to also assess significance of delineating recoverable mineralization in these two Formations which envelope the Speckled Shale.

Several potential polymetallic zones were identified by historic work focusing only on base metals and uranium, two of which were confirmed by historic drilling, and by DNI's drill programs. The shale hosted metal zones are envisaged to extend over vast areas (50-100 sq km each), occurring as flat-lying near-surface "blankets" amenable to extraction by open pit bulk mining methods subject to constraints imposed by depth criteria. Two of the zones, the Asphalt and Buckton Zones, were recognized by DNI in 2008 to host two Mineralized Zones (under NI-43-101) with potential for classification as mineral resources subject to in-fill drilling. DNI has delineated a mineral resource hosted in a portion of the Buckton Zone, has deferred additional drilling at the Asphalt Zone and instead has delineated an initial maiden resource hosted in the Buckton South Zone located 7km to the south of the Buckton Zone. The Property's large size is appropriate to the type and size of metal targets being sought by DNI.

The SBH Property previously consisted of six contiguous sub-properties centered over polymetallic enrichment domains or zones. After review and revised prioritization of the Property, DNI allowed certain permits over remote parts of the Property hosting three lesser explored zones to lapse in March 2014 to focus its efforts entirely on advancing the eastern part of the Property hosting the Buckton Deposit, the Buckton South Zone mineral resources and Asphalt Zone.

While DNI had, like the preceding historic work, previously focused only on base metals and uranium mineralization hosted in the shales, to the extent that its leaching testwork also reported incidental recovery of Specialty Metals, REE and Lithium as co-products, DNI expanded the scope of its exploration in 2011 to evaluate the significance of these additional metals which represent considerable additional value recoverable from the shales. All of the foregoing are recoverable by bulk leaching as demonstrated by DNI's extensive testwork. While none of the metals occur in the shales in sufficiently high concentrations to be a "pay" metal by itself, the metals collectively represent sufficient in-situ value on a combined basis to place the shales within reach of economic viability as shown by the 2013 Buckton Preliminary Economic Assessment as a long term source of metals given that the metals can be collectively extracted/recovered from the shales. Although historic work has reported multi-gram gold grades from some composite drill core bulk samples, the historical data are nuggetty and DNI is provisionally treating gold grade as nil until its average bulk grade is clearly established. The polymetallic mineralization of current interest to DNI at the Property consists of recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu) and Cobalt (Co), which are accompanied by Specialty Metals Lithium (Li), Scandium (Sc) and Thorium (Th) in addition to Rare Earth Elements (REE). The 2013 Buckton Preliminary Economic Assessment omitted Mo-V-Li-Th-Sc-Th based on economic or marketing considerations and concluded that Ni-U-Zn-Cu-Co-REE-Y can be economically produced from the Deposit at this time.

Whereas DNI's focus has to date been on exploring and advancing its polymetallic black shale hosted targets on the Property, compelled by fast growing demand in natural sand proppant (fracsand) for use during hydraulic fracking of tight oil/gas reservoirs DNI commenced evaluation of new fracsand targets on the Property in March 2014 and has since delineated a portfolio of seven large fracsand project areas distributed along a 100km long corridor across the Property representing an opportunity to add considerable value to the Property. DNI's fracsand projects form an important strategic component of its exploration activities going forward, and they will be explored in conjunction with continuing to advance the polymetallic shale hosted resources discovered on the Property.

Of collateral interest, is the suspected presence over the Property, and the surrounding Birch Mountains, of exhalative volcanogenic venting unique to the Birch Mountains, as a source to the volcanic debris, bentonites and metals discovered in the Speckled Shale. The potential of the foregoing to host sedimentary exhalative - SEDEX style - sulfides has never been investigated and comprises an additional exploration objective over the Property, although to date DNI has not yet carried out any field work to explore the foregoing potential.

Prior Work History

The only prior exploration of the Property for metals is extensive work carried out by Tintina Mines Limited during 1993-1999, augmented by concurrent work by the Alberta Geological Survey and the Geological Survey of Canada, partly in collaboration with Tintina. Some of the foregoing work was carried out by, or under the supervision or direction, of S.F.Sabag PGeo the author of this report and DNI's Qualified Person (QP) for the project and its current president, while he was affiliated with Tintina in charge of its exploration programs. There has since been no metals exploration work on the Property with the exception of work since conducted by DNI.

Tintina discovered the polymetallic black shales by accident in 1995 while searching for metal bearing permeability traps in redox fronts across northeast Alberta. The shales were initially explored as prospective redox fronts which could accumulate metals at their base, although 1997 verification drilling intended to probe beneath them discovered metal enrichment hosted in the black shales instead. What started out in 1993 as a search for gold-copper bearing redox systems ultimately led over a four year period to the discovery of previously unrecognized extensive metalliferous black shale assemblages at the Lower-Upper Cretaceous unconformity, associated also with considerable subaerial venting and previously unknown extinction markers.

The databases available from the historic work provide extensive baseline geological information from the Property. They include databases from systematic reconnaissance level and in-fill multi-media surface geochemical, lithogeochemical and mineral sampling, in addition to geophysical and, more localized, drilling information, all of which are augmented also with subsurface information from the extensive database compiled by DNI of prior third-party oil-gas drilling over the Property.

Though the polymetallic black shales underlying the Property were discovered in 1995, they could not be exploited by then available metals recovery technologies. Advances over the past decade in the application of bioleaching to economic extraction of metals has significantly enhanced merits of polymetallic black shales worldwide as a long term future source to metals, and has similarly transformed the Alberta polymetallic shales from geological curiosities into prospective mineral opportunities.

DNI's work programs during 2007-2010 focused mainly on demonstrating collective recoverability of base metals and uranium from the Second White Speckled Shale Formation Shale by leaching and bioleaching procedures through a series of batch amenability bench scale tests. Encouraged by good results from its testwork, DNI completed its first drilling program in 2010-2011 and delineated an initial mineral resource in 2011-2012 from one of the six zones identified (the Buckton Zone) which was subsequently expanded several times by subsequent studies. A summer 2012 drilling program enabled further expansion of the Buckton Zone resources serving as the basis for the Buckton Preliminary Economic Assessment study completed in 2013. By far the most significant contribution of DNI's recent work has been recognition of the potential for extracting REEs and specialty metals (eg:Li,Sc,Th) as incidental co-products to leaching of base metals from the shale, and recognition of the potential of recoverable polymetallic mineralization hosted in the Labiche shale which had previously been regarded as cover overburden overlying zones then believed to be confined to the Second White Speckled Formation beneath it. DNI also recently recognized potential for recoverable metallic mineralization in the Belle Fourche Formation beneath the Speckled shale.

While historic work and exploration by DNI concerned itself entirely with the Second White Speckled Formation black shale and polymetallic zones therein, DNI broadened scope of its exploration to also focus on the overlying Labiche Formation black shale (previously regarded as cover waste material) as a host to valuable metallic mineralization, and more recently also merits of the Belle Fourche Formation shales (Shaftesbury Formation) beneath the Second White Speckled Formation as yet an additional host to recoverable metallic mineralization. In the foregoing regard, the collective historic and prior work by DNI are equivocated by DNI's 2012-2014 programs and can be regarded to provide only a partial discussion of the polymetallic mineralization which exists on the Property and its ultimate potential.

In addition to polymetallic shale hosted mineralization, DNI recently also commenced evaluation of the potential of the Pelican sandstone Formation as a source to natural sand proppant (fracsand) and identified seven large target areas for future exploration and development. .

Physiography, Access and Surrounding Oil Sands Mines

The general region is of low, often swampy, relief punctuated by a handful of features protruding above the otherwise flat terrain. The Birch Mountains, located to the west of the Athabasca River, is the most conspicuous topographic feature in the region, protruding 500m-600m above the surrounding areas, with a distinct sharp erosional edge. The Birch Mountains provide excellent vertical exposures, especially in river valleys, across relatively long sections of the flat-lying Cretaceous stratigraphy of northeast Alberta, which are otherwise buried to the west and eroded to the south and east. DNI's exploration targets are nearer the surface of the Birch Mountains and are, accordingly, not exposed elsewhere in the region. They are eroded to the east of the Property and are buried under successively deeper cover to the west.

Access throughout the region is in a state of continuous rapid development, providing road access to many pending oil sands mining projects skirting the Birch Mountains surrounding the Property to the east and south, and other SAGD oil sands projects throughout the Birch Mountains. There is good access to the Property's east and south boundaries by roads along the west shore of the Athabasca River, and excellent access to its southern parts which are adjacent to the Horizon oil sands open pit mining operation. There is access by barge/boat via the Athabasca River, and also good access by rotary as well as fixed-wing aircraft relying on many private and public airstrips around the Property, one of which is on its eastern part. Given the large size of the Property, access within the Property is best by rotary aircraft, although many old trails and seismic lines offer adequate, albeit selective, access especially during winter months.

Property Geology

The Property is situated in the sedimentary sequences of the Western Canada Sedimentary Basin dominating Alberta geology. The sedimentary sequences unconformably overlie a relatively stable Precambrian platform with localized zones of reactivation, and comprise a wedge shaped sedimentary pile bounded by the Rocky Mountains to the west the Canadian Shield to the east.

The sedimentary pile is substantially a flat-lying "layer cake" consisting of Devonian sequences at its base (carbonates, evaporite and basal red beds), which are unconformably overlain by Cretaceous clastic sedimentary Formations, the lowermost of which (McMurray Formation) hosts the oil sands deposits. The Lower Cretaceous sequences transition up-stratigraphy through a series of unconformities and disconformities to Upper Cretaceous clastic sequences separated from same by a principal extinction marker (the Fish Scales Marker Bed, Shaftesbury Formation) and a lesser known extinction horizon, the Second White Speckled shale Formation.

A number of "hot-spots" have been recognized in the region, believed to reflect heat generation by the decay of radioactive elements at the top of the Precambrian basement beneath the Western Canada Sedimentary Basin. The Birch Mountains, and the Property, lie over one of the most significant hot-spots recognized, and Cretaceous Formations therein exhibit unique characteristics which are different than exposures of the same Formations elsewhere in northern Alberta away from the Birch Mountains.

Bedrock exposures throughout the Property are scarce (<2%) and, given the flat-lying stratigraphy, they are restricted to valley walls of the many creeks and rivers which define incisions confined to the eastern and southeastern erosional edge of the Birch Mountains, forming a 5-10km wide arcuate lobe. The available exposures enable intermittent observation and vertical sampling across 300m-350m of Cretaceous stratigraphy, extending upward from the top of the Manville to well into the Colorado Group, straddling the Albian-Cenomanian boundary, exposing five Formations: the Clearwater/Grand Rapids, the Viking/Pelican, the Westgate, the Fish Scales, and the Second White Speckled Shale Formations. Many of these Formations are eroded to the east of the Birch Mountains and to its south.

Near-surface geology over the Property consists entirely of Lower-Upper Cretaceous sequences, and mostly straddles the Second White Speckled Shale, the overlying Labiche Formation, and the Shaftesbury (Belle Fourche) Shale Formations beneath it. These shales are typical black shales with average 0.5% and 6.2% organic Carbon. The shale is enriched in Mo-Ni-V-U-Zn-Cu-Co-Ag-Au-REE and specialty metals (eg:Li,Sc,Th), and is a typical metal enriched black shale compatible with the Rift-Volcanic type of metal enrichment style recognized from black shales worldwide. The Speckled shale is the better enriched in base metals and Uranium, whereas the Labiche Formation and the Belle Fourche Formation black shales contain equivalent amounts of REEs and slightly higher amounts of Specialty Metals.

The Rift-Volcanic type of metal enrichment in black shales is associated with intracontinental rifting and basic volcanism in the oceanic crust. Metal accumulations of this type comprise alternating layers of metalliferous black shale and tuffaceous material, are known to occur around volcanic centers, and are believed to have been controlled by hydrothermal-volcanogenic events (submarine exhalations) in the presence of organic matter. The metal accumulations are further characterized by modest-low grading deposits of immense size (300MM-1,000MM+ tonne range) contained in tabular geometries, with thicknesses ranging 20m-100m extending over tens of square kilometers.

The overall region surrounding the Property is better known for its oil sands operations than for its mineral potential, although co-product metals (V, Ti) in oil sands deposits have attracted intermittent attention. Polymetallic mineral aggregations in the Cretaceous carbonaceous shales being targeted by DNI were unknown, and not recognized, until their discovery in 1995 and confirmation by drill testing in 1997.

Economic Geology and Metal Zones

The principal known metallic mineralization on the Property is hosted in black shales, as polymetallic Zones bounded by stratigraphic contacts. The principal metals of interest in the Zones have been Mo, Ni, U, V, Zn, Cu, Co, Ag, and Au, although DNI's recent leaching testwork also reported rare metals (including REE, Sc and Li) as incidental valuable co-products recoverable from the shale, compelling DNI to broaden scope of its exploration and testwork. None of the metals is present in sufficient quantity in the shales to be considered the "pay" metal leading the anticipated value of any deposit identified. Intrinsic economic value of the metal zones is, accordingly, based on effective recovery of the metals from the host rock on a combined basis. It is noteworthy that the resource studies for the Buckton and Buckton South Zones completed during 2012-2014 and the Buckton Preliminary Economic Assessment demonstrate that rare earth elements represent much of the economic value of the shales under recent metal pricing scheme.

Most of the metals, were initially believed to occur principally in the fine and coarser sulfides distributed throughout the shale, which can constitute as much as 20% of the shale matrix by volume, but typically range 5%-20%. Subsequent work completed by DNI since acquisition of the Property suggests that much of the metals content is associated with clay mineralogy within he shale, albeit with some identifiable distribution among several mineral fractions.

Some of the metals, notably V and Cu, are likely bi-popular and may be fractionated between clays, sulfides and organic components of the shale. Gold occurs principally as high fineness gold in native form, which is possibly better concentrated in the upper and lower contacts of the shale, though its grade has not been definitively established due to nugget effect. DNI's mineral (MLA) study suggested that at least a portion of the metals occur in readily soluble ionic form rather than as discrete minerals.

The leaching testwork completed to date by DNI indicates that all metals can be collectively recovered from the shale by acidic leaching, with or without the addition of microorganisms. Historic work predating DNI's exploration campaigns indicates that gold can be recovered from the Second White Speckled Shale by conventional carbon in leach cyanidation, and that heavy minerals and metals can be concentrated from it by gravity methods which also capture gold and some base metals. DNI's recent leaching and bioleaching testwork demonstrated that metals can be collectively recovered from the shale.

There is no prior mineral characterization work establishing mineral and metal make-up of the shale. Given its very fine grain size this work will necessarily rely on electron microscopy as did DNI's MLA mineral study. Exploration, and inferences therefrom, are based entirely on geochemical data supported by heavy mineral concentration and related topical mineral studies.

The Second White Speckled Shale Formation has to date attracted most of the exploration attention on the Property, although DNI's recent work since 2011 has also focused on evaluating the Labiche Formation shales as economic targets. While the Second White Speckled shale is the better enriched in base metals and U, and to a lesser extent REE, than its enveloping Formations, the Labiche Formation shales contains higher Sc and Li, and though much less mineralized with Base metals and uranium, contain nearly equivalent amounts of REE as the Speckled shale. The Labiche Formation and Second White Speckled Formation shales are near the surface, and are locally exposed in valley walls throughout the eastern parts of the Property along the erosional edge of the Birch Mountains. The thicker Shaftesbury Shale Formation, beneath the Speckled Shale Formation, is less well mineralized and metals distribution within it is less well known due to a lack of exposures. DNI's preliminary leaching tests in 2012 also demonstrated that metals contained in the Belle Fourche Formation shales beneath the Second White Speckled Shale are also recoverable suggesting that the polymetallic shale package may well be ultimately shown to be considerably thicker.

Several suspected large buried metal enrichment Zones have been identified by the historic work and by DNI's more recent synthesis thereof, from extensive surface sampling, supported also by other coincident or associated stratigraphic and physical anomalies. Buried polymetallic enriched zones have been confirmed under three of the Zones identified (the Asphalt, Buckton and Buckton South Zones). The confirmed Zones are open in three directions, and are envisaged to be tabular concentrations of metals hosted entirely in the flat-lying Second White Speckled Shale Formation and the overlying Labiche Formation shales (possibly also in the Belle Fourche Formation which lies beneath the Speckled Shale). The three Zones are extrapolated to extend over large areas measuring tens of square kilometers based on combined historic and DNI's drilling, and on supporting information from adjacent surface and outcrops. Mineral resources have been delineated in the Buckton and Buckton South Zones, and the Buckton Deposit has advanced through a Preliminary Economic Assessment in 2013.

Other metal mineralization proposed to exist on the Property is sedimentary exhalative - SEDEX style - sulfide mineralization associated with suspected (yet undiscovered) exhalative venting centers, which are also proposed to be the source to the metal enriched sediments and volcanic debris captured in the black shales hosting the polymetallic Zones. Should the foregoing proposal be proven by future drilling, coalescence among some of the envisaged shale hosted polymetallic zones buried beneath the anomalous areas identified would be a realistic expectation, manifested as vertical zonation cycles.

DNI recently identified a number of non-metallic targets in the Pelican sandstone Formation on the Property with potential to contain large volumes of sand that might be suitable for use as proppant (fracsand). Exploration of the foregoing sand targets comprises an integral part of DNI's exploration activities going forward.

In addition to its demonstrable geological merits, the Property's location in a mature mining district, within a well organized regulatory, jurisdictional and land use permitting framework tailored to the development of laterally extensive deposits, provide considerable logistical and infrastructural advantages. The local availability of sulfur as a waste product of surrounding oil sands operations, is an added benefit to any leaching methods which might ultimately be formulated for the recovery of metals from the shale, and would be a welcome sulfur waste mitigation activity in the region.

Anomalies, Target Areas, Zones & Mineralized Zones

DNI's NI-43-101 technical report for the Property (2008) recognized and identified six large mineralized systems on the Property, comprising six large contiguous areas centered over circular, or closed, surface or subsurface features associated with metals enrichment in one form or another either over them or on their flanks. The six areas were designated as six distinct sub-properties which are at different stages of development, ranging from areas with reconnaissance level anomalies which have not previously been explored, through drill-ready target areas with considerable historic work to two Mineralized Zones at two of the sub-properties.

The Property previously consisted of 2,720 km2 held under 36 permits, and provided coverage over the six mineralized target areas, or zones, which DNI regarded as separate, though contiguous, sub-properties. Through ongoing evaluation of the Property, DNI allowed nearly two thirds of its prior land position over remote lower priority permits to lapse in March 2014. The permits which were abandoned contained three early stage blind targets, namely; the McIvor West and North Lily Anomalies, and the Eaglenest Target Area. DNI has not previously carried out any work on the foregoing areas other than compilation of historic work therefrom (summarized in Sabag 2008). The foregoing targets are challenged by remote field access, lack of outcrop exposures and seasonal field activity restrictions during the caribou calving season.

The six sub-properties range in size 100-300 sq km each and their size is appropriate for the principal type of polymetallic mineralization being sought by DNI, namely, nominal 5kmx5km or larger zones of polymetallic enrichment in flat-lying near-surface "blankets" of polymetallic black shale. The sub-properties share many similar characteristics, and provide two different, apparently related, types of prospective exploration and development targets, namely; (i) metal enriched polymetallic black shales; and (ii) possible source(s) to metals therein, proposed herein to be nearby exhalative vents with untested potential to host sedimentary exhalative - SEDEX style - sulfides.

Considering the large size of the Property and the laterally extensive flat-lying metal enriched targeted zones, DNI relied on geological as well as logistical criteria to initially prioritize the various targets on the Property. Principal logistical criteria were ease of access and the perceived constraints imposed by thickness of overburden cover over the targets which are ultimately being explored to identify deposits which might be exploited by open pit.

DNI's geological prioritization was based on anticipations that the polymetallic mineralization of interest is hosted entirely in the Second White Speckled Shale Formation rather than the continuous shale package which include the overlying Labiche Formation Shale which had previously been regarded as "waste" material which would have to be removed to gain access to the Speckled Shale beneath it. In the foregoing regard, DNI relied on its subsurface stratigraphic database consolidated from third party oil/gas drilling over the Birch Mountains and the Property to identify locations wherein the Second White Speckled Shale Formation is under the thinner cover. Accordingly, the 75m depth contour to the base of the Formation was used as a limiting guideline, representing on average a 50m thickness of cover above an assumed 25m nominal Formational thickness, and considerable areas to the north and south of the Asphalt and Buckton Zones, and the Buckton South Zone, were prioritized as prospective localities with lesser overburden cover above the Speckled Shale, especially nearer the Formation's erosional edge. By contrast, the western parts of the Buckton South Zone (and many parts of the historic Eaglenest Target Area) were classed as lower priority suggesting deferral of additional work thereupon.

The above cover thickness criteria has since been equivocated by the various resource studies for the Buckton Deposit and the Buckton South Zone, and the subsequent Buckton PEA which collectively concluded that the Speckled Shale as well as overlying Labiche Formation shale are mineable as a continuous shale package, and that cover rocks present far lesser economic constraints than previously believed. It is noteworthy that cover rocks above the Buckton Deposit consist of glacial till which has in most part been scoured from the Labiche Shale nearest the surface, and that composition of this till is similar to those of the Labiche.

Based on logistical criteria, the east half of the Buckton South Target Area, the Buckton and the Asphalt Zones, all of which are located over the east part of the Property, present high priority locations which can be relatively easily explored given good access to the area, and equally good access throughout them via a series of old seismic lines and trails, especially in winter months. The foregoing include accessways previously identified, or utilized, during historic work over the area, including a network of winter roads built during 1997 historic drilling at the Buckton and Asphalt Zones in addition to considerable other accessways constructed by more recent drilling related to exploration for gas and oil sands deep beneath the Birch Mountains. The Birch Mountain airstrip provides additional logistical enhancements, as do nearby sources of water which have been previously identified and documented in historic records to support any future drilling at the Asphalt and Buckton Zones.

DNI’s current polymetallic black shale hosted exploration target areas are the Buckton, Buckton South and Asphalt Zones. They are as follows:

The Buckton polymetallic Zone hosts the Buckton Deposit which is open. The Buckton Deposit extends over an approximate 3km x 8km area, and is hosted in the continuous shale package consisting of the Labiche Formation Shale and the Second White Speckled Shale Formation beneath it. The Buckton Deposit has good lateral continuity and is vertically zoned, containing generally better grading base metals and Uranium within the uppermost 10m of the Second White Speckled Shale, similar grades of REE in the entire shale package, and better Li-Sc grades in the Labiche Formation Shale which makes up the upper portions of the Deposit. Although recoverable polymetallic mineralization has been identified in the upper portions of the Belle Fourche Formation beneath the Speckled Shale, the Belle Fourche shale has not yet been incorporated into mineral resources at the Deposit. The Buckton Deposit hosts 4.4 billion tonnes of Inferred and 272 million tonnes of Indicated mineral resources containing recoverable Mo-Ni-U-V-Zn-Cu-Co-Li-REE-Y-Sc-Th, although the 2013 Buckton Preliminary Economic Assessment omitted Mo-V-Li-Th-Sc-Th based on economic or marketing considerations and concluded that Ni-U-Zn-Cu-Co-REE-Y can be economically produced from the Deposit at this time. The Buckton Deposit, and the broader surrounding Zone is open in three directions: to the south toward the Buckton South Zone; to the west across an isopach anomaly and to the north over areas suspected to also host exhalative vents.

Prior work had identified general metals enrichment vectors within the Second White Speckled Shale Formation proposing progressively better grades northward in the upper parts of the Formation, accompanied also by progressive thickening of the better grading sections. The prior work is, however, superceded by the Buckton PEA and underlying resource studies which collectively suggest that the Buckton Deposit is suited to high throughput bulk mining, and as such any subtle enriched subzones would likely not make a material contribution to the overall value extracted from the Deposit.

Prior work over the Buckton Zone and Deposit had assumed that mineable mineralization is hosted in only the Speckled Shale and had, accordingly, paid considerable attention to constraints of overburden cover over the Shale, resource studies for the Deposit and subsequent Buckton PEA concluded that the Speckled as well as overlying Labiche Formation shale are mineable as a continuous shale package, and that cover rocks present far lesser constraints than previously believed. It is noteworthy that cover rocks above the Buckton Deposit consist of glacial till which has in most part been scoured from the Labiche Shale nearest the surface, and that composition of this till is quite similar to those of the Labiche.

The Buckton South Zone was previously named the Buckton South Target Area by historic work, but has since been confirmed by DNI’s drilling and a 497 million tonne initial Inferred mineral resource study was delineated therein in 2013. Buckton South and vicinity represents a prospective polymetallic target with many well defined coincident composite geochemical, stratigraphic, and other interpreted anomalies which collectively are similar to surface anomalies over the Buckton and Asphalt Zones. The eastern parts of the Buckton South Target Area are accessible by a variety of winter roads, by seismic lines via ATV and also by air utilizing the Birch Mountain Airstrip. DNI confirmed the Buckton South Zone with 2012 drilling and delineated an initial “maiden” inferred resource therefrom which is open and can most likely be expanded subject to additional drilling. The Buckton South Zone is bounded on the east by the erosional edge of the Birch Mountains, and is open to the south into untested ground. The Zone is open to the north under surface geochemical anomalies over the 7km-8km distance to the Buckton Deposit.

The Buckton South Zone is likely the southerly extension of the Buckton Deposit, and future work would consist almost entirely of drilling to expand the existing Buckton South inferred mineral resource to include in-fill drilling to upgrade it.

The Buckton and Buckton South Zones together dominate the east-central portion of the SBH Property, with a combined Inferred resource of approximately 5.2 billion tonnes containing recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc. Should future drilling confirm continuation of mineralization over 7km the distance separating the two Zones, ultimate combined resources could represent 10-15 billion tonnes of mineralization stretching over a 20km-25km of strike.

The Asphalt polymetallic Zone hosts a volume of polymetallic mineralization (named the Asphalt Mineralized Zone, or the Asphalt Potential Mineral Deposit in prior work) which extends over an approximate 1km x 4.5km area comprising approximately 4.5 square kilometers, with an estimated thickness ranging 7.2m to 11.6m, and represents an aggregate of approximately 109-132 million short tons of mineralized material (99-120 million tonnes). DNI's verification sampling of the historic drill core reported measured values for Specific Gravity ranging 2.22-2.49 for the Second White Speckled Shale suggesting that tonnages might in fact be larger than those estimated. DNI's recent focus has shifted to Mo-Ni-U-V-Zn-Cu-Co-Li (Ag omitted) contained in the Zone, in addition to Specialty Metals (Sc-Th) and REE. DNI's work programs over the Asphalt Zone have included considerable detailed review and consolidation of historic work therefrom and vicinity, in addition to verification sampling of historic drill core from the Zone and limited confirmation drilling in 2010-2011. Collateral efforts were also directed to better resolve subsurface stratigraphy relying on oil/gas well drilling in the area.
Although DNI had previously intended to advance the Asphalt Zone through drilling to resource delineation, it opted instead to advance exploration and development of the Buckton and Buckton South Zones.

The Property also contains several other prospective targets which are not hosted in polymetallic black shales. These are as follows:

Sedimentary exhalative sulfide (**SEDEX)** deposits are, in general terms, known to accumulate in restricted basins or half grabens bounded by synsedimentary growth faults, with exhalative centers located along the faults or their junctions. Geological, stratigraphic, lithogeochemical and metal distribution trends documented from the Property are characteristic of settings which would be highly conducive to hosting sedimentary exhalative - SEDEX style - sulfide mineralization within the black shales, providing a collateral deposit type with potential to exist on the Property.

Several localities have been identified in prior work as areas which have potential for hosting exhalative venting with potential also for related sedimentary exhalative sulfides. The foregoing areas present natural targets for additional investigation in the field, as part of a broader evaluation of the Property for hosting sedimentary exhalative - SEDEX style - sulfides. The targets are: Buckton north, the westernmost parts of the Buckton South, the immediate area surrounding the Asphalt Zone. DNI has not explored the foregoing areas.

Fracsand Targets. DNI acquired additional permits in April 2014 adjoining the northeast and southeast corners of the Property to secure localities over new targets which have potential for hosting large volumes of sand which might be suited for use as natural sand proppant (fracsand) in the oil/gas industry. Areas over the southeast parts of the Property are prioritized based on the availability of access and better proximity to ultimate markets or transport facilities.

DNI Exploration and Development Programs and Work Progress

Conclusions and interpretations of DNI's NI-43-101 technical report for the Property form the basis of its exploration work on the Property, and the report's recommendations have guided DNI's critical path to advance and develop black shale hosted polymetallic zones at the Property over a four to five year period via a series of multi-phased integrated programs with an aggregate $5.3 million budget, with the objective of delineating mineral resources and advancing at least one zone through a preliminary economic assessment.

To the extent that the potential of any polymetallic shale hosted deposits which might exist on the Property is ultimately dependant on whether metals can be effectively and collectively recovered from the shales, DNI held all work intended to identify volumes of shale hosted polymetallic mineralization over the Property in abeyance until such time as it demonstrated collective recoverability of metals on a combined basis through bench scale leaching and bioleaching testwork conducted during 2009-2010. Encouraged by excellent recoveries achieved, DNI conducted its first drilling program in 2010-2011 to delineate the first resource from the Property, over a portion of the Buckton Zone, which was subsequently expanded several times relying on results from DNI's 2012 drilling and advanced through a positive preliminary economic assessment in 2013. An initial inferred resource delineated over a portion of the Buckton South Zone in 2013 represents the second mineral resource DNI has discovered on the Property.

The exploration work completed by DNI in 2012-2014, together with it prior work since acquisition of the Property, concludes work programs which were prescribed by DNI's NI-43-101 technical report for the

Property relating to polymetallic shale hosted mineralization on the Property to advance at least one of the mineralized Zones on the Property through resource delineation and a Preliminary Economic Assessment.

DNI Programs 2012-2014 and Summary of Conclusions

DNI commenced its exploration work on the Property in 2007, and has since actively continued its work to advance development of the Property. This report summarizes exploration expenditures incurred during the period Feb1/2012-Sept30/2014 at the Property.

Exploration work completed during the 2012-2014 period consisted of a variety of efforts culminating in preparation of four mineral resource studies, concluded in 2013, expanding resources at the Buckton Zone to form the basis of the Buckton Preliminary Economic Assessment which was concluded in December 2013. An initial "maiden" mineral resource was also delineated from the Buckton South Zone. Other activities leading up to preparation of the resource studies consisted of a summer 2012 drilling program (and related permitting), and continuing leaching testwork to establish metals recoveries from the Labiche Formation, the Second White Speckled Shale Formation and the Belle Fourche Formation. Work was also carried out to evaluate the fracsand potential over certain portions of the Property.

DNI's 2012-2014 work programs included the following: (i) Bioleaching testwork program 2012, completed by AITF, testing composite drill core samples from 2010-2011 drilling to evaluate extraction of metals from the Labiche and Belle Fourche Formation shales which envelope the Second White Speckled Shale Formation at the Buckton Zone; (ii) 2012 Resampling and re-analysis of Labiche Formation intercepts in historic archived Tintina 1997 drill cores archived at the MCRF (2012) completed Jun/2012); (iii) Preparation of analytical control standard LBSTD2 and calibration reference pucks for hand held XRF used in the field as a screening tool during the 2012 summer drilling program; (iv) A Resource Study, completed September/2012, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in the Labiche Formation cover rocks overlying the Buckton maiden resource which is hosted in the Second White Speckled Formation beneath the Labiche; (v) Summer 2012 drilling program completed during Aug-Sep/2012, in addition to subsequent core logging, sampling and analytical work; (vi) A Resource Study, completed Jan/2013, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations to consolidate and update previously delineated mineral resources; (vii) A Resource Study, completed Mar/2013, for a portion of the Buckton South Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations, representing the initial "maiden" resource from the Buckton South Zone; (viii) A Resource Study, completed August/2013, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations, to update and expand the previously estimated Buckton mineral resource, and to upgrade a portion of the Buckton Inferred resource to the Indicated resource class. The foregoing resource formed the basis for he preliminary economic assessment study for the Buckton Zone; (ix) Preliminary Economic Assessment study of the Buckton Zone, completed in December/2013; (x) Bioleaching and other stirred tank and column leaching testwork, concluded by CanMet Jan/2014, to explore a variety of metals and REE recovery leaching parameters; (xi) Miscellaneous work relating to evaluating enhancements to the Buckton Preliminary Economic Assessment economic results, including evaluation of Scandium recovery as a co-product from the Buckton Deposit; (xii) Miscellaneous preliminary work relating to evaluation of viability of run of river hydro for streams over the eastern parts of the Property; (xiii) Data consolidation and preliminary evaluation of fracsand potential of the Pelican Formation sandstone at the Property. July 2014 reconnaissance sampling program of select targets and related sample beneficiation and evaluation (ongoing).

Work in progress or in the planning stages consists of ongoing evaluation of enhancements to the economics of the Buckton Deposit, and ongoing work relating to review of sand samples collected in July 2014 with a view to submit select samples for rigorous fracsand testwork. Planning is in progress for follow-up sampling of certain fracsand targets.

Drilling 2012

Nine HQ diameter vertical holes cored during the summer 2012 to test portions of the Buckton and Buckton South polymetallic Mineralized Zones confirmed polymetallic mineralization at the Buckton South Zone, and served to expand Inferred mineral resources previously delineated at the Buckton Zone in addition to upgrading of a portion thereof to the Indicated resource class.

Holes drilled over the Buckton South Zone were the first drilled over the Zone and reported grades and downhole geology nearly identical to that reported from the Buckton Zone located 7km to the north. The holes served to support delineation of an initial Inferred maiden resource over a portion of the Buckton South Zone.

Mineral Resources

Relying on drill results from its 2010-2012 drilling over the Buckton and Buckton South Zones, together with historic drilling information, DNI has to date completed five resource studies delineating incrementally expanding mineral resources at the Buckton Zone, and an initial maiden Inferred resource was also delineated from the Buckton South Zone.

DNI completed the first resource study (the "Buckton Resource Study") for the Buckton Zone in late 2011 and reported a 250 million short ton initial Base Metals, Uranium and Lithium Inferred resource therefrom in October 2011 hosted entirely within the Second White Speckled Shale Formation (the "Buckton Maiden Resource" or the "Buckton Initial Resource") extending over a 5.7 sq km portion of the 26 sq km Buckton Zone. Considering the incidental recovery of Rare Earth Elements and Specialty Metals as co-products during leaching of the traditional base metals, the Buckton Resource Study was expanded in late December 2011 to prepare an estimate of REE and Specialty Metals contained within the Buckton initial Inferred resource hosted in the Second White Speckled Shale Formation. The Buckton supplemental resource study (the "Buckton Supplemental Resource Study") was completed in January 2012, relating to recoverable Rare Earth Elements (REE), Yttrium (Y), Scandium (Sc) and Thorium (Th) contained within the Buckton maiden Inferred resource which previously related only to Base metals, Uranium and Lithium.

After demonstrating successful recovery of Base Metals, Specialty Metals and REE by from the Labiche Shale Formation which represent the cover rocks overlying the Buckton Inferred maiden resource, DNI launched a NI-43-101 compliant resource study in April 2012 (the "Buckton Labiche Resource Study") to determine the potential of Specialty Metals and REEs contained within the Labiche Shale Formation cover material overlying the Buckton initial Inferred resource. The Study relied on drill core samples from DNI's 2010-2011 drilling augmented by archived core from historic drilling over the area verification re-sampling of which was completed in May 2012. The Buckton Labiche Resource Study was completed in September 2012, reporting a 2.7 billion short ton initial Inferred resource over 13.8 square kilometres (the "Buckton Labiche Resource") from the Labiche Shale Formation cover rocks above the Second White Speckled mineralized black shale at the Buckton Zone. This resource relates to Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Th-Sc hosted in the Labiche Formation black shale which makes up majority of the cover rocks above the Second White Speckled Shale Formation which hosts the Buckton Inferred resource and which had previously been DNI's sole target at the SBH Property. Delineation of the Labiche Resource is a significant development from the Property as it demonstrated that much of the cover material above the Buckton initial resource hosted in the Second White Speckled Shale Formation is not "waste" and represents potential recoverable value given that contained metals and REE are recoverable.

DNI completed a resource study during in January 2013 to consolidate, update and expand the Inferred mineral resource at the Buckton Zone, to also combine and restate mineral resources previously identified in the Second White Speckled Shale and the Labiche Formations as a single continuous mineralized tonnage. The Consolidated and Updated Buckton Mineral Resource Study consolidates all previous resource estimates from the Buckton Zone using more current metal prices and a higher base cut-off per recommendations of previous studies. This resource study combined, superseded and replaced all prior resource estimates from the Zone. This Study was revised in 2013 to incorporate results from DNI's 2012 drilling to further expand the resource, and upgrade a portion of it, to support the Preliminary Economic Analysis of the Zone which was concluded in December 2013. The Updated and Expanded Buckton Mineral Resource Study (the "Updated Resource Study"), related to recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc, and it successfully expanded the Inferred resource at the Buckton Zone from 3.2 billion tonnes to 4.4 billion tonnes, in addition to upgrading a portion of it to the Indicated resource class by delineating a 272 million tonne Indicated mineral resource. The Inferred and Indicated resources together extend over 21.9 square kilometres (approximately a 3kmx8km area), 20.4 square kilometres of which represents the aerial extent of the Inferred resource.

The Updated and Expanded Buckton Resource Study updated the Buckton Zone mineral resource based on results from DNI's 2012 drilling over the Zone with the benefit of preliminary guidance from the Preliminary Economic Assessment study then in progress. It significantly expanded, superseded and replaced all prior resource estimates for the Buckton Zone, and formed the basis for the Buckton PEA which was completed in December 2013.

The Updated and Expanded Buckton mineral resource consists of 4,440,112,000 tonnes of Inferred resource extending over 20.4 square kilometres, and 271,938,000 tonnes of Indicated resource extending over 1.5 square kilometres. The resources comprise a wedge of continuous mineralization hosted in the Labiche Formation and underlying Second White Speckled Shale Formation, which are two flat-lying black shale Formations that are stacked to comprise a continuous thick zone of mineralized shale. The resources are mineralized with recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu), Cobalt (Co), Lithium (Li), Scandium (Sc), Thorium (Th) and Rare Earth Elements Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy), Yttrium (Y). The Updated Resource Study estimates that the Inferred and the Indicated resources are overlain by 1,571,338,000 tonnes and 28,413,000 tonnes of glacial till overburden, respectively.

Buckton Zone - Updated & Expanded Mineral Resources

Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined

		Inferred Mineral Resource 4,440,112,000 tonnes (4,894,386,000 short tons)					**Indicated Mineral Resource** 271,938,000 tonnes (299,760,000 short tons)				
	Metal/Oxide Price* (US$/lb or US$/kg)	Raw Grade (ppm)	Recovery %	Recoverable Grade (ppm)	Recoverable metal/oxide (kg)	Recoverable metal/oxide (lbs)	Raw Grade (ppm)	Recovery %	Recoverable Grade (ppm)	Recoverable metal/oxide (kg)	Recoverable metal/oxide (lbs)
MoO_3	12.89 /lb	23	3	0.7	3,058,000	6,742,000	27	3	0.8	220,000	485,000
Ni	8.34 /lb	67	64	43.1	191,533,000	422,257,000	70	64	45	12,231,000	26,965,000
U_3O_8	60.74 /lb	11	70	7.5	33,389,000	73,610,000	11	70	7.6	2,079,000	4,583,000
V_2O_5	5.89 /lb	606	7	42.5	188,484,000	415,536,000	660	7	46.2	12,562,000	27,694,000
Zn	0.94 /lb	170	52	88.2	391,683,000	863,512,000	175	52	90.9	24,723,000	54,505,000
Cu	3.64 /lb	40	25	10.1	44,629,000	98,390,000	42	25	10.4	2,832,000	6,243,000
Co	14.38 /lb	15	72	11	49,040,000	108,115,000	17	72	11.9	3,229,000	7,119,000
La_2O_3	44.58 /kg	49	20	9.7	43,190,000	95,218,000	48	20	9.7	2,633,000	5,805,000
Ce_2O_3	43.2 /kg	84	30	25.2	111,947,000	246,801,000	84	30	25.2	6,849,000	15,099,000
Pr_2O_3	140.41 /kg	11	40	4.2	18,676,000	41,173,000	10	40	4.1	1,111,000	2,449,000
Nd_2O_3	156.16 /kg	40	43	17.3	76,718,000	169,134,000	39	43	16.8	4,559,000	10,051,000
Sm_2O_3	68.16 /kg	7.9	47	3.7	16,523,000	36,427,000	7.6	47	3.6	973,000	2,145,000
Eu_2O_3	2742.11 /kg	1.7	61	1	4,490,000	9,899,000	1.6	61	1	265,000	584,000
Gd_2O_3	105.78 /kg	6.7	63	4.2	18,740,000	41,315,000	6.4	63	4.1	1,105,000	2,436,000
Tb_2O_3	2190.48 /kg	1	65	0.7	3,020,000	6,658,000	1	65	0.7	177,000	390,000
Dy_2O_3	1240.31 /kg	5.9	65	3.9	17,160,000	37,831,000	5.8	65	3.8	1,033,000	2,277,000
Ho_2O_3	202.98 /kg	1.2	64	0.8	3,334,000	7,350,000	1.2	64	0.8	208,000	459,000
Er_2O_3	169.01 /kg	3.4	62	2.1	9,458,000	20,851,000	3.4	62	2.1	579,000	1,276,000
Tm_2O_3	97 /kg	0.5	60	0.3	1,369,000	3,018,000	0.5	60	0.3	85,000	187,000
Yb_2O_3	102.98 /kg	3.4	58	2	8,759,000	19,310,000	3.4	58	2	537,000	1,184,000
Lu_2O_3	1273 /kg	0.5	55	0.3	1,328,000	2,928,000	0.5	55	0.3	82,000	181,000
Y_2O_3	107.77 /kg	41	67	27.1	120,398,000	265,432,000	39	67	26.2	7,134,000	15,728,000
Li_2CO_3	2.82 /lb	375	17	63.8	283,238,000	624,432,000	372	17	63.3	17,217,000	37,957,000
Sc_2O_3	4194.66 /kg	17	24	3.9	17,534,000	38,656,000	17	24	4.2	1,132,000	2,496,000
ThO_2	252 /kg	12	12.5	1.5	6,624,000	14,603,000	12	12.5	1.5	407,000	897,000

Mineral resources are not mineral reserves and do not have demonstrated economic viability. *There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies. * Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm2O3). Sources: Metal-pages.com; Asianmetal.com; USGS. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 and 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding. Mineral resources are not mineral reserves and do not have demonstrated economic viability.*

The Updated and Expanded Buckton Mineral Resources are based on a base cut-off of US$11/tonne and US$12.5/tonne for the Labiche and the Second White Speckled Shale Formations, respectively, reflecting the different operating cost estimates related to leaching of metals from the two Formations. Unlike prior resource studies from the Zone which were arbitrarily constrained by a maximum mineable depth of 75m, the resources reported in the current study comprise all mineralized tonnages which represent sufficient gross recoverable value exceeding the base cut-off to accommodate removal of overlying cover waste material. The Updated Resource Study also used more current metal prices than those in prior studies, as well as higher base cut-offs and more conservative metals recoveries believed to better represent bioheapleaching field conditions. The Updated Resource Study relied on initial findings from the scoping study which was then in progress, and incorporates preliminary operating cost estimates into revised base cut-offs as well as mining depth criteria for the purposes of classifying mineralized material as resources.

The Updated and Expanded Buckton mineral resources consist of an Upper, lower-grade, mineralized horizon (3.5 billion tonnes) hosted in the Labiche Formation which overlies a higher-grading horizon (0.9 billion tonnes) hosted in the Second White Speckled Shale Formation beneath it. The two Formations together comprise an approximately 13m-140m thick wedge of mineralized black shale, extending westward from the eastern erosional edge of the Birch Mountains where they are exposed on surface but are under progressively thicker cover westwards.

DNI completed a resource study for the Buckton South Zone in February 2013, reporting a 497 million tonne NI-43-101 compliant initial maiden Inferred resource relying on drill results from its summer 2012 drilling over the Zone, supported also by other historic exploration information from the area. This Zone is located approximately seven kilometres to the south of the Buckton Zone and it is possible that the two Zones might be connected. The Buckton South maiden Inferred resource extends over approximately 3.3 square kilometres, and is hosted in two near-surface stacked shale and black shale horizons which are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc and are partly exposed on surface. The resource is based on a US$10/tonne base cut-off and represents all mineralized tonnages that are under less than 75m of overburden cover, consisting of a lower-grade upper horizon hosted in the Labiche Formation, and a higher-grading horizon beneath it hosted in the Second White Speckled Shale Formation. The Buckton South maiden Inferred mineral resource is tabulated below combining the upper and lower portions of the resource on a weighted basis.

<table>
<tr><th colspan="10">Buckton South Zone - Initial Maiden Inferred Mineral Resource
Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined</th></tr>
<tr><td>Mineralized Shale (tons)</td><td colspan="9">547,516,000</td></tr>
<tr><td></td><td>MoO_3</td><td>Ni</td><td>U_3O_8</td><td>V_2O_5</td><td colspan="2">Zn</td><td>Cu</td><td>Co</td><td>Li_2CO_3</td></tr>
<tr><td>Raw Grade (ppm)</td><td>25.9</td><td>71.3</td><td>11.8</td><td>720.6</td><td colspan="2">184.7</td><td>47.2</td><td>15.2</td><td>370.3</td></tr>
<tr><td>Recoverable Grade (ppm)</td><td>13.1</td><td>60.5</td><td>10.1</td><td>178.2</td><td colspan="2">149.2</td><td>29.6</td><td>12.7</td><td>157.4</td></tr>
<tr><td>Metal/Oxide Price* (US$/lb)</td><td>17.63</td><td>9.07</td><td>68.99</td><td>7.67</td><td colspan="2">0.90</td><td>3.29</td><td>22.39</td><td>2.68</td></tr>
<tr><td>Recoverable metal/oxide (kg)</td><td>6,490,000</td><td>30,034,000</td><td>4,993,000</td><td>88,489,000</td><td colspan="2">74,095,000</td><td>14,700,000</td><td>6,299,000</td><td>78,204,000</td></tr>
<tr><td>Recoverable metal/oxide (lbs)</td><td>14,308,000</td><td>66,214,000</td><td>11,008,000</td><td>195,085,000</td><td colspan="2">163,351,000</td><td>32,408,000</td><td>13,887,000</td><td>172,410,000</td></tr>
<tr><td colspan="10"></td></tr>
<tr><td></td><td>La_2O_3</td><td>Ce_2O_3</td><td>Pr_2O_3</td><td>Nd_2O_3</td><td colspan="2">Sm_2O_3</td><td>Eu_2O_3</td><td>Gd_2O_3</td><td>Tb_2O_3</td></tr>
<tr><td>Raw Grade (ppm)</td><td>46.6</td><td>81.5</td><td>10.5</td><td>39.4</td><td colspan="2">7.7</td><td>1.7</td><td>6.7</td><td>1.1</td></tr>
<tr><td>Recoverable Grade (ppm)</td><td>14.8</td><td>30.8</td><td>4.3</td><td>18.2</td><td colspan="2">4.8</td><td>1.1</td><td>4.6</td><td>0.7</td></tr>
<tr><td>Metal/Oxide Prices** US$/kg)</td><td>42.84</td><td>47.40</td><td>114.98</td><td>128.61</td><td colspan="2">58.66</td><td>1,872.65</td><td>83.70</td><td>1,551.08</td></tr>
<tr><td>Recoverable Oxide (kg)</td><td>7,353,000</td><td>15,292,000</td><td>2,128,000</td><td>9,056,000</td><td colspan="2">2,372,000</td><td>540,000</td><td>2,305,000</td><td>372,000</td></tr>
<tr><td>Recoverable Oxide (lbs)</td><td>16,211,000</td><td>33,713,000</td><td>4,691,000</td><td>19,965,000</td><td colspan="2">5,229,000</td><td>1,190,000</td><td>5,082,000</td><td>820,000</td></tr>
<tr><td colspan="10"></td></tr>
<tr><td></td><td>Dy_2O_3</td><td>Ho_2O_3</td><td>Er_2O_3</td><td>Tm_2O_3</td><td>Yb_2O_3</td><td>Lu_2O_3</td><td>Y_2O_3</td><td>Sc_2O_3</td><td>ThO_2</td></tr>
<tr><td>Raw Grade (ppm)</td><td>6.2</td><td>1.2</td><td>3.5</td><td>0.5</td><td>3.5</td><td>0.7</td><td>39.3</td><td>21.9</td><td>11.8</td></tr>
<tr><td>Recoverable Grade (ppm)</td><td>4.4</td><td>0.8</td><td>2.2</td><td>0.3</td><td>1.9</td><td>0.4</td><td>26.7</td><td>7.7</td><td>5.0</td></tr>
<tr><td>Metal/Oxide Prices** US$/kg)</td><td>864.09</td><td>205.82</td><td>197.35</td><td>$97.00</td><td>100.63</td><td>1,024.09</td><td>81.73</td><td>3,881.39</td><td>252.00</td></tr>
<tr><td>Recoverable Oxide (kg)</td><td>2,179,000</td><td>388,000</td><td>1,109,000</td><td>153,000</td><td>950,000</td><td>204,000</td><td>13,273,000</td><td>3,828,000</td><td>2,497,000</td></tr>
<tr><td>Recoverable Oxide (lbs)</td><td>4,804,000</td><td>855,000</td><td>2,445,000</td><td>337,000</td><td>2,094,000</td><td>450,000</td><td>29,262,000</td><td>8,439,000</td><td>5,505,000</td></tr>
</table>

**Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the five year trailing average to Oct/2012.*

***Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Oct/2012 for La Ce Pr Nd Sm Eu Gd Tb Dy Y; three year trailing average to Aug/2011 for Tm; Th per USGS Mineral Commodity Summaries 2009-2011, the two year trailing average to Oct/2012 for Ho Er Yb Lu Sc. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.*

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.

The Buckton South Resource Study relies on DNI's 2012 Summer drilling over the Zone, supported by other historic exploration information from the area.

The Buckton South maiden resource is classified as an Inferred resource consisting of 497 million metric tonnes of mineralized black shale extending over 3.3 square kilometres beneath less than 75m of overburden cover. This resource is hosted in the Labiche Formation and underlying Second White Speckled Shale Formation, which are two flat-lying Formations that are stacked to comprise a continuous thick zone of mineralized shale. The Inferred resource is mineralized with recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu), Cobalt (Co), Lithium (Li), Scandium (Sc), Thorium (Th) and Rare Earth Elements Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy) and Yttrium (Y). The Resource Study estimates that the maiden Inferred resource is overlain by 110 million metric tonnes of glacial till overburden cover.

This Buckton South maiden resource has been classified as an Inferred resource according to CIM standards, based on a number of factors, namely; limited number of drill holes and their wide spacing, good continuity of mineralization and geological control between drill holes and from section to section along approximately six kilometres of strike. The Inferred resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls. The Buckton South Resource Study concluded that the Buckton South maiden Inferred resource is mineralization which has a reasonable prospect for extraction in the future, and it comprises all Labiche and Second White Speckled Shale resource blocks which are beneath less than 75m of overburden cover, and for which the combined gross value of recoverable contained Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc exceeds the base cut-off of US$10 per tonne relying on the best achieved metals recoveries as reported from the collective of DNI's leaching testwork. Metal prices used the trailing 2yr, 3yr and 5yr year commodity price averages.

The Buckton South maiden Inferred resource is distributed between the upper and lower portions of the Buckton South Zone as follows: 407 million short tons (369 million metric tonnes) in the lower grade portion hosted in the Labiche Formation ranging 16m-62m in thickness, and 141 million short tons (128 million metric tonnes) in the higher grade portion beneath it hosted in the Second White Speckled Shale Formation which ranges 11m-18m in thickness.

The Buckton and Buckton South Zones together dominate the east-central portion of the SBH Property, with a combined Inferred resource of approximately 5.7 billion short tons (5.2 billion tonnes) containing recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc. In the absence of drilling over the approximately seven kilometres separating the two Zones, the available information does not enable clear conclusion of whether the Buckton South Zone is a southerly extension of the Buckton Zone or whether it is a separate stand-alone Zone. The presence of many surface geochemical anomalies and mineralized exposures throughout the area separating the two Zones, and similarity of metals grades at the two Zones do, however, suggest a likely connection between the two Zones which has not yet been confirmed by drilling. **Should future drilling confirm continuation of mineralization over the distance separating the two Zones, ultimate combined resources could represent 10-15 billion tonnes of mineralization stretching over a 20km-25km of strike.**

Buckton Preliminary Economic Assessment (PEA)

DNI concluded an independent NI 43-101 Preliminary Economic Assessment Study ("PEA" or the "Buckton PEA") of the Buckton Zone in December 2013, reporting positive economics for the 4.5 billion tonne Buckton mineable mineral resource extending over 21.9 km2 containing Ni-U-Zn-Cu-Co-REE-Y. The PEA outlines a conceptual mining and metals recovery scenario relying on the NI 43-101 mineral resource estimate for the Buckton Deposit per the Updated and Expanded Buckton Mineral Resource Study. The PEA relates to mining and processing operations for the production of Ni-U-Zn-Cu-Co and Rare Earth Elements (REE) including Yttrium from the Buckton Deposit.

The Buckton PEA demonstrated that the Buckton Deposit has the potential to be a significant supplier of Uranium and REE. The mining design is a low strip ratio, high tonnage co-production of Ni-U-Zn-Cu-Co-REE-Y from the Labiche and Second White Speckled formations. The metals extraction design basis is bio-heap leaching, followed by metals extraction from leach solution, and a process plant for separating purified individual REE oxides. The projected average annual production capacity is approximately 1 million pounds of uranium yellowcake and 5,500 tonnes of rare earth oxides, of which over 40% consist of heavy Rare Earths. The PEA also identified a number of key opportunities which can significantly enhance economics through strategic cost reductions and/or revenue enhancements, some of which can be achieved with minimal additional testwork. DNI has since evaluated some of the foregoing.

The PEA achieved its principal objective of evaluating viability of producing metals from the Buckton Deposit, and formulated a conceptual plan for high throughput open pit mining and metals recovery flowsheets for the production of Ni-U-Zn-Cu-Co-REE-Y. It was particularly successful in identifying the critical mining and processing parameters which can have a significant impact on economics at Buckton. Whereas mineral resource studies for the Buckton Deposit estimated recoverable Ni-Mo-U-V-Zn-Cu-Co-Li-REE-Y, certain metals were provisionally omitted from the PEA based on economic considerations (Mo-Li-V) or due to uncertainties in their markets (Sc-Th). As such, the PEA contemplates production of saleable final products of Ni-Co and Zn-Cu as sulfides, U as oxide "yellowcake", and REE-Y as separated oxides.

The PEA was prepared by P&E Mining Consultants Inc., Apex Geoscience Ltd. and Cron Metallurgical Engineering Ltd. Hatch Ltd. was retained to review DNI's metals recovery testwork to formulate process engineering design criteria and metals recovery flow sheets, and to develop related capital and operating cost estimates. This PEA is the initial economic assessment of the potential of the Buckton Deposit and is preliminary in nature. It is based on the collective of information from all exploration, mineral resource and metal extraction studies completed by DNI during the past five years, augmented by extrapolations from other similar projects. This assessment was initiated early in the Deposit's development history to better focus DNI's next stage of work, given the array of recoverable metals from the deposit, the differing leaching parameters required for economic recoveries of the various metals, and the geometry of the deposit being hosted in two layered (stacked) sedimentary formations of differing head grade and slightly different compositions.

	Base Case	Alternate Case
Mining Target	Second White Speckled Shale Formation + overlying Labiche Formation	Second White Speckled Shale Formation Only
Final Products	Ni-Co-sulfide; Zn and Cu sulfides U_3O_8 yellowcake Separated REE-Y oxides	Ni-Co-sulfide; Zn and Cu sulfides U_3O_8 yellowcake Separated REE-Y oxides
Optimized Pit Shell Mineable Mineral Resource	4,544 million tonnes	976 million tonnes
Annual Mining/Processing Throughput Feed	72 million tonnes per year by open pit	36 million tonnes per year by open pit
Strip Ratio (waste:feed)	0.50	6.27
Life of Mine	64 years	29 years
Metals Extraction Metals Recovery	Bio-Heapleaching, Selective Precipitation REE-Y Separation	Bio-Heapleaching, Selective Precipitation, REE-Y Separation
Pre-production Capital Cost	$3,766 million	$3,077 million
Contingency (incl. in Capex)	$ 474 million	$ 426 million
Sustaining Capital Over Life of Mine	$ 2,446 million	$ 706 million
Operating Cost	$ 10.3 per tonne	$ 16.6 per tonne
Gross In-Situ Recoverable Value	$ 16.5 per tonne	$ 26.6 per tonne
Net Operating Margin (pre-tax)	$ 6.2 per tonne	$ 10.0 per tonne pre tax
Payback	10.5 years	9.2 years
Gross Revenues Over Life of Mine	$ 75,000 million	$ 26,000 million
Total Cash Flow (NPV0%)	$ 18,900 million pre tax $ 14,145 million after tax	$ 5,147 million pre tax $ 3,847 million after tax
Average Annual Operating Cash Flow	$ 349 million pre tax $ 276 million after tax	$ 284 million pre tax $ 239 million after tax
NPV @ 5% Discount	$ 2,589 million pre tax $ 1,667 million after tax	$1,059 million pre tax $ 611 million after tax
NPV @ 6% Discount	$ 1,616 million pre tax $ 904 million after tax	$ 640 million pre tax $ 273 million after tax
NPV @ 7% Discount	$ 887 million pre tax $ 328 million after tax	$295 million pre tax $ (7) million after tax
IRR (equity funded)	8.7% pre tax; 7.7% after tax	8.0% pre tax; 7.0% after tax

**Life of Mine excludes two year pre-production construction; All $ as CDN; US$1=CDN$1.05; $/t = $ per tonne*

Cautionary Note: The PEA is based on a conceptual mining plan and metals recovery flowsheets to support estimation of cost parameters to serve as the basis for assessing the Buckton Deposit. As such, the PEA is intended to provide the necessary technical disclosure in prescribed regulatory format to enable a reasonable person to form a reasonable opinion of the potential of the Buckton Deposit based on economic sensitivity to key operational criteria. The PEA is not intended as a study of definitive economic viability as it is preliminary in nature and is based on technical and economic assumptions or extrapolations to be refined in future studies. The PEA is, furthermore, based on mineral resources consisting mostly of Inferred resources that, despite uniformity of grade and continuity, are too speculative geologically to have economic conditions applied to them that would enable them to be characterized as mineral reserves, and there is no certainty that the PEA's conclusions will be realized.

DNI has been exploring and evaluating the Buckton Deposit during the past five years as a long term future source of numerous metals. The Buckton mineralization is hosted in two flat-lying "stacked" shale formations beneath overburden cover. The lower formation is the higher grading Second White Speckled Shale Formation which lies beneath the Labiche Formation shale. The PEA, accordingly, evaluated two separate scenarios. The Base Case scenario focuses on mining and processing of both formations on a blended basis, whereas the Alternate Case contemplates mining and processing of only the lower formation (the Second White Speckled Shale Formation) with a considerably higher strip ratio over a shorter mine life while treating all overlying material as waste. In general terms, with the exception of different mine and plant capacities, both scenarios contemplate the same mining and metal processing methods. The Base Case yielded more favorable economics than the Alternate Case and is therefore regarded as the preferred development approach.

The PEA identified a number of key parameters which can significantly enhance economics through strategic cost reductions or revenue enhancements some of which DNI believes can be achieved with minimal additional testwork and represent potential realistic upside to be assessed in a future update of the PEA. DNI has since evaluated some of the foregoing enhancements in an attempt to quantify enhancements that might be achievable relying on leaching and related metals recovery information which became available after completion of the PEA. In the foregoing regard, various potential operational modifications were evaluated relating to lower acid consumption, sourcing of limestone from localities nearer the Property, and capture of the value of co-product Scandium (net of its recovery costs) into production revenues. These enhancements can be incorporated into a future revision of the Buckton PEA.

Overview of Conclusions - 2012-2014 Work Programs

The 2012-2014 programs, collectively achieved significant milestones in advancing exploration of polymetallic shale hosted mineralization on the Property by expanding previously delineated resources at Buckton, upgrading a portion thereof, and advancing them through a positive Preliminary Economic Assessment. The programs also successfully delineated a second mineral resource at the Property, the Buckton South Zone maiden resource. In addition, DNI recently also identified a portfolio of seven large fracsand targets across the Property.

A most significant development during the period was the recognition that cover rocks, consisting of Labiche Formation shales previously regarded as waste cover, overlying the Second White Speckled Formation shale also represent recoverable value which meets resource classification base cutoff thresholds. Whereas prior work had envisaged polymetallic shale hosted mineralization on the Property to be confined to the Second White Speckled shale, drilling and leaching testwork, together with iterative resource studies completed during 2012-2013, demonstrated that the recoverable metallic mineralization is hosted in a continuous shale package consisting of the combined Labiche and Second White Speckled Formation shales. Preliminary leaching tests also demonstrated that metals contained in the Belle Fourche Formation shales beneath the Second White Speckled are also recoverable suggesting that the polymetallic shale package may well be ultimately shown to be considerably thicker.

Leaching testwork programs completed during the 2012-2014 reiterated prior leaching testwork, and expanded thereupon by demonstrating that metals from the Belle Fourche Formation shales can be extracted (AITF) by the same leaching methods as those used for the Second White Speckled and Labiche shales. In addition, work completed at Canmet advanced the testwork to the initial column leaching stages and reported metals extractions similar to those previously documented only from the stirred tank experiments. The Canmet work furthermore, served to identify a number of leaching parameters which can enhance recoveries or reduce reagent consumption, and provided the basis for design of the metals leaching and processing flowsheets incorporated into the Buckton PEA.

The Buckton Preliminary Economic Assessment (PEA) represents a significant milestone in development of polymetallic shale hosted zones at the Property. The PEA achieved its principal objective of evaluating viability of producing metals from the Buckton Deposit, and formulated a conceptual plan for high throughput open pit mining and metals recovery flowsheets for the production of Ni-U-Zn-Cu-Co-REE-Y. It was particularly successful in identifying the critical mining and processing parameters which can have a significant impact on economics at Buckton. Whereas mineral resource studies for the Buckton Deposit estimated recoverable Ni-Mo-U-V-Zn-Cu-Co-Li-REE-Y, certain metals were provisionally omitted from the PEA based on economic considerations (Mo-Li-V) or due to uncertainties in their markets (Sc-Th). As such, the PEA contemplates production of saleable final products of Ni-Co and Zn-Cu as sulfides, U as oxide "yellowcake", and REE-Y as separated oxides.

The Buckton PEA demonstrated that the Buckton Deposit has the potential to be a significant supplier of Uranium and REE. The mining design is a low strip ratio, high tonnage co-production of Ni-U-Zn-Cu-Co-REE-Y from the Labiche and Second White Speckled formations. The metals extraction design basis is bio-heap leaching, followed by metals extraction from leach solution, and a process plant for separating purified individual REE oxides. The projected average annual production capacity is approximately 1 million pounds of uranium yellowcake and 5,500 tonnes of rare earth oxides, of which over 40% are made up of heavy Rare Earth Elements.

The PEA also identified a number of key opportunities which can significantly enhance economics through strategic cost reductions and/or revenue enhancements, some of which can be achieved with minimal additional testwork. DNI's subsequent evaluation of some of the foregoing identified modifications which might increase revenues and/or reduce costs toward enhancing NPV/IRR by multiples and shortening payback while also reducing capital costs. Some of the enhancements identified through capture of co-product Scandium hold potential for also reducing mining rate while maintaining significant economic returns.

DNI's recognition of the potential of the Pelican sandstone Formation as a source to natural sand proppant (fracsand) represent yet another milestone in DNI's efforts and success to identify additional value to mineral resources which might exist on the Property.

While historic work and exploration by DNI concerned themselves entirely with the Second White Speckled Formation black shale and polymetallic zones therein, DNI broadened scope of its exploration to also focus on the overlying Labiche Formation black shale (previously regarded as cover waste material) as a host to valuable metallic mineralization, and more recently also merits of the Belle Fourche Formation shales (Shaftesbury Formation) beneath the Second White Speckled Formation as yet an additional host to recoverable metallic mineralization, although. In the foregoing regard, the collective historic and prior work by DNI are equivocated by DNI's 2012-2014 programs and provide only a partial discussion of the polymetallic mineralization which exists on the Property and its ultimate potential.

Recommendations: Polymetallic Shale Hosted Mineralization

DNI's leaching testwork programs completed during the past several years have successfully demonstrated that metals can be collectively extracted from DNI's polymetallic black shales, that the metals can be recovered from the leaching solutions by processing flowsheets as formulated by the Buckton PEA, and that mining operations at Buckton would have positive economics which can be further enhanced by operational optimizations. Although additional leaching testwork would expand the existing database, it will do little to advance development of the polymetallic black shales, notably the Buckton Deposit, toward production if the testwork carried out in isolation from a broader scope of work to advance toward a pilot demonstration bulk test to demonstrate recovery of metal final products from the shales. As such, it is recommended that no further leaching tests be carried out in isolation from broader work intended to advance toward pilot demonstration. It is recommended in this regard that DNI commence preliminary planning to advance toward the foregoing pilot demonstration to comprise its next stage of work on the Buckton Deposit and the polymetallic black shales elsewhere on the Property.

Within the above context, more general recommendations relating to future expansion of the existing leaching database can, nonetheless, be made. All leaching testwork completed to date has been carried out on surface samples or a handful of drill core composites, focusing mainly on the Second White Speckled Formation shale. Some tests were also carried out at the AITF on individual samples from the Labiche Formation shale and, more recently, on a sample from the Belle Fourche Formation shale.

It is recommended that no further leaching tests be carried out on individual samples of the shales, and that the next stage of leaching testwork focus on testing weighted composite samples from the Buckton Deposit, to be constructed from drill core archives on hand. It is recommended in this regard that once DNI has decided to proceed with additional leaching tests, it conduct the test on a weighted composite sample which best represents each of the three shales at the Deposit, that each be separately tested, and that a blended weighted composite be also prepared that is representative of a mixed Second White Speckled and Labiche Formation shales.

To the extent that column tests, requiring several months to complete, conducted at Canmet reported extractions similar to those from stirred tank leaching completed over a much shorter few week period, it is recommended that, once DNI has decided to proceed with additional leaching tests, the leaching of the above composite samples initially rely mostly on stirred tank tests, before expanding the tests to the column leaching tests. In the latter regard, it is also recommended that larger columns be tested to expand on Canmet's testwork which relied on 1m long columns and was intended as a preliminary foray into column testing.

The only drilling that would be warranted at this time is the drilling of holes over the 7km distance separating the Buckton Deposit and the Buckton South resource to confirm that the two mineral resources are indeed connected as suggested by countless surface anomalies and subsurface information extrapolated from oil/gas well downhole records in the area. Such drilling would, however, only serve to further expand the Buckton Deposit (likely double the size) which is already of immense size and its economics would not incrementally benefit from additional tonnage. As such, no further drilling is recommended.

The Buckton PEA successfully demonstrated that the Buckton Deposit represents a formidable long term future source of Ni-U-Zn-Cu-Co-REE-Y and that it can be mined with positive economics. Subsequent work carried out by DNI identified many operational and processing modifications which can significantly enhance economics of the Deposit by reducing reagent consumption or by enhancing metals processing parameters. DNI's work also identified significant additional economic enhancements which might be achieved through the recovery of co-product Scandium from the leaching solution. The financial latitude afforded by capture of foregoing value from Scandium might enable scaling down of the mining operations contemplated by the PEA, and help also to simplify processing circuits by excluding some lower value metals toward significant reductions in capital costs necessary to place the Deposit into production.

It is recommended that DNI internally examine iterations of the cash flow model from the Buckton PEA to identify, prioritize and optimize various enhancements identified to date in preparation for ultimately revising and updating the PEA with the help of independent consultants.

While historic work, and DNI's initial exploration focus, concerned itself entirely with the Second White Speckled Formation black shale and polymetallic zones therein, DNI broadened scope of its exploration in 2011-2012 to also focus on the overlying Labiche Formation black shale as a host to valuable metallic mineralization. The Labiche shales were previously regarded as cover waste material overlying the Speckled shale. DNI has since also recognized merits of the Belle Fourche Formation shales (Shaftesbury Formation) beneath the Second White Speckled Formation as yet an additional host to recoverable metallic mineralization, although DNI's exploration efforts have not yet commenced to evaluate this Formation other than via initial metals leaching tests.

In the above regard, the historic work, and DNI's early exploration work summarized in prior reports are narrow in their scope and, by being pre-occupied with the Second White Speckled Formation, provide only a partial discussion of the polymetallic mineralization which exists on the Property and its ultimate potential. The databases underlying the foregoing, nonetheless, contain considerable information from the Labiche and Belle Fourche Formations and a review of this data may well serve to broaden interpretations to evaluate the two foregoing additional potential hosts of polymetallic mineralization which exists on the Property.

It is recommended that DNI give consideration to re-visiting the historic databases and data from its work programs to update its interpretations of polymetallic mineralization that exist on the Property, with an eye to making a determination whether enrichment vectors might be identified for groupings of metals of economic potential with the benefit of information and guidelines from the Buckton PEA.

Recommendations: Fracsand Targets

DNI's work identified prospective fracsand targets on the Property and its July 2014 reconnaissance sampling reinforced that certain sections of the Pelican Formation sampled at the Tar River and Asphalt Creek exposures contain clean coarse sands of good roundness and sphericity which might well meet fracsand specifications. It is recommended that initial samples be selected from the foregoing sampling and be submitted for rigorous testing, and that additional sampling be carried out at those locations to collect and test large continuous channel samples to better characterize the prospective sections. It is also recommended that the southern parts of the Property which have not yet been inspected in the field be inspected to identify additional exposures of the Pelican Formation for future sampling and testwork.

Subject to favourable results from the foregoing, DNI may also elect to review and re-interpret downhole wireline geophysical logs from its 2009 subsurface stratigraphic database of oil/gas wells, in addition to those to be acquired for all additional drilling from the area, with the primary objective of identifying sections of potential coarse sands in the Pelican sections to make a determination of whether the available information might be sufficient for the estimation of volumetric resources over certain areas.

Recommendations: Land Tenure Management

The permits comprising the Property are being renewed by filing of this report and related expenditures to 2020-2022 dates, such that most of the permits over the eastern two-thirds of the Property over polymetallic shale and fracsand targets will bear a 2022 renewal anniversary. It is recommended that DNI file the necessary applications 2018-2019 to convert some of the permits, or portions thereof, over the Buckton and Buckton South polymetallic resources to mineral leases.

2. INTRODUCTION AND SCOPE

2.1 INTRODUCTION

This report (the "Report") documents exploration and R&D testwork carried out by DNI Metals Inc. (formerly Dumont Nickel Inc.) on its SBH Property (the "Property") during the period February 1, 2012 to September 30, 2014. The names "DNI" and "Dumont" are used interchangeably throughout this Report.

This Report was intended for filing toward assessment work requirements of the Metallic and Industrial Mineral Permits comprising the SBH Property as better outlined in Section 4. This Report also represents a natural milestone reached in exploration of polymetallic black shales on the Property, in addition to recognition of new targets on the Property with potential to host sand which might be suitable for use as proppant (fracsand) by the oil/gas industry.

This Report was prepared by Mr.S.F.Sabag PGeo, who is president and CEO of DNI and its Qualified Person (QP) in connection with work on the Property. The Report, however, also relies upon, and incorporates, findings from work completed by other duly qualified independent geoscientists or engineers who were retained by DNI to conduct certain work programs on its behalf under Mr.Sabag's direction or supervision. Independent stand-alone reports prepared by the foregoing third-parties are appended herein, and summaries of salient information therefrom are extracted into the main body of this Report.

DNI commenced assembly of the Property in 2007 relying on geoscientific baseline historic technical information from third-party reports, press releases, documents and mineral assessment reports, which contain historic results gathered by them from areas presently under the Property. Some of the foregoing third-party work comprise results from exploration carried out by Tintina Mines Limited which extensively explored the area during 1993-1999, which work was carried out by, or under the supervision or direction, of the author of this Report while he was vice president of Tintina. Exploration results from the foregoing work are summarized in a series of mineral assessment reports prepared by the author of this Report.

Although this Report conforms to Canadian mineral exploration best practices guidelines it is not formatted to comply with National Instrument 43-101 ("NI-43-101") nor is it intended as a NI-43-101 Technical Report for the Property. A NI-43-101 compliant Technical Report (Sabag 2008) for the Property is, however, publicly available, which Technical Report predates all field and analytical work conducted by DNI but provides, nonetheless, a solid geological foundation which consolidates all prior historic work conducted by others on the Property and DNI's reinterpretations of same.

Several NI-43-101 compliant Technical Reports are appended herein relating to four resource studies and DNI's related drilling, in addition to a preliminary Economic Assessment of one of the polymetallic zones on the Property. The foregoing reports were prepared by independent consultants.

Extensive sections from DNI's 2008 NI-43-101 Technical Report for the Property, and those from others, have been extracted and incorporated into the body of this Report.

2.2 ABBREVIATIONS & UNITS STANDARDS

Geographic locations in this Report, and in all related historic work, are expressed in Universal Transverse Mercator (UTM) grid coordinates, **using the 1927 North American Datum (NAD27[1]), Zone 12.**

Measurements in this Report are in metric units.

Permit descriptions in this Report are defined per the Dominion Land Survey system, West of the 4th Meridian, based on Townships, Ranges, Sections and subdivisions thereof.

Formational name Speckled Shale, Second White Specks and 2ws are used interchangeably in the Report to refer to the Second White Speckled Shale Formation. Formational name Belle Fourche and Shaftesbury Formation are also used interchangeably in this Report.

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[1] Nearly all databases in Alberta, though in NAD27 in the 1990's and early 2000's, are currently in NAD83.

More detailed tabulation of units and abbreviations used in this Report are shown in Section 2.3 of DNI's NI-43-101 report (Sabag 2008) for the Property.

2.3 RELIANCE ON OTHER EXPERTS

The historical work reported in this Report is summarized or extracted from numerous publicly available third-party reports all of which are referenced throughout the Report. Although the author has critically reviewed the foregoing information during preparation of this Report and has no reason to believe that the information is false or intentionally misleading, he has relied on the accuracy and integrity of the foregoing during preparation of this Report.

The author has also relied on the truth and accuracy of geoscientific information presented in the sources listed in the Reference section of this Report, including stand-alone third-party consulting reports appended in the Alberta Mineral Assessment Reports referenced.

Substantially all of DNI's analytical work is carried out by Actlabs, Ancaster, Ontario, which is an ISO certified analytical facility and an acceptable Certified Canadian Laboratory as understood under Canadian securities regulations and stock exchange rules. Laboratory analytical certificates from Actlabs' work are included herein in respective appendices along with summaries for convenience. Analytical procedures and procedural Codes related to Actlabs' work are included in Appendix A4. Actlabs analytical certificates related to any given work program are referenced in Sections of this Report ("Actlabs Rpt#"), along with the corresponding DNI work order ("DNI#SB").

Some of DNI's metals leaching and other similar R&D testwork reported upon herein was carried out by recognized research institutions such as the Bureau de Recherches Géologiques et Minières (BRGM), France, the Alberta Research Council[2] (ARC), Alberta, and CANMET Mining and Minerals Science Laboratories, (CanMet, Ottawa, which are not certified analytical facilities which strictly conform to Canadian securities regulations and stock exchange rules. Whereas the BRGM, France's leading Earth Sciences public institution recognized worldwide for its expertise in biohydrometallurgy, warranties its research, the ARC and CanMet, equally well recognized research facilities, withhold such warranty as a pre-condition to their terms of service. While the ARC's and CanMet's preference to withhold warranty is by no means a reflection of the caliber and veracity of their research, the lack of warranty may equivocate incorporation of its research results into public records for a Canadian publicly listed company as the results may not comply with Canadian disclosure rules.

Information as to title of DNI's Permits has been collected from the Alberta Department of Energy records and is believed to be accurate. The author has reviewed DNI's Alberta registration and confirms that DNI is duly registered to do business in the Province of Alberta and, as such, is entitled to hold mineral Property in Alberta.

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[2] The Alberta Research Council (ARC) changed its name to Alberta Innovates Technology Futures (AITF) in 2010.

3. PROPERTY DESCRIPTION, LOCATION, RIGHTS AND MAINTENANCE

3.1 PROPERTY DESCRIPTION, RIGHTS AND MAINTENANCE

DNI's Alberta SBH Property (the "Property") consists of twenty-five (25) contiguous Alberta Metallic and Industrial Mineral Permits (previously 36 permits) comprising an aggregate of 1,812 contiguous square kilometers (181,248 ha, previously 272,032 ha). Remote lower priority permits were allowed to lapse in March 2014 to focus future work on the eastern parts of the Property wherein the Buckton Deposit, the Buckton South resource and the Asphalt Zone are located. DNI also acquired additional adjoining permits in April 2014 to secure localities over new fracsand targets.

DNI is applying expenditures related to its 2012-2014 work reported in this Report to renew only 21 of the above permits, some of which permits it is also downsizing. **Once filing of assessment expenditures relating to work programs presented in this Report has been completed, the SBH Property will consist of a 1,218 square kilometre (121,856 ha) land position held under 21 permits (the "Permits")**. The Permits extend over an approximate 20kmx90km quadrant defined by R12-R14 and T95-T103, W4 Meridian. The Property is located over the Birch Mountains approximately 120 kilometers to the north of Fort McMurray, Alberta, and is held 100% by DNI.

The general area of interest is shown in Figure 1. A regional Property location sketch is presented as Figure 2, and a detailed Property sketch showing the Permits is presented as Figure 3. Permit descriptions and related details are summarized in Table 1.

Figure 1: General area of interest showing the Birch Mountains and SBH Property outline.

The Permits[3] were initially acquired/assembled by DNI in stages from Sep/2007 to Jan/2010. Through ongoing prioritization of portions of the Property, DNI has periodically modified the Property by downsizing certain permits or altogether abandoning certain other permits of lesser importance.

The Permits grant DNI the exclusive right to explore for metallic and industrial minerals for seven consecutive two-year terms subject to traditional assessment work performance biannually. Work requirements for maintenance of the permits in good standing are $5/ha for the first term, $10/ha for each of the second and third terms, and $15/ha for each the fourth, fifth, sixth and seventh terms. **This Report concerns assessment work expenditures being filed toward the assessment work requirements of the permits as better detailed in Section 4 of this Report.**

The Permits are held 100% by DNI, subject to a traditional royalty retained by the Province of Alberta against production revenues therefrom as better outlined in the Metallic And Industrial Minerals Royalty Regulation.

The Permits grant DNI use of the surface for the purposes of conducting mineral exploration work, subject to obtaining the necessary land use permits from Alberta Environment. Surface restrictions consist of minor activity restrictions which are discussed in greater detail in Section 3.4.

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[3] Alberta Metallic and Industrial Mineral Permits are acquired by application to the Alberta Department of Energy, and they are granted under the Alberta Mines & Minerals Act Chapter-17, and related Metallic and Industrial Mineral Tenure Regulation. Geographic locations of the Permits are defined per the Dominion Land Survey system based on Townships, Ranges, Sections and subdivisions thereof.

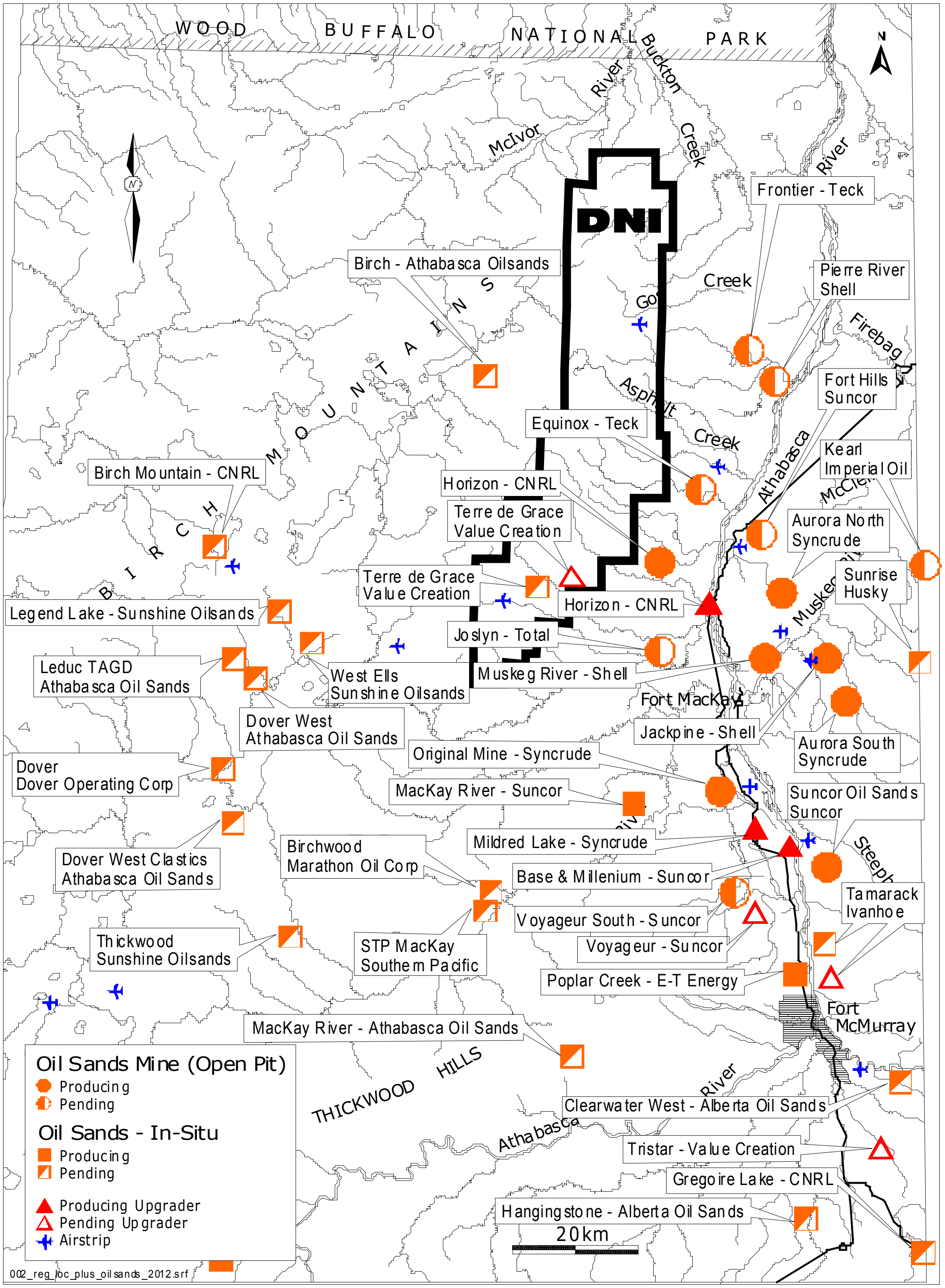

Figure 2: Regional location sketch showing DNI's SBH Property, showing also nearby oil sands operations and airstrips.

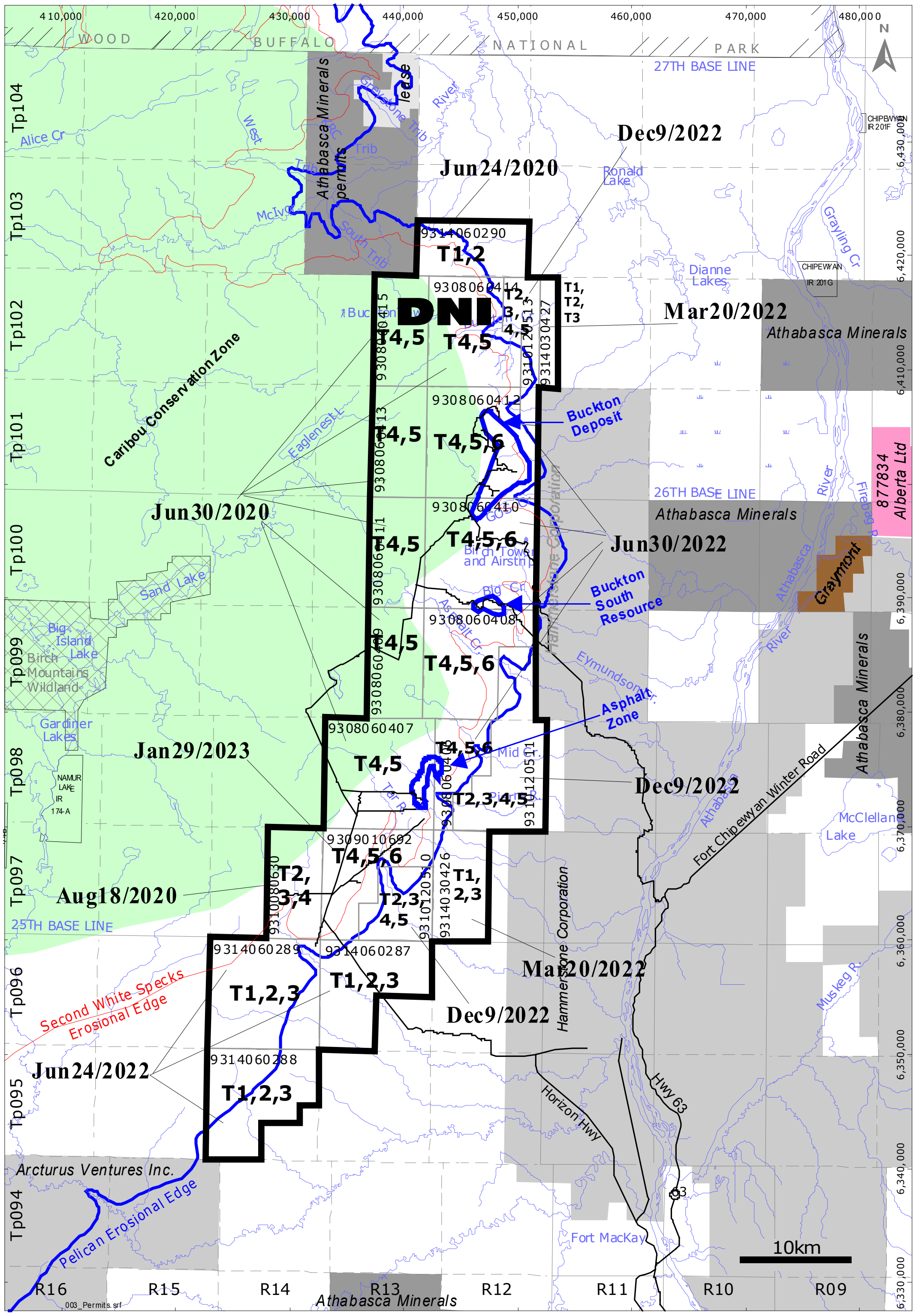

Figure 3: Sketch of DNI's SBH Property showing Metallic and Industrial Mineral Permits and anniversary dates (after filing of this Report). Adjacent mineral properties, and erosional edge of the Second White Speckled and Pelican Formations also shown.

Permit#	Commence Date	Area (ha)	Land/ Zone Description Metallic & Industrial Minerals Permit	Portion Being Forfeited (This Filing)		Portion Being Renewed/Retained (This Filing)	
				Description	Area (ha)	Description	Area (ha)
9308060406	30-Jun-08	3,328	4-12-098: 6;7;17-21;28-33	none	-	4-12-098: 6;7;17-21;28-33	3,328
9308060407	30-Jun-08	9,216	4-13-098: 1-36	none	-	4-13-098: 1-36	9,216
9308060408	30-Jun-08	7,168	4-12-099: 3-10;15-22;25-36	none	-	4-12-099: 3-10;15-22;25-36	7,168
9308060409	30-Jun-08	7,424	4-13-099: 1-17;21-28;33-36	4-13-099: 4-9; 16-17; 21; 28; 33	2,816	4-13-099: 1-3; 10-15; 22-27; 34-36	4,608
9308060410	30-Jun-08	9,216	4-12-100: 1-36	none	-	4-12-100: 1-36	9,216
9308060411	30-Jun-08	9,216	4-13-100: 1-36	4-13-100: 4-9; 16-21; 28-33	4,608	4-13-100: 1-3; 10-15; 22-27; 34-36	4,608
9308060412	30-Jun-08	8,704	4-12-101: 1-24; 26-35	none	-	4-12-101: 1-24;26-35	8,704
9308060413	30-Jun-08	9,216	4-13-101: 1-36	4-13-101: 4-9; 16-21; 28-33	4,608	4-13-101: 1-3; 10-15; 22-27; 34-36	4,608
9308060414	30-Jun-08	6,912	4-12-102: 2-11;14-22;27-34	none	-	4-12-102: 2-11;14-22;27-34	6,912
9308060415	30-Jun-08	9,216	4-13-102: 1-36	4-13-102: 4-9; 16-21; 28-33	4,608	4-13-102: 1-3; 10-15; 22-27; 34-36	4,608
9309010692	29-Jan-09	5,632	4-13-097: 5-8;16-21;25-36	none	-	4-13-097: 5-8;16-21;25-36	5,632
9310080630	18-Aug-10	9,216	4-14-097: 1-36	4-14-097: 4-9; 16-21; 28-33	4,608	4-14-097: 1-3; 10-15; 22-27; 34-36	4,608
9310080631	18-Aug-10	4,608	4-15-097: 01-04;09-16;23-26;35;36	4-15-097: 01-04;09-16;23-26;35;36	4,608	none	-
9310080632	18-Aug-10	4,608	4-14-098: 01-04;09-16;23-26;35;36	4-14-098: 01-04;09-16;23-26;35;36	4,608	none	-
9310120510	9-Dec-10	3,584	4-13-097: 01-04;09-15;22-24	none	-	4-13-097: 01-04;09-15;22-24	3,584
9310120511	9-Dec-10	7,936	4-12-098: 01-05;08-16;22-27;34-36. 4-12-099: 01;02;11-14;23;24	none	-	4-12-098: 01-05;08-16;22-27;34-36. 4-12-099: 01;02;11-14;23;24	7,936
9310120512	9-Dec-10	1,792	4-13-099: 18-20;29-32	4-13-099: 18-20;29-32	1,792	none	-
9310120513	9-Dec-10	2,816	4-12-101: 25; 36. 4-12-102: 01;12;13;23-26;35;36	none	-	4-12-101: 25; 36. 4-12-102: 01;12;13;23-26;35;36	2,816
9314030426	20-Mar-14	6,144	4-12-097: 3-10;15-22;27-34	4-12-097: 3; 10; 15; 22; 27; 34	1,536	4-12-097: 4-9; 16-21; 28-33	4,608
9314030427	20-Mar-14	9,216	4-11-102: 1-36	4-11-102: 1-5; 8-17; 20-29; 32-36	7,680	4-11-102: 6-7; 18-19; 30-31	1,536
9314030428	20-Mar-14	9,216	4-11-103: 1-36	4-11-103: 1-36	9,216	none	-
9314060287	24-Jun-14	9,216	4-13-095: 19-21; 28-33. 4-13-096: 4-9; 16-36	4-13-095: 19-21; 28-33	2,304	4-13-096: 4-9; 16-36	6,912
9314060288	24-Jun-14	9,216	4-14-095: 1-36	4-14-095: 1-3, 10-13	1,792	4-14-095: 4-9, 14-36	7,424
9314060289	24-Jun-14	9,216	4-14-096: 1-36	none	-	4-14-096: 1-36	9,216
9314060290	24-Jun-14	9,216	4-12-103: 1-36	4-12-103: 19-36	4,608	4-12-103: 1-18	4,608
		181,248		Totals	59,392	21 Permits Retained	121,856

Table 1: Summary of Metallic and Industrial Minerals Permits comprising DNI's SBH Property (after filing of this Report).

3.2 COEXISTING OIL-GAS AND OIL SANDS RIGHTS

Rights to metallic and industrial minerals, to bitumen (oil sands), to coal and to oil/gas within the region are regulated under separate statutes, which collectively make it possible for several different "rights" to coexist and be held by different grantees over the same geographic location. Coexistence of rights is an artifact of the flat-lying configuration of subsurface geological formations within the region, and the potential of different formations for hosting different resources including oil, gas, coal and minerals.

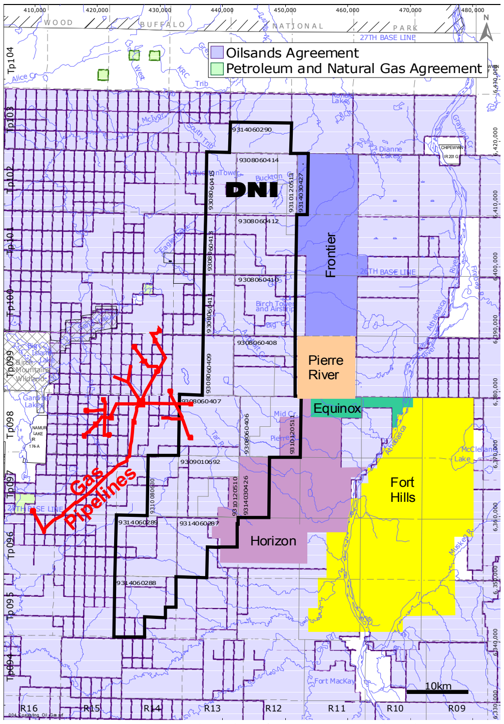

Figure 4: Summary sketch of coexisting third-party oil sands leases (shaded) under the Property. The Fort Hills, Equinox, Pierre River, Horizon and Frontier oil sands properties are highlighted. (Oil Sands permits from Alberta Energy as at May/2011).

Oil/gas leases, coal leases, oil sands leases and metallic mineral permits coexist in the Birch Mountains in the vicinity of, and under, DNI's Property. Rights to oil/gas under of the Birch Mountains are held by third parties, including several producing gas wells and distribution pipelines over a small area to the west of DNI's Property (Figure 4).

Existing oil sands permits in the vicinity of, and under, DNI's Property, are shown in Figure 4, showing also active projects consisting of: the Fort Hills oil sands mine (construction stage), the Equinox oil sands mine (planning stage), the Pierre River oil sands mine (permitting stage), the Frontier oil sands (permitting stage) and the Horizon oil sands mine (in production). Rights to oil sands in the area are confined to the McMurray Formation (approximately 400m beneath DNI's shale targets), and include rights to metals accompanying the oil sands.

Gas leases and oil sands permits over the Birch Mountains, under DNI's Property, relate to stratigraphic formations well below the metal bearing black shale formations targeted by DNI.

3.3 PRIOR OWNERSHIP

DNI commenced assembly of its land position in 2007 and acquired the Property by direct application to Alberta Energy. DNI, accordingly, holds a 100% interest therein under metallic and industrial mineral agreements with Alberta Department of Energy. Through ongoing prioritization of portions of the Property, DNI has periodically modified the Property by downsizing certain permits or altogether abandoning certain other permits of lesser importance. DNI modified the Property most recently in March 2014 by allowing prior permits adjacent to the western parts current Property to lapse, to focus all of its future efforts on developing and advancing the Buckton, Buckton South and Asphalt Zones located over the eastern parts of the Birch Mountains. DNI also acquired additional permits adjacent to the southeast and northeast portions of the Property to secure locations with potential for hosting sand which might be suited for use as a natural sand proppant in the oil/gas industries.

There are no historic mineral mines or similar operations, in the area nor on the Property. All prior, historic, activities in the area consist entirely of exploration work.

DNI's Property currently contains several historic properties previously held and explored for metals by others, notably by Tintina Mines Limited which explored them extensively in the 1990's. A detailed outline of historic work and results have been presented in Section 6 of DNI's NI-43-101 report for the Property, a summary of the foregoing is presented in Sections 6 of this Report. To maintain continuity with historic work, DNI elected to retain historic location names to facilitate referencing of prior year results by referring to the Buckton, Buckton South and Asphalt historic properties previously named and explored by

Tintina (the historic Eaglenest Property is located on permits which DNI allowed to lapse in March 2014). This convention is retained throughout this Report.

3.4 LAND USE AND ENVIRONMENTAL MATTERS

Land use in the area is regulated by the Alberta Department of Environmental Protection, which regulates issuance of land use permits for surface disturbances, with participation from a structured process of local community consultation. Due permitting (and subsequent site reclamation) is necessary for all "invasive" and mechanized work which might disturb the surface (e.g. drilling, road building).

Despite the coexistence of metallic and hydrocarbon mineral tenure in the region, conflicts in precedence of land use are minimal and are as yet untested due to the scarcity of previous exploration for non-hydrocarbon minerals.

Minor sensitivities exist in the region which affect exploration activities and land use to an extent comparable to elsewhere in Canada. These include due attention to wolf migration, moose and caribou calving seasons, traditional land use and miscellaneous trapping rights. Wood Buffalo National Park is located 15km to the north of the northernmost boundary of DNI's Property. There are no aboriginal claims pending in the region, although due consultation with five first nations groups, notably the Fort McKay community which is the nearest to the Property, is a pre-requisite for land use permitting.

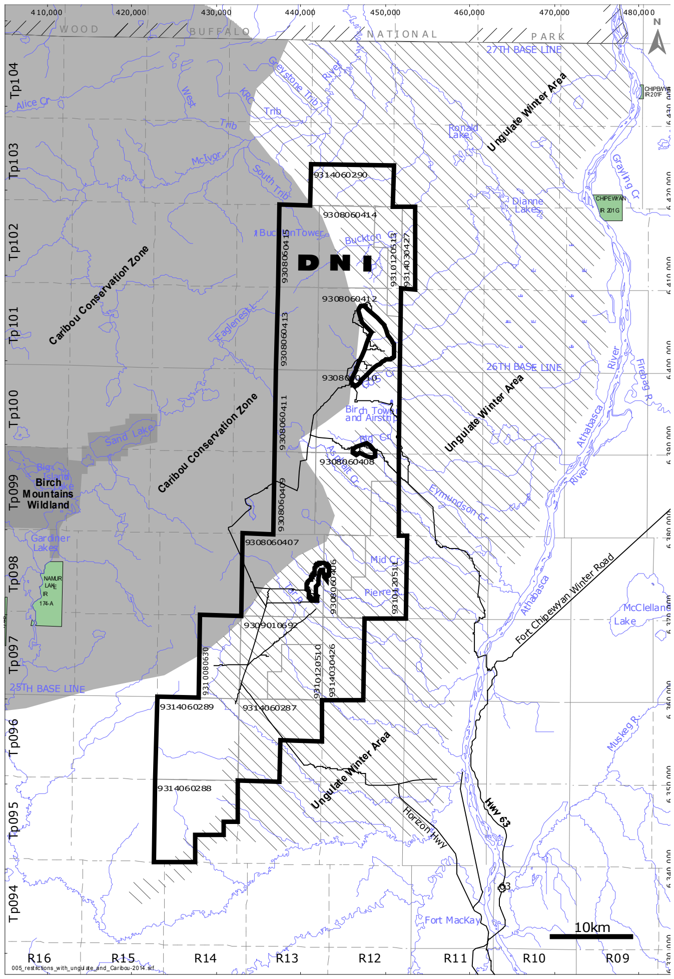

Figure 5: Summary sketch of activity restrictions on the SBH Property.

Surface restrictions consist of minor activity restrictions over the western fifth of the Property (Figure 5) in connection with caribou calving and migration routes requiring the annual recess of field activities during the four month period March 1 through July 1.

There exist known gas accumulations in the region, especially in areas surrounding Fort McMurray. Low pressure gas has been documented from the Viking Formation known to occur at depths of 100m-200m beneath surface in the Birch Mountains under portions of the Property. This Formation is lower (deeper) in the stratigraphy than DNI's polymetallic shale targets and has not previously been a hindrance to exploration. Higher pressure gas occurs deeper in the stratigraphy, in the McMurray Formation (host to Oil Sands), approximately 500m-600m below the surface of the Birch Mountains. Scattered gas pockets are common throughout region, hence taking due precaution during drilling is common practice.

Timber rights for a considerable portion of the region, including the Birch Mountains, are held by various groups under Provincial Forest Management Agreements. Rights in the Birch Mountains Area are held mainly by Alberta Pacific, necessitating compensation payable by way of timber damage assessment (TDA) in the event any clearing is made during preparation of drill pads and access.

The Property is subject to the Lower Athabasca Region Plan and is located within an area designated for miscellaneous use which includes mineral development activities.

3.5 ADJACENT METAL AND MINERAL EXPLORATION PROPERTIES

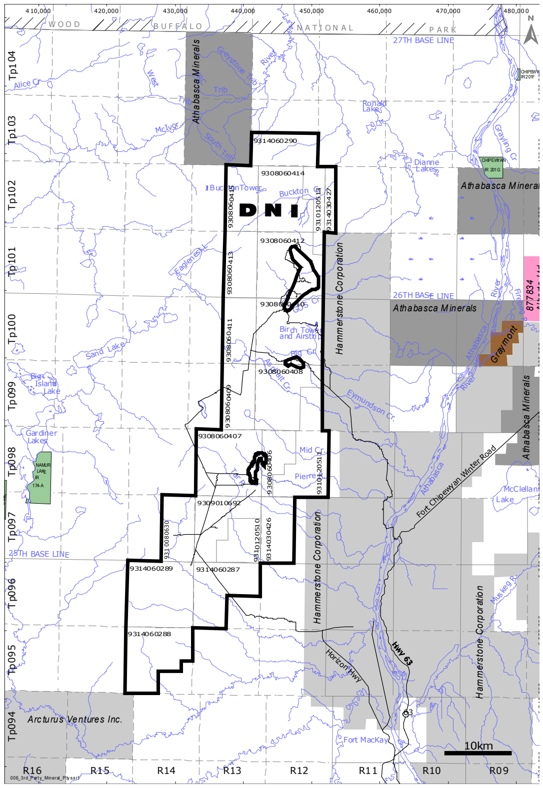

Figure 6: *Sketch of third-party mineral properties adjacent to the Property.*

Historic exploration work conducted by Tintina Mines Limited in the Birch Mountains substantially represent the only exploration efforts in search for metals in the area. Together with work conducted by the Alberta Geological Survey and the Geological Survey of Canada, it forms the only baseline geoscience available from the area.

Athabasca Minerals Inc. holds metallic and industrial mineral permits over the McIvor River and tributaries adjacent to the north boundary of DNI's Property (Figure 6) which it has been exploring for the production of sand and sand proppant (results therefrom have been presented in Alberta Mineral Assessment Report MIN20090012 (Cotterill 2009) filed by Athabasca, (also discussed in Section 18 of this Report). Athabasca has advanced portions of some its McIvor Project permits to mineral leases.

Athabasca's property represents the only recent exploration activity adjacent to DNI's Property, although exploration programs are in the planning stages over areas to the south of the Property in search of sand proppant (fracsand) by Victory Mountain Ventures Ltd. and others.

3.6 ADJACENT OIL/GAS AND OIL SANDS EXPLORATION AND DEVELOPMENT PROPERTIES

Unlike metals exploration, there has been considerable oil/gas exploration activity in and, especially, around the Birch Mountains during the past decade, in addition to oil sands exploration and development activities as many new oil sands extraction operations advance toward production.

A series of gas production wells are currently in operation to the west of the Property, serviced by a distribution network of pipelines (previous Figure 4).

A number of pending, proposed and construction stage oil sands mines surround the eastern and southern erosional edge of the Birch Mountains (Figure 4), and are adjacent to the east and south boundaries of DNI's Property. These consist of the Equinox oil sands mine (planning stage), the Pierre River oil sands mine (planning stage), the Frontier oil sands (permitting stage) and the Horizon oil sands mine (in production). The Fort Hills Oil Sands Mine, located approximately 10km to the east of DNI's Property, is under intermittent construction.

The collective of oil sands mines under construction adjacent to the Property, and those which are operating nearby, provide useful comparative operational and cost benchmarks to DNI's planning. In addition, ongoing, planned and pending enhancements to road access and local infrastructure related to the above projects will considerably enhance access to the Property.

4. DNI ASSESSMENT WORK EXPENDITURES 2012-2014

DNI commenced its exploration work on the Property prior to commencing its land assembly in September 2007, and has since actively continued its work to advance development of the Property. This Report summarizes exploration expenditures incurred during the period Feb1/2012-Sept30/2014 at the Property.

DNI filed a Notice of Intention to File Assessment Work (the "Notice") on August 18 2014, to apply assessment expenditures accumulated during the foregoing period to renew them to anniversary dates as shown in Table 2. The amounts being filed vary slightly from amounts shown in the Notice. Excess expenditures are being filed against permit# 9314030427 toward future renewals.

Permit#	Commencement	Area	Expenditure Required For Planned Renewals						Total Expenditures	Expenditures	Aggregate Exp	Renewal Requested	
	Date	(ha)	Term1 $5/ha	Term2 $10/ha	Term3 $10/ha	Term4 $15/ha	Term5 $15/ha	Term6 $15/ha	Previously Filed (to Jan31/2012)	This Report (Sept30/2014)	After This Report	Term	Renewal To
9308060406	30-Jun-08	3,328	*$ 16,640*	*$ 33,280*	*$ 33,280*	$ 49,920	$ 49,920	$ 49,920	$ 116,329	$ 116,631	$ 232,960	4, 5, 6	30-Jun-22
9308060407	30-Jun-08	9,216	*$ 46,080*	*$ 92,160*	*$ 92,160*	$ 138,240	$ 138,240		$ 230,400	$ 276,480	$ 506,880	4, 5	30-Jun-20
9308060408	30-Jun-08	7,168	*$ 35,840*	*$ 71,680*	*$ 71,680*	$ 107,520	$ 107,520	$ 107,520	$ 179,200	$ 322,560	$ 501,760	4, 5, 6	30-Jun-22
9308060409	30-Jun-08	4,608	*$ 37,120*	*$ 74,240*	*$ 74,240*	$ 69,120	$ 69,120		$ 185,600	$ 138,240	$ 323,840	4, 5	30-Jun-20
9308060410	30-Jun-08	9,216	*$ 46,080*	*$ 92,160*	*$ 92,160*	$ 138,240	$ 138,240	$ 138,240	$ 230,400	$ 414,720	$ 645,120	4, 5, 6	30-Jun-22
9308060411	30-Jun-08	4,608	*$ 46,080*	*$ 92,160*	*$ 92,160*	$ 69,120	$ 69,120		$ 230,400	$ 138,240	$ 368,640	4, 5	30-Jun-20
9308060412	30-Jun-08	8,704	*$ 43,520*	*$ 87,040*	*$ 87,040*	$ 130,560	$ 130,560	$ 130,560	$ 217,600	$ 391,680	$ 609,280	4, 5, 6	30-Jun-22
9308060413	30-Jun-08	4,608	*$ 46,080*	*$ 92,160*	*$ 92,160*	$ 69,120	$ 69,120		$ 230,400	$ 138,240	$ 368,640	4, 5	30-Jun-20
9308060414	30-Jun-08	6,912	*$ 34,560*	*$ 69,120*	*$ 69,120*	$ 103,680	$ 103,680		$ 172,800	$ 207,360	$ 380,160	4, 5	30-Jun-20
9308060415	30-Jun-08	4,608	*$ 46,080*	*$ 92,160*	*$ 92,160*	$ 69,120	$ 69,120		$ 230,400	$ 138,240	$ 368,640	4, 5	30-Jun-20
9309010692	29-Jan-09	5,632	*$ 28,160*	*$ 56,320*	*$ 56,320*	$ 84,480	$ 84,480	$ 84,480	$ 140,800	$ 253,440	$ 394,240	4, 5, 6	29-Jan-23
9310080630	18-Aug-10	4,608	*$ 46,080*	$ 46,080	$ 46,080	$ 69,120			$ 46,080	$ 161,280	$ 207,360	2, 3, 4	18-Aug-20
9310080631	18-Aug-10	-	*$ 23,040*						$ 23,040	-	$ 23,040	no filing	forfeited
9310080632	18-Aug-10	-	*$ 23,040*						$ 23,040	-	$ 23,040	no filing	forfeited
9310120510	9-Dec-10	3,584	*$ 17,920*	$ 35,840	$ 35,840	$ 53,760	$ 53,760		$ 17,920	$ 179,200	$ 197,120	2, 3, 4, 5	9-Dec-22
9310120511	9-Dec-10	7,936	*$ 39,680*	$ 79,360	$ 79,360	$ 119,040	$ 119,040		$ 39,680	$ 396,800	$ 436,480	2, 3, 4, 5	9-Dec-22
9310120512	9-Dec-10	-	*$ 8,960*						$ 8,960	-	$ 8,960	no filing	forfeited
9310120513	9-Dec-10	2,816	*$ 14,080*	$ 28,160	$ 28,160	$ 42,240	$ 42,240		$ 14,080	$ 140,800	$ 154,880	2, 3, 4, 5	9-Dec-22
9314030426	20-Mar-14	4,608	$ 23,040	$ 46,080	$ 46,080	$ 69,120			-	$ 184,320	$ 184,320	1, 2, 3	20-Mar-22
9314030427	20-Mar-14	1,536	$ 7,680	$ 15,360	$ 15,360	$ 2,459			-	$ 40,859	$ 40,859	1,2,3*	20-Mar-22
9314030428	20-Mar-14	-	-						-	-	-	no filing	forfeited
9314060287	24-Jun-14	6,912	$34,560	$ 69,120	$ 69,120				-	$ 172,800	$ 172,800	1, 2, 3	24-Jun-22
9314060288	24-Jun-14	7,424	$37,120	$ 74,240	$ 74,240				-	$ 185,600	$ 185,600	1, 2, 3	24-Jun-22
9314060289	24-Jun-14	9,216	$46,080	$ 92,160	$ 92,160				-	$ 230,400	$ 230,400	1, 2, 3	24-Jun-22
9314060290	24-Jun-14	4,608	$23,040	$ 46,080					-	$ 69,120	$ 69,120	1, 2	24-Jun-20
25 pmts		121,856	$770,560	$1,384,960	$1,338,880	$1,384,859	$1,244,160	$510,720	$2,337,129	$4,297,010	$6,634,139	21 Permits Retained	

Table 2: Expenditures and Renewals distributions for expenditures incurred on the SBH Property during the period Feb1/2012-Sept30/2014. (Prior expenditures filed shown in italics. Prior excess of $33,129 previously filed against permit# 9308060406. An excess of $2,459 being filed against permit# 9314030427.

Exploration work completed during the period Feb1/2012-Sept30/2014 consisted of a variety of efforts culminating in preparation of three mineral resource studies, concluded in 2013, expanding resources at the Buckton Zone to form the basis of the Buckton Preliminary Economic Assessment which was concluded in December 2013. An initial "maiden" mineral resource was also delineated from the Buckton South Zone. Other activities leading up to preparation of the resource studies consisted of a summer 2012 drilling program (and related permitting), and continuing leaching testwork to establish metals recoveries from the Labiche Formation, the Second White Speckled Shale Formation and the Belle Fourche Formation. Work was also carried out to evaluate the fracsand potential over certain portions of the Property. The expenditures were incurred toward the following:

(i) Bioleaching testwork program 2012, completed by AITF, testing composite drill core samples from 2010-2011 drilling to evaluate extraction of metals from the Labiche and Belle Fourche Formation shales at the Buckton Zone;

(ii) 2012 Resampling and re-analysis of Labiche Formation intercepts in historic archived Tintina 1997 drill cores archived at the MCRF (2012) completed Jun/2012);

(iii) Preparation of analytical control standard LBSTD2 and calibration reference pucks for hand held XRF used in the field as a screening tool during the 2012 summer drilling program;

(iv) A Resource Study, completed September/2012, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in the Labiche Formation cover rocks overlying the Buckton maiden resource which is hosted in the Second White Speckled Formation beneath the Labiche;

(v) Summer 2012 drilling program completed during Aug-Sep/2012, in addition to subsequent core logging, sampling and analytical work;

(vi) A Resource Study, completed Jan/2013, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations to consolidate and update previously delineated mineral resources;

(vii) A Resource Study, completed Mar/2013, for a portion of the Buckton South Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations, representing the initial "maiden" resource from the Buckton South Zone;

(viii) A Resource Study, completed August/2013, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations, to update and expand the previously estimated Buckton mineral resource, and to upgrade a portion of the Buckton Inferred resource to the Indicated resource class. The foregoing resource formed the basis for he preliminary economic assessment study for the Buckton Zone;

(ix) Preliminary Economic Assessment study of the Buckton Zone, completed in December/2013;

(x) Bioleaching and other stirred tank and column leaching testwork, concluded by CanMet Jan/2014, to explore a variety of metals and REE recovery leaching parameters;

(xi) Miscellaneous work relating to evaluating enhancements to the Buckton Preliminary Economic Assessment economic results, including evaluation of co-product Scandium;

(xii) Miscellaneous preliminary work relating to evaluation of viability of run of river hydro for streams over the eastern parts of the Property;

(xiii) Data consolidation and preliminary evaluation of fracsand potential of the Pelican Formation sandstone at the Property. July 2014 reconnaissance sampling program of select targets and related sample beneficiation and evaluation (ongoing).

Work in progress or in the planning stages consists of ongoing evaluation of enhancements to the economics of the Buckton Deposit, and ongoing work relating to review of sand samples collected in July 2014 with a view to submit select samples for rigorous fracsand testwork.

An aggregate of $4,297,010 was spent on the above permits during the period Feb/2012-Sept30/2014 (including a 10% administrative overheads provision of $390,637). Work expenditures distribution over the areas to be renewed is shown in Table 2. Renewals requested vary from a period of two to four terms. Property permits sketch showing renewal terms requested is shown in Figure 3.

Bulk of the expenditures incurred relate to DNI's 2012 summer drilling program, subsequent resource studies and a preliminary economic assessment study. The drilling program was implemented under metallic mineral exploration permit MME120002 and related water use permits #00313516, #00313517, #00313518, #00313520, #00313523, #00313524, #00313526, #00313527, #00313528, #00313533 and #00313534. The drilling was conducted over Permits #930806412, #9308060410 and #930806408. The resource studies related to resources identified on Permits #9308060412, #9308060410 and #9308060408. The preliminary economic assessment study relates to mineral resource on Permits #930806412 and #9308060410. DNI's leaching testwork was conducted on samples from the foregoing drilling or on samples from prior sampling located over the foregoing permits. Exploration work relating to evaluation of fracsand potential relates to work on Permits #9310120511 and #9310120510. Expenditures are distributed over the permits comprising the entire Property which are grouped for assessment filing purposes.

The expenditures, as related to work category, are summarized in Table 3, and also summarized per Alberta Department of Energy format. A good deal of the expenditures filed relate to drilling and related work which include analytical costs over and above those reported as routine analytical expenditures, in addition to four mineral resource studies, and a preliminary economic assessment study. The expenditures also include several leaching testwork programs whose costs are over and above general analytical/assaying category shown in the attached summary. Additional details relating to expenditures are included in Part-A of this assessment report.

Expenditures - SBH Property **Feb1/2012-Sept30/2014**		1. Prospecting	2. Geological Mapping & Petrography	3. Geophysical Surveys	a. Airborne	b. Ground	4. Geochemical Surveys	5. Trenching and Stripping	6. Drilling	7. Assaying & whole rock analysis	8. Other Work:
Data Compilation & Review	$ 126,294		126,294								
Reporting (6)	$ 313,373		313,373								
General Analytical & Assaying	$ 105,278									105,278	
Special Studies - BioLeaching	$ 201,237									201,237	
Special Studies - Resource Study	$ 223,256										223,256
Drilling Program (2012) - Consultation & Permits	$ 73,628								73,628		
Drilling Program (2012) - Roads & Pads	$ 57,415								57,415		
Drilling Program (2012) - Drilling & Geol	$ 2,026,189								2,026,189		
Drilling Program (2012) - Analytical	$ 154,629								154,629		
Special Studies - PEA	$ 535,093										535,093
Fracsand Program	$ 89,980										89,980
STTL	$ 3,906,373	-	439,667	-	-	-	-	-	2,311,862	306,515	848,328
Administrative Overhead Allowance 10%	$ 390,637	-	43,967	-	-	-	-	-	231,186	30,652	84,833
Total Expenditures Filed	**$ 4,297,010**	**-**	**483,634**	**-**	**-**	**-**	**-**	**-**	**2,543,048**	**337,167**	**933,161**

Note: Expenditures include estimated costs for July 2014

Table 3: Expenditures work category distribution summary, showing also summary per Alberta Department of Energy cost categories.

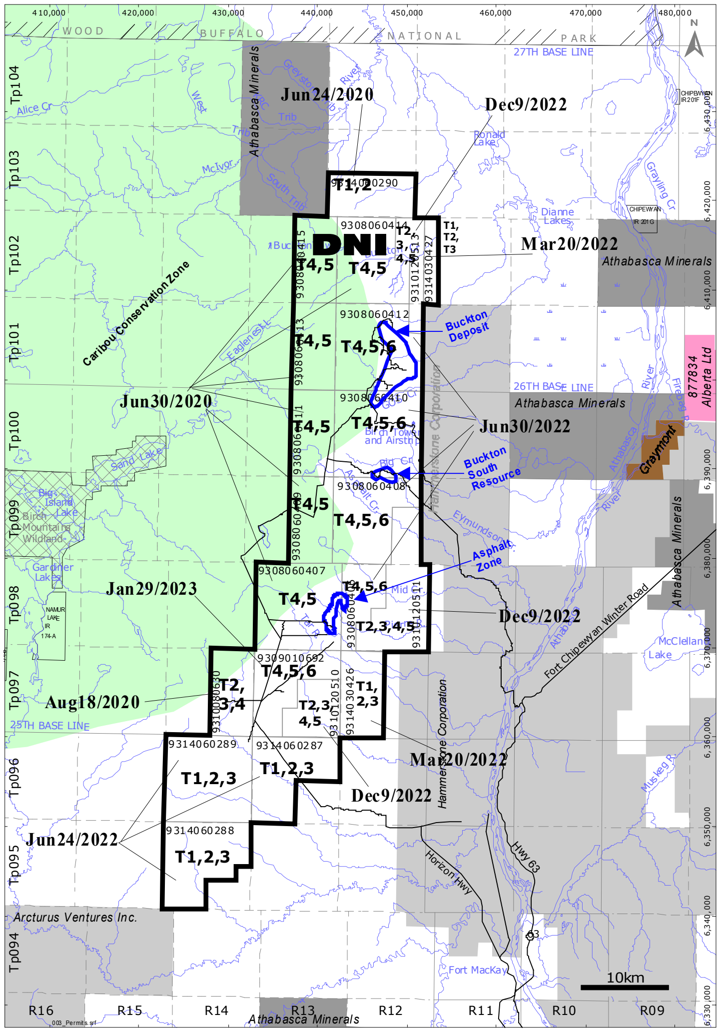

Figure 7: Sketch of DNI's SBH Property showing Metallic and Industrial Mineral Permits and anniversary dates (after filing of this Report). Adjacent mineral properties also shown.

5. ACCESS, CLIMATE, PHYSIOGRAPHY, LOCAL INFRASTRUCTURE

5.1 ACCESS AND LOGISTICS

Fort McMurray is nearly at the center of the region and is accessible by highway from Edmonton (350km away) and by regular daily commercial flights from Edmonton, Calgary and Toronto. Principal access is by road, although discussions emerge from time to time to re-commission the historic CN rail service which currently offers freight railhead just to the south of Fort McMurray.

Fort McMurray is a fast expanding and thriving town which is well supplied. It offers all support services necessary to exploration work in the area, including expediting, fixed and rotary air support, communications, medical and equipment supplies. Radio as well as telephone communications are also excellent throughout the region. Cellular telephone coverage is good throughout the region, with good reception to localities as far away as the Birch Mountains air strip and fire tower.

The Athabasca and the Clearwater rivers represent the two principle waterways in the region with countless other streams and smaller rivers draining into them, the majority of which are characterized by jagged shapes consisting of many relatively straight water courses, reflecting in most part underlying faults and joint systems. The Athabasca River bisects the region and provides relatively good water access across most of the region and also a barge service over its northern portions to the north of Fort McMurray. The Athabasca River flows north into Lake Athabasca.

Access throughout the region is relatively good, facilitated by a network of highways, secondary roads and old seismic lines which serve well as winter roads and bush roads, and in some cases are also accessible by all-terrain vehicles. Past exploration activities have occasionally gained access to the west shore of the Athabasca River by ice-bridge constructed from a locality near Bitumont, as a joint effort between forestry harvesting and mineral exploration. Future programs will, however, benefit from considerable road construction in progress by several dozen oil sand projects which are in various stages of development.

Access throughout the east and west flanks of the Athabasca River are in a state of rapid development, providing road access to several pending oil sand projects skirting the Birch Mountains over localities adjacent to the south and east boundaries of DNI's Property, to as far north as its northeast corner (the Property is surrounded on its east and south by four oils sands mines under development). Significant pending developments include Shell Canada's planned construction of a bridge across the Athabasca River to access its Pierre River oil sands mine (permitting stage), adjacent to the east boundary of DNI's Property. This will significantly enhance access to the Property, since the planned Pierre River Mine is downslope from the Asphalt and Buckton South metal bearing Zones.

The Birch Mountains have traditionally been accessed in the summer months by barge/boat via the Athabasca River, although the principal mode of access has been by rotary aircraft or by fixed wing aircraft landing on the half mile long Birch Mountain Airstrip which also houses a seasonally manned Fire Tower and telecommunications relay station. There are other private airstrips throughout the region, the nearest being Shell Canada's at its Pierre River Project, and Canadian Natural Resources Horizon oil sands project to the south of the Property. Winter access is via the Birch Mountain Winter Road which passes northerly from the village of Fort MacKay and provides a sinuous path which, over its northern parts, is better negotiable after freeze-up as it crosses several streams and over wet muskeg. The Horizon road splays from the foregoing partway and provides the principal all weather access to CNRL's Horizon oil sands mine. Many other winter roads, under road allowance agreements to oil sands companies exploring the Birch Mountains, provide good N-S access across much of the bottom three quarters of the Property.

Access throughout (within) the Birch Mountains is best by rotary aircraft, although countless old seismic lines offer adequate, albeit selective, access throughout much of the area. Past drilling has typically confined itself to the winter months when old trails and seismic lines could be cleared of snow and graded, with minimal surface disturbance, to gain access to localities within the Birch Mountains Area for the mobilization of crews and equipment.

5.2 PHYSIOGRAPHY, VEGETATION AND CLIMATE

Physiography over the general region around Fort McMurray, is variable and is characterized by low, often swampy, relief punctuated by a handful of features protruding above the otherwise flat terrain. The Birch Mountains are the most conspicuous topographic features in the region and are located in the north of the region, to the south of Wood Buffalo National Park. DNI's Property covers the eastern erosional edge of the Birch Mountains.

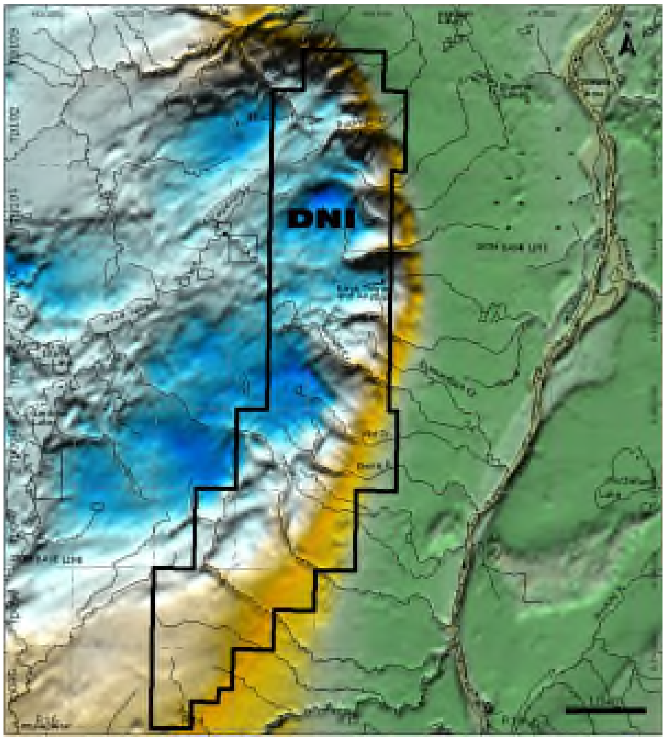

Figure 8: Topographic relief image and sketch of the SBH Property and the eastern erosional edge of the Birch Mountains. NAD27-Zone12.

By far the greatest topographic relief in the region are the Birch Mountains (elev 750m-820m asl) which protrude conspicuously some 500m-600m above the surrounding areas (250m asl), with a distinct erosional edge. The Birch Mountains are characterized by many river and creek incisions in poorly consolidated stratigraphy susceptible to active landslides and slumps. River valley incisions in the area are progressively deeper as they near the erosional edges of the Birch Mountains and the drainage in the area defines an approximate radial pattern outward from the Birch Mountains. Localized radial drainages are also present within the Birch Mountains area, characterized by creeks flowing outward from what appear to be 1km-2km diameter circular domes (Figure 8).

Given the relatively flat-lying stratigraphy in the region, the Birch Mountains provide excellent vertical exposures, especially in river valleys, across relatively long sections of nearly flat-lying stratigraphy which are otherwise buried to the west and eroded to the south and east.

The McIvor River Valley is the most formidable topographic feature in the Birch Mountains, representing a 20km long east-northeasterly trending valley which opens to a width of some 10km at its eastern extremity which is located immediately to the north of the Property. Unlike other sharply incised valleys in the Birch Mountains area, it is a relatively flat-bottomed feature dominated by the McIvor River with its many braided meanders and countless tributaries. The valley is surrounded by zones of active slumpage representing broad zones of continual sediment recharge such that the active flow channel of the McIvor River is in a continual state of flux within the central section of the river valley, shifting back and forth within several hundred meters of valley bottom. The McIvor River flows north into Lake Claire.

Glacial history of northeast Alberta is complex. In gross terms, multiple glacial advances from the east/northeast/north (Laurentide source) and the west (Cordilleran or Rocky Mountain source) have been recognized, as have been also considerable interactions between the two principal ice directions (Dufresne et al 1994). Transverse advances in glacial directions in response to localized topography have been documented and work suggests that the Birch Mountains have had a significant affect on local ice directions in the area. Generalized principal ice directions are shown in Figure 9, and the reader is referred to Considerable work completed in the area by the Alberta Geological Survey toward investigation of quaternary geology.

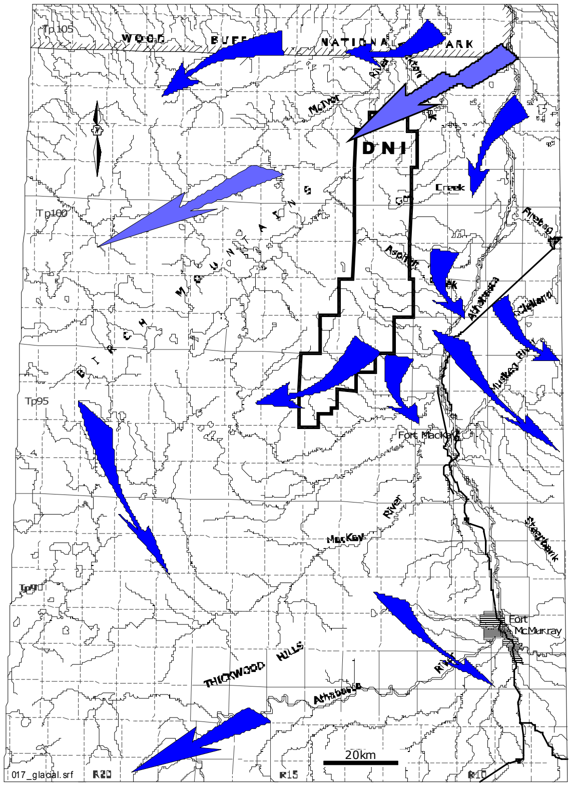

Figure 9: Summary of principal ice directions, Northeast Alberta (Dufresne et al 1994).

Glacial history of the region is complex and not clearly understood. Principal ice direction throughout the northeastern portion of the region is southwesterly, although ice flow is believed to have splayed around (and over) the Birch Mountains such that throughout the balance of the region crosscutting composite directions are common, manifested as multiple tills.

Principal ice direction throughout the Birch Mountains Area is southwesterly and can be seen in large scale glacial scouring across the area (Figure 10), although ice flow is believed to have splayed around, and over, the Birch Mountains such that crosscutting composite directions are common to its south, manifested as multiple tills.

The Buckton, Buckton South and Asphalt polymetallic shale Zones are located along the erosional edge of the Birch Mountains over the eastern part of the Property, and much of the glacial till in the area appears to be locally derived by scouring of shale units nearest surface (notably the Labiche Formation).

Surficial deposits of sand to the east of the Birch Mountains and further east (eg: Firebag River area) are believed to be glacial backwash of sand from the Pelican sandstone Formation scoured from the Birch Mountains.

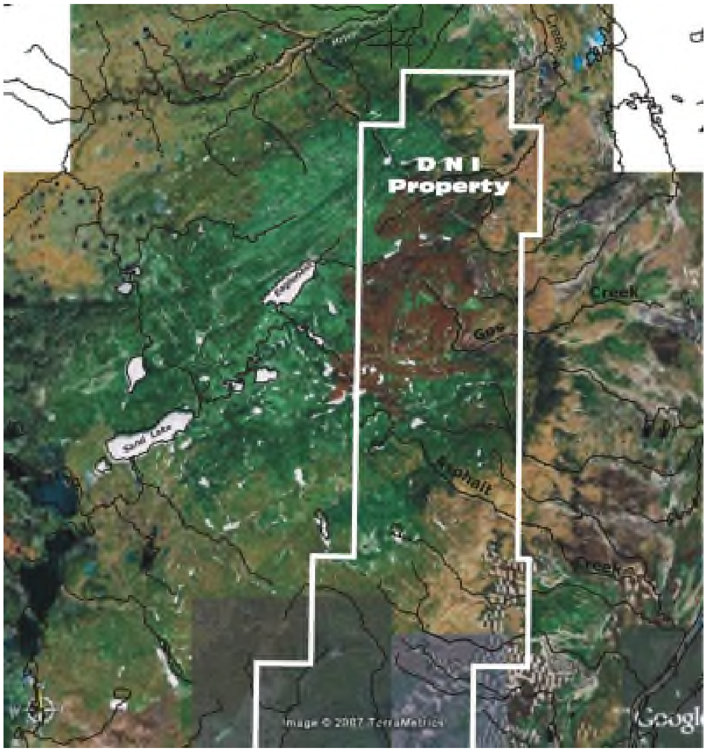

Figure 10: Remote image of the Birch Mountains showing glacial scouring. From Google Earth image bank.

Northeast Alberta weather is somewhat cooler than Canadian central provinces. Winter temperatures are cold, averaging -20 degrees C (min -40 degrees), and summers are warm averaging 17 degrees C (max 30 degrees C) and are typically short (Jun-Aug), much like northern Canada. Average annual precipitation for Fort McMurray is approximately 460mm.

The Birch Mountains, by virtue of elevation, are somewhat cooler than rest of the region, and are susceptible to fog during long periods of wet weather.

6. PRIOR EXPLORATION HISTORY

DNI commenced assembling the Property in 2007, and acquired it directly by application to Alberta Energy. DNI, accordingly, holds a 100% interest therein under metallic and industrial mineral agreements with Alberta Energy. Portions of the Property were previously held by others who carried out considerable exploration in the 1990's (notably Tintina Mines Limited).

6.1 PRIOR OWNERSHIP HISTORY - HISTORIC PROPERTIES

The Property contains the historic Buckton, Buckton South and Asphalt Properties, which were previously held by Tintina Mines Limited, and extensively explored by it during the 1990's. The Property also contains a single township permit (T97/R13) previously held by Ells River Resources, and the southern parts of an early-stage property previously held by Ultrasonic Industries. These are shown in Figure 11 and additional details of the third party tenure are summarized in DNI's NI-43-101 technical report for the Property (Sabag 2008). DNI revised the Property in March 2014 by allowing certain permits to lapse which previously contained the historic Eaglenest Property as well as other early stage zones which DNI had identified as reconnaissance targets for future exploration (McIvor West and North Lilly targets).

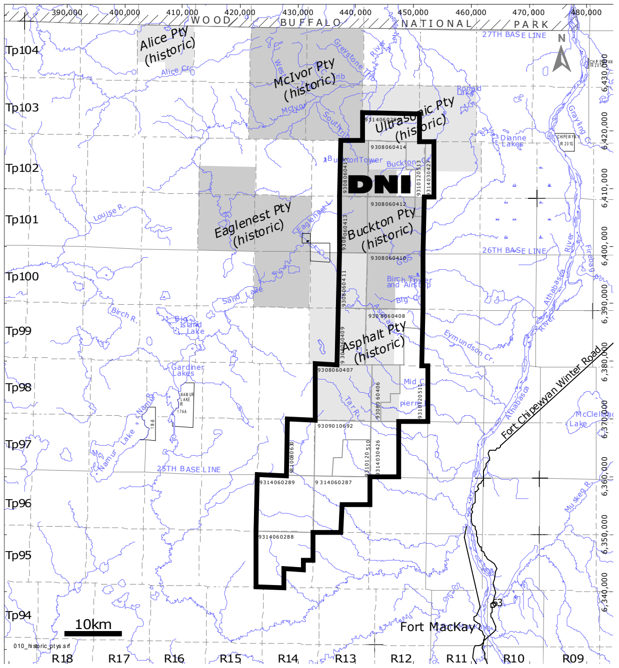

Figure 11: Property location sketch showing historic properties previously held by third parties under DNI's SBH Property Permits.

Geological databases from historic work conducted over the above properties, and their vicinities, together with work conducted by the AGS and GSC, are the only geological information available from the area obtained from the field toward the exploration for metals. They are incorporated in sections below on geology of the Property and vicinity and further details are extracted and appended herein (Appendix A5) in a stand alone summary of historic work results.

DNI's work since acquisition of the Property consists almost entirely of metals recovery testwork, drilling, resource studies and Preliminary Economic Assessment of the Buckton Zone. As such, results from the historic work field continue to represent the only legacy of geological mapping and sampling for the Birch Mountains area and the Property, although they are partly superceded in scope and substance by findings from DNI's exploration work since. In addition, none of the historic work addressed potential of identifying sand proppant at the Property.

To maintain continuity with historic work, DNI has elected to retain historic location names to facilitate referencing of prior year results by referring to the Buckton, Buckton South and Asphalt historic properties. A summary overview of previous third-party work is outlined below.

6.2 PREVIOUS THIRD-PARTY WORK– METALS, DIAMONDS AND OIL/GAS EXPLORATION

The area under DNI's Permits and the broader Birch Mountains Area, were aggressively explored during the period 1993-1999 by Tintina Mines Limited as part of its exploration programs over a much larger (3 million acre) land position it then held across northeast Alberta covering approximately 135 townships. Tintina's exploration programs were active until late 1999 and comprised multi-phased multifaceted campaigns straddling several years focusing entirely on base metals and uranium (rather than rare earths and specialty metals). Tintina collected several thousand multimedia samples in addition to conducting drilling and consolidating considerable other information from various studies, surveys and other testwork completed on its behalf by various professional geoscientists and consulting groups, and from collaborative work with the AGS and the GSC.

Tintina discovered the metal bearing black shales (DNI's polymetallic shale targets) by accident in 1995 while searching for metal bearing permeability traps in redox fronts across northeast Alberta. Tintina started its regional work in 1993, focusing on the Cretaceous-Devonian unconformity, but discoveries it made in the Birch Mountains in 1995 in carbonaceous shales shifted focus of its subsequent work to exploration of the black shales as prospective redox fronts which could accumulate considerable metals at their base. Intrinsic potential of the shales as hosts to metals was not recognized until after 1997 drilling designed to probe beneath the lower contact of the shales, but which discovered metal enrichment within the black shales themselves instead. What started out in 1993 as a search for carbonate hosted gold-copper bearing redox systems similar to roll-front Uranium deposits, ultimately led over a four year period to the discovery of a formidable metalliferous black shale assemblage at the Lower-Upper Cretaceous unconformity associated with considerable subaerial venting and previously unknown extinction markers.

While Tintina's work, and DNI's initial focus, concerned itself mainly with the Second White Speckled Formation metal enriched black shale, DNI recently broadened scope of its exploration to also focus on the overlying Labiche Formation black shale as a host to valuable metallic mineralization (see resource studies Sections 15 and 16, and Preliminary Economic Assessment Section 17). DNI also recently recognized the merits of the Shaftesbury (Belle Fourche Formation) beneath the Second White Speckled Formation as also a host to recoverable metallic mineralization, although DNI's exploration efforts have not yet commenced to evaluate this Formation other than via initial metals leaching tests (see Section 14.1).

Tintina's work spanned the full spectrum of exploration activities ranging from grass roots reconnaissance and systematic regional sampling (1994-1995), through in-fill sampling, anomaly identification and follow-up (1995-1997), to confirmation drilling (1996-1997) and preliminary metallurgical testwork, leaching and benchtests (1997-1999). Diamond indicator investigations and extensive check assaying work (1997-1999) were also completed. Results from all of these work programs are collated in a series of Alberta Mineral Assessment Reports all of which are publicly available[4]. Ells River Resources conducted minimal sampling in 1996 over its single permit property (T97/R13).[5]

Historic exploration work conducted by Tintina over DNI's Property and the broader Birch Mountains, comprise the following: (i) LANDSAT remote imagery analysis (1994); (ii) Airphoto imagery analysis (1995); (iii) Lake sediment/water geochemical sampling (1994); (iv) Stream sediment geochemical sampling (1994); (v) Stream sediment heavy mineral concentrate sampling (1994), and follow-up heavy mineral concentration testwork (1994-1995); (vi) Lake Sediment/Water geochemical infill sampling (1995); (vii) Stream sediment geochemical infill sampling (1995); (viii) Stream sediment infill heavy mineral concentrate sampling (1995); (ix) Lithogeochemical reconnaissance sampling (1994) and follow-up heavy mineral concentration; (x) Lithogeochemical reconnaissance sampling (1995); (xi) Stratigraphic compilation and modeling (1995); (xii) Soil geochemical sampling (1995); (xiii) Follow-up Soil geochemical sampling (1996); (xiv) Winter drilling (1996-1997); (xv) High resolution aeromagnetic survey (1997); (xvi) Preliminary flotation, leaching, and sequential/selective leaching tests (1997-1998); (xvii) Diamond indicator resampling and analytical work (1998); (xviii) Check assaying program (1998-1999).

Concurrently with Tintina's efforts, the Alberta Geological Survey (AGS) and the Geological Survey of Canada (GSC) also completed sampling and mapping programs over the Birch Mountains, and elsewhere over northeastern Alberta, to characterize bedrock and till. Some of the work by the AGS focused on expanding upon Tintina's discoveries of metal enriched Cretaceous shales as it might apply to Cretaceous shales elsewhere in Alberta. Some of this work was conducted under the 1992-1995 Canada-Alberta

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[4] Alberta Mineral Assessment Reports: MIN9611, MIN9612, MIN9613, MIN9802 and MIN9928.

[5] Alberta Mineral Assessment Report: MIN9605.

Agreement on Mineral Development, initially a federal project with provincial participation, though studies therefrom were completed and results ultimately released in reports by the Alberta Geological Survey (eg: AGS 2001).

Many of the samples collected by AGS over the Birch Mountains and the Property duplicated samples from exposures also sampled by Tintina and, as such, provide good corroboration for results documented in Tintina databases and reports. The concurrent work included review and sampling of Tintina drill core as well as a joint Tintina-GSC program focusing on characterizing composition and morphology of alluvial gold and related native metals and minerals discovered by Tintina in the Birch Mountains drainages. Results from all of these studies are publicly available as traditional Geological Reports, as geological articles in technical journals, and as posters/abstracts contributions to various geological conferences (eg: Ballantyne et al 1994-1995).

Tintina ceased its exploration activities in 1999 and allowed its permits to subsequently gradually lapse. There was no further activity on the Property until 2008 when the last of the original permits previously held by Tintina expired and were re-assembled by DNI during 2008.

Considerable sample material from Tintina's sampling programs were archived in storage at the Mineral and Core Research Facility (MCRF), Edmonton. The samples collectively provide a broad variety of duplicate sample material all of which are available for reference, verification and for future testwork. The archives include split drill core from Tintina's 1997 drilling over the Asphalt and Buckton Zones, in addition to material from thematic sampling suites, ranging from regional reconnaissance work to follow-up and in-fill sampling, in addition to mineral concentrates from various heavy mineral sampling surveys. Most of the drill footages were resampled by DNI during the course of its own drilling to expand databases in support of mineral resource delineation studies at the Buckton Zone (see Section 15).

Geological databases from historic work conducted by Tintina over its properties and vicinity, together with work conducted by the AGS and GSC, form the substance of the only baseline geological information available from the Birch Mountains and the Property toward the exploration for metals. The foregoing data were consolidated by DNI into its NI-43-101 report for the Property (Sabag 2008[6]), and represent the foundation of DNI's work on the Property. The historical work results straddle exploration work programs completed during six years over different geographic locations. Salient portions of the historic work are reiterated herein in sections of this Report describing geology and re-interpretations thereof by DNI in 2008. Excerpted results from the foregoing are appended herein (Appendix A5).

In addition to prior exploration for metals, Tintina also carried out field work to explore for diamonds. There has been other exploration in the area for gas in Formations deeper beneath the black shales which are DNI's targets, as there have also been considerable ongoing work over the Birch Mountains as a whole for oil sands which might be recoverable by steam assisted gravity drainage methods (SAGD). There are existing active gas operations to the west of the Property and to its south.

DNI commenced its exploration work on the Property in September 2007 prior to commencing its land assembly, and has since actively continued its work on the Property to advance its development. Work completed by DNI is described in Section 10 and 6.3. Details of prior historic work as excerpted are appended (Appendix A5).

6.3 PREVIOUS WORK BY DNI - 2008-2012

DNI commenced its exploration work on the Property in September 2007 prior to commencing its land assembly, and has since actively continued its work on the Property to advance its development. pursuant to recommendations of its NI-43-101 compilation report for the Property relying on synthesis and re-interpretation of information from prior third-party historic work.

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[6] Technical Report On The Polymetallic Black Shale SBH Property, Birch Mountains, Athabasca Region, Alberta, Canada. NI-43-101 Technical prepared for Dumont Nickel Inc. by S.F.Sabag, October 28, 2008.

While DNI's earlier work (2007-2008) mainly entailed data consolidation and review, its work quickly progressed by 2009 into extensive laboratory based activities focusing almost entirely on investigating metal extraction and recovery testwork studies to formulate an economically viable flowsheet for extraction of collective base metals from the mineralized shales. This work entailed completion of BioLeaching as well as conventional abiotic leaching testwork which advanced to column leaching testwork by 2012 (Section 14.2). Encouraged by results from the leaching testwork, DNI commenced drilling at the Property in 2010-2011 with a winter drilling program which was subsequently followed up with summer 2012 drilling (Section 13). Several resource studies were also completed delineating mineral resource over two of the six zones discovered on the Property (the Buckton and Buckton South Zones), leading to the preparation of a preliminary economic assessment of the Buckton zone in 2013 demonstrating that the Buckton zone hosts a mineable mineral deposit (Section 17).

While DNI's initial focus was on exploring and developing the base metal (Mo-Ni-V-Zn-Co-Cu) and uranium potential of the Property, DNI expanded its focus to: (i) include rare-earth elements and specialty metals (e.g., Li, Sc and Th) given incidental recovery of these rare metals as co-products during its leaching test work, and (ii) broaden scope of mineral resource definition to also include the Labiche Formation black shale overlying the Second White Speckled Shale Formation considering that it too is mineralized with metals which are recoverable by the same leaching methods as those used to extract metals from the Second White Speckled Shale (eg: the Labiche shale contains equivalent and/or higher concentrations of elements of interest in comparison to the Second White Speckled Shale and the Labiche has also positively returned recoverable metals during leaching test work).

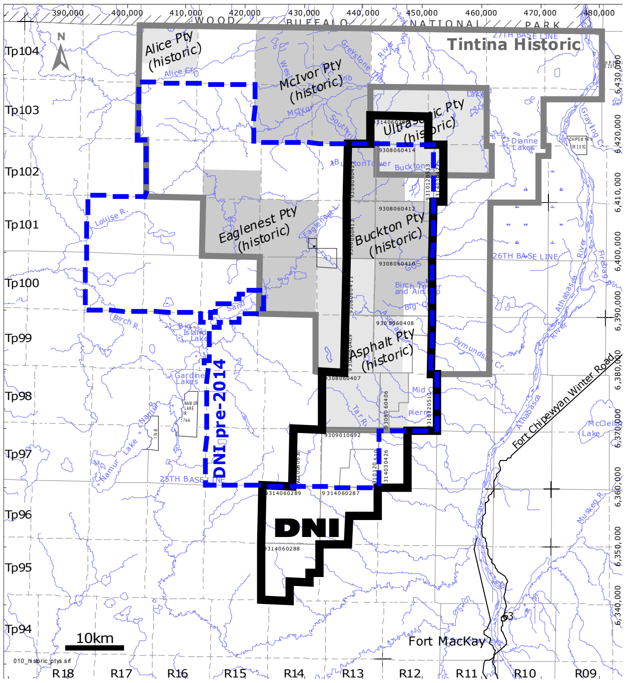


Figure 12: Property location sketch showing historic Tintina property outline in addition to outline of DNI's land position over the Birch Mountains pre-2014, and DNI current Property outline (after filing of this Report).

Exploration work completed by DNI during the period 2007-2010 consisted of a variety of efforts ranging from reconnaissance level synthesis and compilation of all available third party information (2007-2008) and its consolidation into an NI-43-101 compliant technical report (2008), to considerably more detailed localized studies (2008-2009) and analytical work (2009-2010) intended to assess metal recoveries from the shale while relying on sample material collected by DNI from the Property during the 2009 field season and on archived samples in storage at the MCRF.

A detailed report of DNI's work for the period 2007-2010 was filed in Alberta Mineral Assessment Report MIN20100017 in August 2010 (Sabag 2010), outlining considerable work completed by DNI during the period 2007-2010 including the following: (i) Regional and Property scale geological data synthesis and compilation, including synthesis of information from the Western Canada Sedimentary Basin with specific focus on northeast Alberta the Birch Mountains (2007-2008); (ii) Consolidation of the information from geological data synthesis and compilation into databases as well as preparation of a NI-43-101 compliant Technical Report for the Property (2008); (iii) Preliminary review and inventory of historic third-party drill core archived at the MCRF from the Property (2008); (iv) Review, cataloguing and resampling of historic third-party drill core archived at the MCRF from the Property (2008-2009); (v) Verification analytical work of historic third-party drill core archived at the MCRF from the Property (2009); (vi) Expansion of subsurface geological database, related synthesis and subsurface stratigraphic modeling (2008-2010); (vii) Strategic field sampling program and related analytical work (2009); (viii) A number of leaching and mineral testwork as follows: Initial cyanidation testwork (2009); Micro scaled mineral (MLA) study of samples from the Property (2009-2010); Bio-Organism cultivation, culture adaptation and BioLeaching study – ARC (2009-2010); CO_2 Sequestration study – ARC (2009-2010); BioLeaching testwork – BRGM (2009-2010); and Sulfuric acid leaching testwork (2010); (ix) Strategic field sampling program and related analytical work (2010). Results from the foregoing work programs have been incorporated into this Report.

Exploration work completed by DNI during the period 2010-2012 consisted of a variety of efforts culminating in preparation of two mineral resource studies, concluded in 2012, reporting an initial resource from the Buckton Zone. Other activities leading up to preparation of the resource studies consisted of a winter 2010-2011 drilling program (related permitting and community consultation), and continuing leaching testwork to establish metals recoveries from the Second White Speckled Shale and the overlying overburden material.

A detailed report of DNI's work for the period 2007-2010 was filed in Alberta Mineral Assessment Report MIN20120007 in April 2012 (Sabag 2012), outlining considerable work completed by DNI during the period 2010-2012 including the following: (i) Conclusion of analytical work on samples collected in 2010 (field sampling previously reported in Alberta Mineral Assessment Report MIN20100017); (ii) conclusion of bioleaching and analytical work related to sample fractions previously omitted from testing during 2009-2010 testwork completed at the AITF (previously reported in Alberta Mineral Assessment Report MIN20100017); (iii) Permitting and Community consultation related to the 2010-2011 winter drilling program; (iv) Winter 2010-2011 drilling program completed during Dec/2011-Feb/2012, in addition to subsequent core logging, sampling and analytical work; (v) Follow-Up bioleaching testwork completed by the AITF in 2011-2012 on composite drill core samples from the Second White Speckled Shale and overlying overburden; (vi) A Resource Study, completed in Oct/2011, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li contained in the Second White Speckled Formation shale, representing the maiden resource from the Buckton Zone and the first to ever be delineated on the Property; (vii) A supplemental resource study, completed in Jan/2012, relating to REE-Y-Sc-Th contained in the Buckton maiden resource; and (viii) Leaching testwork completed by the AITF in 2011-2012 to evaluate using CO_2 as a leaching solvent. Results from the foregoing work programs have been incorporated into this Report.

DNI's work during 2012-2014 expanded on its previous findings through additional metals recovery testwork, and advanced the Buckton Zone through two resource expansions to its first Preliminary Economic Assessment study. DNI also delineated an initial mineral resource at the Buckton South Zone during the foregoing period, and commenced evaluating the Pelican sandstone Formation as a potential host to natural sand proppant (fracsand) for use by the oil/gas industry.

7. REGIONAL GEOLOGICAL SETTING

7.1 GENERAL GEOLOGICAL AND TECTONIC SETTING

Alberta geology is dominated by sedimentary sequences of the Western Canada Sedimentary Basin which unconformably overlie a relatively stable Precambrian platform with localized zones of reactivation. The sedimentary pile is bounded by the Canadian Shield in the east and the thrust-fold foothills and the Rocky Mountains in the west. The Sedimentary Basin extends southward into the US Great Plains Basin, and many Albertan stratigraphies have US counterparts (Figure 13).

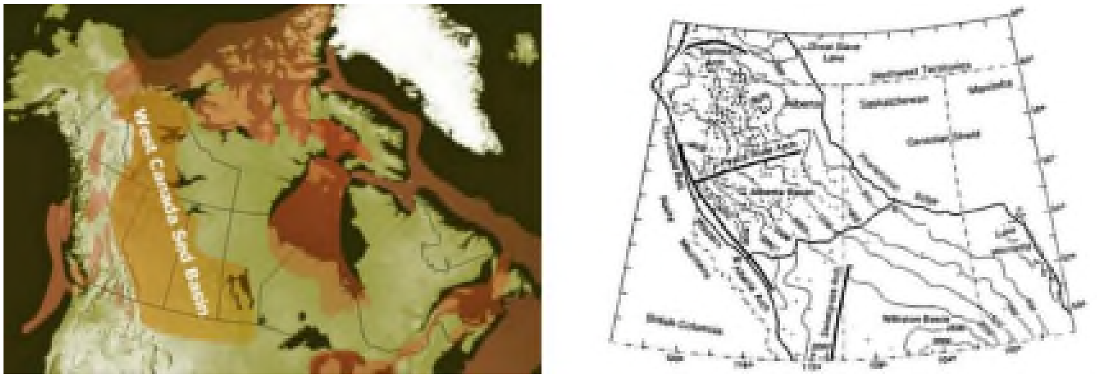


Figure 13: Generalized sketch of the Western Canada Sedimentary Basin (WCSB) across Alberta and Saskatchewan (left). General sketch of WCSB sub-basins after Bachu 1992, showing also Alberta sub-basin (right).

The Western Canada Sedimentary Basin consists of smaller sub-basins separated by a network of arches. One of the sub-basins is the Alberta sub-basin which dominates geology across northeast Alberta, consisting of a wedge of sediments, thickening from 200m in the east to over 6,000m in the west (Figure 14). Gross stratigraphy of the sedimentary pile comprises sediments unconformably overlying the Precambrian shield which is exposed approximately 150km to the northeast of Fort McMurray, and which is buried by progressively thicker sedimentary formations southward and southwestward.

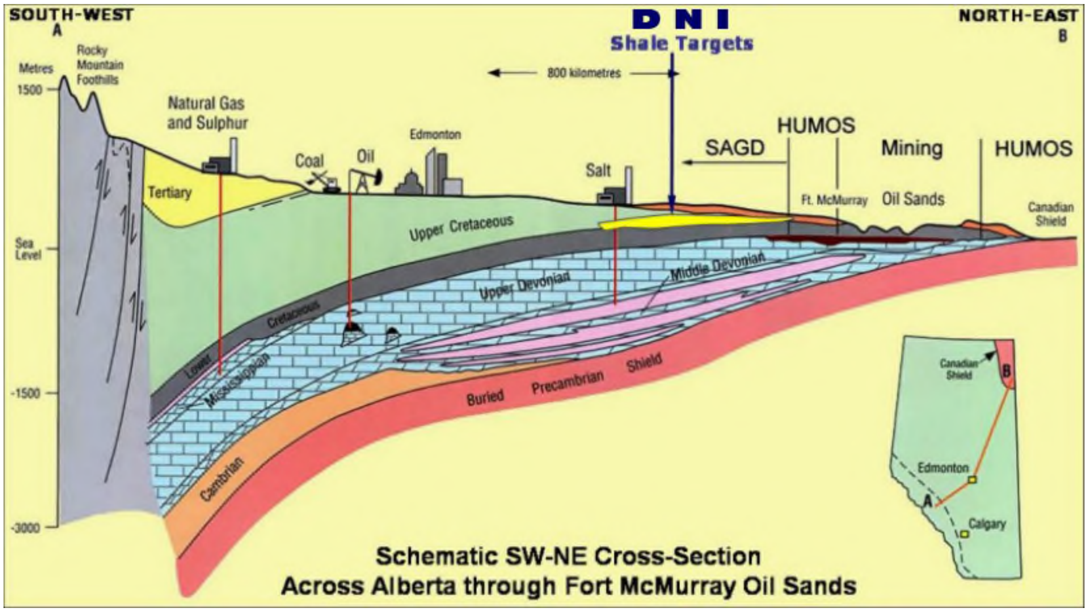


Figure 14: Generalized SW-NE cross-section sketch across Alberta (looking northwesterly). Sabag 2008

The Western Canada Sedimentary Basin across Alberta is a prolific source of minerals though it is best known for its hydrocarbon potential, notably for hosting the Alberta Oil Sands Deposits.

Tectonic setting for northeast Alberta is shown in Figure 15. Recognized basement hot-spots are shown in Figure 16. Generalized geology of northeast Alberta and regional cross section are shown in Figure 17.

In broad terms, regional geology of northeastern Alberta is represented by a sequence of substantially flat-lying Devonian carbonates overlain by equally flat-lying predominantly clastic Cretaceous and younger sediments. The Devonian sequences unconformably overlie the Precambrian Shield which is sporadically exposed only in the northeasternmost part of the region near the Saskatchewan border, from whence southwestwards the Precambrian is buried by progressively thicker sedimentary formations of the Western Canada Sedimentary Basin.

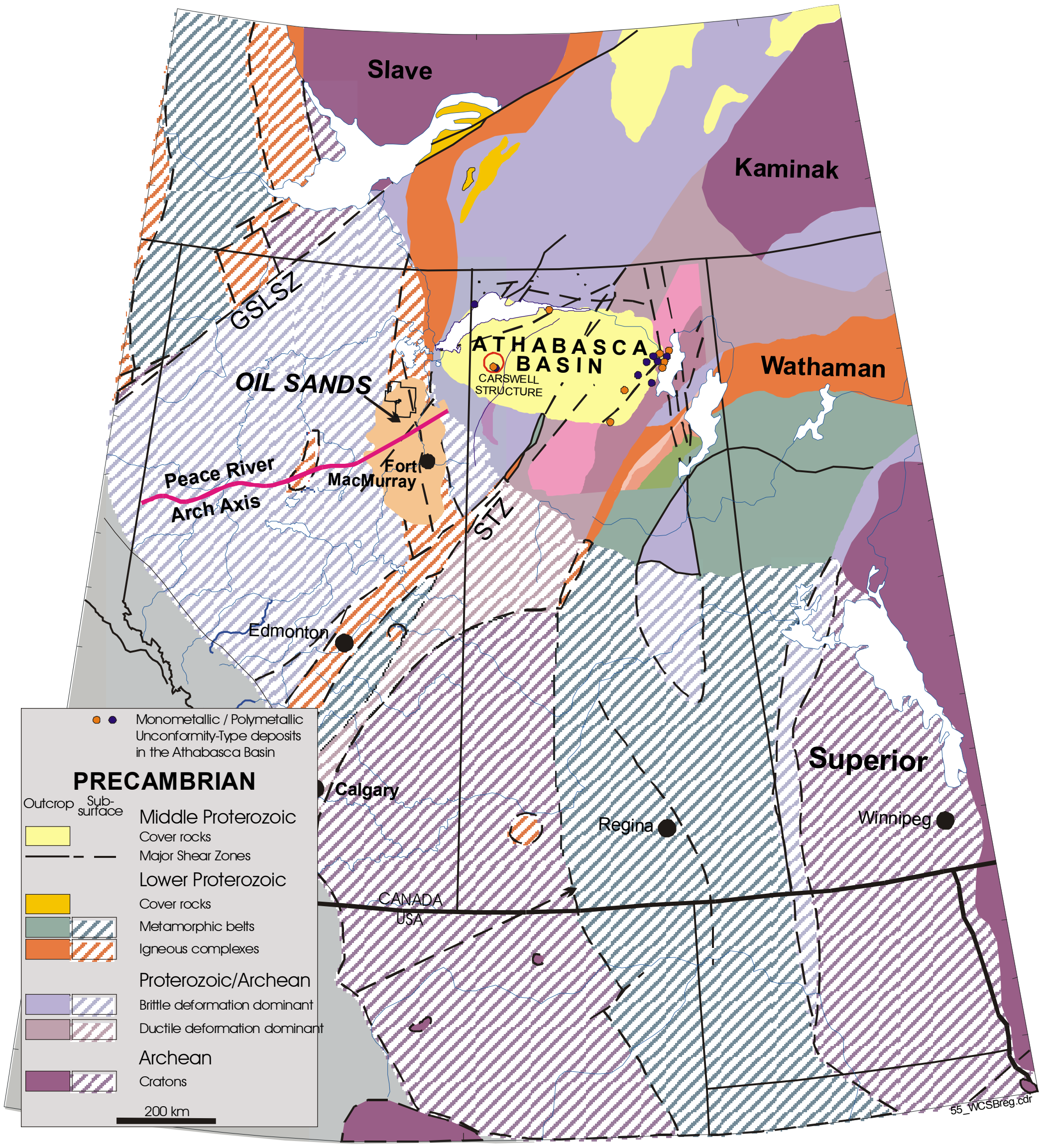
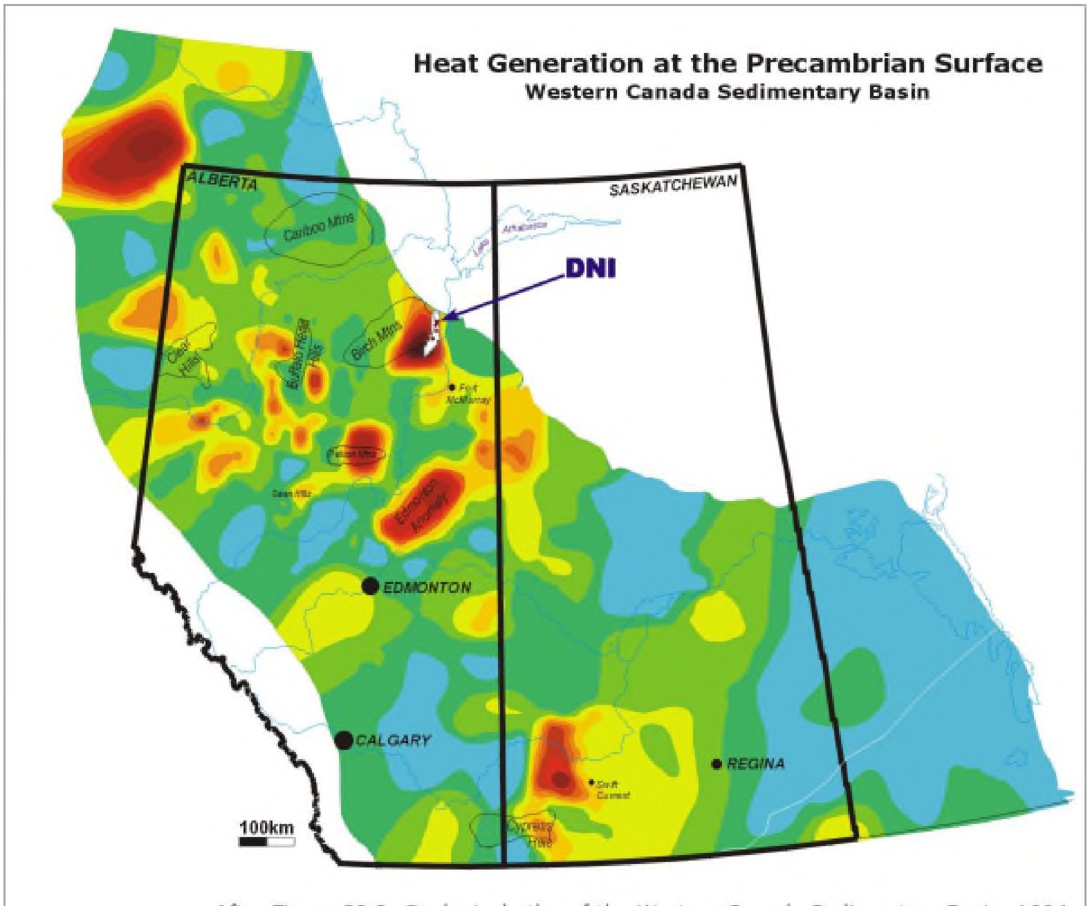


Figure 15: Generalized tectonic setting of the West Canada Sedimentary Basin, Litho-structural units of the exposed Shield, and inferred crystalline basement beneath the Western Canada Sedimentary Basin. STZ=Snowbird Tectonic Zone; GSLSZ=Great Slave Lake Shear Zone. Sabag 2008.

The sedimentary pile consists of Devonian sequences (carbonates, evaporite and red beds), which are unconformably overlain by Cretaceous clastic sediments, the lowermost of which (McMurray Formation) host to the oil sands deposits. The Lower Cretaceous sequences transition upward through a series of unconformities and disconformities to Upper Cretaceous clastic sequences separated from same by a principal extinction marker (the Fish Scales Marker Bed, Shaftesbury Formation) and a lesser known extinction horizon, the Second White Specks Formation.

Precambrian rocks underlying the region belong to the Talston Magmatic Arc (TMA) and the Rae Province. The TMA is a major crustal suture zone marking the boundary between the Archean Rae Province to the east and the Proterozoic Buffalo Head Terrain to the west (Ross and Bowring, 1991), and it is characterized by a sinuous aeromagnetic fabric consistent with the geology of its exposed portions in the northeast of the region where large anastomosing mylonitic shear zones cut through large (up to 50km diameter) granitic batholiths intruding 2.0-1.8Ga old ortho and paragneisses. The TMA can be traced north for several hundred kilometers from the Snowbird Tectonic Zone (~100km southeast of Fort McMurray) to the Great Slave Lake Shear Zone where it is displaced to the northeast and continues as the Thelon Magmatic Zone.

A number of "hot-spots" have been recognized in the Precambrian (Figure 16), believed to reflect heat generation by the decay of radioactive elements at the top of the Precambrian basement beneath the Western Canada Sedimentary Basin Property (Mossop and Shetsen, 1994). The Birch Mountains, and the Property, lie over one of the more significant hot-spots recognized.



After Figure 30.2, Geological atlas of the Western Canada Sedimentary Basin, 1994

Figure 16: Distribution of heat generation by the decay of radioactive elements at the top of the Precambrian basement beneath the Western Canada Sedimentary Basin. After Figure 30.2, Geological atlas of the Western Canada Sedimentary Basin; the Canadian Society of Petroleum Geologists and the Alberta Research Council, ARC-AGS 1994. Mossop and Shetsen 1994. Showing also DNI's SBH Property.

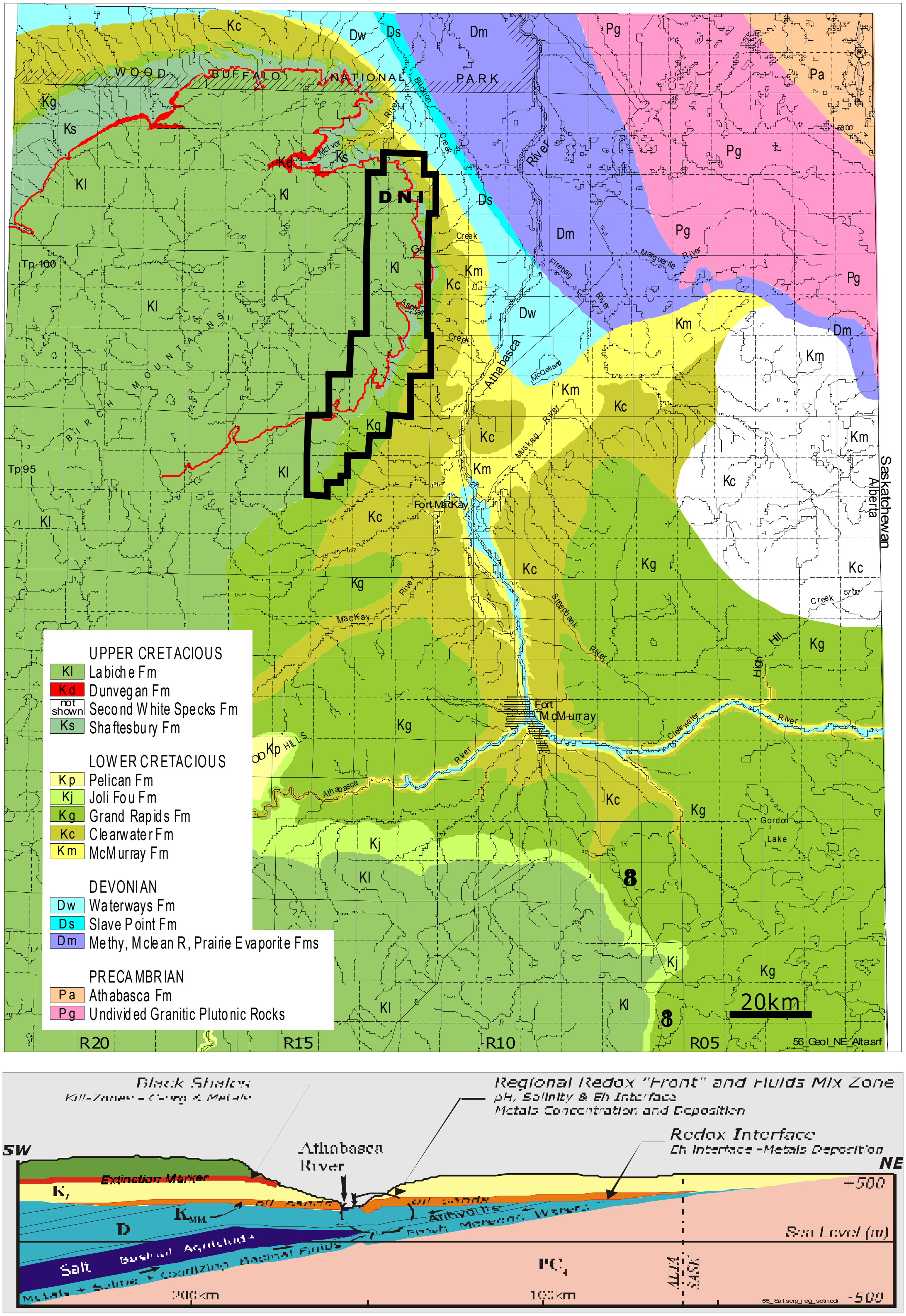


Figure 17: Generalized geological sketch of northeast Alberta, and schematic SW-NE cross-section (Bachu and Underschultz 1993). Geology after Alberta Mineral Assessment Report MIN9611, Sabag 1996a. Second White Speckled Shale is not shown but its trace is proxied by trace of the Dunvegan Formation.

Studies of Basement Heat Flow in the Western Canada Sedimentary Basin (Bachu 1992) suggest the TMA in northeast Alberta to be a relatively young (2.0-1.8Ga) magmatic arc, characterized by high geothermal gradients suggestive of an upper layer of thermal activity in the crust. The studies also show a trend of progressive increase in calculated basement heat flows north-northeastward to a maximum in northeast and northern Alberta. Anomalously high geothermal gradient characterizes the area around Fort MacKay, the outline of which approximates extents of the oil sands region. Similar geothermal anomalies characterize the area over the Great Slave Tectonic Zone underlying the Pine Point deposits.

The overall region is better known for its oil sands operations than for its mineral potential, although co-product metals (V, Ti) in oil sands deposits (and tailings) have from time to time attracted passing attention (eg: Ti recovery from oil sands tailings by Titanium Corporation).

7.2 FORMATIONAL FLUIDS AND BRINES

The Western Canada Sedimentary Basin contains approximately 1.75 trillion barrels of crude oil and is one of the most prolific hydrocarbon domains in the world. Northeast Alberta is within one of a number of its sub-basins, and is located over the northeasternmost "feather" edge of the Basin.

The Athabasca oil sands deposits are, in general terms, believed to have been concentrated by fluids flowing up-dip from the west-southwest which were trapped into local reservoirs, and were subsequently biodegraded and washed by meteoric waters introduced from local flow systems (Bachu and Underschultz 1993, Hackbarth and Nastasa 1979). Regional geological discussions of northeast Alberta are, accordingly, meaningless in isolation from discussions of formational waters and related processes.

The Devonian Prairie Evaporite Formation, occupying a substantial portion at the mid-section of the stratigraphy in northeast Alberta. It is the most prominent major hydrogeological feature throughout the region, and is a regionally extensive aquiclude which impedes hydraulic communication between surface and near surface (shallow) waters and those flowing beneath it trapped above the underlying impermeable Precambrian basement. Post-Prairie Devonian aquifers and pre-Prairie aquifers are recognized in the region, the latter characterized by northeasterly up-dip flows (southwest to northeast) and the former by flows mostly in response to local physiography. Pre- and post- Prairie fluids have markedly different chemistries. Pre-Prairie flows at the base of the stratigraphy are saline brines and flow within, and through, sedimentary sequences dominated by shales and red-bed sequences, whereas post-Prairie flows are primarily within carbonates (Figure 17). Pre-Prairie fluids are, furthermore, oxidizing fluids which are anomalously enriched in metals - Ni, V, Cu, Zn, Co, U, Ti, Fe, Mn, Au, Ag and PGE (Bachu 1994)[7].

Over portions of the region (e.g. to the north of Fort McMurray), Salt dissolution within the Prairie Evaporite is advanced, and salt removal from the unit is nearly complete to the east of the Athabasca River. The dissolution creates considerable collapse breccias, and the dissolution front (subsurface scarp) represents a major break in the aquiclude allowing the mixing of pre-Prairie formational waters with those above the formation, thereby bringing into contact waters of markedly different salinities, acidity, Eh and elemental compositions.

Transport and deposition of metals is known to be a function of Eh/pH, and their transport is dependent upon the availability of complexing agents such as halides, bisulfate or other organic species. Transporting complexes are highly dependent on, and sensitive to, variations in Eh/pH, and characteristic complexes gain prominence under different chemical conditions. Abrupt changes in ambient chemistry, therefore, present chemical “fronts” which can cause precipitation of metals via redox reactions.

The Prairie Evaporite dissolution front, as well as major structures within, and across it, represents a significant permeability breach allowing hydraulic communication between pre-Prairie metalliferous oxidizing fluids with post-Prairie “shallow” fluids, and can be regarded as a chemical environment

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[7] Distribution of Transitional Elements In Formation Waters in Northeastern Alberta: by S.Bachu, Alberta Geological Survey, Alberta Research Council; July 1994. Special Study Commissioned by Tintina Mines, included in Appendix A in Alberta Mineral Assessment report MIN9611, Sabag 1996a.

conducive to the accumulation (precipitation) of metals where: (i) basinal fluids first mix with the shallow waters of markedly different chemistry; or (ii) the basinal fluids first come into contact with (are discharged against) surfaces of contrasting chemistry, especially surfaces of reducing strata such as carbonaceous material (e.g. the oil sands or the black shales). Historic work programs by Tintina initially focused on exploration of the projection of the dissolution front across the region in search for metal deposits along redox fronts.

7.3 STRUCTURAL GEOLOGY

Structural elements in northeast Alberta are represented by a broad variety of regional and localized features, many of which are within the Precambrian but others are confined to the overlying stratigraphic sequence in general, or the Devonian in particular. Many major structures extend into Alberta from neighboring Saskatchewan (Figure 18). Broad structural highlights are as follows:

- The boundary between the Archean Rae Province (approx. 4Ga) and the much younger Talston Magmatic Arc (approx. 2Ga) is the principal tectonic feature in the region, passing through its northeastern portion. This boundary is known to have undergone some readjustments. Other major Precambrian structures in the area comprise a series of north-northwesterly features, currently only viewed as lineaments, two of which are known downdropped faults and have been correlated from measured offsets in deep oil well data.

- At least three different principal orientations of faulting are broadly recognized in the basement underlying northeast Alberta as follows: (i) northerly trending sinuous shear zones of the TMA (inferred from the aeromagnetic signatures of the area) characterized by mylonites of varying stages of deformation ranging from early, broad, Granulite facies to more brittle, late stage, greenschist facies, many of which structures are suspected reactivations of brittle structures; (ii) northeasterly extension of the Peace River Arch passing through the region, broadly through the Birch Mountains, possibly also with a splay trending through the Fort MacKay area, and seen in northeast trending offsets in aeromagnetic contours as well as in vertical offsets documented from scant drilling; (iii) northwesterly, potentially fluid bearing, faults inferred from faults observed in the Andrew Lake region of northeastern Alberta wherefrom several late stage (cross-cutting) faults with extensive silicification and hematization of crushed country rock have been documented (Langenberg, 1993).

- Studies of jointing patterns within the sediments in the area conclude that several of the patterns are conformable with structures in the underlying Precambrian basement, reflecting also several readjustments in the Precambrian which have been generally recognized (see Babcock 1975, Babcock and Sheldon 1976).

- Younger structures in the area, apparently restricted to the sedimentary sequence, are dominated by a series of regional northeasterly trending faults, several of which pass through the Fort MacKay area and vicinity. The principal member of this family of faults is a dextral strike-slip fault (Martin and Jamin 1963, see also Figure 18) whose location and trend are based on interpretations from stratigraphic correlation of oil/gas well data. Other members of the northeasterly group of linear trends are interpreted per broad surficial features and per major offsets in regional aeromagnetic data, and have not been corroborated by stratigraphic correlations, although it is of note that all metallic occurrences reported to date from the region are from locations which are at, or in the immediate vicinity of, northeasterly features, particularly where these features cross certain other Precambrian trends, or where they intersect the Prairie Evaporite Dissolution front (scarp).

- The limited drilling penetrating the Precambrian suggests that at least some of the northeasterly structures noted in the sediments reflect Precambrian features, and that offsets along the structures also include a substantive vertical component defining a complex horst/graben framework.

- By far the largest zone of disturbance in the region is the **Peace River Arch**, which is a major regional tectonic zone extending east-northeasterly from the Front Ranges in northeastern British Columbia over approximately 750 kilometers across north-central Alberta to the Saskatchewan border. It comprises a 140km wide zone of structural disturbances which were active from as early as the Late Paleozoic to the Late Cretaceous, with no readily discernible aeromagnetic or gravity expression, although a subtle crustal uplift at the Moho, partially coincident with its axis, is suggested by seismic studies. All inidications are that the Arch is not the result of a discrete Precambrian structure but is rather the end product of the confluence of a variety of complex and episodically active structures. The origin(s) of the Arch are poorly understood and mechanisms suggested as to its development range from thermal to entirely flexural (non-thermal) hypotheses. It suffices to say that it represents a deep structural feature with a complex tectonic history characterized by periodic reactivation and episodic crustal extension.

The Peace River Arch trends across northeastern Alberta within a wide zone passing to the north of Fort MacKay, across the southern parts of the Birch Mountains. Although the sedimentary record in the area suggests that it was an emergent feature during the late Devonian and principally a zone of subsidence during the Cretaceous, work completed by Tintina and the AGS in the 1990's in the Birch Mountains suggest many localized variations, suggesting also that at least portions of the north flank of the Arch were the locus of considerable uplift during the Early-Late Cretaceous transition, coincident with the development of extinction marker horizons and abundant bentonites in the area.

- Other young structures within the region comprise a variety of localized faulting and jointing patterns reflected in surface (and paleo) topography, some of which as linear trends, and others as circular features attributed to salt dissolution sinkholes. A number of the larger (20km-30km diameter) circular features are evident in LANDSAT remote sensing imagery from the region although their nature remains unresolved (eg: Figure 30 in Appendix A5).

More specific structural features, as they relate to metallic exploration in the region, were compiled by Tintina through a variety of studies including remote sensing imagery analysis and subsurface stratigraphic modeling. Principal features identified by the foregoing are summarized in Figure 18.

Some of the structural features across the region, and those crossing the Property, cannot be discussed in isolation from subsurface stratigraphy which is presented in greater detail in Sections 7.5 and 8 of this Report. The most significant of these features is the subsurface salt scarp created by salt bed dissolution within the Devonian Prairie Evaporite, and it has attracted considerable prior exploration attention. The Prairie Evaporite (Prairie Lake Fm, Middle Devonian Elk Point Group) dominates the mid-section of the Devonian sequence in northeast Alberta, and it is characterized by salt beds, anhydride and gypsum.

The Prairie salt beds are a substantive regional feature, known to extend southward into North Dakota. Parts of the salt beds have been dissolved and are responsible for the creation of collapse breccias up-stratigraphy, and dissolution within the beds defines a northwesterly linear regional band across northeast Alberta and is regarded as a dissolution front, or subterranean scarp, to the east of which salt members of the evaporite have been removed. Fort MacKay is located above the foot of the dissolution scarp, east of which salt removal is nearly complete, and it is believed that some 75m of salt were removed from the Prairie Evaporite by dissolution.

The Prairie Evaporite represents a major basinal hydrogeological feature, acting as a regional aquiclude, below which saline and metal enriched oxidizing basinal fluids flow updip northeasterly into the region until they are discharged along the dissolution scarp representing the main breach in the hydrological system (Figures 17 and 18). Leakage of fluids along faults crosscutting the Prairie Evaporite also provide localized communication between metal enriched oxidizing basinal fluids with meteoric "shallow" waters. The Prairie Evaporite Salt Dissolution scarp is, accordingly, the most significant redox front in the region as the locus of "first-contact" between ascending metal bearing oxidizing formational waters and descending meteoric or subformational flows, and also the point of contact of oxidizing metalliferous basinal fluids with any overlying organic rich stratigraphy.

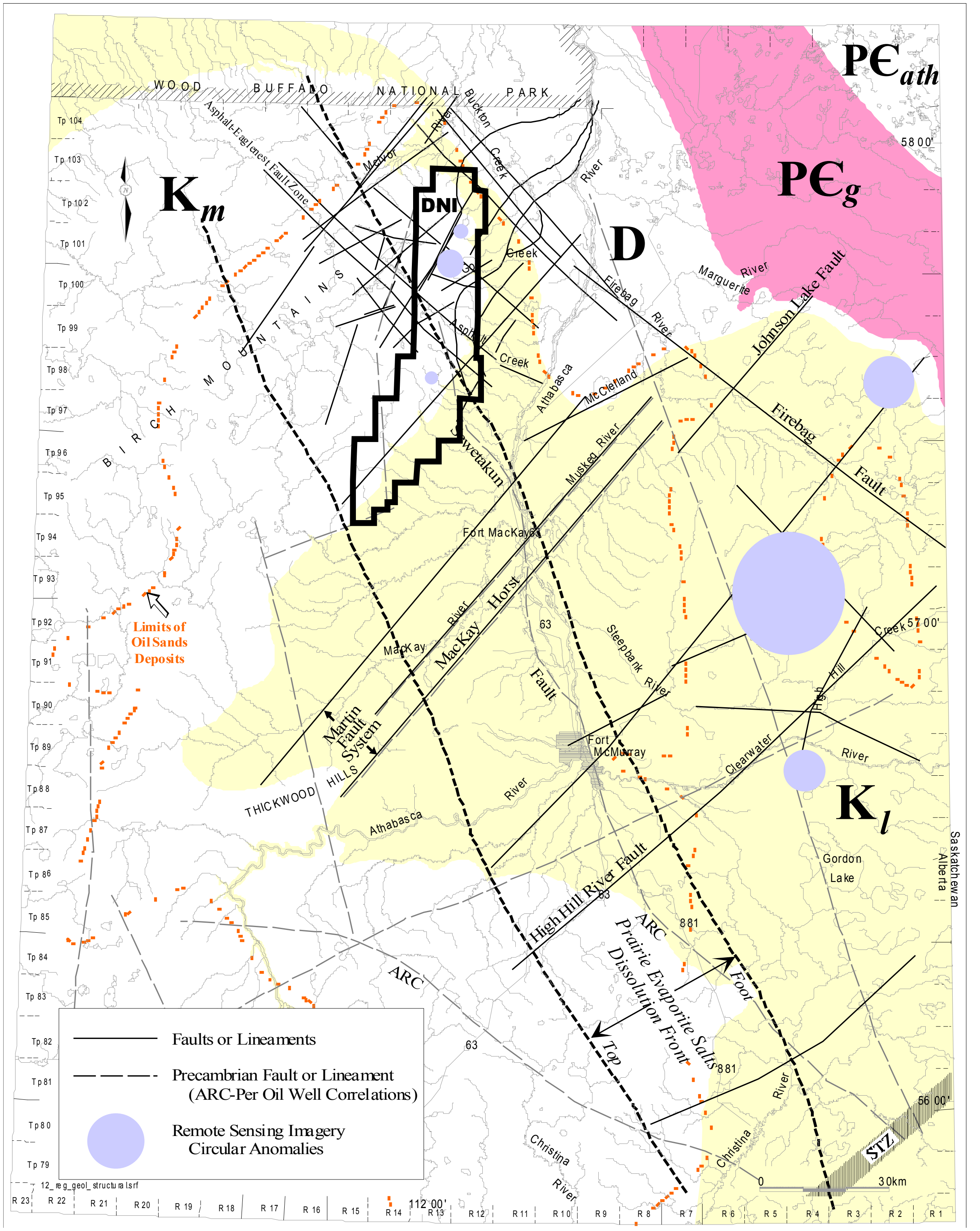


Figure 18: Summary sketch of regional structural trends and the projected trace of the Prairie Evaporite Salt Dissolution front indicating the top and foot of the projected subsurface scarp face, showing also other structural features compiled and interpreted for northeast Alberta by Tintina, including: Athabasca basin sandstone (PCath), Precambrian (PCg), Middle Devonian (D), Lower Cretaceous (Kl), and Middle Cretaceous (Km), the distribution of the oil sands deposits, principal structural elements and the Snowbird Tectonic Zone (STZ). Select circular anomalies also shown from remote sensing imagery studies. After Figure 6, Alberta Mineral Assessment report MIN9802, Sabag 1998.

Prior work across the region by Tintina Mines (1993-1995) focused on the search for gold and copper accumulations controlled by redox processes. It, accordingly, targeted junctures of the Prairie salt scarp with crosscutting features, given the potential of such localities for hosting metal accumulations deposited via redox reactions in stratigraphic and structural traps. Localities were targeted relying on extensive stratigraphic subsurface modeling of information from regional oil/gas prior drilling databases. Based on this work, the Prairie Evaporite Salt Dissolution scarp, as projected to surface, defines a surface trend which extends southeasterly across the region, southeast from Wood Buffalo National Park, across the Birch Mountains, to approximately Township 65 at the Saskatchewan border. The Birch Mountains, and surrounding areas including the areas currently under the Property, overlie junctions of the Prairie Evaporite Salt Dissolution front with other northeasterly faulting as interpreted from regional aeromagnetics. The area also generally overlies projected extensions of the Peace River Arch.

Details of the structural setting of the Birch Mountains area and the Property are discussed in Section 7.3 of this Report, and include details related to subsurface stratigraphic modeling across the Property.

7.4 REGIONAL GEOPHYSICAL OVERVIEW

Regional aeromagnetics of northeastern Alberta are characterized by a series of northerly and northwesterly features, offset along several conspicuous northeasterly trends. Many of these trends extend well into neighboring Saskatchewan.

On a sub-regional scale, aeromagnetics typically define elongate northerly trends of relatively gentle magnetic relief, locally disrupted by abrupt offsets in magnetic contours, by flexures and by dilative features. Many of these features can be correlated with other surficial as well as remote sensing imagery information and are commonly regarded to be manifestations of reactivated structures deeper within the precambrian, many with lateral offsets of 10-30km. Some of the interpreted structures are also suspected to be associated also with considerable vertical movement ranging 50m to 100m.

Preliminary reviews of digital regional aeromagnetic data were conducted by Tintina during its 1994-1995 regional exploration activities to better resolve discontinuities and lineaments (faulting) over the region and across the Birch Mountains, relying on first and second derivative manipulations of the available digital regional data. Discussion of the foregoing magnetic trends over the Birch Mountains and the Property are discussed in Section 8.6 of this Report in conjunction with subsurface stratigraphic and other related surface anomalies over the Property.

Gravity Bouguer Anomalies in the region define many trends corroborated by supporting aeromagnetics, and in general depict Bouguer configurations compatible with horst-graben subsurface geometry suggesting block movements, especially in the general vicinity of, and to the north of, Fort McMurray.

7.5 REGIONAL SEDIMENTARY STRATIGRAPHY

Overall stratigraphy within the region has been documented in most part from subsurface data collected from oil well formational picks due to the scarcity of exposures of the typically flat-lying stratigraphy which can be observed only in river valley walls. A stratigraphic column for the region is summarized in Figure 19, and a regional north-south cross-section is presented in Figure 20 which extends southerly from the McIvor River, across the Property, to as far south as Fort MacKay. A southeasterly section across the Birch Mountains and the Property is presented in Figure 21.

An overview of the sedimentary pile is described below, extending upward from the Devonian sequences at its base, to the Cretaceous Formations which dominate the Birch Mountains and the area under and around the Property.

Devonian Carbonates

Devonian units immediately overlie the Precambrian across the region, and consist primarily of near flat-lying (dipping ~4° west) Middle and Upper Devonian strata, unconformably overlain by Lower Cretaceous sequences. In the center of the region, in the vicinity of Fort MacKay, the Devonian is a 300m thick sedimentary sequence dominated by siliceous carbonates near the surface giving way, through evaporite and dolomitic rocks, to progressively more clastic units and shales or red-beds at depth, all of which are separated from the Precambrian basement by a thin regolith unit. The Precambrian paleosurface dips gently (~ 5°-7°) to the southwest, such that the Devonian sequence is thinner in the northeast portion of the region where it has an estimated thickness ranging 50m-100m in the Firebag River area.

The Devonian sequence is divided into the **Lower to Middle Devonian Elk Point**, **Middle to Late Devonian Beaverhill Lake** and **the Late Devonian Woodbend Groups**. The Elk Point Group consists of a lower succession of shales, red beds and salts and an upper section of platform carbonates and evaporites. The Beaverhill Lake Group and the Woodbend Group are composed of alternating calcareous shales and argillaceous limestones.

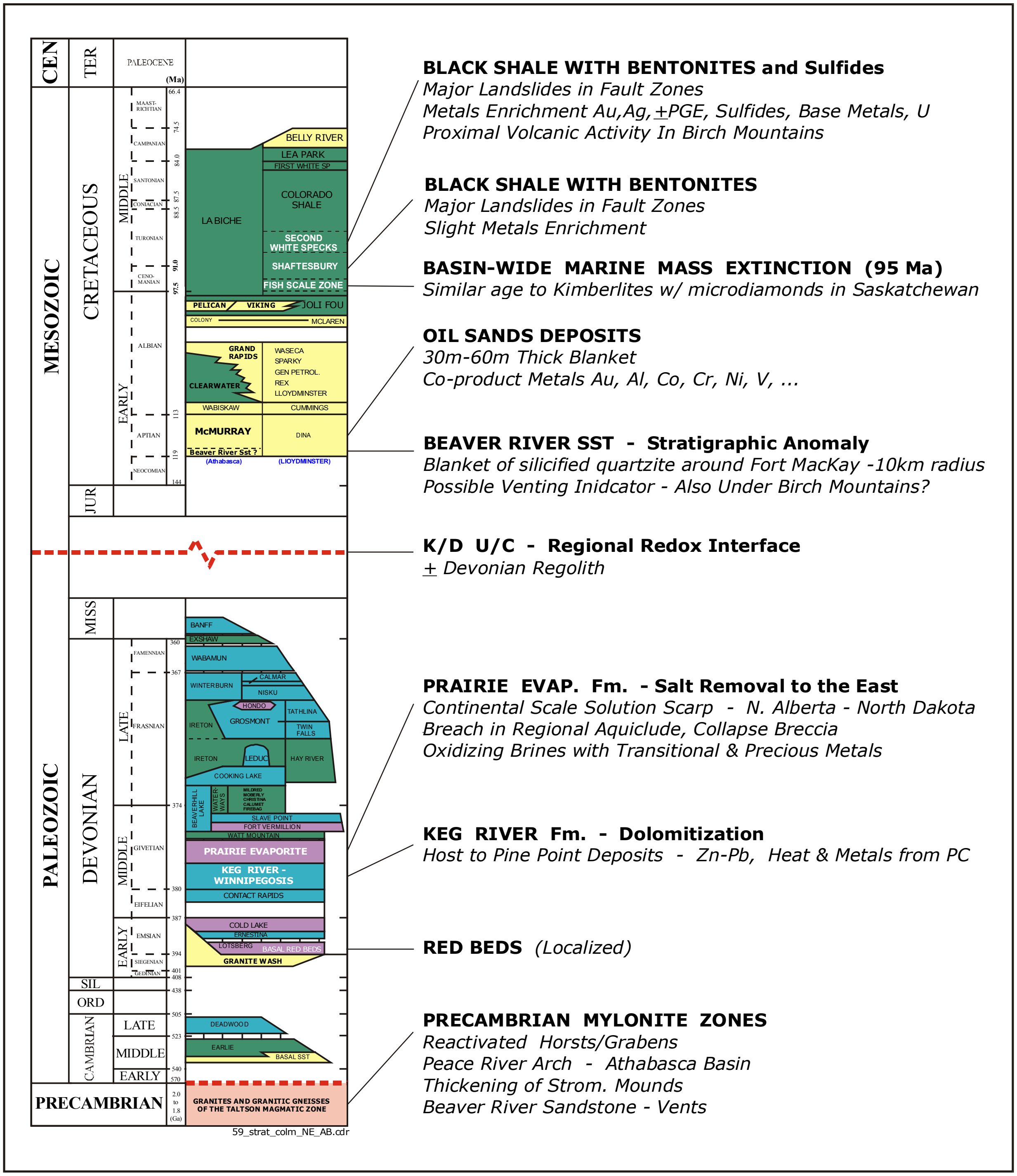
Of particular interest within the Elk Point Group are the **Keg River Formation** and overlying Prairie Evaporite Formation. In the Fort McMurray area, the Keg River Formation has been pervasively altered to sparry tan dolostone and dolomitic limestone, and can be seen in outcrops along the Firebag River just east of the Athabasca River. The Keg River Formation hosts the Pine Point Pb-Zn deposits located adjacent to Alberta’s northwest corner.

The Keg River Formation is conformably overlain by an evaporitic succession, the **Prairie Evaporite Formation**, consisting primarily of extensive thicknesses of salt and lesser interbedded anhydrite/gypsum, which thicken to the northwest from 160m to 275m. Thinner intervals along this trend are the result of reef build-ups in the underlying Keg River Formation.

Portions of the salt beds within the Evaporite horizon, have been dissolved and are responsible for the creation of collapse breccias up-stratigraphy. The Prairie salts are a substantive regional feature, known to extend southward into North Dakota, and dissolution within the salts defines a north-northwesterly trending regional linear domain regarded as a dissolution front, or subterranean scarp, to the east of which salt members of the evaporite have been removed (e.g. Fort MacKay is located over the foot of the dissolution scarp, east of which salt removal is nearly complete, and it is believed that some 75m of salt have been removed from the Prairie Evaporite by dissolution).

The eastern lateral boundary of the Prairie Evaporite Formation is the salt dissolution scarp which comprises a 20km-25km wide band extending north-northwesterly across the region (see Figure 18). The scarp defines an abrupt facies change from anhydrite to salt and has been progressing basinward since the end of Middle Devonian time. Salt dissolution within the Prairie Evaporite Formation has traditionally been credited for the bulk of karsting and brecciation in overlying Formations throughout the region, often to the detriment of the resolution of other structures of purely tectonic affinities.

The Prairie Evaporite represents a principal basinal hydrogeological feature acting as a regional aquiclude below which saline and metal enriched oxidizing fluids flow updip northeasterly into the region until they are discharged along the dissolution scarp representing the main breach in the hydrological system. Leakages of fluids along faulting crosscutting the Prairie Evaporite also provide localized communication between "shallow" waters with deeper formational fluids flowing beneath the sedimentary pile.



BLACK SHALE WITH BENTONITES and Sulfides
Major Landslides in Fault Zones
Metals Enrichment Au,Ag,±PGE, Sulfides, Base Metals, U
Proximal Volcanic Activity In Birch Mountains

BLACK SHALE WITH BENTONITES
Major Landslides in Fault Zones
Slight Metals Enrichment

BASIN-WIDE MARINE MASS EXTINCTION (95 Ma)
Similar age to Kimberlites w/ microdiamonds in Saskatchewan

OIL SANDS DEPOSITS
30m-60m Thick Blanket
Co-product Metals Au, Al, Co, Cr, Ni, V, ...

BEAVER RIVER SST - Stratigraphic Anomaly
Blanket of silicified quartzite around Fort MacKay -10km radius
Possible Venting Inidcator - Also Under Birch Mountains?

K/D U/C - Regional Redox Interface
± Devonian Regolith

PRAIRIE EVAP. Fm. - Salt Removal to the East
Continental Scale Solution Scarp - N. Alberta - North Dakota
Breach in Regional Aquiclude, Collapse Breccia
Oxidizing Brines with Transitional & Precious Metals

KEG RIVER Fm. - Dolomitization
Host to Pine Point Deposits - Zn-Pb, Heat & Metals from PC

RED BEDS *(Localized)*

PRECAMBRIAN MYLONITE ZONES
Reactivated Horsts/Grabens
Peace River Arch - Athabasca Basin
Thickening of Strom. Mounds
Beaver River Sandstone - Vents

Figure 19: Stratigraphic column - Northeast Alberta. After Figure 59, Sabag 2008; and Figure 14, Alberta Mineral Assessment Report MIN9802, Sabag 1998

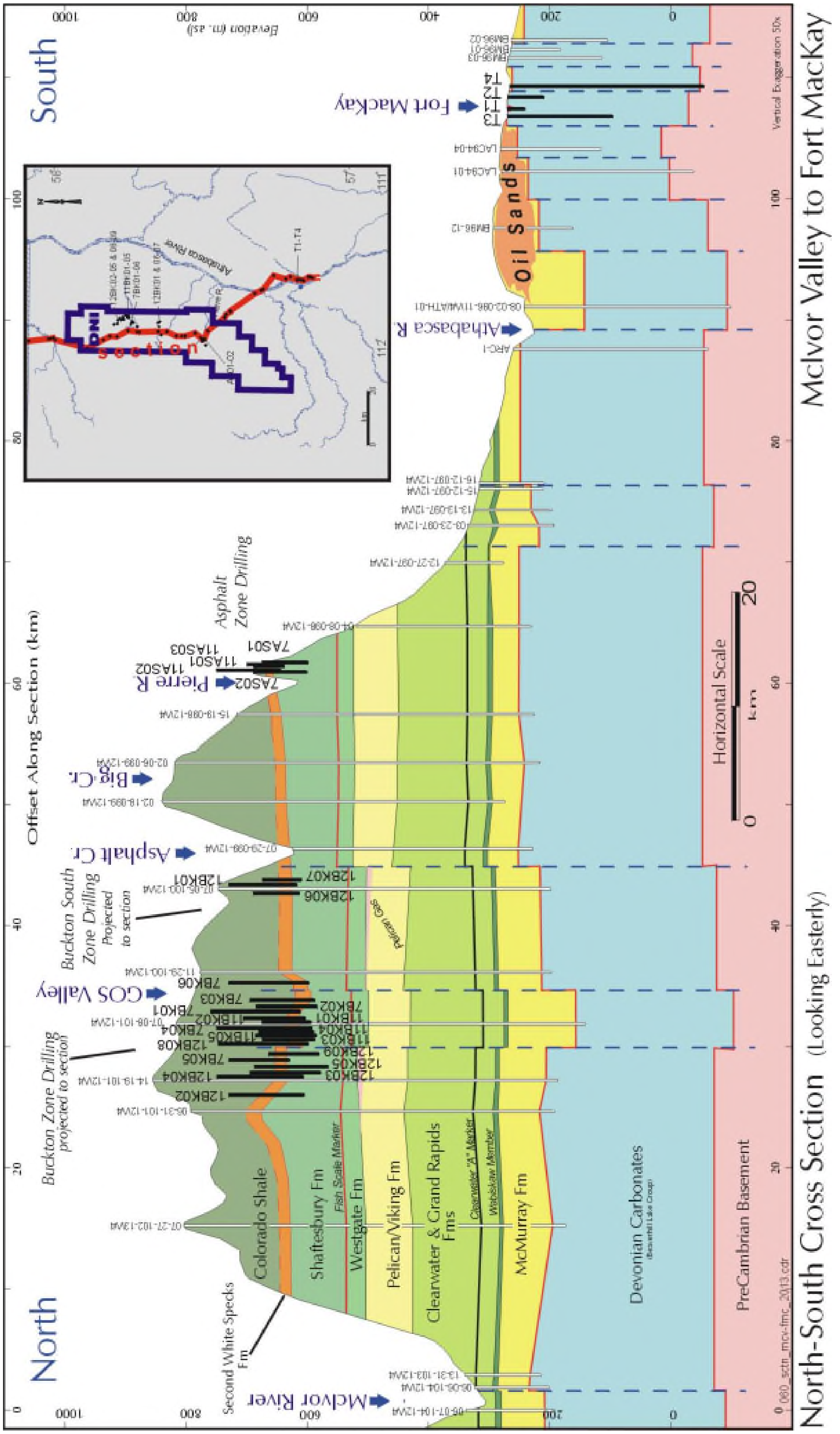


Figure 20: Regional North-South geological cross-section across the Birch Mountains and the Property, McIvor River to Fort MacKay. After Figure 60, Sabag 2008; and Figure 13, Alberta Mineral Assessment Report MIN9802, Sabag 1998.

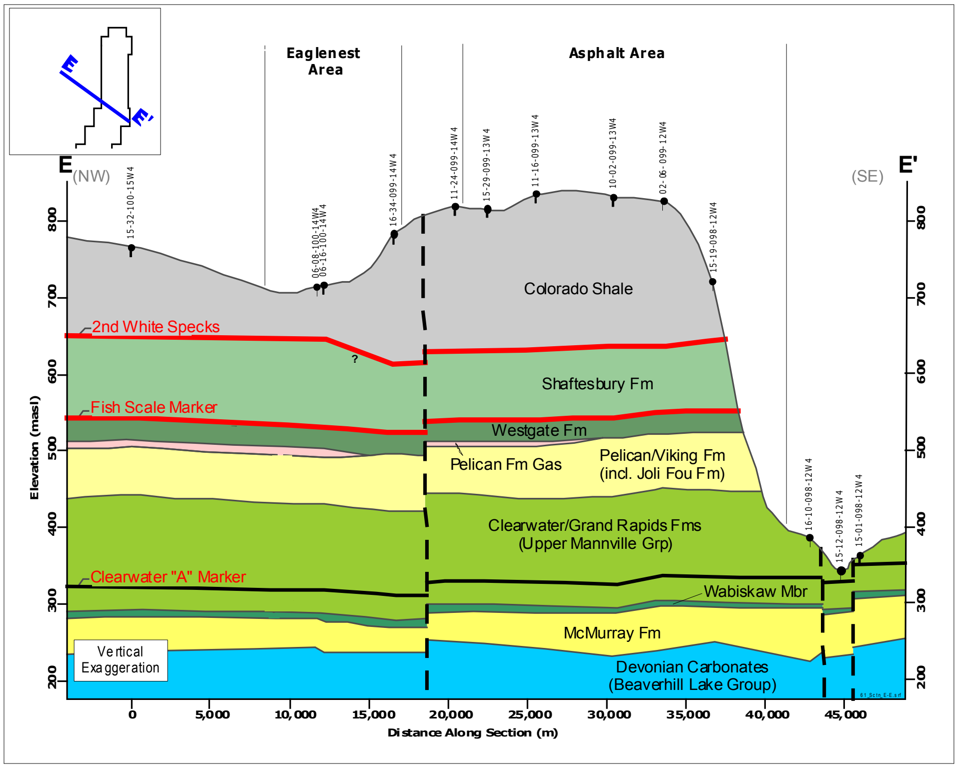


Figure 21: Cross section E-E', southeasterly across the Property and the Birch Mountains. After Figure 61, Sabag 2008; and Drawing D4.3, Alberta Mineral Assessment Report MIN9613, Sabag 1996b.

Cretaceous Clastics

The **Mannville Group** and the **Colorado (or Alberta) Group** dominate the Cretaceous sequences of northeast Alberta. The two Groups are described below.

The **Mannville Group** represents the first major depositional sequence of the Cretaceous throughout Alberta, following a long period of uplift and erosion of older strata. This Group consists in ascending order of the **McMurray Formation**, the **Wabiskaw** member, the **Clearwater Formation**, and the **Grand Rapids Formation**.

The **McMurray Formation** is the most well known of these units. It is a basal deltaic, quartzitic sandstone deposit which unconformably overlies the Devonian Carbonates. The McMurray Formation hosts the Athabasca Oil Sands deposits, centered around Fort McMurray, representing the largest accumulation of hydrocarbons worldwide. It attains a maximum thickness of approximately 50m north of Fort McMurray, but thins slightly and undergoes a facies transition to a more terrestrial sequence of shales and coal in the area of the Firebag River. Accumulations of near-economic are known to occur in the Formation.

The base of the McMurray Formation marks the Cretaceous-Devonian unconformity representing a principal temporal marker within the region, though one that is poorly understood and complicated by the localized presence of horizons and rocktypes which represent stratigraphic or temporal anomalies of unknown age and provenance. This unconformity is well-exposed near Fort MacKay, and is occupied by the Beaver River Sandstone, a silicified 1m-3m thick "blanket" of crystalline quartz sandstone of assumed Jurassic or Lower Cretaceous age. This unit, though previously assumed to be confined to the Fort MacKay area, has also been noted by Tintina in oil/gas well drill cuttings at the base of the McMurray Formation from areas of active structural and geochemical disturbances within the Birch Mountains, and interpreted to represent a decalcification marker in areas overlying venting or hot springs activity.

The Wabiskaw member is a transgressive siltstone to sandstone which overlies the McMurray Formation and is part of the transitional sedimentation into the overlying Clearwater Formation.

The Clearwater Formation is a collection of fine grained marine clastic sediments which developed as a result of a transgressive event which saw the end of the development of the McMurray delta. The Formation also contains several shale units used as stratigraphic markers, these include in ascending order (above the Wabiskaw member) the **Clearwater "A" marker** and the **"Regional Marine Shale"**.

The Clearwater Formation grades laterally and vertically into the Grand Rapids Formation which represents the contemporaneous development of a prograding barrier bar complex which thins to the northwest. The Grand Rapids Formation sandstones are easily distinguished from those of the underlying Clearwater Formation due to the usually considerable amount of glauconite and shaley interbeds in the latter.

The Lower to Middle Cretaceous (Albian-Santonian) **Colorado Group** represents the second major clastic depositional sequence throughout the Alberta Sedimentary basin. It consists of a lower section comprising the **Joli Fou Formation**, which envelops the **Pelican** or **Viking Formation**, and an upper section which is dominated by the **LaBiche Formation**. The LaBiche Formation has been subdivided into the **Westgate, Fish Scale, Belle Fourche, Second White Specks**, and **Colorado Formations**. All outcrops mapped and sampled in the historic work in the Birch Mountains, and on the Property, are exposures of the foregoing Cretaceous units.

The various members of the Colorado Group represent depositional events which extended over much of North America over a period of approximately 25-30 million years during a time when sea levels were high and the North American craton was experiencing a regional down warping (Leckie et al, 1992). As a result, the Colorado Group is dominated by marine shales which are occasionally punctuated by coarser sediments deposited during brief high-stands.

The Colorado Group reaches a maximum thickness of approximately 1500m in northwest Alberta and is generally thickest nearer the Cordillera. The erosional edge of the Colorado Group in northeast Alberta is represented by a shale dominated package of strata which reaches a maximum thickness of approximately 450m-500m in the Birch Mountains (the Colorado Group underlies all of DNI's Property in the Birch Mountains, and dominates near surface exposures). The stratigraphy of the Colorado Group is complicated by: (i) different terminologies often used in different areas; (ii) the shale dominated sequence can only be sub-divided by micropaleontological work rather than gross lithologic features, and (iii) the sequence is not well exposed and thus not well understood lithologically, particularly in northeast Alberta. The Colorado group of northeast Alberta is best described, in ascending order, in terms of the **Joli Fou, Viking (or Pelican), Westgate, Fish Scale, Belle Fourche, and Second White Specks Formations** (Bloch et al, 1993).

The Upper Albian **Joli Fou Formation** in northeast Alberta unconformably overlies the Clearwater-Grand Rapids Formations of the Mannville Group, and is composed of gray, non calcareous, marine shale with minor fine to medium-grained sandstone. The Joli Fou Formation is not well exposed in the region.

Sandstones of the **Viking Formation (Pelican Formation)** overlie the Joli Fou Formation and they are more commonly known as the Pelican Formation in northeast Alberta. The Formation represents an eastward thinning wedge of coarse clastic detritus which extends from British Columbia to Saskatchewan. In central Alberta the thickness of the Viking Formation ranges 15m-30m and is known to thicken southward to more than 75m. Within the region, the Pelican Formation represents somewhat of a stratigraphic anomaly as exposures of medium to coarse-grained, clean, quartzitic sandstones, and minor interbedded shales and mudstones, with a thickness of up to 80m have been mapped and sampled in the Birch Mountains (T104/R13/W4M). The uppermost 5-10m of the Formation are known to locally (e.g. Birch Mountains) carry accumulations of low-pressure gas which are generally uneconomic.

The remainder of the Colorado Group consists almost entirely of shale and mudstone and has been subdivided based on two distinctive basin-wide stratigraphic markers, the **Fish Scales Zone** and the **Second White Specks Zone**. The shales that conformably overlie the sandstones of the Viking Formation, but lie beneath the Fish Scale Zone, belong to the **Westgate Formation** which is described primarily from outcrops in the Peace River area, as a laminated to bioturbated mudstone to siltstone with a thickness of approximately 20m-25m. (Bloch et al, 1993). Above the Westgate Formation are the Fish Scale bearing shales of the **Shaftesbury Formation**, which represents the stratigraphic interval between the Fish Scales Zone and the Second White Specks Formation, and comprises the **Fish Scale Formation**, near its base, and the overlying **Belle Fourche Formation**.

The **Fish Scales Formation** consists of a concentration of fish debris, such as bones, teeth and scales, within shales (and lesser amounts of sandstone) with relatively high total organic Carbon values of 5-10%. It is generally less than 20m thick. The Formation can contain >75% fish debris, and may represent either an anoxic event at the Albian-Cenomanian boundary which prevented the normal decay of the bioclastic material or as a transgressive lag deposit. It is ill understood and poorly delineated.

The **Belle Fourche Formation** overlies the Fish Scale Formation, and it consists of massive shales and mudstones characterized by low amounts of total organic Carbon. A distinctive foraminiferal assemblage, and a lack of bioclastic material set it apart from the underlying Fish Scale Zone and the overlying Second White Speckled Shale (Bloch et al, 1993). The **Belle Fourche Formation**, occasionally also referred to as the Upper Shaftesbury Formation, is not well exposed in the region with the exception of many slump zones throughout the Birch Mountains which contain masses of gray shales and mudstones. Although little detailed lithological information can be extracted from mapping/sampling of the slumps, it is noteworthy that the upper portions of the Shaftesbury Formation are locally characterized by the occurrence of numerous large (0.5m-2m) rounded, calcareous concretions containing abundant sulfides (predominantly FeS) as disseminations and as nodules. Both the shales and the concretions of the Shaftesbury Formation locally contain abundant pyrite nodules which range 0.5cm-5cm and are generally rounded agglomerations of individual crystalline grains.

The **Second White Speckled Shale** (or **Second White Specks Formation**) is another basin-wide subsurface stratigraphic marker within its shales given its radioactivity which can be easily detected in down-hole drill logs. The Second White Specks is so named for the common occurrence of coccoliths. This unit, and its surrounding shales, commonly form large slumping outcrops toward the top of many of the creeks draining the Birch Mountains. It is characterized by a distinctive coarse grained (occasionally conglomeratic), sub-rounded, chert and quartz sandstone which usually contains abundant fish debris similar to that of the Fish Scale Zone. The cherty bioclastic sandstone, referred to as the Siliciclastic Bone Bed or SBB (thus differentiating it from the Fish Scales Marker bone bed - FSMB), ranges in thickness from a few centimeters up to 1.2m, and is normally calcite cemented. Just above the SBB there is usually a thin (approx. 10cm) limestone or carbonate cemented siltstone layer followed by a 5m to 10m interval marked by numerous thin (1cm-20cm) bentonite seams. The shales in this interval are characterized by elevated total organic Carbon contents exceeding 10% by weight. The shales of the Fish Scales-Second White Specks section are also characterized by the large (0.5m-2m) rounded, calcareous concretions.

The **LaBiche Formation**, overlying the Second White Speckled Shale is poorly studied given lack of exposures in the area and in the Birch Mountains. Two small and badly slumping outcrops of massive gray Colorado or LaBiche Formation shale previously observed well above those of the Second White Specks Formation have been assumed to represent LaBiche Shales and the youngest Cretaceous strata preserved in the Birch Mountains area of northeast Alberta. Locally, the LaBiche shales have been eroded due to periods of uplift (eg: micropaleontological examination of LaBiche Formation from Birch Mountains drilling at the Buckton Zone suggests an unexpected 4-6 million year gap between the top of the Second White Specks Formation and the base of the LaBiche Formation, and indicates that shales previously logged/mapped as LaBiche are likely part of the Upper Cretaceous Lea Park Formation).

The Second White Speckled and the Labiche Formation black shales comprise DNI's primary polymetallic shale targets which host zones of recoverable base metals, Uranium Rare Earths and Specialty metals (Sc,Li,Th), although given recoverability of low grade similar metals in the Belle Fourche might expand DNI's future focus to also include it in the shale package of economic interest. The Pelican sandstone Formation is the target of DNI's efforts in search of natural sand proppant (fracsand) on the Property.

8. PROPERTY GEOLOGY

8.1 INTRODUCTION

The Property is large and substantially covers the eastern one third of the Birch Mountains, including its eastern and southern erosional edges. Prioir to March 2014, the Property was considerably larger and covered the east half of the Mountains, hence geology documented from the Property is also the geology of the Birch Mountains.

To the extent that the historic work completed by Tintina in the 1990's, combined with work by the AGS of the same vintage, comprise the substance of descriptive geological knowledge from the Birch Mountains, discussions of descriptive stratigraphy over the Mountains and under DNI's Property are extracted from reports by the foregoing groups. Historic results are consolidated into a 1:50,000 general compilation Drawing #A3 for the Property in Appendix A3. The Drawing also shows details of prioir and 2012 DNI's drilling programs. General geology of the area was previously presented in Figure 17. Available exposures and "named" stratigraphic lithosections previously mapped in detail and sampled shown in Figure 23 in Section 8.6. A stratigraphic column for the Birch Mountains Area juxtaposed with lithogeochemical profiles for select elements is presented in Figure 24 in Section 8.6.

8.2 STRATIGRAPHY

Bedrock exposures throughout the Birch Mountains are scarce (<2%) and, given the flat-lying stratigraphy, they are restricted to valley walls of the many creeks and rivers which define incisions confined to the eastern and southeastern erosional edge of the Birch Mountains, over a 5-10km wide arcuate band defining a 70km long arcuate lobe of the Mountains. The available exposures throughout the area, nonetheless, enable intermittent observation and sampling across 300m-350m of Cretaceous stratigraphy, extending upward from the top of the Manville to well into the Colorado Group, straddling the Albian-Cenomanian boundary, providing exposures of five Formations: the Clearwater/Grand Rapids Formation, the Viking/Pelican Formation, the Westgate Formation, the Fish Scales Formation, and the Second White Specks Formation. Many of these Formations are eroded to the east of the Birch Mountains and to its south, and their exposures can be seen in cliffs and escarpments along the eastern and southern erosional edges of the Birch Mountains, and in valley walls of rivers and streams draining the Mountains.

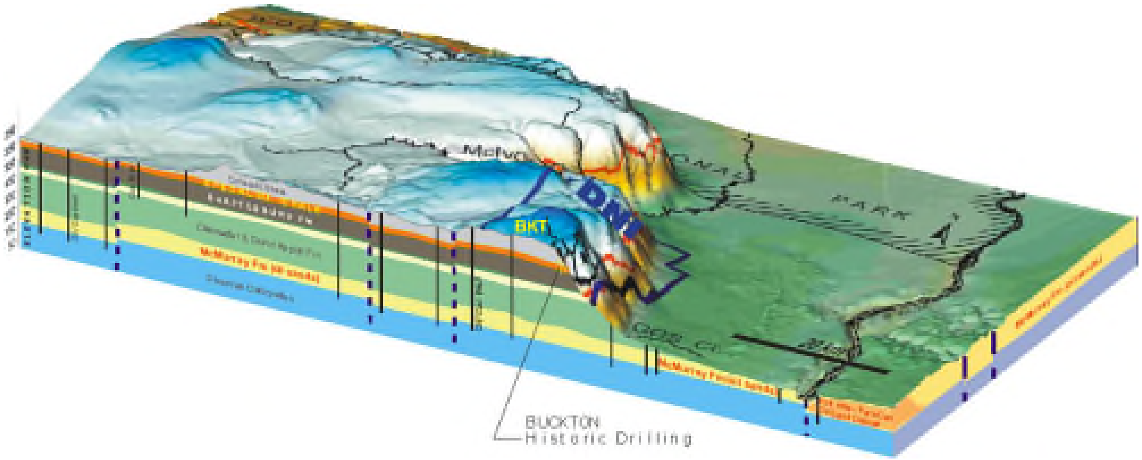


Figure 22: East-West 3-Dimensional cutaway block diagram across the Birch Mountains and the SBH Property, showing generalized stratigraphy and Buckton Zone historic drilling. After Figure 62, Sabag 2008.

The five Formations which have been mapped and sampled in historic work over the Birch Mountains are described below, capturing information from a large area extending north from the vicinity of Pierre River, through Asphalt Creek, across the Buckton Creek area to the McIvor River and its tributaries located immediately to the north of the Property.

The Clearwater/Grand Rapids Formation can be seen throughout the Birch Mountains area in exposures at the lowest elevations (e.g. KRC-A exposure, to the north of the McIvor River on KRC Tributary, the McIvor-A exposure and the South Tributary, Figure 23). The Formation is generally characterized by thinly interbedded, dirty glauconitic sandstones, silty shales and mudstones with occasional interbedded channel sandstones which range in thickness from 5-50cm and are massive in appearance with occasional cross bedding and contain lags of very coarse grained sand with coal, occasional bivalve coquina, and locally abundant ammonites (e.g.McIvor-A, Figure 23). The interbedded sandstones and shales are locally cut by channel-filled sands which are often carbonate cemented and appear as prominent iron stained pods between 10-50cm in thickness and 1-5m in width. Minor disseminated pyrite has been observed in samples from this unit.

The Viking/Pelican Formation is shown in the regional geology map of northeast Alberta (Green et al, 1970) to be part of the Grand Rapids Formation which is clearly not the case. This Formation has been mapped and sampled in the Birch Mountains at ten lithosections located along Pierre River, Mid Creek, Asphalt Creek, Buckton Creek and Greystone Creek. By far the best lithosections are located in the Asphalt and Greystone Creek valleys. These exposures are characterized by sections of a clean, unconsolidated, medium to coarse grained, well rounded, massive, quartzitic sandstones with minor interbedded shales. The predominance of quartz and its massive appearance are distinctive features which differentiate this Formation from the glauconitic sands of the underlying Clearwater Formation. Based on outcrop and subsurface measurements, the Formation has a relatively consistent thickness in the area varying 40-45m.

The Pelican Formation is poorly consolidated and contains 20m-30m thick sections believed to be channel sands consisting of coarse clean white sand which might have potential for use as sand proppant (fracsand).

The contact between the Pelican Formation and the overlying Westgate Formation shales can be seen in lithosections Mid Creek-B, Asphalt-A to -E, and Greystone-B (Figure 23), and is characterized by a 5m of interbedded quartzite and mudstone with abundant iron staining which is progressively more pervasive nearer the contact. Minor silicification has been observed at the top of the Formation at Greystone-B, and pervasive iron staining along with massive "manganese wad" development has been noted at Mid Creek-B. While no significant geochemical anomalies have been identified in the Pelican Formation, highlights from historic work include 2 samples from a 1m(±) thick shale bed exposed near the top of the Greystone-B lithosection, with 18.7% and 22.7% organic Carbon. Other highlights include up to 10ppb Au at Asphalt-E, 53ppm Cu and 43ppm Co on Asphalt Creek, 153ppm V at Greystone-B, and 227ppm Zn at Asphalt-A.

The Westgate Formation in the area is represented by a handful of poor exposures of badly slumping shales and mudstones which apparently overlie the Pelican Formation and which are devoid of fish debris and can hence be assumed to underlie the Fish Scales (or Shaftesbury) Formation. The Westgate Formation has been characterized (Bloch et al 1993) as a laminated-to-bioturbated, heterolithic mudstone to siltstone that typically contains less than 2% organic Carbon and underlies the Fish Scales Zone (or Formation). Identification of the Westgate Formation from field relationships alone has to date proven difficult due to the lack of a diagnostic lithological break between it and the overlying Shaftesbury Formation, and due to its unconsolidated nature.

The full extent of the Formation is exposed in the Greystone-B section, north of McIvor River (Figure 23), as a massive (20m) poorly consolidated dark gray mudstone overlying the Pelican Formation. The mudstones are interbedded with thin (<1cm) discontinuous (10-20cm long) fine-grained sandstone and siltstone lenses within their uppermost 5m, and the top of the Formation is marked only by the sudden appearance of fish scales. Westgate mudstones are frequently iron and sulfur stained, and yellowish sulfates (jarosites?) can be seen near its base at the Greystone-B lithosection in abundant irregular 2m-4m long and 1cm-3cm wide fractures.

The Westgate Formation is characterized by relatively subdued geochemical variations: Vanadium contents range 50ppm-150ppm and average 115ppm; Zinc contents vary 2ppm-366ppm and average 89ppm; Ni contents range 2ppm-186ppm and average 27ppm; Au and PGE contents are sporadic; and indicator elements such as Cu, Mo, As and Sb are marginally anomalous.

The Fish Scales (or Shaftesbury) Formation is normally characterized as a fish scales bearing mudstone or claystone, with minor associated sandstones and conglomerates, with up to 8% organic Carbon (Bloch et al 1993). The Formation is defined as the stratigraphic interval from the base of the Fish Scales bearing section to the base of the Second White Specks section, and is also referred to as the Shaftesbury Formation, which includes the Fish Scale and Belle Fourche Formations of Bloch et al (1993).

The Fish Scale bearing section is marked by the sudden appearance of fish scales and other skeletal debris in an otherwise massive unit of silty shales and mudstones, representing a conspicuous marker bed - the Fishscales Marker Bed (FSMB). The FSMB, described in sections from the Peace River area as a coarse grained sandstone with large concentrations of fish debris surrounded by organic Carbon-rich shales, is noticeably absent in the Birch Mountains where it is proxied for by fish scales bearing black shales.

Exposures of the FSMB are rare in the area and have been positively identified only at Greystone-B, although other occurrences have also been noted in badly slumped exposures along Asphalt Creek. At Asphalt-F (Figure 23), a section of the Creek is characterized by the presence of an unusual abundance of friable float slabs and blocks up to 5cm thick, composed of a concentrated bed of fish scales (>80% by volume) (e.g. samples F067AT222 and F067AT257, Sabag 1996a), at an elevation of approximately 530m, consistent with projected FSMB exposure per oil well picks compiled in the subsurface stratigraphic database. The exposure is located well away from exposures of the overlying Second White Specks Formation. Samples of this material are characterized by up to 5% P; 16% Fe; by slightly elevated base metal concentrations; by elevated Pt, Pd, Mo, As and Sb; and 20ppb and 17ppb Au.

Lithogeochemistry of the FSMB, to the extent represented by the scant surface sampling collected throughout the Birch Mountains, show it to be a potential trap of metals with an apparent correlation between the better metal contents with the higher C-org content of samples. While the samples indicate that the Formation is enriched in metals relative to underlying units, U and Th concentrations are surprisingly low and insufficient to produce the typical radioactive anomaly characterizing the FSMB picks in oil well down-hole geophysical logs. U and Th concentrations average only 10.2ppm and 9.9ppm, respectively, and only 3 of 57 historic samples collected report U exceeding 50ppm. It is likely, therefore, that the FSMB as "picked" from well logs is not fully exposed in the Birch Mountains area, or that same has not yet been definitively located.

Geochemically significant anomalies from the FSMB have been identified at the Greystone-C exposure, reporting upward to 10.5% C-org, 117ppm Cu, 228ppm Ni, 942ppm V, 761ppm Zn, and 12ppb Au. While very anomalous relative to other samples from the FSMB within the region and those from all other Formations, the exposure may be material slumped from the overlying Second White Specks Formation.

Of particular significance is the presence throughout select localities in the Birch Mountains area of spherical and quasi-spherical carbonate concretions ranging in size upward to 2m spatially associated with the FSMB. The concretions consist predominantly of black calcite and carry considerable sulfide mineralogy as disseminations of predominantly FeS and as pyrite nodules ranging in size upward to 5cm, consisiting of aggregations of crystalline grains. In addition, presence of concretions typically characterize all exposures located by tracing sulfide-rich alluvial material upstream, especially those carrying also alluvial gold. By far the best location to observe the carbonate concretions is KRC-B wherein gravel bars along the KRC tributary to the McIvor River host countless carbonate concretions surrounded by alluvial material consisting of upward to 50% sulfides. Carbonate concretions can also be seen at the Greystone-B lithosection, strewn about in slumped shales and muds carrying also considerable pyrite nodules.

The Second White Speckled Formation (or Second White Specks Formation) is described by Bloch et al (1993) from outcrops in the Peace River area of northwest Alberta and from sub-surface data from around the Alberta Basin as consisting of a calcareous shale or siltstone with organic carbon rich shales commonly associated with a bentonite up to 20cm thick, in turn associated with a carbonate concretionary layer. With the possible exception of an abundance of carbonate matrix, the Second White Specks Formation has been identified at many exposures throughout the Birch Mountains, and it is relatively well exposed in the creeks and rivers. The Formation has been mapped and sampled at exposures between the 600m and 650m elevations (asl) along Mid, Asphalt, Gos, Greystone, and Current Creeks.

Asphalt-H, located toward the headwaters of Asphalt Creek, represents a typical section of the Second White Specks Formation in the area, consisting of a succession of lithologies commencing at the bottom with a Siliciclastic Bone Bed (SBB) characterized by a coarse grained, sub-rounded, poorly sorted, carbonate cemented, black chert and glassy quartz sandstone, which often contains large concentrations of fish debris. A thin, 10cm-20cm thick, carbonate concretionary unit overlies the SBB (normally within ±1m), and is itself overlain by bentonite or a zone of bentonitic shale.

At Asphalt-H (Figure 23), a distinct zone of bentonites are evident immediately above the SBB, continuing for 3m-5m up-section, in which the thicker bentonite seams are, upon close inspection, seen to be composed of countless thin bentonites in a 15cm-20cm zone. The bentonites are hosted in a shale matrix with variable C-org content ranging from trace upward to 29% (avg 3%). Calcareous shales are patchy at Asphalt-H, although several sections were found to contain white specks or coccoliths and fossils such as fish debris including teeth (shark?), bivalve coquina, and Inoceramus imprints. (Asphalt-H was resampled by DNI in 2009 and samples were tested during 2009-2010 leaching R&D testwork - Sabag 2010).

Whereas the SBB in the area typically varies in thickness 10cm-20cm, it attains a thickness exceeding 1m at the Gos-C lithosection exposure, near the Buckton Zone, wherein it is also associated with metals enrichment in surrounding shales (Gos-C is at the eastern flank of a principal stratigraphic disturbance in the area). It is of note that SBB has been documented in the area from several elevations varying 600m-640m (asl), and that the variations are probably the result of multiple slumping. Repetitive sedimentary/extinction events cannot, however, be entirely ruled out.

Samples of the Second White Speckled Shale Formation have to date reported by far the most anomalous concentrations of base as well as precious metals from the Birch Mountains, in addition to yielding native gold grains from certain localities (e.g.GOS1 gossan, Gos Creek-C and Current Creek, Figure 23). Geochemical anomalies identified from the Formation define relatively systematic base metal enrichment zones, dominated by Ni-Cu-Mo-V-Zn (±U-Co-Cd-Ag-Au), spatially associated vertically with the more carbonaceous sections immediately overlying the SBB, and a suggested lateral association with proximity to certain faults in the Birch Mountains. Considerable intraformational geochemical inhomogeneities notwithstanding, Asphalt-H, GOS1 and Gos-C present by far the best metal enrichment localities documented from the Second White Specks Formation in the area.

The **LaBiche Formation**, overlying the Second White Speckled Shale is poorly studied given lack of exposures in the area and in the Birch Mountains. Much of what is known is derived from review of drill cores from drilling completed by Tintina and DNI.

The LaBiche Formation shales are locally eroded due to periods of uplift (eg: micropaleontological examination of LaBiche Formation from Birch Mountains drilling at the Buckton Zone suggests an unexpected 4-6 million year gap between the top of the Second White Specks Formation and the base of the LaBiche Formation, and indicates that shales previously logged/mapped as LaBiche are likely part of the Upper Cretaceous Lea Park Formation). Its thickness varies significantly (~15m-150m) from location to the next based on downhole geophysical logs from oil/gas drilling in the area.

Two small and badly slumping outcrops of massive gray Colorado or LaBiche Formation shale previously observed well above those of the Second White Specks Formation have been assumed to represent LaBiche Shales and the youngest Cretaceous strata preserved in the Birch Mountains area of northeast Alberta.

Due to monotonous lithology and chemistry, the Labiche Formation shales have historically attracted little attention and were until recently regarded by DNI as waste cover rocks above the better mineralized Second White Speckled Formation shale. Given discovery and recognition of recoverable metals within the Labiche and positive economics of mining and recovery as shown by the Buckton Preliminary Economic Assessment study completed by DNI in 2013, the Labiche has gained higher standing as an economic target of merit (see Sections 15, 16 and 17).

The Second White Speckled and the Labiche Formation black shales currently comprise DNI's polymetallic shale targets which host zones of recoverable base metals, Uranium Rare Earths and Specialty metals (Sc,Li,Th), although given recoverability of low grade similar metals in the Belle Fourche might expand DNI's future focus to also include it in the shale package of economic interest. The Pelican sandstone Formation is the target of DNI's efforts in search of natural sand proppant (fracsand) on the Property.

8.3 SUBSURFACE STRATIGRAPHIC DATABASE 1995 AND 2009 EXPANSION

Other than the drilling carried out by Tintina and DNI over the Buckton and Asphalt Zones, the only source of subsurface geological information for the Birch Mountains, (including areas currently under the Property), are downhole logs from oil/gas drilling over the area. The first compilation of such information was conducted by Tintina in 1995 to build a three dimensional stratigraphic model and database for the area, to aid identification of stratigraphic disturbances toward resolution of faulting and doming patterns identified by remote sensing and air-photo studies. Drilling and downhole logging records of approximately 1850 wells were critically reviewed, and only 207 were found to have sufficiently complete records to form the basis of the database and model.

Lithologic picks, downhole geochemistry and geophysical logs were recorded and compiled into an extensive database, with the primary objective to identify principal structural breaks above Prairie Evaporite Salt Scarp with particular attention to "picking" base of the Fishscales (Shaftesbury Formation) given that at the time metallic enrichment discovered in the area was believed to be hosted in shales belonging to the Shaftesbury Formation rather than the Second White Speckled Shale Formation as shown by subsequent mapping. Tintina's subsurface database also contoured and rendered in a series of structural and isopach maps for the Birch Mountains, for select Formations extending downward from the Upper Cretaceous to the Precambrian basement. Stratigraphic surface selection was based primarily on delineating major depositional breaks within the stratigraphic column which are identifiable on well logs. These are presented in greater detail in discussions relating to the subsurface database and its subsequent expansion by DNI in Appendix A5.

Tintina's study was successful in identifying a number of structural disturbances in the Birch Mountains and over the Property, in addition to several large structural corridors portions of which were demonstrated by subsequent surface soils sampling by Tintina to be zones of metal diffusion (see Section 6.2.9 of DNI's NI-43-101 report for the property, Sabag 2008). The study also identified large areas of abnormal thickening in the Cretaceous sedimentary pile. Several of the isopach anomalies coincide with topographic domed features with radial drainage patterns reporting polymetallic geochemical anomalies in Tintina sampling, accompanied also by native gold and abundant sulfides in stream sediments and in stream sediment heavy mineral concentrates downstream from the domes. Many of the features identified by the study are material to metal exploration in the area, since many of them correlate well with metal enrichment zones identified by results of surface geochemical and lithogeochemical sampling conducted by Tintina over the area. Specific anomalies and anomalous areas are presented in Section 8.8, and Figure 26, in conjunction with surface anomalies identified by Tintina in the Birch Mountains under the Property.

Tintina's 1995 subsurface stratigraphic database was expanded in late 2009 by extracting information from drilling records postdating the 1995 historic databases. Consistency was maintained with Tintina's work with more attention paid to picking the top of the Second White Speckled Formation which had been omitted in 1995 (bottom picked only in 1995) since the principal focus of work at the time had been the Shaftesbury Formation then believed to be the host to the metallic mineralization in the area. This work identified 591 oil/gas wells in the Birch Mountains which had sufficiently complete downhole geologic records to be of use, of which 156 oil/gas wells also contained subsurface picks for the Second White

Speckled Shale Formation (of 207 wells comprising the 1995 historic database, only 56 wells contained reliable information on the Second White Speckled Shale Formation). Details of the above study including supporting database and related computer-generated isopach and structural contour maps are included in Sabag 2010, Alberta Mineral Assessment Report MIN2010001.

The 2009 expanded subsurface database was rendered in contoured structural and isopach maps and interpreted to identify localities where the Second White Speckled Shale Formation is under the thinnest cover to guide future drilling, given that the Speckled Shale was at the time considered to be the principal metal bearing target at the Property. Subsequent resource studies completed by DNI at the Buckton and Buckton South Zones demonstrated that the Second White Speckled Shale as well as the overlying Labiche Formation are both significant metal bearing targets which together offer a continuous shale package with sufficient recoverable value to meet economic thresholds as outlined in the positive Buckton Preliminary Economic Assessment discussed later in this Report (Section 17).

In addition to the above, a number of large - regional scale - stratigraphic features were identified by Tintina's stratigraphic model and subsurface database over the Birch Mountains based on interpretations from drill logs from historic oil-gas drilling augmented by broad geophysical trends and by remote sensing imagery analysis. Details of the subsurface stratigraphic database and interpretations therefrom are outlined in Appendix A5.

Since consolidation of the database in 2009, there have been considerable additional drilling for oil/gas by third parties over the Birch Mountains and the Property, offering additional information which might be useful to future work at the Property (especially as related to evaluation of the Viking/Pelican Formation sandstone as a natural sand proppant for use in the oil/gas industry as discussed in Section 18).

8.4 SURFACE GEOCHEMICAL TRENDS AND ANOMALIES - LAKES, STREAMS AND SOIL

Regional reconnaissance level field sampling programs, and related localized follow-up work, conducted by Tintina provide the only surface geochemical information from the Property and the broader surrounding Birch Mountains. The foregoing comprise extensive multimedia and geochemical databases consisting entirely of lake sediment, lake water, stream sediment, and stream heavy mineral sampling surveys completed by during the 1990's.

All available lakes and drainages were sampled by the foregoing surveys and databases therefrom offer a solid surface geochemical baseline geochemical framework as there has been no subsequent surface geochemical work over the Birch Mountains and the Property. Similar sampling was also conducted by Ells River Resources in 1996 over T97/R13 currently under a permit at the southern parts of the Property. The programs overall concerned themselves with searching for the source(s) to base metals enrichment discovered in various drainages across the Birch Mountains, and were successful in identifying the Second White Speckled Shale Formation as the primary source of base metals enrichment discovered, and a host to particulate gold grains panned from certain rivers.

The historic programs focused almost entirely on base metals, Uranium and gold, with no attention paid to REE or specialty metals (eg: Sc, Li, Th), although multielement geochemical databases therefrom could be re-visited to extract information relevant to the exploration for the foregoing critical metals. The historic programs broadly concluded as follows:

- Lakes from the Birch Mountains report by far the strongest and most consistent anomalies documented from the region, characterized by elevated concentrations in most of the base and precious metals (notably Ni,Co,V,Cr,Cu,Zn,Au,Ag), generally defining trends associated with a number of structures, and locally from lakes with high natural acidity (pH 3-4) attributed to abundant sulfides therein.
- The Birch Mountains area is characterized by major zones of landslides and widespread slumps from poorly consolidated Cretaceous muddy clastic sequences. Due to the continual recharge of streams in the area by fresh sediments from slumps, stream sediments sampling provides a particularly useful "real time" mapping "tool" to quickly characterize entire drainages.

- Nearly all stream sediment geochemical and mineral anomalies in the Birch Mountains are downstream from exposures of the Second White Speckled Shale and the Shaftesbury Shale Formations which are exposed within a range of elevations varying approximately 520m-650m asl.
- Nearly all metal geochemical anomalies over the Birch Mountains are congregated over its erosional edges, in sections of the rivers/streams which are at, or below, approximately the 520m-650m elevations, in streams draining the Speckled Shale and Shaftesbury Formations.
- The most consistently anomalous waterways identified in the area are the Pierre River, Mid Creek and Asphalt Creek, characterized by coincident multimetal anomalies in addition to gold. Pierre River, Tar River and Mid Creek broadly radiate from an area at the headwaters of Pierre River (generally near the Asphalt Zone) which is also characterized by strong geochemical Zn-Cu-Ni diffusion anomalies in soils.
- While the majority of stream geochemical anomalies in the area are polymetallic, anomalies in Gos Creek, downstream from the Buckton Zone, are mainly characterized by elevated Ni which can be attributed to Ni-enriched exposures of Cretaceous shales upstream, which also carry native gold. Native gold grains have been also recovered from Gos Creek by Tintina and others.

The reader is referred to details of the surveys which are presented in Sabag 2008, and to summaries and figures extracted therefrom which are reiterated in Appendix A5.

8.5 GEOPHYSICAL ANOMALIES

The only regional aeromagnetic information available from the Birch Mountains, and the Property, is coarse scaled national airborne geophysical data series and related maps. Tintina identified many discontinuities and lineaments through review of the foregoing data relying on first and second derivative manipulations, to guide its regional exploration in the area (see Appendix A5).

The only detailed airborne geophysical information from the Property comprises a high resolution aeromagnetic survey commissioned by Tintina in 1997 over the eastern parts of the Property, over the Asphalt and Buckton Zones, to better resolve the many structural trends in the area, and to investigate the suspected presence of vents which might be related to diamond indicator minerals discovered in the two areas. The surveyed area consists of an eight township quadrant bounded by UTM coordinates: 451381E-6369640N; 431620E-6369920N; 432331E-6413610N; 451889E-6413460N. For greater details the reader is referred to the Section 6 of DNI's NI-43-101 technical report for the Property, Sabag 2008.

The collective of all available geophysical information serve to identify synsedimentary and other structural disturbances across the Birch Mountains and the Property, all of which would be germaine to regional scale exploration over the area. Details from the foregoing work and interpretations are summarized in Figures 27 and 28 (see also Appendix A5).

8.6 LITHOGEOCHEMICAL SURFACE SAMPLING AND MAPPING

Current understanding of geology and lithogeochemistry of the Property, and the Birch Mountains in general, relies on geological mapping and lithogeochemical sampling programs conducted by Tintina Mines together with similar concurrent work by the AGS-GSC in the mid-late 1990's, which collectively provide an exhaustive database of all that is exposed and available to sampling across the Property.–Mapping and sampling completed by the AGS-GSC expands beyond the former work programs' scopes to also investigating the Second White Speckled Shale as well as the Shaftesbury and related Cretaceous Formations westward from the Birch Mountains and the Property to west-central Alberta (see AGS 2001).

The above historic prior work included reconnaissance sampling programs as well as detailed sampling and mapping of individual exposures with special focus on systematic mapping and sampling of measured stratigraphic lithosections (Figure 23) exposed as cliff-faces confined mostly to the erosional edge of the Birch Mountains, within a 5km wide arc over the eastern lobe of the Mountains. The foregoing mapping and sampling surveys comprise the only mapping and lithogeochemical sampling conducted over the Property toward exploration for metals, and results therefrom form the only lithogeochemical databases available from the Property. As with all other historic work in the area, historic exploration focus was on base metals, Uranium and gold hosted in Cretaceous shales, with minimal attention paid to exploration for REE or specialty metals (eg: Sc, Li, Th). The Viking/Pelican Formation sandstone has also received little, if any, attention given that it is devoid of metals except over its uppermost portions in contact with the overlying Shaftesbury Formation (Belle Fourche Formation).

Bedrock exposures throughout the Property are scarce (<2%), and are restricted to creek/river valleys which define incisions confined to the erosional edge of the Birch Mountains, forming a narrow 5-10km wide arcuate band under the Property located over the eastern lobe of the Mountains. The Cretaceous strata exposed in the area are dominated by poorly consolidated recessive sequences of shales and mudstones, exposed in terraces (Plates 1 and 2) partly obscured by considerable slumped material or mud-flows (especially at their base), all of which are highly susceptible to landslides and slumping. Nearly all bedrock exposures in the Birch Mountains are in various stages of active mass wasting, and are transformed during prolonged wet weather periods into mudflows. In many cases slumpage is sufficiently advanced to introduce uncertainties to the definitive determination of stratigraphic position of often similar looking exposed units, especially for shales.

Plate 1: Typical terraced exposures of recessive sequences, Cretaceous Formations, Northeast Alberta. Asphalt Creek Valley, Birch Mountains (Right). Images from Sabag 1994-1999.

Exposures available throughout the Birch Mountains enable observation and sampling of approximately 300-350 vertical metres across the Cretaceous stratigraphy, extending upward from the top of the Manville to well into the Colorado Group. This section straddles the Albian-Cenomanian boundary, and provides exposures of five Formations: the Clearwater/Grand Rapids Formation, the Viking/Pelican Formation, the Westgate Formation, the Shaftesbury Formation, and the Second White Speckled Shale Formation. All available lithosections and "un-named" lithosections previously mapped and sampled are shown in Figure 23.

Significant highlights from historic surface lithogeochemical sampling from areas under the Property include:

- The discovery of large flat Fe-phosphate and Fe-sulfide rich float slabs in Asphalt Creek, immediately below slump zones of suspected black shales, subsequently leading up to delineation of the Buckton South Zone near the headwaters of Asphalt Creek, and the Asphalt polymetallic Zone at the headwaters of Pierre Creek.

- The discovery of the GOS1 gossan, a large reddish gossan, at the headwaters of GOS Creek, (southeast portion of T101/R12) and the discovery of native pristine gold grains with encrustations and inclusions of Fe-Cu-Sulfides from some samples of the gossan (Sample E5100, E5100B, GOS1 Gossan, Second White Specks Formation).

Plate 2: Typical stratigraphic section and related slump, Cretaceous Shales, Birch Mountains, Alberta. (Repel mapping by the author)

- The GOS1 gossan, subsequently recognized to be part of the Buckton Zone, comprises Ni/V/Zn-enriched carbonaceous and muddy shales, which have also reported abundant euhedral zircons, chromite and Mn-wads accompanying a variety of FeS morphologies including crystals, specular composites and spheres, many of the latter studded also by 1µm-5µm granules of native Ni. Orientation XRD from Tintina's work for sample E5100 reported a predominance of illite clay, accompanied by smectite and locally glauconite in the shale (Alberta Mineral Assessment Report MIN9611, Sabag 1996a);

The GOS1 gossan, over exposures of the Buckton Zone, represents the most continuous exposure, albeit slumped, of the Second White Speckled Shale in the Birch Mountains and on the Property. It comprises a 1km long intermittent exposure of conspicuous brick red carbonaceous shales over a ledge, and related slumps, between the 600m-630m (asl) elevations along the northern slopes of the Gos Creek valley. The Formation is also exposed at Gos Creek-B exposure, also on the north flank of the GOS valley, and at the Gos Creek-C exposure which is located at its closure. Due to its distinct coloration and the abundant metallic content, GOS1 was initially regarded as a zone of advanced auto-oxidation, although subsequent work indicated that the coloration is likely due to an old extensive forest fire.

With the exception of the uppermost 5m-10m of the gossan ledge, the bulk of GOS1 comprises slumped material consisting of slimy muds or dislocated pieces of hillside in various states of disaggregation. Bedrock exposed along the uppermost ledge is characterized by carbonaceous shales, with bentonite seams and other seams of sulfur and sulfates. The gossan is over an area characterized by junctions of several faults.

Shales at GOS1 contain varying amounts of sulfides (mainly FeS) with a broad range of morphologies ranging from perfectly spherical pyrite/marcasite balls to twin pyramidal and specular aggregations. The FeS is accompanied by abundant euhedral Zircons, chromite and Mn-wads, all of which are hosted in muddy shales predominated by illite clay, accompanied also by smectite and (locally) glauconite. Orientation microanalytical investigation of some subsamples indicate also the presence of 1µm-5µm granules of native Ni as overgrowths on FeS grains (especially those spherical). Native gold grains have been reported in heavy mineral concentrates from the exposure, representing an equivalent grade of nearly 1ppm based on volumetric/gravimetric estimates (by tabling and by panning, Sabag 1996b). The gold grains recovered are characterized by encrustations and inclusions of Fe±Cu-sulfides in various states of oxidation. The gossan has been sampled in great detail by Tintina, and the presence of native gold grains in the shales is corroborated by independent AGS sampling (AGS 2001).

The GOS1 and Gos Creek-C localities expose poorly consolidated shales and mudstones (with variable organic components), a thin bentonite (3-5cm), a thin discontinuous carbonate cemented siltstone/concretion (10-15cm thick), and a Siliciclastic Bone Bed (SBB). The bone bed is interpreted as a transgressive lag deposit and is characterized by a calcite cemented, medium to very coarse grained, black chert and glassy quartz sandstone, containing variable amounts of fish debris. While the bone bed is generally a thin (10cm-20cm) unit in the area, and elsewhere in the sedimentary basin, it comprises as many as three distinct chert and quartz sandstone units at the Gos Creek-C exposure, with an overall thickness exceeding 1m, which are interbedded with sandy organic-rich shales. The sandstones of the bone bed are fairly massive and exhibit few sedimentary structures with the exception of vague cross-bedding and occasional mudstone "rip-ups". (exposures of bonebed at the base of the GOS-Cr-C lithosection were sampled in detail by DNI in 2009. See Sabag 2010).

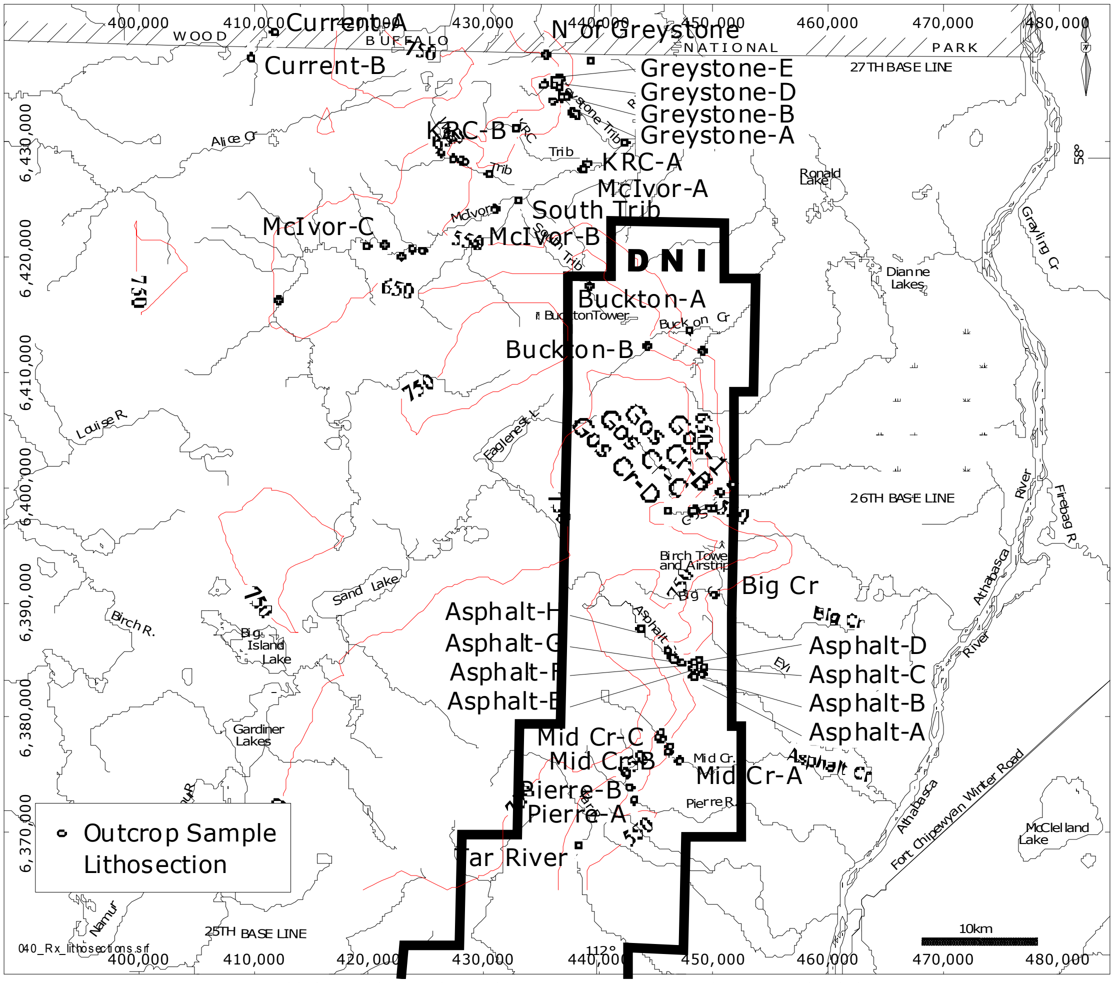


Figure 23: Historic mapping and lithogeochemical sample coverage, outcrops and stratigraphic lithosections, Tintina 1994-1995 programs, Birch Mountains, showing "named" stratigraphic sections. After Figure 25, Alberta Mineral Assessment Report MIN9611, Sabag 1996a. Stratigraphic lithosections Asphalt-H and GOS-Cr.-C were sampled by DNI in 2009 and 2010.

The GOS1 gossan and the Gos Creek-C exposures are enriched in Zn/V, locally in Ni, and also by elevated Cd, Co, Cr and Cu (Sabag 1996). Metal enrichment over the eastern portion of GOS1 can be correlated with increasing organic carbon content, although results from its western extremities are characterized by metal enrichment patterns which are independent of C-org supporting metals concentration in forms other than those organic. Lithogeochemical anomalies for most metals were documented from the gossan by Tintina. Samples of the Second White Specks Formation have also reported up to 29% organic Carbon, 250ppm U and 33ppm Th. Samples from the Gos Creek-C exposure reported up to 67ppb Au, by fire assay, and 11ppb Pd and 14ppb Pt. Despite recovery of gold grains in heavy minerals from samples of the gossan, routine INA or fire assay analyses have not returned equally high grades (GOS Creek C was resampled by DNI in 2009 and 2010 to collect material for leaching testwork (see Sabag 2010, 2012).

Lithosection at Asphalt-H represents perhaps the most complete stratigraphic section across the Second White Speckled Shale Formation that is substantially intact with little or no slumped. Most of DNI's leaching testwork carried out at the AITF relied on surface material samples from this lithosection (Sabag 2010, 2012).

Detailed geochemistry, geological findings and conclusions from historic lithogeochemical sampling programs are discussed in Section 7.7 of DNI's NI-43-101 technical report for the Property, parts of which are extracted and appended herein in Appendix A5. Extensive additional data are available also in AGS 2001. Lithogeochemistry of the various Formations from surface sampling are summarized in Table 4, and shown juxtaposed against stratigraphy s Figure 24.

The reader is referred to Alberta Mineral Assessment Reports MIN9611 and MIN9802, Sabag 1996a and Sabag 1998, respectively; in addition to AGS 2001, for a detailed review of all lithogeochemical trends identified by the historic work, a presentation of which is well beyond the scope of this Report. A summary of salient conclusions from the collective foregoing historic work by Tintina and the AGS over Property and the surrounding Birch Mountains includes the following:

- Tintina concluded from its sampling that metals enrichment zones in the Birch Mountains are hosted in carbonaceous shales of the Second White Speckled Shale Formation, and to a lesser extent in the Shaftesbury Formation beneath it, associated vertically with marine extinction markers, and laterally associated with certain large structural disturbances (fault zones or doming). Metal enrichment zones are characterized by enrichment Ni/Cu/Zn/V/Ag/Mo/(U) accompanied by Au.

- The Second White Speckled Shale Formation and, to a lesser extent, the Shaftesbury Formation, are carbonaceous shales containing up to 29% and 10% organic carbon, respectively (Table 4). Though there is some correlation between metal enrichment in the Second White Speckled Shale Formation with organic carbon, general consensus is that the metals substantially occur in the shale in sulfide or metallic forms rather than as organometallic compounds. As such, the relationship suggested by bulk chemistry between C-org and metals may be incidental.

- Tintina concluded based on its lithogeochemical work that the Second White Speckled Shale and the Shaftesbury Formations, by virtue of their elevated organic carbon contents, present conditions which are highly conducive to scavenging of metals via redox processes from oxidizing metal rich fluids which might be circulating within the stratigraphic pile. (Source of the fluids being oxidizing metal enriched basinal fluids seeping upstratigraphy through the Prairie Evaporite salt scarp beneath the Birch Mountains).

- Tintina further concluded that scavenged metal accumulations in these shales can be expected to have tabular geometry, characterized by relatively restricted thicknesses but with potential to have vast lateral dimensions ranging upward to 100km^2, occupying the near-surface sections of the stratigraphy dominated by Second White Specks and Shaftesbury shales.

- Based on detailed review of interelemental correlations and variograms, Tintina concluded that there exists good overall correlation among most of the metals, and noted possible bimodal distribution of some of the metals. Two modal groups identified comprised a Ni-Co-Zn±(Cu,Cd) group and a group V-Ag±Cu.

- The AGS reported from its sampling of mid-Cretaceous bedrock units sampled in northern Alberta over the Peace River, Buffalo Head Hills, Caribou Mountains and Birch Mountains areas that the Second White Speckled Shale Formation in the Birch Mountains reported the highest concentrations of precious and base metals from amongst the units sampled in these areas across northern Alberta.

- The AGS concluded that samples, from the Birch Mountains, regardless of lithology, contain a significantly different shale-normalized REE profile when compared to samples from over the Peace River, Buffalo Head Hills, Caribou Mountains. Most samples from the Birch Mountains, particularly those from the Second White Specks Formation, display a slightly negative Ce anomaly and a distinctly positive Eu anomaly, in conjunction with elevated to highly anomalous concentrations of Ba (shale samples reported Ba contents ranging from an average of 1,568ppm to a maximum of 31,000ppm).

- The AGS concluded that the REE patterns, the highly anomalous Ba and other metals enrichment patterns displayed by many samples from the Birch Mountains suggest a strong influence of low temperature hydrothermal precipitates in the Birch Mountains.
- Tintina concluded from its sampling that metals grades documented from lithogeochemical reconnaissance in the Birch Mountains are relatively low for individual metals when reviewed in the context of conventional mono-metallic base metal deposits. It proposed, however, that the grades are significant when considered on a combined basis, as a polymetallic assemblage of Mo+Ni+Co+Cu+Zn+V+U±Ag±Au, from the perspective of large bulk mining operations, especially those for poorly consolidated deposits which might be developed in most part by low cost earth-moving bulk-mining methods.
- Tintina and the AGS concluded that the metallic budget in the area might be associated with suspected proximal exhalative venting activity in the Birch Mountains, possibly also related to multiple vents.
- Tintina and the AGS concluded that the Second White Speckled Shale and the Shaftesbury Formations, straddling the Albian-Cenomanian transition may have affinities to resedimented kimberlitic material.
- Tintina suggested that the possible association of metals enrichment zones throughout the Birch Mountains with interpreted hot springs activity and marine extinction markers is compatible with proximal submarine subaerial venting.

There is general consensus in the historic work among all who have sampled and mapped the Birch Mountains and the Property, that there is excellent potential for discovery of metal deposits in the Second White Speckled Shale Formation in the Birch Mountains, but to a lesser extent in the underlying Shaftesbury Formation. The foregoing historic work has, however, since been superceded by DNI’s drilling and leaching testwork.

While Tintina’s work, and DNI’s initial focus, concerned itself mainly with the Second White Speckled Formation metal enriched black shale, DNI broadened scope of its exploration to also focus on the overlying Labiche Formation black shale as a host to valuable recoverable metallic mineralization (see resource studies Sections 15 and 16, and Preliminary Economic Assessment Section 17). DNI also recently recognized the merits of the Belle Fourche Formation (Shaftesbury Formation) beneath the Second White Speckled Formation as also a host to recoverable metallic mineralization, although DNI’s exploration efforts have not yet commenced to evaluate this Formation other than via initial metals leaching tests (see Section 14.1).

The Second White Speckled and the Labiche Formation black shales currently comprise DNI’s primary polymetallic shale targets which host zones of recoverable base metals, Uranium Rare Earths and Specialty metals (Sc,Li,Th).

In addition, whereas DNI’s focus has to date been on exploring and advancing its polymetallic black shale hosted targets on the Property, delineation of a portfolio of seven large project areas distributed along a 100km long corridor across the Property with potential to host fracsand in the Pelican sandstone Formation represents an opportunity to add considerable value to the Property. DNI’s fracsand projects form an important strategic component of its exploration activities going forward, and they will be explored in conjunction with continuing to advance the polymetallic shale hosted resources discovered on the Property.

Element	Ag	As	Au	Au	Pd	Pt	Cu	Mo	Sb	Cd	Co	Cr	Ni	V	Zn	Al	Ba	Ca	Mg	Sr	Na	K
Method	ICP	INA	Fa	INA	Fa	Fa	ICP	ICP	INA	ICP	INA	INA	ICP	ICP	ICP	ICP	INA	ICP	ICP	ICP	INA	ICP
Det.Limit	0.2ppm	0.5ppm	1ppb	2ppb	3ppb	5ppb	1ppm	2ppm	0.1ppm	0.5ppm	1ppm	5ppm	1ppm	2ppm	1ppm	0.01%	50ppm	0.01%	0.01%	1ppm	0.01%	0.01%
All Birch Mountains Area Formations (n=634)																						
MIN	0.1	0	1	1	1.5	2.5	2	1	0.1	0.3	1	1	2	2	2	0.01	25	0.01	0.01	5	0.01	0.01
MAX	3.6	1200	138	65	14.0	22.0	181	228	51.0	42.4	100	150	315	1051	845	11.08	29000	44.29	12.72	2804	1.47	3.35
AVERAGE	0.4	35	4	4	2.2	2.8	32	16	3.6	2.3	12	65	44	185	121	5.00	951	6.32	0.74	210	0.29	1.35
95th %'ile	1.5	98	12	12	5.0	5.0	85	72	16.0	11.1	32	120	141	627	358	8.95	1735	31.19	1.57	467	0.61	2.37
90th %'ile	1.0	76	8	9	4.0	2.5	69	49	9.3	6.3	25	110	88	447	267	8.24	1300	23.56	1.19	345	0.53	2.24
75th %'ile	0.5	49	4	5	2.0	2.5	41	14	4.7	2.1	15	96	52	233	147	7.37	898	6.63	0.92	235	0.37	1.93
50th %'ile	0.2	17	2	2	2.0	2.5	24	2	1.3	0.7	10	71	30	118	91	5.57	670	1.22	0.69	168	0.27	1.52
Second White Specks (n=354)																						
MIN	0.2	1	1	1	1.5	2.5	3	1	0.1	0.3	1	1	3	4	5	0.28	25	0.05	0.03	23	0.03	0.11
MAX	3.6	1200	138	65	14.0	22.0	181	228	51.0	42.4	100	150	315	1051	845	11.08	29000	44.00	3.47	1203	0.73	2.65
AVERAGE	0.6	52	6	5	2.5	3.0	43	27	5.8	3.5	15	70	61	263	158	5.19	1232	8.89	0.68	230	0.26	1.40
95th %'ile	1.8	130	15	12	5.0	6.0	93	116	19.4	14.0	39	120	195	692	401	9.18	2810	33.31	1.20	487	0.50	2.36
90th %'ile	1.4	91	10	10	4.0	2.5	80	65	14.7	10.5	29	110	122	581	333	8.51	1400	30.10	1.07	365	0.42	2.26
75th %'ile	0.7	67	6	7	3.0	2.5	57	36	6.6	3.9	19	100	72	344	205	7.43	1000	12.77	0.89	254	0.35	2.02
50th %'ile	0.4	39	3	4	2.0	2.5	35	11	3.8	1.6	11	79	44	216	122	5.67	760	3.33	0.65	190	0.26	1.56
Fish Scales / Shaftesbury (n=57)																						
MIN	0.2	2	1	1	1.5	2.5	6	1	0.1	0.3	1	5	2	6	13	0.28	180	0.08	0.03	55	0.06	0.05
MAX	2.7	170	55	22	11.0	10.0	117	51	16.0	30.8	49	120	228	942	761	9.51	4800	37.50	3.20	1601	0.67	2.51
AVERAGE	0.3	21	6	3	2.4	2.8	26	6	1.5	1.5	9	58	28	115	101	4.77	951	6.72	0.76	302	0.31	1.19
95th %'ile	0.8	74	21	17	6.0	5.0	75	27	6.7	4.6	23	110	79	376	288	8.19	1900	31.71	1.76	916	0.59	2.38
90th %'ile	0.5	57	14	10	3.4	2.5	47	14	2.0	1.4	21	110	53	170	173	7.80	1640	30.05	1.01	442	0.56	2.06
75th %'ile	0.2	16	5	3	2.0	2.5	25	5	0.9	0.8	10	80	28	95	96	7.05	1100	7.52	0.88	289	0.41	1.57
50th %'ile	0.2	10	3	1	2.0	2.5	21	2	0.6	0.3	7	55	17	73	63	5.17	740	1.00	0.78	205	0.28	1.25
Westgate (n=88)																						
MIN	0.2	1	1	1	1.5	2.5	3	1	0.1	0.3	1	2	2	2	2	0.11	61	0.02	0.01	7	0.01	0.03
MAX	1.1	420	15	12	5.0	5.0	59	69	13.0	4.6	40	150	122	200	366	9.06	1900	44.29	4.00	2804	1.11	3.35
AVERAGE	0.2	16	2	3	1.9	2.5	22	3	0.8	0.6	9	78	26	106	83	6.25	639	1.49	0.81	189	0.34	1.68
95th %'ile	0.5	20	5	8	2.6	2.5	45	9	1.4	2.1	16	120	56	177	151	8.62	987	5.13	1.12	310	0.57	2.41
90th %'ile	0.4	17	4	6	2.0	2.5	30	4	1.0	1.1	13	110	41	168	120	8.37	896	0.86	1.02	179	0.53	2.35
75th %'ile	0.2	14	2	4	2.0	2.5	25	2	0.8	0.7	11	94	31	125	103	7.76	760	0.55	0.95	156	0.44	1.88
50th %'ile	0.2	11	1	1	2.0	2.5	21	1	0.6	0.3	8	82	25	110	79	7.10	620	0.43	0.84	137	0.34	1.78
Pelican (Viking) (n=79)																						
MIN	0.2	0	1	1	1.5	2.5	2	1	0.1	0.3	1	1	2	2	2	0.05	25	0.01	0.01	5	0.01	0.01
MAX	2.2	64	7	10	4.0	2.5	53	13	2.0	5.8	43	100	63	153	227	9.49	1100	23.39	1.15	899	0.49	1.96
AVERAGE	0.2	7	2	2	1.8	2.5	11	2	0.3	0.4	7	30	16	45	48	2.58	334	0.83	0.30	83	0.12	0.71
95th %'ile	0.4	21	4	6	2.0	2.5	24	3	0.8	1.0	21	80	45	123	145	7.07	892	1.48	0.90	208	0.36	1.72
90th %'ile	0.2	12	3	4	2.0	2.5	21	3	0.6	0.7	16	75	31	103	104	6.60	676	0.83	0.83	160	0.32	1.66
75th %'ile	0.2	8	2	2	2.0	2.5	17	2	0.5	0.3	10	55	21	76	73	4.91	495	0.34	0.57	105	0.20	1.37
50th %'ile	0.2	4	1	1	1.5	2.5	7	1	0.3	0.3	5	17	12	32	35	1.18	240	0.16	0.14	47	0.05	0.48
Clearwater/Grand Rapids (n=15)																						
MIN	0.2	3	1	1	1.5	2.5	9	1	0.3	0.3	3	23	11	33	21	1.59	430	0.44	0.81	124	0.10	0.40
MAX	0.5	25	4	7	2.0	2.5	32	2	1.1	0.7	15	120	38	128	105	10.42	940	26.86	4.07	361	1.47	2.59
AVERAGE	0.3	11	2	2	1.7	2.5	20	1	0.7	0.3	8	67	25	86	66	5.78	555	5.57	1.56	194	0.57	1.62
95th %'ile	0.5	19	4	6	2.0	2.5	31	2	1.0	0.6	14	101	37	120	104	10.41	772	18.48	2.82	299	1.12	2.56
90th %'ile	0.5	16	4	5	2.0	2.5	29	2	1.0	0.5	13	92	36	114	100	9.94	676	14.33	2.15	252	0.96	2.40
75th %'ile	0.4	13	3	2	2.0	2.5	27	1	0.9	0.3	11	86	33	108	85	7.50	630	7.26	1.73	206	0.68	2.15
50th %'ile	0.2	10	1	1	1.5	2.5	18	1	0.8	0.3	9	76	27	98	80	6.34	510	2.06	1.28	181	0.57	1.93

* Statistics are generated from data wherein values below detection were replaced by a value equal to 50% of the detection limit. Sabag 1996a.

Table 4: Statistical summary of historic lithogeochemical sampling results, Cretaceous Formations, Birch Mountains. After Table 2, Sabag 2008; and Alberta Mineral Assessment Report MIN9611, Sabag 1996a.

Element	U	C-org	P	S	Fe	Mn	La	Ce	Nd	Eu	Yb	Lu
Method	INA	Leco	ICP	Leco	INA	ICP	INA	INA	INA	INA	INA	INA
Det.Limit	0.5ppm	0.001%	0.001%	0.001%	0.01%	1ppm	0.5ppm	3ppm	5ppm	0.2ppm	0.2ppm	0.05ppm
All Birch Mountains Area Formations (n=634)												
MIN	0.3	0.00	0.00	0.0	0.1	7	0	2	3	0.1	0.1	0.0
MAX	250.0	29.10	7.22	30.1	36.3	>det	470	720	490	28.8	63.6	8.4
AVERAGE	15.4	2.30	0.34	2.9	4.9	667	45	78	36	2.0	3.7	0.6
95th %'ile	59.4	9.81	1.43	10.3	15.6	1646	110	164	90	5.4	8.9	1.4
90th %'ile	39.0	7.16	0.65	6.2	10.0	1018	78	120	65	3.9	6.6	1.0
75th %'ile	16.0	2.17	0.23	3.8	5.1	434	48	88	38	2.0	3.9	0.6
50th %'ile	5.2	1.12	0.10	1.5	3.5	190	37	72	28	1.4	3.0	0.5
Second White Specks (n=354)												
MIN	0.3	0.00	0.00	0.0	0.5	29	2	4	3	0.1	0.1	0.0
MAX	250.0	29.10	7.22	30.1	35.7	5112	470	720	490	28.8	37.9	5.7
AVERAGE	23.9	3.04	0.44	4.2	5.4	424	54	90	45	2.5	4.5	0.7
95th %'ile	72.4	11.24	1.75	13.6	15.3	1440	120	170	100	6.2	10.8	1.7
90th %'ile	54.7	9.14	0.91	8.7	10.5	974	92	140	84	4.9	7.8	1.2
75th %'ile	31.0	4.43	0.34	4.9	5.6	497	59	99	50	2.9	5.2	0.8
50th %'ile	12.0	1.23	0.15	3.1	4.0	235	42	78	32	1.6	3.4	0.6
Fish Scales / Shaftesbury (n=57)												
MIN	0.5	0.05	0.02	0.1	0.6	34	8	16	6	0.3	0.6	0.1
MAX	100.0	10.50	6.42	26.3	33.4	4956	400	690	320	22.0	63.6	8.4
AVERAGE	10.2	1.95	0.58	2.9	5.4	442	44	79	33	1.8	4.2	0.6
95th %'ile	39.0	6.92	4.80	16.0	22.3	1280	99	124	70	3.8	7.8	1.1
90th %'ile	25.2	3.67	0.78	5.1	13.8	999	58	108	47	2.5	5.8	0.9
75th %'ile	7.3	2.17	0.23	2.3	3.9	392	43	85	35	1.7	3.9	0.6
50th %'ile	4.9	1.49	0.09	1.3	3.2	181	35	64	25	1.2	2.6	0.4
Westgate (n=88)												
MIN	0.3	0.02	0.02	0.0	0.1	9	2	5	3	0.1	0.2	0.0
MAX	65.0	6.78	3.40	7.9	36.3	2407	190	260	150	7.4	16.4	2.4
AVERAGE	4.7	1.55	0.12	1.4	3.8	186	39	74	30	1.4	3.0	0.5
95th %'ile	9.5	2.44	0.19	3.6	6.7	287	46	94	38	1.8	3.9	0.6
90th %'ile	5.3	2.31	0.11	2.2	4.1	227	45	92	37	1.7	3.7	0.6
75th %'ile	4.4	1.74	0.09	1.5	3.4	168	42	82	33	1.5	3.4	0.5
50th %'ile	3.7	1.46	0.07	1.0	3.1	135	39	74	29	1.3	3.0	0.5
Pelican (Viking) (n=79)												
MIN	0.3	0.01	0.00	0.0	0.1	7	2	2	3	0.1	0.1	0.0
MAX	28.0	22.70	6.22	1.8	12.9	23086	140	210	120	7.6	12.9	2.0
AVERAGE	2.6	1.09	0.17	0.4	2.5	1219	22	43	19	0.9	2.0	0.3
95th %'ile	5.9	2.62	0.39	1.5	8.8	4752	54	111	48	2.3	4.9	0.7
90th %'ile	5.2	1.51	0.20	1.0	5.6	1887	44	90	36	1.7	3.5	0.6
75th %'ile	3.9	0.89	0.09	0.5	3.3	358	34	64	27	1.3	2.9	0.4
50th %'ile	1.7	0.42	0.05	0.2	2.0	133	15	30	15	0.7	1.6	0.2
Clearwater/Grand Rapids (n=15)												
MIN	0.3	0.22	0.04	0.0	2.3	183	11	17	6	0.4	0.8	0.1
MAX	4.1	8.75	0.30	1.9	22.5	2992	48	100	34	1.9	3.3	0.6
AVERAGE	2.2	1.95	0.09	0.4	7.0	700	26	52	21	1.1	2.4	0.4
95th %'ile	3.5	6.87	0.19	0.9	21.3	2041	42	80	31	1.7	3.2	0.5
90th %'ile	3.1	4.80	0.12	0.5	17.3	1559	37	71	30	1.5	3.2	0.5
75th %'ile	2.9	1.50	0.09	0.4	7.8	920	29	60	28	1.4	2.9	0.5
50th %'ile	2.5	1.10	0.08	0.3	4.0	292	27	57	24	1.2	2.5	0.4

Note: Statistics are generated from data wherein values below detection have been replaced by a value equal to 50% of the detection limit. Sabag 1996a.

Table 4 (continued): Statistical summary of historic lithogeochemical sampling results, Cretaceous Formations, Birch Mountains. After Table 2, Sabag 2008; and Alberta Mineral Assessment Report MIN9611, Sabag 1996a.

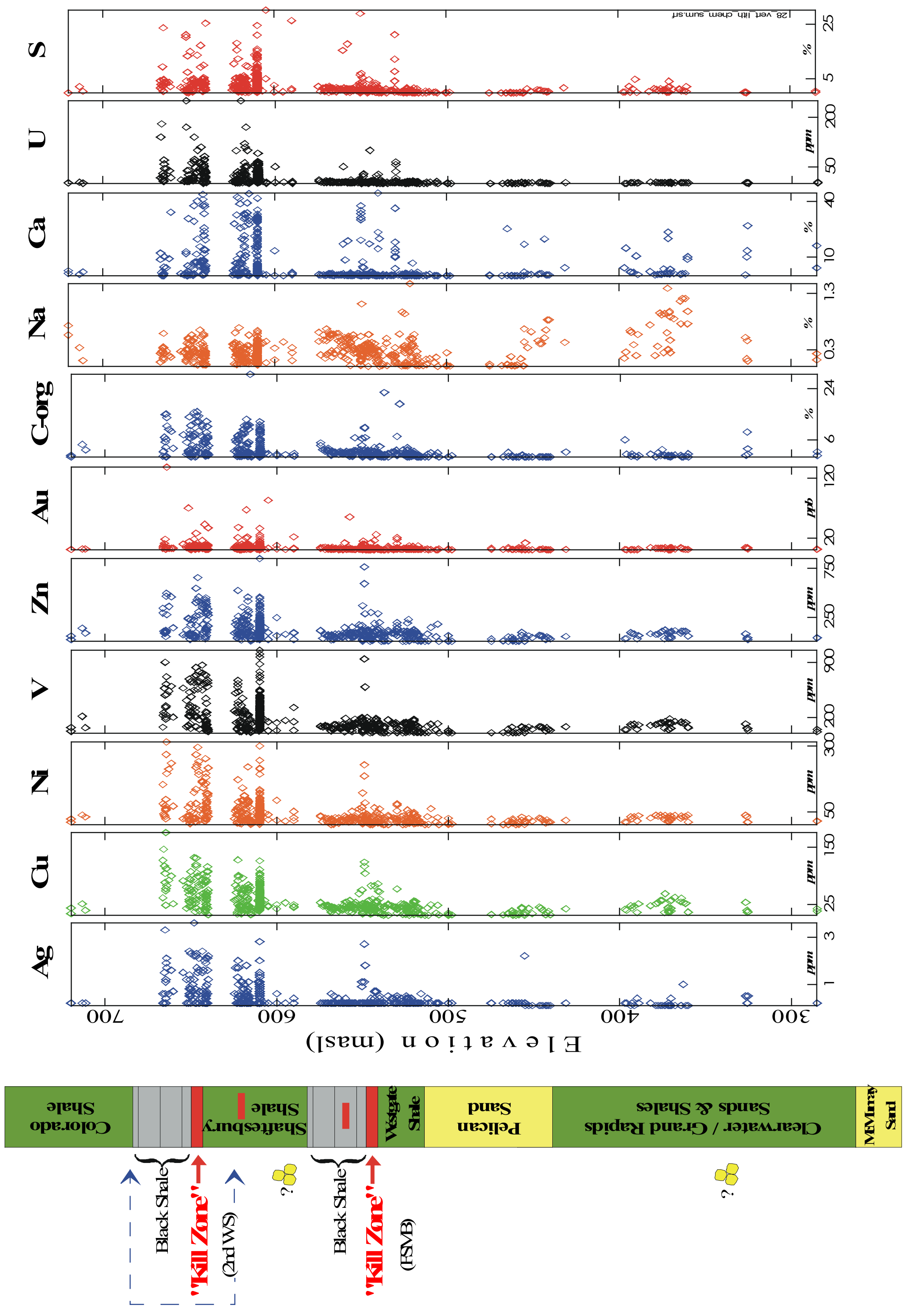


Figure 24: Summary of surface lithogeochemical vertical trends, historic sampling, Birch Mountains. After Figure 28, Sabag 2008; and Figures 36 and 37, Alberta Mineral Assessment Report MIN9611, Tintina Mines, Sabag 1996a. 2ndWS=Second White Speckled Shale Formation, FSMB=Fish Scales Marker Bed (Shaftesbury Formation).

8.7 GEOLOGICAL WORKING MODELS - 1996 AND 2008

A geological working model was formulated for the Birch Mountains by Tintina in 1996[8], based on its surface work programs and composite anomalies identified, as a guideline for ongoing exploration of Cretaceous horizons in the area (Figure 25). The working model was based on the following premises:

(i) that deep sourced pre-Prairie oxidizing metalliferous basinal fluids could leak into the Birch Mountains through the countless cross-structures intersecting the Prairie Evaporite salt scarp which is projected to cross the Mountains and underlie it;

(ii) that carbonaceous shales across the Birch Mountains, provide good redox interfaces as collectors of metals via redox processes from the oxidizing fluids seeping up from a source beneath the shales; and

(iii) that metal concentration in the Birch Mountains can be envisaged to be controlled primarily by redox processes acting on metal bearing oxidizing fluids circulating through fault zones or fault junctions.

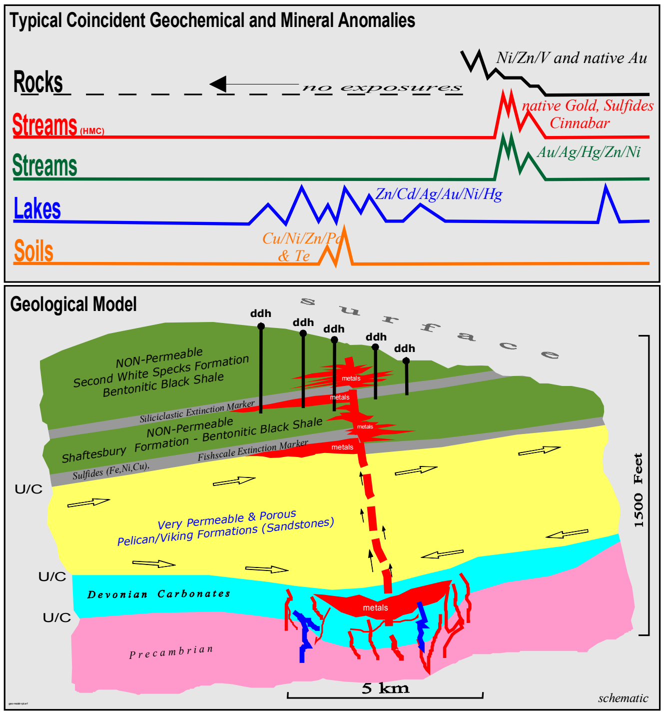


Figure 25: Geological model for metals enrichment, Birch Mountains. Showing typical geochemical and mineral anomaly profiles from historic multimedia surface sampling programs from areas over and near shale hosted metals enrichment zones. From Figure 23, MIN9802, Sabag 1998.

Possible (suspected) hot-springs or volcanogenic activity in the area was not incorporated into the model due to the scarcity of reliable spatially resolved information.

For the purposes of the Birch Mountains Model, stratigraphy of the area was regarded as a sedimentary package consisting of alternating permeable sequences (sandy – eg: Pelican sands) enveloped within impermeable horizons (carbonaceous – Speckled and Shaftesbury Shales).

The Model anticipated that metal bearing fluids would circulate upward within the permeable units and would precipitate their metal content against overlying carbonaceous contacts and in permeability traps created by a number of faults and domed locations identified in the course of stratigraphic correlations for the area.

Basinal dewatering was regarded as the source of metal rich fluids which would travel up-stratigraphy through the permeability breach created by dissolution of the Prairie Evaporite salt beds.

Extrapolations from the model suggested that the lower contacts of the Second White Speckled Shales and Shaftesbury Shale Formations, the principal carbonaceous units in the area, present equally good redox interfaces for the accumulation of metals beneath their lower contacts and, accordingly, offer equally prospective exploration targets.

Tintina tested the proposed model in 1997 by the drilling of a series of holes positioned to cross an anomalous locality and related faulting over each of the B-Mid (Buckton) and A-South (Asphalt) targets, to

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[8] Alberta Mineral Assessment Report MIN9611, Sabag 1996a.

test beneath the base of the Second White Speckled Formation. This Formation is nearer the surface, and was regarded as an adequate proxy for any redox processes which might be active in the area and which would be expected to affect both Formations.

The drilling confirmed that the surface composite anomalies A-South and B-Mid (subsequently named the Asphalt and Buckton Zones, respectively) indeed reflect buried metal mineralization in shales beneath the surface, over a 8km cross-section across the Buckton Zone at B-Mid and over a 900m cross-section across the Asphalt Zone at A-South. The drilling confirmed the presence of metal enrichment in the Second White Speckled Shale, but indicated that sections beneath its bottom contact are relatively unmineralized, contrary to the proposal of the geological working model formulated for the area.

The drilling, accordingly, disproved the model and demonstrated that the Second White Speckled Shale, and to a much lesser extent also the Shaftesbury Formation beneath it, is ***itself*** the primary host to the metals and related anomalies documented from both areas. The drilling and related downhole geology/geochemistry of the Asphalt and Buckton Zones are discussed Section 8.10.

Based on its 2008 compilation and a re-assessment of the collective historic information from the Birch Mountains area and the Property, DNI proposed a general geological working model attributing a central role to local Middle Cretaceous volcanism or exhalative venting as the source to sedimentary debris as well as metallic mineralization (enrichment) captured in Second White Speckled Shale Formation discovered in the area (Sabag 2008). The foregoing proposal is reinforced by work from the Alberta Geological Survey published after Tintina's efforts (AGS 2001) demonstrating that the Birch Mountains are unique in the foregoing regard and that Formations such as the Second White Speckled Shale are better mineralized over the Mountains when compared to elsewhere in northeast Alberta, a conclusion which is consistent with buried "hot spot" (Figure 16) beneath the Birch Mountains.

As a general geological working model, DNI proposed that the Birch Mountains, and the Property, overlie considerable exhalative venting, that the Middle-Upper Cretaceous formations incorporate considerable material from nearby venting events into their sedimentary record, and that culmination of the Second White Speckled Shale Formation depositional cycle coincided with a significant increase in venting, also marking the inset of a hiatus of volcanic activity in the area.

DNI also proposed that metallic mineralization in the Birch Mountains, and the Property, is congregated around several yet undiscovered vents, which are characterized by considerable exhalative activity venting through select block-faults or their junctions, and that the Second White Speckled Shale Formation, at least at the Buckton and Asphalt Zones, incorporates exhalative debris and metals from nearby venting. Under this scheme, DNI envisaged that the Asphalt and Buckton Zones represent "aprons" of their respective nearby vents, and both Zones support speculation of the nearby existence in the area of yet undiscovered sedimentary exhalative - SEDEX style – sulfide mineralization.

All of the available historic data support the above proposal, and there exist no data, to the author's knowledge, that constrain the model or refute the proposal. There has been no prior exploration for sulfide deposits in the Birch Mountains and on the Property, since the bulk of the historic work has focused on a formational fluid dependant redox model for the area which was disproved by the 1997 drilling. All work subsequent to the historic drilling focused entirely on evaluating metallic potential of the black shales themselves without any attention to their provenance.

8.8 COMPOSITE ANOMALIES

A number of anomalous localities were identified in the Birch Mountains by Tintina from the collective of its 1994-1995 exploration programs (Figure 26), comprising areas extending over 20-40 sqkm each, which were defined based on results from multimedia sampling and other geological work, They are areas characterized by multiple and coincident, or spatially proximal, surface geochemical and mineral anomalies, typically located over structural or subsurface stratigraphic disturbances. The majority of the localities are located over fault zones or are on their flanks, or are associated with zones of stratigraphic disruption or thickening. Many of the anomalous localities are also adjacent to, or occupy, a topographic "high", and some are associated with magnetic anomalies. Lithogeochemical metal enrichment trends over the anomalous localities reflect enrichment vectors suggesting an intimate association between structural disruptions and metals enrichment in the Birch Mountains.

The composite anomalous areas are described in Tintina reports referenced by Tintina's (then) property names, and comprise the principal anomalies identified to date on DNI's Property by the historic work. The anomalous areas are "named" in this Report for easy reference and are described in pages following. The reader is referred to Sabag 2008 for additional details which are summarized in Appendix A5.

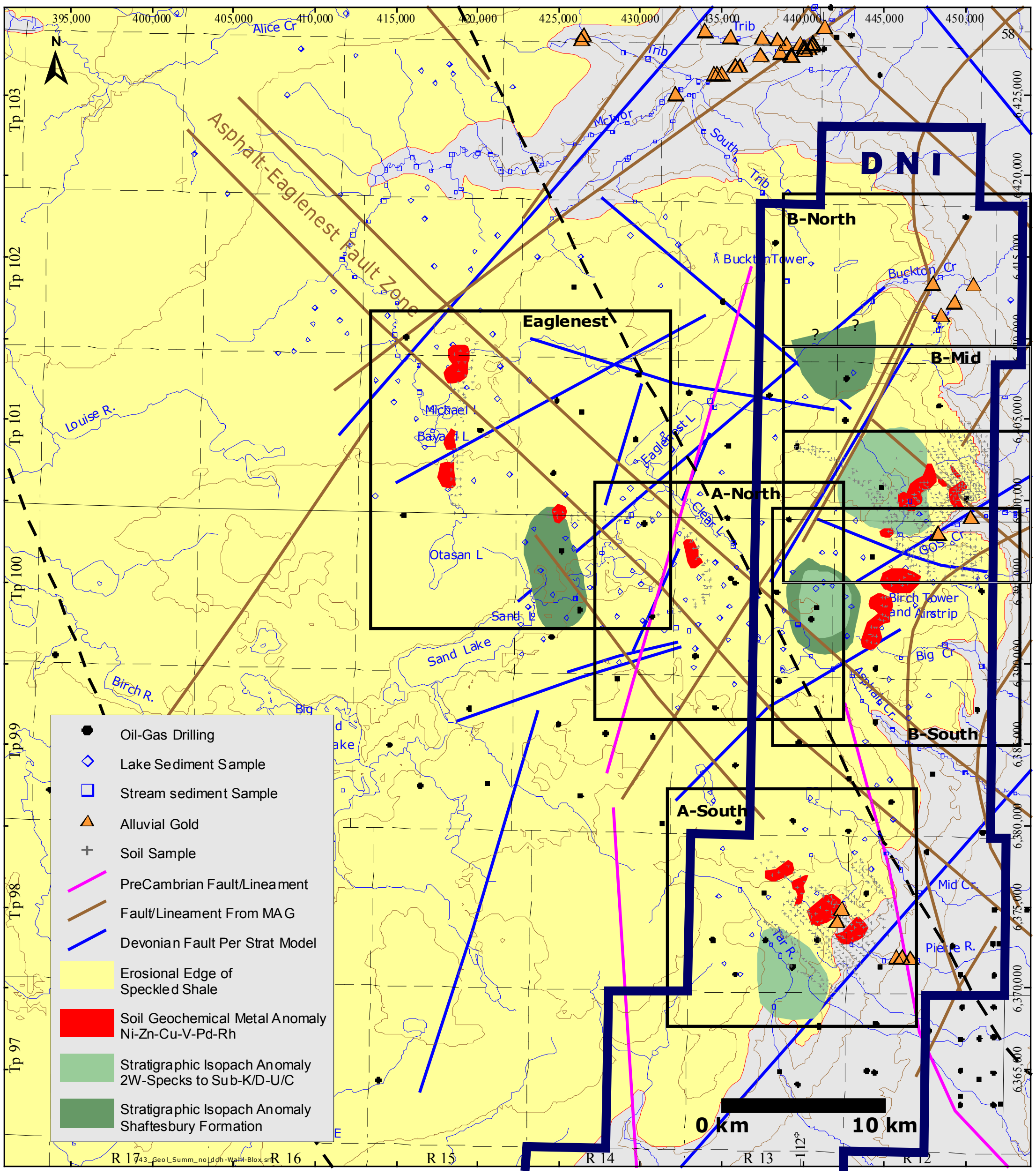


Figure 26: Summary of historic composite anomalous areas ranked by Tintina, Birch Mountains. After Figure 29, Sabag 2008; and Drawing 97-B3, Alberta Mineral Assessment Report MIN9802, Sabag 1998.

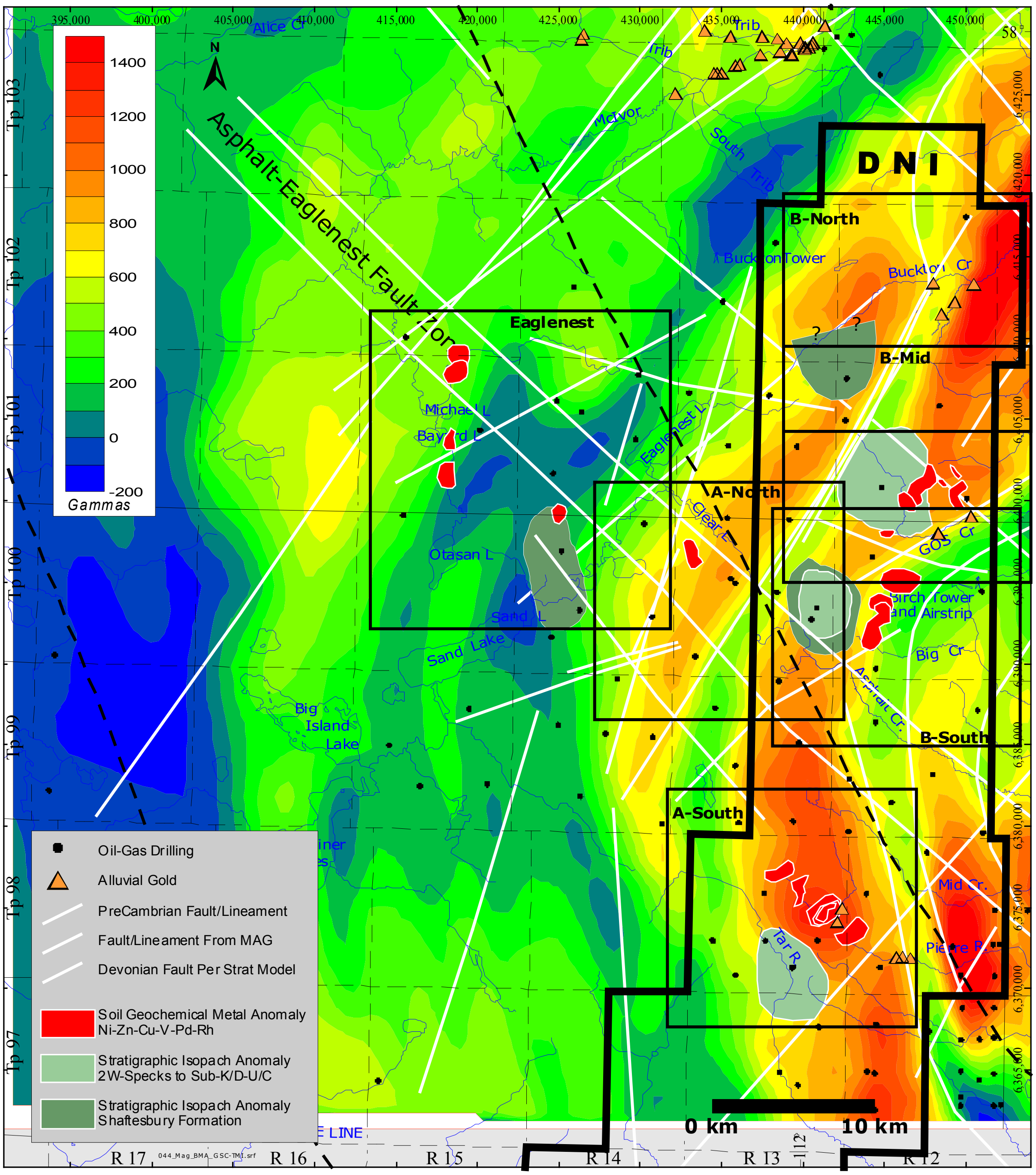


Figure 27: Total Residual Total Field Aeromagnetic trends, showing Tintina composite anomalous areas and major interpreted structures and anomalies, Birch Mountains. After Figure 30, Sabag 2008. Aeromagnetics after GSC Magnetic Anomaly Map, No.12-AM. Other sampling and features after Alberta Mineral Assessment Report MIN9802, Sabag 1998.

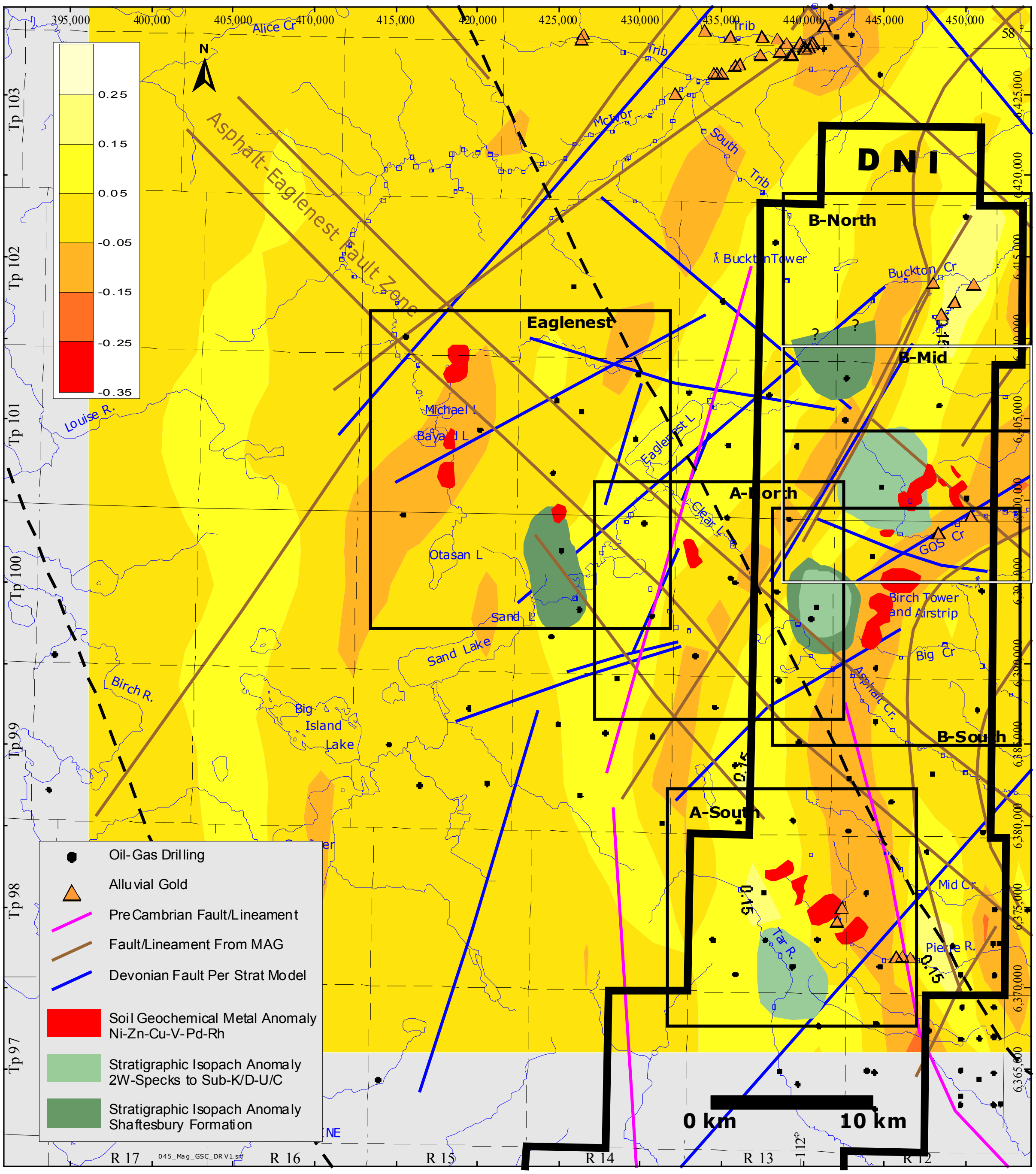


Figure 28: First Derivative of Total Residual Total Field Aeromagnetic trends, showing Tintina composite anomalous areas and major interpreted structures and anomalies, Birch Mountains. After Figure 31, Sabag 2008. Derivatives based on data digitized from GSC Magnetic Anomaly Map, No.12-AM. Other sampling and features after Alberta Mineral Assessment Report MIN9802, Sabag 1998.

Composite Anomalous Area Ranking: Tintina ranked anomalies and prioritized the B-Mid and B-South targets (subsequently recognized as the Buckton and Buckton South Zones and vicinity), located over the central and southern portions of its historic Buckton Property, as the most prospective near-term drilling targets, characterized by a predominance of Ni/Cu enrichment over the former and of Zn over the latter. The ranking also similarly prioritized A-South, over the southern portion historic Asphalt Property, as a highly prospective target characterized predominantly by Zn enrichment accompanying native gold. The Eaglenest anomaly was not explored beyond the reconnaissance stage despite the many favourable anomalies identified.

The B-Mid and A-South target areas were subsequently drill tested in 1997, hence defining the Buckton and Asphalt Zones, both of which were also initially prioritized by DNI as its highest priority targets, although DNI subsequently decided to focus on advancing the Buckton target and its likely extension, the Buckton South target, and has since deferred all work on the Asphalt target. DNI furthermore delineated mineral resources over the Buckton and Buckton South Zones, and advance the Buckton deposit through a Preliminary Economic Assessment (discussed in Section 17).

8.9 DNI'S TARGET AREAS – "SUB-PROPERTIES"

8.9.1 Overview of DNI's Target Areas

The Property has considerable potential for hosting metals, and contains a number of targets which have excellent potential for hosting immense quantities of metals in near-surface black shales. The Property also contains areas with potential for hosting metals in yet undiscovered, though suspected, sediment hosted exhalative - SEDEX style - sulfides. As such, advancement of the exploration and development of the potentials of the Property would entail combined efforts to explore and develop the various shale-hosted targets and to advance them toward their ultimate potential, while also conducting early stage work to evaluate the potential of SEDEX style sulfide mineralization over several parts of the Property. Historic results are consolidated into a 1:50,000 general compilation Drawing #A3 for the Property in Appendix A3, showing also details of prioir and 2012 DNI's drilling programs. Extracts from prior work also included in Appendix A5

The aggregate of all historic work provides data coverage over only the eastern two-thirds of the Birch Mountains, and had by 1996 defined six target areas over composite surface and subsurface anomalies. The historic target areas were consolidated by DNI into four principal areas soon after assembly of its then larger land position in 2007-2008 based on its reinterpretation of historic results with the benefit of other historic work postdating their initial designation in 1996. DNI recognized two additional areas of merit which had not previously been explored by Tintina.

Relying on the above, DNI formulated a basis for its own future work on the Property, and ultimately recognized six contiguous mineralized systems on what was previously, until March 2014, its larger land position over the Birch Mountains. DNI regarded the foregoing as sub-properties with similar characteristics, but which provide two different, though apparently related, types of prospective exploration and development targets, namely; (i) metal enriched polymetallic black shales and (ii) possible source(s) to metals therein, proposed herein to be nearby exhalative vents with potential to host sediment hosted exhalative volcanogenic sulfides.

The six sub-properties recognized by DNI are localities which hold potential for hosting polymetallic black shales. The sub-properties ranged in development from areas which have reconnaissance level anomalies which have not been explored, through drill-ready target areas, to two mineralized volumes (previously named Mineralized Zones). The sub-properties range in size 100-300 sq km each and their size is appropriate for the principal type of polymetallic mineralization being sought by DNI; namely, nominal 5kmx5km or larger zones of polymetallic enrichment in flat-lying near-surface "blankets" of polymetallic black shale. The target areas are typically centered around circular, or closed, physical or stratigraphic features associated with metals enrichment in one form or another either over them or on their flanks. The additional potential of the overall Property to host yet undiscovered exhalative sediment hosted sulfides has not yet been evaluated. The six sub-properties identified by DNI are shown in Figure 29.

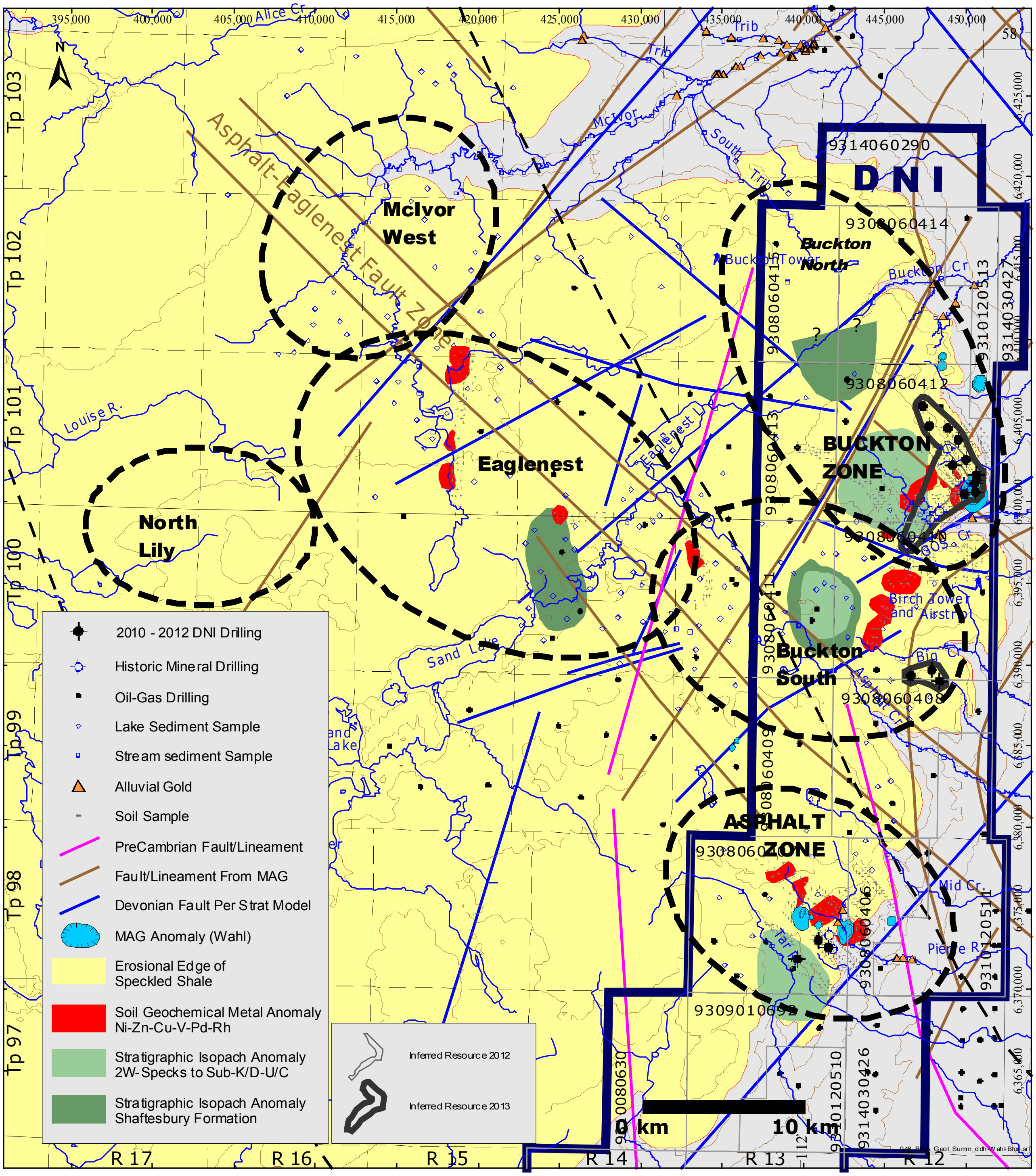


Figure 29: Summary compilation of all historic anomalies over the Property, showing also the composite target areas - "sub-properties" - comprising the principal exploration targets over the east half of the Birch Mountains and on the Property. The Buckton, Buckton South and Asphalt Zones are also shown. After Figure 65, Sabag 2008.

To downsize the Property in March 2014, DNI allowed permits containing three of the six target areas to lapse (the McIvor West, North Lilly and Eaglenest). The six target areas are shown in Figure 29, and are as follows:

- Two of the sub-properties, designated herein as the **McIvor West** and **North Lily Anomalies**, comprise large 50-100 sqkm anomalies selected based on interpretations of general information, and have not been investigated in the field in any measure of detail to determine if they host mineralization. They are in the reconnaissance stages. **These are located to the west of DNI's current Property outline and are on permits which DNI allowed to lapse in March 2014.**

- Two of the sub-properties, designated herein as the **Buckton South** and the **Eaglenest Target Areas**, comprise large areas which have undergone considerable prior historic surface work which has identified prospective targets to be tested by future drilling to probe for suspected buried polymetallic mineralized shale beneath the surface of each Target Area. Additional field work will not substantially, nor materially, alter conclusions which have already been reached by the historic work suggesting considerable potential for both. Portions of both Target Areas also present reconnaissance level potential to prospect for the presence of exhalative vents. **The Eaglenest target is located immediately to the west of DNI's current Property outline and is on permits which DNI allowed to lapse in March 2014. DNI drill tested the** Buckton South Target Area in 2012 (Section 13) and delineated a maiden initial inferred mineral resource therefrom (Section 16), further concluding also that the Buckton South Zone is a likely southerly extension of the Buckton Zone mineral resources.
- Two of the sub-properties, designated herein as the **Asphalt** and **Buckton Zones** represent near-surface (partly exposed) polymetallic zones which were confirmed by Tintina's widely spaced historic drilling and by DNI's winter 2010-2011 and summer 2012 drilling programs. DNI furthermore delineated a maiden initial mineral resource at the Buckton Zone in 2011, and after expanding it several times (Section 15) advanced it through a Preliminary Economic Assessment in 2013 (Section 17). Both Zones present additional targets with by way of suspected sources to their respective metallic mineralization believed to be nearby exhalative venting. Historic work results from the Buckton Zone further provide metal enrichment vectors directing the search for exhalative venting to its north.

Based on the above, the six targets merit work to investigate physical and geochemical surface anomalies interpreted/identified from reconnaissance field work, or to localize the source of surface metal anomalies discovered, or to confirm suspected buried metal enrichment beneath surface geochemical anomalies identified, or to advance mineralized Zones previously identified to a classified resource. As such, the six target areas are distinct properties in their own right. The target areas are presented in Figure 30. The reader is referred to Sabag 2008, 2010 and 2012 for a detailed discussion of all of the six target areas.

DNI downsized the Property in March 2014, by allowing permits containing the McIvor West and North Lily Anomalies, and the Eaglenest Target area to lapse given the early stage of their development and the remote access which will undoubtedly challenge field work. The foregoing areas are, furthermore, within Caribou Ranges whose boundaries were arbitrarily expanded by Alberta SRD in 2013, adding even greater challenges to conducting of field work to explore them. To the extent that this Report relates mainly to work conducted on the Buckton and Buckton South Zones, the discussion following focuses only on details relating to the two Zones.

8.9.2 Buckton Zone, Projected Extensions and The Buckton South Zone

The Buckton polymetallic Zone was discovered by Tintina Mines in 1997 by drilling which was conducted to verify suspected metallic mineralization buried beneath a composite set of anomalies identified by extensive prior surface sampling over an approximate 50 sqkm area (Figure 47). The Zone and its vicinity were previously designated as Composite Anomaly Area B-Mid by the historic work, and it is located in S½ T101/R12.

Historic work depicted the Buckton Zone as a Zone of polymetallic enrichment in Mo-Ni-U-V-Zn-Cu-Co-Ag-Au, hosted in, and confined to, the Second White Speckled Shale Formation which is a substantially flat unit ranging 18m-26m in true thickness as intersected in the drilling. The Zone's thickness based on drilling is consistent with its exposures adjacent to the drilling along the north and south valley walls of Gos Creek at elevations ranging from 600m to 624m asl, although the exact position of the Formation is difficult to discern from the valley wall exposures alone due to considerable slumping locally "telescoping" its actual thickness to an apparent thickness exceeding 40m.

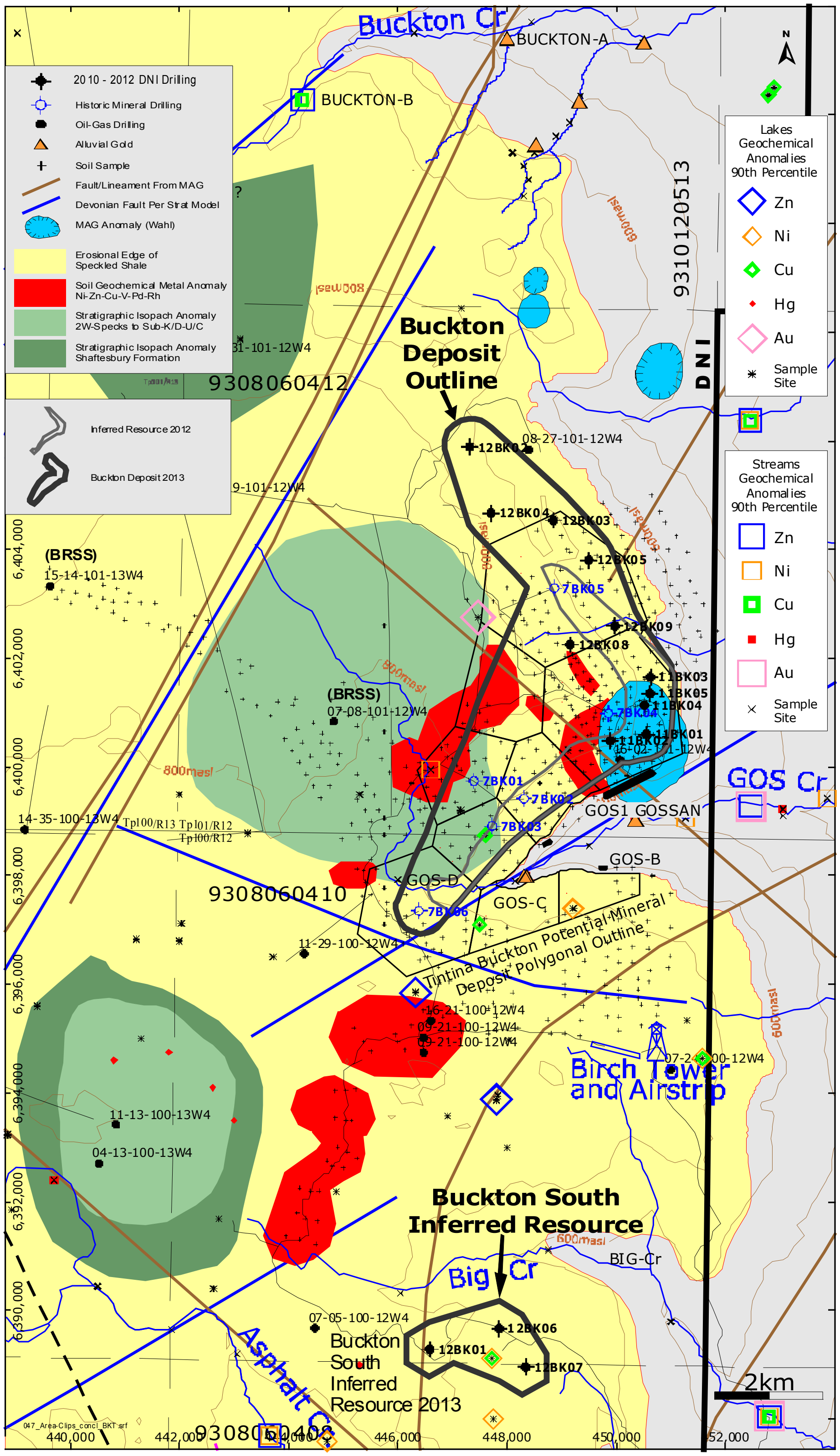


Figure 30: Summary of the Buckton and Buckton South Zones and vicinity, showing location of current mineral resources. Other features are also shown after Figure 66, Sabag 2008. BRSS=Beaver River Sandstone.

Whereas as historic work, and DNI's initial work focused entirely on base metals and uranium, DNI's subsequent work demonstrated that Rare Earth Elements and other critical metals (Li-Th-Sc) contained in the Zone are also incidentally recoverable from the shale as co-products to recovery of base metals and Uranium. More recently, DNI also recognized that Labiche Formation shales overlying the Zone are sufficiently enriched in REEs and critical metals that they can add considerable value to any mining operation. **As a result, the Buckton Zone is currently envisaged to comprise a continuous shale package consisiting of the Second White Speckled Formation shale and the overlying Labiche Formation hosting recoverable base metals, Uranium and critical metals** (see Sections 15 and 17).

The Buckton Zone is at least approximately 9km-10km long and 2km-3km wide. It is open to the north beyond the portion drilled, to the west and to the south, but is eroded away to the east as it sits on the erosional edge of the Birch Mountains. Metal enriched exposures of the Second White Speckled Shale along valley walls as far away as 4km to the east of the Zone's southern extremity suggest it may be 2-3 times wider over its southern parts than demonstrated by the drilling. Other surface anomalies to its north and, especially the south, support speculations that it may be 2-3 three times longer than demonstrated by the drilling. The Buckton South Zone located some 7km-8km to the south of the Buckton Zone (historic Composite Anomaly Area B-South, Sabag 2008) likely represents southerly extension of the Buckton Zone, although it may represent an altogether separate mineralized zone. Although a mineral resource has been delineated over the Buckton South Zone (Section 16), the 7km-8km separating the two Zones has not yet been tested by drilling.

Although there has been no additional surface mapping and sampling work since Tintina's work over the Buckton Zone and vicinity, historic information from the Buckton Zone is superceded by DNI's exploratory and infill drilling programs (2010-2011 and 2012), its resource studies for the Zone (Section 15) and the Buckton Preliminary Economic Assessment study (PEA-2013) presented in Section 17 of this Report, which collectively have delineated a mineral deposit which is potentially economically mineable. As it stands, the Buckton Deposit represents mineral resources which are hosted in two near-surface stacked black shale horizons which are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc. The mineral resources consist of an upper mineralized portion hosted in the Labiche Formation which directly overlies a higher grade black shale hosted in the Second White Speckled Shale Formation beneath it. The two formations together comprise an approximately 13m-140m thick wedge of mineralized black shale, extending westward from the eastern erosional edge of the Birch Mountains where they are exposed on surface but are under progressively thicker overburden cover westwards. Due to differing head grades and slight lithogeochemical contrasts, the two formations offer two mining targets which were discussed separately in previous resource studies for the Buckton Deposit and reported on a segregated basis as well as on a combined (blended) basis.

The Buckton mineral resources represent an aggregate of 4.7 billion tonnes of mineralized material consisting of 4.4 billion tonnes classified as an Inferred resource and 271 million tonnes classified as an Indicated resource. The Buckton Inferred and Indicated resources together extend over 21.9 square kilometres, 20.4 square kilometres of which represents the aerial extent of the Inferred resource. The Buckton Inferred resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls. The Inferred resource is open to the south over the approximately seven kilometres separating it from the Buckton South Zone mineral resource. Stratigraphic and surface exploration information suggests that the Buckton and Buckton South Zones may well be connected. The Buckton Indicated resource is located in the middle of the deposit surrounded by the Inferred resource which may be upgraded into the Indicated class subject to minimal infill drilling.

The Buckton Zone is located on the eastern flank of a 5km diameter subsurface stratigraphic isopach anomaly representing abnormal thickening in the stratigraphic pile above the sub-Cretaceous Unconformity (to base of Second White Specks) associated with faulting. Cross-sections across the anomaly indicate considerable structural complexity characterized by the junction of a multitude of faults converging toward the general southern portions of the isopach anomaly, defining an overall partial radial pattern. The isopach has been interpreted as a "closed" feature based on contouring of subsurface stratigraphic information from oil-gas well picks, although its interpreted shape may be an artifact of data noding, and it may well instead be a large fault block rather than a domed feature. Metal enrichment patterns in exposures sampled along the Gos Creek valley by the historic work suggest progressive enrichment nearer the isopach, as do a series of soil geochemical anomalies characterized by acute Ni-Cu diffusion accompanied by Te enrichment over areas straddling the flanks of the isopach.

The Zone is intermittently exposed along the north and south valley walls of Gos Creek. The GOS1 gossan, located in the north valley wall, represents by far the most continuous exposure of the Zone. The gossan comprises a nearly 1km ledge exposure of metals enriched Second White Specks Formation, lying over the eastern flank of this isopach feature. Mudflow sediments from the gossan drain directly into Gos Creek which is characterized by >90th pctl stream sediment geochemical anomalies in Ni±Zn±Hg, accompanied by alluvial gold in stream sediment HMCs. Native gold has been repeatedly recovered from the GOS1 gossan and from the Gos-C lithosection (in the south valleywall), both of which locations are uphill from stream samples reporting also native gold in Gos Creek. Metal enrichment over the western extremities of the GOS1 gossan are supported by Ni/Cu/Pd and halogens (Br/I) diffusion anomalies in overlying soils. The gossan can be regarded as a geochemical halo, related to broader metal accumulation nearby.

Outcrop exposures of Speckled Shale adjacent to the Buckton Zone and the adjacent isopach anomaly are enriched in Mo-Ni-Cu-Zn-V-Co-Ag±Au±Pt±Pd, especially over its upper portions and near its lower contact defined by the siliciclastic bone bed representing a marine extinction marker horizon. The bone bed is typically a few centimeters thick but is abnormally thickened upward to 1m nearer the isopach anomaly.

Tintina's examination of available archived drill core and cuttings from two oil/gas wells in the area (07-08-101-12W4 and 15-14-101-13W4) reported the presence of abundant sulfides in some Cretaceous sections. The historic work also noted presence of Beaver River Sandstone immediately above the sub-Cretaceous unconformity, enveloped in altered shale with up 50% sulfides by volume immediately adjacent to its contacts (shown in Figure 30 as BRSS). This highly silicified sandstone also outcrops elsewhere in the region and is generally regarded as a hot springs alteration marker carrying ZrO in addition to gold, base metals, sulfides and iodides (Fenton and Ives 1982, 1984, 1990). Its presence in the Birch Mountains spatially associated with stratigraphic thickening and with metal enrichment zones can be considered to be diagnostic and suggestive of the localized presence in the area of broad alteration zones overlying nearby centers of hot springs or other metal bearing fluid venting activity (fumeroles?).

The Buckton Zone was discovered by six 3-inch diameter vertical holes (a total of 749.63m) drilled by Tintina in 1997 to verify suspected metallic mineralization buried beneath the anomalies described above which collectively represent a 5kmx8km composite anomalous target area (Area B-Mid). The holes were collared along an approximate 8km long fence as a cross-section over the southeast flank of the isopach anomaly. Drill hole spacing ranged 700m to 2400m, and hole depths varied 75m-150m to probe from surface (approximate elevation of 700m-750m asl) down to the base of the Second White Specks Formation (approximate elevation of 600m-630m asl). Drill core was sampled under geological control and sample intervals varied 4cm to 1.51m averaging 0.53cm (see Sabag 2008 for details of the drill program). Split core was archived at the MCRF facilities in Edmonton, and nearly all of it was subsequently re-sampled by DNI in 2009 and 2012 (see also Section 15).

DNI conducted two drill programs over the Buckton Zone, to collect sufficiently detailed information to support estimation of a mineral resource for the Zone. DNI's 2010-2011 drill winter program (Sabag 2012, Alberta Mineral Assessment Report MIN20120007) completed 5 holes including infill holes, whereas the 2012 summer drilling program (discussed in Section 13 of this Report) completed 6 holes. Both programs cored of shallow HQ diameter holes ranging 80.5m to 147.5m in depth intended to core through the base of the Second White Speckled Shale Formation. Together with the historic drilling, the current drill database from the Buckton Zone represents a drill hole spacing ranging 240m to 2.05km and forms the basis of the most current mineral resource model and estimate for the Buckton Deposit (Updated and Expanded Buckton Zone Resource, see also Section 15.4).

While all prior historic discussions of metal grades and variations thereof focused entirely on trends within the Second White Speckled Shale Formation, DNI's Buckton resource studies and especially the Buckton Preliminary Economic Assessment conclude that confining discussions to the Speckled shale alone is too simplistic and does not reflect the economic potential of recoverable mineralization at the Buckton Zone. The foregoing studies concluded that the potential of the Zone is reflected by the merits of the combined shale package consisting of the Speckled Shale and the overlying Labiche Formation shale, thereby suggesting that future discussions of economic geology should address metal grades and variations thereof for the entire package. **In addition, DNI's most recent metals leaching testwork further demonstrated that metals contained in the Belle Fourche Formation shales (Shaftesbury Formation) beneath the Speckled shale are also recoverable by the same bioleaching methods used to recover metals from the shales above it, suggesting that future studies might give consideration to including Belle Fourche hosted mineralization in mineral resources.**

Weighted average grades for the three principal Formations as intersected in DNI's 2010-2011 Buckton drill holes are summarized in Table 5 for the select group of metals which are included in the Buckton resource studies (Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc). The general trend is for better base metal+U grades within the Second White Speckled Shale Formation, similar REE grades for all three Formations (albeit with more irregularity within the Speckled Shale), and better Li+Sc grades within the Labiche and Belle Fourche Formations. Inter-formational Lithogeochemistry is also shown in downhole geochemical plots in Figures 31 and 32, for drill hole 12BK03 (from 2102 summer drilling program, Section 13), showing downhole profiles for Mo (which proxies well for other metals) and for Li-Sc-Ce-Yb. The Figures show considerable vertical variation in grade, but reiterate good lateral continuity (additional downhole geochemical profiles in Sections 13.7 and 15.4).

To the extent that most of the drill holes over the Buckton Zone cored across the entire thickness of the Second White Speckled Shale Formation, trends in metal grades can be discerned well enough to characterize the Formation (discussed in greater detail in Sabag 2008). True thickness of the Labiche Formation is, however, unknown given that its upper portions are eroded away or scoured by glacial activity in the area, and as such down-stratigraphic geochemical trends are impossible to discern with any measure of certainty. Similarly, drill intercepts of the Bell Fourche Formation penetrate only a short distance into the upper portions of the Formation and provide only partial information for the Formation.

Limitations of the information from the Labiche and Belle Fourche Formations notwithstanding, there is good lateral consistency in the average grades for all three Formations among the drill holes over large distances, especially considering their wide spacing. This is typical of the lateral consistency displayed by black shales worldwide. Lateral continuity is depicted in downhole metal grades for Mo shown in Figure 31 for select holes for a qualitative review, sequenced in the fence diagram from south to north in the same order in which they are located in the drilled cross section. Metal grades are shown sequenced downhole for the drill intercepts across the Formations.

While prior work discerned some lateral enrichment vectors to guide future work, the trends are based entirely on the Second White Speckled Shale Formation and not necessarily reinforced by demonstrably similar trends in the overlying shales or those beneath it, suggesting that future work should focus on the area to the north of the drilled cross-section for identification of better grading material which may also comprise thicker sections in the Formation northwards dominated by metals other than V (Sabag 2008).

Should the trends discernible in the Second White Speckled Shale Formation prove to be typical for the overall Property, they would serve to further characterize the true nature of metal mineralization in the Second White Speckled Shale and perhaps also the enveloping black shales across the Property as consisting of two separate juxtaposed trends: one which is predominantly a general basinal trend related to the shales' anoxic provenance and dominated by V-Cu(Zn), and another trend superimposed upon it which is dominated by Mo-Ni-U-Zn-Co enrichment, accompanied by bentonite development, related to localized volcanism and exhalative venting.

		Location	ASP	BKT	ASP	BKT	ASP	BKT	ASP	BKT
		Length (m)	61.2	5.0	33.7	202.6	23.6	89.0	13.1	96.4
		Formation	ob	ob	L	L	2WS	2WS	BF	BF
Analyte Symbol	Detection	Method								
Mo (ppm)	1	ICP	4	3	7	3	85	72	2	3
Ni (ppm)	1	ICP	23	47	59	46	163	150	49	42
U (ppm)	0.5	INA	3.2	4.0	7.0	4.3	36.5	28.0	7.0	4.9
V (ppm)	2	ICP	82	247	358	248	709	742	343	200
Zn (ppm)	1	ICP	50	136	174	141	308	281	135	114
Cu (ppm)	1	ICP	21	29	52	30	86	74	38	26
Co (ppm)	1	INA	8	12	16	15	25	24	13	12
Li (ppm)	0.5	MS	25.8	65.1	77.4	74.4	81.0	56.6	114.8	67.0
La (ppm)	0.1	FUS-MS	22.1	42.7	40.2	39.8	65.2	50.0	50.7	41.8
Ce (ppm)	0.1	FUS-MS	43.4	77.3	70.5	71.9	102.1	80.6	89.9	76.9
Pr (ppm)	0.05	FUS-MS	4.97	8.79	8.57	8.39	15.13	10.71	11.98	9.11
Nd (ppm)	0.1	FUS-MS	18.9	32.0	32.8	32.0	62.5	41.6	47.1	35.0
Sm (ppm)	0.1	FUS-MS	3.7	5.7	6.5	6.1	13.6	8.5	9.8	7.0
Eu (ppm)	0.05	FUS-MS	0.77	1.28	1.37	1.29	2.88	1.83	2.02	1.54
Gd (ppm)	0.1	FUS-MS	3.1	4.5	5.6	5.0	12.8	8.2	8.8	6.2
Tb (ppm)	0.1	FUS-MS	0.5	0.7	0.9	0.8	2.0	1.2	1.4	0.9
Dy (ppm)	0.1	FUS-MS	2.8	3.8	5.2	4.6	11.2	7.2	8.2	5.4
Ho (ppm)	0.1	FUS-MS	0.6	0.8	1.1	1.0	2.2	1.5	1.6	1.1
Er (ppm)	0.1	FUS-MS	1.6	2.3	3.1	2.8	6.0	4.0	4.4	3.0
Tm (ppm)	0.05	FUS-MS	0.25	0.35	0.49	0.44	0.86	0.59	0.66	0.45
Yb (ppm)	0.1	FUS-MS	1.7	2.3	3.2	2.9	5.4	3.7	4.4	2.9
Lu (ppm)	0.04	FUS-MS	0.28	0.39	0.51	0.47	0.87	0.58	0.69	0.47
Y (ppm)	2	FUS-ICP	15	25	30	26	70	43	48	30
Sc (ppm)	1	FUS-ICP	6	14	15	15	12	11	15	14
Th (ppm)	0.1	FUS-MS	6.5	10.2	10.4	10.8	10.9	10.2	13.1	10.6
C-Total (%)	0.01	IR	0.75	1.25	2.48	1.42	8.40	8.07	1.76	1.65
C-Graph (%)	0.05	IR	0.06	0.18	0.16	0.13	0.23	0.12	0.10	0.11
C-Organ (%)	0.05	IR	0.57	0.82	2.06	0.84	7.16	6.62	1.51	1.21
CO2 (%)	0.01	COU	0.46	0.85	0.91	1.64	3.67	4.99	0.53	1.21
S (%)	0.01	ICP	0.42	1.00	1.20	0.64	4.08	4.39	1.75	1.78
S Total (%)	0.01	IR	0.50	0.98	1.17	0.65	4.16	4.28	1.75	1.68
SO4 (%)	0.3	IR	0.7	1.1	0.9	1.0	2.0	2.6	1.4	1.3
Paste pH	0.01	Met	7.12	6.92	6.78	7.21	6.62	6.93	6.57	6.19
Spec Grav	0.01	GRV	2.63	2.67	2.63	2.71	2.44	2.45	2.64	2.68
Al (%)	0.01	ICP	2.55	5.46	5.68	5.99	4.71	4.56	6.43	5.21
Na (%)	0.01	INA	0.53	0.41	0.60	0.48	0.72	0.54	0.54	0.57
K (%)	0.01	ICP	1.32	2.08	2.66	2.24	1.98	2.11	2.59	2.37
Ca (%)	0.01	ICP	0.53	0.64	0.77	0.72	4.36	5.36	1.00	1.43
Mg (%)	0.01	ICP	0.35	0.86	0.99	0.95	0.92	0.93	0.96	0.77
Fe (%)	0.01	INA	2.42	3.71	3.93	4.33	4.37	4.47	3.26	3.34
SiO2 (%)	0.01	FUS	81.70	64.72	61.27	62.81	45.93	46.44	62.53	65.21

Table 5: Summary of formational weighted averages for the LaBiche (L), Second White Speckled Shale (2ws) and Belle Fourche (BF) Formations, for select metals and elements of interest, DNI 2010-2011 winter drilling program, Asphalt (ASP) and Buckton (BKT) Zones. Note that averages for LaBiche and Belle Fourche are only for partial intercepts across the two Formations since drill holes did not intersect across the entire thickness of the two Formations. From Table 21, Sabag 2012, Alberta Mineral Assessment Report MIN20120007.

There is, however, vertical variability in grades among the three Formations as expected as there is also within each Formation, especially within the Second White Speckled Shale Formation. While definitive vertical rends cannot be established across the Labiche and Belle Fourche Formations, the Second White Speckled Shale is broadly characterized by progressive enrichment of Mo-Ni-U-(Ag) upstratigraphy correlated with progressively more bentonitic sections seen in the drill core which carry more abundant sulfides. V-Zn-Cu-Co, however, exhibit mixed trends one of which is enrichment upstratigraphy and the other is enrichment midsection in the Formation, which is pronounced for V which is concentrated mostly in the midsection. The trends are accompanied by Ba enrichment over the top of the Formation, and are also consistent with the progressive increase in frequency and size of bentonites in the upper sections of the drill core nearer the upper contact of the Second White Speckled Shale Formation, and also better development of thicker bentonite seams toward the northeast suggesting a nearby source to the northeast.

The above proposed scheme would be consistent with the overall V and Zn enrichment common to all of the black shales on the Property, , even though the concentrations are notably higher in the Second White Speckled Shale (avg 680ppm V; 306ppm Zn). By contrast, the Speckled shale is considerably better enriched in Mo-Ni-U (avg 72ppm Mo, 137ppm Ni, 31ppm U) than its enveloping black shale Formations (LaBiche avg 2ppm Mo, 42ppm Ni, 5ppm U)(Belle Fourche avg 3ppm Mo, 42ppm Ni, 5ppm U).

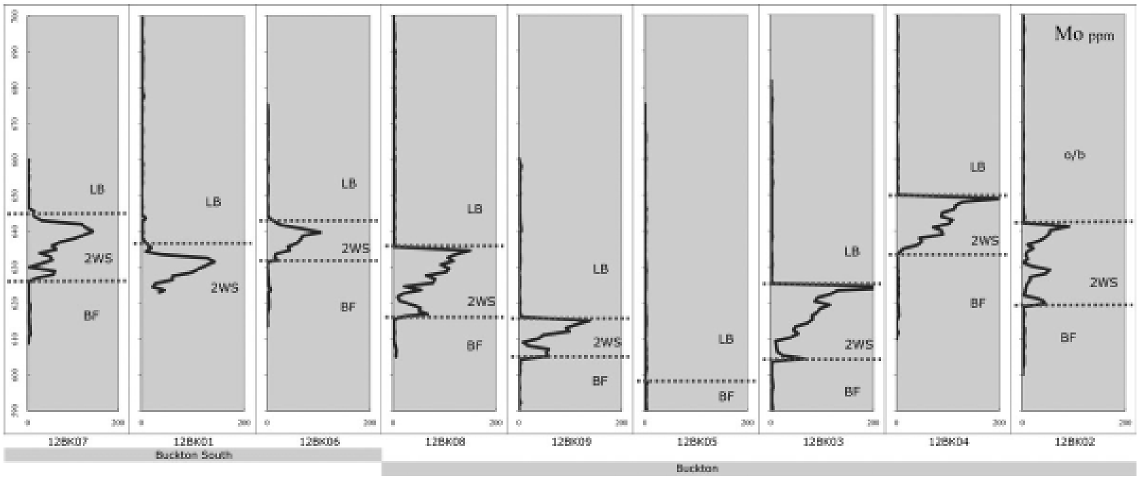


Figure 31: Downhole geochemical profile fence diagrams showing lateral continuity in concentration of Mo across drill holes over the Buckton and Buckton South Zones. 2012 Summer Drilling Program. Note: holes 12BK06 and 12BK07 are 3.1km apart, holes 12BK02 and 12BK08 are 5.6km apart, holes 12BK07 and 12BK02 are 21.4km apart, along fence. See Section 13 for additional details.

In addition to the above, prior interpretation of vertical metal the trends (Sabag 2008) proposed that the trends might provide a general indication of the carrier mineralogy of the various metals, suggesting that Mo-Ni-U-Zn-Co are likely contained in forms or minerals (sulfides/oxides?) other than those which host the V-Cu(Zn) (likely organics and clays). This is a proposal supported by DNI's MLA detailed mineral investigations, and subsequent leaching testwork suggesting that at least some of the metals, notably rare earth elements, likely occur as charged ions adsorbed on clay. The prior interpretations of lateral enrichment trends furthermore proposed that the Speckled Shale hosts two groupings of metals, one including V and the other excluding it, and that the trends suggest a northerly thickening of the better grading material in the upper parts of the Formation. The foregoing would be relevant to future exploration toward expansion of the Buckton Zone, and to exploring the suggested potential of locating the source to metals in the shales.

Unlike base metals and Uranium, concentrations of Rare Earth Elements within the Labiche Formation Shale overlying the Second White Speckled Shale are similar to those from the Speckled Shale, whereas specialty metals Li-Sc are slightly better concentrated in the Labiche than the Speckled Shale beneath it. The upper portions of the Belle Fourche Formation which underlies the Speckled Shale exhibit similar trends to those noted in the Labiche Formation. The foregoing are shown in Figure 32, and discussed further in Section 15.4 along with downhole stratigraphy and other elemental trends.

In attempts to demonstrate potential of the metallic mineralization hosted in the Buckton Zone, prior work had characterized the mineralization by way of in-situ value estimates for contained Mo-Ni-U-V-Zn-Cu-Co relying on average metal prices for the year Sep/07-Aug/08. All of the foregoing are superceded by the Buckton resources studies and the Buckton Preliminary Economic Assessment study discussed in Sections 15 and 17 of this Report, respectively. Similarly superceded is an estimate of the tonnage which might be hosted in the Zone which has since been shown via drilling and resource studies to be considerably larger than previously anticipated. Downhole gross in-situ values, along with stratigraphy and elemental trends, are discussed further in 15 and 17 of this Report, relying on metal prices and metals suites of interest per the Buckton resource studies and the Buckton Preliminary Economic Assessment.

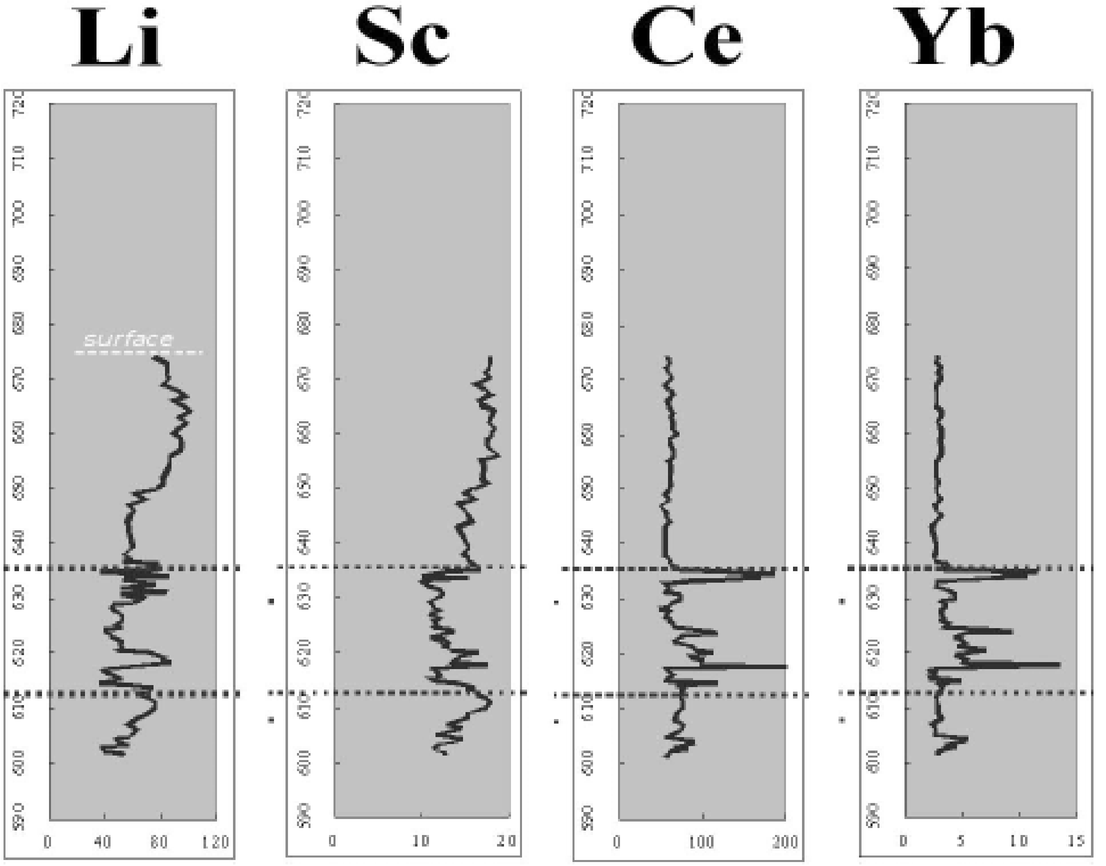


Figure 32: Typical downhole geochemical profiles showing downhole variations in concentrations of Li, Sc, Ce and Yb. Drill hole 11BK01, 2010-2011 winter drilling program. See Section 13.7 and 15.4 of this Report for additional downhole profiles and details.

8.9.3 Buckton Zone Extensions

The Buckton Zone is open in three directions - to the north, the south and the west - but it is eroded away to the east as it sits on the erosional edge of the Birch Mountains. Projected extensions are as follows:

> **Southern Extension (Buckton South)**: Based on historic results from surface sampling, the Buckton Zone could realistically be extended for at least an additional 6km to its south over a series of soil geochemical metal diffusion anomalies collectively occupying a 2kmx6km area. The soil geochemical anomalies are reinforced by other surface, subsurface stratigraphic and structural features, and by >90th pctl lake sediment geochemical anomalies comprising elevated Zn±Ni±Cu±Ag±Hg surrounding an interpreted fault swarm related to Zn diffusion anomalies in soils, associated also with localized zones of Te enrichment. The faulting is associated with a stratigraphic isopach anomaly (in T100/R13) comprising abnormal thickening in the stratigraphic pile above the sub-Cretaceous Unconformity (to base of Second White Specks) coincident with a similar thickening exhibited by the Fishscales-Second White Specks (Shaftesbury) isopach. The combined anomalies were previously designated by historic work as Composite Anomaly Area B-South which was re-named the Buckton South Zone.
>
> Buckton South Zone occupies the headwaters of Asphalt and Big Creeks, radially flowing downhill from it. Both Creeks have reported exceptionally good geochemical and heavy mineral anomalies in stream sediment samples from the historic work. The headwaters of the Creeks, and the vicinity of the soil anomalies, have also reported good >80th percentile lake and stream geochemical anomalies. Asphalt Creek, additionally, represents one of the most sulfide rich

drainages in the Birch Mountains, reflecting mineralogy and geochemistry from fresh sediments which can be seen slumping into the Creek from the adjacent steeply incisioned valley walls. A nearly complete section of the Second White Speckled Shale Formation is exposed in the lithosection at Asphalt-H, at the headwaters of Asphalt Creek, comprising a 10m vertical section with 67ppm Mo, 110ppm Ni, 35ppm U, 461ppm V, 254ppm Zn, 62ppm Cu, 19ppm Co and 1.1g/t Ag averaged over the lithosection as reported from historic sampling. To the extent that lithosections sampled in the historic work are "measured" true stratigraphic sections which were systematically, and substantially continuously, sampled, the lithosections reliably "proxy" as drill holes with better reliability than that represented by conventional reverse circulation holes. The Asphalt-H lithosection was re-sampled on several occasions by DNI to obtain fresh material for its metals recovery leaching testwork (see Sabag 2010 and 2012).

Though the combined anomalies comprising the Buckton South Zone are similar in characteristics to those over the Buckton Zone to its north it is uncertain whether the soil, and associated lakes and stream geochemical, anomalies over areas separating the two Zones reflect a southerly extension of the Buckton Zone, or whether they reflect an altogether separate Zone buried beneath them better associated with the coincident stratigraphic isopach anomaly nearby to their west. Should the exhalative venting geological working model proposed for the area be demonstrated to be valid, overlap or coalescence between volcanic debris from adjacent vents would be a realistic expectation, as would be contrasts in geochemistry (and any metal content) of their respective ejecta material. Arbitrary extrapolation of the Buckton Zone to the south might, therefore, inadvertently mix different metal profiles from two different zones, although DNI's 2012 drilling and the Buckton South resource study noted that grades similar to those at the Buckton Zone.

Northern Extension (Buckton North): The Buckton Zone is open to the north for 5km-10km toward an isopach anomaly previously designated as the B-North Target Area by historic work, located in NW¼ T101/R12. This Area is dominated by an aeromagnetic "high" flanked on its side by a series of 1km-2km diameter circular topographic features, separated by many creeks flowing into, and comprising the headwaters of, Buckton Creek. Other than native gold reported from Buckton Creek and its tributary from historic streams sediment sampling, and a coincident Zn-Cu >90th percentile stream geochemical anomaly at the headwaters of Buckton Creek, little is known about the Area other than the acute isopach anomaly which is one of the most conspicuous subsurface stratigraphic anomalies identified in the Birch Mountains by the historic work, comprising a 60m abnormal thickening in the Shaftesbury Formation beneath the Second White Speckled Shale Formation. Whether this isopach anomaly is also related to thickening in the Second White Speckled Shale Formation is unknown, although the creeks flowing eastward from it define a radial pattern and drain slumped shale exposures in the area.

A northerly trend of better drill grades in the upper portions of the Second White Speckled Shale Formation as discerned in the historic drill holes is accompanied by a general trend of northward thickening of the better grading drill sections. These trends present obvious guidelines suggesting that the Zone likely extends to the north and should be tested by additional drilling. In addition, these trends, when combined with observations of northerly increasing thickness, frequency and distribution of bentonites in the drill core, make strong arguments supporting the presence of a nearby source to the volcanic debris (and metallic mineralization) incorporated into the Buckton Zone Second White Speckled Shale. Relying on the proposed volcanogenic geological working model, Sabag (2008) proposes that the area to the north of the Buckton Zone also holds potential for hosting exhalative metalliferous venting possibly associated with SEDEX style (massive?) sulfide mineralization hosted within the Cretaceous stratigraphy.

Nearly all of the historic surface geochemical and mineral anomalies discovered to date on the Property are in structural zones interpreted based on stratigraphic disturbances (e.g. Asphalt-Eaglenest Fault Zone), or are on the flanks of circular, or "closed", stratigraphic disturbances (e.g. Buckton and Asphalt polymetallic Zones). The "closed" shape of some of the stratigraphic, often isopach, anomalies may be an artifact of contour noding and it is possible that they reflect faulted blocks, even though the closed shapes have support from coincident roughly circular domed topographic relief features. Should the "closed" shaped stratigraphic anomalies ultimately be demonstrated to be faulted blocks (bounded by synsedimentary faults) rather than domes, considerable significance would be placed on fault junctions, and junctions among fault swarms, as potential conduits for any volcanic exhalative venting in the Birch Mountains and on the Property. Fault junctions, accordingly, present high priority future exploration targets for volcanic vent related exhalative mineralization which might exist on the Property, and to the north of the Buckton Zone. Several such targets are suggested and are shown in Appendix A5.

Western Extension (Buckton West):

The Buckton Zone is open to the west toward, and across, the stratigraphic isopach anomaly on its western flank. There are no exposures to the west of the Zone, nor any information from the area other than a handful of lake and stream sediment geochemical anomalies. This area corresponds to area A-North designated by the historic work, and its southern parts overlap on the Buckton South Zone.

There is no information from historic work to support or refute extension of the Buckton Zone to its west, and no information to provide any guidelines to how far the Zone might be expected to so extend. It is of note that any westward extension to the Zone would be under progressively thicker overburden cover.

It is evident from the above that the Buckton Zone metal mineralization with potential for delivering large quantities of metals from immense volumes which are partly exposed at, or are near, surface as shown by the Buckton South resource study (Sections 15 and 17). The most attractive features of the Buckton Zone are: (i) the potentially immense size hence the potential as a long term source of metals, (ii) proximity to surface and unconsolidated nature hence likely amenability to extraction by low cost large scale bulk mining, and (iii) remarkable uniformity of metal grades as demonstrated by the drilling and other sampling over the large area represented by the Zone.

A simple discussion of potential overall grade for the Zone is complicated by the multiplicity of metals which collectively comprise the ultimate value represented by the mineralized material in the Zone. The reader is referred to the Buckton Preliminary Economic Assessment study discussed in Section 17 of this Report for a broader discussion of the foregoing.

8.9.3 Buckton South Zone

The Buckton South Zone represents an approximate 300 square kilometer area located approximately 7km to the south of the Buckton Zone. It incorporates historic composite anomalous areas previously designated by the historic work as B-South and A-North. This area hosts a multitude of surface geochemical, lithogeochemical and mineral anomalies which are spatially associated with a composite stratigraphic isopach anomaly.

The Buckton South Zone is substantially centered over a stratigraphic isopach anomaly comprising abnormal thickening in the stratigraphic pile above the sub-Cretaceous Unconformity (to base of Second White Specks) coincident with a similar thickening exhibited by the Fishscales-Second White Specks (Shaftesbury) isopach. A series of strong soil geochemical anomalies lie on the east flank of the isopach over a 2km x 6km area, dominated by Zn diffusion anomalies in soils associated also with localized zones of Te enrichment. The soil anomalies are reinforced by lake sediment geochemical anomalies comprising elevated (>80th pctl) Zn±Ni±Cu±Ag±Hg, and by stream geochemical and mineral anomalies in streams draining the area to the east and the south.

The isopach anomaly occupies the headwaters of Asphalt and Big Creeks, radially flowing downhill from it. Both Creeks have reported good geochemical and heavy mineral anomalies in stream sediment samples from the historic work. The headwaters of the two Creeks, and the vicinity of the soil anomalies, have also reported good >80th percentile lake and stream geochemical anomalies. Asphalt Creek, additionally, represents one of the most sulfide rich drainages in the Birch Mountains, and on the Property, reflecting mineralogy and geochemistry from fresh sediments which can be seen slumping from the adjacent steeply incisioned valley walls. Exposures of various sections of the stratigraphy in the area are confined to the Asphalt and Big Creek valleys, and mostly comprise slump and mudflow slopes. The Asphalt and Big Creek valleys were extensively mapped and prospected by the author during the mid 1990's.

A nearly complete section of the Second White Speckled Shale Formation is exposed in the lithosection at Asphalt-H, a 10m vertical section at the headwaters of Asphalt Creek, with 67ppm Mo, 110ppm Ni, 35ppm U, 461ppm V, 254ppm Zn, 62ppm Cu, 19ppm Co and 1.1g/t Ag averaged over the lithosection as reported from historic sampling. To the extent that lithosections sampled in the historic work are "measured" true stratigraphic sections which were systematically, and substantially continuously, sampled, the lithosections reliably "proxy" as drill holes with better reliability than would be represented by conventional reverse circulation drill holes. (Asphalt-H may be an distal part of the Asphalt Zone). Asphalt-H was re-sampled by DNI on several occasions to obtain large samples for its metals recovery leaching testwork (see Sabag 2010 and 2012).

The anomalies over the Buckton South Zone area have similar characteristics as those over the Buckton Zone to its north, and demonstrated by DNI's 2012 drilling to reflect polymetallic mineralization buried beneath them. It is, accordingly, proposed that the east flank of the Buckton South isopach anomaly, especially portions with geochemically anomalous soils, also reflect undiscovered buried metallic mineralization. An initial "maiden" mineral resource was delineated at Buckton South by DNI's 2012 summer drilling program.

The west half of the Buckton South Zone lies on the west flank of the subsurface stratigraphic isopach anomaly, and is in the Asphalt-Eaglenest fault corridor, a major structural feature across the Property which is coincident with many geochemical lake sediment anomalies throughout the area. There is no prior drilling in the area other than historic oil-gas exploratory wells. There are no exposures in the area and all information, and interpretations, therefrom are based on surface sampling of soil, lake and stream sediments, combined with subsurface information from the oil-gas wells. This part of the Buckton South target area was previously designated by historic work as the A-North Composite Anomaly.

The west half of the Buckton South Zone is broadly characterized by lake sediment geochemical anomalies comprising elevated (>80th pctl) Zn±Ni±Cu±Ag±Hg surrounding an interpreted fault swarm associated with the coincident isopach anomalies. Notable features of the area include abundant sulfides documented from stream sediments in the headwaters of Asphalt Creek, on the west flank of the isopach anomaly, and a series of soil geochemical anomalies located in the NW$^1/_4$ T100/R13 characterized by strong Zn diffusion accompanied by elevated Pd-Rh(Ni). Spatial association of these features with faulting and the isopach anomaly has not been sufficiently resolved to enable targeting of drill holes to test the subsurface, and future initial drilling will necessarily test extrapolated, though justifiable, blind targets.

The Buckton South Zone was drill tested by DNI during its 2012 summer drilling program presented in Section 13 of this Report, and an initial "maiden" mineral resource was delineated over the Zone in February 2013 as presented in Section 16 of this Report.

8.9.4 Asphalt Zone, Projected Extensions and Mineralized Zone

The Asphalt polymetallic Zone was discovered by Tintina Mines in 1997 by drilling which was conducted to verify suspected metallic mineralization buried beneath a composite set of anomalies identified by extensive prior surface sampling over an approximate 30 sqkm area centered on the headwaters of Pierre River (Figure 56). The Zone and its vicinity were previously designated by the historic work as Composite Anomaly Area A-South located mostly in E½ T98/R13 straddling the boundary into T98/R12.

The Asphalt Zone was confirmed by DNI's 2010-2011 drilling program, but further exploration was deferred to instead advance work on the Buckton and Buckton South Zones. The reader is referred to Sabag 2008, Sabag 2010 and Sabag 2012 for additional details on the Asphalt Zone.

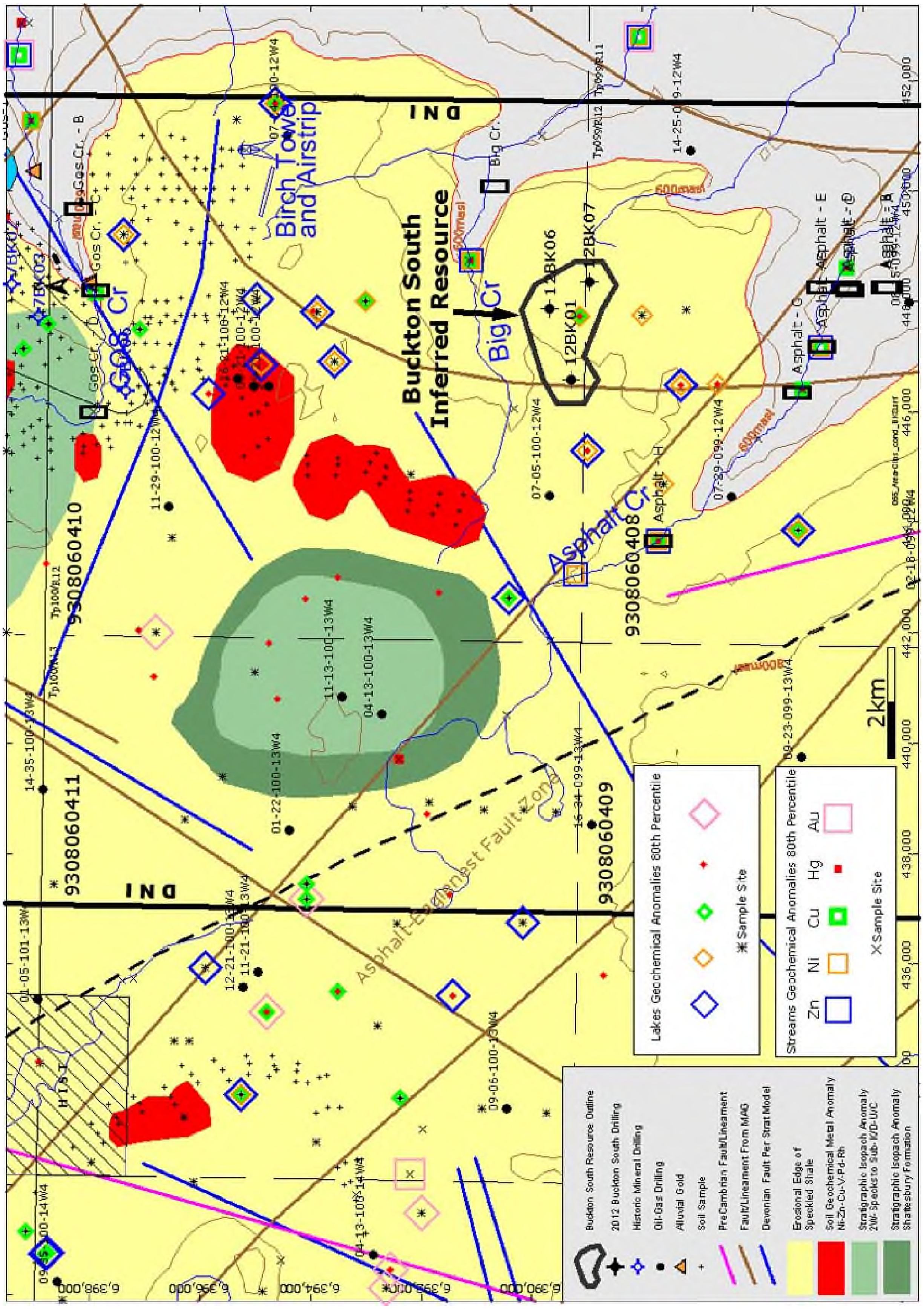


Figure 33: Buckton South Target Area, showing the Buckton South Inferred maiden resource, in addition to all historic anomalies and DNI's 2012 summer drill holes. Historic work after Figure 74, Sabag 2008.

8.10 DOWNHOLE GEOLOGY AND GEOCHEMISTRY

To the extent that drill programs postdating historic drilling on the Property consist in most part of in-fill drilling (DNI programs) which were mostly intended to collect information to support mineral resource studies, the descriptive downhole geological information from the historic work continues to provide the most thorough subsurface geological and stratigraphic record available from the black shales on the Property.

The historic downhole descriptive information is reiterated below from Sabag 2012 (Alberta Mineral Assessment Report MIN20120007), although the reader is referred to Sabag 2012 and Section 13 of this Report for any incremental downhole descriptive information from DNI's 2012 summer drill program.

Weighted average grades for the three principal Formations as intersected in the Buckton drill holes are summarized in previous Table 5 for the select group of metals which are included in the Buckton resource studies (Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc). Downhole geochemical profiles were presented in previous Figures 31 and 32 (additional profiles in Sections 13.7 and 15.4)

8.10.1 Downhole Stratigraphy

The historic downhole descriptive information summarized below is reiterated from Sabag 2012.

Although the drill holes from the Asphalt and Buckton Zones exhibit many lithological, textural and geochemical contrasts, the holes intersected the same principal units and a collective discussion of same on a combined basis serves to characterize gross near-surface stratigraphy of the Second White Specks and enveloping Formations at the two Zones, and probably the Birch Mountains in general. Considering that only two short holes were drilled at the Asphalt Zone one of which collared only partway into the Second White Specks Formation, the stratigraphic descriptions below necessarily rely in most part on observations made from the Buckton Zone drilling. Downhole geology at Buckton South is similar to that at the Buckton Zone.

The Second White Specks Formation at the two Zones comprises a sequence of carbonaceous and bentonitic shales enveloped between the overlying LaBiche Formation shales and underlying Belle Fourche Formation (Shaftesbury). With the exception of drilling at the Asphalt Property, overburden was encountered in all of the holes, ranging 6m to 47m of intermixed till, clay and shale, and is most probably locally derived incorporating considerable material from the underlying LaBiche Formation. Downhole stratigraphy is summarized below.

Considerable footages of the upper portions of the drill holes cored shales of the **LaBiche Formation,** consisting predominantly of battleship gray muddy shale which, with the exception of the occasional isolated carbonate concretion or (rarer) bentonite seam, is a monotonous sequence devoid of lithological and geochemical variations. Ultimate thickness of the Labiche Shale at the Property is unknown since near-surface portions of it have been locally scoured away by glaciation, and as a result the different drill holes provide observations across differing intercepts across whatever portion of the Formation has been preserved. Thickness of the Belle Fourche Formation over the Property is also unknown since all drilling completed to date penetrated only partway into its uppermost portions.

Preliminary micropaleontological examination conducted by the GSC (Leckie 1997) on LaBiche Formation drill core samples taken by Mr.D.Leckie from the Buckton Property suggest an unexpected 4-6 million year gap between the top of the Second White Specks Formation and the base of LaBiche, indicating that shales logged/mapped at the Buckton Zone as LaBiche are likely part of the Upper Cretaceous Lea Park Formation.

The **Second White Specks Formation** was intersected in all of the historic as well as DNI holes, and was cored in its entirety where available. Stratigraphic and textural observations suggest that the Formation has been disturbed by faulting or a glacial thrust at the Asphalt Zone.

The Second White Specks Formation varies in thickness from 18m to 26m at the Buckton Property, varies 11m to 18m at Buckton South, and is thinner at the Asphalt Property averaging approximately 11m. It is broadly characterized by three principal horizons: (i) silty shales nearer the lower sections, (ii) a bioclastic black shale midsection, and (iii) bentonitic gray shales nearer its top. The Formation's upper and lower contacts are well marked by the development of bentonites near its top and bone beds (often siliciclastic) defining its base.

The basal 3m-5m of the Formation is typically characterized by one or more pebbly lag deposits intercalated with lenses of calcareous (coccolithic) non-bioturbated organic rich shale with "poker chip" appearance. The lag deposits are generally carbonate cemented and contain abundant fish debris, quartz, clear-white and black chert, glauconite and sulfides (pyritic and marcassitic). The bone-bed horizons are often well lithified and contain some silica cement – hence are generally termed siliciclastic bone beds. In many instances, the bone beds contain angular shardy clear quartz which exhibits no evidence of transport and has been interpreted to be of likely volcanic provenance as it resembles similar quartz observed in bentonites, suggesting proximal availability of ash/pyroclastic material at the onset of Second White Specks deposition.

The bone-bed/poker-chip shale assemblage is overlain by 3m-5m of poorly calcareous to non-calcareous and non-bioturbated **silty shales** which contain minor amounts of clastic material (quartz, biotite) and a bentonite ranging in thickness upward from a few centimeters to 20cm. This bentonite (**Lower Bentonite Marker**) is a good marker unit noted in most of the drill holes and contains subangular to subrounded clasts of other bentonites and shale.

The silty shales are succeeded upward by a 4-6m thick calcareous non-bioturbated black shale which locally contains carbonate cemented silt lenses and a few bentonites with thicknesses ranging upward to 5cm. These shales are overlain by a 1m-3m thick very calcareous black shale characterized by the presence of horizons of shell material (particularly Inoceramus) and is devoid of bentonites. Due to its pitch-black colour and the presence of shells, this **bioclastic shale** presents a good correlative marker between holes.

The bioclastic shale is succeeded upward by 3-5m of calcareous black shale with varying amounts of bentonite which are most abundant in the lower 2m-3m of the sequence (upward to 14 separate thin beds) and throughout its top which is marked by the **Upper Bentonite Marker**. Midsection, these shales are only moderately calcareous and nearly devoid of bentonites.

The **Upper Bentonite Marker**, observed in all of the drill holes, is a 10-25cm thick steely gray to blue distinct marker which contains trace amounts of pyrite/marcassite and mica. It is succeeded upward by a 1m-3m thick poorly calcareous gray-brown **bentonitic shale** which contains upward to 20 separate thin bentonite seams (typically 2mm-1cm) at various angles to core. The unit typically contains abundant pyrite/marcassite (10-20% volume) as well as white powdery layers which are likely ash or sulfates, or an admixture thereof. The Marker is tightly folded in historic drill hole 7BK03 (Plate 3) at the Buckton Property and is accompanied by a thickening of the Second White Specks Formation in its uppermost 4m (the result likely massive slumping within the GOS Creek valley).

The bentonitic shale is capped by a 10cm-50cm thick sulfidic shale (10-30% sulfides volume) containing clasts of bentonite and other shale, as well as matrix quartz and chert similar to the basal lag deposits. The unit also occasionally contains a green clay-like material (altered ash, pyroclastic or galuconite?) as clasts and as matrix. Although this unit may be a basal lag deposit to the overlying LaBiche Formation, the shardy volcanic quartz and bentonite clasts suggest that it belongs to the Second White Speckled Shale and has significant pyroclastic affinity.

The **Belle Fourche Member** of the Upper Shaftesbury Formation was penetrated in all of the holes which extend below the base of the Second White Specks Formation. Belle Fourche in the area is dominated by light gray bioturbated silty shales with occasional silty/sandy seams.

Plate 3: Tight fold in Upper Bentonite Marker, surrounded by thin bentonite seams, Drill hole BK03 Buckton Zone. Tintina Mines drilling 1997. Image from author's collection of lecture photographs, Sabag 1994-1999.

8.10.2 Downhole Lithogeochemistry

All historic work and all work by DNI pre-dating mineral resource studies completed by DNI and pre-dating the 2013 Buckton Preliminary Economic Assessment (Section 17 of this Report) concerned themselves entirely with base metals and Uranium, and hence excluded discussions of trends for REE and other specialty metals (eg: Li, Th, Sc). As such, the foregoing focused almost entirely on the Second White Speckled Shale Formation as the main exploration target on the Property considering that it is relatively better enriched in base metals and Uranium than the enveloping shales. DNI's resource studies and the Buckton PEA demonstrated, however, that shales above and beneath the Second White Speckled Shale Formation also hold considerable economic potential given their REE and specialty metals content (similar to, or better than, grades in the Speckled Shale).

A detailed presentation of lithogeochemical trends and inter-elemental relationships documented by Tintina in its reports is beyond the scope of this Report, and is partly equivocated by the above as being only a partial discussion of the in-situ value represented by the shales (the reader is referred to Sabag 1998 Alberta Mineral Assessment Report MIN9802 and to AGS 2001 for an indepth review of the trends).

Downhole elemental profiles for select rock forming oxides, elements, Corg-and S-total from DNI's drill hole 12BK03 are presented in Figures 34 and 35, showing the various overall trends within and between the three black shales, namely; the Second White Speckled Shale Formation, the Labiche Formation overlying it, and the Belle Fourche Formation underlying it. Drill hole 12BK03 was cored by DNI during its 2012 summer drilling program at the Buckton and Buckton South Zones, and it is typical of other holes form the Buckton, Buckton South and Asphalt Zones. The Figures are self explanatory. Highlights are as follows:

Downhole trends for Na, S-total and Ba presented in Figure 35 show Ba-S and Na enrichment at the top of the Second White Speckled Shale Formation which reflects increasing abundance of bentonitic seams upstratigraphy accompanied by barite enrichment.

Downhole trends for Specific Gravity and shale pH (past pH) are presented in Figure 36 showing a general trend of increasing acidity with depth, and slightly lower density of the Second White Speckled Shale Formation compared to its enveloping shales.

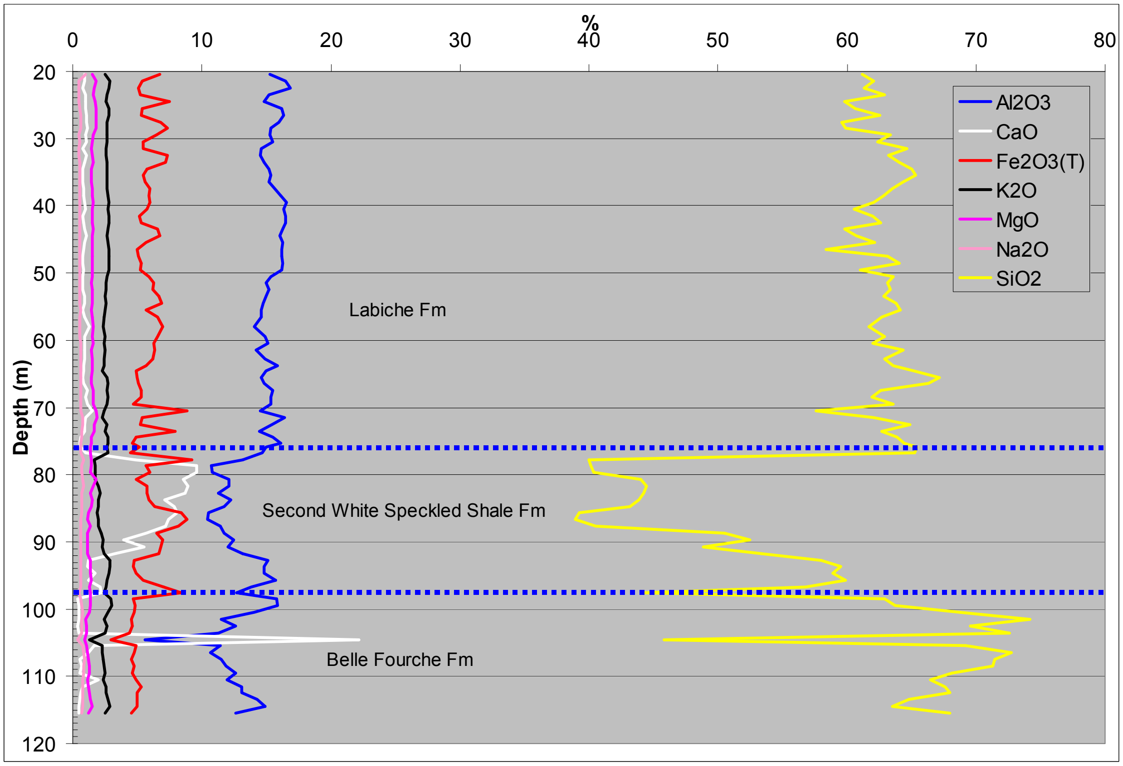


Figure 34: Downhole geochemical profiles for major oxides for drill hole 12BK03. Grades from DNI summer drilling program 2012.

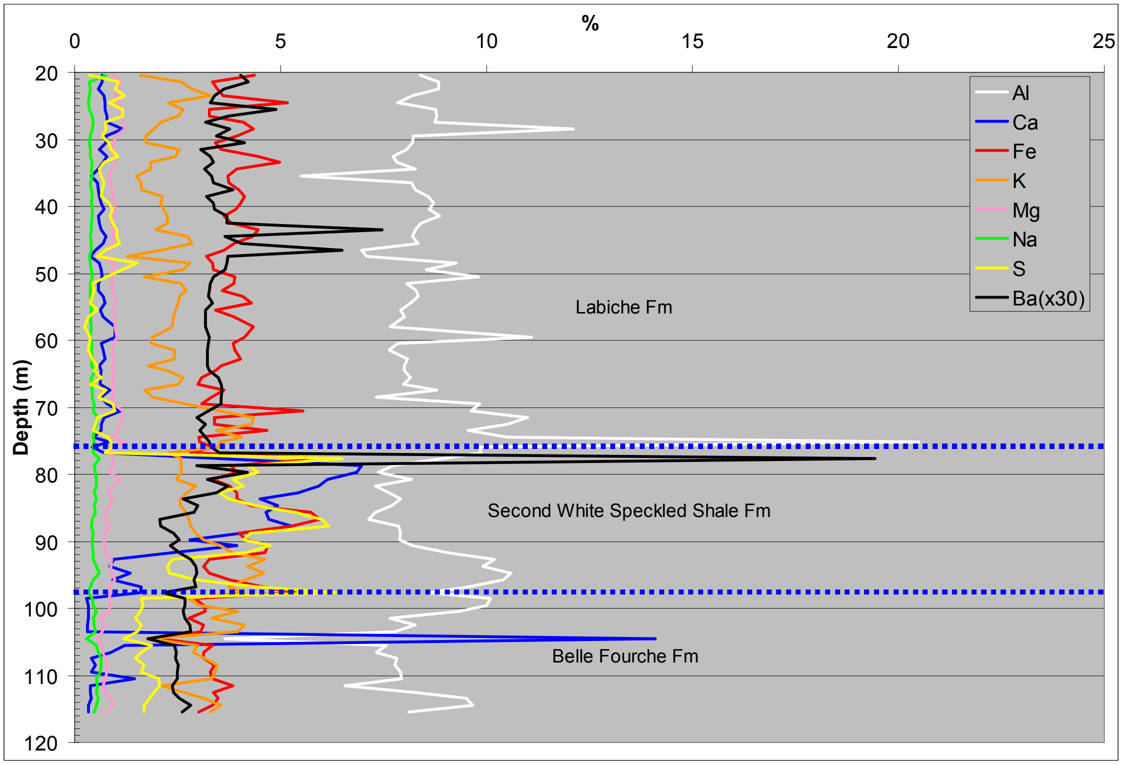


Figure 35: Downhole geochemical profiles for Al, Ca, Na, K, Fe, Mg, and S-total for drill hole 12BK03. From DNI summer drilling program 2012.

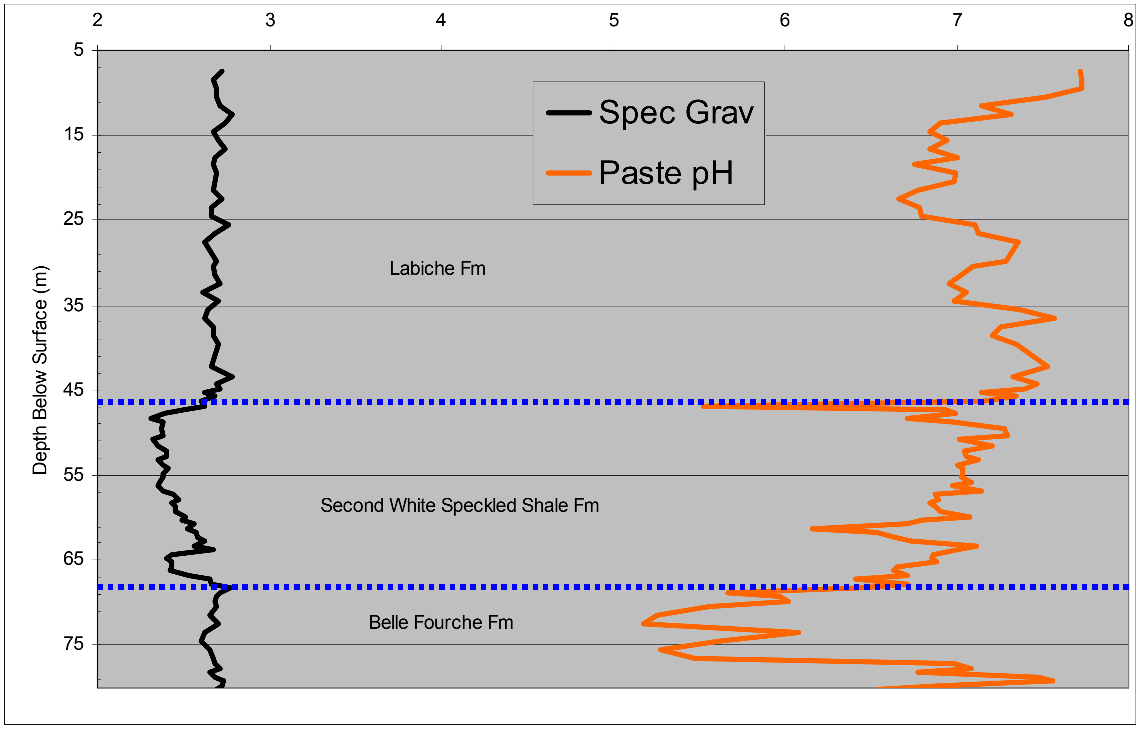


Figure 36: Downhole geochemical profiles for Specific Gravity and shale pH for drill hole 11BK01. Data from DNI winter drilling program 2010-2011, Sabag 2012, Alberta Mineral Assessment Report MIN20120007.

Downhole trends of gross in-situ values represented by each of the metals of interest identified by the Buckton resource studies is presented in Figure 37 for drill hole 11BK01, showing the relative value represented by each of the metals, relying on raw grades (100% recovery) and metals prices per the Updated and Expanded Buckton resource study presented in Section 15.4 of this Report). The figure reiterates that whereas DNI's prior work had highlighted base metals and Uranium, REEs and Scandium make a significant contribution to overall gross in-situ value given their recent metals prices compared to more depressed prices for base metals and Uranium.

Figure 37 is reiterated in Figure 38 based on recoverable grades per the Updated and Expanded Buckton resource study (based on leaching testwork conducted at Canmet), reiterating the significance of value contribution from REEs and specialty metals and the progressively lesser value contributions from Mo-V given their low leaching recoveries.

Figure 38 is reiterated in Figure 39 showing the downhole gross in-situ value profiles per the suite of metals selected by the Buckton Preliminary Economic Assessment (PEA) study as metals which would have a reasonable potential of production. The aggregated in-situ values shown in Figure 39 (per PEA) are considerably lower than those in Figure 38 (per Resource study) given that the Preliminary Economic Assessment omitted Mo-V-Th-Li-Sc for various economic or operational reasons (discussed in Section 17). Similar downhole profiles from drill hole 12BK03, drilled during DNI's 2012 summer drilling program (discussed in Section 13) are presented in Figure 40 for comparison to reiterate good consistency between drill holes across the Buckton Zone.

The Buckton PEA reiterates that the majority of the gross in-situ value of the Buckton Deposit can be attributed to REE content rather than to base metals and Uranium. The foregoing may represent the true economic nature of mineralization at Buckton, and likely also the shales elsewhere on the Property, but may also be at least partly an artifact of metals prices and the polymetallic nature of the deposit. Additional discussions are presented in this regard in Section 17 of this Report.

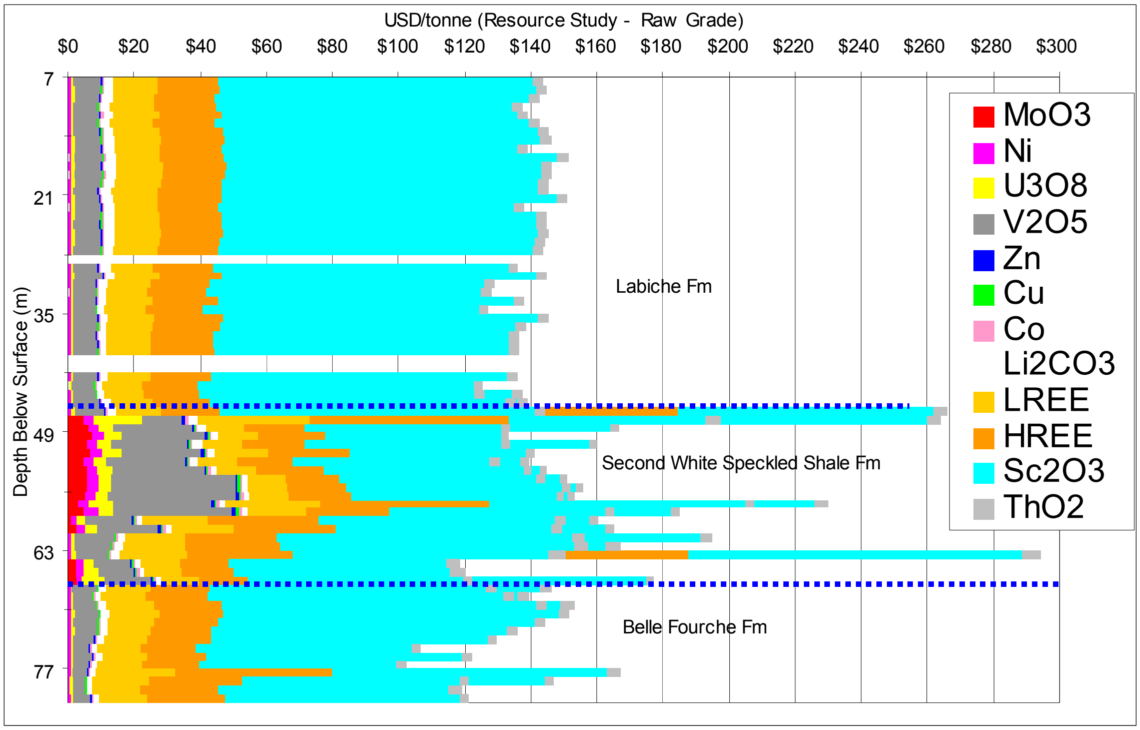


Figure 37: Downhole gross in-situ value profiles of raw grades for drill hole 11BK01. Grades from DNI winter drilling program 2010-2011, Sabag 2012, Alberta Mineral Assessment Report MIN20120007; metals of interest and in-situ values per Updated and Expanded Buckton Mineral Resource Study Eccles 2013c (discussed in Section 15.4 of this Report).

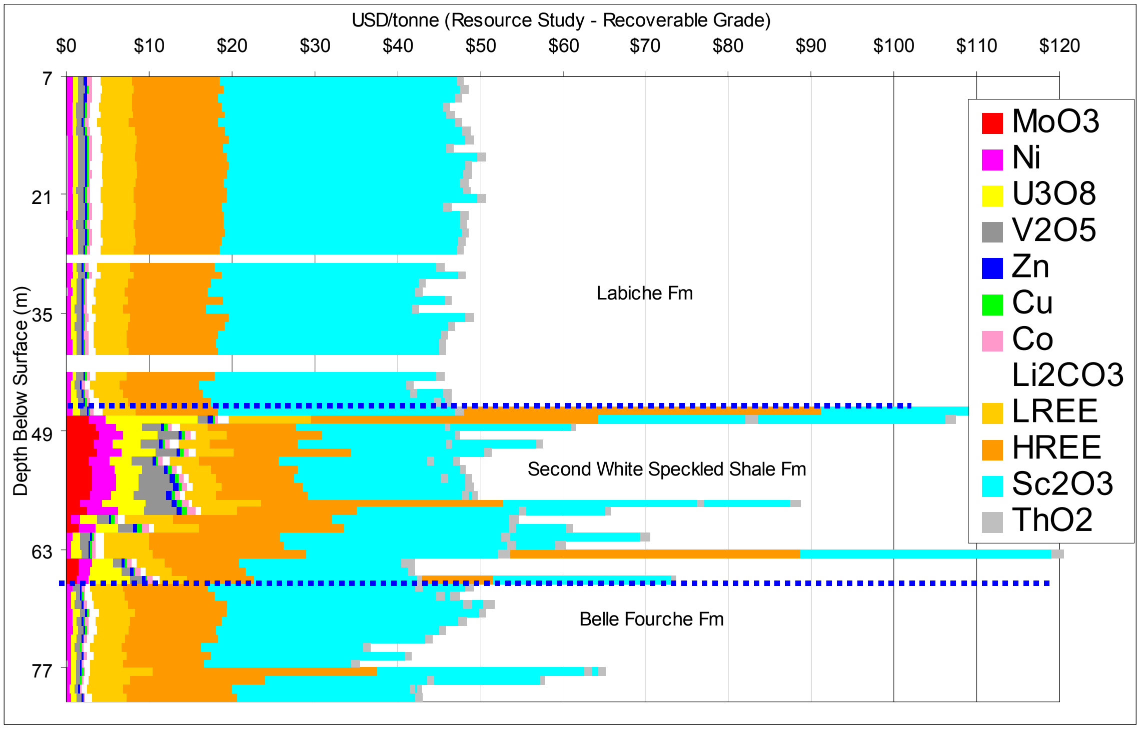


Figure 38: Downhole gross in-situ value profiles of recoverable grades for drill hole 11BK01. Grades from DNI winter drilling program 2010-2011, Sabag 2012, Alberta Mineral Assessment Report MIN20120007; metals of interest and in-situ values per the Updated and Expanded Buckton Mineral Resource Study Eccles 2013c (discussed in Section 15.4 of this Report).

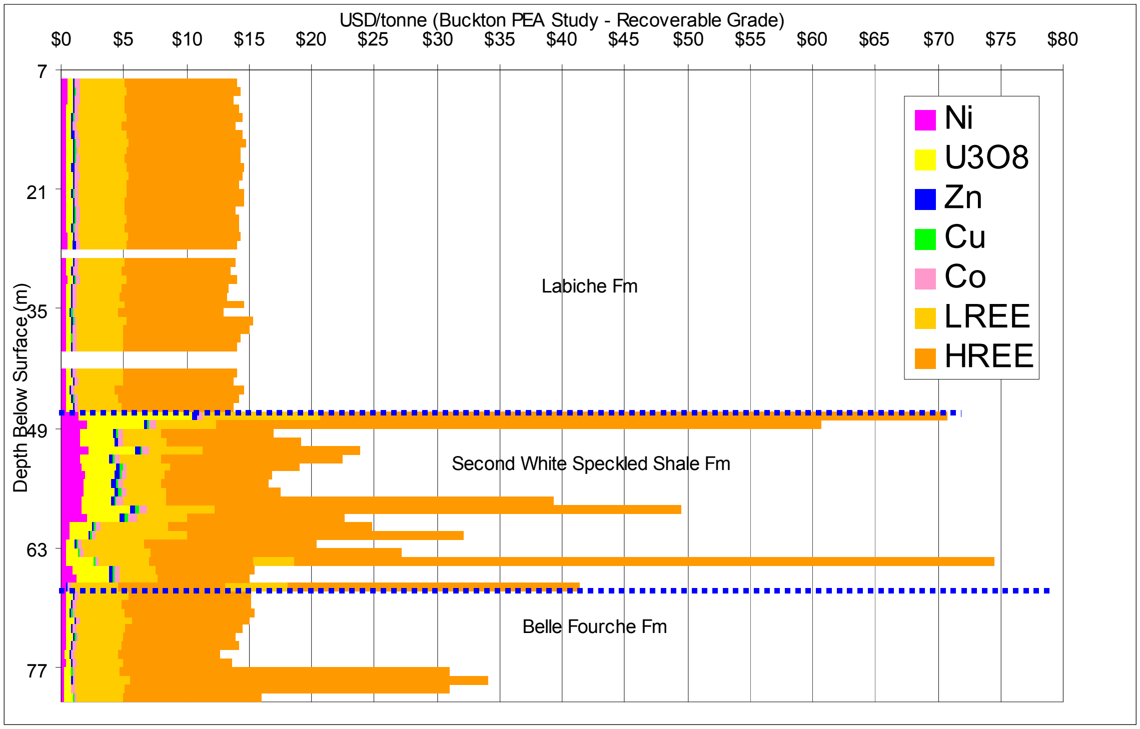


Figure 39: Downhole gross in-situ value profiles of recoverable grades for drill hole 11BK01 for metals of interest per Buckton PEA. Grades from DNI winter drilling program 2010-2011, Sabag 2012, Alberta Mineral Assessment Report MIN20120007; metals of interest and in-situ values per the Buckton Preliminary Economic Assessment Study (discussed in Section 17 of this Report).

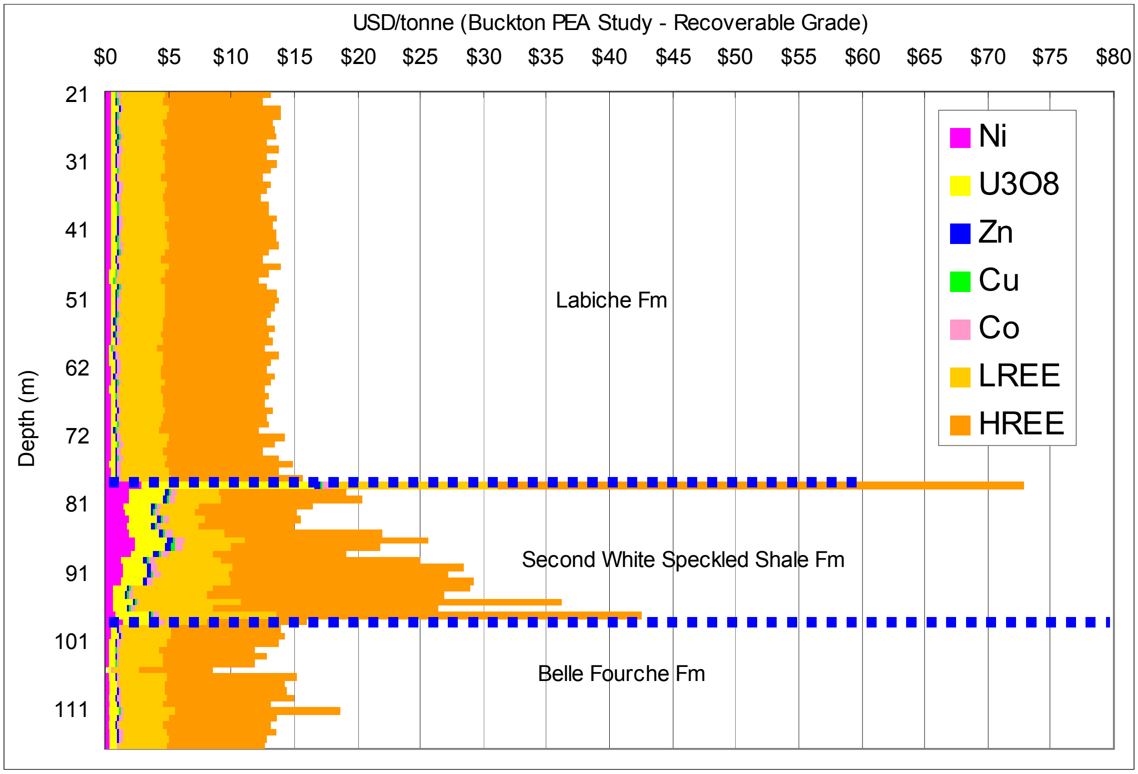


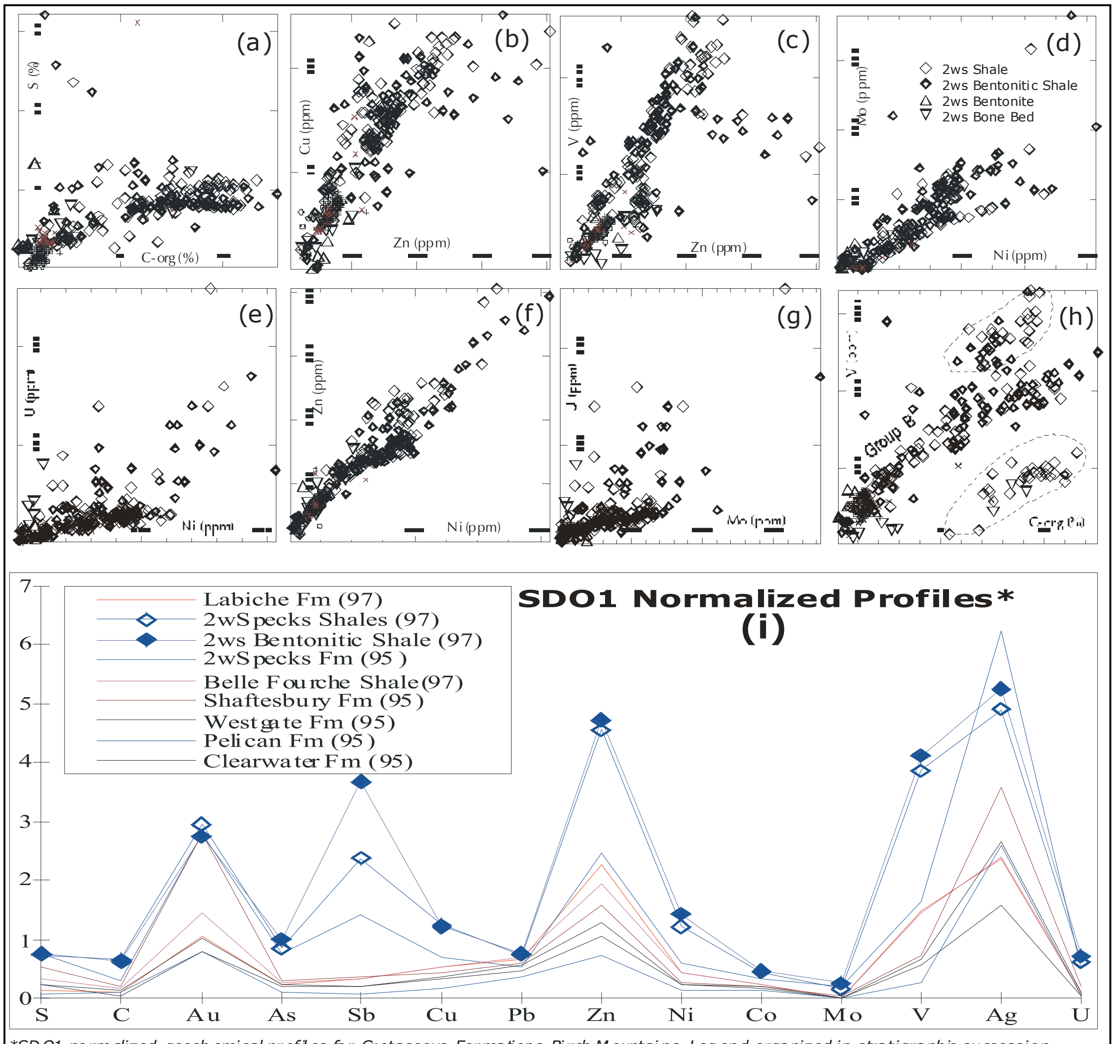
Figure 40: Downhole gross in-situ value profiles of recoverable grades for drill hole 12BK03 for metals of interest per Buckton PEA. Grades from DNI 2012 summer drilling program (discussed in Section 13 of this Report). Metals of interest and in-situ values per the Buckton Preliminary Economic Assessment Study (discussed in Section 17 of this Report).

8.10.3 Buckton Shales Classification

Relying on the collective of surface sampling as well as drill core information, Tintina endeavored to classify the Cretaceous shales on the Property compared to other metalliferous shales, notably black shales, from elsewhere in the world. The various shales were classified based on the black shale classification scheme of the general IGCP Project 254 guidelines, and Huyck, 1988, according to which:

- a "**black shale**" is a dark (gray or black), fine grained (silt or finer), laminated sedimentary rock that is generally argillaceous and contains appreciable organic carbon (>0.5 wt%); and
- a "**metalliferous black shale**" is a black shale which is enriched in any given metal by a factor of x2 (except Be, Co, Mo, U for which x1 is sufficient) relative to USGS standard SDO-1.

General inter-elemental variograms are presented in Figure 41 for select elements from historic hole 7BK06 from the Buckton Zone, showing good correlation among metals (in 65a-65h). The Figure also shows likely multiple populations for V and to a lesser extent also for Cu and U. Figure 41 also presents SDO-1 normalized profiles for a suite of elements from historic hole 7BK06, showing metal enrichment in the Second White Speckled Shale Formation compared to SDO-1 for most of the metals.



*SDO1 normalized geochemical profiles for Cretaceous Formations, Birch Mountains. Legend organized in stratigraphic succession. Data from 1995 regional reconnaissance sampling programs, Alberta Mineral Assessment Report MIN9611, Sabag 1996b; and from Asphalt and Buckton Properties drilling 1996-97, Alberta Mineral Assessment Report MIN9802, Sabag 1998.

Figure 41: After Figure 44, Sabag 2008. (a)-(h) Miscellaneous inter-elemental variograms, historic drilling, Asphalt and Buckton Zones. After figures from Alberta Mineral Assessment Report MIN9802, Sabag 1998; (i) SDO1 normalized geochemical profiles, Cretaceous Formations, historic surface sampling 1995-1997 and 1997 drilling, Birch Mountains. After Figure 36, Alberta Mineral Assessment Report MIN9802, Sabag 1998.

SDO1 normalized geochemical profiles for the various Formations (Figure 41) demonstrate that the Second White Specks Formation shales are "metalliferous" (metal enriched shales) in respect of most of the metals, as they are present in quantities greater than twice those of SDO1. Second White Specks shales in the Asphalt Zone drill holes are, overall, also enriched in REE compared to SDO1 even though the bentonitic component of the shales report REE contents equivalent to SDO1 as do shales from the LaBiche and Belle Fourche Formations. In marked contrast to the Asphalt Zone, none of the Formations sampled at the Buckton Property are REE enriched relative to SDO1.

	Property	C-org %	S %	S/C	Ca %	Fe %	Ba ppm	Na %	Ni/Cu
Labiche Shale	Asphalt	1.7	1.2	0.7	0.6	3.9	2240	0.66	1.2
Labiche Shale	Buckton	1.1	0.8	0.7	0.8	3.9	1175	0.43	1.3
Second White Specks Shale	Asphalt	5.4	3.9	0.8	5.3	4.5	1192	0.50	1.3
Second White Specks Shale	Buckton	6.7	4.0	0.7	5.6	4.6	1484	0.51	1.6
Second White Specks Bentonitic Shale	Asphalt	6.6	3.8	0.7	4.1	4.5	3099	0.66	1.6
Second White Specks Bentonitic Shale	Buckton	6.1	4.2	1.4	4.5	4.5	4097	0.77	2.1
Bell Fourche Shale	Asphalt	1.9	1.8	1.0	1.2	3.4	953	0.49	1.3
Bell Fourche Shale	Buckton	1.7	2.2	1.3	1.4	3.9	944	0.58	1.4
Bell Fourche Bentonitic Shale	Asphalt	1.1	2.3	3.1	1.0	3.1	702	0.56	0.8

Table 6: Summary of C-org, S, S/C, Ca, Fe, Ba, Na, Ni/Cu averages for shales, Asphalt and Buckton Zones historic drilling, Alberta Mineral Assessment Report MIN9802, Sabag 1998. After Table 6, Sabag 2008.

C-org, S, Ba, Na and Ca contents for the LaBiche, Second White Specks and the Belle Fourche (Shaftesbury) Formations are summarized in Table 6. Averages for organic Carbon (C-org) contents range 1.1% to 6.7% and shales from all three Formations meet the textural and compositional criteria to be classed as "black shales". Shales from the Second White Specks Formation report by far the highest C-org contents, are more calcic and are characterized by elevated Fe and S. In addition, bentonitic shales, being shales intermixed with many fine layers and seams of bentonitic material, reflect their composite nature reporting the higher average Na and Ba levels, especially for the Second White Speckled Shale Formation.

Additional salient observations, and trends noted or inferred by Tintina from its drilling programs, as applicable also to exploration work elsewhere in the Birch Mountains, are summarized below, extracted from its reports. Majority of the conclusions reached are consistent with conclusions and proposals also offered by the AGS from its mapping and sampling (AGS 2001) of Cretaceous Formations across northeast Alberta and the Birch Mountains:

- Comparative geochemical profiles from the drilling (similarly from sampling of Cretaceous Formations in the Birch Mountains) exhibit an overall gross trend of progressively better metals enrichment upstratigraphy, peaking at the top of the Second White Specks Formation. The enrichment trend is reversed in the overlying LaBiche Formation, averages from which exhibit relative depletions. The trend is best seen in relative Au, Zn, Ni, V and Ag enrichment, and is accompanied by similar trends for Ba and REE;
- Culmination of the Second White Speckled Shale Formation depositional cycle likely coincided with a significant increase in volcanism as evidenced by the great volume and number of bentonites marking its upper contact and their general association with Ba enrichment. The suggested volcanism is supported by the presence of pyroclastic material in a lag deposit often capping the Formation, suggesting that at least some of the volcanism is localized in the Birch Mountains;
- A close link between metal enrichment in the Second White Specks Formation shale with volcanic processes is reinforced by the shale's overall elevated S/C ratio averaging 1-1.2, well above an overall ratio of 0.32 common to normal shales. Since elevated S/C ratios exceeding 0.32 are commonly regarded to be the result of input from volcanogenic-hydrothermal processes, a similar history can be proposed for the Second White Specks Formation shales and, to a lesser extent, also for the enveloping LaBiche and Bell Fourche Formations;
- A volcanogenic provenance for the Second White Specks Formation Shale is supported by its higher than typical contents of Corg ranging 5.8-7% and S 4-4.2%, both of which are well above published data from normal black shales (avg C-org 0.5-0.7%, avg S 1.5-2%), and are comparable with data from many other metal enriched black shales from elsewhere in the world which are believed to have

formed via volcanogenic and hydrothermal input (e.g. metal enriched shales from Bohemian Massif, Czech Republic, Pasava et al 1996; the Talvivaara deposit, Loukola-Ruskeeniemi and Heino 1996; gold bearing Russian black shales, Buryak 1976);

- The 4-6 million year gap identified between the top of the Second White Specks Formation and the base of LaBiche Formation by preliminary micropaleontological examination points to a period of significant uplift and erosion, and is compatible with syn-sedimentary tectonic activity related to increase in volcanism toward the end of the Second White Specks depositional cycle;
- Bentonites exhibit by far the most conspicuous stratigraphic trends and contrasts between the drill holes from the Asphalt Zone compared to those from the Buckton Zone. Distribution, thickness and frequency of bentonites noted in the drill holes at the Asphalt Zone suggest a local proximal source for bentonites, whereas a nearby source to the northeast is suggested by bentonites noted in the Buckton Zone drill core;
- While bentonitic shales, or shale intercepts near bentonites, in the Second White Specks Formation generally report the higher metal and sulfide contents from both properties, a similar, though weaker, trend can also be discernible in shale intercepts near bentonites in the underlying Belle Fourche Formation (Shaftesbury Fm) in the Asphalt Zone drill holes, reiterating a more general association between bentonites (i.e. volcanism) and metal concentration in the area;
- The discovery of abundant garnets and possible eclogitic garnets in heavy mineral concentrates from drill core support speculations regarding the presence of kimberlitic material, or similar venting, in the area. This is also supported by the presence of diamond stability field mineralogy in stream sediment heavy mineral concentrates from the vicinity of the two Zones;
- Tintina noted that the proposed existence of previously unrecognized volcanogenic material (and activity) in northeast Alberta is novel and represents a departure from the general geoscientific dogma for the region which has traditionally invoked a singularly brinally controlled metallogenic setting to the exclusion of other processes (eg: Feng and Abercrombie 1994). Others have also recognized a similar non-brinal metallogenic potential (Olson 1994a and 1994b, AGS 2001);
- Tintina also noted that discoveries and conclusions from its exploration work in the Upper Cretaceous stratigraphic package overwhelmingly suggest a local source(s) to the metals discovered, with a strong volcanogenic association. Tintina also proposed that metallic mineralization documented in the Birch Mountains are congregated around distinct volcanic centers characterized by considerable exhalative activity as evidenced by the abundance of bentonites and ejecta material of probable localized provenance. Cryptovolcanic activity or venting via kimberlitic pipes were also considered to present equally likely sources to the abundant ejecta material incorporated into the Second White Specks Formation.

8.10.4 Closing Remarks - Drill Programs and Downhole Trends

Salient observations and deductions from the drilling are as follows:

- The historic drilling, reinforced by subsequent drilling by DNI, confirms that the surface composite anomalies A-South (Asphalt Zone) and B-Mid (Buckton Zone) identified by Tintina indeed reflect buried metal mineralization in shales beneath the surface, over a 8km cross-section across the Buckton Zone at B-Mid and over a 900m cross-section across the Asphalt Zone at A-South;
- The drilling confirmed the presence of metal enrichment in the Second White Speckled Shale, but indicated that sections beneath its bottom contact are relatively unmineralized, contrary to the proposal of the geological working model formulated for the area. The drilling, accordingly, disproved Tintina's working model and demonstrated that the Second White Speckled Shale, and to a much lesser extent also the Shaftesbury Formation beneath it, is ***itself*** the primary host to the metals (subsequent work by DNI equivocated this and concluded that the Second White Speckled and the Labiche Formation black shales are the primary polymetallic shale targets at the Property which host zones of recoverable base metals, Uranium Rare Earths and Specialty metals, although given recoverability of low grade similar metals in the Belle Fourche Formation offer additional opportunity to expand the shale package of economic interest);

- All of the holes reported metal enrichment from the entire width (thickness) of the Second White Speckled Shale intersected which, over the Buckton Zone, is a 18.4m-26.2m thick flat-lying "blanket" of poorly consolidated black shale, gently block-faulted in several places. Over the Asphalt Zone the Shale is estimated to be 11.4m thick. The drilling confirmed enrichment of Mo, Ni, U, V, Zn, Cu, Cd, Co, Ag and Au in the Shale;

- The holes demonstrated good continuity of geology and grades between the widely spaced holes across the Buckton Zone, and the closer spaced holes similarly reported minimal variability well within limits documented from sampling of large outcrops in the area (this is also corroborated by variography conducted during the Buckton and Buckton South resource studies discussed in Sections 15 and 16). Grade variations documented from the drilling are, overall, compatible with those documented from sampling of the larger valleys in the area, and from sampling of intermittent exposures of the mineralized Speckled Shale along the valley walls of GOS Creek valley which parallels the 8km long drilled section approximately 1km away to its southeast;

- Downhole lithogeochemistry demonstrated that the Second White Specks Formation is characterized by the most conspicuous geochemical relief in the area, providing the only geochemical variations within an otherwise featureless and monotonous stratigraphic package. Samples from the LaBiche Formation reported by far the most monotonous geochemistry, and geochemical similarities of overburden material to the underlying LaBiche shales indicated a predominance of locally derived overburden in the area;

- The drilling demonstrated that metals enrichment within the mid-Cretaceous stratigraphic package is conspicuously confined to the Second White Specks Formation, characterized by metal contents varying x2 to x10 of its enveloping Formations. While concentrations of many of the base metals (e.g. Ni, Mo, Zn) were noted to be better concentrated nearer the Formation's upper contact, dominated by intermixture of considerable bentonitic seams into the shale, other metals (e.g. V, Cu) are better concentrated throughout its midsection. Metals enrichment within the upper sections of the Formation is also accompanied by Ba, S, Na and Corg enrichment, and by higher pyritic sulfide contents ranging upward to 20% by volume;

- LaBiche, Belle Fourche and Second White Specks Formation shales meet the textural and compositional criteria to be classed as bona fide "black shales" in the strictest of sense, and the Second White Specks Formation shales are "metal enriched black shales" in respect of Au, Sb, Zn, V, Ag, Sr, Ba, Ca, P and Se;

- Despite good apparent relationship between metals enrichment and Corg, Tintina's interpretations of inter-elemental variations, and of metal-Corg and metal-S relationships, suggested that the metals are hosted in multiple carrier minerals some of which are sulfides and others are likely organic forms, with a suggested grouping of the various metals into one group (Ni, Zn, Mo) characterized by affinities for enrichment predominantly in, or as, inorganic minerals and another group (V, Cu) exhibiting affinities for enrichment in, or as, organic species, some subpopulation portioning, notwithstanding (subsequent mineralogical studies by DNI corroborated historic conclusions, although due to the extremely fine grain size of the shales has no enabled a definitive determination of the mineralogy that is the carrier of metals of interest).

8.11 METALS RECOVERY

The earliest, and first ever, tests to attempt to recover metals from the black shales on the Property were initial preliminary investigations conducted by Tintina Mines Limited during 1998-1999 to assess viability of recovering metals from the Second White Speckled Shale on a combined basis. Results of the foregoing work were encouraging and provided baseline guidelines to launch DNI's subsequent initial metals recovery testwork during 2009-2010 which also benefited from new metals extraction procedures via bioleaching which were not available in the late 1990's. Tintina conducted cyanidation tests, sequential leaching and sulfuric acid leaching tests, in addition to flotation and deflocculation tests. Analysis of heavy mineral concentrates was also completed.

Particulars of Tintina's testwork are described in Alberta Mineral Assessment Report MIN20100017 and in Sabag 2008, and are summarized as follows: Through Sequential Leaching Tests (1998) Tintina concluded that a that the metals enriched in the shale are in most part hosted in non-organic compounds and in recoverable forms (e.g. sulfides, native or oxides), as partly demonstrated by subsequent Sulfuric acid leaching Tests (1998) which achieved extracted recoveries of 97.2% Nickel, 100% Zinc and 33.6% Vanadium by 6-hour long leaching in sulfuric acid at 75C and ambient pressure. The leaching tests did not record data for Molybdenum, Uranium and Copper, nor for any of the other metals known to be enriched in the shale sample tested. Physical pre-concentration of the metals proved unsuccessful as demonstrated by simple flotation tests (1998) which concluded that the metals enriched in the shale cannot be concentrated by conventional flotation and that they report to slimes, and that deflocculation (1998) would serve only to collect particulate gold from some samples. Heavy Mineral Concentration tests relying on oils (1999) demonstrated, however, that deflocculants are an effective pre-treatment for concentration of minerals and metals from the shale's otherwise muddy matrix, and that gold and base metals were successfully, though incidentally, concentrated in the heavy minerals, confirming the presence of native gold in the shale. The heavy oil concentrates achieved concentration ratios ranging x25-476 for Au, x6-15 for Zn, x2-20 for Co, x2-11 for Ni, and x1-2 for U.

Tintina's cyanidation tests (1999) confirmed preg-robbing gold losses and reported nuggetty results, and Tintina's check assaying program (1999) reported very erratic results ultimately concluding that the standard 30gm sample size routinely used during fire assaying is non-representative for analysis of the shales for gold, and that historic gold grades relying entirely on assays from small samples may have been understated.

Despite overall encouraging conclusions from the above work, Tintina's testwork failed to identify recovery methodology for the collective recovery of all of the metals of interest by a single procedure.

Tintina's testwork is superceded by considerable leaching testwork completed by DNI during the period 2009-2013, which included bioleaching, acid leaching and mineral studies to evaluate collective recoverability of metals from the Second White Speckled Shale. The foregoing testwork was successful and ultimately enabled estimation of mineral resources at the Buckton and Buckton South Zones.

While some of the leaching testwork was carried out under DNI's direction at Actlabs, under the supervision of S.F.Sabag PGeo, DNI's QP for the projects and its President, the bioleaching testwork was carried out by Alberta Innovates Technology Futures (AITF - formerly the Alberta Research Council ARC) and the Bureau de Recherches Géologiques et Minières (BRGM), France's leading Earth Sciences public institution recognized worldwide for its expertise in biohydrometallurgy, with considerable direction and input from Dr.C.L.Brierley, a well recognized bioleaching expert, who was retained by DNI to oversee and direct its bioleaching R&D programs. The foregoing testwork programs are described in considerable detail in Sabag 2010 and Sabag 2012. DNI advanced its leaching testwork through to initial column tests conducted at Canmet (discussed in Section 14.2).

DNI's leaching testwork programs represent initial work carried out under test conditions which have not yet been optimized for enhanced recoveries, although they were successful in demonstrating that metals can be collectively recovered from the Second White Speckled Shale by simple leaching in sulfuric acid and by bioleaching, and that excellent recoveries can be achieved for Ni-U-Zn-Cd-Co, middling recoveries for Cu-Li-REEs, and low recoveries for Mo-V. The foregoing tests are the first ever leaching and bioleaching tests completed to evaluate recovery of metals from the Speckled Shale. Salient highlights from the tests and maximum metal recoveries achieved are as follows:

- **Sulfuric acid leaching tests conducted by DNI**, on Second White Speckled Shale samples from the Asphalt Zone, comprising Stage1 and Stage2 tests intended to generally simulate bioleaching, relying on 10gm and 5gm samples, respectively, reported recoveries ranging upward to Mo-51%; Ni-89%; U-84%; V-51%; Zn-88%; Cu-57%; Co-86%; Cd-93%; Li-58%. The tests noted that metals solubilized readily and rapidly within the initial 8-10 hours of the tests, and also reported some re-precipitation for some of the metals at the later stages of leaching in many of the tests, especially Stage2 tests which were conducted at higher temperatures. Although Stage2 tests were intended to experiment by trial-error with different temperatures, leach duration and pH, results were inconclusive and, other than providing some general guidelines for future work, do not allow conclusion of definitive trends or recoveries.

- **Bioleaching tests were conducted by the BRGM** on a fresh surface sample of the Second White Speckled Shale from the Asphalt Zone to determine amenability of the Second White Speckled Shale to bioleaching for the collective recovery of metals. The Alberta black shales' amenability to bioleaching has never previously been tested, and the BRGM testwork was intended as an initial step toward broader testwork to follow. BRGM conducted bioleaching as well as abiotic leaching tests using duplicate 200gm charges during approx 15 days of leaching at substantially constant pH of 1.8, at 40C and 3% solids. A bacterial consortium from BRGM's acidophilic culture bank was used during the tests. Considering that the culture had previously been adapted to grow on a copper concentrate, copper recovery could not be measured during the biotic leaching. Cd and Li were also not monitored.

  BRGM overall concluded that that the bacterial activity has only limited incremental positive influence on metals dissolution, since the metal solubilization under abiotic conditions were similar to those under biotic conditions, indicating that metals solubilize quickly under acid conditions. BRGM also concluded that the principal benefit of biotic intermediation is improvement in recovered metal yields over time. The tests recommended that complementary leaching tests be undertaken using conventional leaching agents to definitively determine any advantages which bioleaching might offer over chemical leaching. They further recommended that future tests include tests at higher solids content and tests with liquor recycling in order to increase collection of metals into the solvent.

  BRGM tests noted that the Shale tested is quite reactive to bioleaching demonstrated by very short lag time before micro-organisms start to grow at its contact. They also noted that bacterial adaptation to the shale is immediate and that there is no "poisoning" by the shale's geochemistry nor does the shales chemistry inhibit start-up of bacterial growth.

  BRGM noted that although the ore produces acidity quite soon, sulfur content of the sample tested is too low to produce the requisite sulphuric acid by bioleaching alone, and that the 3%-4% S content of the shale is at the lower limit for triggering and maintaining a bacterial growth based on sulphide oxidation.

  BRGM noted that metal recoveries in biotic conditions were only slightly improved by the presence of bacteria compared to recoveries from the abiotic test, and reported the following calculated metals recoveries from bioleaching: Mo-15.6%; Ni-88.4%; U-88%; V-5.8%; Zn-82.8%; Co-88.1%. The BRGM reported the following calculated metals recoveries from abiotic leaching: Mo-2.5%; Ni-86.6%; U-81.9%; V-8.3%; Zn-83.7%; Co-83.2%; Cu-49.4%. BRGM test results are consistent with, and corroborate, results from sulfuric acid leaching tests conducted by DNI which similarly concluded that most of the metals quickly solubilize under acidic conditions and that excellent recoveries can be achieved for many of the metals.

- A set of tests were conducted by AITF (formerly the Alberta Research Council) on fresh surface samples of Second White Speckled Shale from the Property to determine whether microorganisms capable of growing under bioleaching conditions (i.e. extreme acidic conditions) could be detected in the Shale. The tests successfully demonstrated that enrichment cultures can be obtained from the fresh samples of the Second White Speckled shale, and extracted cultures for subsequent adaptation and bioleaching tests.

- A bioculture adaptation study was carried out by the AITF by conducting testwork to adapt two of the bioleaching enrichment cultures obtained above from the Second White Speckled Shale to increasing shale amounts (up to 20% solids density) and decreasing amounts of external ferrous sulphate. The study achieved its objective and demonstrated that the cultures could adapt well to the Second White Speckled shale. The study recommended that testwork advance to conducting batch amenability tests, using the cultures extracted from Shale and adapted to it as the bioleaching inoculum, to measure the types and amounts of metals that can be extracted from the Second White Speckled shale by bioleaching.

- Acid consumption testwork conducted by the ARC to measure sulfuric acid required to achieve a pH of 1.8 in samples of Second White Speckled Shale from the Property. The tests reported acid consumption ranging 7.4kg-102kg from two samples of the Second White Speckled Shale from the Property.
- Metal mobility testwork conducted by the ARC to determine which metals would solubilize sulphuric acid at pH range between 1.2-1.8 concluded that Ni-U-Zn-Co are readily soluble at pH of 1.8 over 48 hours, but that Mo-V-Cu demonstrated poor solubility.
- A series of batch amenability bioleaching tests were conducted by the AITF (formerly the Alberta Research Council) on fresh surface samples of the Second White Speckled Shale, relying on bacterial inoculum cultures extracted and adapted above, to determine the types and amounts of metals that can be. Duplicate tests, using 200gm charges from two separate samples, were conducted and final tails from one set of duplicates were washed in HCl to assess sulfate and Fe precipitation and what effect it might have on metals solubilization.

  The tests reiterated findings of DNI's sulfuric acid leaching tests and those reported by the BRGM from its bioleaching work, and demonstrated that collective group of metals can be extracted from the shale by bioleaching and that high recoveries typically ranging 80%-95% can be achieved under non-optimized conditions for Ni-U-Zn-Cd-Co, that middling recoveries typically ranging 40%-55% can be achieved under non-optimized conditions for Cu-Li; and that the poor recoveries documented for Mo-V, typically ranging 10%-30% for Mo and 2%-5% for V, might be partly due to re-precipitation of Mo and V from solution associated with re-precipitation of Fe. No attempt was to mitigate re-precipitation observed nor to optimize test conditions, and some results are pending which might enhance the foregoing extractions. Testwork and results previously reported in Sabag 2010.
- A series of batch amenability bioleaching tests were conducted by the AITF (formerly the Alberta Research Council) on composite drill core samples of the Second White Speckled Shale collected from DNI's 2010-2011 drilling program, relying on bacterial inoculum cultures extracted and adapted above, to determine the types and amounts of metals that can be. extracted. Results from the foregoing tests were comparable to those obtained from prior work conducted by the ARC (testwork previously reported in Sabag 2012).
- A series of batch amenability bioleaching tests were conducted by the AITF (formerly the Alberta Research Council) on fresh surface samples of the Second White Speckled Shale, the Labiche Formation Shale and the Belle Fourche Formation shale, relying on bacterial inoculum cultures extracted and adapted above, to determine the types and amounts of metals that can be. The tests successfully extracted metals as well as REEs from all three shales (discussed in Section 14.1 of this Report).
- DNI launched a series of CO_2 sparging tests, conducted by AITF (formerly the Alberta Research Council), on samples from the Second White Speckled Shale from the Property to collect baseline laboratory information on the reactive properties of fresh Shale samples when injected with CO_2 under ambient pressure given that black shales are known to have capacity for sequestering CO2 under pressurized conditions, and given that certain "spent" black shales and similar material also have similar capacity. The tests comprise the initial stage of work, to be repeated on Shale tailings after they have been leached or bioleached.

  Incidental solubilization of metals observed during the CO_2 sparging testwork demonstrated that metals can be liberated (extracted) from the shale under mildly acidic conditions[9] over a broad range of pH exceeding pH 2 (less acid than the pH 1.2-1.8 of prior sulfuric acid leaching and bioleaching tests), and that acidity may be the decisive factor to achieve metals extraction rather than the type of acid used in leaching (all prior leaching and bioleaching testwork had relied on sulfuric acid solutions whereas the CO_2 sparging tests did not). This discovery offers possibilities for use of CO_2 as a pretreatment to other more acidic leaching methods. Testwork and results previously reported in Sabag 2012.

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[9] This observation is consistent with suggestions from the MLA mineralogical study that the metals might in most part occur in the Shale as charged particles which can be easily liberated, rather than as discrete minerals.

- DNI launched a joint research project with CanMet Mining and Minerals Science Laboratories, Ottawa, in 2012 to conduct testwork toward the commercialization of a heap leaching process for extraction of metals from the polymetallic black shales at the Property (presented in Section 14.2 of this Report). The testwork consisted of a series of investigative initial leaching experiments, over thirty stirred-tank bioleaching experiments and five column bioleaching tests to explore the effects of different agglomeration procedures. Constant pH stirred-tank tests were conducted to assess bioleaching and abiotic (chemical) leaching with different lixiviants some of which were selected to simulate processing of Chinese weathered elution-deposited rare earth ores. Preliminary mineralogical characterization was also initiated. Preliminary results from the testwork were made available to DNI in April 2013 to guide some of the metals processing work related to the Preliminary Economic Assessment study for the Buckton Deposit (discussed later in this Report in Section 17).

DNI plans to expand its testwork toward REE separation and optimization of test parameters for enhanced recovery of the various metals of interests to advance the Buckton Deposit through pilot demonstration test.

8.12 MICRO-MINERALOGY

The mineralogy of a suite of fifteen samples from the Second White Speckled Shale from the Property was studied by Actlabs Geometallurgy Services during a mineralogical characterization study by MLA600F Scanning Electron Microscope. Due to the extremely fine grained nature of the samples, definitive mineralogical data could not be collected as hoped, although the study concluded that samples can be grouped into broad categories based on geochemical, XRD and MLA information. The study also noted that the organic phase in the shale can carry high and variable levels of Ca, Fe and S which precipitate or crystallize, depending on moisture and other conditions, as pyrite framboids or have been oxidized to sulphates (jarosite, Fe-sulphate and/or alunite), and that some Fe-oxides were found to host Cu and Mn. Mineralogical point-count modal data were gathered, and the samples generally characterized. The study noted that Zn in the samples is largely hosted by sphalerite (which accompanies pyrite framboids), and that Zn is also hosted in Mn-oxides/hydroxides. Detectable Ni, Cu and Co was identified in rare Fe- and Mn-oxyhydroxides. Study previously reported in Sabag 2012.

The MLA work did not provide as much quantitative mineralogical information as hoped, although it reiterated that black shale hosted metallic mineralization is typically too fine to afford identification by optical or EDS methods and that the metal-bearing compounds are dispersed throughout the shale as extremely tiny particles (often submicron) trapped in organic matter or in slimes. The Study also suggested that many of the metals might occur in the Second White Speckled Shale samples tested as charged particles within oxides, hydroxides and clays, rather than as discrete mineral phases[10]. This, latter, suggestion is supported by the ease with which metals can be leached from the shale as observed during subsequent leaching and bioleaching testwork, and also by historic mineralogical work from the Property noting instability of at least some of the mineralogy in the shale and its susceptibility to decomposition.

A mineralogical study was also incorporated into the joint research project conducted with CanMet although final report from the study is pending.

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[10] A conclusion shared by the Supplemental Buckton resource study discussed Section 15.3 of this Report

9. ECONOMIC GEOLOGY, DEPOSIT TYPE AND MINERALIZED ZONES

9.1 SHALE CLASSIFICATION

The metal enriched Second White Speckled Shale Formation and the Shaftesbury Shale Formation meet all textural and compositional criteria to be classed as bona fide "black shales" in the strictest of sense, and the Second White Speckled Shale Formation meets test criteria for classification as a "metal enriched black shale". While DNI's initial focus at the Property was mainly on the Second White Speckled Formation, and to a lesser extent the underlying Shaftesbury Formation, DNI broadened scope of its work to also include the Labiche Formation black shale which contains metals of value recoverable by the same processes as those envisaged for the other black shales (see discussions of mineral resources at the Buckton and Buckton South Zones presented in later Sections of this Report). Although the Labiche Formation shale meets compositional criteria to be classed a "black shale" it does not consistently meet criteria to be classified as a "metal enriched black shale".

Metal enrichment in the Alberta metalliferous black shales is compatible with the Rift-Volcanic Type of metal enrichment style recognized from black shales worldwide and is, accordingly, so classed. The classification is supported by (i) relatively thick tabular geometry of the metalliferous black shale layers alternating with layers of ejecta material (bentonites and pyroclastic material); (ii) diagnostic characteristic Ni/Cu ratios; (iii) spatial association of metal enrichment zones with suspected venting (volcanic centers); (iv) predominance of V-Zn-Cu mineralization over Ni-Mo-PGE (based on relative grades).

9.2 MINERALIZATION TYPE

The principal known metallic mineralization on the Property is hosted in black shales, as polymetallic Zones bounded by stratigraphic contacts. The principal metals of interest in the Zones have been Mo, Ni, U, V, Zn, Cu, Co, Ag, and Au, although DNI's recent leaching testwork also reported rare metals (including REE, Sc and Li) as incidental valuable co-products recoverable from the shale, compelling DNI to broaden scope of its exploration and testwork. Though none of the metals is present in sufficient quantity in the shales to be considered the "pay" metal leading the anticipated value of any deposit identified. Intrinsic economic value of the metal zones will, accordingly, be based on effective recovery of the metals from the host rock on a combined basis. It is noteworthy that the resource studies for the Buckton and Buckton South Zones completed during 2012-2014 (Sections 15 and 16), and the Buckton Preliminary Economic Assessment (Section 17) demonstrate that rare earth elements represent much of the economic value of the shales under recent metal pricing scheme.

Most of the metals, were initially believed to occur principally in the fine and coarser sulfides distributed throughout the shale, which can constitute as much as 20% of the shale matrix by volume, but typically range 5%-20%. Subsequent work completed by DNI since acquisition of the Property suggests that much of the metals content is associated with clay mineralogy within he shale, albeit with some identifiable distribution among several mineral fractions (see sequential leaching testwork by CanMet presented in Section 14.2 of this Report).

Some of the metals, notably V and Cu, are likely bi-popular and may be fractionated between clays, sulfides and organic components of the shale. Gold is believed to occur principally as high fineness gold in native form, which is possibly better concentrated in the upper and lower contacts of the shale, though its grade has not been definitively established due to nugget effect. DNI's mineral (MLA) study suggested that at least a portion of the metals occur in readily soluble ionic form rather than as discrete minerals (Sabag 2010).

The leaching testwork completed to date by DNI indicates that all metals can be collectively recovered from the shale by acidic leaching, with or without the addition of microorganisms. Historic work predating DNI's exploration campaigns indicates that gold can be recovered from the Second White Speckled Shale by conventional carbon in leach cyanidation, and that heavy minerals and metals can be concentrated from it by gravity methods which also capture gold and some base metals. There is no information from the Property suggesting that the other metals of interest cannot also be similarly recovered. All prior work indicate that disaggregation of the shale's clay matrix will be crucial to enable recovery of metals from the shale. DNI's recent leaching and bioleaching testwork demonstrated that metals can be collectively recovered from the shale.

There is no prior mineral characterization work establishing mineral and metal make-up of the shale. Given its very fine grain size this work will necessarily rely on electron microscopy as did DNI's MLA mineral study (Sabag 2010). Prior exploration, and inferences therefrom, are based entirely on geochemical data supported by heavy mineral concentration and related topical mineral studies.

The Second White Speckled Shale Formation has to date attracted most of the exploration attention on the Property, although DNI's recent work since 2011 has also focused on evaluating the Labiche Formation shales as economic targets. While the Second White Speckled shale is the better enriched in base metals and U, and to a lesser extent REE, than its enveloping Formations, the Labiche Formation shales contains higher Sc and Li, and though much less mineralized with Base metals and uranium, contain nearly equivalent amounts of REE as the Speckled shale. The Labiche Formation and Second White Speckled Formation shales are near the surface, and are locally exposed in valley walls throughout the eastern parts of the Property along the erosional edge of the Birch Mountains. The thicker Shaftesbury Shale Formation, beneath the Speckled Shale Formation, is less well mineralized and metals distribution within it is less well known due to a lack of exposures.

Several suspected large buried metal enrichment Zones have been identified by the historic work and by DNI's more recent synthesis thereof, from extensive surface sampling, supported also by other coincident or associated stratigraphic and physical anomalies. Buried polymetallic enriched zones have been confirmed under three of the Zones identified (Asphalt, Buckton and Buckton South). The confirmed Zones are open in three directions, and are envisaged to be tabular concentrations of metals hosted entirely in the flat-lying Second White Speckled Shale Formation and the overlying Labiche Formation shales. The three Zones are extrapolated to extend over large areas measuring tens of square kilometers based on combined historic and DNI's drilling, and on supporting information from adjacent surface and outcrops.

Other metal mineralization proposed to exist on the Property is sedimentary exhalative - SEDEX style - sulfide mineralization associated with suspected (yet undiscovered) exhalative venting centers, which are also proposed to be the source to the metal enriched sediments and volcanic debris captured in the black shales hosting the polymetallic Zones. Should the foregoing proposal be proven by future drilling, coalescence among some of the envisaged shale hosted polymetallic zones buried beneath the anomalous areas identified would be a realistic expectation, manifested as vertical zonation cycles.

DNI recently identified a number of non-metallic targets in the Pelican sandstone Formation on the Property with potential to contain large volumes of sand that might be suitable for use as proppant (fracsand). Exploration of the foregoing sand targets comprises an integral part of DNI's exploration activities going forward.

Polymetallic anomalous areas, polymetallic Zones and the proposed Mineralized Zones contained in the Buckton and Asphalt Zones are discussed later Sections of this Report. Status of DNI's work programs thereupon is presented in Sections 10 and 11.

9.3 BLACK SHALES, MINERALIZATION TYPES AND ALBERTA ANALOGUES

Black shales series worldwide represent important hosts for the concentration of immense metallic mineral resources, especially for precious metals (Au, Ag, PGE), transitional metals (Mo, Cu, Ni, Cr, V and Zn) and Uranium. They also provide extensive sources of hydrocarbons and have attracted intermittent interest over the years, especially during the past two decades, as a long term source of metals.

Black shales are generally regarded to have been deposited within anoxic deep water depositional environments, although they can be formed in a broad variety of depositional environments ranging from fresh to estuarine to marine waters with conditions ranging from anoxic to oxic (Quinby-Hunt and Wilde, 1996). All black shales are not metal enriched, and metal enrichment in black shales throughout world has been demonstrably linked to nearby metal deposits (Coveney et al 1992b). Among these are black shales hosting major gold deposits of the Getchel Trend, Nevada; the Pilot shales hosting the Alligator Ridge deposits, Nevada; Bendigo, Australia, (Bloomstein and Clark, 1990); Sabie-Pilgrim's Rest goldfield, S.Africa, and numerous deposits in the former USSR (Buryak, various publications). Other notable black shale hosted metal deposits include, a number of Ni-Mo and Mo deposits, south China (Coveney and Chen, 1991); high Ni-Zn-PGE accumulations at the Nick deposit, Yukon, Canada (Hulbert et al 1992); Ag-V deposits in Upper Sinian Doushantuo Formation, Western Hubei, China (Delian et al, 1992), and the Zechstein district in the Polish Kupferschiefer (Kucha 1982, 1983).

Mineralogy of any given black shale Formation and metals contained therein reflect their source, and hence the shale's provenance. Metals accumulation in black shales must, accordingly, be viewed as a dynamic and virtually continuous process extending from the onset of sedimentation throughout diagenesis, and over the entire history of any given deposit as suggested by Vine and Tourtelot (1970). Black shales typically exhibit relatively uniform mineralogy and chemistry over large lateral distances, though they can vary considerably in vertical section reflecting changes in sedimentation processes, in weathering and hydrological history of the depositional basin area and those of the sources to the shale.

Black shales are not all necessarily metalliferous, nor do all metal bearing black shales contain the same suite of metals or kerogens. The role of organics notwithstanding, as metal scavengers often cited for black shale enrichment, processes commonly cited (for example Goodfellow 1990, Krauskopf 1955 & 1956) as being responsible for metal enrichment in black shales include: (i) preservation of metalliferous ejecta from meteoritic impact; (ii) episodic venting of metalliferous hydrothermal fluids; (iii) organically scavenged metal concentration during rapid sedimentation; (iv) redox fronts within the water column; (v) metal trapping by diagenetic H_2S generated in organic rich units.

Given a suitable source of metals, black shale depositional settings are capable of aggregating and hosting immense metalliferous deposits whose concentration is nearly always bacterially mitigated, although source of the metals and their carrier mineralogy straddle organic and inorganic geochemical processes.

Black shale ores are typically polymetallic with a variable proportion of sulfidic component. Their exploitation on large scale has principally been hampered by: (i) the inefficiency of conventional metallurgical processing (smelting) for recovery of valuable contained metals, (ii) the environmental impact and energy costs of the application of the conventional techniques, and (iii) practical constraints of assembly of vast land positions given the large aerial extent of the metal deposits which often extend over hundreds of square kilometers (e.g. the Kupferschiefer is a lithological formation that extends over 600,000 sqkm from England to Poland, but exploitable Cu reserves therein are mostly concentrated at the southern edge of the Zechstein Basin and represent only 0.2% of the total area).

From a mineral processing perspective, by far the biggest challenge to extraction of metals from black shales has been morphology of the metal-bearing compounds which are typically dispersed throughout the shale as very fine particles, and are often trapped in the organic and fine clay fractions or in slimes. Traditional black shale mining operations have been topical and notoriously inefficient, producing also considerable fine grained, often slimy, metal bearing waste material (e.g more than two million tons of copper have been produced from the Kupferschiefer formation to date, along with noble and rare metals, all of which from mining operations wherein they were being extracted as by-products with a poor recovery). Recent break-through advances of applied bioleaching are, however, mitigating many of the foregoing challenges, enabling the exploitation of one of the world biggest deposit types of metals.

From the explorationist's perspective, black shale metal deposits are best discovered in areas wherein (i) large land positions ranging in 100's sqkm can be assembled quickly and inexpensively, (ii) adequate access and infrastructure exists to enable efficient exploration of the land position, (iii) exploration, development and mining activities can take place without the complications of competing land use, (iv) open pitting of large areas is accommodated by the local industrial, logistical and regulatory fabric, and (v) the metal enriched zones are near enough to the surface to be available to bulk mining methods.

Black shale deposits discovered in areas other than the foregoing cannot realistically be expected to hold promise for development and are, as such, only of academic interest.

Few black shale ores have been commercially exploited on a large scale, though many have been sporadically mined on a local scale and are associated with other deposits or mining camps often with an affinity to large metal-bearing geological systems. Analogues from elsewhere in the world which have similar geological setting to northeast Alberta, namely the juxtaposition of carbonaceous environments in brinally active domains include: the Zechstein district in the Polish Kupferscheifer, evaporites of southwest Shaba, Zaire, black shales of south China, the Nick deposit, Yukon. The Uraniferous Alum Shales, Sweden, and the polymetallic Talvivaara black shale hosted deposit, Finland, provide examples of currently active black shale exploration and development operations, the latter of which commenced production in October 2008 (both are discussed in Section 9.4.3 and 9.4.1 of this Report, respectively).

Two types of metal enrichment styles have been recognized from black shales, contrasted by their mineral assemblage, trace element geochemistry, geometry and extent of mineralized horizons, and the geochemistry and temperature of ore-bearing fluids (Pasava 1993). The two distinct types also correspond to two different geotectonic settings, and are as follows:

Rift Type: documented from black shales in association with intracontinental rifting without any intrusive rocks. Metal accumulations of the Rift Type typically represent very high grade but thin (varying millimeters to several tens of centimeters) and often laterally extensive (to 100’s ofkm2) metal concentration zones associated with phosphatic layers, carbonate, REE-phosphates and U. Metal grades documented from this Type often range 10’s to 100’s ppm precious metals (Au or PGE), and 5% to 25% in base metals. Examples of this Type include Ni-Zn-PGE at the Nick Deposit, Selwyn Basin, Canada (Hulbert et al 1992); Mo concentrations at several deposits in the Guizhou Province, China (Coveney et al 1992a).

Rift-Volcanic Type: documented from black shales associated with intracontinental rifting and basic volcanism in the oceanic crust. Metal accumulations documented from this group of black shales are known to occur only around basic volcanic centers and typically comprise alternating layers of metalliferous black shale and tuffaceous material. The metal accumulations are characterized by (i) ore layers ranging in thickness from a few meters to several tens of meters (considerably thicker than those of the Rift Type), (ii) by metal grades lower than those typifying the Rift Type, (ii) by generally low minor element contents (except Cu, Cr), and (iii) by Ni/Cu ratios and other elemental patterns similar to conventional mafic-ultramfic deposits of PGE (e.g. Ni/Cu Sudbury-1.18; Platreef-1.5; Merensky Reef-1.6. Compared to Ni/Cu ratios for typical Rift Type deposits such as the Nick Ni/PGE deposit-173.6; Chinese Mo deposits-34.4; Pasava, 1993).

Metal accumulation within Rift-Volcanic Type of black shales is believed to have been controlled by hydrothermal-volcanogenic events (submarine exhalations) in the presence of organic matter. Examples of this Type include PGE deposits in the Barrandian of the Czech Republic, and the Talvivaara Nickel (Ni-Cu-Zn) deposit, Finland, among others.

While there are many overall similarities between mineral assemblages of ore horizons from the two Types of environments, there is a predominance of Ni-Mo-PGE as the principal metals of interest associated with the Rift Type, in contrast to Fe-Zn-Cu-V for those of the Rift-Volcanic Type. The Rift-Volcanic Type are further characterized by modest-low grading tabular deposits of immense size (300-1,000+ million tonne range) extending over tens of square kilometers, with thicknesses ranging 20m-100m.

The Alberta metalliferous black shales documented from the Birch Mountains, and from DNI’s Property, are compatible with the Rift-Volcanic Type and have, accordingly, been so classed. The classification is supported by (i) relatively thick tabular geometry of the metalliferous black shale layers alternating with layers of ejecta material (bentonites and pyroclastic material); (ii) Ni/Cu ratios ranging 0.8 to 2.1 (typically 1.3-1.6); (iii) spatial association of metal enrichment zones with suspected venting (volcanic centers); and (iv) predominance of V-Zn-Cu mineralization over Ni-Mo-PGE.

Discussions of episodic venting scenarios for the Albertan black shales can benefit from an overview of the spatial and temporal constraints presented by volcanic arcs. The Skellefte Mining District, Sweden, provides guidelines for the facies architecture and events characterizing the development of a 1.9 Ga submarine volcanic arc (Allen et al 1997). The volacanotectonic cycle is believed to have occurred within a 10-15 million year period characterized by episodic and localized intense marine volcanism accompanied by periods of localized differential uplift and subsidence creating horst and graben paleogeography.

The Skellefte District represents an area of 120kmx30km containing over eighty-five pyritic Zn-Cu-Au-Ag massive sulfide deposits (and a few vein Au deposits) majority of which are associated with a felsic-dominant volcanic unit. Massive sulfide deposits in the district are associated with subaqueous rhyolite cryptodome-tuff volcanoes which are relatively small features measuring 2km-10km in diameter with thicknesses ranging 250m-1200m at the center. The cryptodome-tuff volcanoes represent only one of the seven main volcano types identified, and the ores occur in near-vent and volcaniclastic facies. All indications from the district are that spatial proximity to vents is more critical to the formation of deposits than their stratigraphic position. These associations are reminiscent of interpretations from the Alberta middle Cretaceous shales (see AGS 2001, Sabag 1998, Ballantyne 1994, among others). The confinement of metal enrichment in the Albertan black shales to localities over, and flanking, the Peace River Arch (eg: the Birch Mountains) lends further support to suggestions of volcanogenic affinity, especially considering discoveries of considerable venting in the form of kimberlitic material and associated ejecta aprons from areas overlying the Arch in central Alberta.

9.4 BIOLEACHING ADVANCES AND OTHER POLYMETALLIC BLACK SHALE PROJECTS

9.4.1 Black Shales and Bioleaching

Polymetallic black shale deposits of the rift-volcanic class are typically immense low grade base metal (polymetallic) deposits which hold particularly realistic promise of advancing toward production if, and only if, they can be bulk mined at high rates, can be beneficiated inexpensively in bulk, can take advantage of economies of scale, have access to nearby infrastructure and local supply of reagents, and are located in a stable regulatory and political fabric conducive to very long term planning over a typical mine life spanning many decades. In the foregoing regard, the deposits are base metal operational equivalents of sub-gram bulk mineable heap leach gold deposits or oil sand deposits.

Black shale polymetallic deposits have attracted special recent attention due mainly to break-through advances in the industrial application of bioleaching technology processes on a large scale (eg: bulk heap leaching) to extraction of metals with considerably enhanced economics when compared to traditional methods, and with lesser energy dependence and lesser environmental footprint. The foregoing biohydrometallurgal advances offer especially useful alternatives to conventional metal recovery by enabling large scale extraction of a variety of metals from sulfidic deposits (eg: copper, gold, cobalt, nickel, zinc, manganese). This includes also recovery of metals from refractory ores (e.g Nevada) which were previously unrecoverable and lost to tailings. The foregoing milestone advances have transformed polymetallic black shales from geological curiosities to a potential prospective long term source to countless metals.

In simple terms, bioleaching entails dissolution of metals from and ore by a solution of iron/sulfur consuming bacteria (e.g. thiobascilli), and subsequently treating the effluents with a variety of conventional chemical and electrochemical methods for sequential selective recovery (re-precipitation) of each of the metals. Tailings are transformed into a substantially inert waste during the process and leaching fluids are circulated or reused once they are stripped of their metal content. The reader is referred to Brierly (2008) or other publicly available literature for a detailed discussion of bioleaching[11].

Whereas traditional processing of many ores relies on smelting of concentrated material to recover the metals, many operations have opted for bioleaching as an alternative. The success of bioleaching lies in

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[11] Additional information can be obtained from Japan Oil Gas & Mining Company, Mintek Laboratories, Ouototec, Newmont Mining, among others.

the efficiency of the process, its ability to extract much lower grades than otherwise extractable by traditional smelting, its low reagent consumption, its (considerably) lower energy and water requirements, and reduced environmental impact when compared to traditional methods. Adapted to be applied in a bulk heap leaching configuration, bioleaching has paved the way to exploitation of large low grade metal deposits worldwide, including those hosted in black shales, transforming them from geological curiosities to realistically prospective targets for exploration and development.

The majority of current bioleaching operations comprise vat leaching of concentrates in stirred tanks (bioreactors). The Talvivaara mine, which commenced production in October 2008, is the first large scale commercial bio-heapleaching operation designed to recover a suite metals on a combined basis. The Talvivaara mine is applying bioleaching in conventional heap leach methods similar to cyanidation of heaps normally associated with some large gold mines (e.g Nevada). The Quebrada Blanca copper mine operated by Teck-Cominco, Chile, completed its pilot bio-heap-leaching tests in 2009[12] with a view to converting the operations to enhance recovery of low grade copper from its ore. Aura Energy announced its scoping study in 2012 noting it intends to rely on bio-heap-leaching to produce Alum Shale hosted Uranium from its Haagan Property, Sweden. Advances over the past decade in bioleaching applications provide renewed interest in metalliferous black shales as a long term source to metals.

Despite scientific breakthroughs, contemplation of metal production from the Alberta polymetallic black shales, or black shales in general for that matter, is a novel proposal and is, as such, challenged more by perceptual barriers than by technological hurdles. The challenges are in the form of considerable entrenched skepticism as to: (i) whether metals can indeed be produced from black shales in general, (ii) whether collective metals can be produced on a combined basis, and (iii) whether the overall low grades presented by the Alberta shales can be economically exploited. The dogmatic skepticism would benefit from a review of the Alberta shales in the context of a fast growing handful of other black shale exploration and development projects worldwide, of which the Talvivaara polymetallic black shale mine has been the first to quickly advance to production. The handful of projects elsewhere in the world currently investigating the viability of developing polymetallic black shale deposits are presented below.

Prior to completion of a Preliminary Economic assessment for the Buckton Zone in 2013, DNI had relied on inferences from other actively advancing black shale projects or other low grade bulk mining operations to propose that the polymetallic black shales on the Property hold potential (eg: Sabag 2008, Sabag 2010 and Sabag 2012). Methodology and positive conclusions of the Buckton PEA, however, provides direct information as to costs and revenues relating to potential mining operations to extract metals from one of the polymetallic resources hosted in the black shales on the Property and demonstrates the potential of the Buckton Deposit.

Analogues that DNI previously cited for inferences continue to be relevant and are as follows:

- The Talvivaara Ni-Co-Zn-Cu-(Mn) deposit, Finland, which commenced production in October 2008, provides by far the best analogue as an open pit mining operation recovering combined metals from a large black shale hosted deposit by bioheapleaching in subarctic conditions. Talvivaara operations provide good metrics relating to multi-metal extraction operations from a black shale, with the added benefit of providing an analogue of a heap bioleaching (bioheapleaching) operation in a sub-arctic environment. The Talvivaara mine is the first mine to exploit polymetallic black shales in bulk and represents a significant milestone and a breakthrough in the mining of polymetallic black shales. Formulation of the metals leaching and processing flowsheets incorporated into the Buckton PEA relied on metrics from Talvivaara.
- The Alberta Oil Sands mining operations adjacent to DNI's Property provide by far the best analogue for bulk mining - bulk earth moving - operations from the area. Though processing methods from these operations are different than those which would realistically be expected to be relevant to extraction of metals from black shales, mining methods by "ripping" of flat thin blanket of mineralized material are directly relevant to any future contemplated open pitting of the Alberta shales.

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[12] Kelly et al 2010, Hydroporcess Symposium 2010.

- The MyrViken polymetallic deposit, hosted in Alum Shale, Sweden, provides a good analogue of a black shale hosted multi metal deposit containing Ni-Mo-V-U among others. The deposit has been under active exploration for several years until recently by Continental Precious Minerals Inc., and has advanced through its second preliminary economic assessment study contemplating bioleaching recovery of metals. Despite exploration success, Continental met resistance from its major shareholders in 2012 leading up to a change in its management and focus. The MyrViken project has since been mothballed.
- The Haagen Property, held and explored by Aura Energy Ltd., is adjacent to MyrViken, and has advanced through a positive preliminary economic assessment study targeting U-Mo-V relying on bioheapleaching for recovery of metals.
- The Paracatu Gold deposit, Brazil, provides a good analogue for bulk mining by "ripping" of poorly consolidated very low grade ore (300ppb-400ppb gold), from a deposit characterized by remarkable continuity in grade and geology.

The reader is referred to Sabag 2012 for details on the above deposits and operations. Formulation of the metals leaching and processing flowsheets incorporated into the Buckton Preliminary Economic Assessment relied on metrics from the Talvivaara mine which is described in greater detail below.

9.4.2 Talvivaara Polymetallic Black Shale Deposit and Mine - Finland

The Talvivaara Ni-Co-Zn-Cu-Mn deposit, located in eastern Finland, is one of the largest known nickel sulfide deposits in Europe. It provides a good analogue as an open pit mining and heap leach operation recovering combined metals from a large black shale (schist) hosted sulfide deposit by bioheapleaching in subarctic conditions. The Talvivaara mine represents a significant milestone and a breakthrough in the mining of polymetallic black shales and has had full support of European financial markets. The mine commenced production in October 2008 and had since been gradually scaling up to full production until it halted operations in 2012 due to a breach in its principal gypsum effluent pond which cascaded into a series of other difficulties culminating in restructuring of the company in 2013. Talvivaara has since resolved its difficulties and is currently working to resume mining and leaching operations.

The Talvivaara deposit was originally held by Outokumpu, which carried out considerable exploration in the late 1980's and early 1990's. The resource was found to be large but of too low grade to be economically viable using traditional metal extraction techniques, and it was accordingly "shelved". Outokumpu sold exploration rights to the nickel deposits to Talvivaara Mining Company in 2004. The deposit quickly advanced during the four years 2004-2008 from the exploration stage to production.

Talvivaara Mining Company has been producing Ni-Co-Zn-Cu from its Talvivaara Mine, hosted in carbonaceous schists (black schists). The Talvivaara open pit mine commenced production in October 2008, to produce Ni-Zn-Cu-Co on a combined basis from a 336 million tonne resource hosted in black schists, relying on bio-heapleaching for recovery of the metals on a combined basis. Combined JORC Code classified mineral resources for the deposit as at 2006 Feasibility Study stood at 337 million tonnes at 0.26% Ni, 0.14% Cu, 0.02% Co and 0.55% Zn (in measured, indicated and inferred resource category, quoted at a 0% Ni cut off within a 0.15% Ni wire-frame model)[13]. Resources have since quickly expanded to nearly 1.2 billion tonnes at lower grades. On average, bioleaching recoveries are projected to be as follows: Ni-85%, Zn-80%, Cu-50%, Co-50%. Talvivaara estimates that its metal recovery plant will recover approximately 98% of the metal contained in the pregnant leach solution.

Talvivaara demonstrated the viability of using bioheapleaching technology for the extraction of metals in pilot trials in 2005-2006 as part of the EU-sponsored Bioshale project, launched in 2004 to study processing and metals recovery from black schist ores. This trial run was started in subzero conditions at -20°C and successfully demonstrated the applicability of bioleaching under sub-arctic conditions (Plate 4).

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[13] Bankable Feasibility Report, Mineral Experts Report On The Talvivaara Nickel Project In Finland: Report Compiled by: Dr.D.Pattinson, Reviewed by: Dr.M.Armitage, SRK Consulting, Cardiff, UK; 2006. SRK Project Number U2993. Included in IPO June, 2007, London Stock Exchange listing.

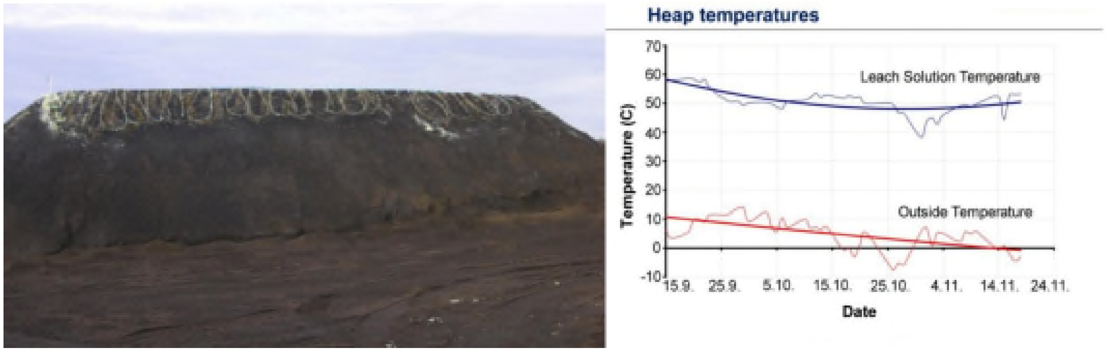

Plate 4: Talvivaara bioheapleach and heap temperatures profile. From Talvivaara 2005.

The Talvivaara Nickel deposit is located in the Kainuu black schist zone in the southern part of the Kainuu belt. The deposit consists of two different polymetallic ore bodies; the Kuusilampi and the Kolmisoppi, which are polymetallic sulfide orebodies, dominated by low grade nickel, hosted in variably recrystallized carbon and sulfide rich "black" metasediments - black schists – which range in thickness from tens of metres to 100m. The Formation has been tectonically thickened in the Talvivaara area.

Soon after commencing production in 2008, Talvivaara announced plans to also recover Mn via electrowinning[14] from the collective of metals leached during its heap leaching process, and in early 2010 it announced plans to add a solvent extraction based circuit to recover approximately 350 tonnes of Uranium annually from its ore which contains an average of 15ppm U[15]. The Talvivaara deposit and mining operation are discussed in greater detail in Section 18.4 of DNI's NI-43-101 report for the Property (Sabag 2008).

The deposits have a thin overburden, and are planned to be mined at a 1.5:1 strip ratio by open pit. Annual nickel output is estimated to be approximately 33,000 tonnes, in addition to zinc 60,000tpa, copper 10,000tpa and cobalt 1,200tpa as co-products. At peak production (late 2010) Talvivaara has the potential to provide 2.3% of the world's current annual production of primary nickel. The mine is anticipated to produce metals for a minimum of 24 years (based on 336 million tonnes of resources) at an approximate mining rate of 15 million tonnes per annum. Projected mine life extrapolated over its current resources of approximately 1.2 billion tonnes, however, would be 100 years at current production rate.

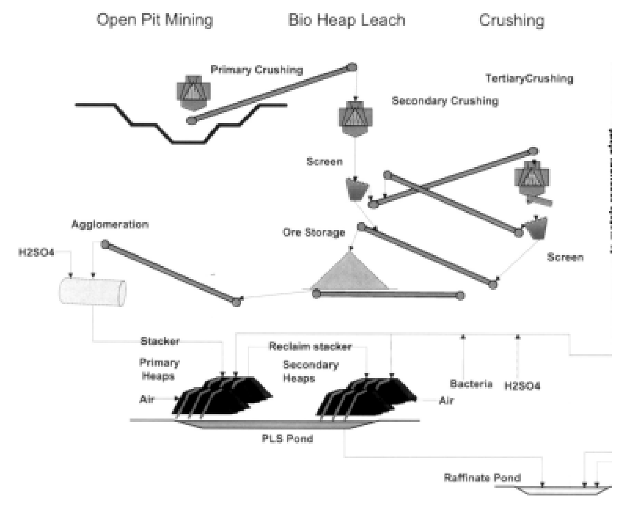

Figure 42: Talvivaara mine, mining flowsheet. From Talvivaara 2010.

Mining flow sheet is shown in Figure 42, and metals recovery plant flowsheet is shown in Figure 43.

Talvivaara ore is crushed in three stages, followed by agglomeration with sulfuric acid to consolidate fines with coarser ore

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[14] Press Release – June 23, 2008, Talvivaara Mining Company.

[15] Talvivaara entered into a 15 year offtake agreement with Cameco Corp. in February 2011 under which Cameco will purchase all co-product Uranium produced from the mine at a price pegged to market, provided it also funds adition of a US$60 million Uranium precipitation circuit to Talvivaara's metals recovery plant.

particles. Sulfuric acid consumption is estimated to be 269,582 tonnes annually, and 5,798,374 tonnes over life of the mine (16 kg/t - primary heap; 2 kg/t - secondary heap). The material is heap leached per conventional heap leaching procedures over 12-18 months and 24-48 months in the primary and secondary heaps, respectively.

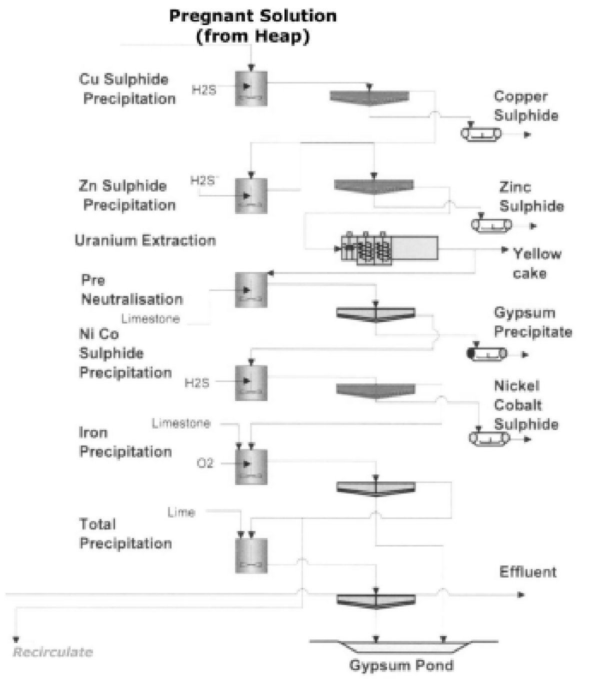

Figure 43: Talvivaara mine, summary metals recoveries flowsheet. From Talvivaara 2010.

Talvivaara had lower capital and lower operating cost than many other nickel mines. Costs are also expected to be considerably lower than traditional mines given reliance on bioheapleaching to extract the metals, since bioheapleaching has considerably more favourable capital and operational cost profiles, and cleaner favourable environmental profile compared to smelting.

Operating cut-off cost is had been estimated to be approximately EUR7.1/t, three-quarters of which represents cost of ore processing. Interruption of mining operations has, as can be expected, adverse affect on costs and it is not possible at this time to ascertain with any clarity what the ultimate cost structure of the operations will be once mining is are resumed.

In early 2010, Western Areas NL (WSA:TSX-ASX) and joint venture partner Magnus Minerals Ltd. assembled a series of properties in the Kainuu Schist Belt which hosts the Talvivaara deposit. The joint venture had planned to commence exploration for polymetallic black schist hosted deposits similar to Talvivaara, but has instead focused its efforts on developing and patenting bioleaching procedures.

9.5 SEDIMENTARY EXHALATIVE SULFIDES AND BLACK SHALE BASINS

Suggested volcanogenic processes associated with the Albertan black shales the Birch Mountains and the Property are presented in previous (and later) Sections of this Report. There exists overwhelming evidence from all historic work over the Birch Mountains and the Property suggesting the local presence of exhalative venting as a likely source to the volcanogenic debris and bentonites in the Second White Speckled Shale. The foregoing also suggest that the exhalative venting to also be the source to the metals enriched in the Second White Speckled Shale, and that the Birch Mountains and the Property hold potential for hosting sedimentary exhalative - SEDEX style - sulfide mineralization.

In general terms, sedimentary exhalative - SEDEX style - sulfide deposits are known to accumulate in restricted basins or half grabens bounded by synsedimentary growth faults, with exhalative centers located along the faults or their junctions. The deposits are stratabound, tabular or lens shaped accumulations consisting of beds of sulfides and often barite, ranging from centimeters to tens of meters thick, which are stacked and have considerably greater lateral extent than vertical, often extending over tens of kilometers. Depositional environments vary from deep "starved" marine to shallow water restricted shelf settings, although the more common host rocks are those found in euxinic environments, namely black (carbonaceous) shales. (Briskey 1986, Large 1981)

SEDEX deposits are typically dominated by Zn-Pb-Ag-(Cu) and range in size worldwide from 15-150 million tonnes, typically grading 5-6% Zn, 2-3% Pb, 5-30g/t Ag, with subordinate Cu. By virtue of large size and extensive lateral dimensions, deposits near the surface are amenable to open pitting. The deposits have electromagnetic and magnetic signatures and might be so detectable when steeply dipping, though they are difficult to detect if flat-lying, or if the sulfide layers are fine and distributed over a thick stratigraphic column.

Geological, stratigraphic, lithogeochemical and metal distribution trends documented from the Property are characteristic of settings which would be conducive to hosting sedimentary exhalative - SEDEX style - sulfide mineralization within the black shales, providing a collateral deposit type as a secondary target for future exploration of the Property.

9.6 OTHER RELEVANT INFORMATION AND INTANGIBLES

9.6.1 Overview of Other Relevant Information

Based on all of the geological information presented in the preceding Sections of this Report, it is clear that the Property has considerable exploration and development potential for hosting metals, and that in addition to polymetallic Mineralized Zones proposed to exist over two of the target areas, it contains a number of targets which have excellent potential for hosting additional quantities of metals in immense near-surface black shale hosted zones. The Property also contains areas with potential for hosting metals in yet undiscovered, though suspected, sediment hosted exhalative - SEDEX style - sulfides.

Discussion of geological merits of the Property, or those of any other property for that matter, in isolation from related logistical criteria would, however, materially detract from a meaningful evaluation of the Property's merits, since logistical criteria play as significant a role in enabling the development of mineral deposits as do those geological, and that many formidable mineral deposits exist worldwide which cannot be commercially exploited due to impediments such poor location, inaccessibility, remoteness, or other similar circumstances which are often difficult to quantify but are all too often underrated. This holds especially true for low grading deposits whose economics require large tonnages which are accessible and are available to bulk mining, and holds particularly true for deposits with long term mine life which require higher than conventional level of political stability, environmental sustainability, and better overall synergy with their surrounding areas.

The polymetallic black shale targets at the Property are ideally located and can benefit from many intangibles which are not available to other similarly mineralized shales in Alberta, or elsewhere, which are either too deeply buried, or are inaccessible, or lack access to reagents or water, or face competition from other anthropogenic surface land use (eg: agriculture).

Other information is presented below which are materially relevant to any discussion of the merits of the polymetallic shales on the Property. The information, gathered from other projects elsewhere, offer some operational and cost benchmarks, and serve also to highlight advantages which the Property's location offers to any contemplated future development.

Significant intangibles which are difficult to quantify but are, nonetheless, material advantages which can only be expected to enhance the timely development of any deposit which might be discovered at the Property are as follows:

9.6.2 Location in Mining District

The Property's location in a mature mining district, in a stable political environment, within a well organized regulatory, jurisdictional and land use permitting framework tailored to the development of laterally extensive deposits, provides considerable logistical and infrastructural advantages rarely available to mining operations. These are significant intangibles which are difficult to quantify but are, nonetheless, material advantages which can only be expected to enhance the timely development of any deposit which might be discovered at the Property and its subsequent operation over a long mine-life.

9.6.3 Local Sulfur and Other Reagent Supplies - Athabasca Region

Leaching processes which can be realistically expected to be applicable to recovery of metals from black shales will consume sulfur and, given the immense projected size of the metal zones, would do so over a long mine life.

For example, reagent consumption for the Talvivaara bioheapleaching operations includes consumption of an estimated 18kg sulfuric acid[16] per tonne of ore processed, representing an estimated 270,000 tonnes consumed annually. Sulfuric acid consumption of 40kg per tonne of material treated is reported by Continental Precious Minerals from leaching and extraction testwork to leach Uranium from samples of uraniferous black shale from its Viken Property in Sweden[17]. Other bioleaching operations consume upward to 100kg of acid per tonne of ore processed, and more traditional inorganic leaching processes might be expected to consume more. (DNI's bioleaching testwork reported sulfuric acid consumption ranging 7.4kg-102kg from leaching of the Second White Speckled Shale (Sabag 2010, 2012). More recent leaching testwork from Canmet reported consumptions of as low as 20kg-30kg per tonne of shale (see Sections 14.2 and 17).

The local availability of sulfur as a waste product of surrounding oil sands operations, is a benefit to any leaching methods which might ultimately be identified for the recovery of metals from the Second White Speckled Shale, and any such recovery operation should be regarded as a welcome sulfur waste mitigation activity in the region. The foregoing represent significant synergies within the region by offering opportunities which have not previously been explored, to achieve steady-state balance between sulfur waste production and its consumption in the normal course of an industrial activity.

Considerable tonnages of sulfur are produced annually within the region surrounding the Property from oil sands operations, mainly from the upgrading of bitumen. Oil is extracted from oil sands in the form of bitumen which contains up to 20% sand, clay, water and other minerals. The bitumen is upgraded by heating to 500 degrees C to recover synthetic crude oil which typically makes up approximately 80% of the bitumen. Upgraders remove most of the sulfur from bitumen by converting it to elemental sulfur, and since sulfur may represent more than five percent of the bitumen, large volumes of by-product sulfur are produced from upgrading operations. Bitumen from oil sands operations in the region is either upgraded on site at an upgarder plant, or shipped by pipeline to upgraders located to the north of Edmonton.

Although sulfur can be used in the manufacture of fertilizers, pharmaceuticals, and other products, much of the sulfur produced from oil sands operations is unsold and sulfur produced from many local upgraders is stockpiled at the upgarder at mine site in blocks which are stacked on surface as pyramids (Plate 5). Despite recent surges in price of sulfur, its export to sulfur markets is problematic since Fort McMurray is substantially landlocked and shipping logistics to ultimate sulfur markets are difficult and costly as they entail transport first by truck from Fort McMurray to Lynton (Edmonton, 550km away) and then by rail to port.

Plate 5: Typical sulfur stockpiles and blocks from oil sands mining operations, Athabasca Region.

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[16] Sulfuric acid can be produced from sulfur by bioleaching. Various species of thiobacilli metabolize sulfur to produce Sulphur dioxide and hydrogen sulfide, both of which react with water to form sulfuric acid.

[17] Press Release - October 30, 2007, Metallurgical Report, Continental Precious Minerals Inc.

Sulfur blocks stored on surface are a serious and fast growing environmental concern within the region as the sulfur crumbling from the blocks due to the severe local climatic conditions produces considerable acid-drainage due to melt-water and rain seepage through cracks.

There are currently an estimated 10-15 million tonnes of sulfur stockpiled in the region (Syncrude held 5.2 million tonnes of this as at 2005). Based on an estimated 1 tonne sulfur produced per 100 bbl of oil[18], an estimated 2 million tonnes of additional sulfur are projected to be produced annually from the oil sands operations. There is no sulfur mitigation plan for the region despite concerted efforts by some oil sands producers to explore novel and creative solutions to either store, bury or consume their waste sulfur. As it stands, waste sulfur burial seems to command consensus despite the many risks of its leakage into local and regional groundwater aquifers.

Other reagents which can be expected to be consumed during any envisaged metal leaching operation are lime, calcite and hydrogen sulfide[19]. Reagent consumption for the Talvivaara bioheapleaching operations includes annual consumption of an estimated 1 million tonnes of calcite, 100,000 tonnes of lime, and 72,000 tonnes H_2S, all of which are reagents which are locally available within the Athabasca region surrounding the Property.

Estimated reagent consumption for a mining operation at the Buckton Zone is discussed further in the Buckton Preliminary Economic Assessment presented in Section 17 of this Report.

9.6.4 Run-Of-River Hydro Power Generation Opportunities

The Property's east boundary, atop the erosional edge of the Birch Mountains, provides a nearly 500m substantially vertical relief with potential to be harnessed for generating local run-of-river hydro from nearly a dozen small streams flowing outward from the Mountains all of which are devoid of fish. The foregoing offer collateral benefits which might be monetized, in connection with additionally minimizing carbon footprint of any future operations. DNI has only conducted an initial preliminary evaluation of the foregoing (discussed in Section 19.2 of this Report).

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[18] "Upgrader Alley, Oil Sands Fever Strikes Edmonton": by M.Griffiths and S.Dyer, The Pembina Institute; June 2008.

[19] Recent DNI leaching testwork suggests that CO_2 may be used as a leaching reagent as a pre=treatment to bioleaching. See Section 14.4 of this Report, and Brydie 2012.

10. DNI EXPLORATION PROGRAMS - DESCRIPTION & OBJECTIVES

10.1 DNI EXPLORATION PROGRAMS DESCRIPTION

The Property previously consisted of 2,720 km^2 held under 36 permits, and provided coverage over six mineralized target areas, or zones, which DNI regarded as separate, though contiguous, sub-properties. Through ongoing evaluation of the Property, DNI allowed nearly two thirds of its prior land position over remote lower priority permits to lapse in March 2014. The permits which were abandoned contained three early stage blind targets, namely; the McIvor West and North Lily Anomalies, and the Eaglenest Target Area. DNI has not previously carried out any work on the foregoing areas other than compilation of historic work therefrom (summarized in Sabag 2008). The foregoing targets are challenged by remote field access, lack of outcrop exposures and seasonal field activity restrictions during to caribou calving season.

DNI acquired additional permits in April 2014 adjoining the Property to secure localities over new targets which have potential for hosting large volumes of sand which might be suited for use as natural sand proppant in the oil/gas industry.

The SBH Property currently comprises 1,812 square kilometres held under 25 permits, and contains only three polymetallic zones, namely; the Buckton, Buckton South and Asphalt Zones. Mineral resources have been delineated by DNI on the Buckton and Buckton South Zones, and existence a volume of mineralized material at Asphalt has been proposed by prior historic work (see Sabag 2010). DNI is applying expenditures relating to work reported herein to renew 21 of the permits and to downsize some that are renewed. **Once filing of assessment expenditures relating to work programs presented in this Report has been completed, the SBH Property will consist of a 1,218 square kilometre (121,856 ha) land position held under 21 permits.**

DNI's exploration programs are predicated on its re-interpretation of historic data from the Property and its recognition of mineralized systems, or zones, thereupon. The foregoing were described previously in this Report as consolidated from DNI's NI-43-101 technical report prepared in 2008 for the Property (appended in Sabag 2010 - Alberta Mineral Assessment Report MIN20100017, and Sabag 2012 Alberta Mineral Assessment Report MIN201200007). As such, conclusions and interpretations of the technical report form the basis of DNI's exploration work on the Property, and the report's recommendations have defined the critical path which DNI has followed to advance and develop the polymetallic mineralized zones over a four-five year period via series of multi-phased integrated programs, with an aggregate $5.3 million budget, addressing the different requisites of each zone.

Completion of the Buckton Preliminary Economic Assessment (PEA) study in 2013, together with delineation of an initial resource from the Buckton South Zone, concludes DNI's work programs to advance the Property through the work programs recommended by the 2008 technical report relating to polymetallic black shale hosted mineralization. The Buckton Deposit PEA represents a significant material milestone whose results establish engineering and financial baseline metrics to guide future exploration and development of the Buckton Deposit and other shale hosted polymetallic zones on the Property. The foregoing studies, furthermore, supercede many prior proposals and serve to revise the understanding of shale hosted polymetallic zones on the Property, and likely the broader surrounding Birch Mountains.

The exploration programs recommended by the technical report address the two prospective opportunities and target types presented by the Property, namely; (i) exploration and development of known and suspected Shale hosted polymetallic deposits; and (ii) reconnaissance level exploration for SEDEX type sulfide mineralization as the suspected source to the metals and exhalative debris hosted in the shales. To the extent that the potential of any polymetallic shale hosted mineralization is ultimately dependant on whether metals can be effectively and collectively recovered from the shales, DNI held all work intended to identify additional volumes of shale hosted polymetallic mineralization over the Property, or intended to expand the two proposed Mineralized Zones identified thereupon, in abeyance until it confirmed collective metal recoveries on a combined basis through a series of leaching and bioleaching testwork in 2009-2010 (see Sabag 2010, Alberta Mineral Assessment Report MIN20100017). DNI's 2010-2011 winter drilling program represents the first drilling conducted by DNI to delineate initial resources from the Property (Buckton Zone Maiden resource), which was later expanded based on results from its 2012 summer drilling program and which also enabled delineation of a second resource at the Property (Buckton South Zone). DNI has not carried out any work to explore for SEDEX type sulfide mineralization on the Property.

Whereas DNI's focus has to date been on exploring and advancing its polymetallic black shale hosted targets on the Property, compelled by fast growing demand in natural sand proppant (fracsand) for use during hydraulic fracking of tight oil/gas reservoirs DNI commenced evaluation of new fracsand targets on the Property in March 2014 and has since delineated a portfolio of seven large fracsand project areas distributed along a 100km long corridor across the Property representing an opportunity to add considerable value to the Property. DNI's fracsand projects form an important strategic component of its exploration activities going forward, and they will be explored in conjunction with continuing to advance the polymetallic shale hosted resources discovered on the Property.

10.2 TARGET PRIORITIZATION CRITERIA

Considering the large size of the Property and the laterally extensive flat-lying metal enriched targeted zones, DNI relied geological as well as logistical criteria to initially prioritize the various targets on the Property. Principal logistical criteria were ease of access and the perceived constraints imposed by thickness of overburden cover over the targets which are ultimately being explored to identify deposits which might be exploited by open pit.

DNI's geological prioritization was based on anticipations that the polymetallic mineralization of interest is hosted entirely in the Second White Speckled Shale Formation rather than the continuous shale package which include the overlying Labiche Formation Shale which had previously been regarded as "waste" material which would have to be removed to gain access to the Speckled Shale beneath it. In the foregoing regard, DNI relied on its subsurface stratigraphic database consolidated from third party oil/gas drilling over the Birch Mountains and the Property to identify locations wherein the Second White Speckled Shale Formation is under the thinner cover. Accordingly, the 75m depth contour to the base of the Formation was used as a limiting guideline, representing on average a 50m thickness of cover above an assumed 25m nominal Formational thickness, and considerable areas to the north and south of the Asphalt and Buckton Zones, and the Buckton South Zone, were prioritized as prospective localities with offer lesser overburden cover above the Speckled Shale, especially nearer the Formation's erosional edge. By contrast, the western parts of the Buckton South Zone (and many parts of the historic Eaglenest Target Area) were classed as lower priority suggesting deferral of additional work thereupon.

The above cover thickness criteria has since been equivocated by the various resource studies for the Buckton Deposit and the Buckton South Zone, and the subsequent Buckton PEA which collectively concluded that the Speckled as well as overlying Labiche Formation shale are mineable as a continuous shale package, and that cover rocks present far lesser economic constraints than previously believed. It is noteworthy that cover rocks above the Buckton Deposit consist of glacial till which has in most part been scoured from the Labiche Shale nearest the surface, and that composition of this till is quite similar to those of the Labiche.

Based on logistical criteria, the east half of the Buckton South Target Area, the Buckton and the Asphalt Zones, all of which are located over the east part of the Property, present high priority locations which can be relatively easily explored given good access to the area, and equally good access throughout them via a series of old seismic lines and trails, especially in winter months. The foregoing include accessways previously identified, or utilized, during historic work over the area, including a network of winter roads built during 1997 historic drilling at the Buckton and Asphalt Zones in addition to considerable other accessways constructed by more recent drilling related to exploration for gas and oil sands deep beneath the Birch Mountains. The Birch Mountain airstrip provides additional logistical enhancements, as do nearby sources of water which have been previously identified and documented in historic records to support any future drilling at the Asphalt and Buckton Zones.

DNI acquired additional permits in April 2014 adjoining the northeast and southeast corners of the Property to secure localities over new targets which have potential for hosting large volumes of sand which might be suited for use as natural sand proppant (fracsand) in the oil/gas industry. Areas over the southeast parts of the Property are prioritized based on the availability of access and better proximity to ultimate markets or transport facilities. Potential of identifying fracsand on the Property is discussed further in Section 18.

10.3 DNI'S WORK PROGRAMS

An overview of DNI's work programs is outlined below:

10.3.1 Buckton Zone and the Buckton Deposit

The Buckton polymetallic Zone hosts the Buckton Deposit which is open. The Buckton Deposit extends over an approximate 3km x 8km area, and is hosted in the continuous shale package consisting of the Labiche Formation Shale and the Second White Speckled Shale Formation beneath it. Although recoverable polymetallic mineralization has been identified in the upper portions of the Belle Fourche Formation beneath the Speckled Shale, the Belle Fourche shale has not yet been incorporated into mineral resources at the Deposit. The Buckton Deposit Inferred and Indicated mineral resources are discussed in Section 15 of this Report.

The polymetallic mineralization at the Buckton Deposit consists of Mo-Ni-U-V-Zn-Cu-Co-Li-REE-Y-Sc-Th, per the Updated and Expanded Buckton resource study, although the 2013 Buckton Preliminary Economic Assessment study (Section 17) omitted Mo-V-Li-Th-Sc-Th based on economic or marketing considerations and concluded that Ni-U-Zn-Cu-Co-REE-Y can be economically produced from the Deposit.

The Buckton Deposit has good lateral continuity and is vertically zoned, containing generally better grading base metals and Uranium within the uppermost 10m of the Second White Speckled Shale, similar grades of REE in the entire shale package, and better Li-Sc grades in the Labiche Formation Shale which makes up the upper portions of the Deposit.

Prior work (eg: Sabag 2010, Sabag 2012) had identified general metals enrichment vectors within the Second White Speckled Shale Formation proposing progressively better grades northward in the upper parts of the Formation, accompanied also by progressive thickening of the better grading sections. The prior work is, however, superceded by the Buckton PEA and underlying resource studies which collectively suggest that the Buckton Deposit is suited to high throughput bulk mining, and as such any subtle enriched subzones would likely not make a material contribution to the overall be value extracted from the Deposit.

The Buckton Deposit, and the broader surrounding Zone is open in three directions: to the south toward the Buckton South Zone; to the west across an isopach anomaly and to the north over areas suspected to also host exhalative vents.

Prior work over the Buckton Zone and Deposit had assumed that mineable mineralization is hosted in only the Speckled Shale and had, accordingly, paid considerable attention to constraints of overburden cover over the Shale, resource studies for the Deposit and subsequent Buckton PEA concluded that the Speckled as well as overlying Labiche Formation shale are mineable as a continuous shale package, and that cover rocks present far lesser constraints than previously believed. It is noteworthy that cover rocks above the Buckton Deposit consist of glacial till which has in most part been scoured from the Labiche Shale nearest the surface, and that composition of this till is quite similar to those of the Labiche.

10.3.2 Buckton South Zone

The Buckton South Zone was previously named the Buckton South Target Area by historic work, but has since been confirmed by drilling and an initial mineral resource study has been delineated therein (Section 16). Buckton South and vicinity represents a prospective polymetallic target with many well defined coincident composite geochemical, stratigraphic, and other interpreted anomalies which collectively are similar to surface anomalies over the Buckton and Asphalt Zones. The eastern parts of the Buckton South

Target Area are accessible by a variety of winter roads, by seismic lines via ATV and also by air utilizing the Birch Mountain Airstrip.

DNI confirmed the Buckton South Zone with 2012 drilling and delineated an initial "maiden" inferred resource therefrom which is open and can most likely be expanded subject to additional drilling. The Buckton South Zone is bounded on the east by the erosional edge of the Birch Mountains, and is open to the south into untested ground. The Zone is open to the north under surface geochemical anomalies over the 7km-8km distance to the Buckton Deposit.

The Buckton South Zone is likely the southerly extension of the Buckton Deposit, and future work would consist almost entirely of drilling to expand the existing Buckton South inferred mineral resource to include in-fill drilling to upgrade it.

10.3.3 Asphalt Zone

The Asphalt polymetallic Zone hosts a volume of polymetallic mineralization (named the Asphalt Mineralized Zone by prior work) which extends over an approximate 1km x 4.5km area comprising approximately 4.5 square kilometers, with an estimated thickness ranging 7.2m to 11.6m, and represents an aggregate of approximately 109-132 million short tons of mineralized material (99-120 million tonnes). DNI's verification sampling of the historic drill core reported measured values for Specific Gravity ranging 2.22-2.49 for the Second White Speckled Shale suggesting that tonnages might in fact be larger than those estimated. DNI's recent focus (work in progress and discussed in Sections 13, 14 and 15) has shifted to Mo-Ni-U-V-Zn-Cu-Co-Li (Ag omitted) contained in the Zone, in addition to Specialty Metals (Sc-Th) and REE.

DNI's work programs over the Asphalt Zone have included considerable detailed review and consolidation of historic work therefrom and vicinity, in addition to verification sampling of historic drill core from the Zone and limited confirmation drilling in 2010-2011 (see Sabag 2012). Collateral efforts were also directed to better resolve subsurface stratigraphy relying on oil/gas well drilling in the area.

Although DNI had previously intended to advance the Asphalt Zone through drilling to resource delineation, it opted to advance exploration and development of the Buckton and Buckton South Zones. The reader is referred to Sabag 2012 for a detailed discussion of the Asphalt Zone.

10.3.4 SEDEX style Sulfide Targets

In general terms, sedimentary exhalative sulfide deposits are known to accumulate in restricted basins or half grabens bounded by synsedimentary growth faults, with exhalative centers located along the faults or their junctions. Depositional environments vary from deep "starved" marine to shallow water restricted shelf settings, although the more common host rocks are those found in euxinic environments, namely black (carbonaceous) shales. The deposits have electromagnetic and magnetic signatures and might be detected when steeply dipping though are difficult to detect if flat-lying, or if the sulfide layers are fine and distributed over a thick stratigraphic column.

Geological, stratigraphic, lithogeochemical and metal distribution trends documented from the Property are characteristic of settings which would be highly conducive to hosting sedimentary exhalative - SEDEX style - sulfide mineralization within the black shales, providing a collateral deposit type with potential to exist on the Property.

Several localities have been identified as areas which have potential for hosting exhalative venting with potential also for related sedimentary exhalative sulfides. The foregoing areas present natural targets for additional investigation in the field, as part of a broader evaluation of the Property for hosting sedimentary exhalative - SEDEX style - sulfides. The targets are: Buckton north, the westernmost parts of the Buckton South, the immediate area surrounding the Asphalt Zone. The targets are discussed in greater detail in prior reports (Sabag 2010, 2012).

DNI's work programs have to date included only minimal field efforts directed at re-examining the foregoing localities and broader efforts toward evaluating the potential of this area for hosting SEDEX style sulfides. Incremental progress made to date includes expansions of the subsurface stratigraphic database and its detailed synthesis and modeling with the objective of identifying synsedimentary structures across the Property. Although several prospective localities have been identified which hold potential for hosting exhalative vents, DNI has focused its efforts entirely on advancing the polymetallic zones discovered in black shales on the Property, and has no immediate plans to conduct exploration for sedimentary exhalative sulfides on the Property.

10.3.5 Fracsand Targets

DNI acquired additional permits in April 2014 adjoining the northeast and southeast corners of the Property to secure localities over new targets which have potential for hosting large volumes of sand which might be suited for use as natural sand proppant (fracsand) in the oil/gas industry. A number of large exposures of Pelican Sandstone Formation have been identified by historic work on the Property, none of which has been tested for suitability for use as fracsand. Potential of identifying fracsand on the Property is discussed further in Section 18 of this Report.

Based on the availability of access and better proximity to ultimate markets or transport facilities, DNI has prioritized areas over the southeast parts of the Property for field sampling and testing. DNI completed reconnaissance sampling over two of the southernmost target areas, the Tar River and Asphalt Creek exposures in July 2014. DNI has since sieved all samples and its review and characterization of samples and concentrates is in progress.

11. DNI WORK PROGRAMS 2012-2014 - OVERVIEW

DNI commenced its exploration work on the Property prior to commencing its land assembly in September 2007, and has since actively continued its work to advance development of the Property. DNI reported its work programs completed during 2007-2010 in Alberta Mineral Assessment Report MIN20100017 (Sabag 2010), and work programs completed during 2010-2012 in Alberta Mineral Assessment Report MIN20120007 (Sabag 2012). This report related to work completed during the period Feb1/2012-Sept30/2014.

Exploration work completed during the period Feb/2012-September/2014 consisted of a variety of efforts culminating in preparation of three mineral resource studies, concluded in 2013, expanding resources at the Buckton Zone to form the basis of the Buckton Preliminary Economic Assessment which was concluded in December 2013. An initial "maiden" mineral resource was also delineated from the Buckton South Zone. Other activities leading up to preparation of the resource studies consisted of a summer 2012 drilling program (and related permitting), and continuing leaching testwork to establish metals recoveries from the Labiche Formation, the Second White Speckled Shale Formation and the Belle Fourche Formation. Work was also carried out to evaluate the fracsand potential over certain portions of the Property including an initial reconnaissance field sampling program completed in July 2014.

Work in progress or in the planning stages consists of ongoing evaluation of enhancements to the economics of the Buckton Deposit, and ongoing work relating to review of sand samples collected in July 2014 with a view to submit select samples for rigorous fracsand testwork.

The exploration work completed by DNI in 2012-2014 follows recommendations of its NI-43-101 Technical Report for the Property (Sabag 2008), and concludes work programs which were prescribed by the foregoing report relating to polymetallic shale hosted mineralization on the Property to advance at least one of the mineralized Zones on the Property through resource delineation to a preliminary economic assessment.

The expenditures were incurred toward the following:

(i) Bioleaching testwork program 2012, completed by AITF, testing composite drill core samples from 2010-2011 drilling to evaluate extraction of metals from the Labiche and Belle Fourche Formation shales at the Buckton Zone;

(ii) 2012 Resampling and re-analysis of Labiche Formation intercepts in historic archived Tintina 1997 drill cores archived at the MCRF (2012) completed Jun/2012);

(iii) Preparation of analytical control standard LBSTD2 and calibration reference pucks for hand held XRF used in the field as a screening tool during the 2012 sumer drilling program;

(iv) A Resource Study, completed September/2012, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in the Labiche Formation cover rocks overlying the Buckton maiden resource which is hosted in the Second White Speckled Formation beneath the Labiche;

(v) Summer 2012 drilling program completed during Aug-Sep/2012, in addition to subsequent core logging, sampling and analytical work;

(vi) A Resource Study, completed Jan/2013, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations to consolidate and update previously delineated mineral resources;

(vii) A Resource Study, completed Mar/2013, for a portion of the Buckton South Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations, representing the initial "maiden" resource from the Buckton South Zone;

(viii) A Resource Study, completed August/2013, for a portion of the Buckton Zone relating to Mo-Ni-U-V-Zn-Co-Li and REE-Y-Sc-Th in both the Labiche and Second White Speckled Shale Formations, to update and expand the previously estimated Buckton mineral resource, and to upgrade a portion of the Buckton Inferred resource to the Indicated resource class. The foregoing resource formed the basis for he preliminary economic assessment study for the Buckton Zone;

(ix) Preliminary Economic Assessment study of the Buckton Zone, completed in December/2013;

(x) Bioleaching and other stirred tank and column leaching testwork, concluded by CanMet Jan/2014, to explore a variety of metals and REE recovery leaching parameters;

(xi) Miscellaneous work relating to evaluating enhancements to the Buckton Preliminary Economic Assessment economic results, including evaluation of co-product Scandium;

(xii) Miscellaneous preliminary work relating to evaluation of viability of run of river hydro for streams over the eastern parts of the Property;

(xiii) Data consolidation and preliminary evaluation of fracsand potential of the Pelican Formation sandstone at the Property. July 2014 reconnaissance sampling program of select targets and related sample beneficiation and evaluation (ongoing).

12. MISCELLANEOUS RESAMPLING, ANALYTICAL AND OTHER WORK

12.1 RESAMPLING AND REANALYSIS OF 1997 HISTORIC DRILL CORES

Tintina Mines Limited cored eight P-diameter holes over the Buckton (6) and Asphalt (2) Zones during 1997. Following completion of its drilling programs Tintina donated all split cores from the holes to the Alberta Geological Survey (AGS) which archived them at the Mineral Core Research Facility (MCRF), Edmonton.

DNI re-examined the Tintina drill cores in 2009 and all Second White Speckled Shale Formation intercepts were re-sampled and re-analyzed (see Sabag 2010). DNI broadened focus of its exploration at the Property in 2011 based on its leaching testwork results to also evaluate potential of the Labiche Formation as a realistic host to polymetallic mineralization which was previously believed to be confined only to the Speckled Shale. DNI also broadened scope of its focus to include Rare Earth Elements and Specialty metals (eg: Li, Sc, h) as incidentally recoverable co-products to leaching of base metals and Uranium from its target shales.

Whereas DNI's re-sampling and re-analysis of the historic drill core provided an extensive multielement lithogeochemical database for the Second White Speckled Shale, historic analytical databases for the Labiche Formation overlying it, and the Belle Fourche Formation beneath it, lacked data for some of the REE and Specialty metals. Apex Geoscience Ltd. was, accordingly, retained in 2012 to examine, re-sample and re-analyze all Labiche and Belle Fourche Formation intercepts of the historic drill core to augment DNI's analytical database to enable incorporation of at least Labiche Formation into mineral resource estimates for the Buckton Zone which had previously only included polymetallic mineralization hosted the Second White Speckled Shale Formation.

In May 2012, prior to its re-sampling of the historic drill core, Apex personnel (under the supervision of Mr.R.Eccles), evaluated integrity of the drill core given that it had been re-boxed by the AGS from the original traditional 1.5m long wooden core boxes into 0.75m long cardboard trays. The entire footage was visually compared to the original downhole photo-logs of the core archived by Tintina, and found to be in excellent condition. Apex's memo report[20] relating to the foregoing is appended herein in Appendix B1.3.

The historic drill core was re-sampled during the period June 4-7, 2012, by Apex personnel under the supervision of Mr.R.Eccles, by chip sampling over all Labiche and Belle Fourche Formation drill intercepts. Available intercepts of till were also re-sampled. Re-sampling intervals were kept "in-step" with the original 1997 sample intervals to enable comparison of data with available previous analyses. Short intervals of less than 50cm[21] were aggregated to collect for a more representative sample albeit with a "from" and "to" in step with the historic sample series.

A total of 391 chip samples, weighing approximately 200gm-400gm each, were collected and submitted to Actlabs for analysis under analytical Lot#SB120613[22] representing a 431 sample Lot including 40 analytical control standards (DNI standard LBSTD-1) which were inserted into the analytical sequence after approximately every 10th sample. The samples were analyzed for by Actlabs package 1H2 (Gold +53) (four acids ICP + INA), Code 8 (REE Package), Code 5G (C and S) and paste pH.

Drill hole footages re-sampled and analyzed are summarized in B1.2. Analytical certificates and summary are appended herein in Appendix B1.1 and B1.2.

Results obtained from the above re-sampling and analysis are consistent, and compared well, with historic data, and were incorporated into resource studies. Summary of comparative variograms are included in Appendix B1.2.

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[20] Report: Review of Alberta Geological Surveys re-boxing of Tintina 1997 drill cores, Apex Geoscience Ltd., Eccles R., May 17, 2012.

[21] Given that Tintina's 1997 sampling was carried out under geological control, the drill footage contains many short intercepts of less than 50cm (Sabag 1998).

[22] DNI Lot#SB120613 - Actlabs Report#A12-06457.

12.2 ANALYTICAL CONTROL STANDARD LBSTD2

A matrix matched analytical standard had previously been prepared by DNI by homogenizing a large sample of LaBiche Shale which overlies the Speckled Shale Formation (see Alberta Mineral Assessment Report MIN20100017, Sabag 2010). The standard (ID# LBSTD-1) had been prepared by Actlabs in 2009, and pre-split into several hundred pulverized subsamples for use during DNI's analytical work as an analytical control sample. To the extent that this material is relatively poorly mineralized with base metals when compared to the Second White Speckled Shale, it is occasionally referred to as a "blank" in some DNI documents and those of its consultants.

By 2012, most of the available pre-packaged sub-samples had been consumed in various analytical programs, and a new analytical standard was prepared (ID# LBSTD-2) from Labiche Formation shale to be used during subsequent analytical work.

Analytical control standard LBSTD-2 was prepared by combining all pulps from the 21m long intercept of Labiche Formation shale in DNI drill hole 11BK04 commencing at 24m depth and ending at 45m depth, being 10m above the top of the Second White Speckled Shale, namely; samples 11BK0401500 to 11BK0404400.

The pulps were combined and homogenized, and five sub-samples were analyzed by Actlabs under analytical Lot# SB120712[23] by Actlabs Code 1H2 (Gold +53) (four acids ICP +INA) for multielements, by Code 5G for C and S, and by Code 1E2. Analytical certificate Actlabs Report A12-07662 is appended herein in Appendix B2.1.

The homogenized composite sample was subsequently separated into 135_ pre-packaged aliquots, weighing approximately 50gm each, and individually packaged into kraft envelopes. The aliquots were numbered LBSTD2-1 through LBSTD2-135.

12.3 RECLAMATION SEEDING OF 2011 DRILL SITES

Certain drill sites which were disturbed during the 2010-2011 winter drilling program were seeded at the end of the 2012 summer drilling program. The foregoing sites could not be seeded at the end of the program in 2011. The work completed is better described in Section 13.9 of this Report, in conjunction with the 2102 summer drilling program.

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[23] Lot#SB120712, Actlabs Report A12-07662

13. SUMMER DRILLING PROGRAM 2012

13.1 OVERVIEW SUMMARY

A heli-supported diamond drilling program was completed by DNI during the 2012 summer over the Buckton and Buckton South Zones (Figure 44) with the minimum objective of completing sufficient number of holes to enable the drill testing and confirmation of the Buckton South Zone to delineate an initial resource therefrom, and of exploring northward projected extension of the Buckton Zone with a view to expanding the Buckton initial inferred resource. Once sufficient holes were completed over the Buckton and Buckton South Zones to achieve minimum objectives, several proposed holes were deferred due to scheduling and budgetary constraints. Holes completed over the Buckton South Zone were the first ever completed over the Zone.

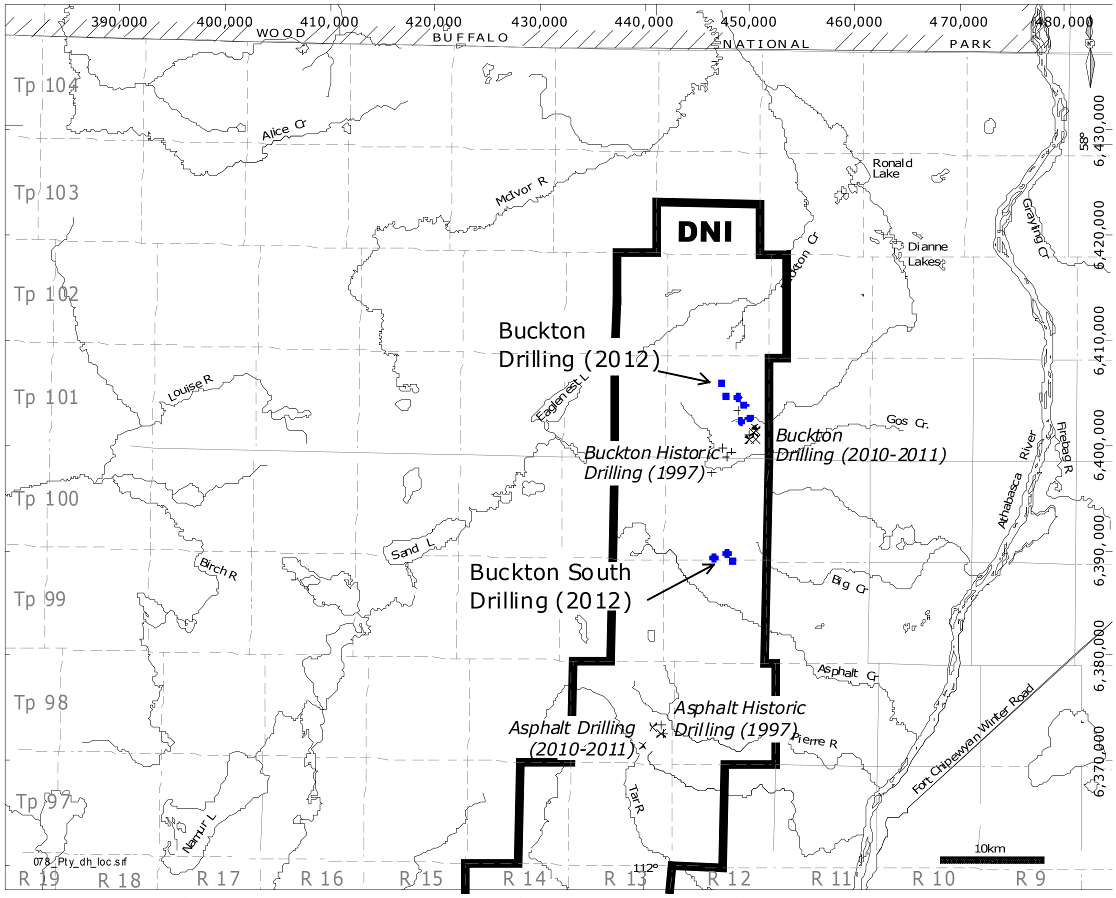

Figure 44: Sketch of the SBH Property showing location of DNI's 2012 Summer drilling program, Buckton and Buckton South Zones. Prior drilling (+)(x) also shown.

Drill equipment was mobilized by helicopter. Mobilization commenced in early August 2012. Demobilization was completed in October 2012 after completion of some site reclamation.

The drilling program, including core logging and sampling, was implemented on behalf of DNI by Apex Geoscience Ltd of Edmonton, Alberta, under the overall direction of Mr.M.Dufresne PGeol who had previously also directed all historic 1997 drilling over the Property, and Mr.R.Eccles PGeol. The drilling was carried out by Tahltan Drilling Services (formerly Lone Peak Drilling) of Smithers, British Columbia. The drilling program particulars are outlined in detail in reports from APEX appended herein as Appendix C1.1[24] and C1.2[25]. Salient parts of the foregoing reports are extracted and summarized below.

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[24] Report: Preliminary Memorandum on 2012 Drilling at Buckton and Buckton South Mineralized Zones, SBH Property, Northern Alberta. Apex Geoscience Ltd., McMillan K. and Bahrami B., November 12, 2012 .

Drill logs are appended in Appendix C1.3. Analytical certificates are appended in Appendix C2.1, and results as compiled by DNI are appended in Appendix C2.2.

A total of nine HQ diameter vertical holes were cored during the period August7-Oct1, 2012, (aggregate of approximately 982m) to test portions of the Buckton and Buckton South polymetallic Mineralized Zones which are exposed or are near surface under thin cover. All of the holes cored, except one, 12BK05, intersected the Second White Speckled Shale Formation which has been DNI's principal target hosting polymetallic mineralization at the Buckton and Buckton South Zones. One of the holes, 12BK05 was located too far to the east of the erosional edge of this Formation to intersect it. Intercepts of this Formation in the drill holes range 11m to 22m, and are consistent with prior drilling in the area. Labiche Formation black shale which overlies the speckled Shale was also intersected in all of the holes in intercepts ranging 16m to 84m. An additional eleven holes planned to continue expanding the Buckton resource northward, and to further infill over the Buckton and Buckton South Zones, were deferred due to scheduling and budgetary constraints. Three of the drill holes were cored at the Buckton South Zone located eight kilometres to the south of the Buckton inferred resource and successfully confirmed this Zone over approximately three square kilometres. The current holes are the first ever cored over the Buckton South Zone which had previously been identified relying on surface trenching and historic oil/gas well downhole subsurface information.

Hole#	UTME NAD27Z12	UTMN NAD27Z12	Collar Elevation (masl)	Casing Depth (m)	Depth to Top Labiche (m)	Depth to Top 2WS (m)	Depth to Top Belle Fourche (m)	Depth EOH (m)
Buckton								
12BK02	447,317	6,405,888	723.3	18.0	no Labiche	81.8	104.0	123.5
12BK03	448,847	6,404,538	702.1	18.1	20.0	77.2	98.0	116.0
12BK04	447,706	6,404,671	751.2	32.8	57.8	101.7	118.8	141.5
12BK05	449,497	6,403,806	694.5	13.8	18.5	No 2WS	96.4	120.8
12BK08	449,155	6,402,251	752.3	33.2	Case into LB	117.2	136.3	147.5
12BK09	449,974	6,402,593	667.8	7.6	8.0	52.3	63.1	83.0
Buckton South								
12BK01	446,583	6,389,291	734.2	21.0	35.1	97.0	EOH in 2WS	111.5
12BK06	447,857	6,389,670	689.2	9.5	12.5	47.0	57.5	76.3
12BK07	448,344	6,388,961	672.0	11.9	11.9	27.5	45.5	63.5

Table 7: Drill hole specifications and select stratigraphic intercepts across the Buckton and Buckton South Zones. 2012 Summer Drilling Program.

The drilling program achieved its principal objectives. Sufficient holes were completed over the Buckton Zone to expand the Buckton Inferred resource and to also upgrade a portion of it to the Indicated class. Sufficient holes were completed over the Buckton South Zone to enable delineation of an initial NI-43-101 compliant "maiden" inferred resource therefrom. The Updated and Expanded Buckton Resource is presented in Section 15.4 of this Report. The Buckton South Zone "maiden" inferred resource is presented in Section 16 of this Report.

13.2 DRILL HOLE TARGETING

Drill holes were localized to focus on probing select localities of shallow cover wherein the Second White Speckled Shale Formation is beneath less than 100m of cover rocks. These areas, shown in Figure 45, were identified based on a synthesis of the expanded subsurface stratigraphic database and model compiled from all oil/gas drilling over the area. Drill collars were localized to probe the Buckton and Buckton Zones, with priority for locations over the Buckton Zone.

A total of 24 drill collar locations were initially selected for testing. After "culling" certain of the foregoing locations, a total of 20 locations were prioritized of which only 9 holes were ultimately drilled given considerable scheduling and budgetary constraints. Drill collar locations selected are shown in Figure 45 along with those completed. Drill hole locations and other details are shown in Table 7.

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[25] Report: Summary of Re-Investigation of 2012 Buckton and Buckton South Drill Cores. Apex Geoscience Ltd., Eccles R.

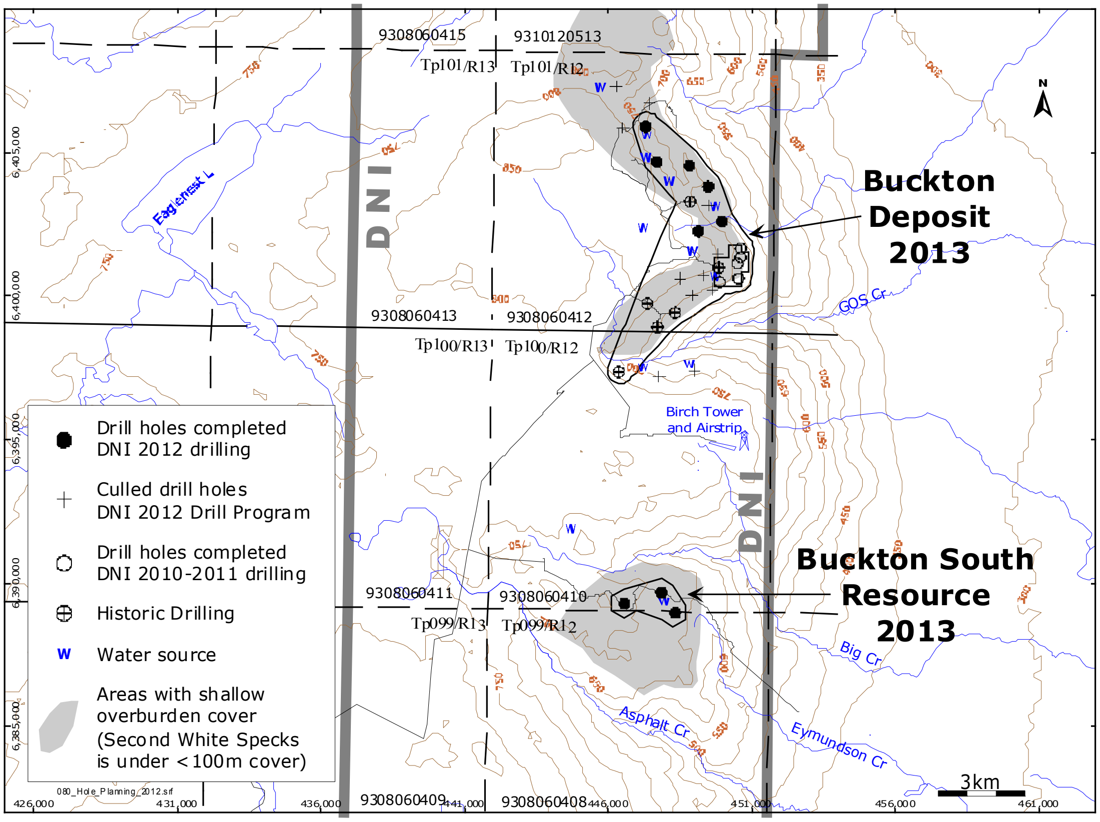

Figure 45: Sketch of the eastern part of the SBH Property over the Buckton and Buckton Zones showing location of the DNI 2012 summer drilling program in relation to prior drilling over the Zones and outline of the Buckton Consolidated and Updated resource. Locations of drill camp and water sources also shown. Prioritized areas with <100m cover above Second White Speckled Shale Formation are after Section 8.3.2, Sabag 2012.

Detailed location sketches for drilling completed over the Buckton and Buckton South Zones are presented separately in Figures 46 and 47, showing also prior drilling and outline of the Buckton Updated and Expanded Resource and the Buckton South Maiden Inferred Resource, both of which were based on information from the 2012 drilling together with available information from prior drilling in the area (see Sections 15.3, 15.4 and 16 of this Report).

It is of note that DNI's subsequent resource studies for both Zones and the 2013 Buckton Preliminary Economic Assessment study collectively demonstrated that thickness of overburden above the Second White Speckled Shale is not a useful targeting criteria given that the Labiche Formation shale overlying the Speckled Shale is also sufficiently mineralized to meet resource thresholding base cut-off grades and is therefore included in mineral resources for the Zones. Future drilling might, accordingly, target drilling based on thickness of the overburden cover above the combined Labiche+Speckled shale package which is currently regarded as the principal host to metallic mineralization in the Buckton and Buckton South Zones. This is a significant development and a fundamental departure from all prior work on the Property which had targeted the Speckled Shale as the only mineralized host at the Property, and hence focused all efforts to probe localities wherein it is most readily accessible. In addition, to the extent that the overburden cover throughout the Buckton and Buckton South Zones, and most likely throughout the entire Property, consists largely of material scoured from the Labiche Shale beneath it, the overburden is also mineralized with metals and might be incorporated into mineral resources if the metals are recoverable by the same leaching methods as applicable to the Shales. Comparative lithogeochmistry for the Formations and overburden are summarized in Table 8 in Section 13.7 of this Report.

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and McMillan K., Jan 24, 2013.

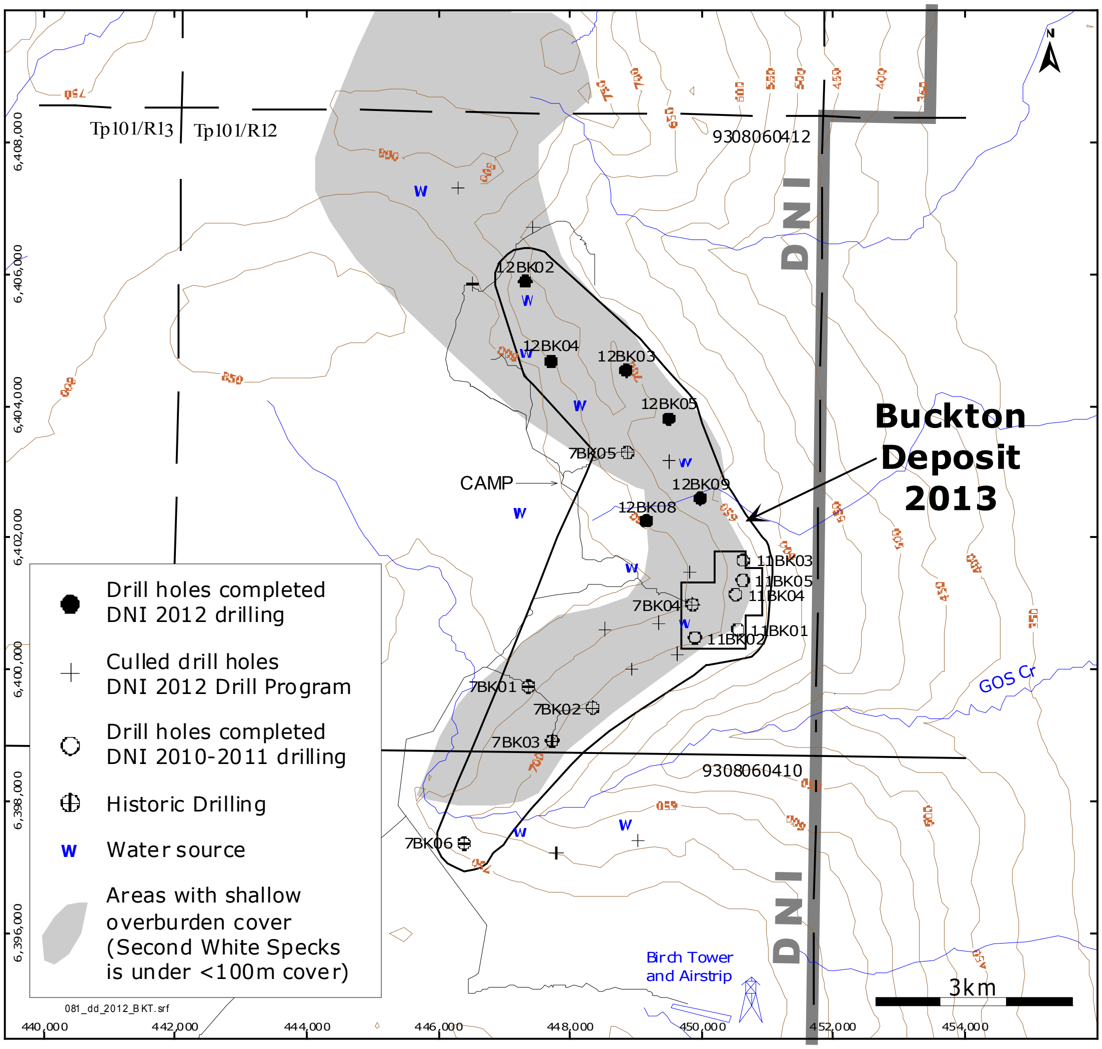

Figure 46: Sketch of the Buckton Zone, and vicinity, showing location of drill holes, access and water holes. DNI 2012 Summer Drilling Program. The outline of the Buckton Updated and Expanded Resource delineated based on the 2012 drilling is also shown. Historic and prior drilling information after Sabag 2010 and 2012.

13.3 LOGISTICS, PERMITTING AND COMMUNITY CONSULTATION

Drill program planning commenced in May 2012. Permitting for the drilling program was organized as an extension of the permit previously granted for 2010-2011 drilling program parts of which were deferred. Relevant community consultation relating to the foregoing had previously been completed. Permitting was organized during the period May-July/2012, the final permits being in hand by mid July 2012.

The program was implemented under metallic mineral exploration permit MME120002 and related water use permits #00313516, #00313517, #00313518, #00313520, #00313523, #00313524, #00313526, #00313527, #00313528, #00313533 and #00313534 (sources of water are shown in Figures 46 and 47). The drilling was conducted over Permits #930806408, #9308060410, and #9308060412 (subsequent related resource studies discussed in Sections 15.4 and 16 of this Report extend over Permits #930806408, #9308060410, and #9308060412).

As the 2012 drill sites are not summer-road accessible, an A-star helicopter was retained from Highland Helicopters, Ltd. on an occasional use basis to move people and equipment between the camp, drill site, a summer-road accessible staging area, the Birch Tower Airstrip (where charter flights are able to land), and other field areas.

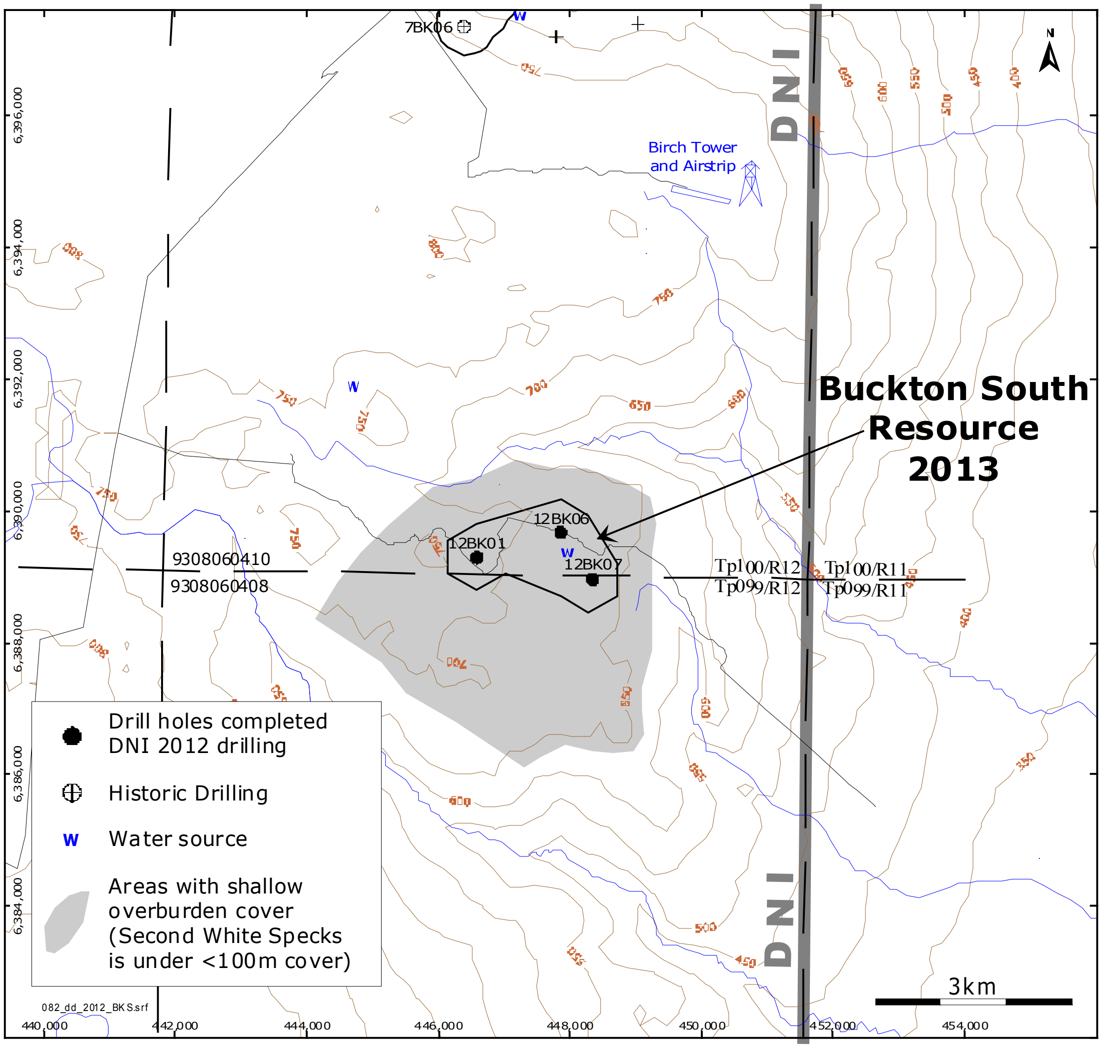

Figure 47: Sketch of the Buckton South Zone, and vicinity, showing location of drill holes, access and water holes. DNI 2012 Summer Drilling Program. The outline of the Buckton South Maiden Inferred Resource delineated based on the 2012 drilling is also shown. Historic and prior drilling information after Sabag 2010 and 2012.

Apex maintained a crew of four on site, in addition to full camp services and cook (camp location shown in Figure 46).

The drilling was conducted by Tahltan Drilling Services which maintained a drill foreman and two two-man drill crews (day and night shift) on site, in addition to 2-3 pad builders. In addition to the personnel listed above, other employees of APEX and DNI visited the project area several times during the duration of the project and stayed for periods ranging from a few hours to several days.

13.4 CORING, LOGGING AND SAMPLING SPECIFICATIONS

The reader is referred to the two drill program reports by Apex Geoscience (McMillan and Bahrami 2012, and Eccles et al 2013d) for details relating to the drilling, logging ad sampling protocols. The foregoing reports are appended in Appendix C1.1 and C1.2.

An aggregate of approximately 982m were cored in a total of nine HQ diameter vertical holes during the period August 7 to October 1, 2012. Hole numbers were assigned sequentially in the order drilled identified also with a prefix "12BK-" indicating (BK) for both Buckton and Buckton South Zones ("12" noting 2012). Historic holes by contrast, drilled in 1997, are prefixed "7BK-). All holes were cored from casing to completion depth. Collars were positioned by GPS (NAD27Z12). Drill core samples were screened in the field with a handheld XRF to guide the drilling, and subsequently submitted for analysis to Actlabs.

Drilling was done with a standard diamond drill that was moved between sites by helicopter. The upper part of each hole (consisting of unconsolidated sediments) was cased and therefore not recovered, but otherwise, each hole was cored to the final depth in 1.5m runs. All cores were HQ-sized (63.5 mm core diameter). Cores were placed in wooden core boxes at the drill site and flown back to camp on a regular basis.

Particulars of drill holes are summarized in previous Table 7.

Cores were flown from the drill sites into camp by helicopter. Once in camp, cores were cleaned, metre-marked, photographed, and processed by a geotechnician, who recorded the rock quality designation (a statistic used to quantify the competence of rock at the multi-metre scale) and core recovery. Cores were logged by the project geologist (B.Bahrami or K.McMillan) and sample intervals were picked. Core was sampled on a standard 1m interval.

Drill core samples were screened in the field with a handheld Innov-X Systems X-50 XRF unit to guide the drilling, and subsequently submitted for analysis to Actlabs. The XRF was user-calibrated daily using commercial standards (supplied with the machine) and internal standards made from previous samples collected by DNI from the Buckton area and analyzed under Actlabs Report #A12-07738 (certificates appended as Appendix C2.3)

The XRF screening proved a useful tool for separating often similar looking muddy shale intercepts. The Second White Speckled shale Formation (as logged with the X-50 XRF in camp) has very high values of Hg, Ag, Cd, Sb, and Ba, especially near the top of the formation, and locally high values of V and P. The concentration of S and Mo is generally very high throughout the Second White Speckled shale Formation. Concentrations of Zn, Ni, Cu, and U are also higher than in the Belle Fourche or Labiche Formations, but generally not significantly higher.

After processing and logging, all drill core footages were photographed (wet and dry photos). The core was also photographed after it was split. Downhole photologs are appended herein in Appendix C4.1 and C4.2.

Core was sampled by manual splitting with hand tools as had been done previously in other drilling of the shales (the fresh core being soft enough to split with a putty knife). Split core samples were submitted to Activation Laboratories, Ancaster, Ontario ("Actlabs") for analysis, and the split half-core was shipped to Edmonton for storage by Apex in secure storage facilities. Sample numbering retained protocols previously formulated by DNI, namely; sample numbers consisted of an eleven digit id, the first six digits representing hole-ID (eg:12BK04) and the final 5 digits representing the depth in cm to the top of the sample interval (eg: sample# 12BK0405200 corresponds to the sample in hole 12BK-04 that starts at 5200cm below surface).

Two analytical control samples (often called "blanks") were inserted into the sample batch after every tenth sample. These are samples LBST-1 and LBST-2 which had been previously blended and prepared for DNI. These standard blanks were created from homogenized core collected from the Labiche Formation during earlier drill programs at the SBH Property. The standards were recorded in the sample log (i.e., whether LBST-1 or LBST-2 was used), and were otherwise bagged similarly to the rest of the 2012 drill program samples. Standards were placed in the sequence of core samples after every tenth sample. Sample numbers for standards were the same as for other samples, except that standards were given assumed depths in the sample names that corresponded to the 99 centimetre mark of the depth between the two samples where that standard occurred (i.e., the standard placed between samples 12BK0804400 and 12BK0804500 was named 12BK0804499). In some holes, where samples were shorter than one metre occurred, the centimetre before the next sample was used as the arbitrary depth of the standard.

A duplicate split was taken of every 20th sample, and retained for future use. Duplicates were taken by breaking up the original sample by hand (in the original sample bag) and selecting approximately half of the pieces, which were removed by hand from the original bag and placed in the duplicate-sample bag. Since each original sample weighs approximately 2-3 kg, more than enough material was present in each original sample and duplicate sample for lab analyses. In total, 34 duplicates were collected from the total footage drilled and shipped to Edmonton for storage by Apex in secure storage facilities. An inventory of duplicates and core boxes of split-core which are in Edmonton storage is summarized in Appendix C1.1.

All cores and samples were stored in the field camp for the duration of the project, with the exception of 109 samples that were shipped to the project expediter (McMurray Serv-U Expediting, Ltd.) early in the program and held until the field program ended. In total, 854 samples were collected for lab analyses and submitted to Actlabs under DNI Lot# SB121018.

Drill logs, initially based on lithological observations of often similar non-descript dark shales near the contacts of the Second White Speckled Shale Formation (especially its bottom), were subsequently revised in January/2013 once analyses were on hand to better define Formational contacts with the benefit of, and based on, geochemical definitions to exclude intervals of mixed shales near the contacts of the Second White Speckled Shale and Labiche Formations. The reader is referred to Eccles et al 2013d for details of the revisions to the logging (Appendix C1.2).

13.5 ANALYTICAL SPECIFICATIONS

All split drill core samples from the 2012 drill program were submitted to Activation Laboratories in Ancaster, Ontario, on Oct 22, 2012, under analytical Lot# SB121018 for multielement geochemical analysis by Actlabs package 1H2 (four acids TD-ICP + INA) and Code 8 (REE Assay Package). Actlabs had previously carried out all analytical work in connection with DNI's 2010-2011 drilling as well prior historic drilling over the two Zones and the Property. In addition to the above work, samples were weighed by Actlabs upon arrival "as received", weighed also after drying and weights reported to enable estimation of moisture content. Specific Gravity determination (on pulps) were also made and reported. Unlike prioir drilling programs, samples were not analyzed for Corg-Stotal by Code 5G, nor for whole rock geochemistry by Code 4B, nor for paste pH (see Appendix A4 for details of Actlabs analytical codes).

Samples were dried slowly at moderate temperatures per standard Actlabs protocols. Typically, a 500g analytical fraction was pulverized from each sample. Two 50gm subsamples (denoted with "A" and "B" suffixes to the sample number) were shipped to DNI from this pulp to be archived as "witness" samples. Additional details

Analytical certificates from the above work and related summaries are appended herein as Appendix C2.1 and C2.2. All rejects and pulps are currently in storage at Storage Mart.

13.6 DOWNHOLE GEOLOGY

Downhole stratigraphy documented from logging of drill cores from the 2012 drilling program is consistent with that previously documented from historic drilling completed by Tintina mines in 1997, as well as that from DNI's 2010-2011 drilling program, all of which holes were drilled under the supervision of Mr.M.Dufresne PGeol of Apex Geoscience. To that end, the idealized stratigraphic section formulated in 1997 by Mr.Dufresne to typify the Second White Speckled Shale Formation and shales adjacent to its upper and lower contacts, was used as a guideline. For details of downhole geology, the reader is referred to a drill program report by Apex Geoscience (McMillan and Bahrami 2012) and related addendum memo report thereto (Eccles et al 2013d) appended herein as Appendix C1.1 and C1.2, respectively, for details of the drilling program, salient portions from which are summarized or extracted below.

Drill logs for all holes drilled are included in Appendix C1.3 and in Eccles et al 2012 and Eccles et al 2013d. Detailed, larger scale, set of downhole drill core photologs are appended herein (Appendix C4) for the core when dry, when wetted and after splitting.

Both the Buckton and the Buckton South drill cores were re-examined in January 2013 with the benefit of geochemical analyses to clarify uncertainties in some holes for the top and bottom of the Second White Speckled Shale Formation and Labiche which were previously determined based on visual logging. Revisions were recommended for three of the nine Buckton and Buckton South drill logs (12BK-01, 12BK-02 and 12BK-04) as follows: (i) Recognition of the contact between Labiche and Second White Speckled Shale formations had initially been logged at 100.17m depth; however, the contact was changed to 97.02 m, based on colour and textural changes of the core, which correlates well with the base-metal and REE profiles of the core; (ii) the zone above the Second White Speckled Shale in 12BK-02 was initially logged as "Overburden with intermingled Labiche Shale", however the main description of the zone was changed to "Overburden" because of the overwhelming prevalence of glacial material in the interval (0.00m – 81.75m); and (iii) All material above Second White Speckled Shale had been initially defined as Labiche shale, however upon re-examination the contact between the overburden and Labiche Formation was identified at 57.90m, based on textural distinctions between the units, which is in good agreement with the major lithology change indicated in the downhole geochemical profile of the hole. The lithology logs from 12BK-01, 12BK-02, and 12BK-04 were modified. In addition, Hole 12BK-05 was re-examined, and additional notes were made on the interval just above the Labiche-Belle Fourche contact, but the main contacts were not changed.

As with the 2011 Buckton drill cores, the 2012 cores show variation in the thickness of the Second White Speckled Shale Formation (which, in the 2012 cores ranges from 10.8 to 22.5 m where it was present and penetrated completely). Two holes (12BK-06 and 12BK-09) have particularly thin Second White Speckled Shale intervals (10.5 and 10.8 m, respectively). In both of these cores, the lithologic contact between the Labiche shale and the Second White Speckled Shale is abrupt, though in 12BK-06 the contact itself may be missing (in core), as it falls exactly at the boundary of two core runs. In hole 12BK-09, the contact is marked by a sharply defined 7-cm band of diamictonite. In each of these two holes however, the geochemical contact is surprisingly gradational; in both holes, molybdenum, uranium, and REE are distinctly elevated in the lowermost one to two samples of the Labiche Formation, in contrast to the other Buckton holes, suggesting possible remobilization of metals at the contacts, which may coincide with structural disturbances.

It is worth noting that although structural disturbances (slumping and/or glaciotectonic faulting) may decrease the thickness of the Second White Speckled Shale Formation, it may also increase formation thickness. Hole 12BK-02 contains evidence of structural disturbance, but contains the thickest Second White Speckled Shale section of all the 2012-cores; it is possible that the Second White Speckled Shale interval was thickened by the similar structural disturbances that decapitated the Second White Speckled Formation in other holes, as described above. The local displacement of distinct geologic units in the Buckton Zone should therefore not be viewed as only as a mechanism to decrease the local thickness of the Second White Speckled Shale Formation, but also as one that may potentially increase thickness. Because of the wide drill spacing (relative to the size of the structural displacements in question), the lack of oriented core, the scarcity of Cretaceous outcrop and the lack of relevant geophysical data, it is not currently possible to map the extent of structural disturbances or the thickness of the Second White Speckled Shale Formation within the Buckton Zone.

13.7 DOWNHOLE GEOCHEMISTRY

A detailed discussion of vertical zonation and trends characterizing the Second White Speckled Shale Formation was presented in a previous Section of this Report (Section 8.10) relating to historic drilling and results from DNI's 2010-2011 drilling program. Tends identified serve to characterize the 2012 drilling results. The reader is also referred to AGS 2001 for a detailed discussion of geochemical characteristics of subformational components of the Second White Speckled Shale Formation and its enveloping rocks across the Birch Mountains and elsewhere in Alberta.

To the extent that the drilling program was conducted for the purposes of collecting systematic data to support a resource study, there is little that can be said about the drill core analytical results other than that they are consistent with analytical results from all prior drilling and sampling in the area as documented from historic drilling and sampling work. The results are self explanatory and serve to reiterate that the Second White Speckled Shale Formation is metal enriched, that while there is remarkable lateral grade continuity among drill holes, there is conspicuous vertical zonation of increasing metals grade upstratigraphy all of which hiatus at the Formation's upper contact with the LaBiche Shale which is substantially devoid of base metals mineralization but contains equivalent levels of rare earth elements, and slightly higher concentrations of Specialty metals (eg: Li, Sc, Th).

Weighted averages for the various Formations and overburden intersected in the 2012 drilling over the Buckton and Buckton South Zones are presented in Table 8. Averages shown for LaBiche and Belle Fourche Formations are only for partial intercepts across the two Formations since drill holes did not intersect the entire thickness of the two Formations and sampled only the upper portions of the Belle Fourche at the bottom of each hole, and across whatever lower portions of the Labiche are preserved in the area (Labiche thickness is variable over the Birch Mountains and the Property due to paleosurface erosion and glacial scouring).

2012 Drilling Program			**Buckton Zone**				**Buckton South Zone**			
Analyte	Detection	Method	o/b	LB	2WS	BF	o/b	LB	2WS	BF
Mo (ppm)	1	ICP	1	2	61	2	4	2	61	3
Ni (ppm)	1	ICP	22	47	144	43	22	50	129	43
U (ppm)	0.5	INA	2.7	4.5	24.9	4.9	2.2	4.7	26.3	5.1
V (ppm)	2	ICP	80	262	698	211	89	277	760	231
Zn (ppm)	1	ICP	55	145	271	120	61	156	274	126
Cu (ppm)	1	ICP	20	31	77	27	17	34	87	31
Co (ppm)	1	INA	7	13	23	10	6	13	21	12
Li (ppm)	0.5	MS	35.1	77.0	63.8	76.2	27.6	70.5	69.3	95.0
La (ppm)	0.1	FUS-MS	26.7	36.1	56.0	37.8	19.1	37.7	50.1	39.0
Ce (ppm)	0.1	FUS-MS	51.4	64.8	85.9	65.6	35.9	67.6	80.2	71.9
Pr (ppm)	0.05	FUS-MS	6.10	7.97	12.61	8.50	4.26	8.51	11.54	8.76
Nd (ppm)	0.1	FUS-MS	22.4	29.7	49.4	31.8	16.0	31.8	45.2	32.5
Sm (ppm)	0.1	FUS-MS	4.2	5.7	10.2	6.1	3.0	6.2	9.3	6.1
Eu (ppm)	0.05	FUS-MS	0.88	1.22	2.28	1.33	0.65	1.32	2.07	1.33
Gd (ppm)	0.1	FUS-MS	3.4	4.7	10.2	5.1	2.5	5.2	9.3	4.8
Tb (ppm)	0.1	FUS-MS	0.5	0.8	1.6	0.8	0.4	0.8	1.4	0.8
Dy (ppm)	0.1	FUS-MS	3.0	4.5	8.7	4.6	2.3	4.8	8.0	4.6
Ho (ppm)	0.1	FUS-MS	0.6	0.9	1.6	0.9	0.5	1.0	1.5	0.9
Er (ppm)	0.1	FUS-MS	1.8	2.7	4.7	2.6	1.3	2.8	4.4	2.6
Tm (ppm)	0.05	FUS-MS	0.27	0.40	0.66	0.40	0.20	0.43	0.63	0.40
Yb (ppm)	0.1	FUS-MS	1.8	2.7	4.2	2.6	1.3	2.9	4.0	2.7
Lu (ppm)	0.04	FUS-MS	0.27	0.43	0.63	0.41	0.20	0.44	0.61	0.42
Y (ppm)	2	FUS-ICP	17	26	56	27	13	28	51	26
Sc (ppm)	1	ICPf	7	15	13	14	5	16	12	15
Th (ppm)	0.1	FUS-MS	8.4	10.4	11.1	10.6	5.9	10.4	10.4	10.9
Spec Grav	0.01	GRAV	2.73	2.88	2.68	2.86	2.73	2.92	2.67	2.88
H20 (%)	0.1	GRAV	13.6	17.4	16.5	13.9	7.0	18.6	16.5	13.1
Al (%)	0.01	ICP	5.15	8.92	7.51	8.12	3.69	8.51	6.95	8.70
Na (%)	0.01	INA	0.61	0.41	0.45	0.51	0.46	0.56	0.62	0.51
K (%)	0.01	ICP	1.98	2.75	2.49	2.74	1.31	2.35	2.39	2.99
Ca (%)	0.01	ICP	1.79	0.73	3.94	0.94	0.61	0.68	4.56	0.68
Mg (%)	0.01	ICP	0.75	0.99	0.85	0.80	0.38	1.01	0.89	0.87
Fe (%)	0.01	INA	2.23	3.96	4.16	3.15	2.77	3.47	3.94	3.35
SiO2 (%)	0.01	ICP	75.65	62.91	49.01	65.92	79.78	63.46	47.63	64.38
Al2O3 (%)	0.01	ICP	8.58	15.13	12.48	13.83	6.45	15.29	12.81	14.99

Table 8: Summary of formational weighted averages for the LaBiche (LB), Second White Speckled Shale (2ws) and Belle Fourche (BF) Formations, and overburden cover (o/b), for select metals and elements. DNI 2012 Summer Drilling Program, Buckton and Buckton South Zones.

Downhole lithogeochemical plots from 2012 drill holes are presented in fence diagram plots in Figure 48 for Mo, Ce and U. Fence location is shown in Figure 49, spanning a distance of 21.4km from Buckton South to the north end of the Buckton Zone. The Figure is self-explanatory and serve to reiterate excellent lateral grade continuity over large distances as previously observed in other drilling over the Property. Additional downhole lithogeochemical plots for other metals and elements are appended in Section 15.4 and Appendix C3.1.

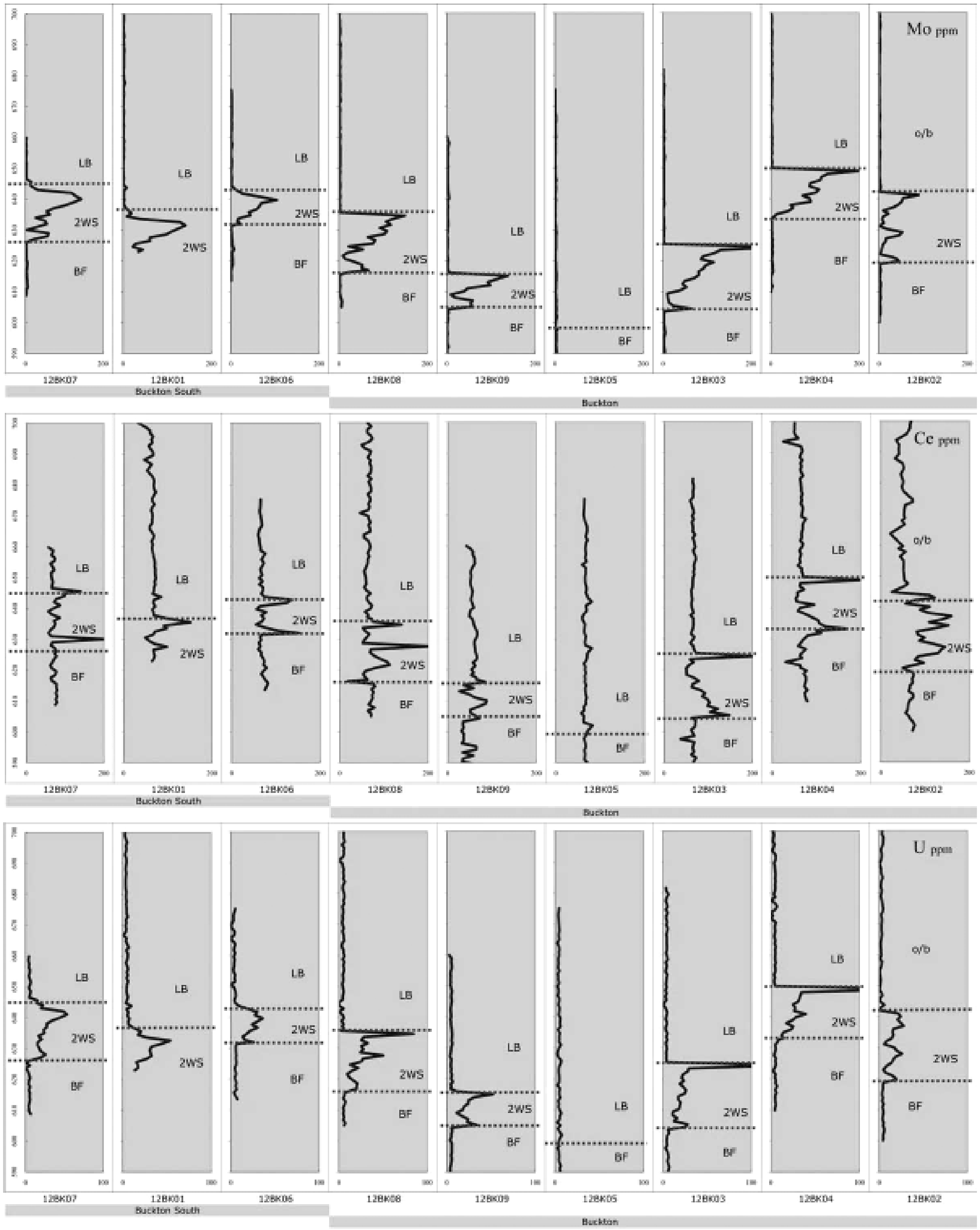

Figure 48: Downhole lithogeochemical profiles for Mo, Ce and U, showing also Second White Speckled Shale (2ws), Labiche (LB) and the Belle Fourche Formations, Buckton and Buckton South Zones. DNI 2012 Summer Drilling Program, Buckton Zone. Note: holes 12BK06 and 12BK07 are 3.1km apart, holes 12BK02 and 12BK08 are 5.6km apart, holes 12BK07 and 12BK02 are 21.4km apart, along fence.

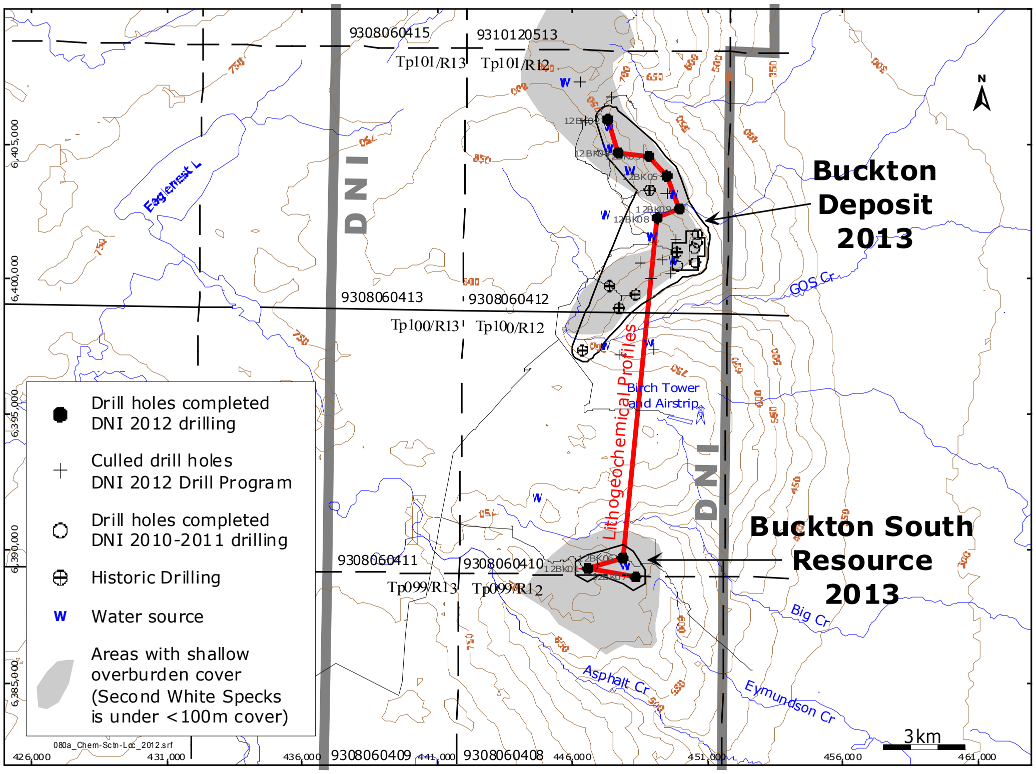

Figure 49: Location of fence over 2012 drill holes comprising the downhole geochemical fence diagram in Figure 48.

13.8 DRILL PROGRAM CONCLUSIONS

The drill program achieved its principal objectives as follows:

- Four holes drilled to test the projected northward extension of the Buckton Zone inferred resource confirmed extension to the Zone and resource for an additional 3km to the north. The drilling results served to expand the Buckton Consolidated and Updated Inferred mineral resource northward by approximately an additional 4km^2. The foregoing mineral resource and its expansion and re-statement as the Updated and Expanded Buckton resource are discussed in Sections 15.3 and 15.4 of this Report.
- Two strategically located in-fill holes at the Buckton Zone sufficiently enhanced the drilling database to enable upgrading a portion of the Inferred mineral resource to the Indicated mineral resource class as stated in the Updated and Expanded Buckton resource (discussed in Section 15.4 of this Report).
- three holes completed over the Buckton South Zone, located 8 kilometres to the south of the Buckton Zone inferred resource, successfully confirmed the Buckton South Zone over approximately 3 square kilometres and enabled delineation of an initial "maiden" inferred resource therefrom (discussed in Section 16 of this Report). Considering limited number of holes and their distribution, the drilling did not definitively ascertain whether the Buckton South Zone is the southerly extension of the Buckton Zone or whether it is a separate stand-alone Zone of similar grade and distribution.
- The 2012 drilling results reiterate that the Cretaceous shales at the Buckton and Buckton South Zones demonstrated considerable geological and geochemical continuity over large distances of several kilometers across the Property. The results were consistent with analytical results from all prior drilling and sampling in the area as documented from historic drilling and sampling work.

13.9 SITE RECLAMATION - 2010-2011 DRILL SITES

Considering that the 2012 drill program was a heli supported program, drill pads comprised the only localities disturbed which required surface reclamation. Drill pads reclaimed by "buck & scatter", spreading, covering drill-cuttings, garbage cleanup and seeding. Pads were re-seeded with the same forestry mix as used for reseeding DNI's 2010-2011 drill sites. Seeding was done shortly after drilling, while personnel were still in camp. Reclamation of the sites was done by hand (no large trees were moved). All seeding and reclamation was completed under the supervision of the project geologist on site (either B. Bahrami or K. McMillan). All 2012 drill sites were photographed before site preparation, and after they were reclaimed (photos retained by DNI in its project records).

In addition to reclamation of 2012 drill sites, 3 sites from DNI's 2010-2011 winter drill program were also re-seeded. The foregoing drill program was completed in January and February 2011, and drill sites were reclaimed by "buck & scatter" and spreading but could not be seeded in winter. Field inspection of the sites concluded that reseeding would be advisable at three specific sites that were on sloped ground (probably heavy-machinery turnarounds), poorly vegetated, and therefore considered susceptible to soil erosion. Reseeding of these sites was completed on August 25th, September 5th, and September 6th, 2012, under the supervision of the onsite project geologist, B. Bahrami. The seed used was forestry mix approved by Alberta Ministry of Environment and Sustainable Resource Development. One site was already mostly revegetated and only small bare patches were reseeded; the other two sites were poorly vegetated, and were thoroughly reseeded. Table 2 shows the locations and descriptions sites reseeded.

2010-2011 drilling pads seeded in 2012			
SITE	UTM Easting (NAD 27, Z12)	UTM Northing (NAD27, Z12)	PRE-SEEDED SITE DESCRIPTION
1	448914	6401260	Weakly-Moderately slopped area, vegetation growing; isolated 2x2 m barren patch was reseeded.
2	447864	6402854	30 m steeply sloped area of a 4 m wide cut-line, slumping with no vegetation growing.
3	448871	6403452	25 m moderately-steeply sloped area of a 4 m wide cut-line, slumping with no vegetation growing.
Note: all UTMs in NAD 27, Z12			

Table 9: Locations and site descriptions for drill sites from DNI's 2010-2011 drill program which were reseeded in 2012.

14. LEACHING TESTWORK 2012-2014

14.1 BIOLEACHING BATCH AMENABILITY TESTS - AITF - 2012

14.1.1 Overview

A series of bioleaching tests were initiated in mid 2012 at Alberta Innovates Technology Futures (AITF - formerly the Alberta Research Council), to test two composite drill core samples from the Labiche and Belle Fourche Formations. Other samples from of Labiche Formation Shale had previously been tested, but recovery of metals by leaching from the Belle Fourche Formation Shale, which underlies the Second White Speckled Shale Formation at the Property, had not previously been tested. The objective of the testwork was to test amenability of composite fresh drill core samples collected from DNI's 2010-2011 winter drilling program from the two foregoing Formations to the same bioleaching procedures as prior tests carried out on samples from the Second White Speckled Shale which was then believed to be the only host to polymetallic mineral resources at the Property. Some of the AITF testwork is superceded by subsequent stirred tank and column leaching tests carried out by CanMet (described in Section 14.2 of this Report).

The work was carried out by AITF during July-Dec/2012 under the supervision of by Dr.K.Budwill (AITF) with input from Dr.C.L.Brierley and S.Sabag (DNI). Bioleaching procedures were as previously formulated by Dr.Brierley during previous testwork completed by AITF in 2009-2010 (see Sabag 2010 and Sabag 2012, Alberta Mineral Assessment Report MIN20100017 and MIN20120007). Analytical work was completed by Actlabs, Ancaster, Ontario.

Two composite weighted samples of drill core were bioleached, each representing the complete intercept across the Labiche and Belle Fourche Formations in drill hole 11BK05 the Buckton Zone.

The bioleaching tests focused on reporting only Mo-Ni-U-V-Zn-Cu-Co-Li and, as such, AITF's final report[26] outlines results only for the foregoing metals even though the underlying multielement analytical results from the various fractions of the leaching also provide results for a range of other metals of interest to DNI including Specialty Metals Sc-Th as well as Rare Earth Elements (REE). Results reported herein for REE and Specialty Metals have, accordingly, been calculated by DNI and the author of this Report relying on analytical data from AITF's bioleaching tests.

Samples were leached using bio-organism cultures previously harvested by AITF from Second White Speckled Shale surface samples during its 2009-2010 testwork, all of which had been maintained in storage at AITF facilities, Edmonton (See Alberta Mineral Assessment Report MIN20100017, Sabag 2010).

The reader is referred to AITF's final report appended herein as Appendix D1.1 for details of the testwork, which also includes Actlabs analytical certificates[27] related to the testwork. Summary of the testwork is outlined below extracted from AITF's report.

14.1.2 Sample Preparation

Two composite samples, 11BK5LB and 11BK5BF, made from different core samples of the polymetallic black shale were used. The samples were prepared and provided by DNI for testing in the experiment. Duplicate 100gm charges from the foregoing composites were tested labeled BK5LB and BK5BF. Details of the composite samples and their average compositions are summarized in Tables 10 and 11, respectively.

Composite Samples from Drill Hole 11BK05		
Sample#	BK5LB	BK5BF
From (m)	17.50	74.50
To (m)	61.94	98.50
Length (m)	44.44	24.00
Formation	Labiche	Belle Fourche
Composite Weight	4.6kg	3.3kg

Table 10: Composite samples BK5LB and BK5BF. AITF Bioleaching Testwork 2012.

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[26] Report: Assessing The Bioleaching Capacity Of Alberta Polymetallic Black Shale: Composite samples BK5BF and BK5LB. Prepared by Alberta Innovates Technology Futures (AITF) for DNI Metals Inc., Budwill K., December 20, 2013.

[27] Actlabs Rpt# A11-11374, A11-11382 and A11-14634.

Analyte	Method	Detection	BK5LB	BK5BF
Mo	ICP	1 ppm	2	2
Ni	ICP	1 ppm	44	42
U	INA	0.5 ppm	4.5	4.9
V	ICP	2 ppm	250	200
Zn	ICP	1 ppm	140	113
Cu	ICP	1 ppm	28	26
Co	INA	1 ppm	13	12
Li	MS	0.5 ppm	68.6	64.5
La	FUS-MS	0.1 ppm	38.0	41.4
Ce	FUS-MS	0.1 ppm	69.6	75.6
Pr	FUS-MS	0.05 ppm	8.20	8.89
Nd	FUS-MS	0.1 ppm	31.1	35.0
Sm	FUS-MS	0.1 ppm	6.0	7.0
Eu	FUS-MS	0.05 ppm	1.24	1.50
Gd	FUS-MS	0.1 ppm	5.0	6.1
Tb	FUS-MS	0.1 ppm	0.8	0.9
Dy	FUS-MS	0.1 ppm	4.6	5.4
Ho	FUS-MS	0.1 ppm	1.0	1.1
Er	FUS-MS	0.1 ppm	2.9	3.0
Tm	FUS-MS	0.05 ppm	0.44	0.45
Yb	FUS-MS	0.1 ppm	2.9	2.9
Lu	FUS-MS	0.04 ppm	0.48	0.45
Y	FUS-ICP	2 ppm	27	30
Sc	FUS-ICP	1 ppm	15	14
Th	FUS-MS	0.1 ppm	10.9	10.6
SiO2	FUS-ICP	0.01 %	62.46	61.94
Al2O3	FUS-ICP	0.01 %	15.02	13.36
Fe2O3(T)	FUS-ICP	0.01 %	5.63	4.47
MnO	FUS-ICP	0.001 %	0.064	0.021
MgO	FUS-ICP	0.01 %	1.51	1.24
CaO	FUS-ICP	0.01 %	0.90	2.64
Na2O	FUS-ICP	0.01 %	0.52	0.69
K2O	FUS-ICP	0.01 %	2.57	2.60
TiO2	FUS-ICP	0.001 %	0.754	0.710
P2O5	FUS-ICP	0.01 %	0.24	0.30
LOI	FUS-ICP	%	9.5	9.4
Total	FUS-ICP	0.01 %	99.19	97.35
Be	FUS-ICP	1 ppm	2	2
V	FUS-ICP	5 ppm	260	192
Cr	FUS-MS	20 ppm	85	153
Co	FUS-MS	1 ppm	10	9
Ni	FUS-MS	20 ppm	27	28
Cu	FUS-MS	10 ppm	23	65
Zn	FUS-MS	30 ppm	124	125
Ga	FUS-MS	1 ppm	18	16
Ge	FUS-MS	1 ppm	1	1
As	FUS-MS	5 ppm	7	7
Rb	FUS-MS	2 ppm	116	113
Sr	FUS-ICP	2 ppm	178	167
Zr	FUS-ICP	4 ppm	165	174
Nb	FUS-MS	1 ppm	13	12
Mo	FUS-MS	2 ppm	1	2
Ag	FUS-MS	0.5 ppm	0.5	0.5
In	FUS-MS	0.2 ppm	0.1	0.1
Sn	FUS-MS	1 ppm	2	1
Sb	FUS-MS	0.5 ppm	0.6	0.3
Cs	FUS-MS	0.5 ppm	9.2	7.5
Ba	FUS-ICP	3 ppm	1220	815
Bi	FUS-MS	0.4 ppm	0.2	0.3
Hf	FUS-MS	0.2 ppm	4.0	4.1
Ta	FUS-MS	0.1 ppm	0.9	0.9
W	FUS-MS	1 ppm	1	1
Tl	FUS-MS	0.1 ppm	0.8	0.7
Pb	FUS-MS	5 ppm	12	9
U	FUS-MS	0.1 ppm	3.6	4.2
C-Total	IR	0.01 %	1.47	1.79
C-Graph	IR	0.05 %	0.10	0.12
C-Organ	IR	0.05 %	0.93	1.16
CO2	COU	0.01 %	1.62	1.87

Analyte	Method	Detection	BK5LB	BK5BF
Au	INA	2 ppb	1	1
Ag	ICP	0.3 ppm	0.3	0.3
Cd	ICP	0.3 ppm	0.2	0.2
Pb	ICP	3 ppm	14	11
S	ICP	0.01 %	0.64	1.75
Al	ICP	0.01 %	5.98	5.03
As	INA	0.5 ppm	18.8	17.7
Ba	INA	50 ppm	1351	954
Be	ICP	1 ppm	3	3
Bi	MS	0.1 ppm	0.3	0.2
Br	INA	0.5 ppm	2.1	2.9
Ca	ICP	0.01 %	0.80	1.99
Cr	INA	2 ppm	112	187
Cs	INA	1 ppm	9	7
Fe	INA	0.01 %	4.04	3.33
Hf	INA	1 ppm	4	5
Ge	MS	0.1 ppm	0.6	0.2
Hg	INA	1 ppm	1	1
In	MS	0.2 ppm	0.1	0.1
Re	MS	0.001 ppm	0.003	0.007
Ir	INA	5 ppb	3	3
K	ICP	0.01 %	2.18	2.43
Mg	ICP	0.01 %	0.96	0.77
Mn	ICP	1 ppm	530	176
Na	INA	0.01 %	0.44	0.57
P	ICP	0.001 %	0.100	0.132
Rb	INA	15 ppm	138	124
Sb	INA	0.1 ppm	1.5	1.0
Sc	INA	0.1 ppm	16.2	14.8
Se	MLT*	0.1 ppm	0.1	0.1
Sn	MS	1 ppm	5	2
Sr	ICP	1 ppm	187	178
Ta	INA	0.5 ppm	0.9	0.8
Te	MS	0.1 ppm	0.1	0.1
Ti	ICP	0.01 %	0.47	0.46
Th	INA	0.2 ppm	12.7	12.5
Tl	MS	0.1 ppm	0.8	0.8
W	INA	1 ppm	1	1
Y	ICP	1 ppm	28	32
La	INA	0.5 ppm	39.9	42.2
Ce	INA	3 ppm	69	74
Nd	INA	5 ppm	33	36
Sm	INA	0.1 ppm	6.9	7.6
Eu	INA	0.2 ppm	1.2	1.5
Tb	INA	0.5 ppm	0.5	0.6
Yb	INA	0.2 ppm	2.9	3.0
Lu	INA	0.05 ppm	0.52	0.47
Mass	INA	g	26.5	26.1
SiO2	FUS	0.01 %	63.45	63.71
Al2O3	FUS	0.01 %	15.15	13.75
Fe2O3(T)	FUS	0.01 %	5.76	4.67
MnO	FUS	0.001 %	0.065	0.021
MgO	FUS	0.01 %	1.55	1.27
CaO	FUS	0.01 %	0.91	2.67
Na2O	FUS	0.01 %	0.55	0.71
K2O	FUS	0.01 %	2.57	2.64
TiO2	FUS	0.001 %	0.765	0.724
P2O5	FUS	0.01 %	0.26	0.31
LOI	FUS	%	7.9	8.5
Total	FUS	0.01 %	99.02	99.00
Ba	FUS	2 ppm	1219	823
Sr	FUS	2 ppm	178	166
V	FUS	5 ppm	257	194
Y	FUS	1 ppm	28	31
Sc	FUS	1 ppm	15	14
Zr	FUS	2 ppm	165	182
Be	FUS	1 ppm	2	2
S Total	IR	0.01 %	0.66	1.73
SO4	IR	0.3 %	1.1	1.4
Paste pH	Met	0.01 -	7.31	6.34
Spec Grav	GRV	0.01 -	2.72	2.69
H20-	GRV	0.1 %	0.5	9.9

Table 11: Weighted lithogeochemical average compositions for composite samples 11BK5LB and 11BK5BF. AITF Bioleaching Testwork 2012.

14.1.3 Adaptation of Inoculum

Work with shale samples done previously at AITF showed that some shale samples did not respond quickly to a bioleaching culture enriched from shale by AITF. For these tests, it was thought that it would be best to adapt the bioleaching culture to each new shale sample. For each shale sample, the bioleaching culture was gradually adapted with four transfers. Each transfer had increasing amounts of the new shale with decreasing amounts of FeSO4·7H2O and was considered complete when the redox level reached above 600 mV. By the final transfer, the solids density was 20% and no FeSO4·7H2O was added. The adaptation for the shale samples was started on June 26, 2012. The BK5LB sample was completed on August 1, 2012 and BK5BF on August 14, 2012.

14.1.4 Metals Mobility and Acid Consumption

Prior to commencing the batch leaching tests, duplicate acid consumption and 48hr metals mobility tests were completed to determine acid consumption and solubility of metals at a pH of 1.8. Test conditions relating to the foregoing and related acid consumption are summarized in Tables 12 and 13, respectively.

Sample	BK5LB-1	BK5LB-2	BK5BF-1	BK5BF-2
Initial volume of MKM (mL)	300	300	300	300
Volume of 10 N H_2SO_4 added (mL)	12.3	12.4	12.0	12.3
Total volume of pH probe rinse water (mL)	9	9	9	9
Total Volume (mL)	321.3	321.4	321.0	321.3
Initial weight (g)	100.01	100.02	100.52	100.06
Final dry weight (g)	98.11	97.19	100.25	101.00
% different for initial and final weight	-1.9	-2.8	-0.3	0.9

Table 12: Volumes and dry weights of duplicate samples of BK5LB and BK5BF generated during the acid consumption and metal mobility tests. AITF Bioleaching Testwork 2012. After Table 1, Budwill 2012. (Negative values show gain in weight and positive values show loss in weight).

Sample	Volume of 10N H_2SO_4 added over 48 hour period (mL)	Kg 10N H_2SO_4/tonne shale
BK5LB-1	12.3	60.3
BK5LB-2	12.4	60.7
BK5BF-1	12.0	58.5
BK5BF-2	12.3	60.2

Table 13: Acid consumption of duplicate samples of BK5LB and BK5BF during acid consumption and metal mobility tests. AITF Bioleaching Testwork 2012. After Table 2, Budwill 2012.

Metals that were the most acid-soluble (abiotic acid solubilization over a 48-hour period) had also the highest extraction efficiencies by bioleaching. Cd had extraction efficiencies ranging 63%-100% and Zn 30%-50%. Uranium, Co, Cu and Ni were all extracted between 9% and 46%. The metals that were the most insoluble in acid were also the least extracted by bioleaching.

14.1.5 Batch Amenability Tests

Batch amenability tests were conducted during which pH and reduction potential values of the batch amenability cultures were monitored regularly over the course of the experiment. Two duplicate tests were carried out for each sample in separate flasks (Flask1 and Flask2). Sample BK5LB (Labiche) was leached over a 26day period whereas sample BK5BF (Belle Fourche), which demonstrated slower dynamics, was leached over a 55 day period. A subsample was taken midpoint through the leaching. Sample weights and volumes are summarized in Table 14. Evolution of pH and Redox during the testwork is shown in Figure 50, showing also the midpoint sample.

Sample	BK5LB-1	BK5LB-2	BK5BF-1	BK5BF-2
Initial volume of MKM (mL)	700	700	700	700
Volume of 10 N H_2SO_4 added (mL)	64	62	69	61
Total volume of pH probe rinse water (mL)	140	145	230	230
Total Volume (mL)	904	907	999	991
Volume of midpoint sample (mL)	25	25	25	25
Initial weight (g)	204.80	200.20	202.10	200.50
Solids introduced via Inoculum (g)	22.5	22.5	22.5	22.5
Total initial solids weight (g)	227.31	222.71	224.58	222.98
Final solids dry weight (g)	199.00	193.00	198.80	191.28
Loss in solids (g)	28.3	29.7	25.8	31.7
% Loss	12.5%	13.3%	11.5%	14.2%

Table 14: Volumes and dry weights of duplicate samples of BK5LB and BK5BF generated during the batch amenability tests. AITF Bioleaching Testwork 2012, From Table 5, Budwill 2012.

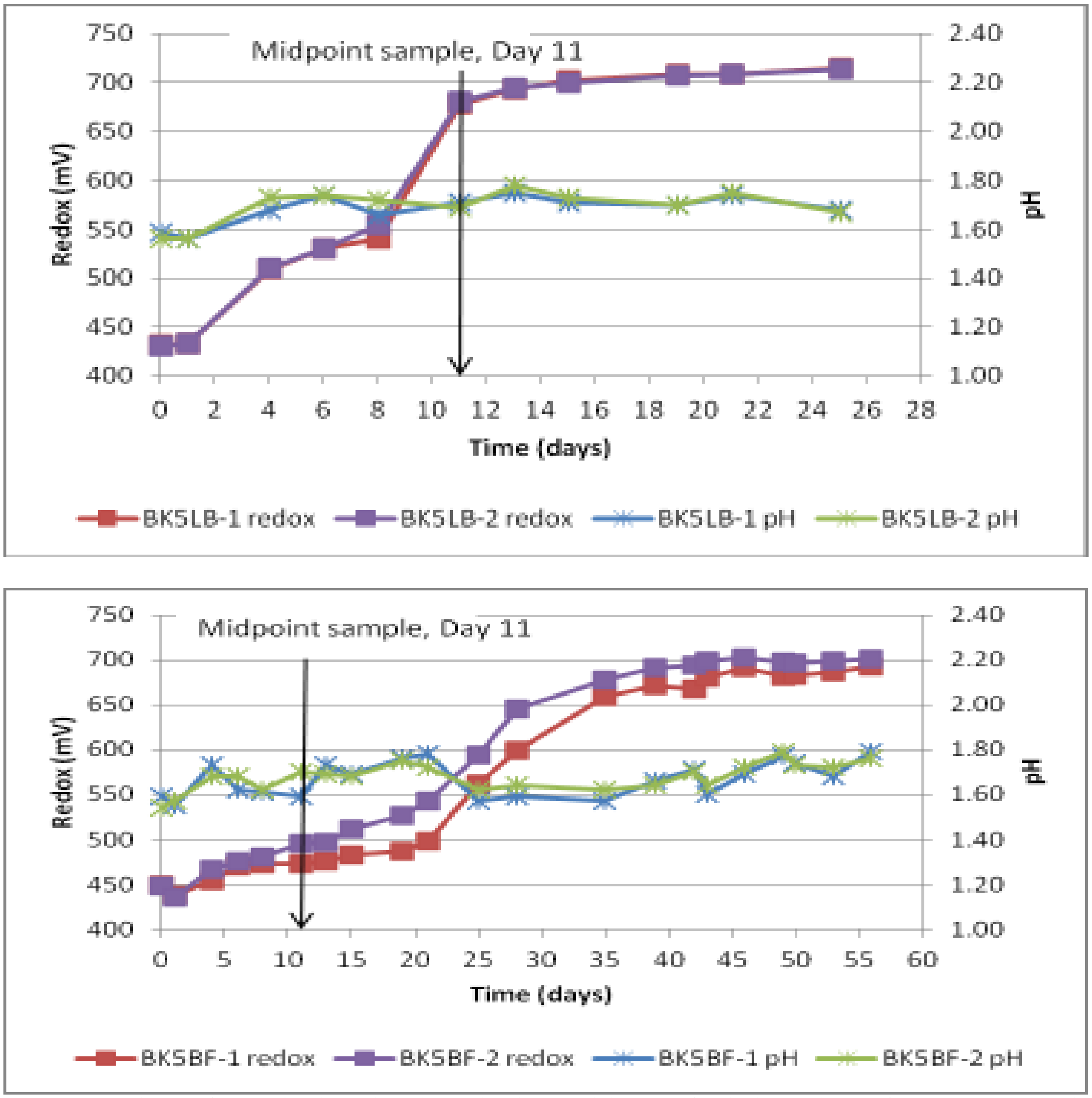

Figure 50: Evolution of pH and redox values during batch amenability tests for duplicate charges from composite samples BK5LB and BK5BF. AITF Bioleaching Testwork 2012, After Figures 1 and 2, Budwill 2012.

Redox and pH were monitored on a weekly basis, and pH was adjusted by addition of sulfuric acid. Acid consumption for the batch amenability tests are summarized in Table 15.

Sample	Volume of 10N H_2SO_4 added over test period (mL)	Kg 10N H_2SO_4/tonne shale
BK5LB-1	64	153.1
BK5LB-2	62	151.7
BK5BF-1	69	167.3
BK5BF-2	61	149.1

Table 15: Acid consumption of duplicate samples of BK5LB and BK5BF during the batch amenability tests. AITF Bioleaching Testwork 2012, After Figure 6, Budwill 2012.

Although the testwork was intended to be conducted under constant pH1.8, acidity during much of the bioleaching tended closer to pH1.6 which might explain the higher acid consumption than that previously documented from other bioleaching tests conducted at the AITF on samples of the Second White Speckled Shale Formation and Labiche Formation shales. Acid consumption during the batch amenability testwork is also higher than that documented during the 48hr mobility tests (Table 13), and might be attributed to larger pH drift during the bioleaching tests and more frequent requirement for acid addition over a longer (26-55 days) period.

The foregoing tests are superceded by stirred tank and column leaching testwork subsequently conducted at CanMet at pH2 which documented considerably lower acid consumption ranging 20kg-40kg acid per tonne of shale leached (see Section 14.2 of this Report).

A summary of the metal recoveries achieved during the above bioleaching tests for the Belle Fourche Formation, as reported by AITF, range as follows: Mo 33%-45%, Ni 62%-71%, U 42%-52%, V 2%-15%, Zn 72%-87%, Cu 55%-80%, Co 75%-80%, Li 20%-44%. Recoveries for Specialty Metals and REE incidentally leached as co-products during the testwork, as calculated by DNI based analytical results from AITF's testwork, range as follows: La 17%-19%, Ce 22%-26%, Pr 28%-35%, Nd 34%-44%, Sm 56%-60%, Eu 59%-67%, Gd 59%-72%, Tb 67%-71%, Dy 58%-72%, Ho 51%-69%, Er 48%-57%, Tm 43%-57%, Yb 38%-41%, Lu 34%-36%, Y 59%-63%, Th 44%-48%, Sc 25%-29%.

A summary of the metal recoveries achieved during the above bioleaching tests for the Labiche Formation shale, as reported by AITF, range as follows: Mo 22%-57% , Ni 60%-70% , U 33%-38% , V 4%-11% , Zn 68%-76% , Cu 46%-68% , Co 69%-79% , Li 25%-28%. Recoveries for Specialty Metals and REE incidentally leached as co-products during the testwork, as calculated by DNI based on analytical results from AITF's testwork, range as follows: La 11%-19% , Ce 17%-23% , Pr 23%-29% , Nd 29%-36% , Sm 48%-52% , Eu 51%-59% , Gd 54%-65% , Tb 62%-63% , Dy 52%-60% , Ho 48%-52% , Er 44%-52% , Tm 39%-57% , Yb 37%-45% , Lu 34%-37% , Y 49%-53% , Th 36%-44% , Sc 24%-31%.

Similarly to prioir tests, overall, the extraction efficiency for head and calculated head solid and liquid results were >80% for Cd and ≥60% for Zn, Co and Ni. Uranium extraction efficiency was >30%, Mo and Li were ≥20% and V was the lowest at <20%. This pattern of extraction efficiencies is consistent to what was previously observed in bioleaching of Second White Speckled Shale samples at the AITF (see Sabag 2010, 2012). Washing the final solid with HCl to release any jarosite-associated metals did not have an effect on increasing metal extraction efficiencies. For most of the metals, the extractions remained well within 10% of the results where no HCl was used. The exceptions were Mo and Cu.

14.1.6 AITF Bioleaching Testwork 2012 - Concluding Remarks

The 2012 AITF Bioleaching testwork overall reported results which are similar to prioir tests conducted by AITF on samples of the Second White Speckled Formation and Labiche Formation shales, reiterating also that metals solubilization from the shales is relatively rapid.

Demonstrating amenability of the Belle Fourche Formation shale to the same bioleaching procedures as those applied to liberate metals from the foregoing two shales was, however, a significant new development suggesting that mineral resources hosted in the Cretaceous black shales at the Property may be more extensive than previously believed, and that it may not be confined only to the Second White Speckled Shale Formation and the Labiche Formation shale above it. This can have significant implications to the design of any potential open pit mining operation to extract metals from the Cretaceous shales, as it would affect pit design and pit bottom dilution estimates, in addition to serving to expand existing mineral resources delineated which are currently envisaged to be confined to the Speckled and Labiche Formation shales only.

The 2012 AITF testwork and all prior bioleaching tests conducted by DNI or on its behalf, are superceded by stirred tank and column leaching tests on samples of Second White Speckled Shale conducted by CanMet which are discussed in Section 14.2 of this Report, given the stricter pH monitoring and maintenance practices of the CanMet work which was carried out at a constant pH2 with minimal acidity drift. The prior testwork is also superceded by the metals leaching and processing flowsheets formulated by Hatch Ltd. for the Buckton Preliminary Economic Assessment which prescribe pH2 as a benchmark acidity which better represents conditions which might be achieved in the field during bioheapleaching as compared to prioir work which were all conducted at pH1.8 with considerable downward drift during the leaching. The Buckton Preliminary Economic Assessment is discussed in Section 17 of this Report.

14.2 BIOLEACHING AND COLUMN LEACHING TESTWORK 2012-2014 - CANMET

14.2.1 Overview

The collaboration of CanMet Mining and Minerals Science Laboratories, Ottawa, was enlisted in April 2012 to conduct a joint research project to conduct testwork toward the commercialization of a heap leaching process for extraction of metals from the polymetallic black shales at the Property. This work was conducted through 2012-2013, and CanMet's final report was issued in January 2014. Preliminary results from the testwork were made available to DNI in April 2013 to help guide some of the metals processing work related to the Preliminary Economic Assessment study for the Buckton Deposit (discussed later in this Report in Section 17).

While CanMet's main objective for its involvement in the project was to evaluate Rare Earth Element recovery from the shales, the multielement analytical data relating to the leaching data collected throughout the work contains also analyses for all other metals and is, accordingly, equally as applicable to evaluating recovery of other metals from the shale given that the analytical work for the testwork consist of multielement geochemical analyses conducted by Actlabs which has also completed nearly all analyses for DNI's work on the Property.

The testwork consisted of a series of investigative initial leaching experiments, over thirty stirred-tank bioleaching experiments and five column bioleaching tests to explore the effects of different agglomeration procedures. Constant pH stirred-tank tests were conducted to assess bioleaching and abiotic (chemical) leaching with different lixiviants some of which were selected to simulate processing of Chinese weathered elution-deposited rare earth ores. Overall, the leaching testwork was conducted at a constant pH2, and endeavored to compare efficacies of bioleaching, dilute sulfuric acid leaching and ammonium sulfate leaching procedures at pH2. Preliminary mineralogical characterization was also initiated.

The CanMet study advanced DNI's leaching testwork to the column testing stage, while also gathering leaching data that better simulates natural bioleaching conditions which might be achieved in the field under mild acidity (CanMet ph2 compared to pH1.8 in prior testwork) and data which is more reliable than that from other bioleaching tests previously completed at the AITF given better instrumentation available at CanMet for maintenance of constant pH. Although prior work completed at the AITF was intended to conduct leaching at a pH1.8, acidity during the tests fluctuated to as low as pH1.2 due to the lack of suitable real-time pH monitoring and control instrumentation which caused related fluctuations in metals solubilization and re-precipitation. As a result of the foregoing, metals processing flowsheets for the Buckton Preliminary Economic Assessment study relied entirely on leaching results and parameters from CanMet's study.

A general description of the various tests is outlined below, and the reader is referred to the report by CanMet[28] appended herein as Appendix D2.1 for details of the work. Test results and conclusions are summarized, or excerpted, below from the foregoing report.

As part of the deliverables under the project, CanMet also delivered to DNI extensive datasets from the testwork consisting in most part of working spreadsheets which form the basis of calculations and final conclusions presented in its report. The foregoing datasets have been omitted from this assessment report since they span several hundred pages. Analytical certificates related to the work are, however, appended herein as Appendix D2.3, and analytical coding and testwork legend key is appended (Appendix D2.2).

14.2.2 Samples

Several suites of surface and drill core samples were forwarded to CanMet. The testwork was conducted on only one of the foregoing suites, consisting of thirty-nine samples representing three subsamples from each of thirteen surface samples previously collected by DNI during its 2010 surface trenching of the Asphalt-H lithosection (UTM E443640-N6387689 and E443536-N6387607) exposure of the Second White

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[28] Report: *Leaching of a Black Shale from Alberta - Final Report. Cameron R., Langley S., Thibault Y. and Lastra R., Canmet Mining, Natural Resources Canada, Project P-001336.001, Report CanmetMining 13-046(CR), January 9, 2014.*

Speckled Shale lithosection. The 2010 sampling program and related data were previously reported in Sabag 2010 (Alberta Mineral Assessment Report MIN20100017). The Asphalt-H lithosection exposure is one of the most complete exposures of the Second White Speckled Shale Formation on the Property. Details of the samples, fractions thereof and corresponding CanMet testwork reference ID# are summarized in Table 16. Analyses of the blended composites tested are shown in Table 17.

DNI Sample #	Weight(g)		CanMet Sample#
10ASH01gg	2,393.3	Each of the 13 sub-samples was split in 2 (ggRC and ggSL). Approximately 1/8 of each of the 13 ggRC sub-samples was used for mineralogical examination, and the remaining ggRC samples were combined and pulverized. All the ggSL splits were combined and pulverized. These samples were used for stirred-tank reactor experiments and culture maintenance.	RC and SL (stirred tank testwork samples designated as STR series)
10ASH02gg	2,093.2		
10ASH03gg	2,272.6		
10ASH04gg	2,043.9		
10ASH05gg	873.6		
10ASH06gg	1,741.8		
10ASH07gg	1,960.2		
10ASH08gg	1,299.9		
10ASH09gg	861.0		
10ASH10gg	824.7		
10ASH11gg	735.8		
10ASH12gg	1,478.9		
10ASH13gg	1,254.7		
10ASH01ee	2,404.8	Combined and used for the column experiments. No comminution of the blended sample.	COL
10ASH02ee	2,090.0		
10ASH03ee	2,259.4		
10ASH04ee	2,072.4		
10ASH05ee	823.7		
10ASH06ee	1,731.8		
10ASH07ee	1,940.1		
10ASH08ee	1,330.2		
10ASH09ee	827.4		
10ASH10ee	733.8		
10ASH11ee	625.3		
10ASH12ee	1,660.5		
10ASH13ee	1,053.8		
10ASH01ff	2,334.5		
10ASH02ff	2,069.1		
10ASH03ff	2,280.9		
10ASH04ff	2,067.5		
10ASH05ff	827.9		
10ASH06ff	1,734.4		
10ASH07ff	1,938.9		
10ASH08ff	1,222.1		
10ASH09ff	877.2		
10ASH10ff	874.5		
10ASH11ff	704.1		
10ASH12ff	1,244.0		
10ASH13ff	1,370.4		

Table 16: List of samples tested by the CanMet Study 2013, Cameron et al 2014.

Other sample suites delivered to CanMet but not tested are tabulated in Appendix D2.4.

14.2.3 Bacterial Cultures

Two bacterial cultures were tested during the bioleaching tests: (a) a mixed culture from CanMet which had been adapted on a low grade nickel sulfide ore; and (b) a mixed culture obtained from AITF which had been harvested and adapted from DNI's black shales (sub-cultures of this material previously used by AITF for all bioleaching testwork carried out on the black shales from the Property. Harvesting and adaptation of the cultures at AITF has been discussed in prior reports (Sabag 2010, Alberta Mineral Assessment Report MIN20100017).

The culture obtained from AITF was further adapted to the shale samples to be tested and sub-cultures were used during the bioleaching work.

Analyte	Units	Detection Limit	Analysis Method	SL mean	SL Std Dev	RC mean	RC Std Dev	COL mean	COL Std Dev
Co	ppm	1	TD-ICP	17.33	0.58	18.00	1.00	18.00	1.00
Cu	ppm	1	TD-ICP	84.33	2.08	80.33	1.53	77.00	6.00
Fe	%	0.01	TD-ICP	3.88	0.11	3.98	0.04	3.90	0.30
Li	ppm	1	TD-ICP	58.67	1.53	60.67	0.58	60.00	4.58
Mo	ppm	1	TD-ICP	62.33	1.53	63.33	0.58	63.00	6.00
Ni	ppm	1	TD-ICP	111.67	2.52	114.67	0.58	116.67	5.51
V	ppm	2	TD-ICP	619.67	13.58	632.33	10.69	620.67	43.47
Zn	ppm	1	TD-ICP	213.00	4.00	217.33	4.16	213.33	6.43
Mo	ppm	2	FUS-MS	52.67	4.62	54.33	7.23	56.67	8.62
Co	ppm	1	FUS-MS	14.00	1.00	17.00	3.46	15.33	0.58
Ni	ppm	20	FUS-MS	86.67	5.77	86.67	15.28	86.67	5.77
Cu	ppm	10	FUS-MS	103.33	57.74	66.67	5.77	66.67	5.77
Y	ppm	2	FUS-ICP	43.33	0.58	43.00	1.00	48.33	0.58
Sc	ppm	1	FUS-ICP	12.67	0.58	13.00	-	14.00	-
La	ppm	0.1	FUS-MS	44.97	1.46	45.20	0.90	51.20	3.22
Ce	ppm	0.1	FUS-MS	78.80	5.00	81.97	2.92	88.77	5.15
Pr	ppm	0.05	FUS-MS	10.57	0.47	10.83	0.55	11.80	0.53
Nd	ppm	0.1	FUS-MS	41.43	2.65	42.50	2.16	45.10	3.04
Sm	ppm	0.1	FUS-MS	8.43	0.40	8.87	0.42	9.40	0.56
Eu	ppm	0.05	FUS-MS	1.82	0.07	1.85	0.14	1.98	0.07
Gd	ppm	0.1	FUS-MS	7.80	0.10	7.90	0.17	8.57	0.29
Tb	ppm	0.1	FUS-MS	1.27	0.06	1.30	-	1.33	0.06
Dy	ppm	0.1	FUS-MS	6.80	0.10	7.03	0.06	7.43	0.15
Ho	ppm	0.1	FUS-MS	1.40	-	1.43	0.06	1.50	-
Er	ppm	0.1	FUS-MS	3.90	-	3.87	0.15	4.20	0.10
Tm	ppm	0.05	FUS-MS	0.57	0.01	0.56	0.02	0.61	0.03
Yb	ppm	0.1	FUS-MS	3.73	0.06	3.70	0.10	4.00	0.10
Lu	ppm	0.04	FUS-MS	0.60	0.01	0.61	0.02	0.68	0.02
Th	ppm	0.1	FUS-MS	10.10	0.56	10.07	0.29	11.00	0.70
U	ppm	0.1	FUS-MS	24.00	2.05	23.60	0.87	25.10	2.36
SulphideS	%	0.01	Calc	0.69	0.04	0.68	0.06	0.92	0.05
TotalS	%	0.01	IR	2.40	0.03	2.34	0.06	2.67	0.02
P_2O_5	%	0.01	FUS-ICP	0.45	0.01	0.47	0.01	0.48	0.03

Table 17: Composition of the blended composite samples, CanMet Study 2013. After Table A1, Cameron et al 2014.

14.2.4 Sequential Leaching Tests

To identify the carrier mineral phases in which Ni, U, V, Mo and some of the REE (Ce, Nd, Eu, Dy, Y) are contained within the shale, a series of sequential chemical extractions was performed based on the procedure developed for geochemical characterization of black shales. The sequential extraction experiments were conducted with the blended SL Asphalt sample, with fractions that were pulverized to ~200 Tyler mesh. All the analytical assays for the sequential leaching tests were conducted at CanmetMINING, and only nine elements were selected for assaying to contain project costs. All samples were analyzed by ICP-MS and matrix-matched to the individual extractants to reduce matrix effects.

The selective leaching results are summarized in Figure 51, showing the association of the various metals with several distinct mineralogical hosts and demonstrating that variable portions of the different metals is insoluble and is hosted in recalcitrant mineralogy which ultimately remains in leaching residues (eg: 77.1% of V is insoluble and remains in residues).

The five REEs monitored are arranged in Figure 51 according to decreasing trivalent ionic radius instead of increasing atomic number to better reflect the geochemical behaviour of Y as a mid REE (Y has an ionic radius almost identical to Ho. Gupta and Krishnamurthy, 2005; Shannon, 1976). The general trend in the REE leaching profile is particularly interesting, showing good correlation between decreasing ionic radius and decrease in the fraction residing in more refractory residue phases (eg: as the ionic radius progressively decreases from Ce to Y, there is a 3-fold increase in the proportion reporting to the carbonate extraction step and a 3-fold decrease in the fraction remaining in the residues). The foregoing is reinforced by leaching results which reported progressively better recoveries for the mid and heavy REEs.

The above trend for REE leaching from the shale demonstrates that achieving high recoveries of the LREEs from the blended SL Asphalt shale samples will be difficult during conventional bioleaching. A significant proportion of the LREEs examined are associated with recalcitrant mineral phases that are not easily leached under oxidative conditions that would be expected to occur under heap (bio)leaching conditions (i.e., reducible and residual phases). Cerium is expected to be the most recalcitrant with > 30% of the element reporting to the most recalcitrant residual phase.

The sequential leaching tests also show that Ni and U are the most amenable to heap (bio)leaching, due to a higher proportion of those metals being hosted by carbonate/exchangeable, ligand (labile carbon-associated), and sulphide phases. The test show that Vanadium will be the most recalcitrant metal assayed, with ~ 90% of the metal associated with the most recalcitrant phases: reducible and residual.

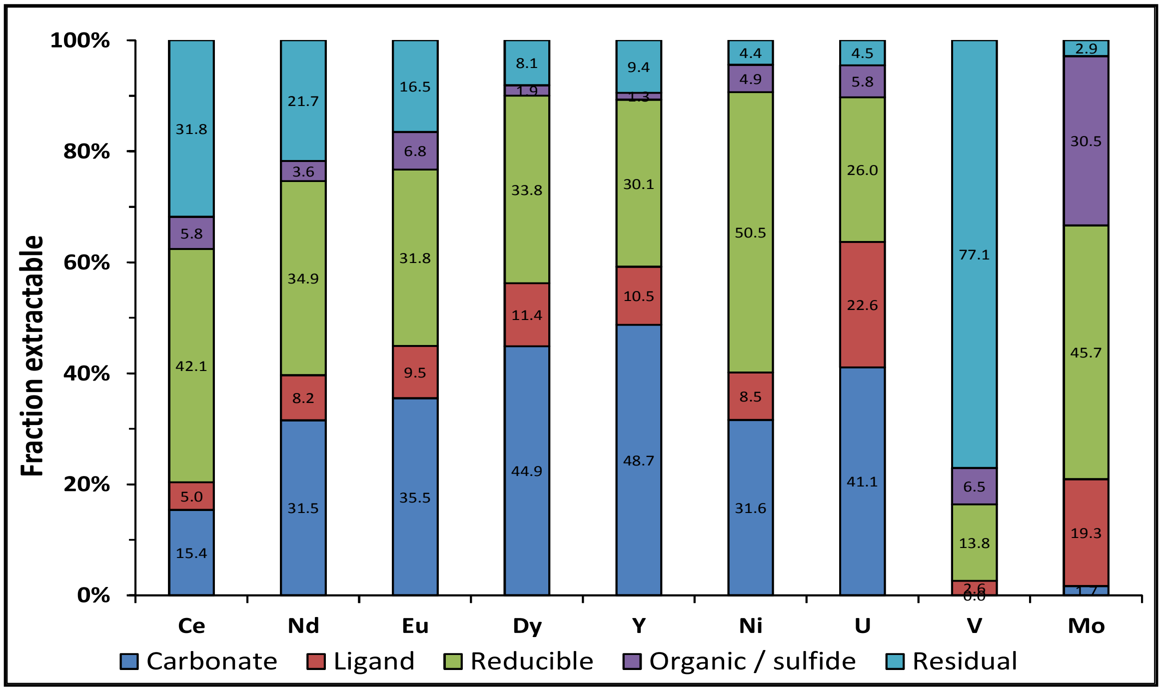

Figure 51: Sequential selective leaching results, CanMet Study 2013. From Figure 3.1, Cameron et al 2014.

14.2.5 Stirred-Tank Biotic and Abiotic Leaching Tests

Chemical leaching (abiotic) experiments were conducted by combining the pulverized ore and the lixiviant to a total volume of 1.5 L, whereas bioleaching experiments were commenced by combining 10gm of pulverized ore with an inoculum and growth medium which was, after gestation, combined with the remainder of the pulverized sample to be bioleached and the reaction vessel was made up to a total volume of 1.5 L with medium. Aliquots of the leachate were taken periodically, and evaporative losses were volumetrically made up with deionized water prior to sampling. After sampling, the sample volume was replaced with an equal volume of fresh media. STR experiments with pulverized Asphalt ore exhibited poor settling characteristics; therefore samples were centrifuged for 2 min to sediment the suspended material prior to leachate removal. After sample removal, the solid pellet was re-suspended in the fresh media and returned to the reactor. This was necessary in order to maintain a constant pulp density. Oxidation-reduction potential (ORP), conductivity, the acid level, and the dissolved oxygen (DO) were measured and recorded during each sampling session. After each test, the residue was filtered, washed with deionized water, and dried at 45°C for one week. Sample splits for chemical characterization were pulverized to minus 200 Tyler mesh prior to analysis. Leaching results are discussed in sections below.

14.2.6 Leaching Kinetics

The stirred tank leaching tests showed that leaching of metals from the shale occurs very rapidly, reiterating what had previously been shown by all other leaching and bioleaching tests conducted by DNI at the BRGM, AITF and Actlabs. A series of 2 day long abiotic acid leaching tests conducted to assess reaction kinetics demonstrated that the majority of the leaching occurs during the first 24 hours, after which only modest incremental increases are achieved as shown in Figure 52.

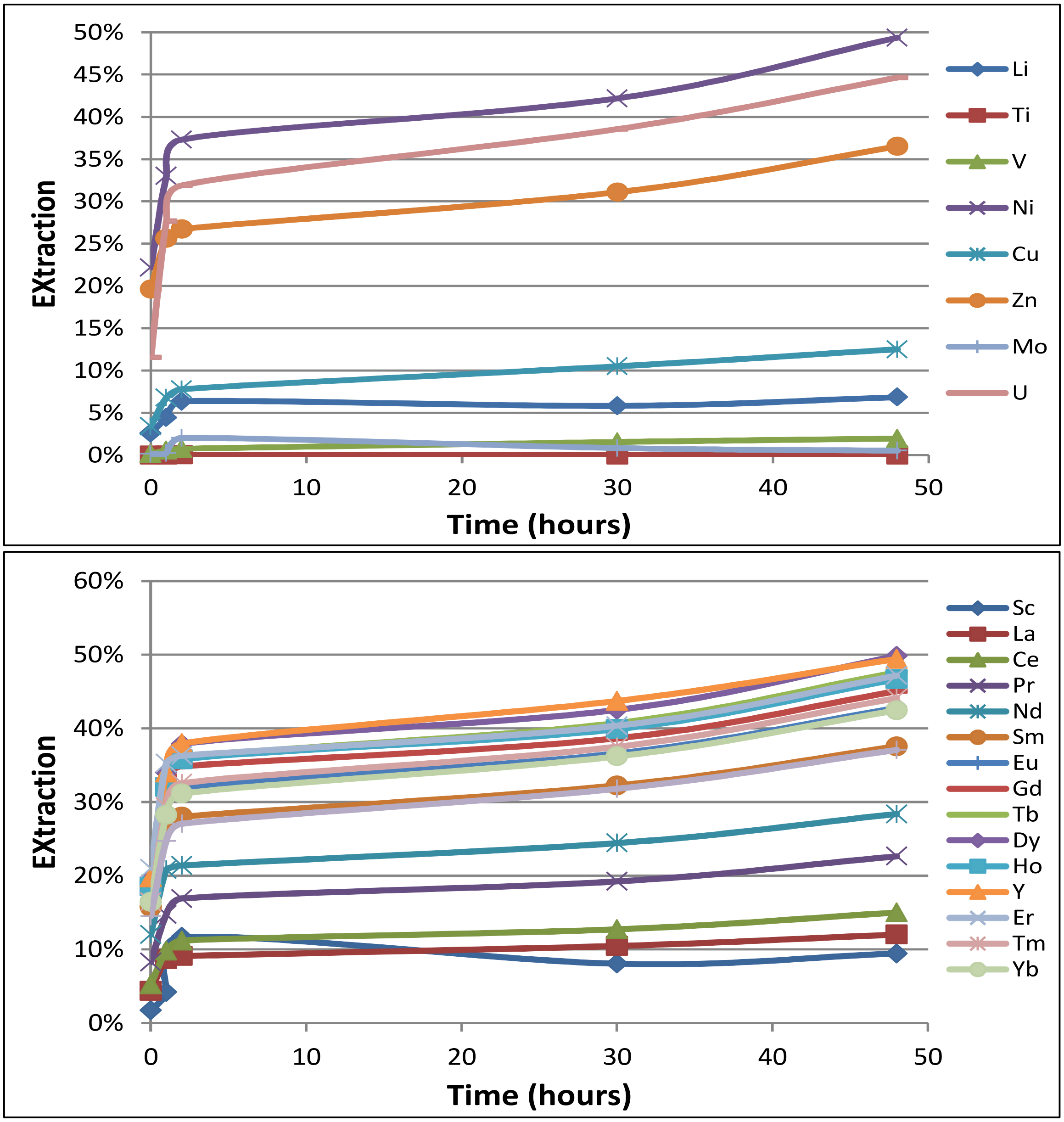

Figure 52: Leaching extractions showing solubilization kinetics for REE and select other metals, CanMet Study 2013. Cameron et al 2014.

Similar rapid kinetics were also observed during 28 day long stirred tank leaching tests, and 150-200 day long column leaching tests. The majority of the leaching observed during 28 day long stirred tank leaching tests occurred during the initial 3-4 days, whereas for the column leaching tests it occurred during the initial 10-20 days, after which only modest incremental increases were achieved in both sets of tests. The foregoing observations are significant and are relevant to leach pad designs incorporated into the Buckton Preliminary Economic Assessment (Section 17) which provide for a 180 day long leaching time which is obviously considerably longer than what might be necessary to leach the bulk of metals from the shale. This is discussed further in Section 17 of this Report.

Results from the stirred tank bioleaching and abiotic leaching testwork are summarized in Table 18, showing also test conditions and the solvents tested.

14.2.7 Effects of Lixiviant and pH

Prior leaching and mineral investigations had suggested that the REEs in the DNI ore might be associated with clay minerals in a fashion similar to the Chinese weathered elution-deposited rare earth ores wherein the REEs are typically extracted by leaching the ores at pH ~5 using in-situ ammonium sulphate ((NH4)2SO4)), although other lixiviants (eg: as ammonium chloride NH4Cl, sodium chloride NaCl, and sodium sulphate Na2SO4) have also been used for their extraction. Once extracted from the clay minerals, recovery of a bulk REE concentrate (either liquid or solid) from the leachate is a relatively simple process that may be accomplished by ion exchange, solvent extraction, or direct precipitation.

Many of CanMet's initial STR experiments were, accordingly, conducted with ammonium sulphate as the lixiviant to investigate its efficacy as a solvent, and concluded that that acidity, and low pH in particular, is essential for achieving reasonable metal and REE extractions, reiterating what DNI's prior testwork had also concluded.

Extraction of the REEs with 0.5 M ammonium sulphate (0.5AS) at different pH levels is presented in Figure 53 showing better REE extractions with lower pH. Extraction of other metals follows a similar trend). Acid consumption related to the foregoing tests is presented in Figure 54 showing progressively higher acid consumed per tonne of shale for lower pH.

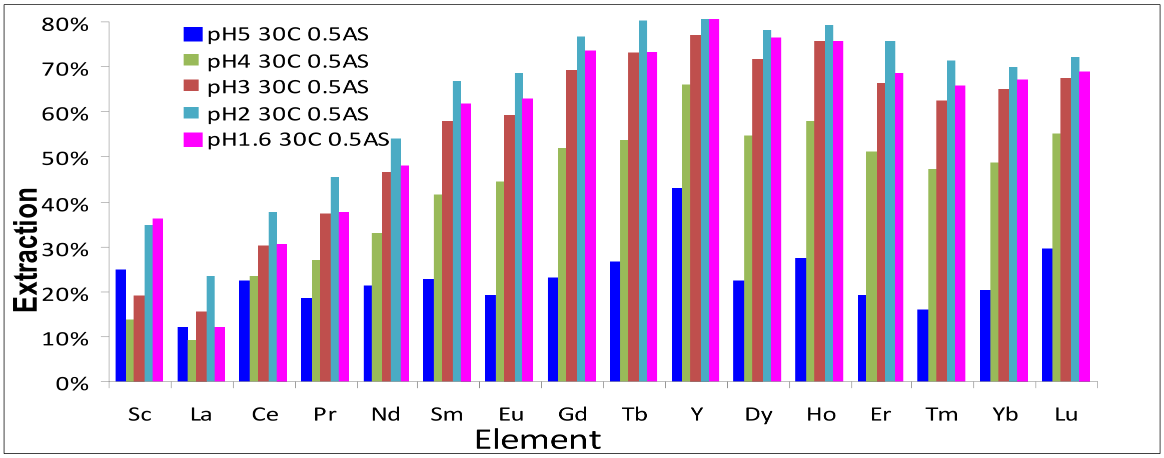

Figure 53: Extraction of the REEs during STR experiments with 0.5 M ammonium sulphate (0.5AS) at different pH levels. From figure 3.3a, CanMet Study 2013. Cameron et al 2014.

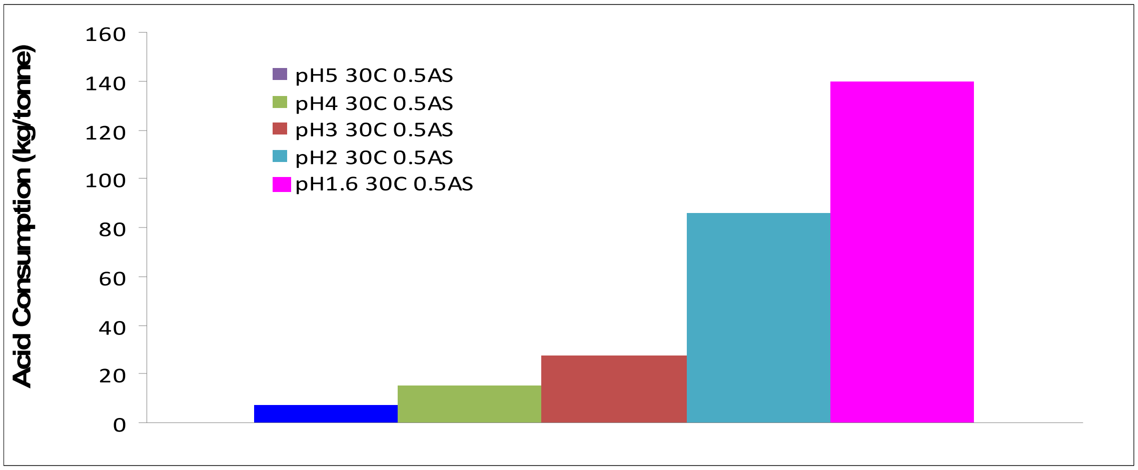

Figure 54: Acid consumption during STR experiments with 0.5 M ammonium sulphate (0.5AS) at different pH levels. From figure 3.3b CanMet Study 2013. Cameron et al 2014.

The extractions of the REEs with dilute H2SO4 at pH2 and pH1.6 are compared with those from leaching at pH2 with 0.5M ammonium sulfate (NH4)2SO4 in Figure 55, showing that the best extractions are achievable by leaching with ammonium sulfate, and that lower pH achieves better extractions when leaching with acid alone. These trends are similar of most other metals except Li-Mo-V as shown in Figure 56. The enhanced extractions from ammonium sulfate leaching, however, is achieved at the cost of considerably higher acid consumption as shown in Figure 57.

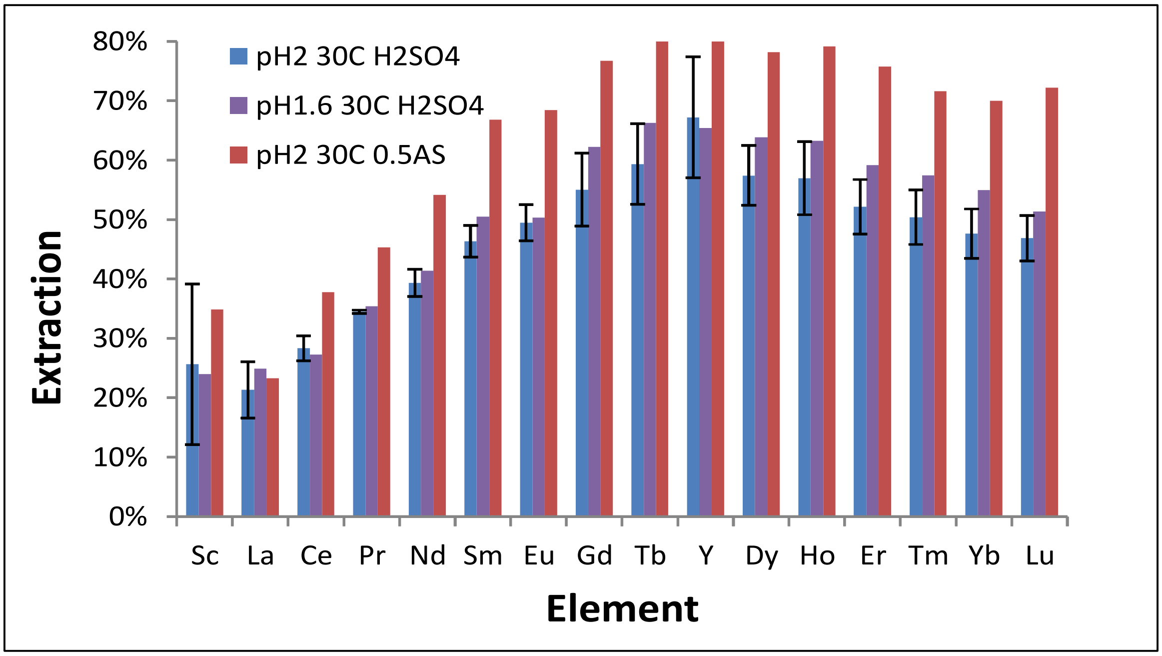

Figure 55: Extraction of the REEs during STR experiments with dilute sulphuric acid (H2SO4) compared with those from leaching with 0.5M ammonium sulphate (0.5AS) at 30°C. From figure 3.4a CanMet Study 2013. Cameron et al 2014.

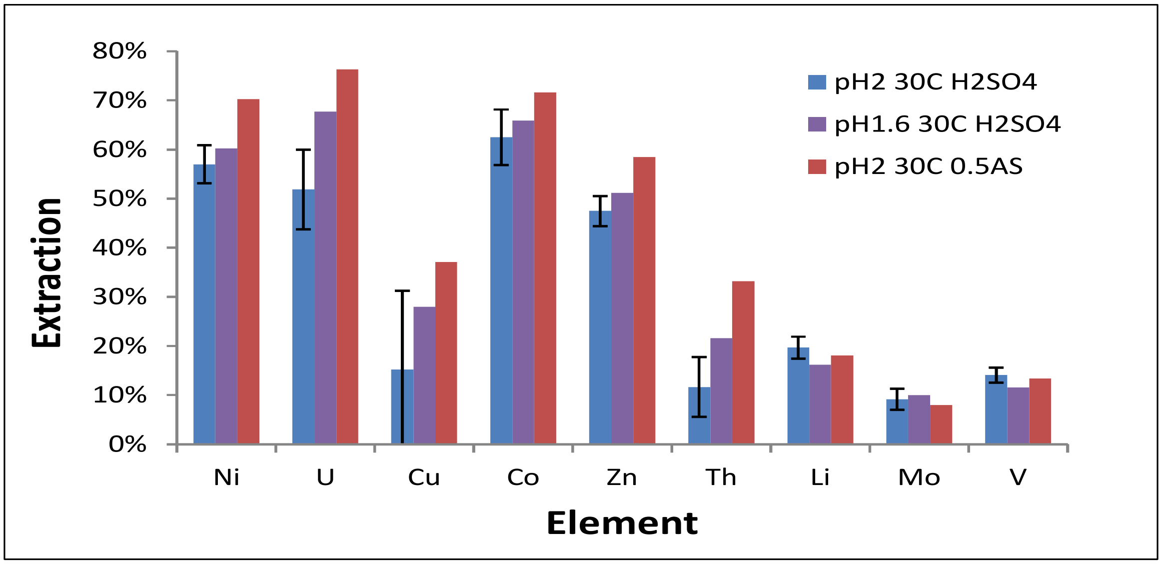

Figure 56: Extraction of the select metals during STR experiments with dilute sulphuric acid (H2SO4) compared with those from leaching with 0.5M ammonium sulphate (0.5AS) at 30°C. From figure 3.4b CanMet Study 2013. Cameron et al 2014.

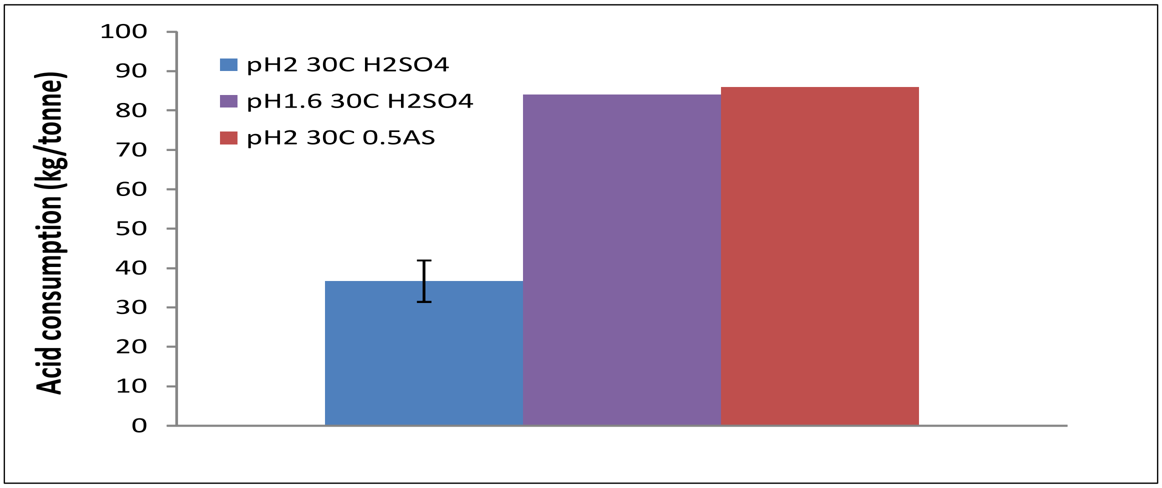

Figure 57: Acid consumption during STR experiments with dilute sulphuric acid (H2SO4) compared with those from leaching with 0.5M ammonium sulphate (0.5AS) at 30 °C. From Figure 3.4c CanMet Study 2013. Cameron et al 2014.

14.2.8 Effect of Inoculations

Three 28-day bioleaching experiments (STR 14 to 16) were conducted at pH2 with the blended RC sample. The three tests were identically inoculated but used a different combination of nitrogen/ phosphorous nutrients as follows: STR 14 with no nitrogen and no phosphorous; STR 15 with nitrogen and no phosphorous; and STR 16 with both nitrogen and phosphorous. The tests returned similar metal extraction results suggesting that the bacteria are well adapted to the ore, and that limited nutrient stimulation is necessary (Figures 58 and 59).

Inoculation of the STR experiments with the mixed adapted culture of iron- and sulphur-oxidizing bacteria did not significantly increase metal extractions compared to non-inoculated experiments with dilute H2SO4 at equivalent pH, nor did it affect kinetics of metals solubilization as the majority of the metals were leached within the first two days in both the biotic and abiotic tests. This is consistent with DNI's prior leaching testwork conclusions (notably those from the BRGM previously reported in Sabag 2010).

In general, the metal extractions achieved during the 28 day bioleaching tests were slightly higher compared to those from the 2 day long chemical (abiotic) leaching at equivalent pH, although it is unclear if the incremental metal extraction from bioleaching is due to the efficacies of bacterial action on or simply the additional leaching duration of the bioleaching tests

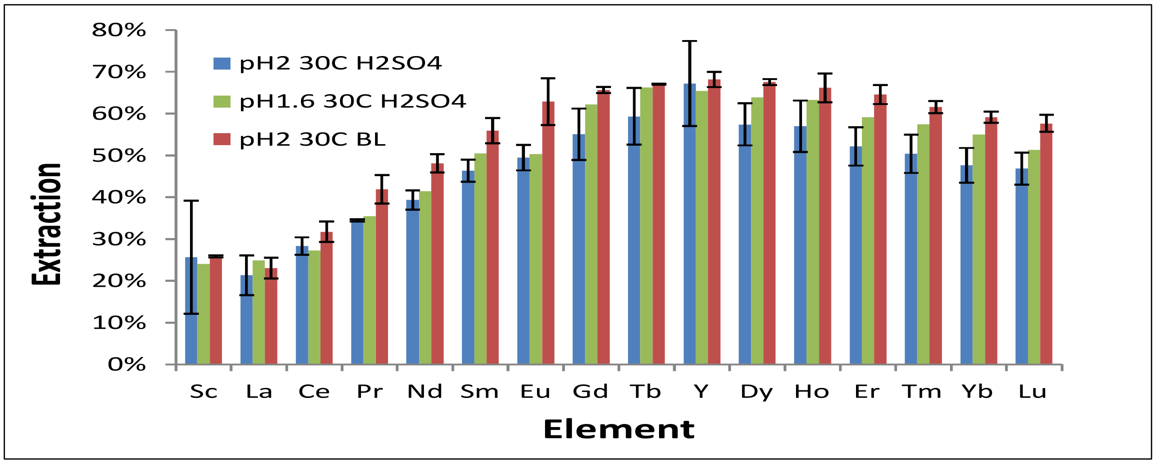

Figure 58: REE extractions during bioleaching (BL) and dilute sulphuric acid leaching (H2SO4) at 30 °C. From Figure 3.6a CanMet Study 2013. Cameron et al 2014.

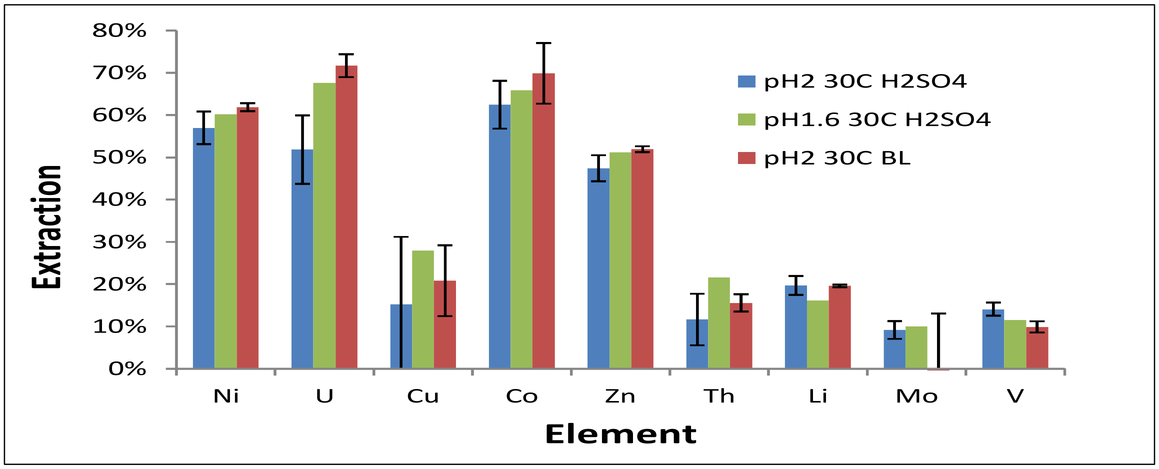

Figure 59: Non-REE extractions during bioleaching (BL) and dilute sulphuric acid leaching (H2SO4) at 30 ºC. From Figure 3.6b CanMet Study 2013. Cameron et al 2014.

Acid consumption observed during above the biotic and abiotic tests is presented in Figures 60 showing that there is minimal difference between consumption at equivalent pH, reiterating prior findings that the Alberta black shale tested lacks sufficient sulfide mineralogy to generate the necessary acidity by bacterial action alone, and that addition of considerable acid is required to leach metals from the shale.

The minimal difference between acid consumption of the biotic and abiotic leaching tests which achieved very similar metals extractions begs the question of whether bio-organisms are at all necessary for extraction of metals from the shale. This is a consideration that could have significant affect on the capital and operating costs of leach pads and their design.

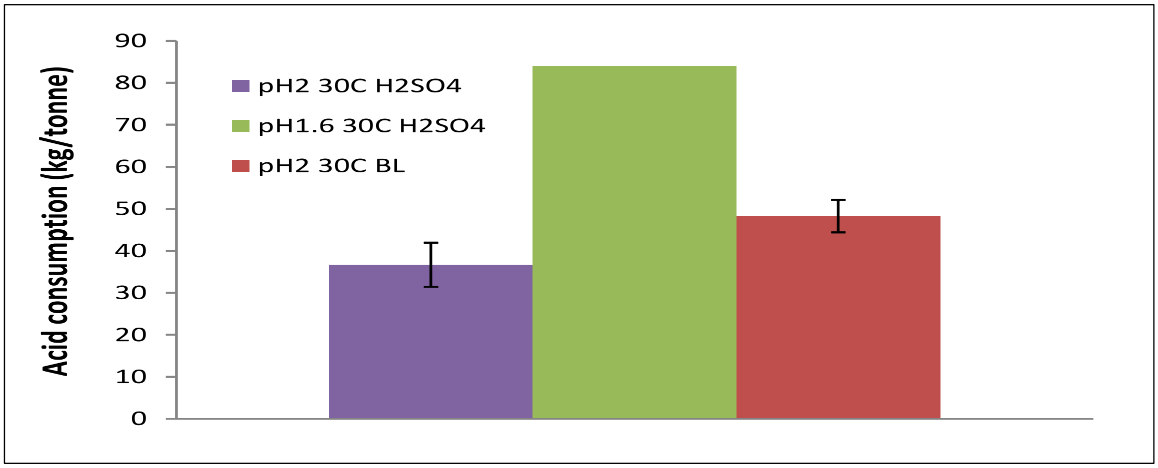

Figure 60: Acid consumptions during bioleaching (BL) and dilute sulphuric acid leaching (H2SO4) at 30 ºC. From Figure 3.6c CanMet Study 2013. Cameron et al 2014.

14.2 9 Effect of Temperature

Many of the stirred tank experiments were conducted at 30°C to evaluate effect of pH, lixiviant type and concentration, and nutrient addition to metals extraction. Additional experiments were conducted at 5°C, 15°C, and 45 C to evaluate the sensitivity of the leaching kinetics to temperature. The test results showed minimal sensitivity of extractions to temperature, especially among test results at 5°C, 15°C and 30°C, suggesting a low apparent activation energy. A net heat mass balance was not determined during the tests (it is noteworthy that bioleaching reactions at the Talvivaara bioheapleaching operations are exothermic and generate considerable heat, enabling leaching to proceed at subzero temperatures during the winter months. See Plate 4, Section 9.4.2 of this Report).

14.2.10 Summary of Stirred Tank Bioleaching Extractions

The stirred tank leaching tests were successful in identifying leaching parameters which most affect metals extractions (recoveries), and served to further characterize the metallic mineralization in the shales tested. Principal conclusions from this work, excerpted from CanMet's final report, are as follows:

- The leaching efficiencies of the individual elements follow the same trend as determined in the sequential extraction experiments shown in Figure 3.1, namely; that REE leaching efficiency increases with decreasing ionic radius and that the order of increasing leaching efficiency mirrors the association of REE with the combined carbonate/exchangeable fraction + ligand fraction, and that leaching of the non-REE metals also correlates with the sequential extraction data showing reasonable recoveries of Ni and U, and low recoveries of V and Mo.

- All leaching tests showed rapid initial leaching kinetics, followed by a period of slow leaching. This observation is consistent with the sequential extraction data which suggests the metals of interest are distributed between distinct phases, ranging from water exchangeable to recalcitrant under very aggressive conditions. This observation is also consistent with all prioir leaching testwork conducted by DNI on all samples of the shales (the Second White Speckled Formation Shale, the Labiche Formation shale and the Belle Fourche Formation shale).

- The stirred tank leaching tests depict an overall general trend of better (higher) metal extractions with higher acidity (ie:decreasing pH).

- Metal extractions are also enhanced by the addition of (NH4)2SO4 when compared to extractions with only dilute H2SO4 at equivalent pH. In an ultimate production scenario, however, it is of note that the increased extraction is achieved at the added cost of the (NH4)2SO4 and additional H2SO4 which would be required to lower the pH of the medium.

- The stirred tank leaching tests show that there is no overwhelming advantage during bioleaching to nutrient addition to stimulate the bacteria in the DNI ore.

- Metal extractions were generally higher after 28 days of bioleaching compared to 2 days of chemical leaching; however, it is unclear if the incremental metal extraction during bioleaching is due to the bacterial action on the metal-containing phases or simply the additional leaching time that resulted in attack of the more recalcitrant metal-bearing phases.

- The leaching tests also demonstrated that metal extraction has a low dependency on temperature in the range of 5 to 45 ºC. This is an important conclusion considering the cool northern climate of the location of the SBH Property and the relatively low levels of sulfide mineralization in the ore which may prove to be too low to sustain heat generation from oxidation of pyrite during bioleaching.

Metals extraction results from the stirred tank leaching tests are summarized in Table 18 showing also principal test conditions. The foregoing results were calculated based on the difference of grades between feed head grade and that of the final residues (tails).

It is of note, that in all leaching testwork completed by DNI, including the CanMet work, metal extractions calculated in the above manner based on mass balancing solid fractions of the testwork are slightly higher than those calculated based on mass balancing of the various solutions. This might be attributed to the cumulative affect of losses to sub-sampling and filtration given the generally small sample charges tested (typically 200gm-300gm). Metal extractions based on mass balancing solid fractions are considered to be the more reliable set of results, and provided the basis of metals leaching and processing flow sheet designs for the Buckton Preliminary Economic Assessment study concluded in December 2013 (discussed in Section 17 of this Report).

Test#	Test Conditions				Stirred Tank Extractions (%) per Residue Analyses																									Acid Consumption
	T (°C)	pH	Biotic?	Medium	Sc	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Y	Dy	Ho	Er	Tm	Yb	Lu	Ni	U	Cu	Co	Zn	Th	Li	Mo	V	(kg/tonne)
STR 1	30 °C	variable	no	0.5 M (NH4)2SO4	18%	-4%	7%	-2%	-1%	4%	1%	3%	5%	13%	5%	8%	2%	2%	0%	14%	19%	-2%	15%	17%	10%	-1%	13%	7%	10%	0.0
STR 2	30 °C	3	no	0.5 M (NH4)2SO4	19%	16%	30%	37%	47%	58%	59%	69%	73%	77%	72%	76%	67%	63%	65%	68%	63%	52%	24%	66%	49%	8%	17%	5%	8%	27.3
STR 3	30 °C	4	no	0.5 M (NH4)2SO4	14%	9%	24%	27%	33%	42%	44%	52%	54%	66%	55%	58%	51%	47%	49%	55%	57%	19%	18%	67%	46%	3%	18%	4%	9%	15.6
STR 4	30 °C	5	no	0.5 M (NH4)2SO4	25%	12%	22%	18%	22%	23%	19%	23%	27%	43%	22%	27%	19%	16%	20%	29%	46%	2%	14%	52%	36%	6%	17%	11%	17%	7.5
STR 5	30 °C	4	no	0.5 M NH4Cl	15%	13%	22%	21%	24%	24%	21%	27%	28%	42%	26%	29%	25%	22%	24%	31%	46%	1%	13%	53%	36%	5%	10%	-7%	5%	20.5
STR 6	30 °C	4	no	0.5 M (NH4)2SO4	11%	22%	32%	36%	44%	51%	51%	58%	59%	67%	60%	63%	56%	54%	52%	57%	57%	24%	15%	65%	43%	6%	15%	2%	6%	8.2
STR 7	30 °C	4	no	0.5 M (NH4)2SO4	20%	21%	34%	41%	47%	56%	56%	64%	67%	72%	63%	64%	62%	58%	56%	58%	57%	27%	18%	62%	44%	1%	17%	2%	5%	4.4
STR 8	30 °C	2	no	0.5 M (NH4)2SO4	34%	30%	44%	51%	60%	71%	73%	81%	81%	84%	81%	83%	79%	76%	73%	75%	74%	80%	38%	73%	61%	38%	19%	13%	15%	92.6
STR 9	30 °C	3	no	0.1 M (NH4)2SO4	17%	21%	32%	35%	42%	50%	53%	57%	59%	69%	61%	63%	59%	57%	54%	58%	60%	30%	19%	65%	44%	8%	15%	-2%	6%	11.5
STR 10	30 °C	2	no	H2O + H2SO4	18%	21%	31%	34%	42%	48%	47%	51%	59%	60%	57%	57%	52%	48%	45%	44%	57%	56%	-3%	66%	46%	8%	17%	11%	13%	42.3
STR 11	30 °C	1.6	no	H2O + H2SO4	24%	25%	27%	35%	41%	51%	50%	62%	66%	65%	64%	63%	59%	58%	55%	51%	60%	68%	28%	66%	51%	22%	16%	10%	12%	84.0
STR 12	30 °C	2	no	H2O + HCl	20%	23%	34%	36%	41%	48%	49%	52%	54%	59%	54%	52%	51%	49%	49%	51%	59%	39%	25%	62%	45%	9%	15%	-3%	6%	68.8
STR 13	30 °C	2	no	0.5 M (NH4)2SO4	36%	16%	32%	40%	49%	62%	64%	72%	80%	79%	75%	76%	73%	67%	67%	70%	67%	72%	37%	71%	56%	28%	17%	3%	12%	79.1
STR 14	30 °C	2	YES	McCready (no N, no P)	26%	25%	29%	38%	46%	53%	56%	65%	67%	68%	67%	64%	62%	61%	58%	58%	63%	75%	22%	71%	51%	17%	19%	8%	11%	45.5
STR 15	30 °C	2	YES	McCready (+N, no P)	26%	23%	34%	44%	50%	57%	66%	67%	67%	66%	67%	64%	65%	60%	59%	56%	-23%	72%	12%	62%	52%	16%	20%	-20%	11%	52.8
STR 16	30 °C	2	YES	McCready (+N +P)	26%	20%	32%	43%	49%	59%	66%	65%	67%	70%	68%	70%	67%	63%	61%	60%	61%	69%	29%	76%	53%	13%	20%	5%	8%	46.6
STR 17	30 °C	1.6	no	0.5 M (NH4)2SO4	36%	12%	31%	38%	48%	62%	63%	74%	73%	81%	77%	76%	69%	66%	67%	69%	69%	77%	41%	71%	62%	30%	19%	11%	15%	139.8
STR 18	30 °C	1.6	no	0.1 M (NH4)2SO4	32%	3%	20%	31%	40%	56%	57%	69%	74%	81%	75%	76%	71%	65%	63%	68%	70%	72%	35%	72%	58%	16%	16%	4%	12%	84.0
STR 19	30 °C	1.6	no	0.5 M Na2SO4	22%	18%	32%	39%	46%	58%	63%	71%	74%	78%	75%	77%	72%	67%	68%	69%	75%	78%	46%	77%	65%	34%	24%	19%	24%	127.6
STR 20	30 °C	2	no	H2O + H2SO4	41%	17%	26%	35%	37%	43%	53%	52%	53%	79%	52%	51%	48%	48%	45%	45%	53%	43%	22%	56%	46%	8%	22%	7%	16%	31.9
STR 21	30 °C	2	no	H2O + H2SO4	18%	26%	28%	35%	39%	47%	48%	62%	66%	63%	63%	63%	57%	56%	52%	51%	61%	57%	27%	66%	51%	19%	20%	10%	14%	35.9
STR 22	15 °C	2	no	H2O + H2SO4	25%	6%	19%	22%	28%	36%	41%	48%	53%	60%	51%	45%	41%	37%	39%	43%	58%	43%	25%	66%	43%	1%	18%	4%	13%	34.7
STR 23	15 °C	2	no	H2O + H2SO4	24%	11%	23%	24%	29%	36%	40%	45%	46%	54%	47%	45%	37%	33%	34%	44%	53%	42%	25%	56%	39%	5%	15%	1%	10%	34.0
STR 24	45 °C	2	no	H2O + H2SO4	25%	27%	37%	40%	45%	56%	56%	63%	67%	68%	63%	64%	60%	57%	56%	58%	68%	64%	30%	67%	55%	15%	18%	-1%	10%	45.1
STR 25	45 °C	2	no	H2O + H2SO4	25%	12%	26%	31%	38%	47%	49%	55%	60%	66%	59%	58%	53%	47%	48%	55%	68%	56%	33%	71%	55%	4%	19%	4%	11%	47.5
STR 26	5 °C	2	no	H2O + H2SO4	18%	25%	34%	35%	39%	49%	45%	51%	59%	54%	53%	51%	48%	46%	45%	50%	51%	46%	21%	61%	38%	15%	13%	-4%	7%	35.0
STR 27	5 °C	2	no	H2O + H2SO4	24%	17%	27%	29%	32%	41%	40%	47%	53%	56%	49%	45%	41%	40%	41%	46%	54%	41%	20%	61%	37%	7%	15%	0%	9%	36.2
STR 28	30 °C	2	no	H2O + H2SO4	17%	15%	23%	29%	30%	41%	41%	47%	52%	57%	46%	51%	45%	41%	38%	39%	56%	50%	31%	61%	43%	5%	20%	11%	16%	38.6
STR 29	30 °C	2	no	H2O + H2SO4	17%	16%	26%	32%	33%	45%	44%	49%	52%	57%	47%	50%	45%	44%	42%	42%	57%	50%	28%	61%	43%	7%	18%	5%	9%	37.4

Notes: All tests are on 300gm samples except STR6 (150gm) and STR7 (75gm)

Table 18: Summary of stirred tank testwork extractions per residue analyses. REE elements are sequenced in order of decreasing ionic radius. After Tables A3 and A4, CanMet Study 2013, Cameron et al 2014.

14.2 11 Column Testing - Agglomeration

Five column tests were carried out on 6.4kg-7.8kg charges of blended sample COL, which was tested as received, without further comminution, with a nominal top size of ~ 1 cm. The tests were the first ever column leaching tests conducted on samples of the shale and were intended as an initial exploratory foray to help formulate future column testing parameters. The samples were leached at pH2 over up to a 200 day period. The tests investigated column loading, shale agglomeration and various leachate conditions as summarized in Table 19.

Test #	Weight (kg)	Agglomeration procedure	Inoculum introduction	Significant observations
Col 1	7.800	Ore was agglomerated with bacteria in leachate at pH~2, and balance was water acidified to pH~2 with H_2SO_4. Packed into the column and irrigated immediately	Two inoculum shake flasks as described in Section 2.4, added during the agglomeration process. McCready medium used for column irrigation.	9.5 to 10.5% liquid addition appeared to produce the best agglomerates. The agglomerates partially disintegrated when column irrigation started. 8.3% slumping.
Col 2	6.479	Agglomerated with 10% H_2SO_4 (vol/vol). Packed into the column immediately and allowed to cure overnight with no aeration before irrigation. Agglomerates were moist when irrigation started.	Two inoculum shake flasks as described in Section 2.4. Added by percolation to the top of the column. McCready medium used for column irrigation.	Agglomerates were harder and more consistent in size compared to Col 1. 11 to 12% liquid addition produced the best agglomerates. 11.4% slumping.
Col 3	6.442	Agglomerated with 10% H_2SO_4 (vol/vol). Spread on plastic sheet and allowed to cure overnight before packing into the column. Irrigation started immediately after column packing.	No bacteria added. Irrigated with dilute H_2SO_4 at pH 2.	Agglomerates were almost completely dry after curing stage. They were harder and more consistent in size compared to both Col 1 and Col 2. 12% liquid addition produced the best agglomerates. 2.5% slumping.
Col 4	6.466	Agglomerated with 5% H_2SO_4 (vol/vol). Spread on plastic sheet and allowed to cure overnight before packing into the column. Irrigation started immediately after column packing	No bacteria added. Irrigated with dilute H_2SO_4 at pH 2.	Agglomerates were almost completely dry after curing stage. They were harder and more consistent in size compared to both Col 1 and Col 2 but inferior to Col 3. 12% liquid addition produced the best agglomerates. Agglomerates partially disintegrated once irrigation commenced. 1.2% slumping.
Col 5	6.475	Agglomerated with 5% H_2SO_4 (vol/vol). Packed into column immediately and allowed to cure overnight with no aeration before irrigation.	No bacteria added. Irrigated with 0.5 M $(NH_4)_2SO_4$ at pH 2. pH control with H_2SO_4.	Agglomerates were moist at the start of irrigation and similar in size to Col 4. Approximately 5% slumping the first night with no irrigation, and little afterwards.

Table 19: Column weights, agglomeration procedures, inoculum addition, and significant observations. After Table 3.1, CanMet Study 2013, Cameron et al 2014.

Given challenges of heap leaching of high clay content rocks such as the black shales from the Property, several agglomeration methods were investigated. The criteria for judging the quality of the agglomerates produced was qualitative, and the objective of the agglomeration tests was to produce agglomerates that were resilient enough to allow for column leaching experiments. In general, the proportion of fines determines the need for agglomeration In general, agglomerate quality increased with 10% H2SO4 > 5% H2SO4 > leachate & pH 2 water; and moist curing in the column was better than dry curing on the bench top for ore that was agglomerated with 5% H2SO4.

Leaching conditions were varied as follows: COL1 & COL2 were inoculated with an adapted culture of iron- and sulphur-oxidizing bacteria; COL3, COL4 and COL5 were not inoculated with bacteria, and COL5 was leached with 0.5 M (NH4)2SO4.

Extraction curves for Y, Dy, Ni, U, and the corresponding acid consumption curves for the five column experiments are shown in Figures 61 and 62, respectively (other REEs and non-REEs exhibit similar trends). The calculated acid consumptions account for all acid additions, including: acid used during agglomeration; acid required to acidify the 10 L of media; and acid required to maintain the desired pH set-point in the PLS reservoir. The acid addition during agglomeration had a significant impact on the initial rate of metal extraction; the initial rate of leaching was very rapid with 10% H2SO4 agglomeration, whereas it was considerably slower with simulated leachate agglomeration. However, metal extractions started to converge after ~ 50 to 60 days regardless of acid dose during agglomeration. (COL2 test started at pH2 but changed to lower pH values after 91 days).

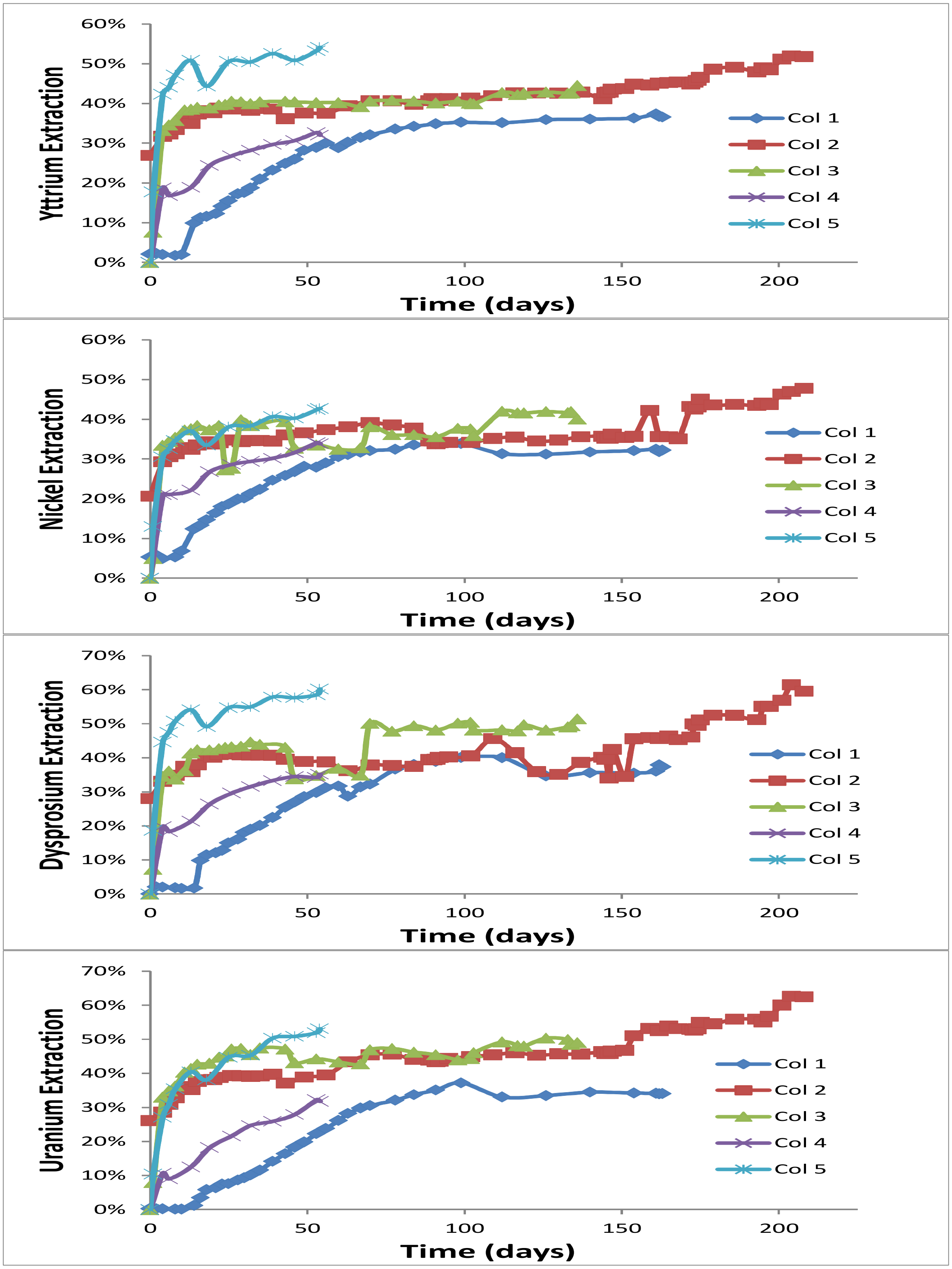

Figure 61: Extraction evolution for leaching of Y, Ni, Dy and U during column leaching experiments. After Figures 3.10a-3.10d, CanMet Study 2013, Cameron et al 2014.

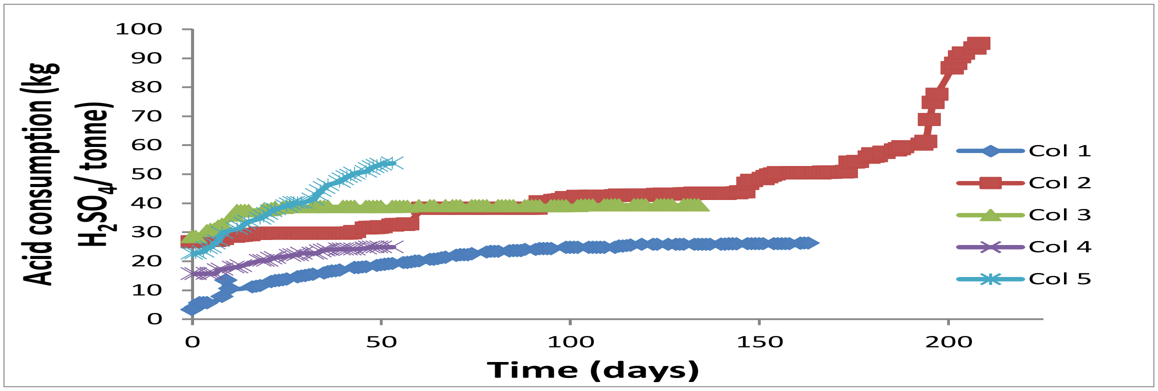

Figure 62: Evolution of acid consumption during column leaching experiments. From Figure 3.10e, CanMet Study 2013, Cameron et al 2014.

It is significant to note that acid consumption for COL4, which was terminated at approximately 50 days, is trending toward 20kg/tonne whereas the other tests are nearer the 40-50kg/tonne mark, but overall final metal extractions from test COL4 are similar to those of COL1 and COL3 (Figure 62), suggesting that lower acid consumptions can be achieved through proper agglomeration.

The extraction of V and Mo was very low in all stirred tank tests and also similarly low initially during the column experiments. In an effort to improve V and Mo leaching during the column experiments, the pH of the PLS applied to COL2 was decreased from pH2 to pH 1.8, 1.6, 1.4, and 1.0 on days 91, 146, 173, and 194 respectively. Extraction curves for non-REE metals are shown in Figure 63. noting that while metal extractions for most of the metals and REE are notably progressively higher (nearly double) at the higher acidities, little improvement was noted in extractions of Mo-V. The foregoing improvements in metal extractions is achieved at considerable additional acid consumption as shown in Figure 63.

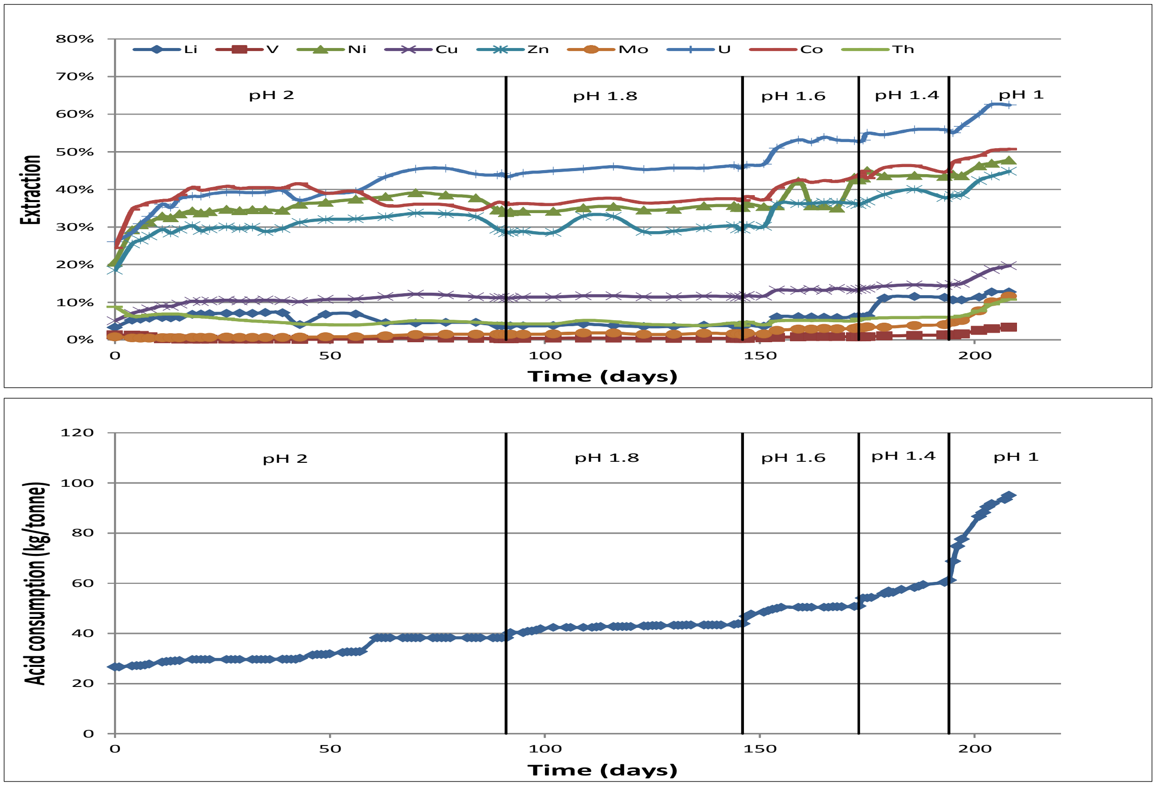

Figure 63: Evolution of extractions for non-REEs during COL2 tests and related acid consumption. After Figures 3.11b and 3.11c, CanMet Study 2013, Cameron et al 2014.

While the poor Vanadium leaching is consistent with results from the sequential leaching tests suggesting its association with very recalcitrant phases, results for Mo are ambiguous given that the sequential leaching tests suggest that a significant proportion of the total Mo is hosted in phases that can be expected to leach under heap bioleaching conditions.

Final metal extractions ultimately achieved during column leaching are shown in Figure 64 which also includes comparative extractions from stirred tank leaching at pH2 and 30C. The extractions are based on solid mass balances.

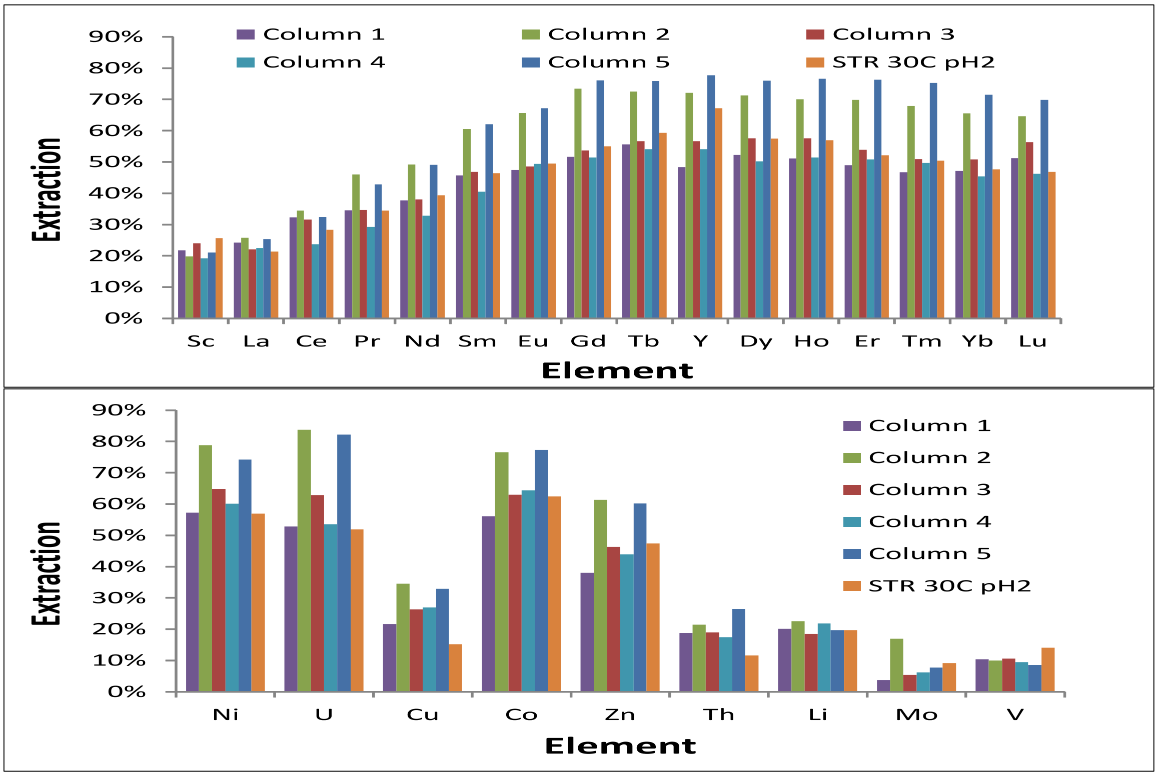

Figure 64: Summary of final extractions from column leaching tests, showing also comparative results from stirred tank leaching at pH2 and 30C. After Figures 3.12a and 3.12b, CanMet Study 2013, Cameron et al 2014.

The final metal extractions of the column experiments are difficult to compare directly to one another due to the different lengths of the experiments (53 to 208 days) and different leaching conditions (eg: inoculated with bacteria, non-inoculated, with or without ammonium sulphate, COL2 at significantly lower pH, COL5 leached with 0.5M (NH4)2SO4). Despite the differences in operating conditions, however, the final results of COL1, COL3 and COL4 tests are surprisingly similar suggesting that final metal recovery is not a large function of the agglomeration technique, and that only a relatively short leaching time is necessary to extract whatever is ultimately recoverable from the shale (Figure 64).

In addition, the metal leaching trends observed from the stirred tank leaching tests are also observed in the column experiments such that metal extractions during column leaching mirror those obtained during the stirred tank leaching tests at pH2 as indicated by the similar extractions during COL1, COL3 and COL4 tests and the stirred tank leaching tests at pH2 and 30 ºC (Figure 64). The foregoing suggests that simple stirred tank leaching tests (which are typically conducted over a short time span of a 20-30 days) might suffice as a realistic substitute or proxy for column tests which are more complicated and require considerably longer to complete (100-200 days). The foregoing is particularly significant when considering the rapid reaction kinetics noted during all testwork and that both types of leaching tests were prolonged for much longer periods tha necessary to achieve metals extraction from the shales.

14.2.12 Column Testing - Concluding Remarks

The CanMet column leaching testwork was very successful in demonstrating that it is technically feasible to leach REE and non-REE metals from the black shale samples tested (Second White Speckled Shale Formation) under conditions designed to replicate the environment within a heap bioleaching operation. The testwork concluded that:

- Due to high clay content the shales would have to be agglomerated in order to improve heap structure and stability.

- Further test work is needed to optimize the agglomeration process with DNI ore; and it is possible that different agglomeration techniques may be optimal for the different stratigraphic sections of the ore body, as the different stratigraphic sections of the shales have visibly different mineralogy content.

- Full-height column tests are required to determine the effect of compaction on the permeability of the agglomerated material, as permeability can be expected to constrain heap lift height and the solution application rates.

- The consumption of sulphuric acid is one of the major operating costs to a heap (bio)leaching operation, and its reduction would be key to enhanced economics. Acid consumption can be reduced by a number of ways including: reducing the acid dose during agglomeration; and recycling a portion of the acid (eg: COL1, COL4 and COL3 tests which report similar final extractions were agglomerated with dilute H2SO4 (i.e., simulated PLS), 5% H2SO4, and 10% H2SO4, respectively).

- Comparison of the metal leaching kinetics suggest that the amount of acid used during agglomeration has a large impact on the initial rate of metal leaching, whereas the final amount leached after 50 days shows little dependency on the acid addition during agglomeration.

- There is a balance between acid dose during agglomeration and the time required for leaching. Additional column experiments may be used to further refine the acid dose during agglomeration at levels between 0 and 5% H2SO4.

- Majority of the experiments were conducted at constant pH2 and did not succeed in extracting V or Mo in any significant amount. Vanadium and Mo represent a meaningful portion of the contained metal value within the shale, and both metals are relatively recalcitrant at pH 2, whereas lower pH levels were shown to slightly improve the leaching of V and Mo during COL2 tests. Additional experiments at lower pH levels, initially in the range of pH 1.7-1.9, might succeed in enhancing recovery of the two metals.

- Experiments conducted with 0.5M (NH4)2SO4 consistently leached higher amounts of the valuable metals compared to dilute H2SO4 at equivalent pH. However, the increased extraction comes at a cost of the (NH4)2SO4 and additional H2SO4 that is required to lower the pH of the medium.

- While there are existing technologies for extracting REEs from (NH4)2SO4 media at pH ≥3 based on the processing of Chinese weathered elution-deposited rare earth ores, recovery of some of the non-REE metals of interest may be more problematic and will require additional research.

- The shale sample tested for all of the experiments was a blended composite sample taken from trenching of an outcrop. The leaching behaviour of this blended sample may or may not be representative of the deposit, depending on the amount of weathering. Duplicating some of the testwork on samples of drill core material would be an important next step to verify metal extractions and acid consumptions documented from the testwork.

15. RESOURCE STUDIES 2012-2014 - BUCKTON ZONE

15.1 OVERVIEW

DNI completed the first resource study for the Buckton Zone in October 2011 and reported a 250 million short ton initial "maiden" inferred resource for Base Metals, Uranium and Lithium, hosted entirely within the Second White Speckled Shale Formation, extending over a 5.7 sq km portion of the 26 sq km Buckton Zone. Considering the incidental recovery of Rare Earth Elements and Specialty Metals as co-products during leaching of the traditional base metals, the Buckton Resource Study was expanded to prepare an estimate of REE and Specialty Metals contained within the Buckton maiden resource. The Buckton supplemental resource study was completed in January 2012, and related to recoverable Rare Earth Elements (REE), Yttrium (Y), Scandium (Sc) and Thorium (Th) contained in the Buckton maiden Inferred resource which previously related only to Base metals, Uranium and Lithium. The foregoing resource studies were previously discussed in Alberta Mineral Assessment Report MIN20120007 (Sabag 2012).

APEX Geoscience Ltd. was retained in mid-2012 to prepare a NI-43-101 compliant resource study for the Labiche Formation shales which overlie the maiden mineral resource previously delineated in the Second White Speckled Formation black shale at the Buckton Zone. The Labiche Formation is also a black shale and makes up majority of the cover rocks overlying the Second White Speckled Shale at the Buckton Zone and elsewhere at the Property, but had previously been regarded as overburden cover "waste" material which would have to be removed to access polymetallic mineralization in the Second White Speckled Shale Formation at the Buckton Zone. The Labiche Formation, however, contains polymetallic mineralization which is recoverable by the same leaching methods as those required for recovery of metals and REEs from the Second White Speckled Shale.

The Buckton Labiche Resource Study was completed in September 2012, and successfully demonstrated that a substantive portion of the cover material overlying the Second White Speckled Shale above the Buckton maiden resource is not waste and represents recoverable mineral value hosted in the Labiche Formation. The study identified a 2.74 billion short ton inferred resource for Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Th-Sc hosted in the Labiche Formation black shale. Of the foregoing tonnage, approximately 630 million short tons lie directly above the Buckton inferred maiden resource (Eccles et al 2012b) which is hosted in the Second White Speckled Shale. The Buckton Labiche Resource Study complies with National Instrument 43-101 and CIM resource estimation guidelines, and was prepared by Apex Geoscience Ltd ("Apex"), Edmonton, under the supervision of Mr.Roy Eccles PGeol, Mr.Michael Dufresne PGeol and Mr.Steven Nicholls MAIG, as the Qualified Persons in connection with its preparation, all of whom are independent of DNI. The Buckton Labiche Resource is discussed in Section 15.2 and the study report[29] (Eccles et al 2012b) is appended herein as Appendix E1.

Recognition of the Labiche inferred resource represents a significant milestone development from the Buckton Zone, as it enables inclusion of considerable additional mineralized tonnages into a mineral resource for the Buckton Zone all of which tonnages were previously omitted from resources due to excessive thickness of cover material.

Subsequent to completion of the Buckton Labiche Resource Study, APEX was commissioned in late 2012 to consolidate all resources identified at the Buckton Zone into a global resource for the Buckton Zone, to prepare an estimate of resources hosted in the continuous shale package consisting of the Labiche Formation and underlying Second White Speckled Formation Shale. The Consolidated and Updated Buckton Mineral Resource Study was completed in January 2013, and it relied on more current metal prices and revised higher cut-offs. The Consolidated and Updated Buckton Mineral Resource is discussed in

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[29] Report: Technical Report, Inferred Resource Estimate Of The Labiche Formation And Its Potential To Add To The Overall Metal Content Of The Buckton Mineralized Zone, SBH Property, Northeastern Alberta. Prepared by APEX Geoscience Ltd. Effective date September 11, 2012. Eccles R., Dufresne M. and Nicholls S.

Section 15.3, and the study report[30] (Eccles et al 2013b) is appended herein as Appendix E2.

The Consolidated and Updated Buckton Mineral Resource Study expanded the inferred resource at the Buckton Zone to 3.49 billion short tons extending over approximately 14 square kilometres, hosted in a continuous shale package consisting of the Labiche Formation and underlying Second White Speckled Formation Shale which are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc and are partly exposed on surface.

The Consolidated and Updated Buckton Mineral Resource was superceded and further updated in 2013 to incorporate results from DNI's 2012 summer drilling program to further expand the resource to provide a basis for a Preliminary Economic Assessment of the Buckton Zone. The Updated and Expanded Buckton Mineral Resource Study was completed in August 2013, and successfully expanded the Buckton inferred resource from 3.5 billion short tons to 4.9 billion short tons, in addition to upgrading a portion of it to the indicated resource class by delineating a 300 million short ton indicated mineral resource. The inferred and indicated resources are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc, and together extend over 21.9 square kilometres (approximately a 3kmx8km area), 20.4 square kilometres of which represents the aerial extent of the inferred resource.

The Updated and Expanded Buckton Mineral Resource Study benefited from initial findings from the Preliminary Economic Assessment study then in progress for the Buckton Zone, and incorporated preliminary mine engineering design and operating cost estimates for the purposes of classifying mineralized material as resources. In the foregoing regard, the Study relied on higher base cut-offs (US$11/tonne and US$12.5/tonne for the Labiche and the Second White Speckled Shale Formations, respectively, reflecting the different operating cost estimates related to leaching of metals from the two Formations), and unlike prior resource studies from the Zone which were arbitrarily constrained by a maximum mineable depth of 75m, mineral resources reported in the Study comprised all mineralized tonnages which represent sufficient gross recoverable value exceeding the base cut-off to accommodate removal of overlying cover waste material. The Updated Resource Study also used more current metal prices than those in prior studies, as well as more conservative metals leaching recoveries believed to better represent bioheapleaching field conditions.

The Updated and Expanded Buckton Mineral Resource is the most current resource for the Buckton Zone and forms the basis for the Preliminary Economic Assessment of the Zone. While the foregoing mineral resource relates to Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc recoverable from the shales, Mo-V-Li-Th-Sc were omitted from the Buckton Preliminary Economic Assessment for various reasons discussed in Section 17 of this Report. The Updated and Expanded Buckton Mineral Resource is discussed in Section 15.4 and the study report[31] (Eccles et al 2013c) is appended herein as Appendix E3.

15.2 RESOURCE STUDY 2012 - LABICHE SHALE COVER ROCKS - BUCKTON ZONE

The Buckton Labiche Resource Study was prepared by Apex Geoscience Ltd ("Apex"), Edmonton, under the supervision of Mr.Roy Eccles PGeol, Mr.Michael Dufresne PGeol and Mr.Steven Nicholls MAIG, as the Qualified Persons in connection with its preparation, all of whom are independent of DNI. The study was completed in September 2012, and their report (Eccles et al 2012b) is appended herein as Appendix E1.

The Study relied on DNI's 2010-2011 winter drilling over the Buckton Zone, together with historic drilling from the area from which all archived Labiche Formation drill core intercepts were re-sampled and re-analyzed by DNI in preparation for the Resource Study for consistency with DNI's more recent drilling data. All of the foregoing drilling campaigns were implemented by Apex under the supervision of Mr.Dufresne.

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[30] Report: National Instrument 43-101 Technical Report, Consolidated And Updated Inferred Resource Estimate For The Buckton Zone, SBH Property, Northeast Alberta. Prepared by APEX Geoscience Ltd. Effective date of January 9, 2013. Eccles R., Dufresne M. and Nicholls S.

[31] Report: National Instrument 43-101 Technical Report, Updated And Expanded Mineral Resource Estimate for The Buckton Zone, SBH Property, Northeast Alberta. Prepared by APEX Geoscience Ltd. Effective date of September 9, 2013. Eccles R., Dufresne M., Nicholls S. and McMillan K.

The Buckton Labiche Resource Study relies on an aggregate of eleven vertical core holes distributed over an area of approximately 15.8 square kilometres, and spaced approximately 240m-2500m apart (averaging 1000m) as shown in Figures 65. Approximately 85% of the Labiche Formation shale within the foregoing area lies beneath less than 75m of overburden till and meet cut-off threshold criteria for classification as an inferred resource. This Formation also shows good lateral uniformity for many of the contained metals over large distances across the Property. The spacing and number of holes are considered sufficient for the determination of inferred resources, and extrapolation of grades between the drill holes is supported by statistical variography examined during the Study.

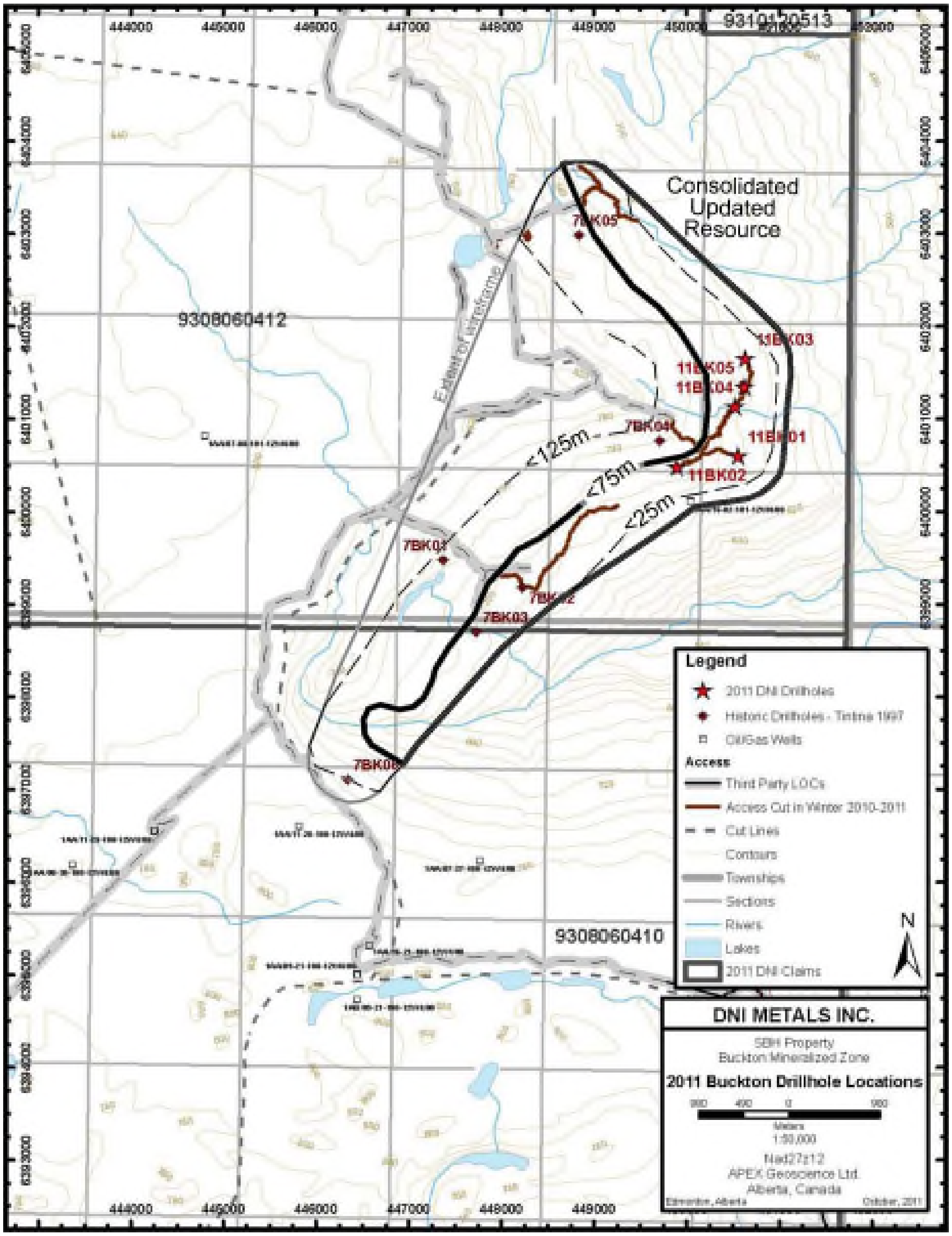

Figure 65: Summary of geographic distribution of the Buckton Labiche Inferred Resource (under <75m cover), showing also geographic distribution of mineralized material which are under <25m, and <125m of cover. Buckton Labiche Resource Study 2012, Eccles et al 2012b.

The Buckton Labiche resource comprises an approximately 13.8 square kilometer, 13m to 109m thick, near-horizontal tabular zone hosted entirely within the Labiche Formation, bounded by its upper and lower contacts. Ultimate thickness of the Formation over the area drilled is unknown since its upper portions have been eroded away predominantly by glaciation. This Formation is exposed throughout the eastern erosional edge of the Birch Mountains but is overlain westward by glacial till. Given the uniformity of metals grades within this shale, the Labiche resource is laterally delimited based on depth criteria (ie: cover thickness) rather than continuity of metallic mineralization which extends well beyond its limits. Presence of Labiche Formation shale beyond the area drilled has been confirmed by oil/gas downhole well logs which report sections of Labiche shale over a large area extending well beyond the current boundaries of the resources.

The Buckton Labiche Resource Study consisted of modeling and tonnage estimation using a 3-dimensional block model based on geostatistical applications using commercial mine planning software MICROMINE. The sample file comprised 854 samples of variable length for all lithologies but, when composited in MICROMINE, yielded a database of 269 sample composites for the Labiche shale which were used for the mineral resource estimation. All drill holes are short vertical holes and, as such, there are no down-hole surveys.

Variography was conducted on the composited drill hole data within the Labiche Shale domain to produce spherical semi variograms. Each metal was modeled individually to determine the continuity and orientation of mineralization. As a result of the wide drill hole spacing a parent model block size of 250mx250mx2m was chosen for the resource estimate. The variography utilized the composited data within the mineralized Labiche domain to produce spherical semi variograms. Some difficulties we encountered with the semi variograms for most of the elements due to the limited number of drill holes, large spacing and irregular distribution of drilling. The composited data was used for top cutting extreme values were capped.

The block model was extended far enough past the mineralized wireframe to encompass the entire mineralized shale domain. The recoverable grades for the metals were translated into a US$ value for each block and sub-block relying on trailing average metal/oxide as noted in footnotes to the above tables, and the collective values aggregated to enable testing against a block value base case cut-off of US$7.5 per tonne being the same cut-off previously utilized for the Buckton maiden and Buckton supplemental REE-Y-Th-Sc resource studies. According to the foregoing method, the Study concluded that the reported resource represents an average value of US$12.2 per short ton (US$13.5 per tonne) representing the aggregate value of recoverable grades for Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Th (US$35.1 per short ton; US$38.7 per tonne if Scandium is also included). REEs account for approximately two-thirds of the foregoing aggregate values (excluding Sc).

The US$7.5 per tonne cut-off is considered to be a reasonable benchmark which has been utilized by recent mineral resource estimates for open pit mineable poly-metallic black shales in Sweden as the break-even point and lower cut-off. Considering a scenario of possible open pit mining in northeast Alberta along the eastern edge of the Birch Mountains, with potential for a low strip ratio at startup, the likely free-dig nature of the poorly consolidated Shale, the potential for easy access to multiple working faces, the location of the project with respect to access, power and other important infrastructure, a lower cut-off value for the mineral resource estimate of US$7.5 per tonne is considered reasonable by the Study as a base case cut-off threshold which also captures a relatively continuous mineralized zone with favourable bulk mining configuration. Iteration of the Labiche resource model at a higher cut-off of $10 per tonne had no effect on the Labiche resource.

The down-hole geochemical pattern for most elements contained within the Labiche is similar and fairly predictable between drill holes attesting to tremendous lateral geochemical continuity. For many oxides/elements there is horizontal continuity over hundreds of meters to kilometres with little change. Grades can, however, change significantly over a few meters vertically reiterating inherent stratigraphic controls to the mineralization.

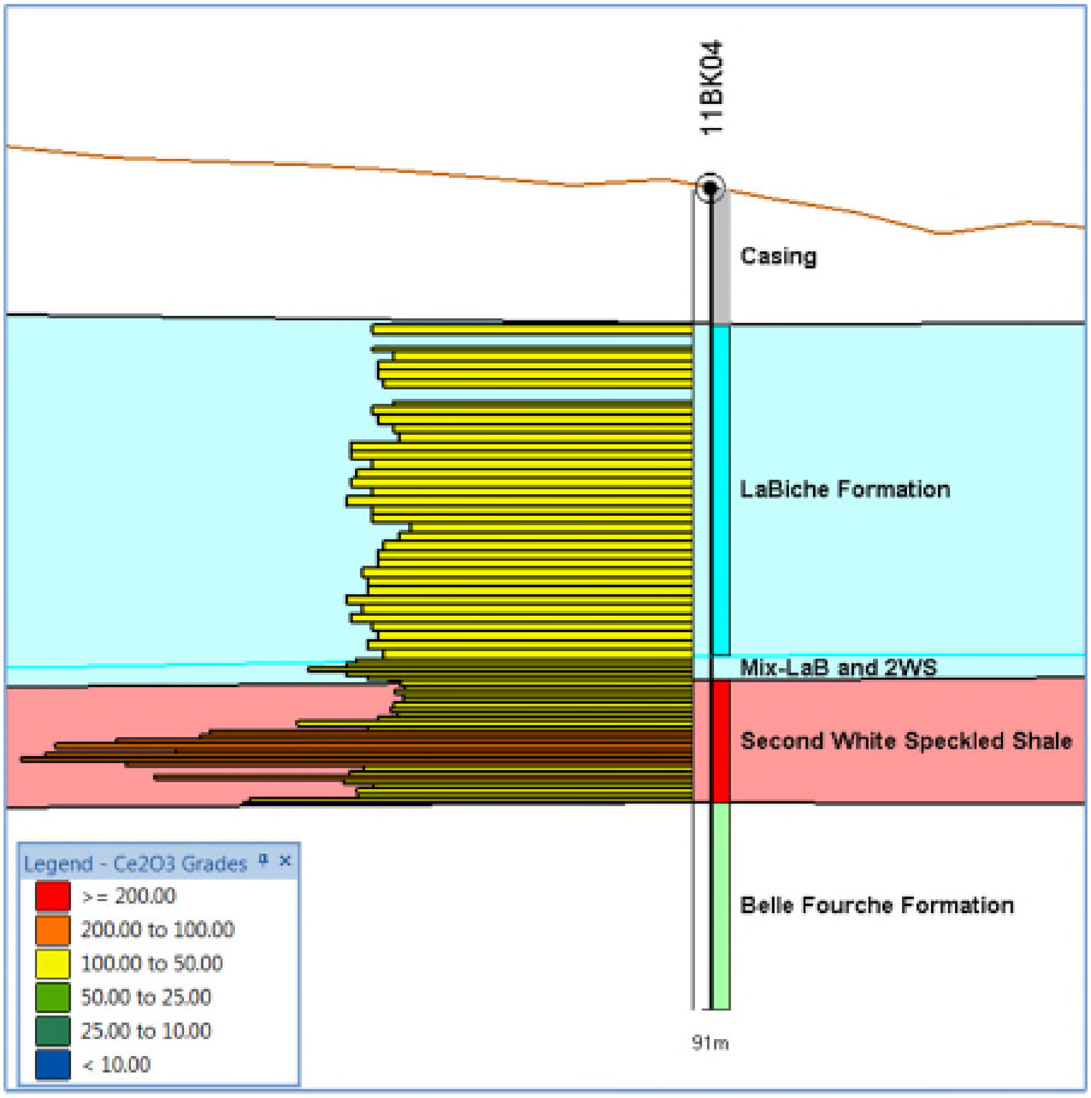

Figure 66:. Downhole distribution of Ce in drill hole 11BK04. Buckton Labiche Resource Study, From Figure 13, Eccles et al 2012b.

Lateral continuity of mineralization versus its vertical continuity was reviewed and confirmed by the variography, noting variations in lateral continuity which may be real or due to the wide-spaced nature of the drilling. Most oxides/metals of interest exhibit a grade continuity of between 1km and 2.5km, whereas Eu_2O_3 and Tm_2O_2 show lateral grade continuity of 6km and 3.2km, respectively. Ni and Co show continuity of 0.67km and 0.5km, respectively. Details of lateral grade continuity for the various elements are shown in Table 20, and it is unclear whether this might change with additional drilling.

The Buckton Labiche resource reported by the Buckton Labiche Resource Study is classified as an inferred resource consisting of 2,737,641,000 short tons (2,483,546,000 metric tonnes) of mineralized Labiche Formation black shale, extending over 13.8 square kilometres beneath less than 75m of overburden cover, which is mineralized with recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu), Cobalt (Co), Lithium (Li), Scandium (Sc), Thorium (Th) and Rare Earth Elements Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy), Yttrium (Y). The Study estimates that the resource is overlain by 740,898,000 short tons (672,131,000 metric tonnes) of glacial till overburden.

Element	Primary Axis	Primary Range (m)	Secondary Axis	Secondary Range (m)	Third Axis	Third Range (m)
La2O3	40	1450	130	1450	-90	20
Ce2O3	15	2750	105	2750	-90	10
Pr2O3	72.2	1800	162.2	1800	-90	15
Nd2O3	69	2340	159	2340	-90	10
Sm2O3	73	2550	163	2550	-90	15
Eu2O3	13	6000	103	6000	-90	20
Gd2O3	56	1400	146	1400	-90	20
Tb2O3	28	1020	118	1020	-90	15
Dy2O3	45	2600	135	2600	-90	10
Ho2O3	24.87	2500	114.87	2500	-90	10
Er2O3	55.2	1690	145.2	1690	-90	15
Tm2O3	43	3200	133	3200	-90	15
Yb2O3	43	2290	133	2290	-90	15
Lu2O3	83	2620	173	2620	-90	15
Y2O3	18.8	1000	108.8	745	-90	15
Sc203	18	2600	108	2600	-90	2
ThO2	42.53	1700	132.53	1700	-90	10
MoO3	72	1160	162	1160	-90	10
Ni	45	670	135	670	-90	20
U3O8	21	2000	111	2000	-90	10
V2O5	74	2500	164	2500	-90	10
Zn	12.6	2880	102.6	1400	-90	20
Cu	42.52	1660	132.52	1660	-90	10
Co	6	500	96	500	-90	20
Li2CO3	42.53	1250	132.53	1250	-90	15

Table 20: Lateral continuity of grades in the Labiche resource. After table 17 Buckton Labiche Resource Study, Eccles et al 2012b

Details of the inferred resource reported by the Buckton Labiche Resource Study are summarized in Table 21. Distribution of grades/value within the Buckton Labiche Resource is shown in Figures 67 and 68.

Buckton Labiche Inferred Resource									
Mineralized Shale (tons)	2,737,641,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	3	49	5	448	143	31	13	400	
Recovery %	55%	80%	75%	10%	75%	65%	80%	40%	
Recoverable Grade (ppm)	2	39	4	45	107	20	10	160	
Metal/Oxide Price* (US$/lb)	21.6	11.1	73	8.1	1.1	3.2	25.3	3	
Recoverable metal/oxide (kg)	4,014,000	97,673,000	9,655,000	111,312,000	265,984,000	49,751,000	25,232,000	397,618,000	
Recoverable metal/oxide (lbs)	8,850,870	215,368,965	21,289,275	245,442,960	586,494,720	109,700,955	55,636,560	876,747,690	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	46	82	10	37	7	2	6	1	
Recovery %	15%	25%	30%	35%	50%	55%	60%	60%	
Recoverable Grade (ppm)	7	21	3	13	4	1	4	1	
Metal/Oxide Prices** US$/kg)	$42.90	$41.30	$81.30	$93.40	$39.30	$1,202.60	$56.00	$1,017.40	
Recoverable Oxide (kg)	17,141,000	51,056,000	7,311,000	32,516,000	8,984,000	2,023,000	8,657,000	1,341,000	
Recoverable Oxide (lb)	37,795,905	112,578,480	16,120,755	71,697,780	19,809,720	4,460,715	19,088,685	2,956,905	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5	1	3	1	3	1	33	24	12
Recovery %	60%	60%	50%	50%	45%	55%	55%	30%	30%
Recoverable Grade (ppm)	3	1	2	0.2	1	0.3	18	7	4
Metal/Oxide Prices** US$/kg)	$547.60	$275.60	$240.00	$97.00	$76.90	$719.40	$57.40	$3,528.50	$252.00
Recoverable Oxide (kg)	7,634,000	1,519,000	3,778,000	570,000	3,479,000	699,000	45,516,000	17,769,000	9,059,000
Recoverable Oxide (lb)	16,832,970	3,349,395	8,330,490	1,256,850	7,671,195	1,541,295	100,362,780	39,180,645	19,975,095
*Metal/Oxide commodity prices are the five year average to Aug/2006 used to establish bulk recoverable values for cut-off grade thresholding tests. **Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Nov17/2011 for La-Ce-Pr-Nd-Sm-Eu-Gd-Tb-Dy and Y, and the one year trailing average to Nov17/2011 for Ho-Er-Yb-Lu and Sc. Tm value from Montviel Core Zone REE resources study 2011 by SGS Canada Inc. Th value per USGS Mineral Commodity Summaries 2008-2010. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Figures may not add exactly due to rounding.									

Table 21: Summary of the Buckton Labiche inferred resource. Buckton Labiche Resource Study, Eccles et al 2012b

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The value reported therefore represent preliminary mineral recovery testing results and may not reflect ultimate actual process recoverability, which is subject to ongoing studies.

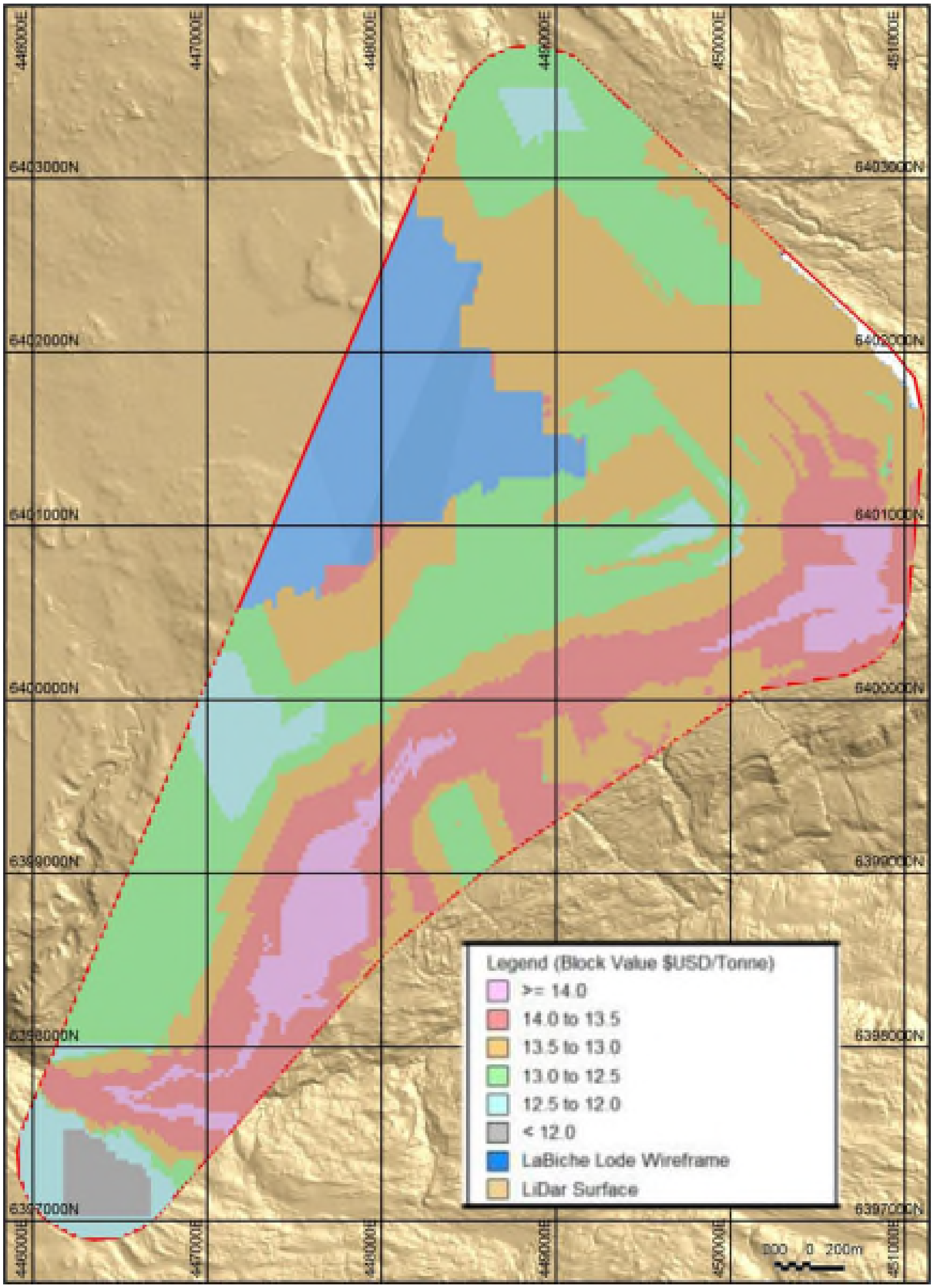

*Figure 67: Distribution of aggregated in situ value USD/tonne (**excluding** Sc) within the Buckton Labiche Inferred Resource (under <75m cover). After Figure 18, Buckton Labiche Resource Study, Eccles et al 2012b*

This Buckton Labiche resource has been classified as an inferred resource according to CIM standards. This classification is based on a number of factors, namely; limited number of drill holes and their wide spacing, good continuity of mineralization and geological control between drill holes and from section to section along approximately six kilometres of strike.

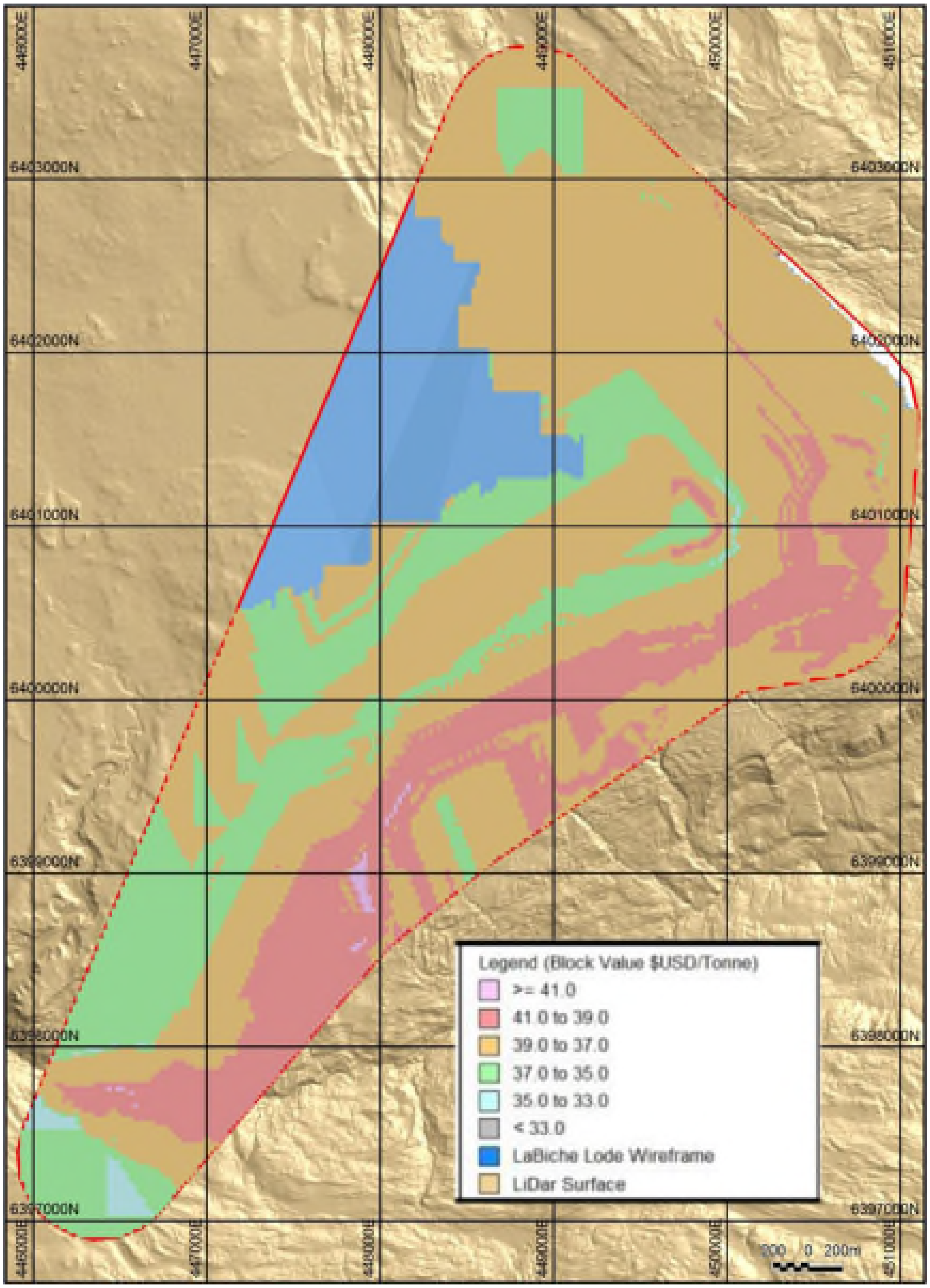

*Figure 68: Distribution of aggregated in situ value USD/tonne (**including** Sc) within the Buckton Labiche Inferred Resource (under <75m cover). After Figure 19, Buckton Labiche Resource Study, Eccles et al 2012b.*

The Buckton Labiche Resource Study concluded that the Buckton Labiche inferred mineral resource is mineralization that is believed to have a reasonable prospect for extraction in the future, especially in conjunction with extraction of the underlying higher grading Second White Speckled Shale Formation. It includes all Labiche underlying uppermost blocks that are beneath less than 75m of overburden/till, and for blocks whose combined metal content meets a lower cut-off of US$7.5 per tonne whose value is represented by the collective value of contained recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Th-Sc relying on the trailing one to five year commodity price averages as shown in Table 21, and relying on the best achieved metals recoveries as reported from the collective of DNI's leaching testwork.

The Buckton Labiche resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls.

The Buckton Labiche Resource Study noted that although the resource reported represents mineralization which is recoverable by a single bulk leaching method from the Labiche shale, REEs account for approximately two-thirds of the recoverable value reported (excluding Sc). The per ton (or tonne) values reported are, accordingly, subject to uncertainties as to long term REE pricing and viability of demand, the unknown effect of new production on REE markets; and the ultimate cost of separating REEs from pregnant leaching solutions once they have been leached from the shale and their refinement into useable saleable final products.

The Buckton Labiche Resource Study demonstrated that a substantive portion of the cover material above the Buckton maiden resource is not waste and represents mineral value recoverable by the same leaching methods as those required for recovery of metals and REEs from the Buckton maiden resource. Considering that the Buckton maiden resource has been delimited based on thickness of overlying cover rocks rather than continuity of grade, the Study recommended that the Buckton maiden resource study and the Buckton Supplemental REE-Y-Sc-Th resource study be reviewed to determine whether mineralized tonnages previously reported lying under more than 75m of cover rocks, which were previously omitted from classification as resources, might be re-classified and included to expand the Buckton inferred resource given that much of the cover rocks above these tonnages consist of Labiche Formation shale which holds intrinsic recoverable value per the Labiche resource.

The Buckton Labiche Resource Study concluded that the Labiche inferred resource has excellent potential for expansion with further drilling, and recommended implementation of additional exploration at the Buckton Zone, and the Property, to include additional leaching testwork and additional drilling to continue expanding and upgrading the Buckton Zone resource hosted within the Labiche as well as the Second White Speckled Shale Formations. Some of this drilling is in progress as is ongoing leaching testwork. The Study reinforces that work on the Buckton Zone advance toward commencing a Preliminary Economic Assessment study (Scoping Study) as planned by DNI, and that DNI give consideration to viewing the Buckton Zone, previously regarded as mineralization confined only to the Second White Speckled Shale Formation, to consist of a Zone of "stacked" polymetallic mineralization consisting of an upper, lower grading, zone hosted in Labiche Formation shale which directly overlies a higher grading zone hosted in the Second White Speckled Shale which has thus far been DNI's primary target.

The Study also recommended that resources identified at the Buckton Zone, hosted in the Labiche as well as the Second White Speckled shale Formations, be revised and updated to incorporate additional results from DNI's 2012 drilling program in progress, and that the cut-off threshold of US$7.5 per tonne utilized in the prior resource studies be revised to US$10 per tonne to incorporate a nominal cost for refining REEs into saleable final products. Prior iteration of the resource model at the higher US$10 per tonne cut-off noted an insignificant change in the resource identified in the Second White Speckled Shale at the Buckton Zone, and no effect on the Labiche resource. The Consolidated and Updated Buckton Zone Resource is discussed in the Section following (Section 15.3).

15.3 RESOURCE STUDY 2013 - CONSOLIDATED AND UPDATED BUCKTON ZONE RESOURCE

The Consolidated and Updated Buckton Zone Resource Study was prepared by Apex Geoscience Ltd ("Apex"), Edmonton, under the supervision of Mr.Roy Eccles PGeol, Mr.Michael Dufresne PGeol and Mr.Steven Nicholls MAIG, as the Qualified Persons in connection with its preparation, all of whom are independent of DNI. The study was completed in January 2013. The study report (Eccles et al 2012a) is appended herein as Appendix E2.

The Study relies on DNI's 2010-2011 winter drilling over the Buckton Zone, together with historic drilling from the area from which all archived drill core were previously re-sampled and re-analyzed by DNI in 2009 and 2012. Geographic distribution of the Consolidated and Updated Resource and related drill holes is shown in Figure 69. The shale package comprising the resource is schematically shown in Figure 70.

Modelling and estimation of the Consolidated and Updated Buckton inferred resource was carried out using 3-dimensional block model based on geostatistical applications using commercial mine planning software MICROMINE (v12.5.4). The model relies on an aggregate of eleven vertical core holes distributed over an area of approximately 15.8 square kilometres, and spaced approximately 240m-2500m apart (averaging 1000m), and was generated using the combined drill hole data derived from drilling campaigns conducted in 1997 (6 holes) and 2011 (5 holes). There were 5 drill lines in the MICROMINE model that ranged in spacing from 670m to 2km between sections. Approximately 88% of the mineralized black shale within the foregoing area lies beneath less than 75m of overburden till and meet cut-off threshold criteria for classification as an inferred resource. The mineralized black shale in the area also shows good lateral uniformity for many of the contained metals over large distances across the Property. The spacing and number of holes are considered sufficient for the determination of inferred resources, and extrapolation of grades between the drill holes is supported by statistical variography examined during the Study.

Considering that leaching tests completed by DNI to date on samples from the Labiche and Second White Speckled Shale formations report different recoveries for the metals of interest, the resource modeling treated the two shale units separately. According to the foregoing scheme, the Buckton Zone assay file was composited using MICROMINE into separate sub-domains where the analytical data were assigned to composite sample files comprising: 269 composite samples for the Labiche sub-domain (at 2.2m intervals), 302 composite samples for the Second White Speckled Shale REE-Y-Sc-Th sub-domain (at 0.5m intervals); and 197 composite samples for the Second White Speckled Shale polymetallic sub-domain (at 1m intervals). The composited samples were used for all sample statistics, capping, estimation input file and validation comparisons.

The composited sample data for the Labiche and Second White Speckled Shale Formation was used for the top cut analysis. All grade elements within the Labiche and Second White Speckled Shale domain were examined individually to determine suitable capping to apply to the respective grade populations. A combination of histograms, probability plots and inflection points were used to determine the extreme values to be cut. During the estimation the extreme values were capped as shown in Table 22.

The down-hole geochemical pattern for most elements contained within the Labiche and Second White Speckled Shale are similar and fairly predictable between drill holes attesting to tremendous lateral geochemical continuity. For many oxides/elements there is horizontal continuity that stretches hundreds of metres to kilometres with little change. However, the geochemistry can change significantly over a few meters vertically. This suggests there is an inherent stratigraphic control to the mineralization. Grade continuity for both formations, the lateral continuity of mineralization versus the vertical continuity, is confirmed by the variography. There are, however, variations in the lateral continuity that may be real or may be due to the wide-spaced nature of the drilling and a lack of information. The variography relied on the composite data within the mineralized Labiche and Second White Speckled Shale domains to produce spherical semi variograms. Difficulties were encountered with the variograms for all of the elements within both formations due to the limited number of drill holes, their large spacing and irregular frequency of drilling. It is unclear how the variography will change with additional drilling. Lateral grade continuity identified from the variography for both Formations is shown in Table 23.

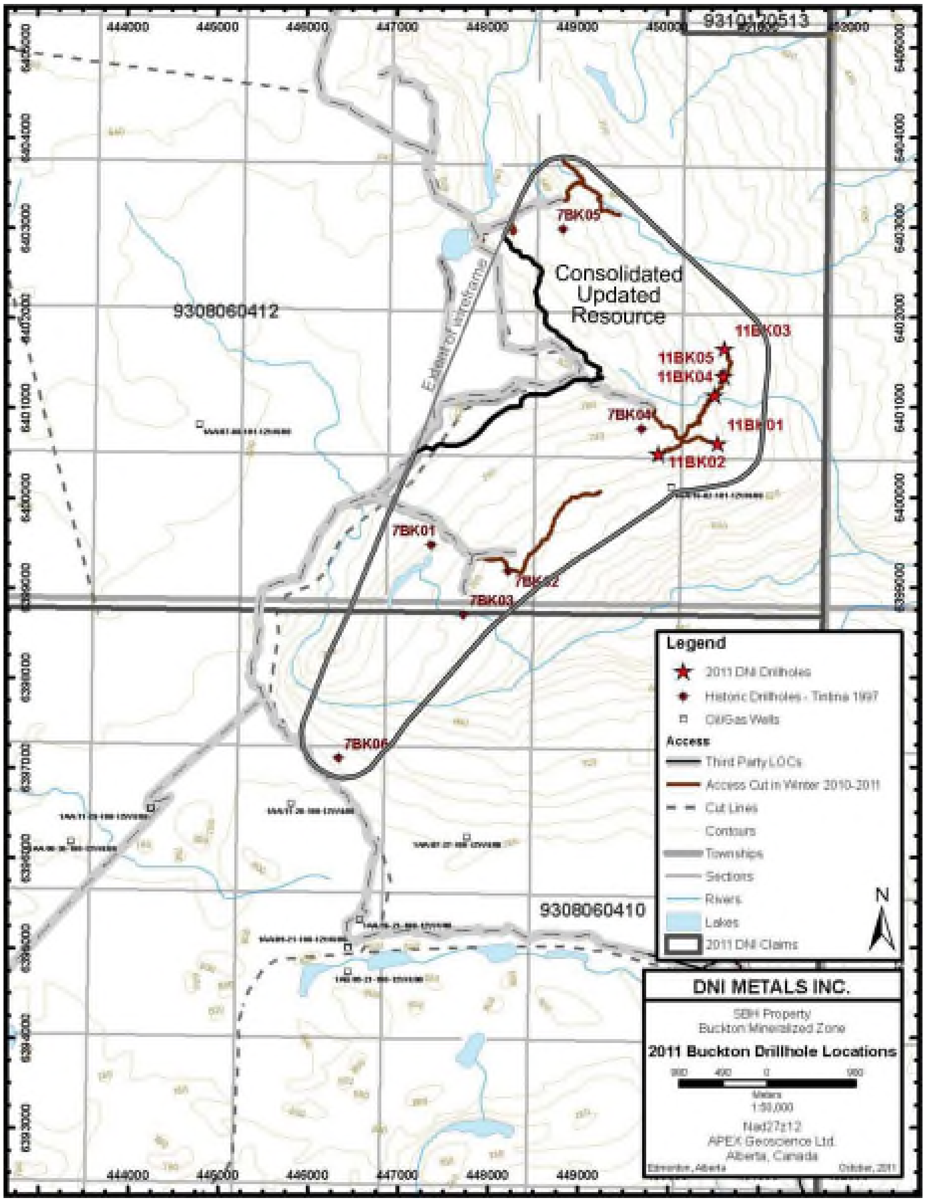

Figure 69: Geographic distribution of the Consolidated and Updated Buckton Resource and related drill holes. After figure 9, Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

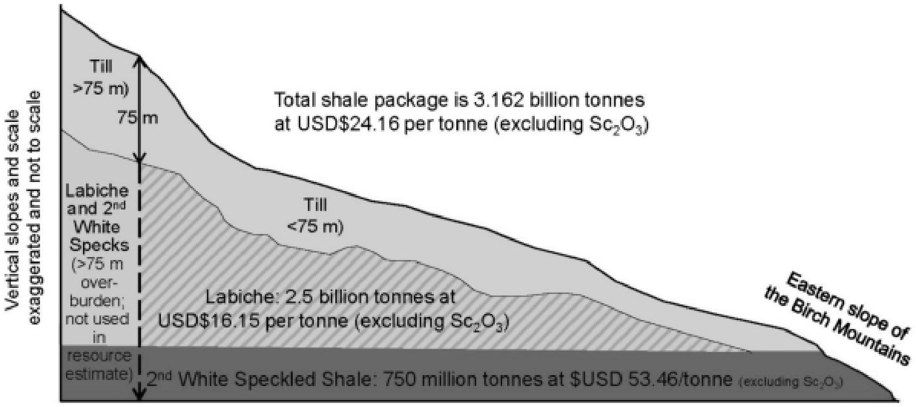

Figure 70: Schematic cross section showing shale package comprising the Consolidated and Updated Buckton Resource. After figure 23, Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

Capping for the Labiche domain composites			
Element or Oxide	Capping Level (ppm)	No. samples Cut	Percentile
	No capping recommended		
La2O3	No capping recommended		
Ce2O3	No capping recommended		
Pr2O3	11	1	97.5
Nd2O3	No capping recommended		
Sm2O3	8.3	2	99
Eu2O3	1.7	1	99
Gd2O3	7	1	99
Tb2O3	1.04	1	99
Dy2O3	6.07	1	99
Ho2O3	No capping recommended		
Er2O3	No capping recommended		
Tm2O3	No capping recommended		
Yb2O3	No capping recommended		
Lu2O3	0.6	3	99
Y2O3	39	1	99
Sc2O3	27.1	2	99
ThO2	No capping recommended		
MoO3	No capping recommended		
Ni	60	1	99
U3O8	No capping recommended		
V2O5	No capping recommended		
Zn	165	1	99
Cu	38	12	96
Co	No capping recommended		
Li2CO3	No capping recommended		

Capping for the Second White Speckled Shale REE domain composites						
	High-grade population			Low-grade population		
Element or Oxide	Capping Level (ppm)	No. samples Cut	Percentile	Capping Level (ppm)	No. samples Cut	Percentile
La2O3	140	6	97	70	1	99.9
Ce2O3	190	7	95	No Capping required		
Pr2O3	28.5	7	95	14	2	99
Nd2O3	120	7	95.5	47	2	99.5
Sm2O3	35	1	99.9	12	1	99.5
Eu2O3	4.3	11	92.3	3	1	99.9
Gd2O3	22	9	95	No Capping required		
Tb2O3	3.5	8	95	1.5	1	99.5
Dy2O3	16.5	11	93	7.8	1	99.5
Ho2O3	3.3	10	93	1.75	5	96
Er2O3	8.7	10	93	No Capping required		
Tm2O3	1.3	9	93	No Capping required		
Yb2O3	No Capping required			No Capping required		
Lu2O3	No Capping required			No Capping required		
Y2O3	No Capping required			43	19	95
Sc2O3	No Capping required					
ThO2	No Capping required					

Capping levels applied to the Second White Speckled Shale polymetallic domain composites		
Element	Capping Level (ppm)	No. samples Cut
Mo	200	1
Ni	None	0
U*	90	2
V	None	0
Zn	475	6
Cu	None	0
Co	38	3
Li	86	3

*The U grade distribution suggests a double population. The upper capping level for the second population was used.

Table 22: Summary of capping, Consolidated and Updated Buckton Resource. After tables 21, 22 and 23, Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

Summary of Grade Continuity

Labiche Formation REE/polymetallic domain	
Element/Oxide	Range 1 (m)
La2O3	1290
Ce2O3	2750
Pr2O3	1200
Nd2O3	2340
Sm2O3	1510
Eu2O3	5980
Gd2O3	1400
Tb2O3	1020
Dy2O3	2600
Ho2O3	2500
Er2O3	1690
Tm2O3	3790
Yb2O3	2290
Lu2O3	2620
Y2O3	1000
Sc2O3	525
ThO2	1700
MoO3	1160
Ni	670
U3O8	510
V2O5	2500
Zn	2880
Cu	1660
Co	500
Li2CO3	1250

Second White Speckled Shale REE-Y-Sc-Th domain	
Element/Oxide	Range 1 (m)
La2O3	1910
Ce2O3	1880
Pr2O3	2120
Nd2O3	2212
Sm2O3	2220
Eu2O3	2160
Gd2O3	2110
Tb2O3	2100
Dy2O3	2030
Ho2O3	1960
Er2O3	2030
Tm2O3	2010
Yb2O3	2130
Lu2O3	2290
Y2O3	1960
Sc2O3	1042
ThO2	4840

Second White Speckled Shale Polymetallic domain	
Element/Oxide	Range 1 (m)
Mo	371
Ni	946
U	2103
V	897
Zn	764
Cu	533
Co	348
Li	1330

Table 23: Summary of grade continuity, Consolidated and Updated Buckton Resource. After tables 24, 25 and 26, Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

As there were single populations present for all elements of interest in the Labiche Formation, all composites were used to determine the continuity and orientation of mineralization. Most oxides/metals of interest exhibit a grade continuity of between 1 and 2.5km, whereas Eu2O3 and Tm2O2 show horizontal grade continuity of 6km and 3.8km, respectively. Also Ni and Co show quite close grade continuity of 0.67 and 0.5km, respectively.

The initial variography for the Second White Speckled Shale REE domain examined each of the high and low grade populations separately, but due to the lack of samples it was decided to look at both populations as a whole. For the Second White Speckled Shale Formation, most oxides exhibit grade continuity around 2km, whereas Sc2O3 and ThO2 show horizontal grade continuity of 1km and 4.8km, respectively. The variography for the Second White Speckled Shale Polymetallic domain utilized the composite data to produce spherical semi variograms. Table 28 provides the search classification and the limits used in the estimation process. Elements such as Mo, Cu and Co show grade continuity around 400m laterally whereas Ni, V and Zn show grade continuity around 900m horizontally. Other elements such as U and Li show grade continuity around 1300 m.

Variography was conducted on the composited drill hole data within the Labiche and Second White Speckled Shale domains to produce spherical semivariograms. Each element was modeled individually to determine the continuity and orientation of mineralization. As a result of the wide hole spacing a parent model block size of 250mx250mx2m was chosen for the resource estimate. The block model extents were extended far enough past the mineralized wireframe to encompass the entire domain. The recoverable grades for the metals were translated into a US$ value for each block and sub-block relying on the best metals recoveries achieved per DNI’s leaching tests and trailing average metal/oxide prices as noted in footnotes to the above tables, and the values were aggregated into a collective gross recoverable value for each block and sub-block to enable testing against a block value base case cut-off of US$10 per tonne.

The Consolidated and Updated Buckton Mineral Resource is classified as an inferred resource consisting of 3,485,011,000 short tons (3,161,549,000 metric tonnes) of mineralized black shale extending over 14 square kilometres beneath less than 75m of overburden cover. This resource is hosted in the Labiche Formation and underlying Second White Speckled Shale Formation, which are two flat-lying black shale Formations that are stacked to comprise a continuous thick zone of mineralized shale. The inferred resource is mineralized with recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu), Cobalt (Co), Lithium (Li), Scandium (Sc), Thorium (Th) and Rare Earth Elements Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy), Yttrium (Y). The Study estimates that the inferred resource is overlain by 738,729,000 short tons (670,164,000 metric tonnes) of glacial till overburden.

The inferred resource reported by the Consolidated and Updated Buckton Mineral Resource Study is summarized in Table 24, combining the Upper and Lower Zones on a weighted basis.

This Consolidated and Updated Buckton Mineral Resource has been classified as an inferred resource according to CIM standards, based on a number of factors, namely; limited number of drill holes and their wide spacing, good continuity of mineralization and geological control between drill holes and from section to section along approximately six kilometres of strike. The inferred resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls.

The Resource Study concluded that the Consolidated and Updated Buckton mineral resource is mineralization which has a reasonable prospect for extraction in the future. This resource comprises all Labiche and Second White Speckled Shale resource blocks which are beneath less than 75m of overburden cover, and for which the combined gross value of recoverable contained Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc exceeds the base cut-off of US$10 per tonne relying on the best achieved metals recoveries as reported from the collective of DNI’s leaching testwork. Metal prices used are the trailing 2yr, 3yr and 5yr year commodity price averages as shown in footnotes to Table 24.

Consolidated and Updated Buckton Inferred Mineral Resource Upper (Labiche Formation) and Lower (Second White Speckled Shale) Zones Combined									
Mineralized Shale (tons)	3,485,011,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	25.4	68.6	11.7	616.5	175.9	40.4	14.7	378.8	
Recoverable Grade (ppm)	12.8	57.9	9.9	141	141.5	25.5	12.3	158	
Metal/Oxide Price* (US$/lb)	17.63	9.07	68.99	7.67	0.9	3.29	22.39	2.68	
Recoverable metal/oxide (kg)	40,529,000	183,032,000	31,224,000	445,733,000	447,367,000	80,530,000	38,757,000	499,397,000	
Recoverable metal/oxide (lbs)	89,351,000	403,516,000	68,837,000	982,672,000	986,274,000	177,538,000	85,444,000	1,100,981,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	48.9	85.3	10.5	40.6	7.9	1.6	6.7	1	
Recovery %	29	36	39	45	61	63	69	70	
Recoverable Grade (ppm)	14.4	30.7	4.1	18.1	4.8	1	4.6	0.7	
Metal/Oxide Prices** US$/kg)	42.84	47.4	114.98	128.61	58.66	1,872.65	83.7	1,551.08	
Recoverable Oxide (kg)	45,371,000	96,967,000	13,014,000	57,268,000	15,038,000	3,270,000	14,420,000	2,237,000	
Recoverable Oxide (lbs)	100,026,000	213,775,000	28,691,000	126,254,000	33,153,000	7,209,000	31,791,000	4,932,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5.8	1.2	3.4	0.5	3.4	0.6	39.4	22.4	12
Recovery %	69	58	62	60	53	50	67	34	40
Recoverable Grade (ppm)	4	0.7	2.1	0.3	1.8	0.3	26.3	7.7	4.8
Metal/Oxide Prices** US$/kg)	864.09	205.82	197.35	$97.00	100.63	1,024.09	81.73	3,881.39	252
Recoverable Oxide (kg)	12,742,000	2,353,000	6,624,000	916,000	5,742,000	1,053,000	83,095,000	24,220,000	15,146,000
Recoverable Oxide (lbs)	28,091,000	5,187,000	14,603,000	2,019,000	12,659,000	2,321,000	183,193,000	53,396,000	33,391,000
*Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the five year trailing average to Oct/2012. **Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Oct/2012 for La Ce Pr Nd Sm Eu Gd Tb Dy Y; three year trailing average to Aug/2011 for Tm; Th per USGS Mineral Commodity Summaries 2009-2011, the two year trailing average to Oct/2012 for Ho Er Yb Lu Sc. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.									

Table 24: Consolidated and Updated Buckton Inferred Mineral Resource, Upper (Labiche Formation) and Lower (Second White Speckled Shale) Zones Combined. Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.

The inferred resource is distributed between the Upper and Lower zones (Table 25) as follows:

(a) 2.7 billion short tons (2.5 billion metric tonnes) in the Upper, lower grade, zone hosted in the Labiche Formation ranging 13m-115m in thickness (ultimate thickness of the Labiche Shale at the Property is unknown as near-surface portions of it have been locally scoured away by glaciation). Most of this tonnage was previously reported in the Buckton Labiche Resource Study (Section 15.2); and

(b) 747 million short tons (678 million metric tonnes) in the Lower, higher grade, zone hosted in the Second White Speckled Shale Formation ranging 13m-23m in thickness. A 250 million short ton portion of this tonnage was previously reported as the Buckton Initial Maiden Resource in the Buckton Maiden Resource Study and the Buckton Supplementary REE-Y-Sc-Th Resource Study (Dufresne et al 2011b and Eccles et al 2012a, respectively, in Sabag 2012). The Consolidated and Updated Buckton Mineral Resource Study expands the resource in the Second White Speckled Shale Formation to include additional tonnages of mineralization surrounding the Buckton Maiden resource beneath the Labiche Formation, which were previously excluded from being classified as a resource due to excessive thickness of overlying Labiche cover where the Labiche was previously believed to be waste but was subsequently demonstrated to be a mineral resource in its own right.

Consolidated and Updated Buckton Inferred Mineral Resource
Upper Zone Portion - in Labiche Formation

Mineralized Shale (tons)	2,737,641,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	2.9	49.2	5.2	448.2	142.8	30.8	12.7	400.3	
Recovery %	55%	80%	75%	10%	75%	65%	80%	40%	
Recoverable Grade (ppm)	1.6	39.3	3.9	44.8	107.1	20	10.2	160.1	
Metal/Oxide Price* (US$/lb)	17.63	9.07	68.99	7.67	0.9	3.29	22.39	2.68	
Recoverable metal/oxide (kg)	4,014,000	97,674,000	9,655,000	111,312,000	265,982,000	49,751,000	25,232,000	397,618,000	
Recoverable metal/oxide (lbs)	8,849,000	215,334,000	21,286,000	245,401,000	586,389,000	109,682,000	55,627,000	876,597,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	46	82.2	9.8	37.4	7.2	1.5	5.8	0.9	
Recovery %	15%	25%	30%	35%	50%	55%	60%	60%	
Recoverable Grade (ppm)	6.9	20.6	2.9	13.1	3.6	0.8	3.5	0.5	
Metal/Oxide Prices** US$/kg)	42.84	47.4	114.98	128.61	58.66	1,872.65	83.7	1,551.08	
Recoverable Oxide (kg)	17,140,000	51,056,000	7,311,000	32,516,000	8,984,000	2,023,000	8,657,000	1,341,000	
Recoverable Oxide (lb)	37,787,000	112,559,000	16,118,000	71,685,000	19,806,000	4,460,000	19,085,000	2,956,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5.1	1	3	0.5	3.1	0.5	33.3	23.8	12.2
Recovery %	60%	60%	50%	50%	45%	55%	55%	30%	30%
Recoverable Grade (ppm)	3.1	0.6	1.5	0.2	1.4	0.3	18.3	7.2	3.6
Metal/Oxide Prices** US$/kg)	864.09	205.82	197.35	$97.00	100.63	1,024.09	81.73	3,881.39	252
Recoverable Oxide (kg)	7,633,000	1,519,000	3,778,000	570,000	3,479,000	699,000	45,516,000	17,769,000	9,059,000
Recoverable Oxide (lb)	16,828,000	3,349,000	8,329,000	1,257,000	7,670,000	1,541,000	100,345,000	39,174,000	19,972,000

Consolidated and Updated Buckton Inferred Mineral Resource
Lower Zone Portion - in Second White Speckled Shale Formation

Mineralized Shale (tons)	747,370,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	107.7	139.9	35.3	1233.1	297.3	75.7	22.2	300.2	
Recovery %	50%	90%	90%	40%	90%	60%	90%	50%	
Recoverable Grade (ppm)	53.9	125.9	31.8	493.2	267.5	45.4	19.9	150.1	
Metal/Oxide Price* (US$/lb)	17.63	9.07	68.99	7.67	0.9	3.29	22.39	2.68	
Recoverable metal/oxide (kg)	36,515,000	85,358,000	21,569,000	334,421,000	181,385,000	30,779,000	13,525,000	101,779,000	
Recoverable metal/oxide (lbs)	80,502,000	188,182,000	47,551,000	737,271,000	399,885,000	67,856,000	29,817,000	224,384,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	59.5	96.7	12.9	52.2	10.5	2.2	10	1.5	
Recovery %	70%	70%	65%	70%	85%	85%	85%	90%	
Recoverable Grade (ppm)	41.6	67.7	8.4	36.5	8.9	1.8	8.5	1.3	
Metal/Oxide Prices** US$/kg)	42.84	47.4	114.98	128.61	58.66	1,872.65	83.7	1,551.08	
Recoverable Oxide (kg)	28,231,000	45,911,000	5,703,000	24,752,000	6,054,000	1,247,000	5,763,000	897,000	
Recoverable Oxide (lb)	62,239,000	101,216,000	12,573,000	54,569,000	13,347,000	2,749,000	12,705,000	1,978,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	8.4	1.6	4.7	0.7	4.5	0.7	61.6	17.3	11.2
Recovery %	90%	75%	90%	75%	75%	75%	90%	55%	80%
Recoverable Grade (ppm)	7.5	1.2	4.2	0.5	3.3	0.5	55.4	9.5	9
Metal/Oxide Prices** US$/kg)	864.09	205.82	197.35	$97.00	100.63	1,024.09	81.73	3,881.39	252
Recoverable Oxide (kg)	5,109,000	834,000	2,847,000	346,000	2,263,000	354,000	37,578,000	6,451,000	6,087,000
Recoverable Oxide (lb)	11,263,000	1,839,000	6,277,000	763,000	4,989,000	780,000	82,845,000	14,222,000	13,420,000

*Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the five year trailing average to Oct/2012. **Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Oct/2012 for La Ce Pr Nd Sm Eu Gd Tb Dy Y; three year trailing average to Aug/2011 for Tm; Th per USGS Mineral Commodity Summaries 2009-2011, the two year trailing average to Oct/2012 for Ho Er Yb Lu Sc. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.

Table 25: Summary of the two components of the Consolidated and Updated Buckton Inferred Mineral Resource, showing the Upper Zone Portion in Labiche Formation, and the Lower Zone Portion in Second White Speckled Shale Formation. Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

While the collective work from the Buckton Zone indicate that none of the metals present in the Buckton Zone occurs in sufficiently high enough concentration to be of economic merit by itself, the metals of interest collectively represent sufficient recoverable gross value on a combined basis to place the resources identified at the Buckton Zone within reach of economic viability provided the metals are efficiently recovered on a combined basis. DNI's leaching testwork has already demonstrated that the metals can be collectively extracted from the shale but clear communication of overall bulk grade has been a challenge considering the polymetallic nature of the mineralization of merit. In the foregoing regard, the Resource Study notes, with concurrence from DNI, that given the absence of a single metal to represent bulk of the overall recoverable value of the mineralized shale, reporting of its overall grade as a traditional "metal equivalent" would be arbitrary and misleading.

Of necessity, the Resource Study opted instead to communicate overall grade by aggregating the individual gross recoverable values represented by each of the metals of interest into a single gross recoverable total per tonne value to characterize the resource and enable its discussion and testing against a base cut-off for the purposes of resource estimation. The reader is cautioned that disclosure of gross values discussed in this Report and in the Resource Study does not comply with Section 2.3(1c) of National Instrument 43-101 since the figures are gross and the term may be misleading in the absence of proven production costs. The recoverable gross values are quoted for convenience of communicating overall grade and are otherwise conceptual in nature and do not represent economic worth of the resource being reported from the Buckton Zone. The reader is also reminded that the values are based on recoverable metal grades per bench scale leaching tests and do not imply that economic viability of the recoveries has been determined and they may not reflect actual recoveries which might be achieved in an ultimate mineral production operation.

Polymetallic black shale is an emerging deposit type which has gained recognition over the past decade mainly due to advances in application of bioleaching procedures to extract low grade metals from shale by bulk-heap leaching. Worldwide, there is one active mining operation extracting polymetals via bio-heapleaching and two other scoping stage projects that are exploring/developing polymetallic deposits in black shale. These operations provide the only resource estimation and operating cost guidelines, particularly with respect to base cut-off values, that are relevant to evaluating the mineral resource hosted in the Buckton Zone.

The US$10 per tonne base cut-off used by the Resource Study is considered to be a reasonable benchmark which is higher than cut-offs utilized by recent mineral resource estimates and a scoping study for other open pit mineable poly-metallic black shales in Sweden and Finland as the break-even point and lower cut-off. This base cut-off incorporates operating costs from the only available operation worldwide of bulk mining and bioheapleaching exploitation of a polymetallic black shale deposit, and includes a nominal cost for refining of REEs into final saleable final products relying on estimates from other REE projects. Considering a scenario of possible open pit mining in northeast Alberta along the eastern edge of the Birch Mountains, with potential for a low strip ratio at startup, the likely free-dig nature of the poorly consolidated shale bedrock, the potential for easy access to multiple working faces, the location of the project with respect to access, power and other important infrastructure, the US$10 per tonne base lower cut-off value is considered reasonable for the purposes of mineral resource estimation as a base case cut-off threshold which also captures a relatively continuous mineralized zone with favourable bulk mining configuration.

DNI's leaching testwork demonstrated that the Buckton Zone mineralization is recoverable by a single bulk leaching method from the shale and that REEs and Specialty Metals are incidentally leached from the shale as co-products of leaching of base metals. The Resource Study notes that REEs account for a significant proportion of the recoverable gross value of the resource, especially for Upper zone mineralization in the Labiche shale, and concluded that ultimate economics of the resource are, accordingly, subject to uncertainties of long term REE pricing and viability of demand, the unknown effect of new production on REE markets; and the cost of separating REEs from pregnant leaching solutions once they have been leached from the shale and their refinement into saleable final products. Although the base cut-off of US$10 per tonne used in the Resource Study includes a nominal cost for separation of REEs relying on estimates from other REE projects, a sensitivity analysis was conducted in the Resource Study to investigate sensitivity of the inferred resource to cost fluctuations by testing the resource model against progressively higher arbitrary base cut-offs.

The resource model was iterated and tested at progressively higher arbitrary base cut-offs to determine the commensurate tonnages that can be classified as mineral resources against any given base cut-off. The entire shale package resource model was, accordingly, tested at base cut-offs of US$12, US$14, US$16, US$16.5 and US$17 per tonne. The sensitivity analysis demonstrated that the tonnage and distribution of the shale package is virtually intact between base cut-offs of US$10 per tonne and approximately US$16 per tonne, and that the aggregate gross recoverable value of contained metals exceeds the base cut-off, but that at higher base cut-offs the tonnage of the Upper zone hosted in the Labiche shale rapidly decreases and distribution of resource blocks lose cohesion such that at a base cut-off of US$17 per tonne virtually none of the Upper zone in Labiche shale can be classified as a mineral resource since aggregate gross recoverable value of the contained metals is less than the cut-off.

The sensitivity analysis successfully demonstrated that as the spatial distribution of the Labiche resource decreases, progressively larger portions of Labiche would be regarded as cover waste material to be removed for the purposes of any mining operations to extract the underlying resource in the Second White Speckled Shale Formation. Considering that distribution of the Upper zone hosted in Labiche shale will affect distribution and tonnage of what might be realistically mined from the underlying Lower zone resource hosted in the Second White Speckled Shale, the resource model was tested at yet higher base cut-offs of US$30, US$40, US$50, US$60, US$70 and US$80 per tonne, to simulate a scenario for which the Upper zone hosted in Labiche shale is deemed to be waste and would have to be removed together with the overburden to gain access to the underlying higher grade mineralization in the Second White Speckled Shale. In these iterative scenarios, the Lower zone in the Speckled Shale is the only mineralization of interest and the resource identified within it remains intact between base cut-offs of US$10 per tonne and US$40 per tonne at which cut-off it comprises 265 million short tons (241 million metric tonnes) extending over 5.8 square kilometres and is similar in distribution and tonnage to the Buckton Maiden Resource (Dufresne et al 2011b in Sabag 2012). The resource gradually loses cohesion at base cut-offs higher than US$40 per tonne such that at a base cut-off of US$70 per tonne virtually none of it can be classified as a mineral resource since the aggregate gross recoverable value of contained metals is less than the base cut-off. Configuration of the resource based on different cut-offs tested is shown in Figure 71.

The Resource Study overall concluded that the per tonne of recoverable gross value represented by the Labiche and Second White Speckled Shale resource is sufficiently higher than the US$10 per tonne base cut-off used by the Resource Study, and sufficiently higher than the related iteration of the resource model at higher cut-offs up to US$16 per tonne, to reasonably conclude that the Consolidated and Updated Buckton mineral resource is mineralization that has a reasonable prospect for extraction in the future.

The Resource Study concluded that the Consolidated and Updated Buckton Inferred Mineral Resource has excellent potential for expansion with further drilling, and recommended implementation of additional exploration at the Buckton Zone, and the Property, to include additional leaching testwork (ongoing) and additional drilling to continue expanding and upgrading the Buckton Zone resource hosted within the Labiche as well as the Second White Speckled Shale Formations. The Resource Study supports DNI's decision to advance the Buckton Zone toward the Preliminary Economic Assessment study (Scoping Study) which is in progress. The Study also recommended that resources reported herein at the Buckton Zone be revised to incorporate results from DNI's 2012 drilling program.

The Consolidated and Updated Buckton Inferred Mineral Resource was superceded in August 2013 by the Updated and Expanded Buckton Zone Resource Study which further expanded the Buckton resource (discussed in Section 15.4) and provided the basis for the Buckton Preliminary Economic Assessment study.

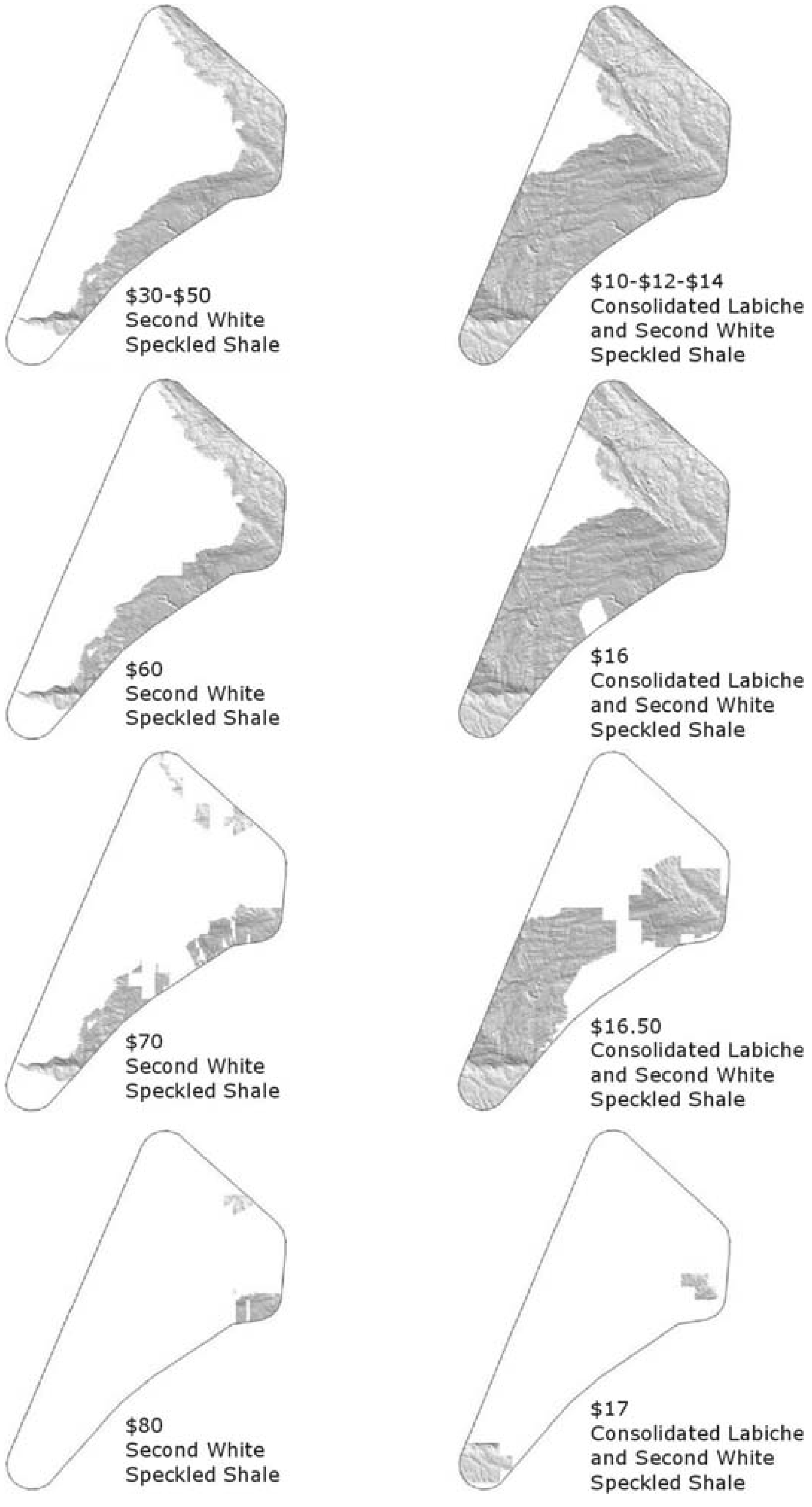

Figure 71: Configuration of the Consolidated and Updated Buckton Resource based on different base cut-offs. Consolidated and Updated Buckton Resource sensitivity study After Figures 41 and 40, Consolidated and Updated Buckton Resource Study, Eccles et al 2013a.

15.4 RESOURCE STUDY 2013 - UPDATED AND EXPANDED BUCKTON ZONE RESOURCE

The Updated and Expanded Buckton Zone Resource Study was prepared by Apex Geoscience Ltd ("Apex"), Edmonton, under the supervision of Mr.Roy Eccles PGeol, Mr.Michael Dufresne PGeol, Mr.Steven Nicholls MAIG and Kyle McMillan PGeo, as the Qualified Persons in connection with its preparation, all of whom are independent of DNI. The Study complies with National Instrument 43-101 and CIM resource estimation guidelines. The study was completed in September 2013, and the study report (Eccles et al 2013c) is appended herein as Appendix E3.

The Updated and Expanded Buckton Zone mineral resources are hosted in two near-surface stacked black shale horizons which are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc, and are partly exposed on surface. The Updated and Expanded Buckton Zone Resource Study relies on the combined drill hole data derived from historic drilling conducted in 1997 together with DNI's drill programs completed in 2011 and 2012. All of the foregoing drilling campaigns were implemented by Apex under the supervision of Mr.Dufresne.

The Updated and Expanded Buckton Zone Resource Study updated the Consolidated and Updated Buckton Mineral Resource by incorporating results from DNI's 2012 drilling over the Buckton Zone and with the benefit of preliminary guidance from the scoping study in progress. It significantly expanded, superseded and replaced all prior resource estimates reported from the Buckton Zone. Geographic distribution of the resource and related drill holes is shown in Figure 72.

The Updated and Expanded Buckton Zone Resource forms the basis for the Preliminary Economic Assessment study which was subsequently completed in December 2013 (discussed in Section 17).

Modelling and estimation of the updated Buckton mineral resources was carried out using 3-dimensional block model based on geostatistical applications using commercial mine planning software MICROMINE. The resource model relies on an aggregate of seventeen vertical core holes distributed over an area of approximately 20 square kilometres, and spaced approximately 240m-2km apart (averaging 1km). The model was generated using the combined drill hole data derived from drilling campaigns conducted in 1997, 2011 and 2012.

Drill hole samples situated within the Labiche and Second White Speckled Shale mineralized wireframes were selected and flagged with the wireframe name/code. A review of the sample lengths was conducted on the REE and polymetallic samples independently. The results varied slightly due to the different sampling intervals collected, but a 1.5m sample compositing length was selected that could be used for both sample files.

The REE sample file results showed a variable sample length from 0.14m to 6.19m in length. The 2011 drill samples were collected for the most part at a standard sample length of 0.5m or 1.0 m. The 2012 drill samples were collected for the most part at a standard 1.0 m. The 1997 drill sample lengths provide most of the variability in sample lengths, but presented a dominate sample interval of 1.5 m. Three dominant sample length populations can be noted in the entire population: 0.5 m, 1.0m and 1.5 m. An additional 11.4% of the sample lengths greater than 1.5m in size. As 88.6% of the sample data is less than 1.5m in length, it was decided that 1.5m should be used for a composite sample length.

Upon completion of the 1.5m compositing process for the polymetallic sample set, both the 1.5m composites and the 1.5m composites with the orphans (sub 1.5m composites) was examined to determine any noticeable bias applied to the grades during the compositing process (Table 26). There was little to no change in the grade for the Labiche formation sample, whereas some of the elements within the Second White Speckled Shale exhibited slight changes (<8%) in grade. The largest observed change in grade was Y where the raw assay grade changed from 49.94 ppm to 54.41 ppm when composited. The sub 1.5m composites were removed from the final composite file that was used in the REE estimation process. The composited samples were used for all sample statistics, capping, estimation input file and validation comparisons.

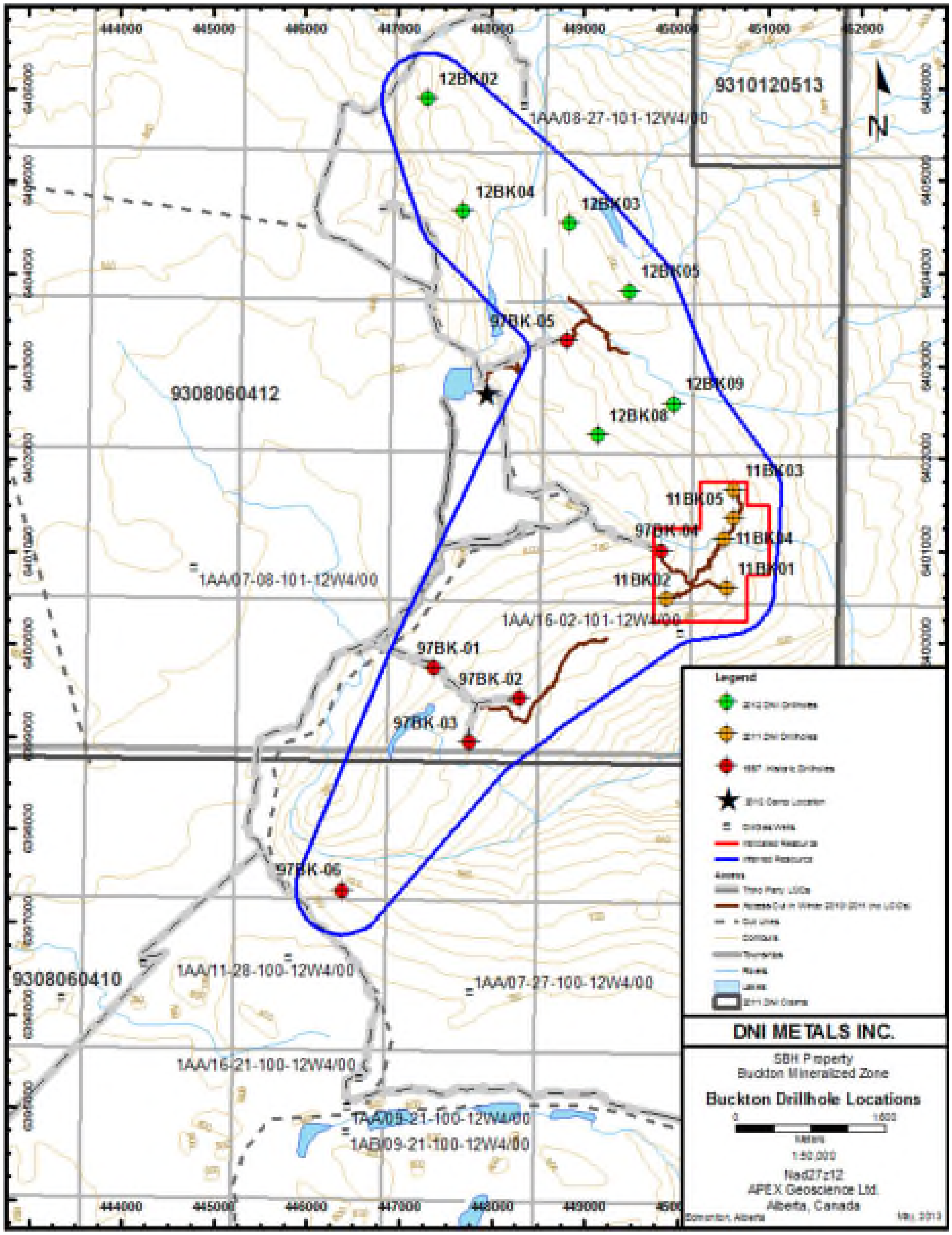

Figure 72: Geographic distribution of the Updated and Expanded Buckton Zone Resource and related drill holes. After figure 11, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

The polymetallic sample file results showed a variable sample length from 0.04m to 4.5m in length, and three dominant sample length populations, 0.5 m, 1.0m and 1.5 m. The 2011 drill samples were collected for the most part at a standard sample length of 0.5m or 1.0 m. The 2012 drill samples were collected for the most part at a standard 1.0 m. The 1997 drill sample lengths provide most of the variability in sample lengths, but have a dominate sample interval of 1.5 m. There are an additional 8.9% of the sample lengths greater than 1.5m in size. As 91.1% of the sample data is less than 1.5m in length, a 1.5m compositing interval was used for a composite sample length

Upon completion of the 1.5m compositing process for the REE sample set, both the 1.5m composites and the 1.5m composites with the orphans (sub 1.5m composites) was examined to determine any noticeable bias applied to the grades during the compositing process. There was little to no change in the grade for the Labiche formation sample with the exception of Mo where there was an increase in grade from 2.206 ppm to 2.376ppm. Some of the elements exhibited slight changes (up to 6% change) in grade within the Second White Speckled Shale. The largest observed changes were in U and V where the raw assay grade was 29.265 ppm and 667.46 ppm respectively, and when composited it produced a grade of 27.639 ppm for U and 707.842 ppm for V. The sub 1.5m composites were removed from the final composite file that was used in the polymetallic estimation process. The composited samples were used for all sample statistics, capping, estimation input file and validation comparisons.

The composited REE and polymetallic sample files for the Labiche and Second White Speckled Shale Formation was used for the top cut/capping analysis. All REE-Y-Sc-Th and polymetallic elements within the Labiche and Second White Speckled Shale were examined individually to determine suitable capping to apply to the respective grade populations. Where bi-modal populations were observed then each population was examined on its own merit. A combination of histograms, probability plots and inflection points were used to determine the extreme values to be cut. During the estimation the extreme values were capped to the values provided in Table 26.

	Labiche			Second White Speckled Sh (Low Population)			Second White Speckled Sh (High Population)		
Element	Capping Level (ppm)	No. of Samples Capped	Percentile	Capping Level (ppm)	No. of Samples Capped	Percentile	Capping Level (ppm)	No. of Samples Capped	Percentile
La2O3	55	7	99.5	80	2	98.5	108.5	4	94
Ce2O3	105	2	99.8	No Capping Required			No Capping Required		
Pr2O3	13	3	99	No Capping Required			No Capping Required		
Nd2O3	44	6	99	No Capping Required			No Capping Required		
Sm2O3	9.5	3	98.9	No Capping Required			No Capping Required		
Eu2O3	1.75	8	97.5	No Capping Required			4.85	6	93
Gd2O3	7.5	5	99.3	No Capping Required			24	3	97
Tb2O3	1.2	5	99	No Capping Required			3.6	2	97
Dy2O3	6	10	98.5	No Capping Required			21	2	98.5
Ho2O3	1.3	7	98	No Capping Required			3.8	2	99
Er2O3	3.8	7	99.3	No Capping Required			10	2	98.5
Tm2O3	0.55	11	98.5	No Capping Required			No Capping Required		
Yb2O3	3.9	4	99.5	No Capping Required			8.5	1	99
Lu2O3	0.65	2	99.7	No Capping Required			1.3	1	98
Y2O3	52	6	99	52	4	97	180	1	99
Sc203	No Capping Required			No Capping Required					
ThO2	16	2	99.5	19	1	99			
MoO3	7.1	17	98.5	No Capping Required			260	1	99
Ni	60	6	99	No Capping Required					
U3O8	8.5	7	99	No Capping Required			No Capping Required		
V2O5	575	5	99.3	No Capping Required			No Capping Required		
Zn	180	4	99.3	190	1	97	485	3	98.5
Cu	47	9	98.5	No Capping Required					
Co	22	2	99.7	36	4	99			
Li2CO3	No Capping Required			No Capping Required					

Table 26: Summary of capping, Updated and Expanded Buckton Resource. After tables 23 and 24, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

The composited REE and polymetallic sample files for the Labiche and Second White Speckled Shale Formation was used for the top cut/capping analysis. All REE-Y-Sc-Th and polymetallic elements within the Labiche and Second White Speckled Shale were examined individually to determine suitable capping to apply to the respective grade populations. Where bi-modal populations were observed then each population was examined on its own merit. A combination of histograms, probability plots and inflection points were used to determine the extreme values to be cut. During the estimation the extreme values were capped to the values provided in Tables 23 and 24.

As single populations are present for all elements of interest in the Labiche, all composites were used to determine the continuity and orientation of mineralization. Table 27 shows the ranges in lateral continuity identified from the variography for the Labiche domain. Most oxides/metals of interest exhibit a grade continuity of between 0.9 and 1.5km, whereas MoO3, Zn and Li2CO3 show horizontal grade continuity of 1.64km, 2.1km and 2.46km, respectively. Also Eu3O3, Ni and Cu show quite close grade continuity of 0.62km, 0.53km and 0.65km, respectively. The average range of the primary axis for all elements within the Labiche domain is around 1.2km. Lateral grade continuity is shown in Table 27, for the Labiche as well as Second White Speckled sample populations.

Summary of Grade Continuity		
Element/Oxide	Second White Speckled Formation Range 1 (m)	Labiche Formation Range 1 (m)
La2O3	300	1000
Ce2O3	425	987
Pr2O3	302	1355
Nd2O3	409	1033
Sm2O3	551	1090
Eu2O3	400	619
Gd2O3	575	1103
Tb2O3	585	1000
Dy2O3	500	950
Ho2O3	344	1000
Er2O3	436	1100
Tm2O3	419	1500
Yb2O3	390	1100
Lu2O3	550	1100
Y2O3	790	1152
Sc203	990	1500
ThO2	2200	1500
MoO3	350	1640
Ni	200	532
U3O8	1500	1200
V2O5	900	1350
Zn	600	2100
Cu	1200	650
Co	380	991
Li2CO3	1400	2460

Table 27: Summary of lateral grade continuity, Updated and Expanded Buckton Resource. After Tables 25 and 26, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

Ranges in lateral continuity identified from the variography for the Second White Speckled Shale REE-Y-Sc-Th/polymetallic domain, which initially examined each of the high and low grade REE/polymetallic populations separately, but due to the lack of samples it was decided to look at both populations as a whole. The majority of elements show a lateral range between 0.2 to 1.0km. ThO2, U3O8, Cu and Li2O3 exhibit a larger lateral continuity with the ranges of 2.2km, 1.5km, 1.2km and 1.4km respectively. The overall average range of the primary axis for all elements within the Second White Speckled Shale domain is around 0.5km.

The Updated and Expanded Resource Study concluded that mineralized black shale in the area shows good lateral uniformity for many of the contained metals over large distances across the Property, that the spacing and number of drill holes over the Buckton Zone are sufficient for the determination of an inferred resource, and that extrapolation of grades between the drill holes is supported by statistical variography examined during the Study. It also concluded that the spacing and number of holes over a portion of the Zone are sufficient for the delineation of an indicated resource, and that extrapolation of grades between the drill holes is also supported by statistical variography examined during the Study. Considering that leaching tests completed by DNI to date on samples from the Labiche and Second White Speckled Shale formations report different recoveries for the metals of interest, the resource modeling treated the two shale units separately.

As a result of the wide hole spacing a parent model block size of 250mx250mx3m was chosen for the resource estimate. The block model extents were extended far enough past the mineralized wireframe to encompass the entire domain. The recoverable grades for the metals were translated into a US$ value for each block and sub-block relying on the metals recoveries from DNI's leaching tests and two-year trailing average metal/oxide prices to May 31, 2013, and the values were aggregated into a collective gross recoverable value for each block and sub-block to enable testing against the block value base case cut-off for each Formation.

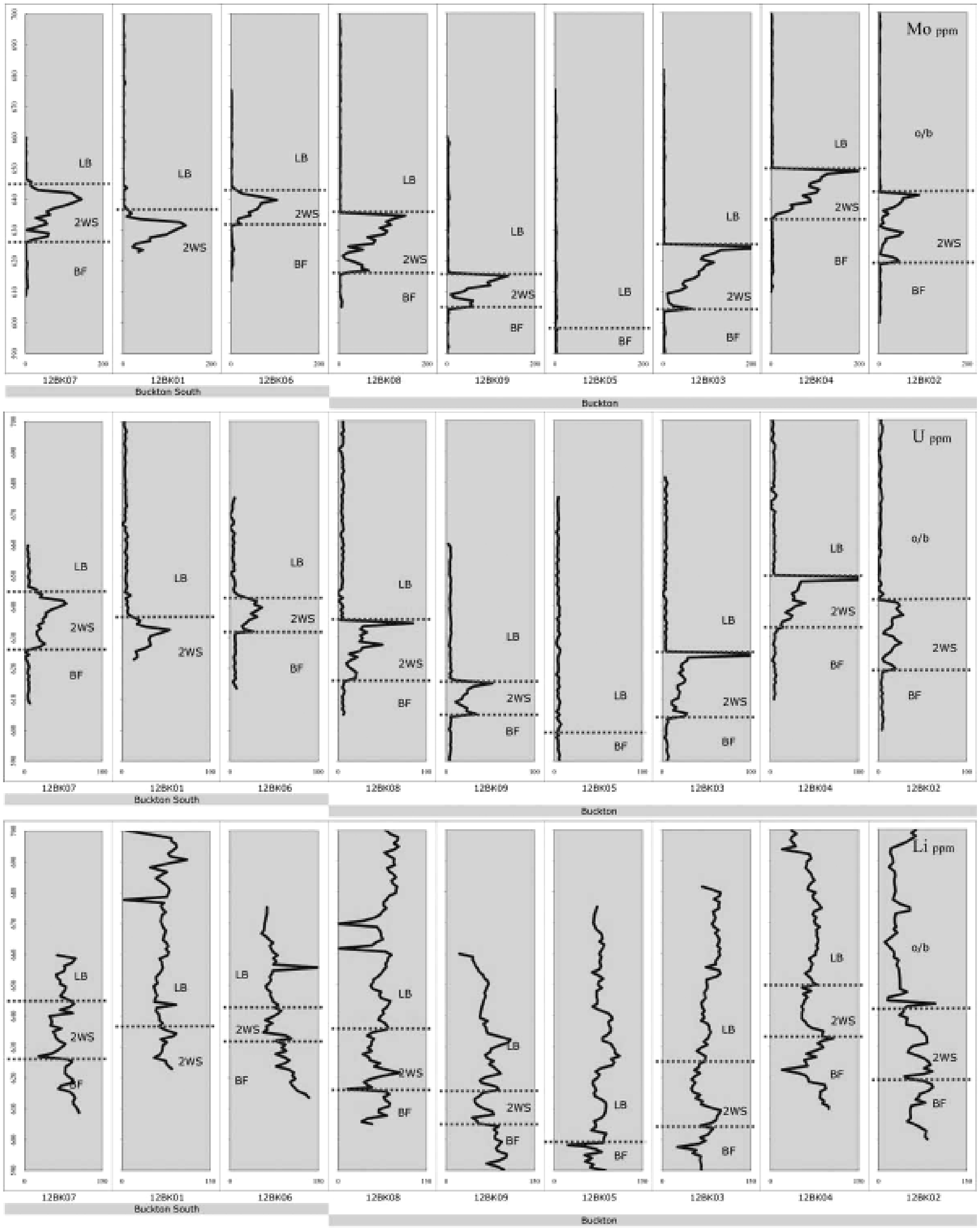

Figure 73: Downhole geochemical profiles for Mo, U and Li for 2012 holes - 2012 Summer Drilling Program. Note: holes 12BK06 and 12BK07 are 3.1km apart, holes 12BK02 and 12BK08 are 5.6km apart, holes 12BK07 and 12BK02 are 21.4km apart, along fence.

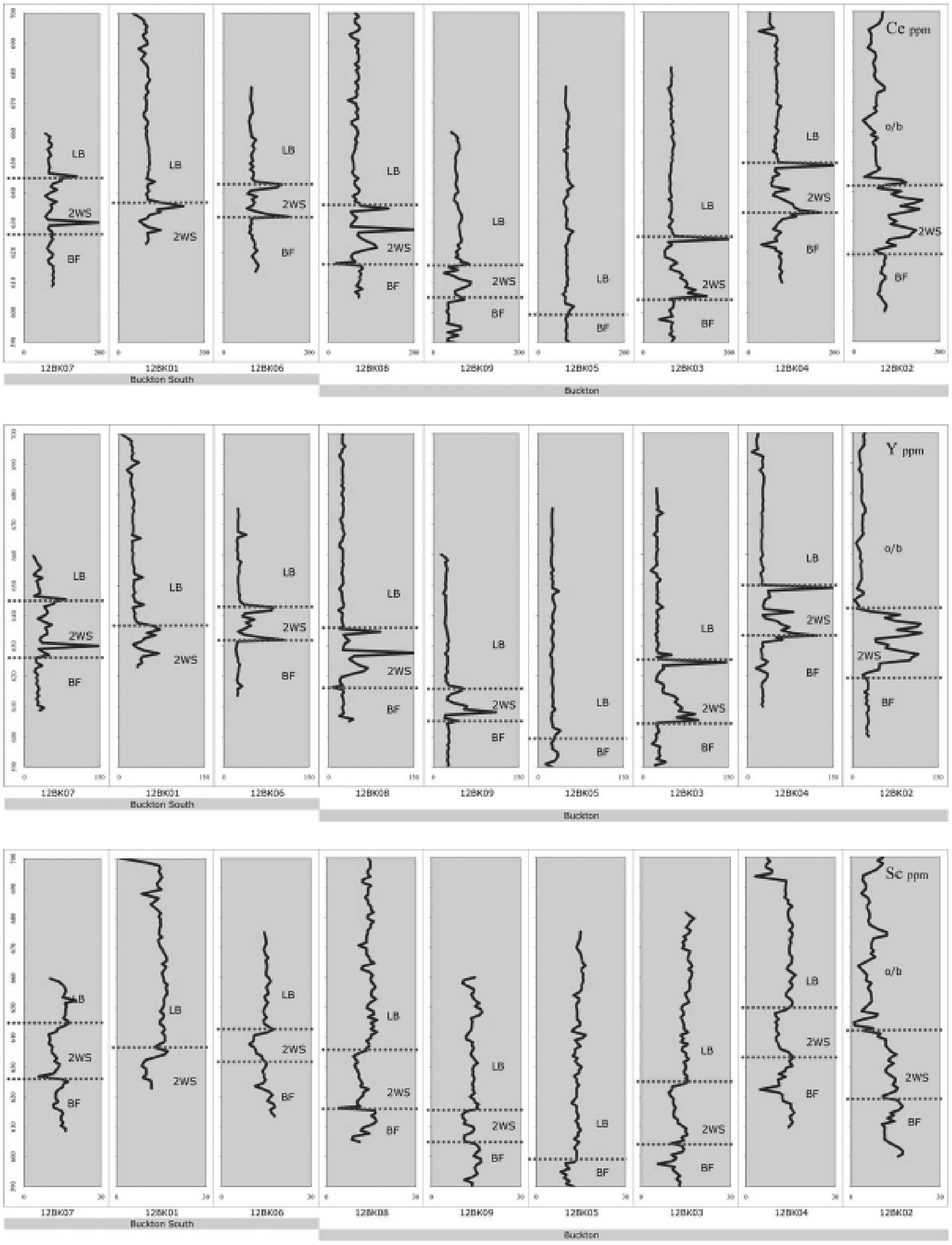

Figure 74: Downhole geochemical profiles for Ce, Y and Sc for 2012 holes - 2012 Summer Drilling Program Note: holes 12BK06 and 12BK07 are 3.1km apart, holes 12BK02 and 12BK08 are 5.6km apart, holes 12BK07 and 12BK02 are 21.4km apart, along fence.

The Updated and Expanded Buckton Resource is based on a base cut-off of US$11/tonne and US$12.5/tonne for the Labiche and the Second White Speckled Shale Formations, respectively, reflecting the different operating cost estimates related to leaching of metals from the two Formations. Unlike prior resource studies from the Zone which were arbitrarily constrained by a maximum mineable depth of 75m, the resources reported in the current study comprise all mineralized tonnages which represent sufficient gross recoverable value exceeding the base cut-off to accommodate removal of overlying cover waste material. The Updated Resource Study also uses more current metal prices than those in prior studies, as well as higher base cut-offs and more conservative metals recoveries believed to better represent bioheapleaching field conditions. The Updated Resource Study relies on initial findings from the scoping study which is in progress, and incorporates preliminary mine engineering design and operating cost estimates into revised base cut-offs as well as mining depth criteria for the purposes of classifying mineralized material as resources.

The updated and expanded Buckton mineral resource consists of 4,894,386,000 short tons (4,440,112,000 tonnes) of inferred resource extending over 20.4 square kilometres, and 299,760,000 short tons (271,938,000 tonnes) of indicated resource extending over 1.5 square kilometres. The resources comprise a wedge of continuous mineralization hosted in the Labiche Formation and underlying Second White Speckled Shale Formation, which are two flat-lying black shale Formations that are stacked to comprise a continuous thick zone of mineralized shale. The resources are mineralized with recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu), Cobalt (Co), Lithium (Li), Scandium (Sc), Thorium (Th) and Rare Earth Elements Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy), Yttrium (Y). The Updated Resource Study estimates that the inferred and the indicated resources are overlain by 1,732,104,000 short tons (1,571,338,000 tonnes) and 31,320,000 short tons (28,413,000 tonnes) of glacial till overburden, respectively. The inferred and indicated resources are shown in Table 28.

Buckton Zone Updated and Expanded Inferred Mineral Resource
Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined

Mineralized Shale (tons)	4,894,386,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	23	67.4	10.7	606.4	169.6	40.2	15.3	375.2	
Recovery %	3	64	70	7	52	25	72	17	
Recoverable Grade (ppm)	0.7	43.1	7.5	42.5	88.2	10.1	11	63.8	
Metal/Oxide Price* (US$/lb)	12.89	8.34	60.74	5.89	0.94	3.64	14.38	2.82	
Recoverable metal/oxide (kg)	3,058,000	191,533,000	33,389,000	188,484,000	391,683,000	44,629,000	49,040,000	283,238,000	
Recoverable metal/oxide (lbs)	6,742,000	422,257,000	73,610,000	415,536,000	863,512,000	98,390,000	108,115,000	624,432,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	48.6	84	10.5	40.2	7.9	1.7	6.7	1	
Recovery %	20	30	40	43	47	61	63	65	
Recoverable Grade (ppm)	9.7	25.2	4.2	17.3	3.7	1	4.2	0.7	
Metal/Oxide Prices* (US$/kg)	44.58	43.2	140.41	156.16	68.16	2,742.11	105.78	2,190.48	
Recoverable Oxide (kg)	43,190,000	111,947,000	18,676,000	76,718,000	16,523,000	4,490,000	18,740,000	3,020,000	
Recoverable Oxide (lbs)	95,218,000	246,801,000	41,173,000	169,134,000	36,427,000	9,899,000	41,315,000	6,658,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5.9	1.2	3.4	0.5	3.4	0.5	40.5	16.5	11.9
Recovery %	65	64	62	60	58	55	67	24	12.5
Recoverable Grade (ppm)	3.9	0.8	2.1	0.3	2	0.3	27.1	3.9	1.5
Metal/Oxide Prices* (US$/kg)	1,240.31	202.98	169.01	97	102.98	1,273.00	107.77	4,194.66	252
Recoverable Oxide (kg)	17,160,000	3,334,000	9,458,000	1,369,000	8,759,000	1,328,000	120,398,000	17,534,000	6,624,000
Recoverable Oxide (lbs)	37,831,000	7,350,000	20,851,000	3,018,000	19,310,000	2,928,000	265,432,000	38,656,000	14,603,000

* Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm_2O_3). Sources: Metal-pages.com; Asianmetal.com; USGS. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 and 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. See additional cautionary language in body text in this Section.

Table 28: Buckton Zone Updated and Expanded Inferred Mineral Resource, Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined, Updated and Expanded Buckton Resource study. After Table 37, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

Buckton Zone Indicated Mineral Resource **Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined**									
Mineralized Shale (tons)	299,760,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	27	70.3	10.9	659.9	174.8	41.6	16.5	372.4	
Recovery %	3	64	70	7	52	25	72	17	
Recoverable Grade (ppm)	0.8	45	7.6	46.2	90.9	10.4	11.9	63.3	
Metal/Oxide Price* (US$/lb)	12.89	8.34	60.74	5.89	0.94	3.64	14.38	2.82	
Recoverable metal/oxide (kg)	220,000	12,231,000	2,079,000	12,562,000	24,723,000	2,832,000	3,229,000	17,217,000	
Recoverable metal/oxide (lbs)	485,000	26,965,000	4,583,000	27,694,000	54,505,000	6,243,000	7,119,000	37,957,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	48.4	84	10.2	39	7.6	1.6	6.4	1	
Recovery %	20	30	40	43	47	61	63	65	
Recoverable Grade (ppm)	9.7	25.2	4.1	16.8	3.6	1	4.1	0.7	
Metal/Oxide Prices* (US$/kg)	44.58	43.2	140.41	156.16	68.16	2,742.11	105.78	2,190.48	
Recoverable Oxide (kg)	2,633,000	6,849,000	1,111,000	4,559,000	973,000	265,000	1,105,000	177,000	
Recoverable Oxide (lbs)	5,805,000	15,099,000	2,449,000	10,051,000	2,145,000	584,000	2,436,000	390,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5.8	1.2	3.4	0.5	3.4	0.5	39.2	17.3	12
Recovery %	65	64	62	60	58	55	67	24	12.5
Recoverable Grade (ppm)	3.8	0.8	2.1	0.3	2	0.3	26.2	4.2	1.5
Metal/Oxide Prices* (US$/kg)	1,240.31	202.98	169.01	97	102.98	1,273.00	107.77	4,194.66	252
Recoverable Oxide (kg)	1,033,000	208,000	579,000	85,000	537,000	82,000	7,134,000	1,132,000	407,000
Recoverable Oxide (lbs)	2,277,000	459,000	1,276,000	187,000	1,184,000	181,000	15,728,000	2,496,000	897,000
* Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm_2O_3). Sources: Metal-pages.com; Asianmetal.com; USGS. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 and 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.–Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. See additional cautionary language in body text in this Section.									

Table 29: Buckton Zone Updated and Expanded Indicated Mineral Resource, Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined, Updated and Expanded Buckton Resource study. After Table 37, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.

The Updated and Expanded Buckton mineral resources consist of an Upper, lower-grade, mineralized horizon hosted in the Labiche Formation which directly overlies a higher-grading horizon hosted in the Second White Speckled Shale Formation beneath it. The two Formations together comprise an approximately 13m-140m thick wedge of mineralized black shale, extending westward from the eastern erosional edge of the Birch Mountains where they are exposed on surface but are under progressively thicker cover westwards.

The updated and expanded Buckton inferred resource is distributed between the Upper and Lower portions are as follows: (a) 3.9 billion short tons (3.5 billion metric tonnes) in the Upper, lower grade, portion hosted in the Labiche Formation ranging 13m-115m in thickness (ultimate thickness of the Labiche Shale at the Property is unknown as near-surface portions of it have been locally scoured away by glaciation); and (b) 1 billion short tons (0.9 billion metric tonnes) in the Lower, higher grade, portion hosted in the Second White Speckled Shale Formation ranging 13m-26m in thickness. Details of the Upper and Lower portions comprising the inferred resource are shown in Table 30.

Buckton Zone Updated and Expanded Inferred Mineral Resource
Upper Portion - in Labiche Formation

Mineralized Shale (tons)	3,876,767,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	2.9	47.7	5.2	445.8	140.7	30.8	13.6	394.3	
Recovery %	3	64	70	7	52	25	72	17	
Recoverable Grade (ppm)	0.1	30.5	3.6	31.2	73.2	7.7	9.8	67	
Metal/Oxide Price* (US$/lb)	12.89	8.34	60.74	5.89	0.94	3.64	14.38	2.82	
Recoverable metal/oxide (kg)	306,000	107,417,000	12,757,000	109,756,000	257,290,000	27,100,000	34,416,000	235,720,000	
Recoverable metal/oxide (lbs)	675,000	236,814,000	28,124,000	241,970,000	567,227,000	59,745,000	75,874,000	519,673,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	44.3	79.1	9.6	36	6.9	1.4	5.6	0.9	
Recovery %	20	30	40	43	47	61	63	65	
Recoverable Grade (ppm)	8.9	23.7	3.8	15.5	3.3	0.9	3.5	0.6	
Metal/Oxide Prices* (US$/kg)	44.58	43.2	140.41	156.16	68.16	2,742.11	105.78	2,190.48	
Recoverable Oxide (kg)	31,167,000	83,482,000	13,471,000	54,442,000	11,442,000	3,078,000	12,379,000	2,022,000	
Recoverable Oxide (lb)	68,711,000	184,046,000	29,698,000	120,024,000	25,225,000	6,786,000	27,291,000	4,458,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5	1	3	0.5	3.1	0.5	32	17.2	12
Recovery %	65	64	62	60	58	55	67	24	12.5
Recoverable Grade (ppm)	3.3	0.6	1.9	0.3	1.8	0.3	21.5	4.1	1.5
Metal/Oxide Prices* (US$/kg)	1,240.31	202.98	169.01	97	102.98	1,273.00	107.77	4,194.66	252
Recoverable Oxide (kg)	11,524,000	2,261,000	6,539,000	958,000	6,244,000	957,000	75,473,000	14,544,000	5,262,000
Recoverable Oxide (lb)	25,406,000	4,985,000	14,416,000	2,112,000	13,766,000	2,110,000	166,389,000	32,064,000	11,601,000

* Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm_2O_3). Sources: Metal-pages.com; Asianmetal.com; USGS. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 and 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. See additional cautionary language in body text in this Section.

Buckton Zone Updated and Expanded Inferred Mineral Resource
Lower Portion - in Second White Speckled Shale Formation

Mineralized Shale (tons)	1,017,619,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	99.4	142.4	31.9	1218.3	280	76	22	302.8	
Recovery %	3	64	70	7	52	25	72	17	
Recoverable Grade (ppm)	3	91.1	22.3	85.3	145.6	19	15.8	51.5	
Metal/Oxide Price* (US$/lb)	12.89	8.34	60.74	5.89	0.94	3.64	14.38	2.82	
Recoverable metal/oxide (kg)	2,752,000	84,116,000	20,632,000	78,728,000	134,393,000	17,529,000	14,624,000	47,518,000	
Recoverable metal/oxide (lbs)	6,067,000	185,444,000	45,486,000	173,565,000	296,285,000	38,645,000	32,240,000	104,759,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	65.1	102.8	14.1	56.1	11.7	2.5	10.9	1.7	
Recovery %	20	30	40	43	47	61	63	65	
Recoverable Grade (ppm)	13	30.8	5.6	24.1	5.5	1.5	6.9	1.1	
Metal/Oxide Prices* (US$/kg)	44.58	43.2	140.41	156.16	68.16	2,742.11	105.78	2,190.48	
Recoverable Oxide (kg)	12,024,000	28,465,000	5,205,000	22,276,000	5,081,000	1,412,000	6,361,000	999,000	
Recoverable Oxide (lb)	26,508,000	62,755,000	11,475,000	49,110,000	11,202,000	3,113,000	14,024,000	2,202,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	9.4	1.8	5.1	0.7	4.7	0.7	72.6	13.5	11.8
Recovery %	65	64	62	60	58	55	67	24	12.5
Recoverable Grade (ppm)	6.1	1.2	3.2	0.4	2.7	0.4	48.7	3.2	1.5
Metal/Oxide Prices* (US$/kg)	1,240.31	202.98	169.01	97	102.98	1,273.00	107.77	4,194.66	252
Recoverable Oxide (kg)	5,637,000	1,073,000	2,918,000	411,000	2,515,000	371,000	44,925,000	2,990,000	1,361,000
Recoverable Oxide (lb)	12,427,000	2,366,000	6,433,000	906,000	5,545,000	818,000	99,043,000	6,592,000	3,000,000

* Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm_2O_3). Sources: Metal-pages.com; Asianmetal.com; USGS. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 and 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. See additional cautionary language in body text in this Section.

Table 30: Components of the Buckton Zone Updated and Expanded Inferred Mineral Resource. The Upper portion in Labiche Formation and the Lower portion in the Second White Speckled Shale Updated and Expanded Buckton Resource study. After Table 37, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

The Buckton indicated resource is distributed between the Upper and Lower portions as follows: (a) 228 million short tons (207 million metric tonnes) in the Upper, lower grade, zone hosted in the Labiche Formation ranging 13m-115m in thickness (ultimate thickness of the Labiche Shale at the Property is unknown as near-surface portions of it have been locally scoured away by glaciation); and (b) 72 million short tons (65 million metric tonnes) in the Lower, higher grade, zone hosted in the Second White Speckled Shale Formation ranging 13m-23m in thickness. Details of the Upper and Lower portions comprising the Indicated resource are shown in Table 31.

Buckton Zone Indicated Mineral Resource Upper Portion - in Labiche Formation									
Mineralized Shale (tons)	227,747,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	3.7	47.3	5.2	452.7	143.6	31.3	14.3	395.7	
Recovery %	3	64	70	7	52	25	72	17	
Recoverable Grade (ppm)	0.1	30.3	3.6	31.7	74.7	7.8	10.3	67.3	
Metal/Oxide Price* (US$/lb)	12.89	8.34	60.74	5.89	0.94	3.64	14.38	2.82	
Recoverable metal/oxide (kg)	23,000	6,255,000	750,000	6,547,000	15,430,000	1,617,000	2,127,000	13,900,000	
Recoverable metal/oxide (lbs)	51,000	13,790,000	1,653,000	14,434,000	34,017,000	3,565,000	4,689,000	30,644,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	45.5	82.2	9.7	36.8	7.1	1.5	5.7	0.9	
Recovery %	20	30	40	43	47	61	63	65	
Recoverable Grade (ppm)	9.1	24.7	3.9	15.8	3.3	0.9	3.6	0.6	
Metal/Oxide Prices* (US$/kg)	44.58	43.2	140.41	156.16	68.16	2,742.11	105.78	2,190.48	
Recoverable Oxide (kg)	1,880,000	5,097,000	800,000	3,273,000	690,000	186,000	747,000	121,000	
Recoverable Oxide (lb)	4,145,000	11,237,000	1,764,000	7,216,000	1,521,000	410,000	1,647,000	267,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	5.2	1.1	3.1	0.5	3.2	0.5	34.2	18.3	12.1
Recovery %	65	64	62	60	58	55	67	24	12.5
Recoverable Grade (ppm)	3.4	0.7	1.9	0.3	1.9	0.3	22.9	4.4	1.5
Metal/Oxide Prices* (US$/kg)	1,240.31	202.98	169.01	97	102.98	1,273.00	107.77	4,194.66	252
Recoverable Oxide (kg)	703,000	142,000	403,000	60,000	383,000	59,000	4,733,000	908,000	312,000
Recoverable Oxide (lb)	1,550,000	313,000	888,000	132,000	844,000	130,000	10,434,000	2,002,000	688,000

Buckton Zone Indicated Mineral Resource Lower Portion - in Second White Speckled Shale Formation									
Mineralized Shale (tons)	72,013,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	100.4	142.9	29.1	1315.5	273.6	74.4	23.4	298.7	
Recovery %	3	64	70	7	52	25	72	17	
Recoverable Grade (ppm)	3	91.5	20.3	92.1	142.3	18.6	16.9	50.8	
Metal/Oxide Price* (US$/lb)	12.89	8.34	60.74	5.89	0.94	3.64	14.38	2.82	
Recoverable metal/oxide (kg)	197,000	5,976,000	1,329,000	6,016,000	9,294,000	1,215,000	1,103,000	3,318,000	
Recoverable metal/oxide (lbs)	434,000	13,175,000	2,930,000	13,263,000	20,490,000	2,679,000	2,432,000	7,315,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	57.7	89.4	11.9	45.8	9.2	2	8.7	1.3	
Recovery %	20	30	40	43	47	61	63	65	
Recoverable Grade (ppm)	11.5	26.8	4.8	19.7	4.3	1.2	5.5	0.9	
Metal/Oxide Prices* (US$/kg)	44.58	43.2	140.41	156.16	68.16	2,742.11	105.78	2,190.48	
Recoverable Oxide (kg)	754,000	1,752,000	310,000	1,286,000	283,000	79,000	357,000	56,000	
Recoverable Oxide (lb)	1,662,000	3,862,000	683,000	2,835,000	624,000	174,000	787,000	123,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	7.8	1.6	4.3	0.6	4.1	0.6	54.9	14.3	11.6
Recovery %	65	64	62	60	58	55	67	24	12.5
Recoverable Grade (ppm)	5	1	2.7	0.4	2.4	0.3	36.8	3.4	1.4
Metal/Oxide Prices* (US$/kg)	1,240.31	202.98	169.01	97	102.98	1,273.00	107.77	4,194.66	252
Recoverable Oxide (kg)	330,000	67,000	176,000	25,000	154,000	23,000	2,402,000	224,000	95,000
Recoverable Oxide (lb)	728,000	148,000	388,000	55,000	340,000	51,000	5,295,000	494,000	209,000
* Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm_2O_3). Sources: Metal-pages.com; Asianmetal.com; USGS. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2011 and 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. Re-analysis of historic drill core included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve.									

Table 31: Components of the Buckton Zone Updated and Expanded Indicated Mineral Resource. The Upper portion in Labiche Formation and the Lower portion in the Second White Speckled Shale Updated and Expanded Buckton Resource study. After Table 36, Updated and Expanded Buckton Zone Resource Study, Eccles et al 2013c.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.

The Buckton inferred resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls. The inferred resource is open to the south over the approximately seven kilometres separating it from the Buckton South Zone mineral resource (Section 16) and available surface exploration information suggests that the two Zones may well be connected. The indicated resource is surrounded by the inferred resource and is, as such, open in all directions into mineralization which may be upgraded into the indicated class subject to infill drilling.

The Updated Resource Study concluded that the updated Buckton inferred and indicated mineral resources represent mineralization which has a reasonable prospect for extraction in the future. These resources comprise all Labiche and Second White Speckled Shale resource blocks for which the combined gross value of recoverable contained Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc exceeds the base cut-offs of US$11 and US$12.5 per tonne for the Labiche and Second White Speckled Shales, respectively, relying on interim metals recovery results from DNI's leaching testwork then in progress at Canmet (see Section 14.2), and for which the combined gross value of recoverable contained metals is sufficiently high to accommodate costs of removal of overlying cover waste material. Metal prices used are the two year trailing commodity price averages to May 31, 2013.

While the collective work from the Buckton Zone indicate that none of the metals present in the Buckton Zone occurs in sufficiently high enough concentration to be of economic merit by itself, the metals of interest collectively represent sufficient recoverable gross value on a combined basis to place the resources identified at the Buckton Zone within reach of economic viability provided the metals are efficiently recovered on a combined basis. DNI's leaching testwork has already demonstrated that the metals can be collectively extracted from the shale but clear communication of overall bulk grade has been a challenge considering the polymetallic nature of the mineralization of merit. In the foregoing regard, the Updated Resource Study notes, with concurrence from DNI, that given the absence of a single metal to represent bulk of the overall recoverable value of the mineralized shale, reporting of its overall grade as a traditional "metal equivalent" would be arbitrary and misleading. Of necessity, the Resource Study has, accordingly, opted instead to communicate overall grade by aggregating the individual gross recoverable values represented by each of the metals of interest into a single gross recoverable total per tonne value to characterize the resource and enable its discussion and testing against a base cut-off for the purposes of resource estimation. **The reader is cautioned that disclosure of gross values discussed in this Report and in the Resource Study does not comply with Section 2.3(1c) of National Instrument 43-101 since the figures are gross and the term may be misleading in the absence of proven production costs.** The recoverable gross values are quoted for convenience of communicating overall grade and are otherwise conceptual in nature and do not represent economic worth of the resource being reported from the Buckton Zone. The reader is also reminded that the values are based on recoverable metal grades per bench scale leaching tests and do not imply that economic viability of the recoveries has been determined and they may not reflect actual recoveries which might be achieved in an ultimate mineral production operation.

Polymetallic black shale is an emerging deposit type which has gained recognition over the past decade mainly due to advances in application of bioleaching procedures to extract low grade metals from shale by bulk-heap leaching. Worldwide, there is one active mining operation extracting polymetals via bio-heapleaching and two other scoping stage projects that are exploring/developing polymetallic deposits in black shale. These operations provide the only resource estimation and operating cost guidelines, particularly with respect to base cut-off values, that are relevant to evaluating the mineral resource hosted in the Buckton Zone. The US$11 and US$12.5 per tonne base cut-offs used by the Updated Resource Study are considered to be reasonable benchmarks which are higher than cut-offs utilized by recent mineral resource estimates and a scoping study for other open pit mineable poly-metallic black shales in Sweden and Finland as the break-even point and lower cut-off. These base cut-offs are guided by initial preliminary findings from DNI's ongoing scoping study for the Buckton Zone, and incorporate operating costs from the only available operation worldwide of bulk mining and bioheapleaching exploitation of a polymetallic black shale deposit. The cut-offs also include a nominal cost for refining of REEs into saleable final products relying on estimates from other REE projects. Considering a scenario of possible open pit mining in northeast Alberta along the eastern edge of the Birch Mountains, with potential for a low strip ratio at startup, the likely free-dig nature of the poorly consolidated shale bedrock, the potential for easy access to multiple working faces, the location of the project with respect to access, power and other important infrastructure, the foregoing base cut-off values are considered reasonable for the purposes of mineral resource estimation as base case thresholds which also capture a relatively continuous mineralized zone with favourable bulk mining configuration.

DNI's leaching testwork demonstrated that the Buckton Zone mineralization is recoverable by a single bulk leaching method from the shale and that REEs and Specialty Metals are incidentally leached from the shale as co-products of leaching of base metals. Considering that REEs account for a significant proportion of the recoverable gross value of the resource, especially for the Upper portion of mineralization in the Labiche shale, the ultimate economics of the resource are, accordingly, subject to uncertainties of long term REE pricing and viability of demand, the unknown effect of new production on REE markets, and the cost of separating REEs from pregnant leaching solutions once they have been leached from the shale and their refinement into saleable final products. Although the base cut-offs used in the Updated Resource Study include a nominal cost for separation of REEs relying on estimates from other REE projects, a sensitivity analysis was conducted to investigate sensitivity of the Buckton resources to cost fluctuations by testing the resource model against progressively higher arbitrary base cut-offs.

The resource model was iterated and tested at progressively higher arbitrary base cut-offs to determine the commensurate tonnages that can be classified as mineral resources against any given base cut-off. The entire shale package resource model was, accordingly, tested at base cut-offs of US$12.5, US$15, US$20, US$25, US$30, US$35, US$40 and US$50 per tonne, and the respective tonnages that can be classified as a mineral resource were estimated. The sensitivity analysis demonstrated that the tonnage and distribution of the shale package is virtually intact between base cut-offs of US$11 per tonne and approximately US$20 per tonne, and that the aggregate gross recoverable value of contained metals exceeds the base cut-off, but that at progressively higher base cut-offs the tonnage of the Upper (lower grade) portion of the resource which is hosted in the Labiche shale rapidly decreases and distribution of resource blocks lose cohesion and ultimately virtually none of the Upper zone in Labiche shale can be classified as a mineral resource since the aggregate gross recoverable value of the contained metals is less than the cut-off.

The sensitivity analysis successfully demonstrated that as the spatial distribution of the Labiche resource decreases, progressively larger portions of Labiche would be regarded as cover waste material to be removed for the purposes of any mining operations to extract the underlying resource in the Second White Speckled Shale Formation. Considering that distribution of the Upper zone hosted in Labiche shale will affect distribution and tonnage of what might be realistically mined from the underlying Lower zone resource hosted in the Second White Speckled Shale, the resource model was tested at the higher base cut-offs to simulate a scenario for which the Upper portion of the resource hosted in Labiche shale is deemed to be waste and would have to be removed together with the overburden to gain access to the underlying higher grade mineralization in the Second White Speckled Shale. In these iterative scenarios, the Lower portion of the resource hosted in the Speckled Shale is the only mineralization of interest and the resource identified within it remains intact between base cut-offs of US$11 per tonne and US$35, but gradually loses cohesion at higher base cut-offs such that at a base cut-off of US$50 per tonne virtually none of it can be classified as a mineral resource since the aggregate gross recoverable value of contained metals is less than the base cut-off.

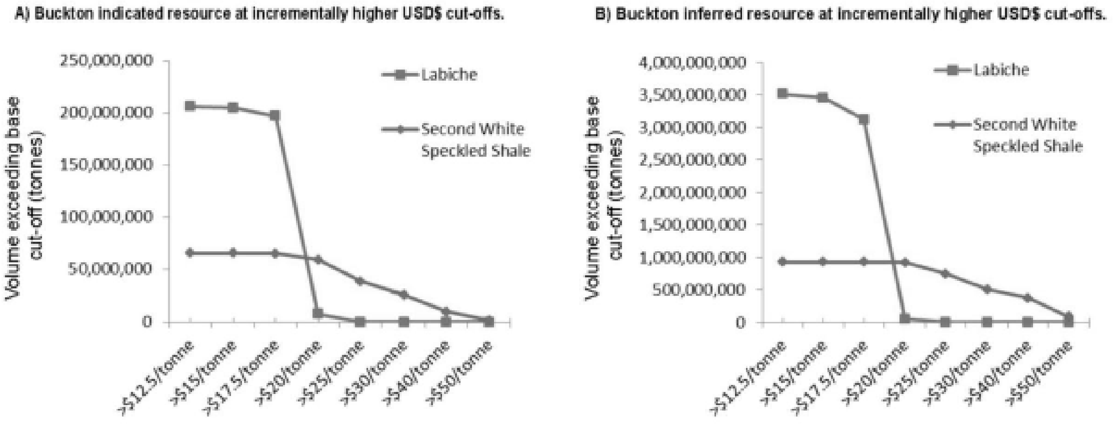

Figure 75: Configuration of the Updated and Expanded Buckton Resource based on different base cut-offs. Updated and Expanded Buckton Resource sensitivity study After figure 26, Updated and Expanded Buckton Resource Study, Eccles et al 2013c.

The Updated and Expanded Buckton Resource Study concluded that the inferred and indicated resources at the Buckton Zone have excellent potential for expansion with further drilling. The Study recommended implementation of infill drilling over the Buckton Zone to upgrade additional material to the indicated class, along with exploratory drilling to test the seven kilomtres separating the Buckton Zone resources from the mineral resource Buckton South Zone (discussed in Section 16). The Study also recommended that DNI's ongoing leaching testwork be expanded and that DNI give consideration to commencing baseline environmental studies relating to the Buckton Zone.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.

16. RESOURCE STUDY 2012-2013 - BUCKTON SOUTH ZONE

APEX Geoscience Ltd. was commissioned in late 2012 to prepare a NI-43-101 compliant mineral resource study for the Buckton South Zone which is located approximately seven kilometres to the south of the Buckton Zone. An inferred resource had previously been delineated from the Buckton Zone and it is possible, based on many mineralized surface exposures and multimetal geochemical soil anomalies throughout the area separating both Zones, that the two Zones are connected.

The Buckton South Maiden Resource Study[32] was completed in February 2013 by APEX under the supervision of Mr.Roy Eccles PGeol, Mr.Michael Dufresne PGeol and Mr.Steven Nicholls MAIG, who are the Qualified Persons in connection with its preparation and are independent of DNI. The Study complies with National Instrument 43-101 and CIM resource estimation guidelines, and relies on DNI's 2012 Summer drilling over the Zone, supported by other historic exploration information from the area. the Buckton South Maiden Resource is the first mineral resource delineated over the Buckton South Zone. The Buckton South Maiden Resource study report (Eccles et al 2013b) is appended herein as Appendix E4. A summary of salient conclusions from the Study are outlined below, and the reader is referred to the foregoing report for additional details.

Modeling and estimation of the Buckton South maiden resource was carried out using 3-dimensional block model based on geostatistical applications using commercial mine planning software MICROMINE (v12.5.4). The model relies on an aggregate of three vertical core holes drilled by DNI in 2012 which are spaced approximately 860m to 1.8km (averaging 1.3km). Drill hole locations are shown on a plan view sketch for the Buckton South Zone in Figure 76.

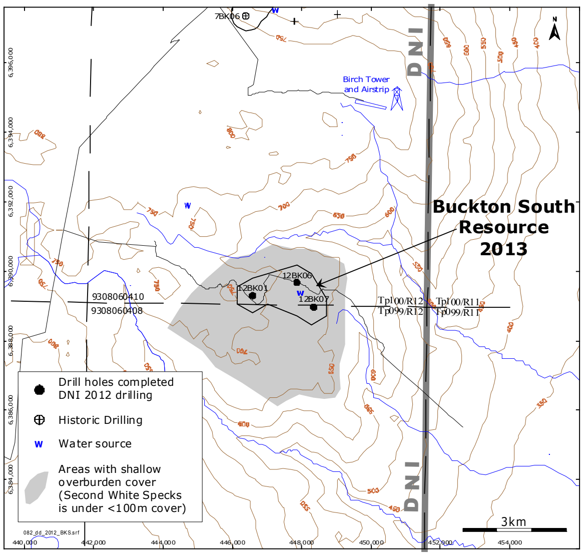

Figure 76: Buckton South drilling and resource location sketch, showing location of access and water holes.

A review of the sample lengths was conducted on all of the Buckton South Zone un-composited drill intercepts samples that were situated within the Labiche and Second White Speckled Shale domains. Results showed the sample lengths varied from 0.17m to 2.5m in length, the 1.0m sample length being the dominant sample length group (89.1% of the samples). Essentially 97.1% of all of the samples were less than 1.0m in length. Thus, a composite length of 1.0m was selected and length weighted composites were calculated for oxides/metals of interest.

Considering that bench scale leaching tests completed by DNI to date on samples from the Labiche and Second White Speckled Shale formations report different recoveries for the metals of interest, the resource modeling treated the two shale units separately (as had also been previously done for resource studies for the Buckton Zone). According to the foregoing scheme, the Buckton South Zone assay file was composited using MICROMINE into separate sub-domains where the analytical data were assigned to composite sample files comprising 99 composite samples for the Labiche sub-domain (at 1.0m intervals) and 41 composite samples for the Second White Speckled Shale sub-domain (at 1.0m intervals).

The composited sample data for the Labiche and Second White Speckled Shale Formation was used for the top cut analysis. All grade elements within the Labiche and Second White Speckled Shale REE-Y-Sc-Th and

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[32] Report: National Instrument 43-101 Technical Report, Maiden Inferred Resource Estimate For The Buckton South Zone, SBH Property, Northeast Alberta. Prepared by APEX Geoscience Ltd. with effective date of March 1, 2013. Eccles R., Dufresne M. and Nicholls S.

polymetallic domains were examined individually to determine suitable capping to apply to the respective grade populations. A combination of histograms, probability plots and inflection points were used to determine the extreme values to be cut. Extreme values were capped as shown in Table 32.

Most of the mineralized black shale within the area drilled lies beneath less than 75m of overburden till and meet cut-off threshold criteria for classification as an inferred resource. As previously also observed for the Buckton Zone, the mineralized black shale over the Buckton South Zone similarly shows good lateral uniformity for many of the contained metals over large distances. The spacing and number of holes are considered sufficient for the determination of inferred resources, and extrapolation of grades between the drill holes is reasonable.

As only three drill holes were completed into the Buckton South Zone there is insufficient data available to perform rigorous variographic analysis to ascertain the orientation and range of the continuity of mineralization. A nominal range of 600m was used for the first pass primary search range. This was deemed appropriate based on the existing drill hole spacing and observations noted in the lateral uniformity of mineralization noted in the Buckton Zone seven kilometres north (discussed in Section 15.4). As such, it was deemed appropriate to apply the observations of mineralization continuity observed at the Buckton Zone to support the use of the primary first pass search range of 600 m.

Density used to calculate tonnes of the Buckton South Zone overburden, Labiche formation, and the Second White Speckled Shale formation are slightly higher than those for the Buckton Zone resource. Buckton South (versus Buckton) densities for the overburden, Labiche and Second White Speckled Shale are 2.72 (versus 2.64 for Buckton), 2.92 (2.68) and 2.67 (2.45).

Element	Capping levels for Labiche Formation			Capping levels for Second White Speckled Formation		
	Capping Level (ppm)	No. Samples Cut	Percentile	Capping Level (ppm)	No. Samples Cut	Percentile
La2O3	58	3	96	96	2	95
Ce2O3	100	3	97	180	1	97.5
Pr2O3	11	4	96	24	2	96
Nd2O3	41	4	96	95	2	95
Sm2O3	8.8	4	96	21	2	95
Eu2O3	1.8	4	96	4.6	2	95
Gd2O3	7.1	4	96	16	3	93
Tb2O3	1.2	4	96	2.5	3	93
Dy2O3	8.5	3	97.5	17.5	2	95
Ho2O3	1.32	4	96	2.5	3	93
Er2O3	4.8	3	96	7	3	93
Tm2O3	0.7	3	97	1	3	93
Yb2O3	4	4	96	8	2	95
Lu2O3	6.5	4	96	0.9	3	93
Y2O3	45	6	94.5	107	1	97.5
Sc203	No Capping Required			No Capping Required		
ThO2	No Capping Required			17.5	1	93
MoO3	8	194	2	95		
Ni	No Capping Required			No Capping Required		
U3O8	9	4	96.5	58.5	1	97.5
V2O5	620	3	97	2000	1	98.5
Zn	180	1	99	425	1	97.5
Cu	53	1	97	No Capping Required		
Co	No Capping Required			27	2	95
Li2CO3	No Capping Required			510	1	97.5

Table 32: Summary of capping levels for the Labiche and Second White Speckled Formations for the Buckton South Maiden Resource. After tables 20 and 21, Buckton South Maiden Resource study, Eccles et al 2013b.

Due to the limited number of drill holes over the Buckton South Zone, variography was not performed to determine the orientation and continuity of mineralization. A nominal range of 600mx600mx5m, which was based on the existing drill hole spacing and the observed grade continuity documented from the Buckton Zone was instead applied to the first pass search ellipsoid. As a result of the wide drill hole spacing, a parent model block size of 250mx250mx2m was chosen for the resource estimate. The block size emulates those that were used in the most recent resource study for the Buckton Zone, and the block model extents were extended far enough past the mineralized wireframe to encompass the entire domain. The recoverable grades for the metals were translated into a US$ value for each block and sub-block relying on the best metals recoveries achieved per DNI's leaching tests and trailing average metal/oxide prices as noted in footnotes to Table 33 and the values aggregated into a collective gross recoverable value for each block and sub-block to test against a block value base case cut-off of US$10 per tonne.

The Buckton South maiden inferred resource extends over approximately 3.3 square kilometres, and is hosted in two near-surface stacked shale and black shale horizons which are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc and are partly exposed on surface. The resource is based on a US$10/tonne base cut-off and represents all mineralized tonnages that are under less than 75m of overburden cover, consisting of a lower-grade upper horizon hosted in the Labiche Formation, and a higher-grading horizon beneath it hosted in the Second White Speckled Shale Formation.

The Buckton South maiden resource is classified as an inferred resource consisting of 548 million short tons (497 million metric tonnes) of mineralized black shale extending over 3.3 square kilometres beneath less than 75m of overburden cover. This resource is hosted in the Labiche Formation and underlying Second White Speckled Shale Formation, which are two flat-lying Formations that are stacked to comprise a continuous thick zone of mineralized shale. The inferred resource is mineralized with recoverable Molybdenum (Mo), Nickel (Ni), Uranium (U), Vanadium (V), Zinc (Zn), Copper (Cu), Cobalt (Co), Lithium (Li), Scandium (Sc), Thorium (Th) and Rare Earth Elements Lanthanum (La), Cerium (Ce), Praseodymium (Pr), Neodymium (Nd), Samarium (Sm), Europium (Eu), Gadolinium (Gd), Terbium (Tb), Dysprosium (Dy) and Yttrium (Y). The Resource Study estimates that the maiden inferred resource is overlain by 122 million short tons (110 million metric tonnes) of glacial till overburden cover.

The Buckton South resource extents are shown in Figure 76. The Buckton South maiden resource is shown in Table 33 combining the upper and lower portions of the resource on a weighted basis. The upper and lower portions of the resource are shown separately in Tables 34 and 35.

Buckton South Initial Maiden Inferred Mineral Resource **Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined**									
Mineralized Shale (tons)	547,516,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	25.9	71.3	11.8	720.6	184.7	47.2	15.2	370.3	
Recoverable Grade (ppm)	13.1	60.5	10.1	178.2	149.2	29.6	12.7	157.4	
Metal/Oxide Price* (US$/lb)	17.63	9.07	68.99	7.67	0.9	3.29	22.39	2.68	
Recoverable metal/oxide (kg)	6,490,000	30,034,000	4,993,000	88,489,000	74,095,000	14,700,000	6,299,000	78,204,000	
Recoverable metal/oxide (lbs)	14,308,000	66,214,000	11,008,000	195,085,000	163,351,000	32,408,000	13,887,000	172,410,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	46.6	81.5	10.5	39.4	7.7	1.7	6.7	1.1	
Recoverable Grade (ppm)	14.8	30.8	4.3	18.2	4.8	1.1	4.6	0.7	
Metal/Oxide Prices** (US$/kg)	42.84	47.4	114.98	128.61	58.66	1,872.65	83.7	1,551.08	
Recoverable Oxide (kg)	7,353,000	15,292,000	2,128,000	9,056,000	2,372,000	540,000	2,305,000	372,000	
Recoverable Oxide (lbs)	16,211,000	33,713,000	4,691,000	19,965,000	5,229,000	1,190,000	5,082,000	820,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	6.2	1.2	3.5	0.5	3.5	0.7	39.3	21.9	11.8
Recoverable Grade (ppm)	4.4	0.8	2.2	0.3	1.9	0.4	26.7	7.7	5
Metal/Oxide Prices** (US$/kg)	864.09	205.82	197.35	$97.00	100.63	1,024.09	81.73	3,881.39	252
Recoverable Oxide (kg)	2,179,000	388,000	1,109,000	153,000	950,000	204,000	13,273,000	3,828,000	2,497,000
Recoverable Oxide (lbs)	4,804,000	855,000	2,445,000	337,000	2,094,000	450,000	29,262,000	8,439,000	5,505,000

** Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the five year trailing average to Oct/2012. ** Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Oct/2012 for La Ce Pr Nd Sm Eu Gd Tb Dy Y; three year trailing average to Aug/2011 for Tm; Th per USGS Mineral Commodity Summaries 2009-2011, the two year trailing average to Oct/2012 for Ho Er Yb Lu Sc. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.*

Table 33: Buckton South Initial Maiden Inferred Resource, Upper (Labiche Formation) and Lower (Second White Speckled Shale) Portions Combined. After Table 1, Buckton South Maiden Resource study, Eccles et al 2013b.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.

Buckton South Initial Maiden Inferred Mineral Resource
Upper Portion - in Labiche Formation

Mineralized Shale (tons)	406,755,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	2.6	50.3	5.1	494	153.2	33.9	13.3	373.1	
Recovery %	55	80	75	10	75	65	80	40	
Recoverable Grade (ppm)	1.4	40.3	3.8	49.4	114.9	22	10.6	149.2	
Metal/Oxide Price* (US$/lb)	17.63	9.07	68.99	7.67	0.9	3.29	22.39	2.68	
Recoverable metal/oxide (kg)	531,000	14,852,000	1,415,000	18,227,000	42,393,000	8,135,000	3,925,000	55,071,000	
Recoverable metal/oxide (lbs)	1,171,000	32,743,000	3,120,000	40,184,000	93,460,000	17,935,000	8,653,000	121,411,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	43.7	78.6	9.7	35.9	6.9	1.5	5.7	0.9	
Recovery %	15	25	30	35	50	55	60	60	
Recoverable Grade (ppm)	6.6	19.6	2.9	12.6	3.5	0.8	3.4	0.5	
Metal/Oxide Prices** US$/kg)	42.84	47.4	114.98	128.61	58.66	1,872.65	83.7	1,551.08	
Recoverable Oxide (kg)	2,418,000	7,247,000	1,074,000	4,641,000	1,277,000	299,000	1,261,000	202,000	
Recoverable Oxide (lb)	5,331,000	15,977,000	2,368,000	10,232,000	2,815,000	659,000	2,780,000	445,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO2
Raw Grade (ppm)	5.4	1.1	3.2	0.5	3.2	0.7	33.2	23.4	11.9
Recovery %	60	60	50	50	45	55	55	30	30
Recoverable Grade (ppm)	3.2	0.6	1.6	0.2	1.4	0.4	18.2	7	3.6
Metal/Oxide Prices** US$/kg)	864.09	205.82	197.35	$97.00	100.63	1,024.09	81.73	3,881.39	252
Recoverable Oxide (kg)	1,195,000	234,000	585,000	90,000	535,000	142,000	6,728,000	2,591,000	1,312,000
Recoverable Oxide (lb)	2,635,000	516,000	1,290,000	198,000	1,179,000	313,000	14,833,000	5,712,000	2,892,000

**Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the five year trailing average to Oct/2012. **Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Oct/2012 for La Ce Pr Nd Sm Eu Gd Tb Dy Y; three year trailing average to Aug/2011 for Tm; Th per USGS Mineral Commodity Summaries 2009-2011, the two year trailing average to Oct/2012 for Ho Er Yb Lu Sc. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.*

Table 34: Buckton South Initial Maiden Inferred Resource, Upper Portion in Labiche Formation. After Table 1, Buckton South Maiden Resource study, Eccles et al 2013b.

Buckton South Initial Maiden Inferred Mineral Resource
Lower Portion - in Second White Speckled Shale Formation

Mineralized Shale (tons)	140,761,000								
	MoO_3	Ni	U_3O_8	V_2O_5	Zn	Cu	Co	Li_2CO_3	
Raw Grade (ppm)	93.3	132.1	31.1	1375.6	275.8	85.7	20.7	362.3	
Recovery %	50%	90%	90%	40%	90%	60%	90%	50%	
Recoverable Grade (ppm)	46.7	118.9	28	550.2	248.3	51.4	18.6	181.2	
Metal/Oxide Price* (US$/lb)	17.63	9.07	68.99	7.67	0.9	3.29	22.39	2.68	
Recoverable metal/oxide (kg)	5,959,000	15,182,000	3,578,000	70,262,000	31,702,000	6,565,000	2,374,000	23,133,000	
Recoverable metal/oxide (lbs)	13,137,000	33,471,000	7,888,000	154,901,000	69,891,000	14,473,000	5,234,000	50,999,000	
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3	Eu_2O_3	Gd_2O_3	Tb_2O_3	
Raw Grade (ppm)	55.2	90	12.7	49.4	10.1	2.2	9.6	1.5	
Recovery %	70%	70%	65%	70%	85%	85%	85%	90%	
Recoverable Grade (ppm)	38.6	63	8.3	34.6	8.6	1.9	8.2	1.3	
Metal/Oxide Prices** US$/kg)	42.84	47.4	114.98	128.61	58.66	1,872.65	83.7	1,551.08	
Recoverable Oxide (kg)	4,935,000	8,045,000	1,054,000	4,414,000	1,095,000	241,000	1,044,000	170,000	
Recoverable Oxide (lb)	10,880,000	17,736,000	2,324,000	9,731,000	2,414,000	531,000	2,302,000	375,000	
	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3	Sc_2O_3	ThO_2
Raw Grade (ppm)	8.6	1.6	4.6	0.7	4.3	0.6	57	17.6	11.6
Recovery %	90%	75%	90%	75%	75%	75%	90%	55%	80%
Recoverable Grade (ppm)	7.7	1.2	4.1	0.5	3.3	0.5	51.3	9.7	9.3
Metal/Oxide Prices** US$/kg)	864.09	205.82	197.35	$97.00	100.63	1,024.09	81.73	3,881.39	252
Recoverable Oxide (kg)	984,000	154,000	524,000	64,000	416,000	62,000	6,545,000	1,237,000	1,185,000
Recoverable Oxide (lb)	2,169,000	340,000	1,155,000	141,000	917,000	137,000	14,429,000	2,727,000	2,612,000

*Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the five year trailing average to Oct/2012. **Metal/Oxide commodity prices used to establish bulk recoverable values for cut-off grade thresholding tests are the three year trailing average to Oct/2012 for La Ce Pr Nd Sm Eu Gd Tb Dy Y; three year trailing average to Aug/2011 for Tm; Th per USGS Mineral Commodity Summaries 2009-2011, the two year trailing average to Oct/2012 for Ho Er Yb Lu Sc. Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. The 2012 drilling included an appropriate number of analytical standards, blanks and duplicates, and no analytical issues were identified. ton=short ton; lb=pound; kg=Kilogram; Recoverable metal/oxide stated to nearest 1000kg or 1000lb. Figures may not add exactly due to rounding.

Table 35: Buckton South Initial Maiden Inferred Resource, Lower Portion in Second White Speckled Shale Formation. After Table 1, Buckton South Maiden Resource study, Eccles et al 2013b.

This Buckton South maiden resource has been classified as an inferred resource according to CIM standards, based on a number of factors, namely; limited number of drill holes and their wide spacing, good continuity of mineralization and geological control between drill holes and from section to section along approximately six kilometres of strike. The inferred resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls.

The Resource Study concluded that the Buckton South maiden inferred resource is mineralization which has a reasonable prospect for extraction in the future. This resource comprises all Labiche and Second White Speckled Shale resource blocks which are beneath less than 75m of overburden cover, and for which the combined gross value of recoverable contained Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc exceeds the base cut-off of US$10 per tonne relying on the best achieved metals recoveries as reported from the collective of DNI's leaching testwork. Metal prices used are the trailing 2yr, 3yr and 5yr year commodity price averages as shown in Table 33. The inferred resource is distributed between the upper and lower portions of the Buckton South Zone as follows (also shown in Tables 34 and 35): 407 million short tons (369 million metric tonnes) in the lower grade portion hosted in the Labiche Formation ranging 16m-62m in thickness, and 141 million short tons (128 million metric tonnes) in the higher grade portion beneath it hosted in the Second White Speckled Shale Formation which ranges 11m-18m in thickness.

While the collective work from the Buckton South Zone indicate that none of the metals contained in the Zone occurs in sufficiently high enough concentration to be of economic merit by itself, the metals of interest collectively represent sufficient recoverable gross value on a combined basis to place the mineral resource identified at the Zone within reach of economic viability provided the metals are efficiently recovered on a combined basis. DNI's leaching testwork has already demonstrated that the metals can be collectively extracted from the shale but clear communication of overall bulk grade has been a challenge considering the polymetallic nature of the mineralization of merit. In the foregoing regard, the Resource Study notes, with concurrence from DNI, that given the absence of a single metal to represent bulk of the overall recoverable value of the mineralized shale, reporting of its overall grade as a traditional "metal equivalent" would be arbitrary and misleading.

Of necessity, the Resource Study, accordingly, opted instead to communicate overall grade by aggregating the individual gross recoverable values represented by each of the metals of interest into a single gross recoverable total per tonne value to characterize the resource and enable its discussion and testing against a base cut-off for the purposes of resource estimation. **The reader is cautioned that disclosure of gross values discussed in this Report and in the Resource Study does not comply with Section 2.3(1c) of National Instrument 43-101 since the figures are gross and the term may be misleading in the absence of proven production costs.** The recoverable gross values are quoted for convenience of communicating overall grade and are otherwise conceptual in nature and do not represent economic worth of the resource being reported from the Buckton South Zone. The reader is also reminded that the values are based on recoverable metal grades per bench scale leaching tests and do not imply that economic viability of the recoveries has been determined and they may not reflect actual recoveries which might be achieved in an ultimate mineral production operation.

Polymetallic black shale is an emerging deposit type which has gained recognition over the past decade mainly due to advances in application of bioleaching procedures to extract low grade metals from shale by bulk heapleaching. Worldwide, there is one active mining operation extracting polymetals via bio-heapleaching and two other scoping stage projects that are exploring/developing polymetallic deposits in black shale. These operations provide the only resource estimation and operating cost guidelines, particularly with respect to base cut-off values, that are relevant to evaluating the mineral resource hosted in the Buckton South Zone. The Buckton Preliminary Economic Assessment study subsequently completed in December 2013 does, however, provide clearer and more direct cost guidelines which would be as relevant to the Buckton South resources as they are to those at the Buckton Zone given similarities of their respective grades. The Buckton PEA is discussed in Section 17 of this Report. Downhole geochemical profiles from the Buckton and Buckton South Zones, from the 2012 summer drilling program are shown in Figures 73 and 74.

The US$10 per tonne base cut-off used by the Resource Study is considered to be a reasonable benchmark which is higher than cut-offs utilized by recent mineral resource estimates and a scoping study for other open pit mineable poly-metallic black shales in Sweden and Finland as the break-even point and lower cut-off. This base cut-off incorporates operating costs from the only available operation worldwide of bulk mining and bioheapleaching exploitation of a polymetallic black shale deposit, and includes a nominal cost for refining of REEs into final saleable products relying on estimates from other REE projects. Considering a scenario of possible open pit mining in northeast Alberta along the eastern edge of the Birch Mountains, with potential for a low strip ratio at startup, the likely free-dig nature of the poorly consolidated shale bedrock, the potential for easy access to multiple working faces, the location of the project with respect to access, power and other important infrastructure, the US$10 per tonne base lower cut-off value is considered reasonable for the purposes of mineral resource estimation as a base case cut-off threshold which also captures a relatively continuous mineralized zone with favourable bulk mining configuration.

DNI's bench scale leaching testwork demonstrated that mineralization contained in the black shales at the Buckton and Buckton South Zones is recoverable by a single bulk leaching method from the shale and that REEs and Specialty Metals are incidentally leached from the shale as co-products of leaching of base metals. The Buckton South Resource Study noted that REEs account for a significant proportion of the recoverable gross value of the resource, especially for mineralization in the Labiche shale, and concluded that ultimate economics of the resource are, accordingly, subject to uncertainties of long term REE pricing and viability of demand, the unknown effect of new production on REE markets, and the cost of separating REEs from pregnant leaching solutions once they have been leached from the shale and their refinement into saleable final products. Although the base cut-off of US$10 per tonne used in the Resource Study includes a nominal cost for separation of REEs relying on estimates from other REE projects, a sensitivity analysis was, nonetheless, conducted in the Resource Study to investigate sensitivity of the inferred resource to cost fluctuations by testing the resource model against progressively higher arbitrary base cut-offs.

The resource model was iterated and tested at progressively higher arbitrary base cut-offs to determine the commensurate tonnages that can be classified as mineral resources against any given base cut-off. The entire shale package resource model was, accordingly, tested at base cut-offs of US$12, US$14, US$16, US$18, US$19, US$20 and US$21 per tonne. The sensitivity analysis demonstrated that the tonnage and distribution of the shale package is virtually intact between base cut-offs of US$10 per tonne and approximately US$14 per tonne, and that the aggregate gross recoverable value of contained metals exceeds the base cut-off, but that at higher base cut-offs the tonnage of the upper zone hosted in the Labiche Shale rapidly decreases and distribution of resource blocks lose cohesion such that at a base cut-off of US$19 per tonne virtually none of the upper portion of the resource hosted entirely in Labiche Shale can continue to be classified as a mineral resource since aggregate gross recoverable value of the contained metals is less than the cut-off.

The sensitivity analysis successfully demonstrated that as the spatial distribution of resource within the upper zone hosted in Labiche Shale decreases, progressively larger portions of Labiche Shale would be regarded as cover waste material to be removed for the purposes of any mining operations to extract the underlying resource in the Second White Speckled Shale Formation. Considering that distribution of the upper portion of the resource hosted in Labiche shale will affect distribution and tonnage of what might be realistically mined from the lower portion of the resource beneath it hosted in the Second White Speckled Shale, the resource model was tested at yet higher base cut-offs of US$40, US$45, US$50, US$54, US$55, US$56, US$57, US$58, US$59 and US$60 per tonne, to simulate a scenario for which the upper portion of the resource is deemed to be waste and would have to be removed together with the overburden to gain access to the underlying higher grade mineralization in the Second White Speckled Shale. In these iterative scenarios, the lower portion of the resource hosted in the Speckled Shale is the only mineralization of interest and the resource identified within it remains intact between base cut-offs of

US$10 per tonne and US$45 per tonne at which cut-off it comprises 132 million short tons (126 million metric tonnes) extending over 3.3 square kilometres. At a base cut-off of US$50 per tonne the resource comprises 112 million short tons (107 million metric tonnes) extending over 3.3 square kilometres, but gradually loses cohesion at base cut-offs higher than US$50 per tonne such that at a base cut-off of US$60 per tonne virtually none of it can be classified as a mineral resource since the aggregate gross recoverable value of contained metals is less than the base cut-off. The reader is referred to Eccles et al 2013b for additional details.

The Resource Study overall concluded that the per tonne of recoverable gross value represented by the Labiche and Second White Speckled Shale resource is sufficiently higher than the US$10 per tonne base cut-off used by the Resource Study, and sufficiently higher than the related iteration of the resource model at higher cut-offs up to US$14 per tonne, to reasonably conclude that the Buckton South initial maiden inferred resource is mineralization that has a reasonable prospect for extraction in the future.

The Buckton and Buckton South Zones together dominate the east-central portion of the SBH Property, with a combined Inferred resource of approximately 5.7 billion short tons (5.2 billion tonnes) containing recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc. In the absence of drilling over the approximately seven kilometres separating the two Zones, the available information does not enable clear conclusion of whether the Buckton South Zone is a southerly extension of the Buckton Zone or whether it is a separate stand-alone Zone. The presence of many surface geochemical anomalies and mineralized exposures throughout the area separating the two Zones, and similarity of metals grades at the two Zones do, however, suggest a likely connection between the two Zones which has not yet been confirmed by drilling.

The Buckton South Resource Study concluded that the Buckton South Zone maiden inferred resource has excellent potential for expansion with further drilling, and recommended implementation of additional drilling with primary emphasis on expanding the Buckton South maiden inferred resource and upgrading a portion of it to the indicated resource class, while also testing the area between the Buckton and Buckton South Zones to determine whether the two Zones are connected. **Should future drilling confirm continuation of mineralization over the distance separating the two Zones, ultimate combined resources could represent 10-15 billion tonnes of mineralization stretching over a 20km-25km of strike.**

17. PRELIMINARY ECONOMIC ASSESSMENT 2012-2013 - BUCKTON ZONE

17.1 OVERVIEW

P&E Mining Consultants Inc., Brampton, Ontario, was retained in late 2012 to prepare a preliminary economic assessment study of the mineral resources contained in the Buckton Zone, relying on the Updated and Expanded Buckton mineral resource (discussed in Section 15.4).

Field visit to the Buckton Zone and surrounding areas was conducted by Mr.G.Purich and Mr.K.Kuchling of P&E Mining Consultants Inc. on October 16, 2012, accompanied by Mr.M.Dufresne of APEX Geoscience Ltd. and S.Sabag of DNI. The foregoing parties also met on October 15, 2012, to discuss the project and review the prior drill core from the Buckton Zone.

Identification of a suitable technical group with the necessary skills and knowledge base to formulate metals leaching and processing flowsheets for the project proved challenging given the many highly specialized facets of extracting a variety of metals from the Buckton shales by bioleaching and ultimately recovering them into final products including rare earth elements which required further processing to separate them into final saleable products. Hatch Ltd. was finally retained in June 2013 given their prior experience with the Talvivaara bioheapleaching mining operations and other projects entailing rare earth element separation.

The preliminary economic assessment study (the "PEA") was completed in December 2013. The PEA was prepared and coordinated by P&E Mining Consultants Inc. which also formulated the mining scheme for the project. The Buckton mineral resource estimate and resource block model was prepared by APEX Geoscience Ltd. Metals recovery and processing were formulated by Hatch Ltd. which was retained to review DNI's metals recovery testwork to formulate process engineering design criteria and metals recovery flow sheets, and to develop related capital and operating cost estimates. The Hatch process engineering was reviewed and reported by Mr.Bruce Cron P.Eng. of Cron Metallurgical Ltd. The foregoing parties are independent of DNI and are the Qualified Persons in connection with preparation of the PEA.

The PEA outlined a conceptual mining and metals recovery scenario relying on the NI 43-101 Updated and Expanded Buckton mineral resource. The PEA related to mining and processing operations for the production of Ni-U-Zn-Cu-Co and Rare Earth Elements (REE) including Yttrium from the Buckton Deposit.

Salient portions from the PEA final report are summarized in sections below. The report[33] is appended herein as Appendix F4.

17.2 PEA STUDY PARAMETERS

DNI has been exploring and evaluating the Buckton Deposit during the past five years as a long term future source of numerous metals. The Buckton PEA is the initial economic assessment of the potential of the Buckton Deposit and is preliminary in nature. It is based on the collective of information from all exploration, mineral resource and metal extraction studies completed by DNI during the past five years, augmented by extrapolations from other similar projects. This assessment was initiated early in the Deposit's development history to better focus DNI's next stage of work, given the array of recoverable metals from the deposit, the differing leaching parameters required for economic recoveries of the various metals, and the geometry of the deposit being hosted in two layered (stacked) sedimentary formations of differing head grade and slightly different compositions.

The Updated and Expanded Buckton Mineral Resource on which the PEA is based consists of the aggregate of Inferred and Indicated resources but, for the purposes of the PEA, the mineral resource is deemed to consist entirely of an Inferred resource considering that 94% of it consists of an Inferred class resource. In

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[33] Report: National Instrument 43-101 Technical Report. Preliminary Economic Assessment For The Buckton Deposit, SBH Property, North-East Alberta", prepared by P&E Mining Consultants Inc., Apex Geoscience Ltd. and Cron Metallurgical Engineering Ltd.. P&E Report#276, dated January 17, 2014, with an effective date of December 5, 2013. Puritch E., Eccles R., Dufresne M., Nicholls S., Kuchling K., Watts G., Rodgers K. and Cron B.

addition, whereas the foregoing mineral resources relate to recoverable Ni-Mo-U-V-Zn-Cu-Co-Li-REE-Y-Th-Sc, Mo-Li-V were provisionally omitted from the PEA based on economic considerations, and Sc-Th were similarly omitted due to uncertainties in their markets. As such, the PEA contemplated production of Ni-U-Zn-Cu-Co-REE-Y only.

The PEA is based on mineral resources consisting mostly of Inferred resources that are too speculative geologically to have economic conditions applied to them that would enable them to be characterized as mineral reserves, and there is no certainty that the conclusions of the PEA will be realized.

The Buckton mineralization is hosted in two flat-lying "stacked" shale formations beneath overburden cover. The lower formation is the higher grading Second White Speckled Shale Formation which lies beneath the Labiche Formation shale. The PEA, accordingly, evaluated two separate scenarios. **The Base Case scenario** focuses on mining and processing of both formations on a blended basis, whereas **the Alternate Case** contemplates mining and processing of only the lower formation (the Second White Speckled Shale Formation) with a considerably higher strip ratio over a shorter mine life while treating all overlying material (including the Labiche Formation shale) as waste. In general terms, with the exception of different mine and plant capacities, both scenarios contemplate the same mining and metal processing methods. The Base Case yielded more favorable economics than the Alternate Case and therefore is the preferred development approach. Details relating to the Base Case scenario are summarized in sections following in this Report, although salient aspects of the Alternate Case are also included for reference where relevant. The reader is referred to the PEA report appended for additional details.

The mining design contemplated by the PEA is a low strip ratio, high tonnage co-production of Ni-U-Zn-Cu-Co-REE-Y from the Labiche and Second White Speckled formations. The metals extraction design basis is bioheapleaching, followed by metals extraction from leach solution, and a process plant for separating purified individual REE oxides. The PEA contemplates production of saleable final products of Ni-Co and Zn-Cu as sulfides, U as oxide "yellowcake", and REE-Y as separated oxides. The PEA demonstrated that the Buckton Deposit has the potential to be a significant supplier of uranium and REE, with a projected average annual production capacity of approximately 1 million pounds of uranium yellowcake and 5,500 tonnes of rare earth oxides, of which over 40% are made up of heavy rare earth elements.

The PEA achieved its principal objective of evaluating viability of producing metals from the Buckton Deposit, and formulated a conceptual plan for high throughput open pit mining and metals recovery flowsheets for the production of Ni-U-Zn-Cu-Co-REE-Y. The PEA was particularly successful in identifying the critical mining and processing parameters which can have a significant impact on economics at Buckton, and identified a number of key opportunities which can significantly enhance economics through strategic cost reductions and/or revenue enhancements, some of which can be achieved with minimal additional testwork.

	Base Case	Alternate Case
Mining Target	Second White Speckled Shale Formation + overlying Labiche Formation	Second White Speckled Shale Formation Only
Final Products	Ni-Co-sulfide; Zn and Cu sulfides U_3O_8 yellowcake Separated REE-Y oxides	Ni-Co-sulfide; Zn and Cu sulfides U_3O_8 yellowcake Separated REE-Y oxides
Optimized Pit Shell Mineable Mineral Resource	4,544 million tonnes	976 million tonnes
Annual Mining/Processing Throughput Feed	72 million tonnes per year by open pit	36 million tonnes per year by open pit
Strip Ratio (waste:feed)	0.50	6.27
Life of Mine	64 years	29 years
Metals Extraction	Bio-Heapleaching	Bio-Heapleaching
Metals Recovery	Selective Precipitation REE-Y Separation	Selective Precipitation REE-Y Separation
Life of Mine excludes two year pre-production construction.		

Table 36: Summary of parameters for the Base Case and the Alternate Case mining scenarios. After Table 22.1, Buckton PEA, Puritch et al 2013.

17.3 BUCKTON POLYMETALLIC DEPOSIT AND THE PEA MINEABLE RESOURCE

The PEA relies on the Buckton mineral resource as outlined in the Updated and Expanded Buckton Mineral Resource Study (the "Buckton resource study") prepared by Apex Geoscience Ltd which was presented in Section 15.4.

The Buckton mineral resource is hosted in two near-surface stacked black shale horizons which are mineralized with recoverable Mo-Ni-U-V-Zn-Co-Cu-Li-REEs-Y-Th-Sc. The mineral resource consist of an upper mineralized portion hosted in the Labiche Formation which directly overlies a higher grade black shale hosted in the Second White Speckled Shale Formation beneath it. The two formations together comprise an approximately 13m-140m thick wedge of mineralized black shale, extending westward from the eastern erosional edge of the Birch Mountains where they are exposed on surface but are under progressively thicker overburden cover westwards. Due to differing head grades and slight lithogeochemical contrasts, the two formations offer two mining targets which were discussed separately in previous resource studies for the Buckton Deposit and reported on a segregated basis as well as on a combined (blended) basis.

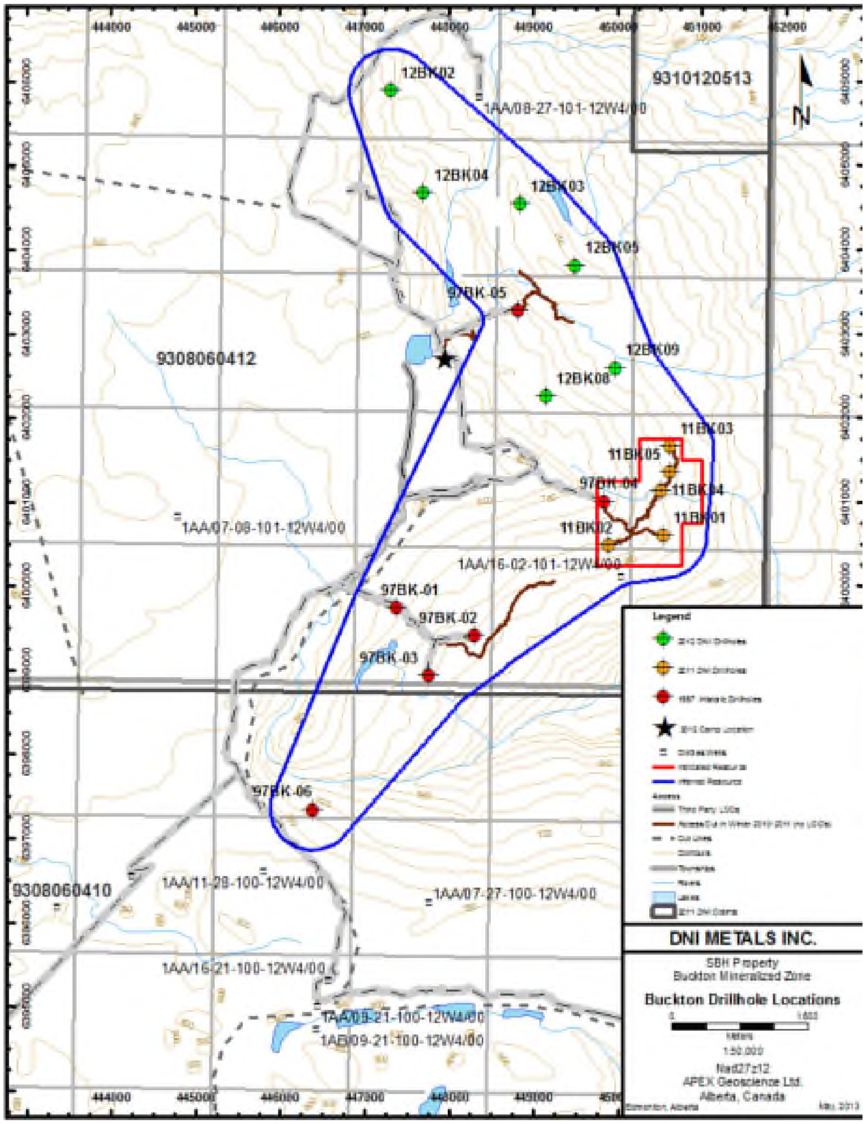

Figure 77: Location sketch of the distribution of the Updated and Expanded Buckton mineral resource, showing also related drill holes. Figure 9.1, Buckton PEA, Puritch et al 2013.

The Buckton mineral resource represents an aggregate of 4.7 billion tonnes of mineralized material consisting of 4.4 billion tonnes classified as an Inferred resource and 271 million tonnes classified as an Indicated resource. The Buckton Inferred and Indicated resources together extend over 21.9 square kilometres, 20.4 square kilometres of which represents the aerial extent of the Inferred resource. The Buckton Inferred resource is open to the north, northeast and south, and eastward to the erosional edge of the Birch Mountains over a large area with thin overburden cover where mineralization intermittently outcrops at surface or is intermittently exposed throughout several kilometres of valley walls. The

Inferred resource is open to the south over the approximately seven kilometres separating it from the Buckton South Zone mineral resource (Section 16). Stratigraphic and surface exploration information suggests that the Buckton and Buckton South Zones may well be connected. The Buckton Indicated resource is located in the middle of the deposit surrounded by the Inferred resource which may be upgraded into the Indicated class subject to minimal infill drilling.

The PEA is based on mineralized material consisting of the aggregate of Inferred and Indicated resources, comprising mineralized material 94% of which consists of an Inferred resource. The PEA mineral resource can, accordingly, be deemed to consist entirely of an Inferred resource for disclosure purposes.

Polymetallic black shale is an emerging deposit type which has gained recognition over the past decade mainly due to advances in application of bulk bioleaching procedures to extract low grade metals from the shale. There is currently only one active mining operation extracting polymetals via bio-heapleaching (Talvivaara Mine, Finland - see Section 9.4.2) and two other scoping stage projects that are exploring/developing polymetallic deposits in Swedish black shale. These operations provide some resource estimation and operating cost guidelines that are relevant to evaluating the Buckton Deposit.

The resource block model from the Buckton resource study was utilized by P&E Mining Consultants Inc. to delineate a mining pit shell using pit optimization software, relying on various constraining design, operating and processing cost parameters collectively comprising threshold cut-offs of $12.5/tonne and $10/tonne for the Second White Speckled Shale and Labiche formations, respectively. The recoverable in-situ value for each resource block was tested against the cut-offs to determine its inclusion into the optimized pit shell. A portion of the optimized pit shell was further revised to reduce pre-stripping costs during the initial years of production. The final designed open pit outlined by the PEA, accordingly, delineates that portion of the mineralized material which meets economic threshold criteria and represents tonnages that are economically extractable by open pit method.

The PEA reports that 4.5 billion tonnes (roughly 96%) of the total resources can be mined by open pit at a 0.5:1 strip ratio for Base Case (both the Labiche Shale and the Second White Speckled Shale are mined together and processed on a blended basis). This material would be overlain by 2.3 billion tonnes of overburden waste (for comparison, under the Alternate Case scenario 976 million tonnes, or 99%, of the total resources hosted in the Second White Speckled Shale can be mined by open pit at a 6.27:1 strip ratio, this tonnage is overlain by 6.1 billion tonnes of waste material consisting of the Labiche Formation Shale and till overburden above it). Details of the various tonnages are shown in Table 37.

	Buckton Mineral Resource (000,000 tonnes) *per Resource Study Aug/2013*		Mineable Material and Cover (000,000 tonnes) *per PEA Optimized Pit Shell*	
	Indicated	Inferred	**Base Case**	Alternate Case
Overburden	28	1,571	**2,287**	6,119
Labiche Fm	207	3,517	**4,544**	
2nd White Speckled Shale Fm	65	923		976
Notes: Figures may not add exactly due to rounding; Buckton Mineral Resource per the Updated and Expanded Buckton Mineral Resource Study, Eccles et al 2013c. See also Section 15.4 of this Report.				

Table 37: Comparison of the Buckton mineable resource per the Buckton PEA and mineral resource per resource study. After Table 1.1, Buckton PEA, Puritch et al 2013.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and *grade continuity to be reasonably assumed. The metal recoveries reported represent preliminary mineral recovery testing results collated from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recoverability that might be achieved in a mineral production operation, all of which is the subject of ongoing studies.*

17.4 METAL GRADES, RECOVERIES AND PRICES

Whereas the mineral resource study for the Buckton Deposit estimated resources for recoverable Ni-Mo-U-V-Zn-Cu-Co-Li-REE-Y-Th-Sc, some of these metals were provisionally omitted from the PEA based on economic considerations (Mo-Li-V) or due to uncertainties in their markets (Sc-Th). As such, the PEA contemplates production of saleable final products of Ni-Co and Zn-Cu as sulfides, U as oxide "yellowcake", and REEs as separated REE oxides. Should markets for Sc-Th be better defined in the future, they can be expected to present additional economic value which might be captured into subsequent updates of the PEA. Similarly, should future testwork achieve higher recoveries for Mo-Li-V to outweigh costs of their respective recoveries, they too can be expected to present additional future value.

The PEA relies on metal recoveries after applying estimated leaching, entrainment and processing circuit losses as shown in Table 38. The metal recoveries reported represent preliminary mineral recovery testing results from the collective bench scale laboratory testwork completed by DNI to date and may not reflect actual process recovery achievable in a mineral production operation. Metal recoveries are the focus of ongoing studies by DNI to be more definitively established during a future pilot plant demonstration leaching test for a bulk sample from the deposit. The recoveries are, however, consistent with initial results from column leaching testwork currently in progress thereby providing guidance for extrapolation and suggesting that column leaching might achieve metal recoveries similar to those documented from the benchscale stirred tank testwork.

The PEA utilizes metals recoveries per the Buckton resource study which are more conservative than those used in prior resource studies for the Buckton Deposit. These recoveries are believed to represent bioheapleaching field conditions, relying on benchscale bioleaching testwork results from work in progress at Canmet conducted under moderately acidic conditions (ie: lower recoveries than tests from more aggressive acidic conditions). This view was guided by extrapolations from the Talvivaara bioheapleaching operation in central Finland which is the only mining operation worldwide relying on bioheapleaching to concurrently recover a suite of metals from its mineralized black shale. The conditions for leaching of metals from the Buckton black shales is subject to further optimization via additional testwork..

In the absence of advanced metals processing testwork and data from a hydrometallurgical plant pilot test, there is some uncertainty in estimates of ultimate metal recoveries in the downstream hydrometallurgical plant envisaged for the Buckton Deposit. Anticipated recovery losses related to hydrometallurgical processing were, accordingly, established by Hatch based on extrapolations from other projects and estimates based on experience. Solution entrainment, precipitation efficiency, and re-dissolution efficiency estimates were built into the mass balance framework. Aggregate metals leaching and processing costs were estimated separately for the Labiche and the Second White Speckled Shale formations by relying on two separate mass balances to determine processing losses and reagent consumption for each. This enables evaluation of various mining scenarios whereby the two formations are blended in different proportions during mining.

Mineral resources, metal grades, recoveries and average quantities of projected annual metal production are summarized in Table 38 including adjustments for entrainment and processing efficiencies. Total recoverable metals per the Buckton resource study and per the PEA production plan are shown for comparison, in addition to average quantities of projected annual metal production as projected by the PEA production schedule.

The PEA economics are based on the Updated and Expanded Buckton resource which relied on the two-year (three-years for Tm_2O_3) trailing average metal/oxide prices to May 31, 2013, without forecasting the future nor extrapolating forward from current market trends over the long anticipated mine life spanning several decades. For the purposes of the PEA, REEs are valued per their respective price quotes as separated final saleable products given that the Buckton metal processing contemplated by the PEA provide for REE separation facilities.

Buckton Mineral Resource - Grades, Tonnages and Metals Quantities							
Mineralized Shale (tonnes)				4,544 million tonnes per PEA Optimized Pit Shell			
	Raw Grade (ppm) per Resource Study (1)	Benchtests Recovery % per Resource Study	Recovery % after Leaching and Processing Losses per PEA (2)	Metal/Oxide Price (3) (US$)	Recoverable metal/oxide (tonnes) per Resource Study	Recoverable metal/oxide (tonnes) per PEA	Projected metal/oxide Production (tonnes/year) per PEA
Ni	67.6	64%	51%	$8.3 /lb	162,375	156,208	2,441
U_3O_8	10.8	70%	62%	$60.7 /lb	31,415	30,043	469
Zn	169.9	52%	48%	$0.9 /lb	384,376	370,226	5,785
Cu	40.3	25%	23%	$3.6 /lb	43,663	42,041	657
Co	15.4	72%	57%	$14.4 /lb	41,380	39,872	623
La_2O_3	48.6	20%	15%	$44.6 /kg	34,024	33,055	516
Ce_2O_3	84	30%	23%	$43.2 /kg	90,166	87,563	1,368
Pr_2O_3	10.5	40%	30%	$140.4 /kg	14,691	14,273	223
Nd_2O_3	40.1	43%	33%	$156.2 /kg	61,751	59,926	936
Sm_2O_3	7.9	47%	36%	$68.2 /kg	13,267	12,858	201
Eu_2O_3	1.7	61%	46%	$2,742.1 /kg	3,550	3,442	54
Gd_2O_3	6.7	63%	48%	$105.8 /kg	14,968	14,510	227
Tb_2O_3	1	65%	49%	$2,190.5/kg	2,386	2,315	36
Dy_2O_3	5.9	65%	49%	$1,240.3 /kg	13,578	13,185	206
Ho_2O_3	1.2	64%	48%	$202.9 /kg	2,630	2,555	40
Er_2O_3	3.4	62%	47%	$169.0 /kg	7,532	7,318	114
Tm_2O_3	0.5	60%	46%	$97.0 /kg	1,104	1,072	17
Yb_2O_3	3.4	58%	44%	$102.9 /kg	6,982	6,787	106
Lu_2O_3	0.5	55%	42%	1,273.0 /kg	1,066	1,035	16
Y_2O_3	40.4	67%	51%	$107.8 /kg	96,106	93,094	1,455
MoO_3	23.0	3%	Omitted from PEA	Omitted from PEA	Omitted from PEA	Omitted from PEA	Omitted from PEA
V_2O_5	10.7	7%					
ThO_2	11.9	13%					
Li_2CO_3	375.2	17%					
Sc_2O_3	16.5	24%					
Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resources reported herein will be converted into a mineral reserve. Notes: (1) The Buckton mineral resource consists of 94% Inferred resource and 6% Indicated resource. For the purposes of the PEA the resource is deemed to consist entirely of an Inferred resource representing the aggregate of the two classes. Mo, V, Li, Th and Sc excluded from PEA; (2) Recovery losses per the PEA represent the aggregate of leaching entrainment losses and metals processing circuit losses; (3) Metal or oxide prices are the two-year trailing average to May 31, 2013 (three-years for Tm_2O_3). Sources: Metal-pages.com; Asianmetal.com; USGS. USDx1.05=CDN; Metal prices vary among various commodity information sources and, in all conflicting instances, the lower pricing was used. t=tonne; lb=pound; kg=kilogram. Some figures may not add exactly due to rounding.							

Table 38: Buckton mineral resource, grades, tonnages and metals quantities. After Table 1.2, Buckton PEA, Puritch et al 2013.

Since REEs account for a significant proportion of the recoverable gross value of the resource, ultimate economics of the Buckton Deposit are subject to uncertainties of long term REE pricing, viability of REE demand and the unknown effect of new production on future REE markets.

Current demand for REEs is robust considering they are critical to a wide spectrum of high tech and electronics based products, as well as magnets and greening industries, and they are generally predicted to remain in high demand well into the future. As critical metals in short supply, however, their future demand can realistically be expected to be subject to unpredictable unknowns including technological innovation which can likely have a more significant affect on pricing fluctuations than simple traditional supply demand dynamics. Considering the multiplicity of metals that the Buckton Deposit can produce, a detailed predictive marketing study was not completed as part of the PEA, especially given the long mine life of contemplated operations at Buckton.

It is of note that, based on the price scheme used, recoverable REEs currently represent majority of the per tonne value represented by the two shales, whereas five years ago at the outset of DNI's launch of exploration of the Buckton Zone (and the SBH Property) the bulk of the gross in situ value of the shales was related to their base metals and Uranium content. This is a typical characteristic of polymetallic deposits, whose value is the aggregate of the individual recoverable values represented by each of the contained recoverable metals which do not necessarily follow the same commodity market trends at any given time.

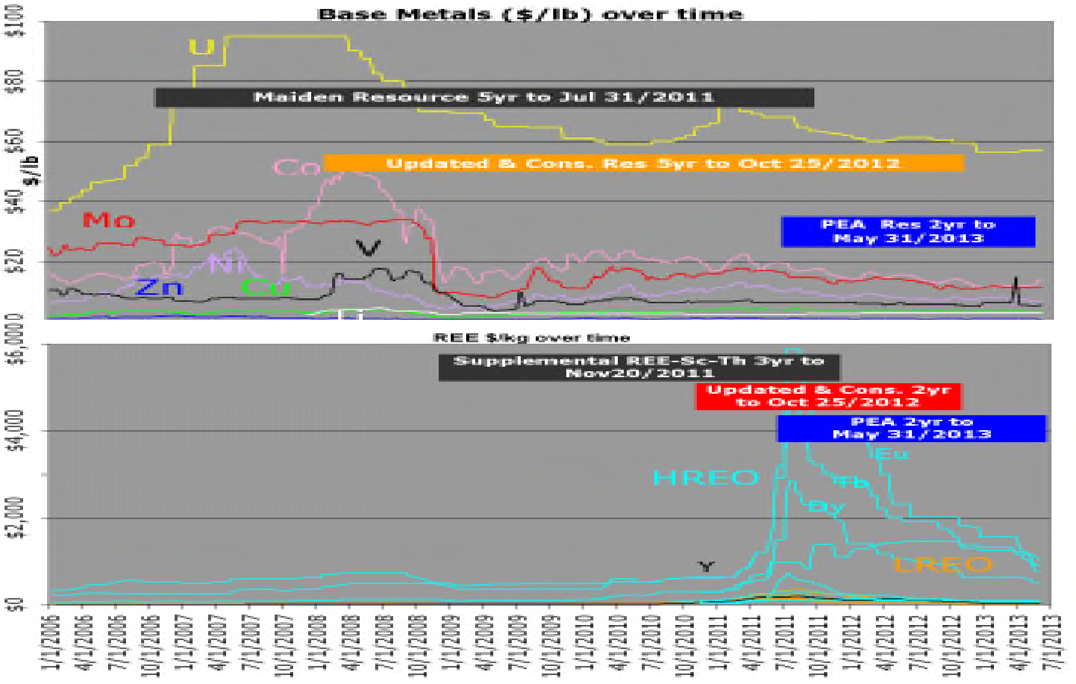

Figure 78: Metals and REE prices during 2006-2013, showing the various time intervals used during various resource studies and the Buckton PEA.

17.5 MINING OPERATIONS OVERVIEW - BASE CASE

The PEA envisages a large shallow open pit mine with 30 degree pit slopes to extract a tabular and nearly horizontal shale package over a 64 year mine life at a production rate of 72 million tonnes of mineralized feed per year at an average strip ratio of 0.5:1. The mining scenario contemplates extracting and processing the Second White Speckled Shale Formation as well as the overlying Labiche Formation by stripping away the overlying till overburden to be backfilled behind the advancing open pit face. To extract the foregoing tonnage of mineralized feed, an average of 105 million total tonnes will be mined annually including overburden and mineralized feed. The contemplated mine site layout and annual production schedule are shown in Figures 79 and 80.

Due to the poorly consolidated nature of the shales, the PEA contemplates that all material can be excavated by free-digging without any drilling and blasting. The run-of-mine feed material to be leached will be mechanically stacked on a multi-compartment 2kmx3km leach pad after screening/sizing and agglomeration with sulfuric acid. The overburden waste material will be will be mined similarly and backfilled into the open pit (except during the initial few years when it is stacked outside the pit).

The leach pad will be stacked up to a height of 8m and irrigated with bioleaching solution in a traditional heap leaching procedure whereby the leach solution (PLS) carrying dissolved metals is collected at the bottom of the heaps once it is percolated through the heap, and is fed to a metal processing plant through a series of pipes. The heap will be equipped with aeration piping and blowers to supply the necessary oxygen for the well being of the bio-organisms, which will be harvested from the shale itself and cultured as was done during DNI’s prior testwork.

Only a single heap leaching cycle is envisaged given the relatively rapid metal dissolution rates observed during the testwork completed to date suggesting that a six month leaching gestation would be more than adequate for extraction of the metals. The barren leach material will be reclaimed, neutralized and conveyed as backfill into the previously mined out portions of the open pit.

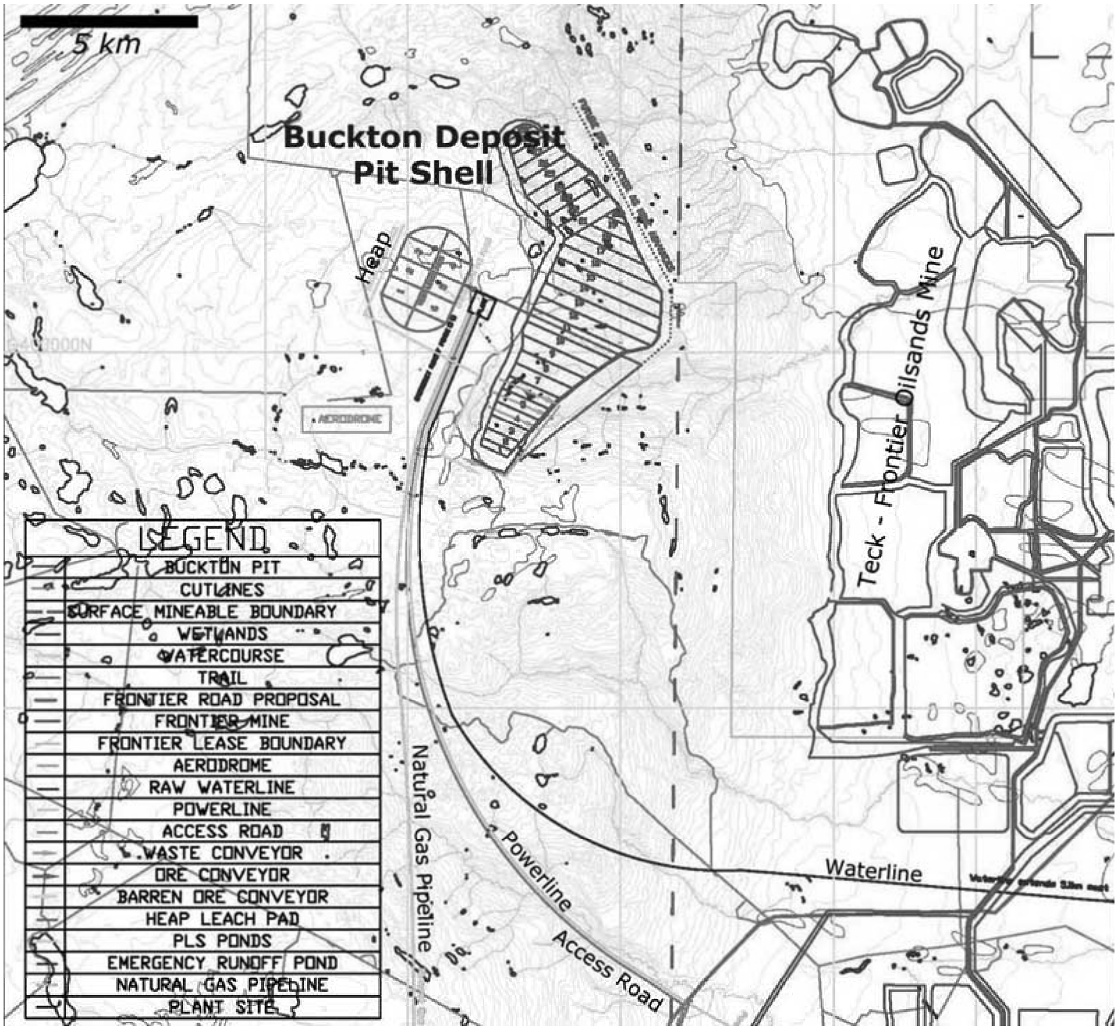

Figure 79: Contemplated mine site layout, Buckton PEA. After Figure 16.2, From Puritch et al 2013.

The mining development schedule envisages a two year construction period ahead of the initial six month mining and heap stacking period followed by six months of leaching. As such, only partial revenues are recognized during the first year of production.

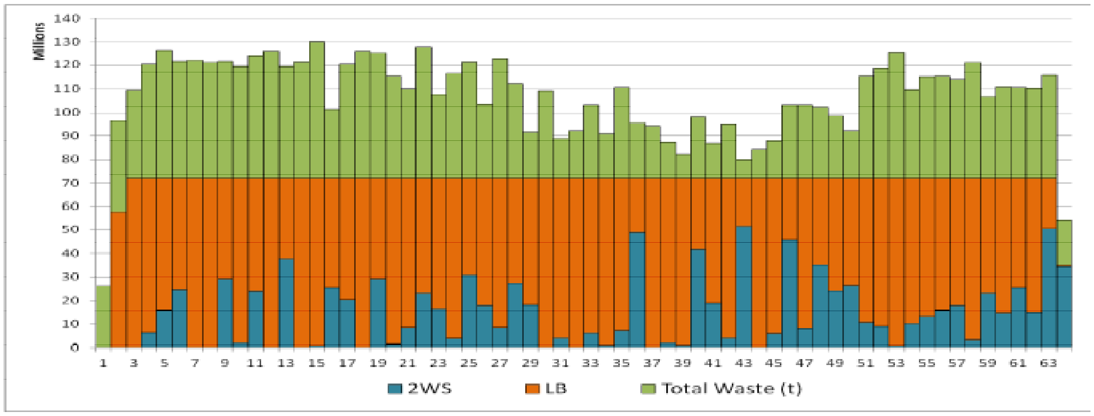

Figure 80: Annual production schedule. Contemplated mining operations for the Buckton Deposit Base Case. After Figure 16.4, Buckton PEA. From Puritch et al 2013.

Mineralized feed and overburden waste will be excavated by large capacity cable shovels and dumped into mobile sizers which feed a network of dedicated conveyors either transporting material to the waste dump or the leach pad area. Barren leach material will be conveyed from the leach pad area and placed upon the backfilled overburden waste material using large capacity stackers.

17.6 METALS LEACHING, RECOVERY AND PROCESSING OVERVIEW

The PEA relies on a process engineering framework formulated by Hatch Ltd. for the extraction, recovery and processing of metal products from the Buckton Deposit. The process engineering was reviewed by Mr. Bruce Cron P.Eng. who is the independent Qualified Person for the metals leaching and processing design portion of the PEA.

Considering the multiplicity of potential final metal products, Hatch completed an initial evaluation to identify the metals which have potential of economic viability to guide further process design development and the PEA. The screening study[34], appended herein as Appendix F1, identified Cu-Zn-U-Ni-Co-Li-REE-Y as the metals which have potential economic viability. The screening study recommended omitting Mo-V from final products since the costs of their recovery outweighed revenues they might contribute, and also recommended omitting Sc-Th based on uncertainties in their market demand (to some extent V is also subject to a concern about potential market oversupply). Li was subsequently also omitted upon completion of their final report.

Hatch subsequently formulated a block flow diagram and process description entailing extraction by low reagent dosage bio-heap-leaching which minimizes operating costs while providing reasonable metals recoveries. Bio-heap leaching is a form of acid heap leaching. The keys to low cost operation lie in the minimal amount of required size reduction (ie: crushing), as well as utilization of sulfide components in the feed, with the help of microbial activity, to generate some or all of the acid required to overcome the acid consuming components in the rock. Although both the Labiche Formation and the Second White Speckled Shale Formation contain acid generating sulfide minerals, they are both net acid consuming given their carbonate contents.

Hatch's final report[35] is appended herein as Appendix F4. The foregoing report was subsequently expanded by an amending memo to provide cost estimates for a REE separation plant[36] (Appendix F3).

The metals recovery procedures envisaged are similar to other shale bio-heapleaching processes which use hydrometallurgical selective base metal precipitation by addition of hydrogen sulfide to the pregnant leaching solution. Next, ion exchange is used to recover Uranium from the leach solution. The main stream is then neutralized with lime and mildly re-acidified to concentrate the rare earths and some base metals into a smaller stream. Ni-Co are precipitated as sulfides by treatment with H2S, and finally, REEs are precipitated from the solution as a mixed REE-oxide chemical concentrate using oxalate reagent. The final metal recovery products are: a mixed Copper-Zinc sulfide concentrate; a mixed Nickel-Cobalt sulfide; dry Uranium oxide (yellowcake) and a REE-Y bulk concentrate. which is further refined at a separation plant to produce final separated individual oxides (+/- carbonates) for sale.

The majority of leaching solution is re-circulated to the heaps during the leaching process. Residues consisting predominantly of inert gypsum are separated out during the neutralization/re-acidification process. Final leached tailings from the heaps are neutralized with lime and backfilled into the pit, and effluent solutions are similarly treated prior to discharge.

Ancillary to the mining and leaching operations are the operation of several plants for producing the necessary processing reagents, namely; an H2S plant, sulfuric acid plant with capacity for 9,600 tonnes

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[34] Report: Initial Metal Economics Evaluation Report. Report# H3442090000-090-124-0001 prepared by Hatch Ltd., Godwin J. and Schwartz L., June 14, 2013.

[35] Report: Buckton Zone Heap Leach & Processing Scoping Study Report. Report# H344209-0000-90-124-0002 prepared by Hatch Ltd. Godwin J. and Schwartz L., September 26, 2013.

[36] Report: Buckton Heap Leach & Processing Scoping Study Supplemental Memo - Separation Plant Study. Memo addendum to Report# H3442090000-090-124-0001 prepared by Hatch Ltd., Schwartz L., October 17, 2013.

per day, and a calcining plant for the production of quicklime. These reagents are further discussed later in this Section.

Opportunities identified by Hatch for improvement include possibility for selective pre-concentration of the pregnant leaching solution prior to its treatment in the metal recovery circuits (eg: membrane separation by nano-filtration) to enhance metals concentrations leading to potential for better recovery or lower reagent consumption.

Hatch relied on the available test data to establish reasonable estimates of operating conditions and metal extraction rates, to prepare process design criteria to construct a mass balance model for the determination of equipment throughputs as a basis for equipment sizing, reagents consumption, production rates, chemical compositions, and energy usage. Hatch prepared capital and operating cost estimates for the Base Case annual leaching throughput rate of 72 million tonnes as well as the Alternative Case scenario for a 36 million tonnes annual rate. Cost estimates for the 72 million tonnes per year Base Case scenario were calculated by scaling up of figures from those of the 36 million tonnes per year Alternate Case scenario.

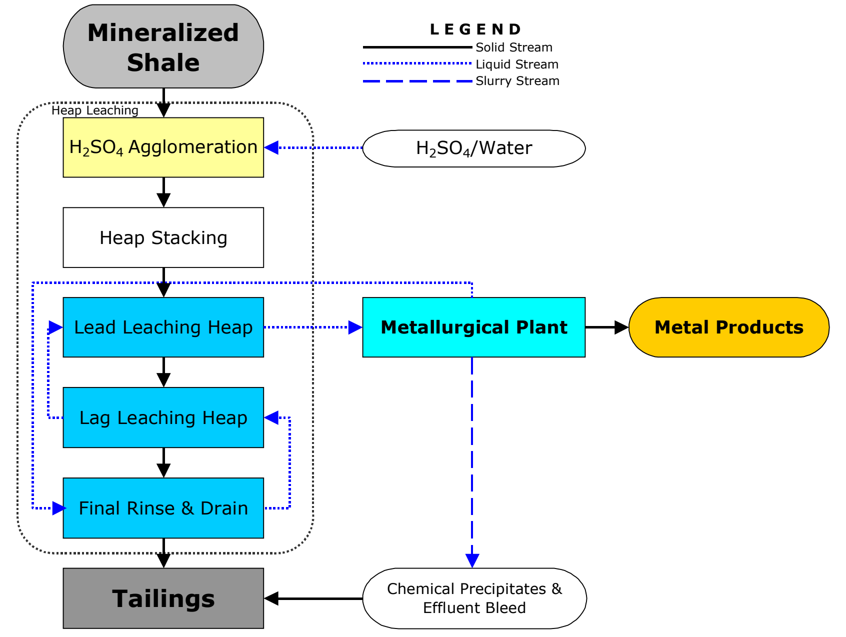

Figure 81: Summary metals leaching flowsheet, Buckton PEA. After Figure 17.1, Puritch et al 2013.

17.7 REAGENT CONSUMPTION

The contemplated leaching and metals processing system will consume a variety of reagents. Natural gas, lime and sulfuric acid represent the critical reagents required in relatively large quantities and have by far the greatest impact on overall operating costs, and low-cost feed-stocks were identified for each of these. Reasonably priced natural gas is available throughout Alberta. The contemplated operations entail on-site calcining of locally sourced limestone to produce quicklime. On-site production of sulfuric acid relies on large local supplies of sulfur which is one of the principal waste products from oil sands operations in the region and is currently stockpiled on surface with no foreseeable economic use. Lime and sulfuric acid production costs are capital intensive and sensitive to transportation cost. Reduction of their consumption is an opportunity for improvement that would also reduce acid/lime plant sizing and thereby reduce capital as well as operating costs. This is discussed later in this Section.

The PEA estimates that leaching and metals processing will consume on average approximately 40kg of sulfuric acid per tonne of mineralized feed processed. Lime consumption for processing of the two shale formations is different and on average requires 31kg of limestone per tonne of blended mineralized feed. These figures are based on preliminary stirred tank and column leaching testwork results as at July/2013 (results from additional work completed since then suggest that sulfur consumption might be lowered without significantly sacrificing metals recoveries).

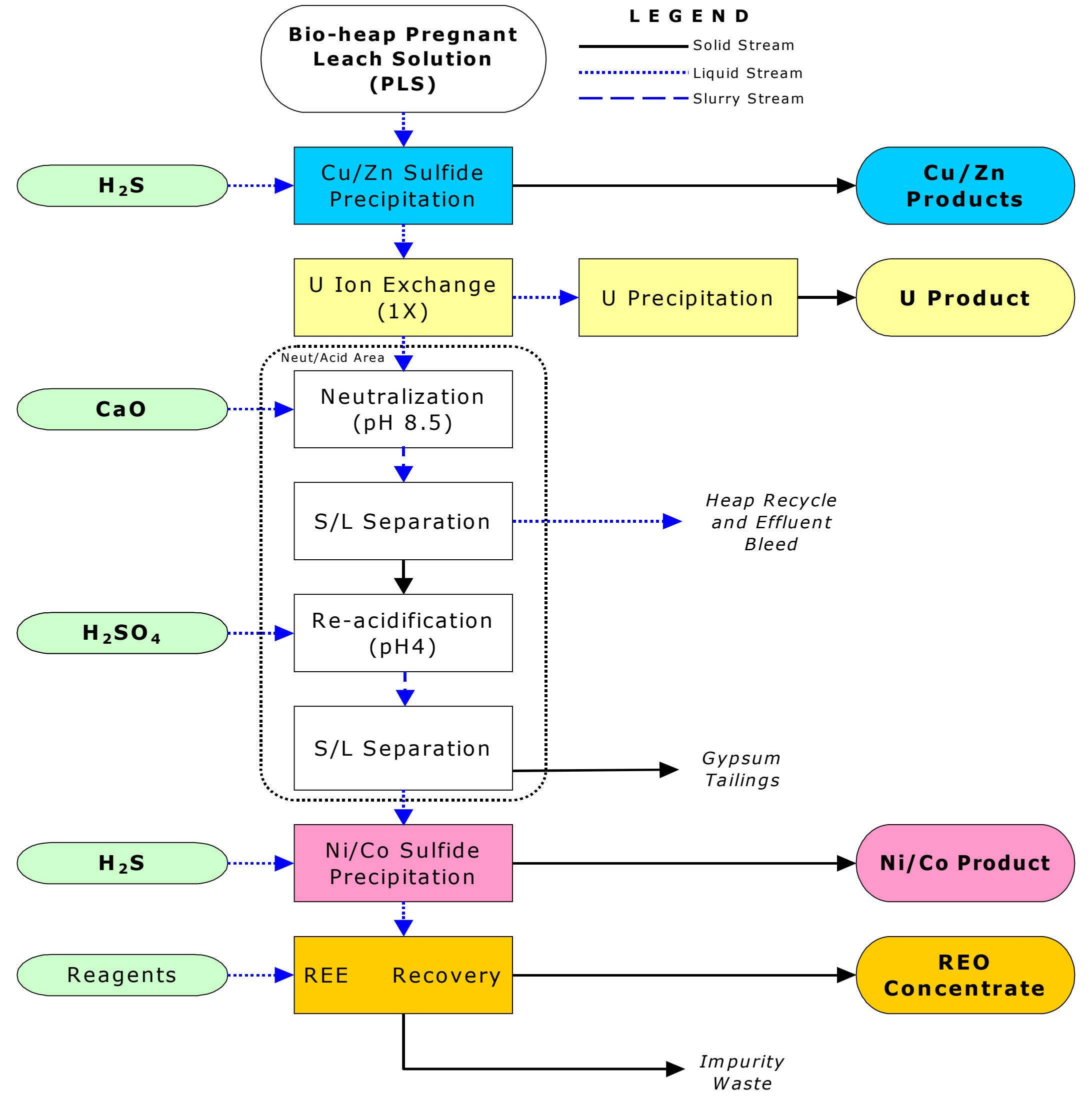

Figure 82: Summary metals recovery processing flowsheet, Buckton PEA. After Figure 17.2, Puritch et al 2013.

The PEA uses a sulfuric acid cost of $59 per tonne of acid, consisting of the cost of producing sulfuric acid at the onsite acid generation plant and an allowance of $10 per tonne for transportation of sulfur to the plant from nearby oil sands operations. A collateral benefit of the sulfuric acid generation plant is the excess electricity produced from its operation, which is reflected in operating costs as a power credit of $0.15 per tonne. The PEA assumes that the excess power would be fed back into the local electrical grid.

The PEA uses a cost for limestone delivered to the on-site calcining plant of $35 per tonne of limestone, nearly half of which ($16 per tonne) is the cost of transporting the limestone from a nearby operating quarry. Although a number of outcroppings of limestone exist nearer the Buckton Deposit, none is currently in production. The proximity of possible sources for limestone nearer the Buckton Deposit offer future opportunities for reducing costs.

17.8 EFFLUENTS AND TAILINGS

The majority of effluent volume is from a bleed stream of partially neutralized leach solution which is further neutralized by the addition of lime to a pH of 10 for removal of residual contaminants, then adjusted to a final release pH. The clarified solution is temporarily held in an effluent pond before discharge. Solid residues from effluent treatment consist largely of very fine gypsum and various iron precipitates which are held in a gypsum pond for dewatering. Tailings consist of leached residue which is unloaded from the leach pads by shovel and conveyor system. The barren material is stored on surface in the initial few years but subsequently backfilled in the open pit. The tailings may be blended with lime if additional neutralization is required.

DNI has not yet completed the necessary pilot testwork to establish definitive parameters relating to treatment of effluents and tailings from the contemplated operations.

17.9 RARE EARTH ELEMENT OXIDES BULK CONCENTRATE AND SEPARATION PLANT

The Buckton black shales have similarities with Chinese ionic clays in that REEs from Buckton are readily extracted from the shale with reasonably high recoveries by a mild leaching solution. One of the final products of the conceptual flow sheet for the envisaged Buckton hydrometallurgical plant is precipitation of a relatively pure mixed rare earth element oxide (REO) concentrate that is calcined as an intermediate product. This becomes the feed for a separation plant to produce respective final saleable products (oxides +/- carbonates) of individual REEs. Expected chemistry of the Buckton REO bulk concentrate is in contrast to concentrates produced from most other REE projects many of which are hosted in hard rocks and typically produce mineral concentrates which are relatively impure and potentially require aggressive leaching and purification before they are fed into a separation plant.

Appropriate pricing of REE final products is highly dependant on their purity; namely, on whether they are 99%+ pure or have purities as high as 99.99% commanding a large sale price differential between the two. DNI has not yet completed the necessary REE precipitation and separation testwork to establish definitive guidelines to prepare estimates of capital and operating costs for separation of the REE concentrate contemplated as the final products from the Buckton Deposit. To provide an interim guide, the PEA relies on recent third party public information to prepare an extrapolated estimate, assuming that all referenced separation plants can achieve separation of products with 99%+ purity, and further assuming that a separation facility constructed by DNI would be designed to specification capable of achieving similar purity.

Considering that little, if any, spare REE separation capacity is presently available outside of China which dominates current world REE supply, the PEA recommended that DNI would benefit from including a REE separation plant of its own into its plans for developing the Buckton deposit. Since no meaningful cost data is published by Chinese REE producers, the PEA's cost estimates for Buckton rely on NI 43-101 publicly available information from selected public companies which are advancing their projects toward construction. Notably, the Thor Lake project (Avalon Rare Metals Inc) Pre-Feasibility studies include information for a REE separation plant in Geismar, Louisiana. This plant is designed to process a REO hydrometallurgical plant precipitate bulk concentrate, presenting the best technology and processing benchmark for the expected high purity REO mixed concentrate that is envisaged to be produced from the Buckton Deposit.

Public information for the Geismar plant consist of a summary from its Pre-Feasibility study (Avalon press April 2012) which reported a capital cost of US$302 million and an operating cost of US$5.6 per kg of REE oxide product for this plant, with an annual capacity to process/produce approximately 10,000 tonnes of final product. These figures were revised by Avalon's pre-feasibility study but disclosed (Avalon press April 2013) on a blended basis along with other overall operating costs. Relying on the foregoing and benchmarking from other REE projects in the upper range of operating cost estimates (eg: approximately US$14/kg of product for Lynas Corporation's Mount Weld operations), the PEA uses an operating cost of US$10 per kg of final product as a conservative estimate for separation of REEs from Buckton. The PEA estimates a capital cost of US$269 million for the construction of the separation plant capable of processing up to 7,200 tonnes of REO mixed concentrate annually.

The contemplated Buckton mining operations have a projected capacity for the annual production of an average of 5,600 tonnes of mixed REO bulk concentrate (ranging 4,100-7,200 tonnes as a function of grade fluctuations). Any excess processing capacity of the separation plant may offer opportunities for additional revenue through toll-milling of third party REO concentrates.

The PEA notes that although the basic metrics of feeding an REO concentrate to a purification and separation facility apply equally well to all REE separation plants in general terms, the plants are ultimately custom designed to feed characteristics. But as purity is progressively improved by intermediate processing steps, the final separation processes tend to look progressively more like standardized combinations of solvent extraction, final precipitation, drying and calcining to produce oxides or carbonates. Accordingly, even though the projected REE production rate for Buckton is similar to those from other REE projects in the Western world such that interpolation from these provides a reasonable benchmarks to guide an early stage PEA, the need for strategic testwork by DNI to establish physical and chemical characteristics of contemplated REO bulk concentrate from Buckton is self evident.

The PEA further notes that location of the contemplated separation plant on-site or off-site is predominantly a function of evaluating synergies provided by the envisaged Buckton on-site infrastructure against benefits provided by an off-site location with easy access to infrastructure and highly skilled operating staff. These considerations are beyond the scope of the PEA and are best assessed in the context of a future Pre-Feasibility study.

While the PEA prepared estimates of capital and operating costs for the construction and operation of a stand-alone separation plant customized to the Buckton concentrates, consideration of third party toll-milling is an alternative worthy of future investigation if such capacity becomes available.

17.10 CAPITAL COSTS - BASE CASE

The PEA covers all aspects of organizing, constructing and conducting mining and processing operations at the Buckton Deposit including mining, metals extraction from the shales by heap leaching, metals recovery from the pregnant leach solution and REE separation into saleable final products, as well infrastructure and maintenance thereof. The PEA capital cost estimates rely on quotations and estimates from suppliers and contractors, augmented by estimates from experience from other comparable operations. The PEA contemplates a two year pre-production construction and pre-stripping period, during which pre-production capital expenditures are incurred.

Estimates of capital costs were prepared generally consistent with an AACE Class 5 estimate with an accuracy of -20%/+50%, in-line with guidelines for an order of magnitude study at the level of engineering and method employed to develop the cost estimates for Buckton. A 30% contingency was, accordingly, applied to direct installed costs of all metals leaching and processing equipment except the REE separation plant, 5% applied to the acid plant costs, and an overall 20% applied to mining equipment costs and infrastructure. The benchmark capital cost estimate for the REE separation plant includes a contingency.

Metals leaching and processing capital cost estimates were initially prepared by Hatch for a run of mine feed of 36MM tpa (Alternate Case), and subsequently scaled up to derive estimates for the 72MM tpa Base Case scenario.

For the 36,000,000 tonnes per year scenario, most or all of the equipment in the upstream processing areas (agglomeration, stacking and leach pads, acid plant and tailings) is either sized at or near the largest capacity available, or strongly correlated to tonnage, such that doubling of the processing tonnage would result in parallel equipment at roughly double the cost in these areas. In the foregoing regard, economy of scale is already at or near optimum for about two-thirds of the overall process equipment cost areas. The downstream processing area costs (Cu/Zn precipitation, U IX, Re-acidification, Ni/Co Precipitation, and REO Precipitation), however, were scalable since the individual equipment can be made larger instead of parallel. If upstream tonnage would be double, the downstream areas would double in size due to the double volume, but at less than linear cost increase. The product ends (Cu/Zn filtration, Ni/Co filtration, U precipitation and drying, RE calcining) would also be scalable, roughly according to final product tonnages.

To calculate costs for the 72tpa Case (the Base Case), costs were, accordingly, scaled up from the 36MM tpa Case to the 72tpa Case as follows: (a) Linear scaling based on tonnage for Materials handling, Heaps, Ponds, Pipes, Sulfuric Acid Plant, Lime Plant, Tailings; and (b) Scaled based on product using Taylor's Rule for Metals Recovery Plant and H2S Plant.

The PEA estimates a pre-production capital cost on a constant (undiscounted) dollar basis of $3,766 million for the Base Case, which includes $55 million of indirect owner costs and $474 million of contingencies. In addition, annual sustaining capital requirements during the mine life are estimated to $38 million per year (equivalent to approximately 1.25% of pre-production capital costs) representing an aggregate of $2,445 million over the 64 year mine life ($547 million if discounted at 6%). Sustaining capital represents the aggregate cost of mining and processing equipment replacement, capitalized infrastructure and facility upgrades over the 64 year mine life, as well as ongoing capitalized repairs and maintenance to leaching pads. Details of capital costs are summarized in Table 39 and Figure 83, showing costs of mining and processing equipment and facilities.

Summary of Capital Costs		
	Base Case 72MM tonnes per annum** 65 year mine life ($000)	Alternate Case 36MM tonnes per annum 28 year mine life ($000)
Pre-Production Capital Costs		
Pre-stripping	19,632	180,009
Mining Equipment	476,600	676,400
Metals Leaching & Processing (direct installed costs)	1,839,000	1,070,200
Metals Leaching & Processing (indirect costs incl owner costs)	518,000	336,000
Infrastructure	156,000	156,000
Contingency	474,447	426,482
Subtotal Pre-Production Capital Costs	3,483,679	2,845,291
REE Separation Plant (Direct & Indirect installed costs and contingencies)	282,450	226,800
Total Pre-Production Capital Costs	**3,766,129**	**3,071,891**
Aggregate Sustaining Capital Over 64 year Mine Life	**2,445,600**	**706,000**
Note: Contingency includes a $344 million related to metals leaching and processing; Figures are stated on a constant dollar basis; Sustaining Capital includes closure and reclamation costs; Numbers may not add exactly due to rounding.		

Table 39: Summary of Capital costs for the Base Case and Alternate Case. After Table 21.1, Buckton PEA, Puritch et al 2013.

Metals leaching and processing capital costs comprise by far the largest component of overall capital costs for both mining scenarios evaluated. They represent, excluding sustaining capital, an estimated $2,983 million for direct and indirect costs, including a $344 million contingency. Sustaining capital requirements relating to metals leaching and processing also comprise the bulk of the sustaining capital requirements representing approximately $37 million annually or the aggregate of $2,361 million over the 64 year mine life ($534 million if discounted at 6%). Contingencies related to metals leaching and processing make up 72% of the aggregate $474 million of contingencies. Details of leaching and processing costs are summarized in Table 40 and Figure 83.

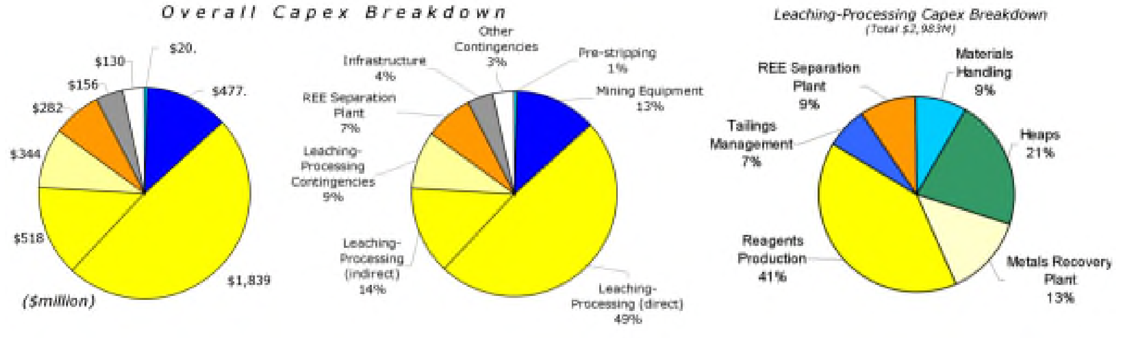

Figure 83: Summary of overall capital costs showing also a breakdown of metals leaching and processing costs. After Buckton PEA, Puritch et al 2013.

Metals Leaching and Processing Capital Costs*					
		Base Case 72MM tonnes per annum** 65 year mine life ($000,000)		Alternate Case 36MM tonnes per annum 28 year mine life ($000,000)	
Operational Sections	Equipment Items	Installation Factor	Installed Cost ($000,000)	Installation Factor	Installed Cost ($000,000)
Materials Handling	Transportation conveyor system	94%	47	94%	23
	Agglomeration drum	94%	36	94%	18
	Heap leach stacking equipment	94%	73	94%	36
Heaps	Heaps	10%	211	10%	106
	Blowers	35%	22	35%	11
	PLS and irrigation ponds	5%	21	5%	11
	Pipelines	5%	126	5%	63
Metals Recovery Plant	Cu/Zn sulfide recovery	220%	22	220%	21
	Uranium recovery	220%	33	220%	32
	Neutralization	220%	92	220%	88
	Re-acidification	220%	60	220%	57
	Ni/Co sulfide recovery	220%	11	220%	10
	REO precipitation	220%	23	220%	22
Reagents	H2S plant	15%	105	15%	100
	Sulfuric acid plant	4%	790	4%	395
	Lime plant	15%	41	15%	21
Tailings	Gypsum pond	5%	54	5%	27
	Interim Tailings facility (5yrs)	5%	71	5%	35
	Subtotal Installed Equipment		**1,839**		**1,081**

Indirect Costs	Indirect Factors	Cost ($000,000)	Indirect Factors	Cost ($000,000)
Installed Equipment Subtotal	-	**1,839**		**1,081**
EPCM	12%	221	14%	151
Construction facilities	5%	92	5%	54
Capital spares	4%	74	4%	43
Commissioning indirects	2%	37	2%	22
Ramp-up support	2%	37	2%	22
Owners costs	3%	55	4%	43
Contingency ***	30%	344	30%	224
Total Leaching & Processing				

REE-Y Separation		Installed Cost ($000,000)		Installed Cost ($000,000)
Leaching & Processing Subtotal		2,698		1,641
REE-Y Separation Plant (incl a contingency)****		269		210
Total Leaching-Processing & REE Separation		**2,980**		**1,851**

**Figures may not add due to rounding. **Costs were scaled up from the 36MM tpa Case to the 72tpa Case as follows: (a) Linear scaling based on tonnage for Materials handling, Heaps, Ponds, Pipes, Sulfuric Acid Plant, Lime Plant, Tailings; and (b) Scaled based on product using Taylor's Rule for Metals Recovery Plant and H2S Plant. ***Contingencies estimated to be 30% except for the acid plant which is estimated at 5%; ****REE costs are an all-up direct and indirect benchmark estimate including also a contingency. Figures may not add up exactly due to rounding.*

Table 40: Metals leaching and processing costs for the Base Case and Alternate Case. After Tables 21.7, 21.8 and 21.10, Buckton PEA, Puritch et al 2013.

The acid plant, with an estimated $790 million installed direct cost, makes up nearly half of the $1,839 million total processing equipment direct installed cost. This figure represents $1,075 million when its pro-rata share of indirect costs are included, and makes up 36% of the overall $2,983 million capital cost for metals leaching and processing equipment and 28% of the total pre-production capital cost.

The capacity (size), hence cost, of the acid plant is a function of the amount of sulfuric acid required during operations and may be downsized should acid consumption be reduced (possible capital and operating cost savings are described in Section 17.16). The heap leach pads ($380 million) and the REE separation plant ($282 million) represent the second and third highest installed metals processing equipment direct costs.

Capital costs of mining equipment represent an estimated $575 million including a $99 million contingency. The bulk of the foregoing costs are related to conveyors ($113 million), sizers ($122 million) and shovels ($100 million).

Capital costs for the mine provide an estimated $187 million for basic site facilities and infrastructure which include costs of construction of a 50km main access road to the mine, a 30km power-line, a 30km gas line and a 30km raw water system. Infrastructure costs also include provision for camp, office facilities, air strip and a 20% contingency.

The principal difference between Capital costs for the Base Case (mining the Second White Speckled Shale and overlying Labiche Formations) and the Alternate Case (mining only the Second White Speckled Shale Formation) scenarios is higher mining equipment and pre-stripping costs for the Alternate Case scenario given the higher strip ratio as a direct result of having to remove considerable Labiche Formation shale overlying the Second White Speckled Shale and disposing of it as waste (6.2:1 Alternate Case vs 0.5:1 Base Case), but lower metals leaching and processing costs for the Alternate Case given the lesser amount of material to be annually processed (36 million tonnes annually for the Alternate Case compared to 72 million tonnes for the Base Case). Capital costs for infrastructure for the Base Case and Alternate Case are the same.

17.11 OPERATING COSTS - BASE CASE

The PEA estimates overall operating costs to be $10.34 per tonne of mineralized shale mined and processed for the Base Case, including $0.29 per tonne for G&A (Table 41). Metals leaching and processing costs make up bulk of the overall operating costs representing $8.07 per tonne (78%) in addition to an average of $0.78 per tonne for REE separation. The cost of REO separation is calculated as a cost per kg of REO produced and processed, its per tonne cost fluctuates from one year to the next due to REO grade variations in the tonnes of mineralized shale mined. Relative costs are shown in Figure 84.

Summary of Operating Costs	
	($ per tonne of feed)
Waste Excavation	0.40
Mining	0.80
Metals Leaching and Processing	8.07
REE Separation cost	0.78
G&A	0.29
Total	10.34
Notes: Operating costs shown represents the average cost over the mine life.	

Table 41: Summary of operating costs - mining, metals leaching and processing. After Table 21.12, Buckton PEA, Puritch et al 2013.

Details of costs for the leaching and processing of metals are shown in Table 42, reiterating the significance of reagent consumption costs, consisting mostly of the costs for upstream acidification of heaps during leaching, their subsequent neutralization during remediation, and similar costs related to downstream processing of metals extracted into solution from the shale.

Costs relating to leaching and processing of the Second White Speckled Shale Formation and the Labiche Formation are shown separately in Table 42, alongside a cost blended in the proportion of their respective relative tonnages per the Buckton production plan. Due to minor local variations in the relative thickness of the two formations throughout the Buckton Deposit, the blended operating cost will vary from one year to the next based on the relative proportion of material mined and processed from each Formation.

Metals Leaching & Processing Operating Costs ($/tonne)			
	Second White Speckled Shale	Labiche Shale	Blended Shale Resource
Reagents – Upstream	2.35	2.35	2.35
Neutralization/Re-acidification	2.01	1.36	1.50
Reagents – Metals Recovery	0.98	0.23	0.39
Labour	0.58	0.58	0.58
Power (Credit)	(0.15)	(0.15)	(0.15)
Maintenance	1.20	1.20	1.20
Effluent Treatment	0.11	0.11	0.11
Tailings Treatment	1.80	1.80	1.80
5% non-specified costs	0.35	0.28	0.29
Total	**9.23**	**7.77**	8.07
Notes: Figures exclude G&A and Sustaining Capital; Costs for Blended Shale Resource are the average cost over the mine life as weight averaged based on proportionate tonnages of Second White Speckled and Labiche shales.			

Table 42: Summary of metals leaching and processing operating costs. After Tables 21.16 and 21.17, Buckton PEA, Puritch et al 2013

While mining excavation costs for he Base Case (mining the Second White Speckled Shale and overlying Labiche Formations) and the Alternate Case (mining only the Second White Speckled Shale Formation) scenarios are the same, metals leaching and processing costs differ. Whereas the Alternate Case contemplates leaching and processing of only the Second White Speckled Shale, the Base Case contemplates leaching and processing of the Second White Speckled Shale as well as overlying Labiche Formations shales on a blended basis. The differing costs are shown in Table 42.

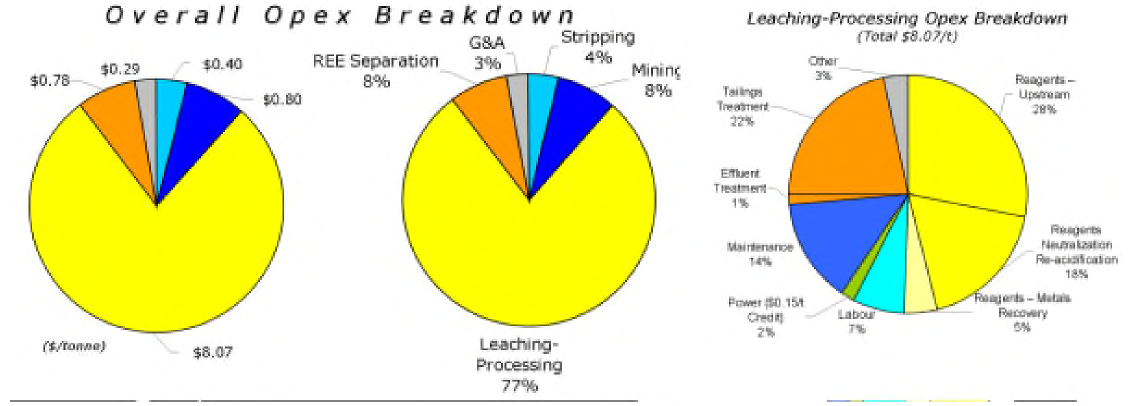

Figure 84: Summary of overall operating costs showing also a breakdown of leaching and processing costs, After Buckton PEA, Puritch et al 2013.

17.12 TAXES AND ROYALTIES

The PEA reports various economic parameters such as cash flows, Net Present Value and Internal Rate of Return on a pre-tax as well as after-tax basis, calculated based on a Canada Federal tax rate of 15% and an Alberta Provincial tax rate of 10% levied on net operating revenues after deducting capital property amortization and the Alberta Provincial Mining Royalty.

The Buckton Deposit (and the SBH Property) is held 100% by DNI, and there are no royalties due to any third parties other than the Provincial Mining Royalty due to the Province of Alberta levied against production revenues. This royalty is equivalent to a 1% royalty levied on gross revenues until all development and capital expenditures are recouped, but which converts thereafter to the greater of a 1% royalty levied on gross revenues or 12% royalty levied on net operating revenues.

Under the Base Case mining scenario, the Buckton Deposit will, on average, yield an estimated $349 million of pre-tax annual net operating income ($276 million after-tax) after payment of the Alberta Provincial Mineral Royalty. On an undiscounted basis, during its 64 year mine life, the deposit will yield an aggregate of $18.9 billion of pre-tax net operating income ($14.1 billion after-tax) after paying an aggregate of $3 billion in Alberta Provincial Mineral royalties. Federal and Alberta Taxes and Royalties payable are summarized in Table 43 for the Base Case scenario per the PEA.

	Federal		**Alberta**					
	Corp Taxes ($000)		Corp Taxes ($000)		Royalties ($000)		Alberta Total ($000)	
	Undiscounted	NPV6%	Undiscounted	NPV6%	Undiscounted	NPV6%	Undiscounted	NPV6%
Base Case	$ 2,853,000	$ 426,000	$ 1,902,000	$ 284,000	$ 2,995,000	$ 503,000	$ 4,897,000	$ 787,000

Table 43: Summary of projected taxes and royalties, Base Case. After Buckton PEA, Puritch et al 2013.

17.13 PROJECTED METALS PRODUCTION PROFILES - BASE CASE

Metals production profile is shown in Table 44 and Figure 85, showing also the relative contribution of the respective metals and REEs to gross recoverable value (shown also in Figure 86).

Projected Metals Production Profile - Base Case					
	Projected Metals/Oxide Production (tonnes)			Projected Gross Value ($000,000)	
	Life of Mine	Annual	%	Life of Mine	%
Ni	156,208	2,441	16%	$1,368	2%
U3O8	30,043	469	3%	$4,225	6%
Zn	370,226	5,785	37%	$806	1%
Cu	42,041	657	4%	$354	0.5%
CO	39,872	623	4%	$1,327	2%
TREO	352,990	5,515	36%	$66,993	89%
Totals	991,380	15,490	100%	$75,072	100%
TREO	352,990	5515	100%	$66,993	100%
LREO	207,676	3,245	59%	$18,370	27%
HREO	145,315	2,271	41%	$48,623	73%

Notes: HREO (Total Heavy Rare Earth Oxides) = the aggregate of Y203, Eu203, Gd203, Tb203, Dy203, Ho2O3, Er203, Tm203, Yb203 and Lu203; LREO (Total Light Rare Earth Oxides) = the aggregate of La2O3, Ce2O3, Pr2O3, Nd2O3, Sm2O3. TREO (Total Rare Earth Oxides) = HREO plus LREO. Numbers may not add exactly due to rounding.

Table 44:. Projected Metals Production Profile - Base Case, After Table 22.9, Buckton PEA, Puritch et al 2013.

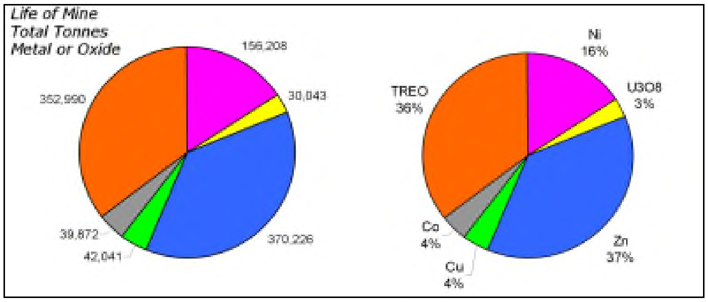

Figure 85: Projected metals production profile for the Buckton Deposit, Base Case, After Buckton PEA, Puritch et al 2013.

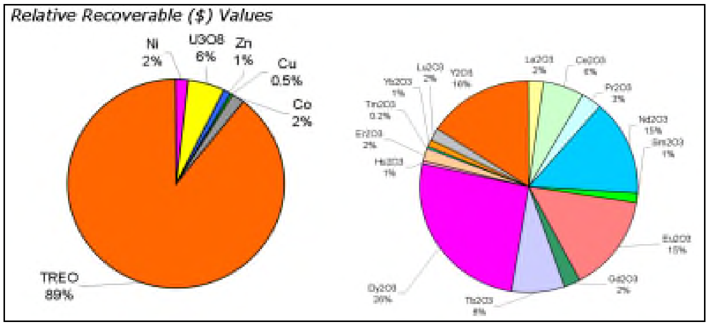

Figure 86: Projected relative contribution of the respective metals and REEs to gross per tonne value recoverable from the Buckton Deposit. Base Case, After Buckton PEA. Puritch et al 2013.

Based on the price scheme used, recoverable REEs represent majority (89%) of the per tonne value represented by the two shales, whereas at the outset of DNI's launch of exploration of the Buckton Zone in 2008 (and the SBH Property) the bulk of the gross in situ value of the shales was related to their base metals and Uranium content. This is a typical characteristic of polymetallic deposits, whose value is the aggregate of the individual recoverable values represented by each of the contained recoverable metals which do not necessarily follow the same commodity market trends at any given time.

Metals production profile for REEs is shown in Table 45 and in Figure 87, noting that the Buckton deposit would produce nearly equal amounts of heavy and light REEs. The relative contribution of the various light and heavy REEs to gross value is shown in Figure 87, demonstrating that heavy REEs contribute approximately three quarters of the gross value recoverable from the deposit.

Projected REE Production Profile - Base Case										
	La_2O_3	Ce_2O_3	Pr_2O_3	Nd_2O_3	Sm_2O_3					
Life of Mine (tonnes)	33,055	87,563	14,273	59,926	12,858					
Annual (tonnes)	516	1,368	223	936	201					
%of Tonnes	9%	27%	6%	27%	8%					
Life of Mine Gross Value ($000,000)	1,547	3,972	2,104	9,826	920					
% of Gross Value	2%	6%	3%	15%	1%					
	Eu_2O_3	Gd_2O_3	Tb_2O_3	Dy_2O_3	Ho_2O_3	Er_2O_3	Tm_2O_3	Yb_2O_3	Lu_2O_3	Y_2O_3
Life of Mine (tonnes)	3,442	14,510	2,315	13,185	2,555	7,318	1,072	6,787	1,035	93,094
Annual (tonnes)	54	227	36	206	40	114	17	106	16	1,455
%of Tonnes	2%	10%	2%	11%	2%	7%	1%	7%	1%	100%
Life of Mine Gross Value ($000,000)	9,910	1,612	5,325	17,171	545	1,299	109	734	1,384	10,534
% of Gross Value	15%	2%	8%	26%	1%	2%	0.2%	1%	2%	16%
Notes: Numbers may not add exactly due to rounding.										

Table 45: Projected REE production profile for the Buckton Deposit, Base Case. Buckton PEA, Puritch al 2013.

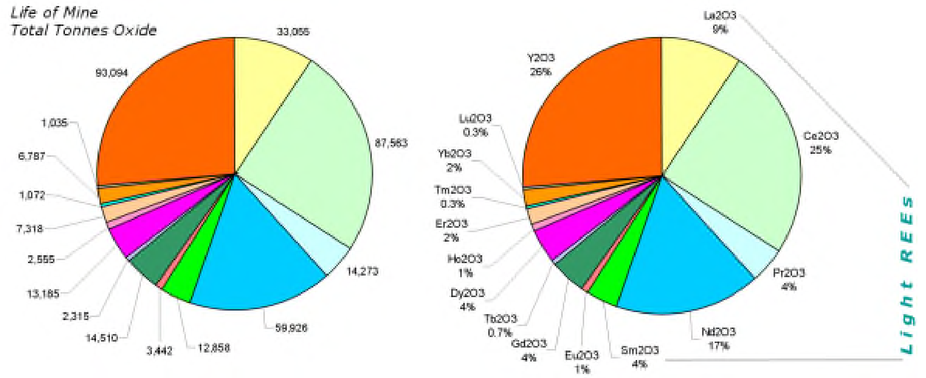

Figure 87: Projected REE production profile for the Buckton Deposit, Base Case, After Buckton PEA, Puritch et al 2013.

17.14 ECONOMIC DISCUSSION AND SENSITIVITY ANALYSIS - BASE CASE

The PEA indicated that the envisaged Buckton operation has a net present pre-tax value of $1.6 billion at a 6% discount rate, with an 8.7% internal rate of return (100% equity financed basis). The PEA estimated that the Buckton mining operations will cost an estimated $3.76 billion in pre-production capital to construct with a 10.5 year payback. The mining operations would generate an average of $349 million in pre-tax net cash flow annually from the production of Ni-U-Zn-Cu-Co-REE-Y over the 64 year mine life, with life of mine revenues of $75 billion. The PEA financial model assumes 100% equity financing although DNI envisages that the Buckton operations might more likely be financed through a combination of debt, equity and offtake arrangements. Economics concluded by the PEA are summarized in Table 46.

	Base Case	Alternate Case
Mining Target	Second White Speckled Shale Formation + overlying Labiche Formation	Second White Speckled Shale Formation Only
Final Products	Ni-Co-sulfide; Zn and Cu sulfides U_3O_8 yellowcake Separated REE-Y oxides	Ni-Co-sulfide; Zn and Cu sulfides U_3O_8 yellowcake Separated REE-Y oxides
Optimized Pit Shell Mineable Mineral Resource	4,544 million tonnes	976 million tonnes
Annual Mining/Processing Throughput Feed	72 million tonnes per year by open pit	36 million tonnes per year by open pit
Strip Ratio (waste:feed)	0.50	6.27
Life of Mine	64 years	29 years
Metals Extraction Metals Recovery	Bio-Heapleaching Selective Precipitation REE-Y Separation	Bio-Heapleaching Selective Precipitation REE-Y Separation
Pre-production Capital Cost	$3,766 M	$3,077 M
Contingency (incl. in Capex)	$ 474 M	$ 426 M
Sustaining Capital Over Life of Mine	$ 2,446 M	$ 706 M
Operating Cost	$ 10.3 per tonne	$ 16.6 per tonne
Gross In-Situ Recoverable Value	$ 16.5 per tonne	$ 26.6 per tonne
Net Operating Margin (pre-tax)	$ 6.2 per tonne	$ 10.0 per tonne pre tax
Payback	10.5 years	9.2 years
Gross Revenues Over Life of Mine	$ 75,000 M	$ 26,000 M
Total Cash Flow (NPV0%)	$ 18,900 M pre tax $ 14,145 M after tax	$ 5,147 M pre tax $ 3,847 M after tax
Average Annual Operating Cash Flow	$ 349 M pre tax $ 276 M after tax	$ 284 M pre tax $ 239 M after tax
NPV @ 5% Discount	$ 2,589 M pre tax $ 1,667 M after tax	$1,059 M pre tax $ 611 M after tax
NPV @ 6% Discount	$ 1,616 M pre tax $ 904 M after tax	$ 640 M pre tax $ 273 M after tax
NPV @ 7% Discount	$ 887 M pre tax $ 328 M after tax	$295 M pre tax $ (7) M after tax
IRR (equity funded)	8.7% pre tax; 7.7% after tax	8.0% pre tax; 7.0% after tax
USD:CDN Exchange Rate	1.05	1.05
Life of Mine excludes two year pre-production construction; All $ as CDN; US$1=CDN$1.05; $/t= $ per tonne; M=million		

Table 46: Summary of the Buckton PEA parameters and conclusions. Base Case and Alternate Case. After Table 22.1, Buckton PEA, Puritch et al 2013.

Cautionary Note: The PEA study is based on a conceptual mining plan and metals recovery flowsheets to support estimation of cost parameters to serve as the basis for assessing the Buckton Deposit. As such, the PEA is intended to provide the necessary technical disclosure in prescribed regulatory format to enable a reasonable person to form a reasonable opinion of the potential of the Buckton Deposit based on economic sensitivity to key operational criteria. The PEA is not intended as a study of definitive economic viability as it is preliminary in nature and is based on technical and economic assumptions or extrapolations to be refined in future studies. The PEA is, furthermore, based on mineral resources consisting mostly of Inferred resources that, despite uniformity of grade and continuity, are too speculative geologically to have economic conditions applied to them that would enable them to be characterized as mineral reserves, and there is no certainty that conclusions of the PEA will be realized.

On an undiscounted basis, the contemplated mining operations for the Buckton Deposit are projected to yield an estimated $75 billion in gross operating revenues over the 64 year mine life (average $1.15 billion per year), from material with a gross in situ recoverable average value of $16.5 per tonne.

On average, the Buckton Deposit will yield an estimated $349 million of pre-tax annual net operating income ($276 million after-tax) after payment of the Alberta Provincial Mineral Royalty, from material with an in-situ recoverable value of $16.5 per tonne which is mined and processed at a $6.2 per tonne operating margin. On an undiscounted basis, during its 64 year mine life, the deposit will yield an aggregate of $18.9 billion of pre-tax net operating income ($14.1 billion after-tax) after paying an aggregate of $3 billion in Alberta Provincial Mineral royalties. There are no additional royalties to be paid since DNI holds a 100% interest in the deposit.

On a discounted basis, the above net revenues represent a pre-tax net present value (NPV) of $1.6 billion at a discount rate of 6% ($904 million after-tax), and a pre-tax IRR of 8.7% assuming 100% equity financing (7.7% after-tax). Based on the foregoing, payback period is estimated to be 10.5 years pre-tax (10.6 years after-tax). Net aggregate revenues, NPV and IRR are shown in Table 47, showing also comparative figures for various discount rates.

Summary of Economics - NPV - IRR - Payback					
	Discount Rate				
	0%	**5%**	**6%**	**7%**	**8%**
NPV pre-tax ($000,000)	$ 18,900	$ 2,589	**$ 1,616**	$ 887	$ 327
NPV after-tax ($000,000)	$ 14,145	$ 1,667	**$ 904**	$ 328	$ (117)
IRR pre-tax (%)	8.7%	8.7%	**8.7%**	8.7%	8.7%
IRR after-tax (%)	7.7%	7.7%	**7.7%**	7.7%	7.7%
Payback pre-tax (yrs)	10.5	10.5	**10.5**	10.5	10.5
Payback after-tax (yrs)	10.7	10.6	**10.6**	10.6	10.6
Notes: Net revenues calculated after payment of the Alberta Provincial Mineral Royalty; Taxes due based on a 10% Provincial and 15% Federal corporate tax rate after deducting amortization.					

Table 47: Summary of economics, Base Case. After Table 25.4, Buckton PEA, Puritch et al 2013.

As a large deposit with long mine life, most of the revenues that can be generated from the Buckton Deposit beyond the initial 20 years do not make a material contribution to the discounted cash flow figures given the vagaries of discounting cash flows over a long term.

As a high mining throughput operation, economics of the contemplated mining scenario are more sensitive to fluctuations in operating costs and revenues than to changes in capital costs. Changes in NPV-IRR-Payback in response to fluctuations in capital cost are presented in Table 48.

Pre-tax NPV-IRR-Payback Sensitivity to Changes in Pre-production Capital Cost				
	NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	payback (yrs)
Baseline Capex + $600 M	18,381	1,102	7.6%	12.0
Baseline Capex + $400 M	18,581	1,286	8.0%	11.5
Baseline Capex + $200 M	18,735	1,449	8.3%	11.1
PEA Baseline Capex = $3,766 M	**18,900**	**1,616**	**8.7**%	**10.5**
Baseline Capex - $200 M	19,100	1,799	9.2%	9.9
Baseline Capex - $400 M	19,300	1,983	9.7%	9.5
Baseline Capex - $600 M	19,449	2,141	10.2%	9.1
Notes: NPV on pre-tax basis; IRR on pre-tax basis and assumes 100% equity financing; M=million				

Table 48: Sensitivity of NPV-IRR-Payback to capital cost Base Case. After Table 22.3, Buckton PEA, Puritch et al 2013.

Aside from fluctuations in capital costs due to changes in equipment costs and mining scheme modifications, some fluctuations in capital costs can be attributed to changes in reagent consumption (notably acid and lime consumption) given that capacity (size) of the contemplated on-site acid generation and the calcining plants are scaled to annual reagent requirements. This is particularly true for acid consumption when considering that capital cost of the acid plant represents 28% of the total pre-production capital cost.

Changes in NPV-IRR-Payback in response to fluctuations in gross recoverable per tonne value are shown in Table 49. While the foregoing value is dependant on commodity price fluctuations which are outside DNI's control, it is noteworthy that a 5% relative change in metal recovery (equivalent to a 1%-3% absolute change depending on the respective metal) represents approximately a $1 change in gross recoverable per tonne value. Optimized enhancement of recoveries is a significant focus of DNI's ongoing testwork. Fluctuations in revenues can also be achieved by increasing or decreasing the proportion of the lower grading Labiche Shale material blended with the higher grading Second White Speckled Shale (under the PEA mining scheme and cash flow model, all tonnages of the two shales are mined and processed with no attempt to optimize economics through disproportionate blending).

Pre-tax NPV-IRR-Payback Sensitivity to Changes in Recoverable $/tonne Value				
	NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	payback (yrs)
Baseline Recoverable Value + $3/t	30,973	4,324	12.9%	7.3
Baseline Recoverable Value + $2/t	26,917	3,405	11.5%	8.1
Baseline Recoverable Value + $1/t	22,914	2,514	10.1%	9.1
PEA Baseline In-Situ Recoverable Value $16.52/t	**18,900**	**1,616**	**8.7%**	**10.5**
Baseline Recoverable Value - $1/t	14,892	718	7.2%	12.5
Baseline Recoverable Value - $2/t	10,911	174	5.7%	14.9
Baseline Recoverable Value - $3/t	6,894	(1,087)	3.9%	19.2
Notes: NPV on pre-tax basis; IRR on pre-tax basis and assumes 100% equity financing.				

Table 49: Sensitivity of NPV-IRR-Payback to recoverable per tonne value, Base Case. After Table 22.4, Buckton PEA, Puritch et al 2013.

Changes in NPV-IRR-Payback in response to fluctuations in per tonne operating cost are shown in Table 50.

Pre-tax NPV-IRR-Payback Sensitivity to Changes in Operating Cost				
	NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	payback
Baseline Opex + $3	6,835	(1,196)	3.8%	19.7
Baseline Opex + $2	10,882	(244)	5.6%	15.2
Baseline Opex + $1	14,928	704	7.2%	12.5
PEA Baseline Opex $10.34/t	**18,900**	**1,616**	**8.7%**	**10.5**
Baseline Opex - $1	22,924	2,547	10.2%	9.0
Baseline Opex - $2	26,936	3,470	11.7%	7.9
Baseline Opex - $3	30,924	4,379	13.1%	7.2
Notes: NPV on pre-tax basis; IRR on pre-tax basis and assumes 100% equity financing.				

Table 50: Sensitivity of NPV-IRR-Payback to operating cost, Base Case. After Table 22.5, Buckton PEA, Puritch et al 2013.

While the most aggressive operating cost reductions might be achieved through reductions in reagent consumption, notably the consumption of lime and sulfuric acid, reduction of acid consumption would also reduce capital costs.

A significant portion of the cost of limestone is the cost of its trucking to the Buckton Deposit. Changes in NPV-IRR-Payback in response to fluctuations in cost of limestone (for lime) are presented in Table 51, showing the PEA cost of $35 per tonne of limestone delivered to Buckton from an operating quarry 100km away from the Deposit, and variations related to the lowest cost of $25 per tonne which might reflect a limestone source nearer the property and the highest cost of $105 per tonne for limestone from greater distances (south-central Alberta). Several outcroppings of limestone exist near the Buckton Deposit, none of which are currently being quarried.

Pre-tax NPV-IRR-Payback Sensitivity to Changes in Cost of Limestone							
Change in Metals Leaching and Processing Operating Cost Relative to $/t Cost of Limestone				Revised Pre-tax NPV-IRR-Payback Relative to Cost of Limestone			
Cost of Limestone Delivered to Buckton ($/tonne)	Processing Opex Change for Second White Speckled Shale	Processing Opex Change for Labiche Formation	Processing Opex Change for Blended Shale PEA Resource	NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	Payback (yrs)
$ 105/t	$ 2.94	$ 2.04	$2.23	9,986	(425)	5.2%	15.7
$ 85/t	$ 2.10	$ 1.46	$1.59	12,523	159	6.3%	14.0
$ 45/t	$ 0.42	$ 0.29	$0.32	17,638	1,331	8.3%	11.2
PEA Baseline $ 35/t	**0**	**0**	**$0.00**	**18,900**	**1,616**	**8.7%**	**10.5**
$ 25/t	$ (0.42)	$ (0.30)	($0.32)	20,227	1,924	9.2%	9.9
Notes: PEA metals leaching and processing operating cost is $8.07 per tonne of feed processed made up of the two shales. This blended cost represents the weighted average over mine life for the blended PEA mineral resource based on respective tonnages of the two shales mined.							

Table 51: Sensitivity of NPV-IRR-Payback to cost of limestone, Base Case. After Table 22.6, Buckton PEA, Puritch et al 2013.

Changes in NPV-IRR-Payback in response to fluctuations in sulfuric acid dosage (consumption) are presented in Table 52, showing operating and capital costs savings which can be achieved by reducing acid consumption. The table shows reductions in acid dosage from the PEA baseline of 40kg of acid per tonne of feed processed toward 20kg per tonne representing preliminary results from agglomerated column testwork which has not yet been confirmed by duplication.

Pre-tax NPV-IRR-Payback Sensitivity to Changes in Acid Consumption						
Change in Metals Leaching and Processing Operating & Capital Costs Relative to Acid Dosage (Consumption)			Revised Pre-tax NPV-IRR-Payback Relative to Acid Dosage (Consumption)			
Acid dosage (kg/tonne)	Operating Cost Change ($/tonne)	Capital Cost Change ($000,000)	NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	Payback (yrs)
PEA Baseline 40kg/t	**0**	**0**	**18,900**	**1,616**	**8.7%**	**10.5**
35	$ (0.26)	$ (108)	20,070	1,965	9.4%	9.7
30	$ (0.52)	$ (190)	21,158	2,262	9.9%	9.3
25	$ (0.78)	$ (272)	22,300	2,586	10.6%	8.7
20	$ (1.04)	$ (380)	23,412	2,905	11.2%	8.3
Notes: PEA metals leaching and processing operating cost is $8.07 per tonne of mineralized shale feed processed made up of the two shales both of which require the same acid dosage.						

Table 52: Sensitivity of NPV-IRR-Payback to acid consumption, Base Case. After Table 22.7, Buckton PEA, Puritch et al 2013.

Changes in NPV-IRR-Payback in response to fluctuations in operating cost of REE separation are presented in Table 53, showing the benchmark cost suggested by the PEA for Buckton relative to the industry benchmark maximum and minimum costs identified. Operating costs shown in Table 53 are per kilogram of final saleable products produced from the separation plant consisting of REEs as oxide/carbonate.

Pre-tax NPV-IRR-Payback Sensitivity to REE Separation Operating Costs					
REE Separation Operating Costs	Comments	Revised NPV-IRR-Payback Relative to REE Separation Cost			
		NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	Payback (yrs)
US$14 per kg of product	Mount Weld - Lynas Corp	17,663	1,325	8.2%	11.2
PEA Baseline $10 per kg product	**PEA Baseline**	**18,900**	**1,616**	**8.7%**	**10.5**
US$5.6 per kg of product	Geismar - Avalon	20,297	1,952	9.3%	9.8

Table 53: Sensitivity of NPV-IRR-Payback to cost of REE separation, Base Case. After Table 22.8, Buckton PEA, Puritch et al 2013.

17.15 PEA CONCLUSIONS AND RECOMMENDATIONS

The PEA overall concluded that the Buckton Deposit has economic potential and warrants additional expenditures and work to move it forward toward production. In addition, the PEA also made other conclusions and recommendations, and identified opportunities which collectively can enhance economics of the contemplated mining operations. These are as follows:

- While the Buckton Deposit has considerable demonstrable potential to expand with further drilling, additional resources of similar grade will not enhance its economics given that it is already of substantive size. Upgrading of the deposit to the Indicated resource classification through infill drilling is, however, recommended to enable advancing it to Pre-Feasibility.

- It is significant that the mineable tonnage based on the mine plan is nearly the same as the entire geological mineral resource currently defined for the Buckton Deposit.

- The PEA recommended that DNI focus future work on optimizing agglomeration and column leaching parameters toward reducing sulfuric acid consumption to reduce capital cost of the acid plant as well as overall cost of its operation.

- Due to limited column leaching testwork from Buckton, the PEA relied on a conservative estimate of six months of leaching irrigation time required to extract the metals from the shale based on preliminary testwork, even though the tests indicate relatively fast leaching kinetics and easier than usual liberation of metals. The PEA recommended that DNI conduct broader comprehensive testwork to make a more precise determination of the required irrigation time, and if leaching kinetics are shown to be rapid then the size of the heaps could be decreased, hence lowering capital and operating costs.

- The PEA suggested that leaching technologies suitable to processing of material with a high clay content but requiring a short leaching time (eg: vat leaching) may unlock further potential from the deposit and should be investigated as potential alternatives to large scale heap leaching. The PEA also recommended investigation of various promising new technologies (eg: membrane separation by nano-filtration) to selectively pre-concentrate the pregnant leaching solution prior to feeding it to the metals processing hydrometallurgical plant, and that application of these technologies holds potential to reduce capital as well as operating costs by lowering the volume of liquid to be processed.

- The PEA noted that while Sc and Th content of the shales were omitted from the PEA economic models due to the lack of a significant world market for these metals, their future production from Buckton may warrant further investigation if significant uses of these metals is developed (Buckton has an estimated capacity to produce approximately 1,100% and 16,800% of current world Th and Sc demand, respectively). Scandium is a particularly useful alloying element and it is generally accepted that its widespread use has been hampered by its low availability.

- The PEA suggested that DNI investigate emerging ion exchange options for recovery of REEs from the pregnant leaching solution as alternatives to the neutralization/re-acidification parts of the hydrometallurgical circuit formulated in the PEA to make significant reductions to operating costs at Buckton.

- The PEA noted that alternate mining configurations and schedules, including mining scenarios of only partial blending of the two shales, might enhance economics of the Buckton Deposit. A comparative detailed investigation of various alternatives is beyond the scope of this PEA and was deferred to a future update of the study.

The PEA was successful in achieving its principal objective of evaluating production of metals from the Buckton Deposit, and identifying critical parameters which can significantly impact the economics of the deposit, and other parameters which can improve them. It was particularly successful in identifying key opportunities which can significantly enhance economics through strategic cost reductions or revenue enhancements some of which can be achieved with minimal additional testwork. The foregoing provide concrete guidelines to better focus DNI's future testwork to collect the necessary strategic data to advance the Buckton Deposit toward pilot plant scale testing and demonstration. Whereas DNI's testwork has to date focused exclusively on enhancing recoveries of metals from the shales at Buckton, its focus going forward will shift to optimizing recoveries while reducing reagent consumption relying on guidelines from the PEA.

The PEA demonstrated that the Buckton Deposit has potential to be a significant supplier of uranium and REE with a projected annual capacity to produce on average approximately 1 million pounds of uranium yellowcake (U_3O_8 equiv) and 5,500 tonnes of rare earth oxides of which 41% are made up of heavy rare earth elements. Projected REE output is dominated by Nd, Eu, Dy and Y which represent 15%, 15%, 26% and 16% of overall REE output, respectively.

The PEA reinforced that reagent consumption during leaching and processing of metals from Buckton represents by far the largest component of operating cost, and to a lesser degree of capital costs, and that reducing consumption of sulfuric acid and lime can have the largest impacts on its economics. Obtaining limestone from sources nearer the property would also be a significant benefit. In the foregoing regard, it is obvious that metals processing and recovery risks are more relevant to the ultimate potential of the Buckton Deposit than are risks of resource definition given the excellent uniformity of grade and continuity characterizing the deposit and the surrounding broader Zone that extends for many additional kilometers beyond it.

The "intangible" value of a long term source of supply of critical REE elements are not reflected in the Deposit's economics which are based on traditional discounted cash flow modeling. The Property's location in northeast Alberta adjacent to large oil sands mines, in a mature mining district, in a well organized regulatory, jurisdictional and permitting framework tailored to the development of large deposits, and the local availability of key processing reagents provide significant logistical and infrastructural advantages rarely available elsewhere, representing benefits whose intangible value is also not reflected in the current economic assessment of the Buckton Deposit.

17.16 POTENTIAL ENHANCEMENTS TO BUCKTON ZONE PEA

The Buckton PEA is the initial economic assessment of the potential of the Buckton Deposit and it was initiated early in the Deposit's development history to better focus DNI's next stage of work, given the array of recoverable metals from the deposit, the differing leaching parameters required for economic recoveries of the various metals, and the geometry of the deposit being hosted in two layered (stacked) sedimentary formations of differing head grade and slightly different compositions..

The PEA provides DNI a solid foundation to build on, and it was successful in achieving its objectives while also identifying a number key opportunities which can significantly enhance economics through either strategic cost reductions or revenue enhancements some of which DNI believes can be achieved with minimal additional testwork.

Reduction of lime and acid consumption represent particularly significant goals which DNI believes are achievable with minimal additional work as suggested by results from ongoing column leaching testwork. Preliminary results from this work are encouraging and, through appropriate agglomeration and slightly longer leaching time, report lower acid consumption to a dosage of as low as 20kg of acid per tonne of feed without significantly sacrificing metals recoveries. This reduction is significant and alone would serve to reduce operating costs by an estimated $1.04 per tonne and capital costs by $380 million as shown in the acid consumption sensitivity table above to enhance economics to a pre-tax NPV6% of $2.9 billion and an 11.2% IRR. Obtaining limestone from sources nearer to the Property can also achieve considerable cost reductions.

Other enhancements which DNI plans to explore in the near term include evaluation of alternate pit phase designs to excavate higher grading material earliest in the mining schedule. Clarification of REE separation cost benchmarks is another area worthy of near term attention.

Enhanced revenues can be achieved through better metals recoveries, or by incorporating recovery of additional metals (eg: Mo, V, Li, Sc and Th) into the final products from the Buckton Deposit, hence adding revenues therefrom to production economics.

Economic enhancements achievable through cost reductions and those relating to capturing of additional revenues through optimized recoveries are discussed separately below.

17.16.1 Enhancements through Strategic Cost Reductions

The PEA reinforced that reagent consumption during leaching and processing of metals from Buckton represents by far the largest component of operating cost, and to a lesser degree of capital costs, and that reducing consumption of sulfuric acid and lime can have the largest impacts on its economics. Obtaining limestone from sources nearer the property would also be a significant benefit. Sensitivity of revenues to the foregoing was presented in a previous Section of this Report (Section 17.14), and they are discussed in greater detail below.

Acid Consumption: Reduction of acid consumption represents a particularly significant goal which might be achievable with minimal additional work as suggested by results from column leaching testwork conducted at Canmet in 2012-2013 (discussed in Section 14.2) which demonstrated that through appropriate agglomeration and slightly longer leaching time, lower acid consumption can be achieved (to a dosage of as low as 20kg of acid per tonne of feed) without significantly sacrificing metals recoveries. This reduction is significant and alone would serve to reduce operating costs by an estimated $1.04 per tonne and capital costs by $380 million to enhance economics to a pre-tax NPV6% of $2.9 billion and an 11.2% IRR (see prior Table 52 and Table 54).

Source of Limestone: The Moberly Formation is a potential source of limestone nearest the SBH property and the Buckton Deposit. It is currently being quarried by Hammerstone Corporation for use as aggregate at their Hammerstone quarry located approximately 100km to the east of the Buckton Deposit by road on the east shore of the Athabasca River. The Hammerstone quarry which is the nearest operating quarry to the Property and the Buckton Deposit, and its current production rate is about 4 million tonnes per year with planned expansion 10 million tonnes per year. Hammerstone does not have a kiln on-site to produce calcined quicklime at present, and their reserves approach a billion tonnes, sufficient for northern Alberta industry for many years.

The PEA assumed that lime would be produced on site by calcining of limestone obtained from the Hammerstone quarry, and costs incorporated into the PEA are based on information provided by Hammerstone estimating a current price of $13.50 per tonne for crushed 25mm limestone which would be suitable as feed to an on-site kiln at Buckton. Trucking costs to the Buckton site are estimated at $16 per tonne, for a total delivered cost of $29.50 per tonne. Quality of Hammerstone's limestone is, however, 75% to 85% CaCO3, compared to the 95% purity used in the design criteria for the Buckton process mass balance. To correct for this, the PEA baseline cost used is $29.50 per tonne x 95% ÷ 80% purity = $35 per tonne. The PEA assumes that there would be no deleterious consequences on the process from using this lower quality limestone, other than a higher tonnage required to correct for the lower neutralization capacity.

Although the Hammerstone quarry is the nearest operating quarry to the Buckton Deposit, there are other sources of Moberly limestone which are nearer to the Deposit (also held by Hammerstone) which are not yet in operation but are potential future realistic sources for limestone. Considering that cost of trucking transport comprises a large component of the cost of limestone delivered to the Buckton site, obtaining limestone from the foregoing locations could capture considerable cost savings toward a $25/t cost for limestone which are reflected as a $0.32 per tonne reduction in operating cost (compared to $35/t cost used in the PEA as a baseline). See also prior limestone sensitivity Table 51 and Table 54).

REE separation cost:
The Buckton black shales have similarities with Chinese ionic clays in that REEs from Buckton are readily extracted from the shale with reasonably high recoveries by a mild leaching solution. Considering that little, if any, spare REE separation capacity is presently available outside of China which dominates current world REE supply, and no meaningful cost data is published by Chinese REE producers, the PEA's cost estimates for Buckton rely on NI 43-101 publicly available information from selected public companies which are advancing their projects toward construction. Notably, the Thor Lake project (Avalon Rare Metals Inc) Pre-Feasibility studies include information for a REE separation plant in Geismar, Louisiana. The Geismar plant is designed to process a REO hydrometallurgical plant precipitate bulk concentrate, presenting the best technology and processing benchmark for the expected high purity REO mixed concentrate that is envisaged to be produced from the Buckton Deposit.

Public information for the Geismar plant consist of a summary from its Pre-Feasibility study (Avalon press April 2012) which reported a capital cost of US$302 million and an operating cost of US$5.6 per kg of REE oxide product for this plant, with an annual capacity to process/produce approximately 10,000 tonnes of final product. These figures were revised by Avalon's pre-feasibility study but disclosed (Avalon press April 2013) on a blended basis along with other overall operating costs. Relying on the foregoing and benchmarking from other REE projects in the upper range of operating cost estimates (eg: approximately US$14/kg of product for Lynas Corporation's Mount Weld operations), the PEA used an operating cost of US$10 per kg of final product as a conservative estimate for separation of REEs from Buckton. The PEA also estimated a capital cost of US$269 million for the construction of the separation plant capable of processing up to 7,200 tonnes of REO mixed concentrate annually.

While cost benchmarking is often an expedient and necessary practice in the absence of more direct cost estimates based on testwork data Benchmarking is, however, complex where REEs are concerned when considering that operating costs are reported by third parties as a cost per kilogram of final separated product rather than as a cost per kilogram of concentrate treated, given that final products might not necessarily include all REEs contained in the mixed concentrate. Whereas Avalon's 2011 Pre-Feasibility Study contemplated separation of all REEs, including light REEs, their 2013 Feasibility Study contemplates foregoing separation of light REEs Ce-La given that they contribute less than 4.5% of revenues while comprising 49% by weight of the final REE products mix.

DNI has not yet completed any testwork to evaluate separation of REE final products from the mixed REE concentrate expected to be produced from the Buckton Deposit. As such, the final REE separated product mix which might be expected from Buckton has not yet been determined, and the Buckton PEA anticipates that all REEs recovered from the shale will be separated. To that end, the operating cost estimate of US$5.6 per kg of REE final product reported by Avalon's Pre-Feasibility study may well provide a more realistic initial benchmark cost estimate for Buckton than the US$10/kg used in the PEA. The foregoing cost reduction would have a significant affect on operating costs to enhance economics of the Deposit (see Table 54, and prior 53).

Exchange Rate:
Although the principal objective of any preliminary economic assessment study is to determine practicability of mining/processing operations by formulating methodology and cost/revenue estimates for mining, metals extraction and recovery, the studies report their final conclusions by way of a handful of economic metrics derived from a discounted cash flow model which is subject to vagaries of exchange rates. As such, subtle variations in exchange rate can often result in significant variations in economic metrics.

The Buckton PEA cash flow model is based on various cost estimates collated in Canadian dollars, whereas metals prices are collected from sources which report in US dollars or, in the case of some REEs, in Chinese currency. The Buckton PEA cash flow model relies on a nominal 1US=1.05CDN exchange rate and would report significantly higher economics at slightly higher US exchange rate. Effects of a x1.1 exchange rate is shown in Table 54.

While the above potential cost reductions can individually achieve enhanced economic results from the Buckton PEA, they can collectively achieve significantly enhanced economics as presented in Table 54 which shows the changes to capital and operating costs, and to NPV-IRR-Payback, which might be achieved as a result of each enhancement as well as the aggregate enhanced economics which would be achieved from the collective of all potential cost savings discussed above.

Cost Reduction Enhancements			Change In Economic Metrics PEA Base Case 72MM tpa					
	PEA Baseline	Possible Enhancement	Opex Change ($/t)	Capex Change (000,000)	NPV6% Change (000,000)	NPV0% Change (000,000)	IRR Change (%)	Payback Change (yrs)
Lower Acid Consumption	40kg acid pre tonne	20kg acid per tonne	$ (1.04)	$ (380)	$ 1,289	$ 4,512	2.5%	-2.2
Nearer Limestone Supply	$35/t Lst - Hammerstone	$25/t Lst - West Shore	$ (0.32)	-	$308	$ 1,327	0.5%	-0.6
Lower REE Separation Cost	$10/kg product	$6/kg product	$ (0.31)	-	$336	$ 1,397	0.6%	-0.6
Higher USD Exchange Rate	x1.05	x1.10	$ (0.78)	$ 14	$698	$ 3,135	1.1%	-1.1
		Aggregate	$(2.45)	$ (366)	$ 2,631	$ 10,371	4.7%	-4.5
PEA Baseline Economics			$ 10.34	$3,766	$ 1,616	$ 18,900	8.7%	10.5
Potential Aggregate Enhanced Economics			$ 7.89	$3,400	$ 4,247	$ 29,271	13.4%	6.0

Table 54: Changes to economic metrics relative to changes to various processing enhancements and exchange rate. After Buckton PEA, Puritch et al 2013.

17.16.2 Enhancements Through Expanded Revenues and Other Optimizations

Capture of additional revenues or operating optimization offer additional opportunities to enhance economics of the Buckton Deposit. While incorporating additional metals of value into the final products recoverable from the Deposit offers opportunities for additional revenues at minimal additional cost, re-configuring mining excavation schedule and shortening leaching duration time offer other opportunities to capture higher revenues in the production life of the Deposit or to control capital costs. These are discussed below.

Mo-V as additional metals: Molybdenum and Vanadium were omitted from the PEA based on Hatch's recommendations per their initial screening report which focused on identifying the metals which have potential of economic viability to guide further process design development (Godwin and Schwartz 2013a).

DNI's batch amenability testwork conducted at the AITF under relatively acidic conditions (Sabag 2012), achieved Vanadium recoveries ranging 9% to 24%, with relatively high acid consumption ranging 180kg-258kg of H_2SO_4 per tonne of shale. By contrast, the PEA leaching flowsheets relied on results from the column leaching testwork conducted by Canmet which were conducted under moderately acidic conditions consuming 20kg-40kg of acid per tonne of shale and showed that vanadium is recalcitrant and that its recovery peaks at 2% to 3%. The Canmet testwork overall showed that Vanadium extraction from the shale is virtually nil (see Section 14.2).

Hatch concluded that to replicate the AITF acidic leaching conditions to recover 9%-24% of the vanadium would be counter-productive, and that approximately 140kg of additional acid would be required compared to that required under the milder bioleaching conditions for the Canmet tests, and that the value of Vanadium recovered would be less than the cost of the additional acid dosage given the low Vanadium grade.

Like Vanadium, Molybdenum has also proved to be refractory requiring higher acid dosage to extract it from the shale, and has reported very low extractions in the 2%-3% range from the work conducted by Canmet. Molybdenum was, accordingly, similarly omitted from the PEA.

Hatch's initial screening recommendations notwithstanding, it is unknown at this time whether additional revenues from enhanced recoveries of other metals due to higher acidity intended to solubilize Mo+V might offset, or exceed, the cost of additional acid consumption. The foregoing is a topic requiring additional expansion by future work from DNI.

Li as an additional metal:

Even though reasonable recoveries of Lithium can be achieved during leaching, it was also omitted from the PEA given that its concentration in the leachate solution is too low to add sufficient value at current lithium prices to offset the cost of its re-precipitation from the solution (most of its the cost of energy). Potential revenues from recovery of Lithium might be incorporated into a future revision of the PEA should Lithium prices improve, or methods be identified to upgrade its concentration in the leachate solution.

Th as an additional metal:

Thorium was omitted from the PEA given that its consumption is unknown. Thorium might be incorporated into a future revision of the PEA if its markets have better clarity and a more local demand is identified.

Sc as an additional metal:

The Buckton PEA outlined a conceptual mining and metals recovery scenario relying on the Updated and Expanded Buckton Mineral Resource for the production of Ni-U-Zn-Cu-Co and Rare Earth Elements (REE) including Yttrium from the Deposit which is hosted in black shales. The Buckton mining operations also include an on-site hydrometallurgical facility to recover the various metal products from the leach solution, and a separation plant to further refine a mixed Rare Earth Element oxide concentrate recovered from the hydrometallurgical facility into individual saleable final products.

Scandium is incidentally leached during the contemplated leaching process as demonstrated by DNI's benchscale testwork, and could be added to the final saleable products contemplated by the PEA provided it is recovered from the leaching solution. Scandium was provisionally omitted from the Buckton PEA considering that its markets are not sufficiently transparent to definitively capture its potential value in the cash flow models of the Buckton PEA.

The Updated and Expanded Buckton Mineral Resource Study estimated that the 4.7 billion tonne Buckton resource contains approximately 18.7 million kilograms of recoverable Sc_2O_3 from an average raw grade of 16.5 ppm at a 24% leaching recovery. The foregoing resource consists of the aggregate of Inferred and Indicated resources but, for the purposes of the PEA, the mineral resource is deemed to consist entirely of an Inferred resource considering that 94% of it consists of an Inferred class resource. Considering that the Buckton PEA concluded that 95%+ of the mineral resource is potentially mineable, the resource study provides a reasonable first order estimate of the Scandium content of the Buckton Deposit. In addition, to the extent that Scandium is leached from the Buckton shales as a co-product of leaching the other metals of interest, cost of its separation from the leaching solution represents the only incremental cost for its recovery.

DNI retained Hatch during January-March 2014, to investigate the feasibility of incorporating a Scandium recovery circuit into the metals recovery hydrometallurgical flowsheets contemplated by the PEA, to recover co-product Scandium from the leaching solution once it has been extracted from the Buckton shales. Hatch formulated conceptual process engineering design criteria and a flow sheet, and prepared estimates for related capital and operating costs. Processing flowsheets presented in the PEA were also previously formulated by Hatch. Hatch's report[37], intended as an addendum to the Buckton PEA Study report, is appended herein as Appendix F5.

Hatch's report concluded that upward to 200,000 kilograms per year of co-product Scandium oxide (Sc_2O_3) could be recovered by the incorporation of a Scandium separation circuit into the contemplated metal processing flowsheets outlined in the Buckton PEA. Hatch's work concluded that a solvent extraction Scandium circuit can conceptually be incorporated into the Buckton metals recovery flowsheets at a capital cost of US$117 million (incl US$39 million contingency) for the production of approximately 200,000 kilograms per year of 99%+ purity Sc_2O_3 at an operating cost of US$500 per kilogram of final Sc_2O_3 product produced. The study also concluded that after allowing for assumed entrainment and processing circuit losses, an estimated 74% of the Sc_2O_3 leached from the Buckton shales may be ultimately recovered as a final product. The estimated capital and operating costs would be incremental to costs estimated in the PEA, as would be the incremental revenues generated from sale of the Scandium oxide final product.

Scandium is one of the seventeen Rare Earth Elements and is typically used in solid oxide fuel cells and to alloy aluminum to strengthen it for applications in aircraft, automotive and frames requiring structural strength and light weight. Consumption in the foregoing sectors is fast expanding offering an expanding demand for Scandium though it is generally accepted that Scandium consumption is constrained by unreliable and scarce supply. Current global supply is estimated to range 10,000-20,000 kilograms a year with capacity for growth toward an unfulfilled demand estimated to be upward to 100,000 kilograms a year. There are no primary sources for Scandium and current supplies are a byproduct from other mining operations which are augmented by dwindling historic stockpiles.

The Buckton Resource Study is based on a Sc_2O_3 price of US$4,195/kg (trailing two-year average to May/2013) although Sc_2O_3 price was quoted at $7,000/kg as recently as March 2014. The resource study estimated that Sc_2O_3 contained in the shale represents US$16.6 of gross recoverable value per tonne of shale resource. This value is equivalent to approximately US$10.8 of net operating revenues per tonne of shale resource after providing for processing circuit losses and refining/separation costs presented above (CDN$11.4 per tonne at exchange rate of US$1=CDN$1.05). The foregoing figures represent additional potential revenues previously omitted from the Buckton PEA and are predicated on sale of the entire projected annual Sc_2O_3 production of 200,000 kilograms. The foregoing figures would be proportionately lower in the

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[37] Report: Buckton Heap Leach and Processing Scoping Study Supplemental Memo - Scandium Recovery. Memo #H344209-0000-90-220-0003, addendum to Report# H3442090000-090-124-0001 prepared by Hatch Ltd., Schwartz L., March 3, 2014.

event only a portion of the annual Sc_2O_3 production is saleable, as would also be the capital cost of the smaller Scandium separation circuit required.

The above figures represent incremental potential revenues which can have a significant affect on the economics of the Buckton Deposit, especially if Scandium markets continue to expand sufficiently enough to absorb bulk of the projected annual Scandium production. As an initial guide, sensitivity of NPV, IRR and Payback to changes in incremental recoverable value per tonne of shale mined/processed from the Buckton Deposit is shown in Table 55 for incremental revenues ranging $1 to $3 per tonne of shale mined/processed (table reiterated from Table 55). Considering the 72 million tonnes per year mining/processing rate contemplated by the Buckton PEA, capturing full value of the entire projected annual Scandium production would have a significant positive impact on economics of the Deposit.

Pre-tax NPV-IRR-Payback Sensitivity to Changes in Recoverable $/tonne Value				
	NPV0% ($000,000)	NPV6% ($000,000)	IRR (%)	payback (yrs)
Baseline Recoverable Value + $3/t	30,973	4,324	12.9%	7.3
Baseline Recoverable Value + $2/t	26,917	3,405	11.5%	8.1
Baseline Recoverable Value + $1/t	22,914	2,514	10.1%	9.1
PEA Baseline In-Situ Recoverable Value $16.52/t	**18,900**	**1,616**	**8.7%**	**10.5**
Baseline Recoverable Value - $1/t	14,892	718	7.2%	12.5
Baseline Recoverable Value - $2/t	10,911	174	5.7%	14.9
Baseline Recoverable Value - $3/t	6,894	(1,087)	3.9%	19.2
Notes: NPV on pre-tax basis; IRR on pre-tax basis and assumes 100% equity financing; $ are CDN$; Table reiterated from Buckton PEA, Puritch et al 2013.				

Table 55: Pre-tax NPV-IRR-Payback sensitivity to changes in recoverable $/tonne value. After Table 22.4, Buckton PEA, Puritch et al 2013.

DNI's recent evaluation demonstrated that the Buckton Deposit represents a significant future source of Scandium, and that even if only a portion of the projected annual production is saleable it can have a significant impact on the economics of the Deposit. A more rigorous analysis of the economic impact of recovering co-product Scandium from the Buckton Deposit will be incorporated into a future update of the Buckton PEA.

Re-configuring Mining Excavation Schedule:

Mining excavation schedules have a profound affect on cash flow models constructed pursuant to any PEA, given that they have a direct impact on the timing of expenditures and revenues and hence the impact of recognition of these cost and revenue items in the projected discounted cash flow model. Various mining schedules were investigated after completion of the Buckton PEA to reduce pre-production excavation by moving pit outlines inward. The foregoing have the favourable affect of reducing pre-stripping tonnages (hence pre-stripping reducing cost), of enabling recognition of some production revenues earlier in the cash flow model (hence at lesser discount), at the expense of reducing overall deposit tonnage and shortening mine life by 5-10 years (neither of which materially affects NPV or IRR given that revenues far into the future are heavily discounted).

Collateral to the above is giving consideration to extracting some metals from the overburden cover above the Buckton Deposit. Analyses and field observation from the area show that the overburden cover is made up mostly of glacial till scoured from the Labiche Formation Shale beneath it, and that its lithogeochemistry and metal content is similar to that of the Labiche which is incorporated into resources at Buckton. Leaching of metals from the overburden cover has not been tested but presents opportunity to extract value from material which would otherwise have to be removed earliest in the production history of the Deposit. This holds potential, as expected, add considerable additional value to the Deposit and would serve to inject revenues into the cash flow model while also reducing (or eliminating) pre-stripping costs.

Shorter Leaching Duration Time:

The PEA assumed a six month leaching duration and is therefore based on a revenue stream which anticipates two leaching cycles per year to extract metals from the 72 million tonnes mined. As a result, pads and ancillary infrastructure are necessarily large to accommodate the volume of material to be processed. Shorter leaching duration would enable more frequent loading of leach pads to process the same tonnage of material mined, hence enabling construction of smaller pads and lesser ancillary infrastructure toward lower costs.

Alternatively, maintenance of leach pad size as proposed by the Buckton PEA but processing with shorter leaching duration would enable processing of larger volumes of material annually (ie: >72 MM tpa) hence expanding annual revenues toward faster capital cost recoupment (shorter Payback) and earlier recognition of net revenues in the discounted cash flow model (ie: higher NPV/IRR).

Column leaching testwork completed by Canmet showed that metals readily leach from the shales during the initial 20-30 days, suggesting that a six month leaching duration is unnecessary. The foregoing work suggests that a two-three month leaching duration might be adequate with minimal sacrifice to recoveries, and recommended that optimization of leaching duration is a worthwhile undertaking.

DNI continues to work toward identifying other incremental enhancements to the economics of the Buckton Deposit. Based on its work so far, in addition to economic enhancements which might be achieved through reducing cost of reagents, a summary of economic enhancements which might be achieved through realistic sources of expanded revenues and other operational optimizations is presented in Table 56.

Revenue Expansion and Other Enhancements			Change In Economic Metrics PEA Base Case 72MM tpa					
	PEA Baseline	Possible Enhancement	Opex Change ($/t)	Capex Change (000,000)	NPV6% Change (000,000)	NPV0% Change (000,000)	IRR Change (%)	Payback Change (yrs)
Faster Leach Time	6 months	3 months	Lower	Lower	Higher	Higher	Higher	Lower
Add 100% of Scandium	Scandium Omitted PEA	Baseline Value + $12.6/t	$ 1.38	$ 117	$11,090	$48,082	15.2%	-6.3
Add Only 10% of Scandium	Scandium Omitted PEA	Baseline Value + $2/t	$ 0.13	$ 20	$ 1,789	$ 8,017	2.8%	-2.4
Potential Aggregate Enhanced Economics			$ 7.89	$ 3,400	$ 4,247	$ 29,271	13.4%	6.0
Potential Aggregate Enhanced Economics + 100% Sc			$ 9.27	$ 3,517	$ 15,337	$ 77,353	28.6%	0.3
Potential Aggregate Enhanced Economics + Only 10% Sc			$ 8.02	$ 3,420	$ 6,036	$ 37,288	16.2%	3.6

Table 56: Changes to economic metrics relative to shorter leach duration time and to capturing potential additional revenues from recoverable co-product Scandium. After Buckton PEA, Puritch et al 2013.

Based on various iterations of the Buckton PEA discounted cash flow model, incorporation of revenues from Scandium offer realistic and significant opportunities to enhance economics of the Deposit, and might serve to enable reducing the annual mining rate while maintaining reasonably good economic returns.

17.16.3 Concluding Remarks and Topics for Future Expansion

The Buckton PEA achieved its objectives of demonstrating that the Buckton resource is mineable with positive economics, and subsequent work by DNI identified many modifications which can significantly enhance economics of the PEA. All of the foregoing notwithstanding, the principal value of the PEA lies not in arriving at a financial estimate of the present value of the Buckton Deposit, but rather in providing an operational framework for mining, leaching and metals processing, and a discounted cash flow model to interrelate the many variables which ultimately together constitute a mining operation.

It would be simplistic to regard financial estimates of revenues and present values estimated by the Buckton PEA, or any other preliminary economic assessment for that matter, as finalities given the vagaries of discounted cash flow models which are complex simulations that are inherently sensitive to timing of expenditures and revenues, and are as such open to artificial, though reasonable and defensible, manipulation.

18. OTHER WORK - FRACSAND EVALUATION 2014

DNI completed other work during 2012-2014 to evaluate other non-metallic assets which the Property hosts, and which can add future value to the metals enriched zones which have been the sole focus of DNI's exploration efforts to date. This includes initial work to evaluate potential of exposures of the Pelican sandstone Formation as a source to natural sand proppant (fracsand) for use in the oil/gas industry.

18.1 INTRODUCTION

The widespread use of horizontal drilling in North Dakota's Bakken oil play, British Columbia's Montney shale gas play or Alberta's Duvernay oil and gas play has fuelled fast growing demand during the past few years for sand used during hydraulic fracturing (fracsand) which is crucial to oil/gas production from these reservoirs. In Canada, rapid developments from a dozen additional "tight" oil/gas plays has recently been leading to an unprecedented demand for fracsand in Alberta and British Columbia. It is broadly accepted that the foregoing demand will further expand dramatically once pending western Canada liquid natural gas projects (LNG) achieve completion.

North American sand demand has grown 25% since 2011, and double digit percentage annual demand expansion is expected over the years moving forward. While US fracsand demand is being met from sources in Wyoming, Wisconsin and Texas, there are few known local sources of sand to supply western Canadian projects, and Canada now represents the fastest growing global market for high grade fracsand.

Compelled by the growing demand for fracsand, DNI commenced evaluation of the Pelican Formation sandstone which is exposed at the Property as a potential source of fracsand. The Pelican Formation contains poorly cemented, hard, clean white coarse sand with relatively smooth round grains and its stratigraphic equivalent in west-central Alberta (Paddy River Formation) is being mined in the Peace River region as fracsand. In addition, several large exposures of this Formation have been under active exploration by others (Athabasca Minerals Inc.) as a source of fracsand in the McIvor valley adjacent to the north boundary of the Property. Aside from mapping and geochemical sampling conducted in the course of exploration for metals, suitability of this sand as fracsand has not been tested on DNI's Property.

DNI carried out a compilation in January 2014 of all information available from the Pelican Formation at the Property and its vicinity to form the basis for additional work to follow including a summer 2014 sampling and testing program. DNI also expanded the Property in early 2014 by acquiring six additional permits adjacent to the northeast and southeast portion of the Property to better secure several localities over large exposures of the Pelican Formation.

18.2 THE PELICAN FORMATION ON THE PROPERTY

Based on DNI's subsurface geological and stratigraphic database accumulated from its 2009 compilation of data from nearly 600 oil/gas wells drilled by others over the Property, the Pelican Formation sandstone extends under the entire Property with thicknesses typically ranging 30m-60m. The Pelican Formation is under thin overburden cover throughout most of the eastern parts of the Property, and it is intermittently exposed in valley walls along the 100km trace marking the erosional edge of the Birch Mountains on the Property, but is eroded away to the east of the Property (Figures 88 and Figure 89).

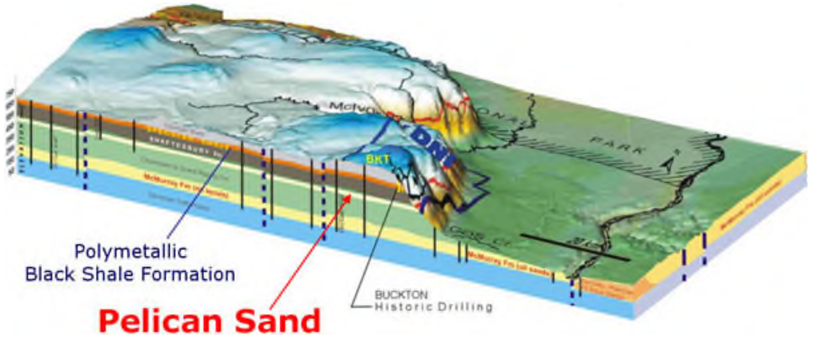


Figure 88: Three dimensional cutaway showing subsurface stratigraphy beneath the Birch Mountains and the Property, showing the Pelican sandstone Formation.

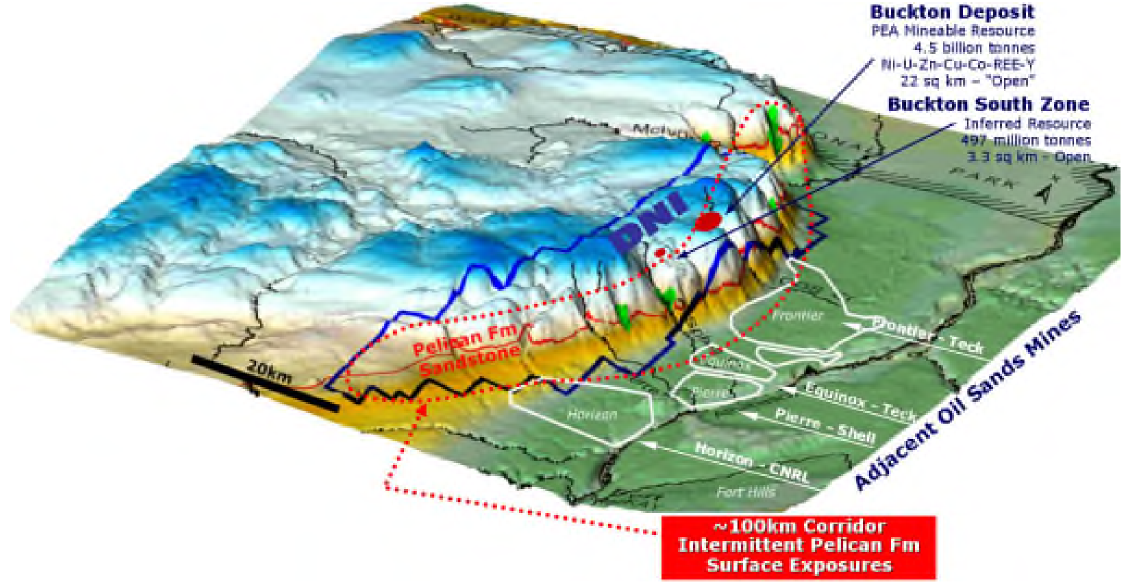


Figure 89: Surface topography over the Property and the Birch Mountains showing trace of 100km corridor of Pelican sandstone Formation exposures over the erosional edge of the Birch Mountains.

Details of the subsurface stratigraphic database were previously outlined in Alberta Mineral Assessment Reports by DNI (Sabag 2010 and Sabag 2012). Thickness of the Pelican Formation and depth from surface to its top are summarized in Figure 90.

Plate 6: Typical slumping exposure of Pelican Formation, Asphalt Creek area.

Based on prior field mapping records from the Property and regional work completed by the Alberta Geological Survey, the Pelican Formation sandstone is known to contain poorly cemented, hard, clean white coarse sand with relatively smooth round grains. The Formation is poorly consolidated and would lend itself well to free-dig mining extraction (Plates 6 and 7).

The only lithogeochemical sampling records from the Pelican Formation in the Birch Mountains are from historic work completed during the 1990's by Tintina Mines Limited and collateral sampling by the Alberta Geological Survey (Sabag 1996a Sabag 199b, and AGS 2001), from mapping and sampling for metals of at ten lithosections located along Pierre River, Mid Creek, Asphalt Creek, Buckton Creek and Greystone Creek (Figure 90). The historic lithogeochemical sampling, however, concerned itself only with metal exploration and, accordingly, focused almost entirely on sampling of the uppermost portions of the Formation where shale or silt material are intermixed with the cleaner sand below. As such, the historic sampling fails to characterize the cleaner more silica-rich portions of the Pelican Formation which are relatively devoid of metals and would hold the best potential for use as fracsand.

Plate 7: Typical sidehill exposure of coarse white sand in Pelican Formation, Athabasca Minerals Inc. McIvor River Project. From Cotterill 2009,

All of the above lithosections are located on the Property, with the exception of Greystone Creek which is located on a property currently held by Athabasca Minerals Inc. (the McIvor Property) which has been actively exploring and developing exposures of the Pelican Formation over the past several years as a potential source of fracsand. Athabasca's work has been summarized in Alberta Mineral Assessment Report MIN20090012 (Cotterill 2009) although it has reported little information on sand quality other than bulk geochemistry and visual mapping information. Athabasca has converted portions of its permits to mineral leases as previously shown in Figure 3.

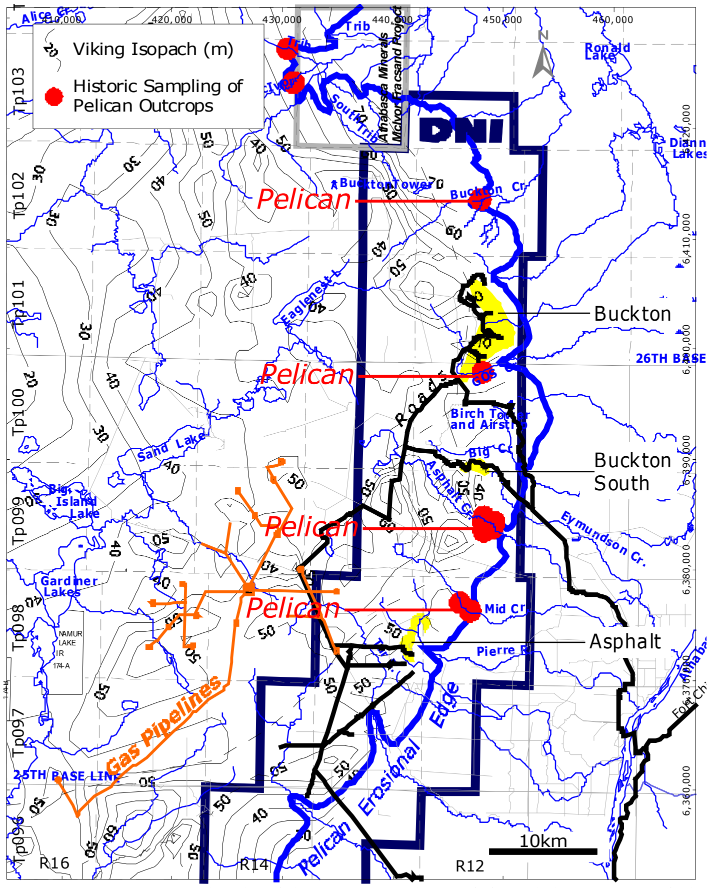
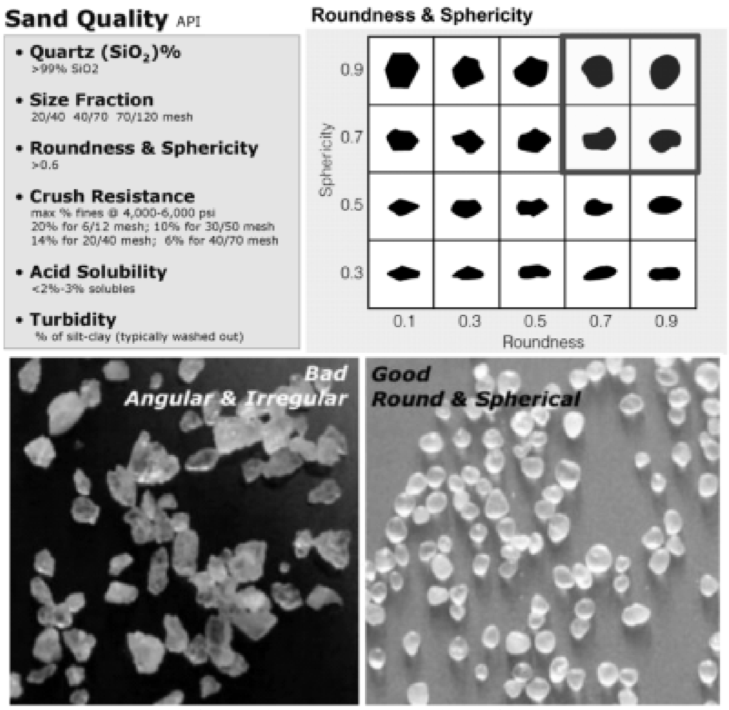


Figure 90: Location sketch of historic sampling of four lithosections of the Pelican Formation, showing also its contoured thickness. The Buckton Deposit, Buckton South Resource and Asphalt Mineralized Zone also shown.

By far the best lithosections of the Pelican Formation in the Birch Mountains are located in the Asphalt and Greystone Creek valleys These exposures are characterized by sections of a clean, unconsolidated, medium to coarse grained, well rounded, massive, quartzitic sandstones with minor interbedded shales over the uppermost sections (Plate 7). The predominance of quartz and its massive appearance are distinctive features which differentiate this Formation from the glauconitic sands of the underlying Clearwater Formation. Based on outcrop and subsurface measurements, the Formation has a relatively consistent thickness in the area varying 40m-45m. Whereas little lithogeochemical information is available from Asphalt Creek, Athabasca Minerals have reported coarse smoother grained high silica (98%+) sand from upper sections of the Pelican Formation at Greystone Creek. Similar exposures on the Property have not yet been sampled.

18.3 FRACSAND SPECIFICATIONS AND POTENTIAL OF THE PELICAN FORMATION

To be suitable for use as fracsand, any given sand must be a clean, high silica sand, with nearly spherical and smooth grains which can withstand high load pressures. Current fracsand specifications criteria are those established by the American Petroleum Institute (API) although other materials testing organizations (eg: ASTM, ISO) have recently expressed their interest to weigh in with their own specifications. The API specifications (API RP56) are summarized in Figure 91 and Table 57.



Sand Quality API

- **Quartz (SiO_2)%**
  >99% SiO2
- **Size Fraction**
  20/40 40/70 70/120 mesh
- **Roundness & Sphericity**
  >0.6
- **Crush Resistance**
  max % fines @ 4,000-6,000 psi
  20% for 6/12 mesh; 10% for 30/50 mesh
  14% for 20/40 mesh; 6% for 40/70 mesh
- **Acid Solubility**
  <2%-3% solubles
- **Turbidity**
  % of silt-clay (typically washed out)

Figure 91: API RP56 fracsand quality criteria and specifications.

	API/ISO Specs	20/40 Sand		40/70 Sand		70/140 Sand	
Sphericity	> 0.6	0.7		0.7		0.7	
Roundness	> 0.6	0.7		0.6		0.6	
Specific Gravity		2.61		2.62		2.63	
Crush Resistance		Stresses Tested (psi)	% Fines	Stresses Tested (psi)	% Fines	Stresses Tested (psi)	% Fines
		4000	2.6	6000	2.5	5000	2.2
		6000	9.2	8000	9.5	10000	9.1
		7000	14.8	9000	13.4	11000	10.6
Crush K Value		6K		8K		10K	

Table 57: Quality of sand from the Firebag Project, Alberta, Athabasca Minerals Inc. After Athabasca Minerals Inc. corporate presentation, April 2014.

Typically, once a sandy Formation is mined it is sized into separate size fractions, washed and dried, and the different size fractions are sold separately to the end user. In general, coarser grain sizes (20/40 and 30/60 mesh) are better suited for oil wells whereas gas wells can utilize finer fractions (40/70 and 70/120). Similarly, oil/gas basin depth also will determine the ranges of sphericity, roundness and crush resistance, which any given well might be able to tolerate (eg: higher crush resistance specifications for deeper wells).

Whereas fracsand users have to date preferred the coarser sand sizes, finer size fractions (40/70 and 70/120 have recently gained favour with Canadian users.

There are currently no test data available from the Pelican Formation over the Birch Mountains, and the Property, to definitively determine its suitability as a source for fracsand which meets API specifications. It is noteworthy, however, that fracsand is currently being produced from stratigraphic equivalent of the Pelican Formation in the Peace River region in west-central Alberta (Paddy Member) by Canadian Silica Industries. A cross section across northeast Alberta stratigraphy showing the Pelican Formation and Paddy Member is shown in Figure 92 (AGS 2001).

It is also noteworthy that good quality specifications reported by Athabasca Minerals Inc. from its Firebag fracsand development project from sands which have accumulated on surface which are likely of Pelican provenance.

Downhole well logs from oil gas wells drilled by others over the Birch Mountains, and the Property, offer additional indirect evidence suggesting suitability of the Pelican Formation as a source to fracsand. Preliminary interpretation of the downhole geophysical and radioactive logs show intercepts upward to 20m thick which likely represent material with adequate grain size and sufficient cleanliness to meet acceptable fracsand specifications. The downhole interpretations are shown in Figure 93 and are based on information from DNI's subsurface stratigraphic database compiled in 2009 for a handful of well from the Birch Mountains and the Property. Many additional wells have since been drilled in the area by others and they will provide additional information once they have been appended to the foregoing database.

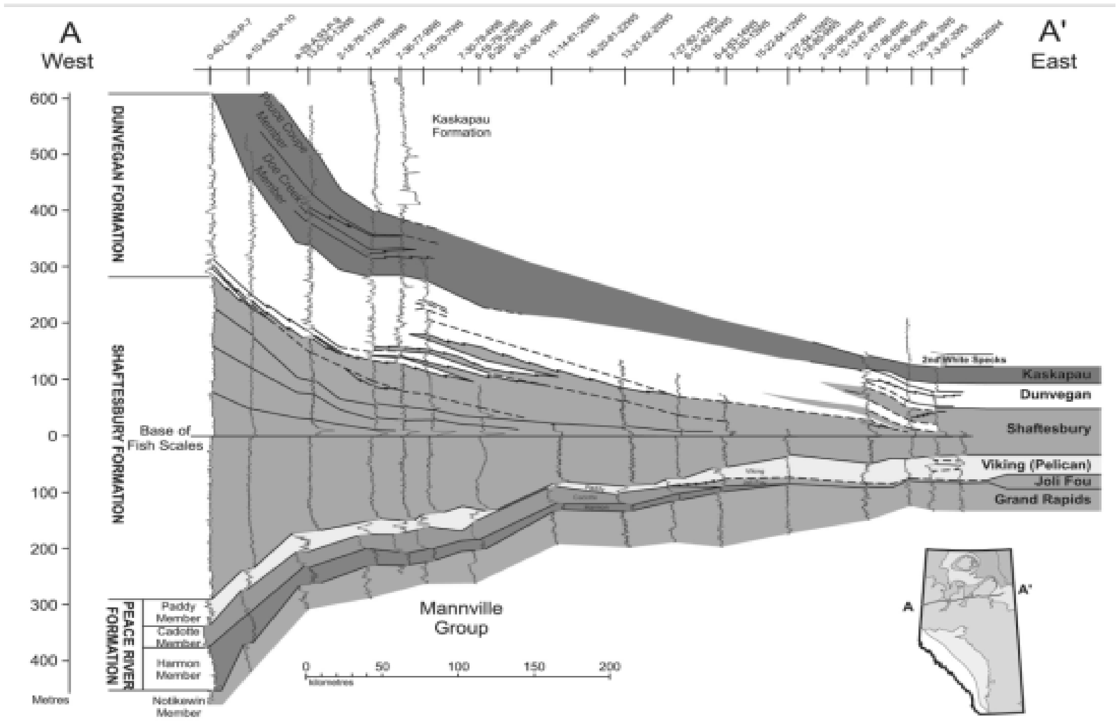


Figure 92: Regional cross section showing Cretaceous stratigraphy across northeast Alberta, showing the Pelican Formation and Paddy Member. After Figure 8, AGS 2001.

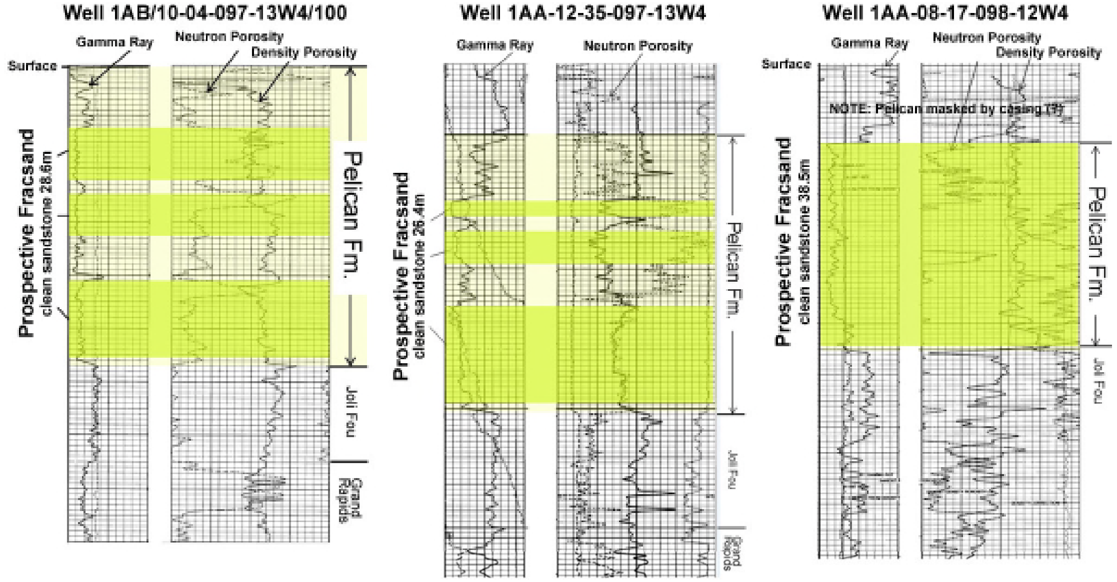


Figure 93: Downhole wireline geophysical logs and preliminary interpretations showing potential intercepts of clean sand on the Property. Well locations shown in Figure 94 as W1, W2 and W3 for wells 1AB/10, 1AA-12 and 1AA-08, respectively.

18.4 POTENTIAL OF THE SBH PROPERTY AS A SOURCE TO FRACSAND

Provided quality of sand at any deposit of sand meets acceptable API fracsand specifications, the viability of any fracsand mineral deposit is dependant on availability of logistical support, notably the availability of haulage access and, preferably, easy access by rail to transport the final products.

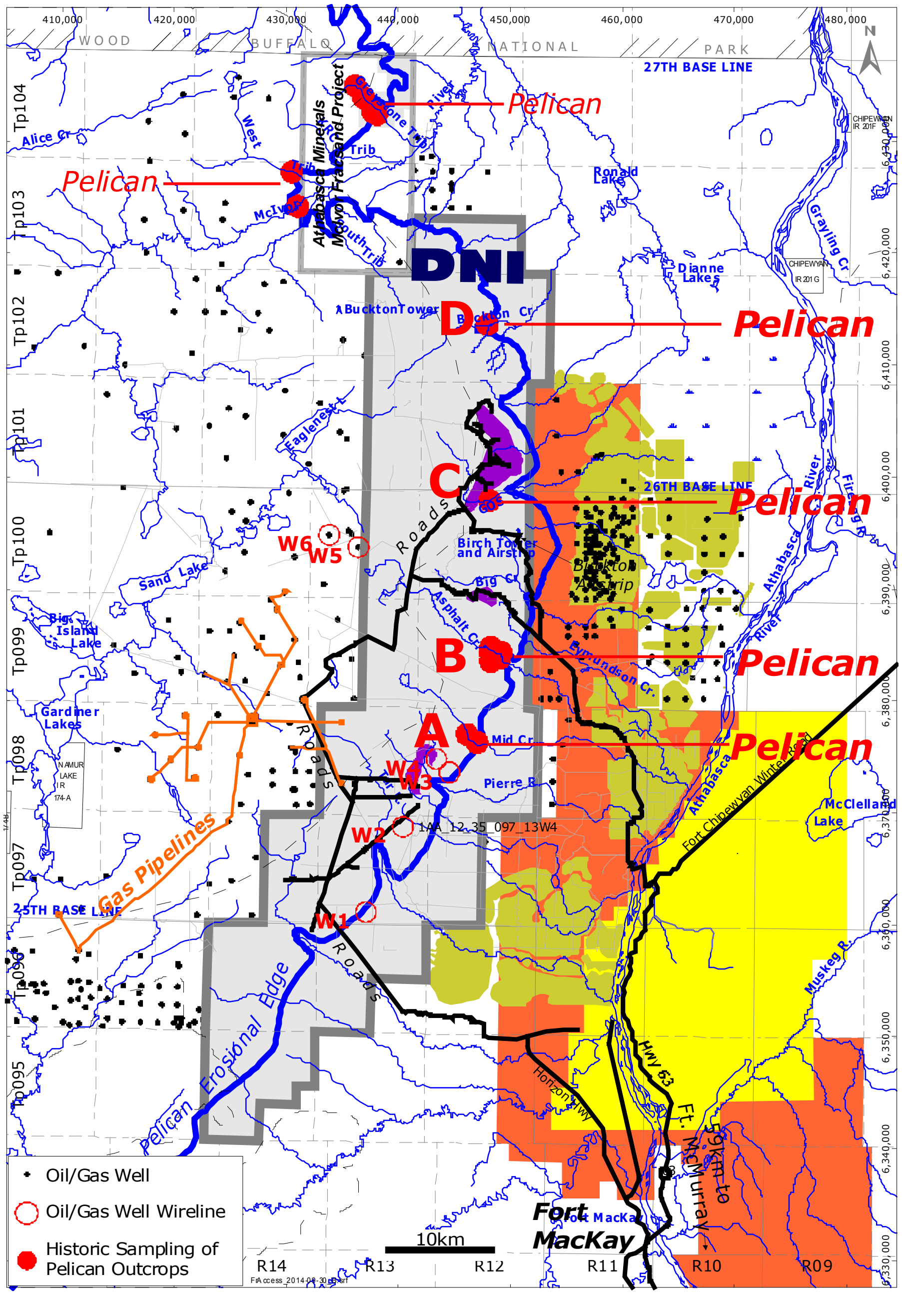


Figure 94: Property sketch showing roads network, main exposures of Pelican Formation, gas distribution network, oil/gas wells and well ID for interpreted wireline downhole geophysical logs shown in Figure 93.

The SBH Property spans a distance of approximately 100km from south to north. Whereas the northern parts of the Property lack access via all-weather or seasonal roads, the southern parts of the Property (eg: Asphalt Creek area and vicinity) are accessible by a network of roads some of which are winter roads only although they connect to all-weather dirt roads leading south to through the adjacent Horizon oil sands mine site, and subsequently connect to paved highway #63. Ultimately, the Asphalt Creek area is accessible by one form of road or another and is approximately 120km away from railhead at Fort McMurray. A gas distribution network located over the western part of the Property offers additional logistical facilities (Figure 94), overall suggesting that any fracsand mineral deposit delineated over the southern parts of the Property would be well situated and holds potential as a source to fracsand.

18.5 RECONNAISSANCE FRACSAND SAMPLING PROGRAM 2014

18.5.1 Overview

Compelled by fast growing demand in natural sand proppant (fracsand) for use during hydraulic fracking of tight oil/gas reservoirs, DNI commenced evaluating fracsand targets on the Property, hosted in the Pelican sandstone Formation, which holds potential for hosting large volumes of clean sand with potential to meet fracsand specifications.

DNI commenced evaluating the potential of the Pelican sandstone Formation in March, and completed reconnaissance sampling of two major exposures of this Formation which are nearer road access in July. This sampling program confirmed presence of sections within this Formation containing coarse clean sand of good roundness and sphericity with potential to meet fracsand specifications. The presence of high quality sands within this Formation had previously only been interpreted from downhole geophysical information from a random selection of oil/gas wells in the area.

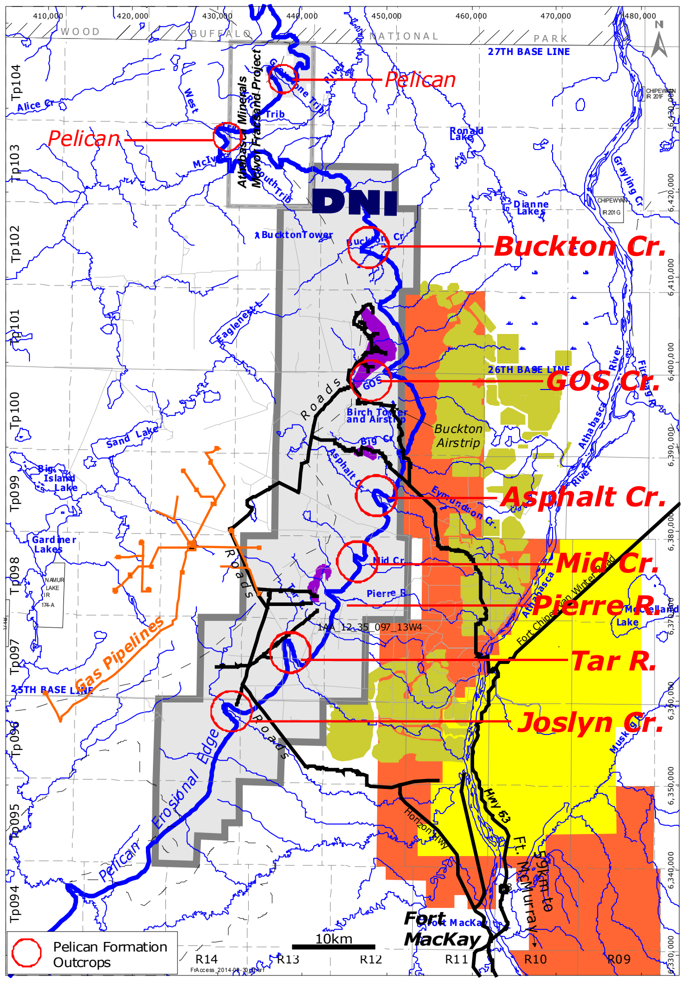


Figure 95: Property sketch showing DNI's fracsand projects portfolio, and exposures sampled in 2014 (Tar River and Asphalt Creek exposures). Reconnaissance fracsand sampling program 2014.

Based on data compilation carried out during March-June, a number of target areas were selected, and APEX Geoscience Ltd. was retained to complete initial reconnaissance sampling of two areas in July, located on the valley walls of the Tar River and Asphalt Creek, respectively.

Based on encouraging initial results from the sampling program, DNI has since designated five additional large fracsand project areas over the SBH Property which are sufficiently large enough that they each hold realistic potential for hosting sand deposits of reasonable dimensions suitable as a long term source of fracsand. As such, they are regarded as distinct fracsand properties which are located some 10km-20km apart along a 100km long corridor across the Property where the Pelican sandstone Formation is intermittently exposed in valley walls.

DNI's seven fracsand project areas currently consist of the Tar River, the Asphalt Creek, the Buckton Creek, the Gos Creek, the Mid Creek, the Pierre River and the Joslyn Creek fracsand project areas.

A location sketch showing the Pelican exposures sampled is presented in Figure 95 together with DNI's other fracsand project areas on the Property. DNI has not yet explored permits acquired earlier in the year over prospective locations at the southern parts of the Property, and additional fracsand project areas might be identified on them through future field reconnaissance.

18.5.2 Sampling

Twenty-two 1kg-5kg trenching and grab samples were collected on July 14, 2014, by APEX Geoscience Ltd. personnel from large exposures of the Pelican sandstone Formation at the Tar River and Asphalt Creek valleys located approximately 20km apart at the southern parts of the Property which are nearest road access. The sampling was completed under the supervision of Mr.M.Dufresne and Mr.R.Eccles from APEX, supported by helicopter from Highland Helicopters.

The two areas sampled comprise 200m-300m long scarp exposures of the Pelican Formation surrounded by other similar outcrops on-strike 1km-2km away whose sampling was deferred. A single scarp was sampled at Tar whereas two scarps, 1km apart, were sampled at Asphalt. The Pelican Formation continues beyond the areas sampled under talus rubble. The Tar River and Asphalt Creek fracsand project areas are sufficiently large enough that they each hold realistic potential for hosting sand deposits of reasonable dimensions suitable as a long term source of fracsand.

Sample locations are shown in Plates 8 and 9 for the Asphalt-A, Asphalt B and Tar exposures. More detailed annotated images are appended in Appendix G2.

The primary objective of the sampling was to collect material to for testing determine whether sand from the Pelican Formation, or sub-formational sections therein, at the two locations might have potential to meet fracsand specifications. Given the reconnaissance nature of the sampling and limited available time, however, some of the sampling served mostly to characterize portions of the Formation at those locations and samples of material clearly not suited for fracsand were also collected. The foregoing consist of material collected near the upper contact of the Pelican Formation wherein Belle Fourche Formation (Shaftesbury Formation) shale is intermixed into the sandy horizons, or from parts midway within the Pelican wherein shaley or cherty material is intercalated with sandy beds.

The cleanest and coarsest sands were encountered within the lower part of the exposures sampled (loosely referred to as Lower Pelican in this Report), unlike further to the north in the vicinity of the McIvor River where such beds are nearer the upper parts of the Formation as reported by Athabasca Minerals Inc. from its McIvor Project[38].

18.5.3 Sample Handling, Splitting and Sieving

Samples were shipped to DNI Toronto offices in sealed plastic sample bags, along with field notes and various photographs of outcrops and specific features which were sampled. Samples were weighed on arrival and renumbered by DNI to standardize sample numbering scheme[39]. They were allocated a two digit alpha code for valley name (TR=Tar River, AS=Asphalt), suffixed by a single digit alpha code for sublocation (TRA=Tar River exposure A, ASA and ASB for Asphalt exposures A and B, respectively), and suffixed by a two digit consecutive numeric code. DNI's work was carried out by S.Sabag PGeo and J.Gillett of DNI. Sample numbers, UTM coordinates (NAD27/Zone12), weights "as received" are summarized in Table 58.

Most of the samples consisted of loose and disaggregated sand, with the exception of nearly a third of the samples which contained limps of shaley clay rich material. Samples were air-dried indoors with the aid of a dehumidifier in 20 inch aluminum pans. While the sandier samples dried within two days, clay/shale rich samples contained lumpy clay/shale balls and proved difficult to dry completely but achieved sufficient dryness within four-five days to enable splitting them. Samples were reviewed under microscope by S.Sabag prior to splitting. Samples were photographed to retain a visual record of "raw" untreated material on file. The images are appended herein as Appendix G3.

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[38] Mineral Assessment Report MIN20090012 (Cotterill 2009)

[39] Under the APEX sample numbering scheme, sample series"RER" and "MDC" were collected by R.Eccles and M.Dufresne, respectively.

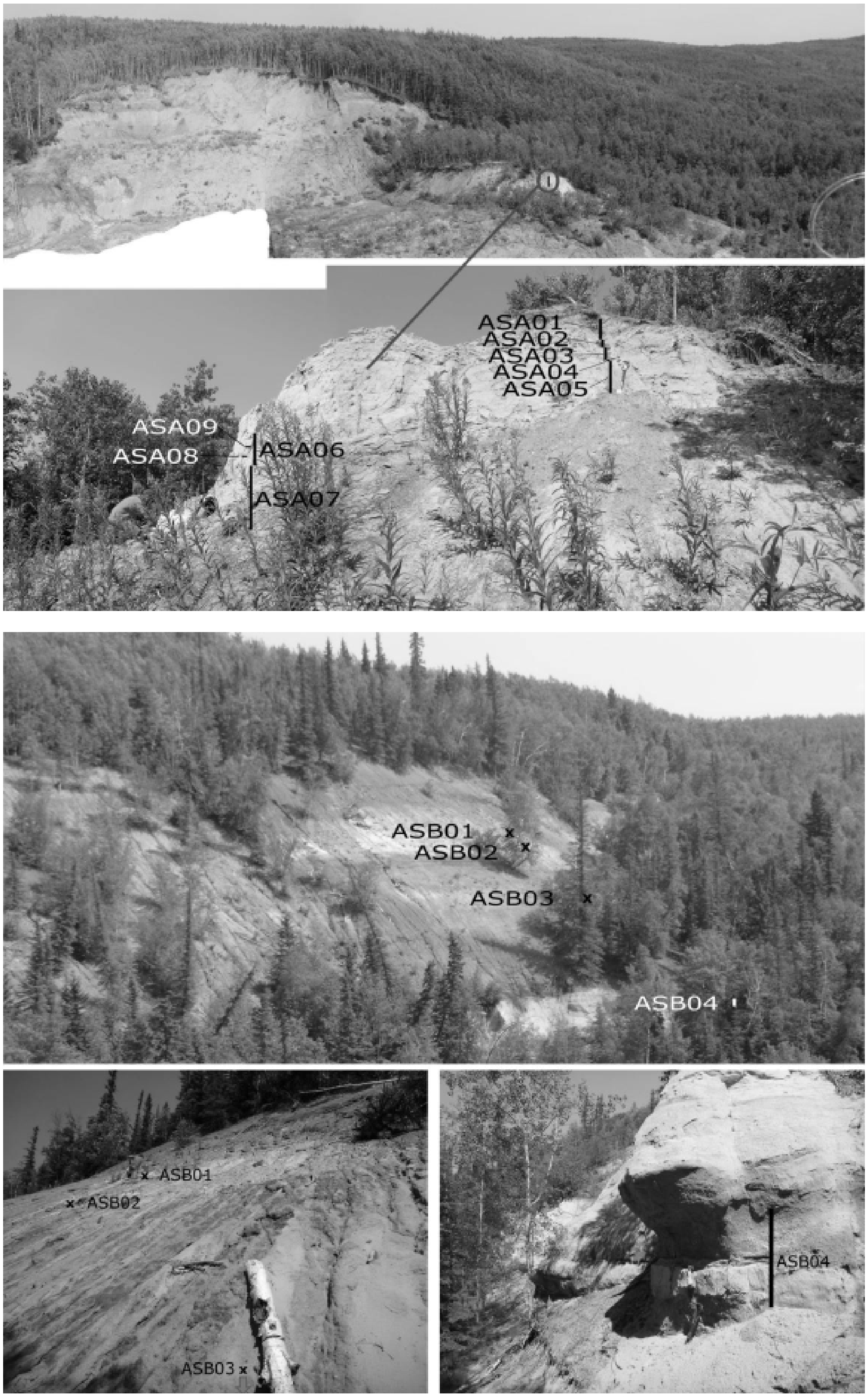

Plate 8: Asphalt Creek Pelican Formation outcrop images, showing sample locations at the Asphalt-A and Asphalt-B exposures. Reconnaissance fracsand sampling program 2014. See Appendix G2 for annotated detailed photographs.

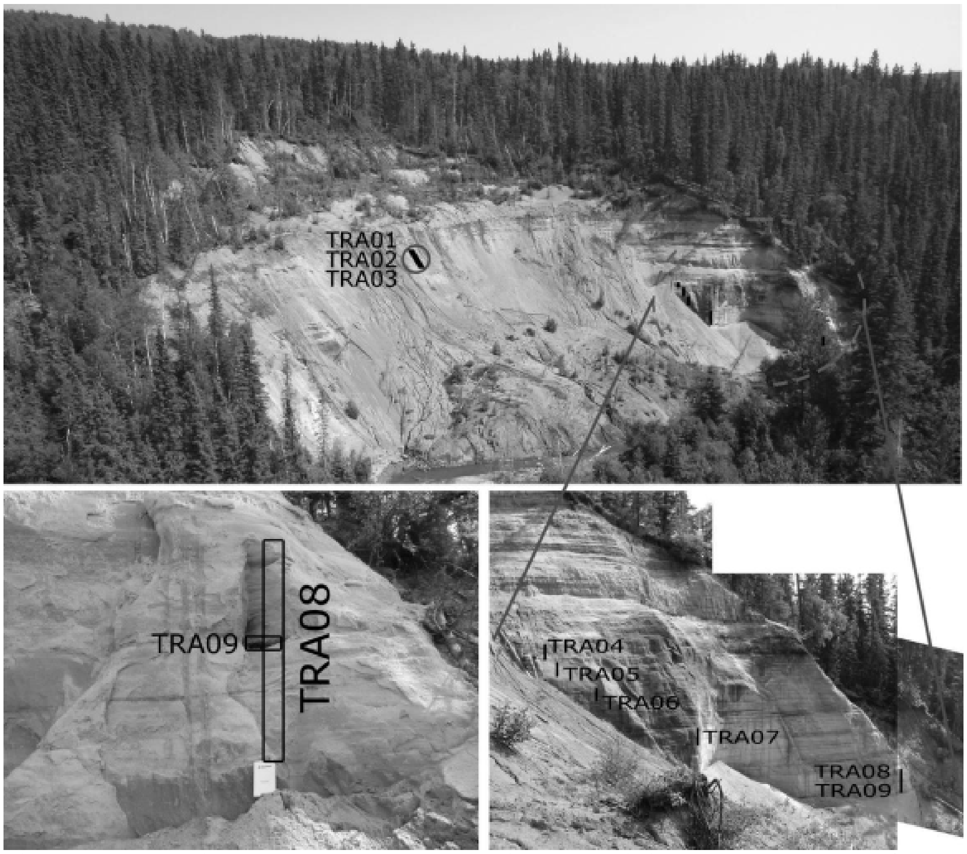

Plate 9: Tar River Pelican Formation outcrop images showing sample locations. Reconnaissance fracsand sampling program 2014. See Appendix G for annotated detailed photographs.

Both areas sampled offer similar stratigraphies, namely; a coarser white sand section nearer the base, overlain by a section of intercalated sand/silt/shale, which is in turn overlain by sandy section containing increasing shaley units nearer the Bell Fourche Formation shale (Shaftesbury Formation) which overlies the Pelican Formation. The exposures are spottily covered by various amounts of slumped clay material from the overlying shales.

The basal coarse sand section is loosely referred to herein as the lower Pelican. This section occurs higher in the stratigraphy over locations to the north of the Property (eg: McIvor River and Greystone Rivers areas).

The Tar River exposure offers by far the cleanest and most distinct exposure of the coarser lower Pelican at its base. Whereas the upper contact of this section can be discerned in the cliff face, its lower contact has not been determined, and the lower Pelican section at that location is is estimated to have a 20m+ thickness.

Given the loose disaggregated nature of the Pelican Formation sandstone, the sampling was done by shovel over portions of the exposures which were readily accessible. Considering time constraints, continuous channel samples over the entire stratigraphic section of the Formation could not be collected, and samples were collected on a best effort basis to characterize various sections of the Formation.

Sample# DNI	Sample# APEX	Easting NAD27	Northing NAD27	LocID (APEX)	Wet-Wt (g)
ASA01	14MDC001	449684	6383534	Pelican2	2,910
ASA02	14MDC002	449684	6383534	Pelican2	2,430
ASA03	14MDC003	449684	6383534	Pelican2	1,185
ASA04	14MDC004	449684	6383534	Pelican2	1,580
ASA05	14MDC005	449684	6383534	Pelican2	5,490
ASA06	14MDC006	449684	6383534	Pelican2	4,690
ASA07	14MDC007	449684	6383534	Pelican2	4,080
ASA08	14MDC008	449684	6383534	Pelican2	710
ASA09	14MDC009	449684	6383534	Pelican2	740
ASB01	14RER-DNI1-001	449243	6384270	Pelican1	4,680
ASB02	14RER-DNI1-002	449243	6384270	Pelican1	5,110
ASB03	14RER-DNI1-003	449243	6384270	Pelican1	2,320
ASB04	14RER-DNI1-004	449243	6384270	Pelican1	3,060
TRA01	14RER-DNI2-001	439122	6364329	Pelican3	3,120
TRA02	14RER-DNI2-002	439122	6364329	Pelican3	2,060
TRA03	14RER-DNI2-003	439122	6364329	Pelican3	2,100
TRA04	14RER-DNI2-004	439118	6364293	Pelican3	3,060
TRA05	14RER-DNI2-005	439118	6364293	Pelican3	3,370
TRA06	14RER-DNI2-006	439118	6364293	Pelican3	1,570
TRA07	14RER-DNI2-007	439110	6364282	Pelican3	3,240
TRA08	14RER-DNI2-008	439089	6364279	Pelican3	4,210
TRA09	14RER-DNI2-009	439089	6364279	Pelican3	3,150

Table 58: Details of samples. Tar River and Asphalt Creek reconnaissance fracsand sampling program 2014.

Samples were split by gravity feeding them through a 16 inch funnel with a metal blade placed in the large spout. Sandy samples proved easy to feed and split whereas clay rich samples containing shale proved challenging and produced uneven splits. Overall, the splits were acceptable and of a caliber as if cone/quartered.

The samples were split into four fractions and marked by suffixing a single letter designator to the sample number as follows: "A" (Archive), "E" (Extra), "S" (Sieve), and "T" (Type). The "T" fraction was further split into four fractions to provide material to be sent to prospective fracsand producers. The "S" fraction was subsequently sieved, and other fractions set aside. Sample weights, and weights of the dry splits are summarized in Table 59, along with an estimated moisture content calculated based on the weight difference between the weight "as received" and that of the aggregate weight of all dry sample splits. Dry subsamples filling a 100ml vial were also weighed to estimate density (also shown in Table 59).

Sample# DNI	Wet-Wt As Received (g)	Archive Fraction (g)	Extra Fraction (g)	Sieve Fraction (g)	T1 Fraction (g)	T2 Fraction (g)	T3 Fraction (g)	T4 Fraction (g)	Dry-Wt Calculated (g)	Moisture Estm (%)	100ml-Wt (g)
ASA01	2,910	597.2	634.5	658.2	235.2	166.7	191.2	193.7	2,676.7	8%	140
ASA02	2,430	578.1	532.7	527.6	124.1	165.1	154.8	86.8	2,169.2	11%	
ASA03	1,185	292.7	202.3	338.3	92.2	59.0	36.3	114.6	1,135.4	4%	na
ASA04	1,580	314.1	295.3	414.1	76.1	72.1	76.1	66.9	1,314.7	17%	na
ASA05	5,490	1,173.6	1,149.9	1,523.6	336.4	299.1	293.6	315.8	5,092.0	7%	125
ASA06	4,690	962.4	1,062.5	1,137.7	285.1	287.9	252.8	251.2	4,239.6	10%	127
ASA07	4,080	1,061.6	819.5	1,044.3	177.3	144.8	198.5	184.5	3,630.5	11%	
ASA08	710	152.5	147.4	176.4	20.1	23.6	45.5	49.6	615.1	13%	na
ASA09	740	133.7	98.8	179.1	27.0	51.2	58.0	55.6	603.4	18%	na
ASB01	4,680	1,018.3	1,231.7	1,084.2	239.4	251.4	321.4	342.4	4,488.8	4%	153
ASB02	5,110	1,191.2	1,386.7	1,107.1	268.6	355.7	291.9	337.7	4,938.9	3%	150
ASB03	2,320	512.9	488.4	668.6	121.5	96.4	114.3	123.2	2,125.3	8%	na
ASB04	3,060	799.3	856.6	684.3	141.1	170.5	147.4	141.8	2,941.0	4%	134
TRA01	3,120	823.3	508.1	520.0	288.9	286.7	181.5	173.1	2,781.6	11%	150
TRA02	2,060	521.2	482.0	508.7	119.3	132.1	99.4	172.0	2,034.7	1%	164
TRA03	2,100	680.8	564.3	386.3	52.4	140.8	83.2	70.8	1,978.6	6%	na
TRA04	3,060	852.5	606.3	781.5	130.7	182.8	189.5	188.4	2,931.7	4%	145
TRA05	3,370	867.8	714.2	936.2	157.4	183.1	196.7	163.3	3,218.7	4%	150
TRA06	1,570	253.2	466.0	431.8	79.4	89.6	75.6	94.4	1,490.0	5%	na
TRA07	3,240	852.1	660.3	801.7	187.3	216.8	220.9	204.1	3,143.2	3%	142
TRA08	4,210	1,175.8	1,032.8	906.3	206.7	279.2	244.7	206.3	4,051.8	4%	155
TRA09	3,150	650.0	760.2	753.9	210.6	200.2	230.9	213.7	3,019.5	4%	166

Table 59: Sample and subsample weights, calculated dry weight and moisture content, and 100ml weights. Reconnaissance fracsand sampling program 2014. Note: Weight of sieved fraction for sample TRA02 estimated as the avg of the other three fractions; 145.5g of shale/tar balls removed from sample ASA03 on receipt of sample. Dry weight adjusted accordingly.

The "S" fraction of all samples were wet-sieved with the aid of a garden hose through a set of nested 8 inch brass sieves rated in incremental US mesh sizes. They were sieved at 16, 20, 30, 40, 70 and 140 mesh[40]. The 140- mesh fraction was discarded and its quantity was estimated by difference. Although 50, 100 and 120 mesh sieves were also available, sieving at those fractions was deferred to expedite the work, and only select samples were so sieved to explore particle size distribution within the 40/70 and 70/140 fractions.

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[40] Mesh sizes are US mesh and are as follows: 16mesh=1.18mm, 20mesh=0.85mm, 30mesh=0.60mm, 40mesh=0.425mm, 50mesh=0.30mm, 60mesh=0.25mm, 70mesh=0.212mm, 100mesh=0.15mm, 120mesh=0.125mm, 140mesh=0.106mm.

Some of the samples contained considerable super-fine clay and shale matter which proved difficult or impossible to pass through the finer 140 mesh, and those were sieved only to 100- mesh. Sieving of two samples through the finer fractions proved impossible due to excessive clay content (likely surficial slump from overlying muddy shale), and sieving was terminated after the 70 mesh, and only partial yield was achieved for the 70- mesh size, and accumulated sludge was discarded.

Sieved concentrates were air dried in paper cone filters, weighed and reviewed by microscope. A number of size fractions were photographed under the microscope. Weights of the various sieve fractions and the respective yields are summarized in Tables 60 and 61, respectively. Estimated moisture content is reiterated in Table 61. DNI's intentions are to eventually sieve all 70140 mesh fractions at 100 and 120 mesh, and the 4070 fractions at 50 and 60 mesh.

Sample# DNI	Sieve Fraction Wt (g)	Sieve (g) 16+	Sieve (g) 1620	Sieve (g) 2030	Sieve (g) 3040	Sieve (g) 4070	Sieve (g) 70140	Fines* (g) 140-
ASA01	658.2	1.2	0.9	27.3	19.8	89.6	175.9	343.5
ASA02	527.6	104.4	3.0	127.1	8.6	30.6	21.4	235.5
ASA03	338.3	13.3	2.3	18.1	3.9	19.6	181.8	99.3
ASA04	414.1	37.5	21.0	117.7	12.1	12.6	76.7	136.5
ASA05	1523.6	19.6	2.1	13.1	1.8	28.1	683.8	775.1
ASA06	1137.7	11.0	0.7	1.1	0.6	3.6	616.6	504.1
ASA07	1044.3	35.0	2.2	11.0	1.6	4.1	72.0	918.4
ASA08	176.4	4.0	4.2	96.9	18.8	2.1	20.0	30.4
ASA09	179.1	2.9	1.9	36.0	2.4	4.0	99.3	32.6
ASB01	1084.2	2.8	2.0	4.7	451.7	483.8	100.1	39.1
ASB02	1107.1	0.6	0.1	0.3	9.4	444.4	583.6	68.7
ASB03	668.6	43.5	14.9	54.7	31.3	201.5	26.4	316.3
ASB04	684.3	1.9	0.3	0.6	0.9	7.5	237.3	435.8
TRA01	520.0	25.2	5.2	11.6	18.4	118.0	298.4	43.2
TRA02	508.7	36.4	50.9	109.2	41.7	68.1	39.1	163.3
TRA03	386.3	57.8	37.8	60.4	47.2	79.4	49.5	54.2
TRA04	781.5	2.3	5.6	20.2	91.5	395.8	106.5	159.6
TRA05	936.2	32.2	24.6	87.1	138.0	475.6	97.9	80.8
TRA06	431.8	1.6	2.8	15.8	40.4	182.7	62.2	126.3
TRA07	801.7	3.2	2.5	2.9	2.8	19.4	587.9	183.0
TRA08	906.3	10.2	157.0	100.5	14.5	25.7	300.5	297.9
TRA09	753.9	25.8	403.2	167.0	26.2	18.8	31.4	81.5

Table 60: Sieved grain size profiles by mesh. Reconnaissance fracsand sampling program 2014. Note: for ASA02 the 70140 fraction is partial yield only - sieving problems; For ASA07 the 4070 and 70140 fractions are partial yields only - sieving problems; fines include 77.3g of sludge.

Sample# DNI	Sieve (%) 16+	Sieve (%) 1620	Sieve (%) 2030	Sieve (%) 3040	Sieve (%) 4070	Sieve (%) 70140	Fines* (%) 140-	Moisture* (%)
ASA01	0.2	0.1	4.1	3.0	8.2	31.6	52.7	8.0
ASA02	19.8	0.6	24.1	1.6	5.8	4.1	44.1	10.7
ASA03	3.9	0.7	5.4	1.2	5.8	53.7	29.4	4.1
ASA04	9.1	5.1	28.4	2.9	3.0	18.5	33.0	16.8
ASA05	1.3	0.1	0.9	0.1	1.8	44.9	50.9	7.2
ASA06	1.0	0.1	0.1	0.1	0.3	40.2	58.3	9.6
ASA07	3.4	0.2	1.1	0.2	0.4	6.9	87.9	11.0
ASA08	2.3	2.4	54.9	10.7	1.2	11.3	17.2	13.4
ASA09	1.6	1.1	20.1	1.3	2.2	55.4	18.2	18.5
ASB01	0.3	0.2	0.4	41.7	42.7	8.9	5.9	4.1
ASB02	0.1	0.0	0.0	0.8	37.0	52.7	9.5	3.3
ASB03	6.5	2.2	8.2	4.7	26.2	3.9	48.3	8.4
ASB04	0.3	0.0	0.1	0.1	1.1	34.7	63.7	3.9
TRA01	4.8	1.0	2.2	3.5	11.6	67.8	9.0	10.8
TRA02	7.2	10.0	21.5	8.2	11.5	9.3	32.4	1.2
TRA03	15.0	9.8	15.6	12.2	17.7	14.5	15.2	5.8
TRA04	0.3	0.7	2.6	11.7	43.5	19.4	21.8	4.2
TRA05	3.4	2.6	9.3	14.7	41.5	18.2	10.2	4.5
TRA06	0.4	0.6	3.7	9.4	34.4	19.7	31.9	5.1
TRA07	0.4	0.3	0.4	0.3	2.4	53.9	42.3	3.0
TRA08	1.1	17.3	11.1	1.6	2.8	30.3	35.7	3.8
TRA09	3.4	53.5	22.2	3.5	2.5	4.2	10.8	4.1

Table 61: Sieved grain size profiles by % yield. Reconnaissance fracsand sampling program 2014. Note: for ASA02 the 70140 fraction is partial yield only - sieving problems; For ASA07 the 4070 and 70140 fractions are partial yields only - sieving problems; fines include 77.3g of sludge

The tables are self-explanatory, showing considerable fines in many of the samples, especially ones with high moisture content likely reflecting clay content. Oddly enough, samples with high yields of the coarser fractions (1640) also similarly report high proportion of fines but at the expense of lesser middling fractions (4070, 70140). These are discussed later in this Section along with sample and concentrates descriptions.

18.5.4 Sample and Sieved Concentrates Descriptions

As noted earlier in this Section , while the primary objective of the sampling was to collect material to for testing to determine whether the Pelican Formation sand, or sub-formational sections therein, have potential to meet fracsand specifications, some of the samples collected are from locations near the upper contact of the Pelican Formation wherein Belle Fourche Formation (Shaftesbury Formation) shale is intermixed into the sandy horizons, or are from parts midway within the Pelican wherein shaley or cherty material is intercalated with sandy beds (eg: ASA07, see Plate 10). Some of the samples also contain sufficient other clay which is likely from surface slumped of overlying shales. The foregoing samples serve mostly to characterize portions of the Formation at those locations and are clearly not suited to enable determination suitability of the Pelican sands for use as fracsand.

Most of the samples consisted of loose and disaggregated sand, with the exception of nearly a third of the samples which contained lumps of shaley clay rich material. Raw samples as well as sized (sieved) concentrates were reviewed by microscope and select samples were photographed. This work is ongoing, and available photomicrographs typifying concentrates from samples of interest are appended herein as Appendix G4.

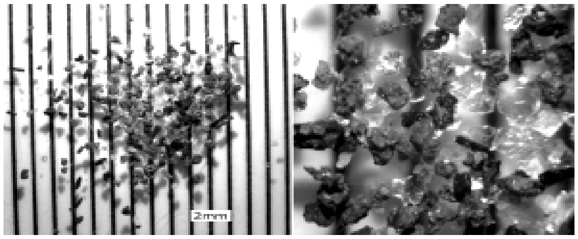

Plate 10: Photomicrographs of clay material intermixed with sand grains, Sample ASA07. Reconnaissance fracsand sampling program 2014.

Due to the limited sampling, the lack of detailed geological mapping of the exposures sampled, the reconnaissance nature of the sampling (channel/grab samples), distribution of the samples (spotty rather than continuous channels across stratigraphy of entire exposure) it is not possible to present a definitive discussion of whether the Pelican Formation at Asphalt Creek and Tar River contains sand of suitable quality to meet fracsand specifications.

The current sampling program does, however, serve to confirm that the Formation at both locations contains subformational sections characterized by clean, white, coarse sand (1640 mesh, 1650?) with smooth grains of high to very high roundness and moderate to high sphericity intermixed within a much finer grained matrix (70140 mesh) of otherwise angular to shardy sand grains. This bimodal grain size distribution is shown in Plate 11. Photomicrographs of various grain sizes from the two areas are collated in Plate 12 (additional images in Appendix G4).

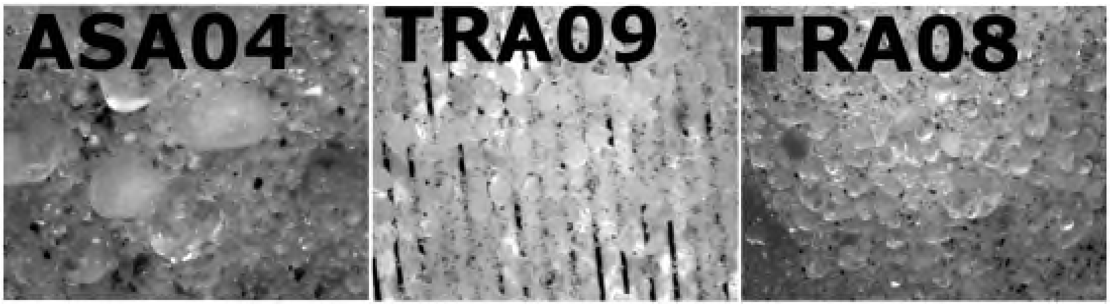

Plate 11: Photomicrographs of coarse smooth sand grains set in a matrix of fine material. Samples# TRA08, TRA09 and ASA04. Reconnaissance fracsand sampling program 2014.

While visual characteristics of the coarser and the finer fractions are generally consistent across most of the samples, the middling fraction (4070 mesh) is more variable from one sample to the next, with some being considerably rounder/spherical and others being subangular to angular or a mixture of the two. Select 4070 mesh fractions were further sieved at 50 and 60 mesh, and showed that coarse smooth grains persist into the 60+ mesh. This is discussed in more detail later in this Section .

The above suggests that whereas the coarser fractions (1640 mesh) hold potential to meet fracsand specifications subject to meeting crush test parameters, the finest fractions (70140- mesh) most likely do not (despite presence of some round/spherical sand grains in the 70100 mesh fraction), and that some portions of the Formation might yield acceptable sands from the middling (4070 mesh) fractions with similar roundness/sphericity as those from the coarser fractions. It would be realistic, therefore, to expect that, subject to meeting crush test fracsand parameters, the Pelican Formation might yield fracsand products in the 1670 mesh grain size range from the two exposures sampled, and likely from elsewhere on the Property, and that these would be dominated by the coarser 1640 mesh fractions.

Photomicrographs of typical sand grains from the various grain size fractions from the Asphalt and Tar exposures are shown in Plate 12 for the 1620, 2030, 3040, 4070 and 70140 mesh size fractions. Additional photomicrographs from many other sieved concentrates are appended in Appendix G4.

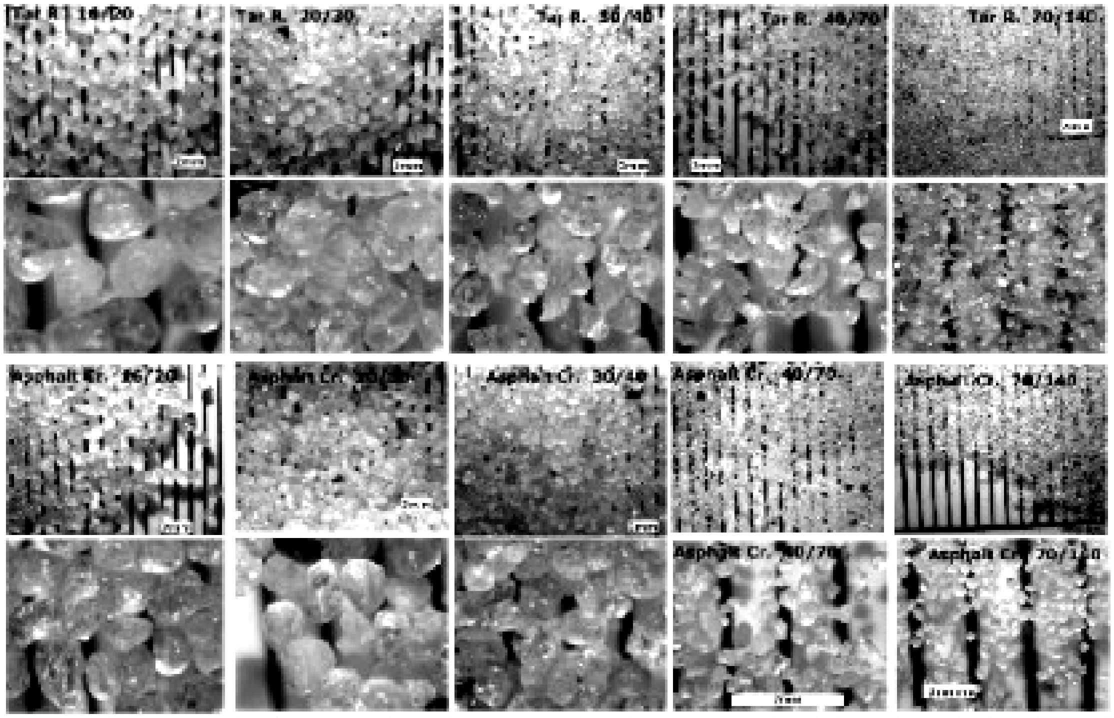

Plate 12: Photomicrographs of some typical sieved concentrates from the Tar River and Asphalt Creek samples for select mesh size ranges. Select images from Samples ASA08, ASB01, ASB02, TRA08 and TRA09. Black scale bars are 1mm apart, Images arranged in vertical pairs of lower magnification (upper image) and higher magnification beneath it. Reconnaissance fracsand sampling program 2014. See Appendix G4 for full set of photomicrographs.

DNI has not yet submitted samples for fracsand testwork to quantify the various API (or ISO) fracsand specification parameters. Visual review of concentrates shows, however, that the coarser fractions can be characterized by roundness and sphericity ranging 0.5-0.9. While visual review cannot enable speculation as to hardness and crush resistance, the observation of occasional fractured near-spherical sand grains intermixed with other grains of otherwise high roundness/sphericity might reflect brittleness attributable to low crush resistance, leading to speculation of whether the abundant angular fines of the 70- mesh fractions might be fragments of what were previously much larger rounder grains. The bimodal sand grain size distribution in the samples (predominantly coarse and fine, with minimal middling), however, and the lack of grain size gradation from coarse to fine grain fractions, serve to dispute this proposal, suggesting two separate sedimentary sources for the two size fractions and arguing for adequate hardness and crush resistance.

In addition to the above, good hardness and crush resistance are also suggested indirectly by good test results reported by Athabasca Minerals Inc. from its Firebag fracsand project which is a surficial accumulation of glacial outwash of sands glacially scoured from the Pelican sandstone Formation at the Birch Mountains located to the west of the Firebag project. DNI's SBH Property occupies the erosional edge of the Birch Mountains and hosts the only remaining vestiges of Pelican sandstone Formation exposed in the region. This Formation is completely eroded away to the east of the Property.

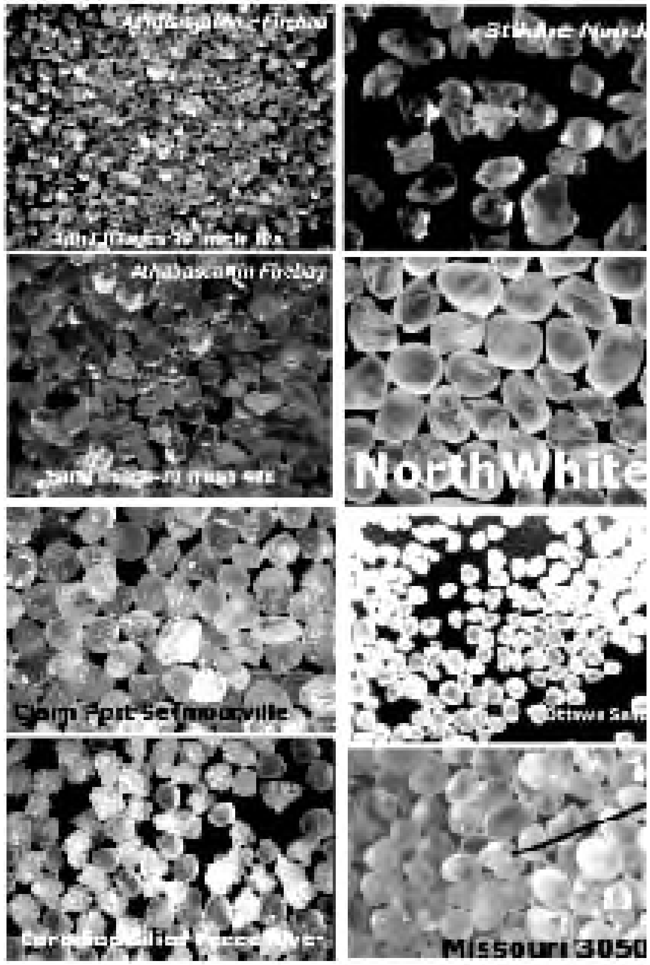

Plate 13: Photomicrographs of fracsands from select third-party projects.

Test results from non-beneficiated samples from Firebag project reported Roundness/Sphericity of 0.7/0.7, 0.6/0.7 and 0.6/0.7 for the 2040, 4070 and 70140 mesh fractions, respectively, and Crush values of 6k, 8k and 10k, respectively, meeting or exceeding fracsand specifications. For comparative reference: the Technical Data Sheet for beneficiated Northern White Sands final saleable product published by CRS Proppants LLC reports Roundness/Sphericity of 0.8/0.8, 0.7/0.7 and 0.8/0.7 for its 2040, 4070 and 3050 mesh fractions, respectively, and Crush values of 7k, 9k and 7k, respectively. Also for additional reference, Claim Post Resources reports Roundness/Sphericity of 0.6/0.7 and 9k Crush Value for the 4070 mesh fraction from its Manitoba Seymourville fracsand project. Photomicrographs of fracsand from a number of third-party projects, including the foregoing, are shown in Plate 13.

Sieving yields previously presented in Table 60 are shown graphically in Figure 96 to show grain size distribution for each sample, for mesh sizes 16+, 1620, 2030, 3040, 4070, 70140. The Figure is self explanatory, and highlights the predominance of fines at exposure ASA and overall better coarse+middling yields at ASB and TRA.

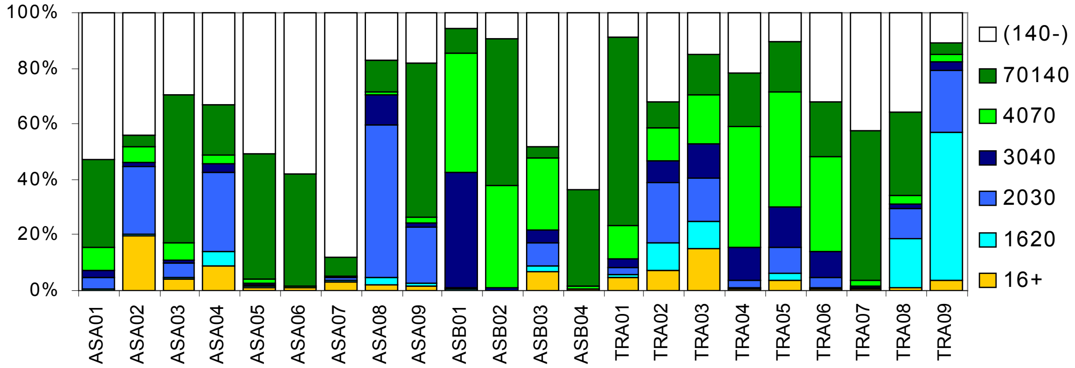

Figure 96: Grain size distribution profiles for principal mesh size fractions. Reconnaissance fracsand sampling program 2014.

Grain size distribution for the samples is shown in Figure 97 displayed in sorted sequence in descending order of %yield for various popular fracsand grain size mesh ranges discussed above, namely; the 1670, 2040 and 4070 mesh. Though samples from the three exposures are shown in the same graph, the samples from each have been sequenced separately to enable review of trends within each area. The various graphs serve to depict the variety of sand that occurs within different parts of each of the areas (see also sample location outcrop photographs in Appendix G2).

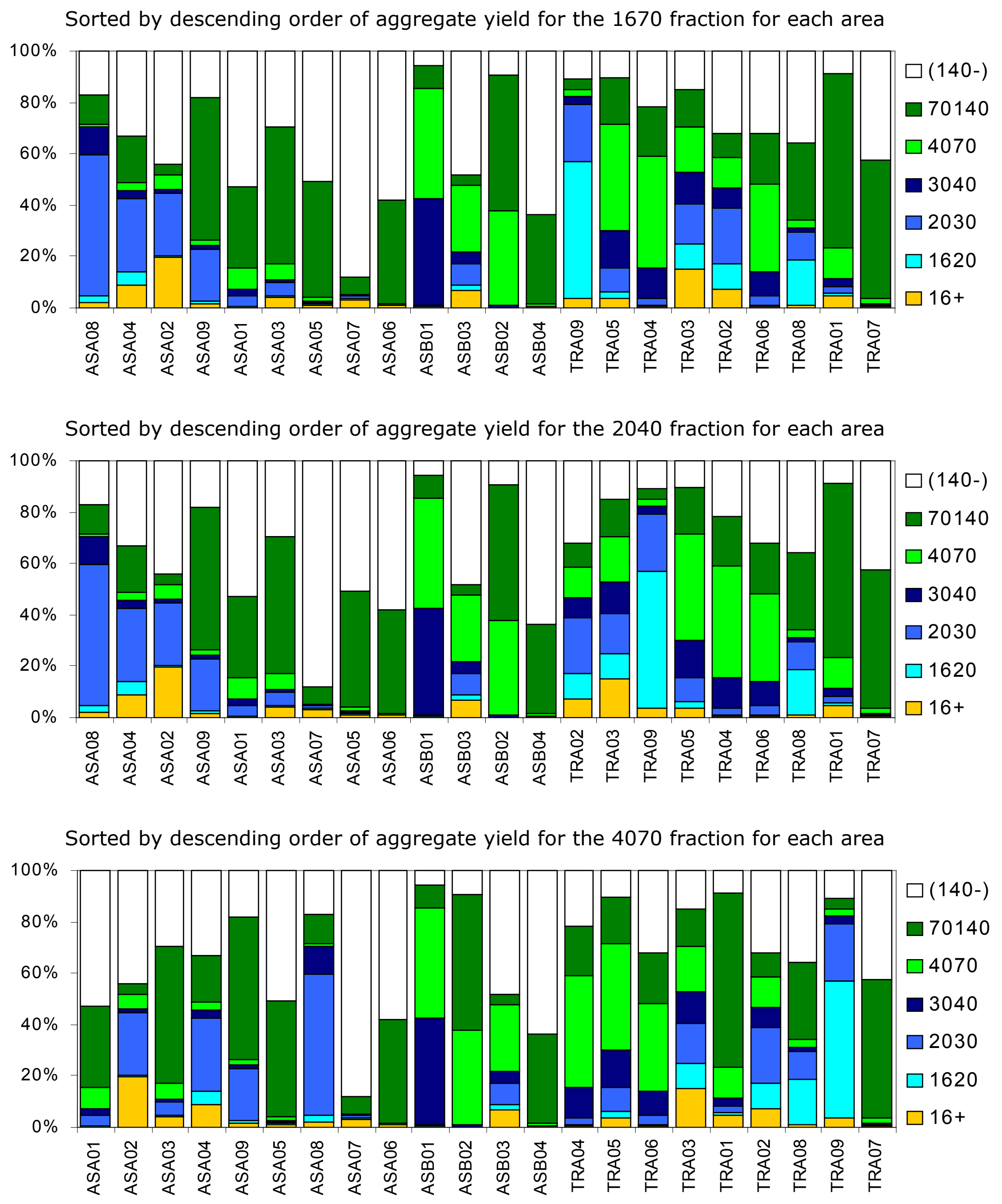

Figure 97: Grain size distribution profiles for principal mesh size fractions, sorted in descending order of yield for the 1670 (top), 2040 (middle) and 4070 (bottom) mesh size fractions for each area. Reconnaissance fracsand sampling program 2014.

Considering that the more popular fracsand products in higher demand which currently also command the higher sale prices fall within the 1670 mesh grain size range, with higher value ascribed to the coarser fractions within that range, the relative grain size distribution within the 1670 mesh range is shown in Figure 98. The Figure highlights dominance of the 4070 mesh grain size range in some of the samples, whereas others are dominated by the coarser 2030 mesh fraction.

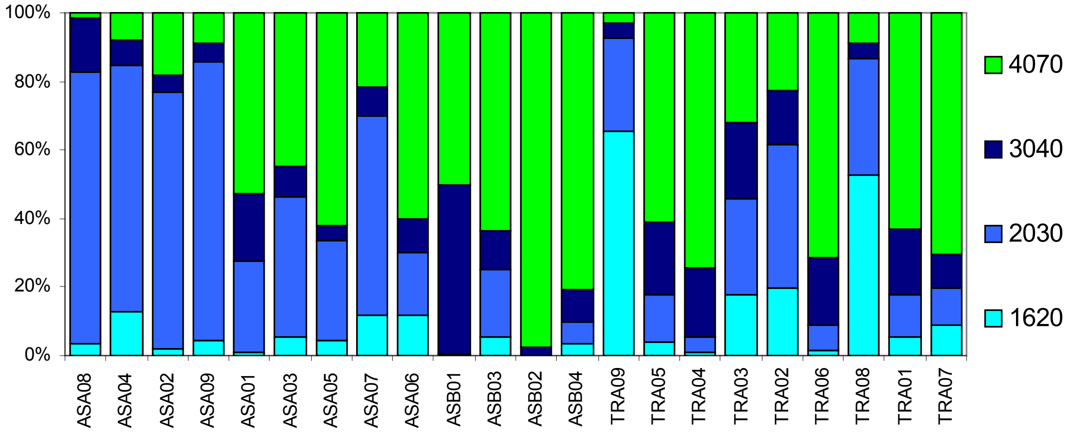

Figure 98: Relative grain size distribution profiles within the 1670 mesh size fraction range sorted in descending order of aggregate yield for the 1670 fraction from each area. Reconnaissance fracsand sampling program 2014.

The 4070 mesh fractions from samples which yielded the highest quantities of 4070 mesh fraction were re-sieved at 50 and 60 mesh to characterize the grain size distribution within the broader 4070 mesh fraction. The samples and related sieving results are summarized in Table 62, and photomicrographs of typical 4050, 5060 and 6070 mesh grain size fractions from select samples are presented in Plate 14 showing persistence of sand grains of good roundness and sphericity similar to those from coarser size fractions well into the 60+ mesh but more particularly well into the 50+ mesh fraction.

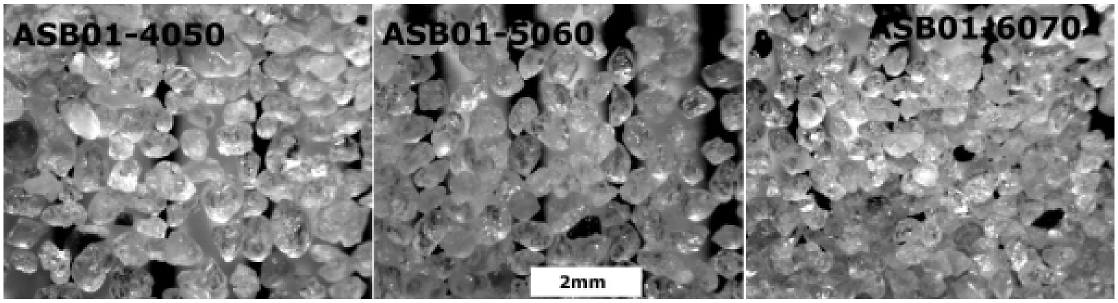

Plate 14: Photomicrographs of 4050, 5060 and 6070 mesh grain size fractions from sample ASB01. Reconnaissance fracsand sampling program 2014.

Sample#	Aggregate 4070		Weights and Yields of Mesh Size Fractions Within the 16 to 70 mesh Grain Size											
			1620		2030		3040		4050		5060		6070	
	(g)	(%)	(g)	(%)	(g)	(%)	(g)	(%)	(g)	(%)	(g)	(%)	(g)	(%)
ASA01	54	8%	1	0.1%	27	4.1%	20	3.0%	10	1.5%	11	1.7%	33	5.0%
ASB01	463	43%	2	0.2%	5	0.4%	452	41.7%	353	32.5%	43	4.0%	67	6.2%
ASB02	409	37%	0	0.0%	0	0.0%	9	0.8%	144	13.0%	135	12.2%	130	11.7%
ASB03	175	26%	15	2.2%	55	8.2%	31	4.7%	100	14.9%	56	8.4%	19	2.9%
TRA01	60	12%	5	1.0%	12	2.2%	18	3.5%	17	3.2%	19	3.7%	24	4.7%
TRA02	59	12%	51	10.0%	109	21.5%	42	8.2%	42	8.3%	12	2.3%	5	1.0%
TRA03	68	18%	38	9.8%	60	15.6%	47	12.2%	48	12.3%	16	4.0%	5	1.3%
TRA04	340	44%	6	0.7%	20	2.6%	92	11.7%	153	19.6%	94	12.1%	92	11.8%
TRA05	388	41%	25	2.6%	87	9.3%	138	14.7%	223	23.8%	88	9.4%	77	8.2%
TRA06	148	34%	3	0.6%	16	3.7%	40	9.4%	60	14.0%	44	10.2%	44	10.1%

Table 62: Weights and yields for various mesh size fractions within the 16 to 70 mesh range, showing results of re-sieving the 4070 mesh fraction at 50 and 60 mesh. Reconnaissance fracsand sampling program 2014.

The re-sieving results from Table 62 are presented in graphical format in Figure 99 showing that the 4070 mesh fraction is dominated by the 4050 and 5060 mesh fractions for many of the samples, notably in samples from the Tar River exposure. (photomicrographs are appended in Appendix G4).

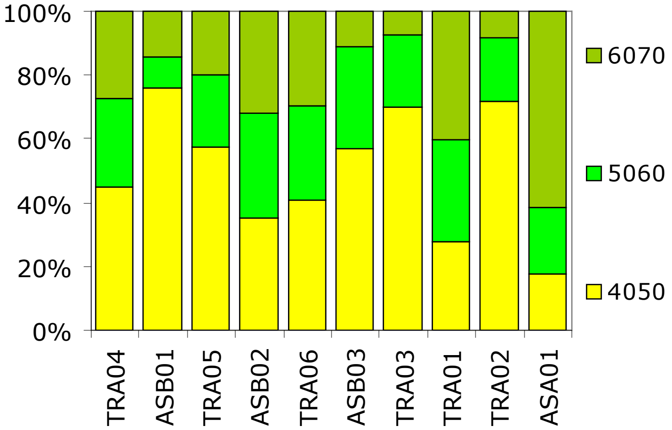

Figure 99: Relative grain size distribution profiles within the 4070 mesh size fraction for select samples, sorted in descending order of total 4070 mesh size fraction %yield. Reconnaissance fracsand sampling program 2014.

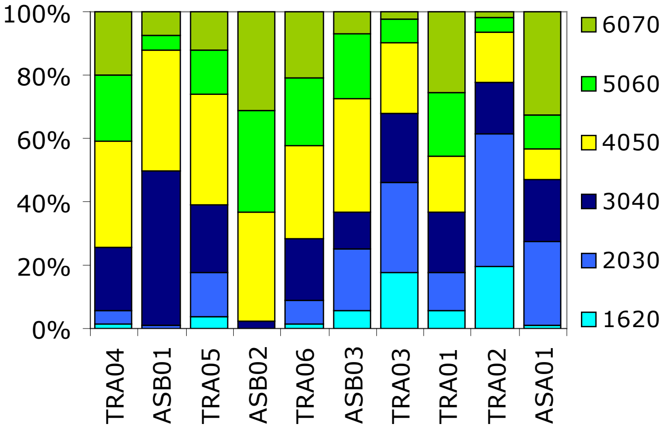

Figure 100: Relative grain size distribution profiles within the 1670 mesh size fraction for select samples, sorted in descending order of total 4070 mesh size fraction yield. Reconnaissance fracsand sampling program 2014.

The relative grain size distribution within the 1670 mesh size fraction for select samples is shown in Figure 100, sorted in descending sequence from the highest to the lowest aggregate 4070 mesh %yield.

Figure 100 suggests that final sand products of a variety of grain sizes might be produced from the Pelican Formation in addition to the traditional 2040 and 4070 mesh sands, but that the Formation also holds potential as a source to more specific products within narrower grain size specifications which might be tailored for specific applications (eg: 1630 or 3050 mesh, etc.).

A handful of the 70140 mesh size fraction concentrates were also re-sieved at 100 and 120 mesh to investigate any variations within the 70140 mesh size range. This work is ongoing, although preliminary indications (samples ASA06, ASB01, ASB02, TRA07 AND TRA08) are that although smoother sand grains do persist into the 70100 mesh or 100120 mesh sizes, they are accompanied by many other jagged grains and their separation may well prove difficult. Available photomicrographs from this work are appended in Appendix G4.

Review and documentation of the samples and sieved concentrates from the 2014 reconnaissance fracsand sampling program is ongoing. DNI's intentions are to conclude photographing all sieved fractions, to select a suite of samples for rigorous fracsand tests and to submit them to Stimlabs or Proptester for testing.

19. OTHER WORK 2012-2014 - SAND, GRAVEL, AND RIVER HYDRO

DNI completed other work during 2012-2014 to evaluate other non-metallic assets on the Property which can provide collateral logistical benefits to any future mining operations to extract metals from the black shale hosted zones. These include identification of potential sand/gravel over parts of the Property, and preliminary evaluation of run of river hydro as a seasonal source of power.

19.1 SAND AND GRAVEL POTENTIAL

Three Sand and Gravel targets were identified at the Property by APEX Geoscience geologists in certain drill logs from diamond drilling completed by DNI in the course of its 2010-2011 and 2012 drilling programs exploring its polymetallic black shale targets at the Buckton Zone, the Buckton South Zone and the Asphalt Zone. All three sand/gravel targets are considered to be of glaciofluvial origin.

Given that drilling only achieved partial recovery across sand/gravel sections, the potential of the proposed sand/gravel targets was extrapolated based on the whatever information available from the drilling together with other indirect information from the surrounding areas. The foregoing included a review of information from other drilling in the surrounding area, in addition to review of topographic maps, air photos, soils maps, Quaternary geology maps and airborne magnetic data. Available provincial aggregates resource maps were also reviewed, but were found to contain no information relevant to the project.

The three targets were provisionally named as follows: the Eymundson Creek Target (coinciding with DNI's Buckton South Zone), Tar River Target (coinciding with DNI's Asphalt Zone) and the Birch North Target (coinciding with DNI's Buckton Zone).

APEX recommended that the three targets be further explored and ultimately drill tested. DNI has not yet implemented these recommendations. General characteristics of the three targets are as follows:

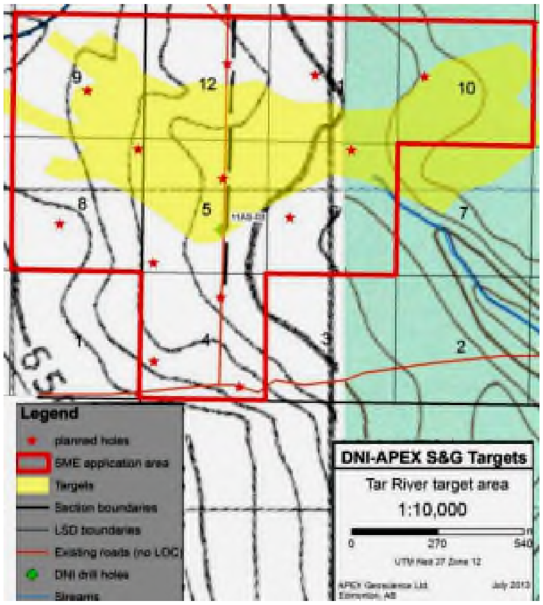

Figure 101: Location sketch, Tar River sand/gravel Target.

Tar River Target

Sand/gravel was encountered in DNI hole 11AS-03, cored in the course of DNI's 2010-2011 drilling program. The hole was cased to 15.0 m, but intersected mainly gravel with some silt from 15.0-32.5m.

An estimate of the proportions of silt to gravel could not be made due to poor drill core recovery over these sections, although silt intervals logged are 1m or less and the field logs reported flowing sand over the 16.0-29.5m interval. Where gravel was recovered it was mainly subangular, 50% cobbles and 50% pebbles, and consisted of 60% sandstone and 40% igneous lithics.

The Tar River Target (Figure 101) is located over the general vicinity of the Asphalt Zone, centered over UTM coordinates 439800E 6372200N (NAD27 z12).

Birch North Target

Sand/gravel was encountered in several DNI holes cored in 2012 (especially 12BK-03 and 12BK-05; also 12BK-09, 7BK-05, 12BK-02 and 12BK-04). Two of the holes (12BK-03 and 12BK-05) had poor core recovery between the casing and the top of the Labiche Formation.

A few cobbles were recovered from 12BK-03, located on a hill within the topographic corridor shown in Figure 102. Holes 12BK-09 and 7BK-05 are located just above and to the east of the corridor; logs for

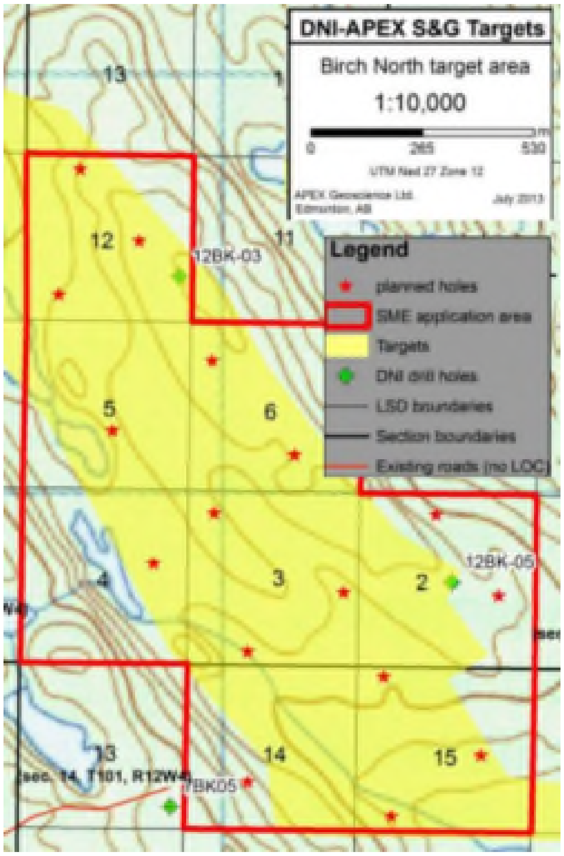

Figure 102: Location sketch, Birch North sand/gravel Target.

12BK-09 reported some cobbles and boulders between the casing and the Labiche Formation, 7BK-05 reported several intervals of lost core (~0.5 to 2.75m) and several other intervals (generally ~1m thick) of till with abundant pebbles and cobbles.

Holes 12BK-02 and 12BK-04, both of which are located well above (but roughly in-line with) the corridor, contain relatively thick overburden sections (81.75 m and 57.90 m, respectively) with complex stratigraphies that include rare zones of gravel (up to 4.8 m thick, but generally <1 m), till, sand and silt. Both these holes contain metre-scale boulder beds immediately above bedrock; 12BK-02 contains metre-scale intersections of displaced bedrock.

The Birch North Target is located on the eastern slope of the Birch Mountains (Figure 102) along a topographically distinct corridor, centered over UTM coordinates 446500E 6389400N (NAD27 Z12).

Eymundson Creek Target

Sand/gravel was encountered in hole 12BK-01 which was cased to 6.0m. Massive till was encountered in the hole over 6.0-16.5m, with 10% pebbles (though 6.0-9.0m though it was mostly lost and what was recovered was mainly lithic pebbles and may have been a gravel seam). Interbedded gravel units (~1.5 to 4.0 m thick) were logged from 16.5m to 27.0m containing thin (<0.5 m) non-gravel units (silty sand and silty clay).

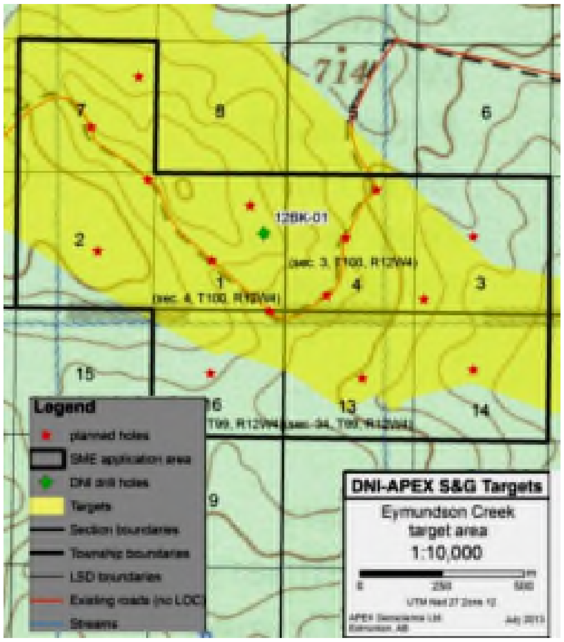

Figure 103: Location sketch, Eymundson sand/gravel Target.

Hole 12BK-01A was abandoned due to drilling problems and was re-drilled as 12BK-01 on the same drill pad and cased to 21.0m. Hole 12BK-01 encountered till from 21.0 to 21.2 m, a very small interval of shale (likely a clast) from 21.2-21.3 m, and lithic clasts (granite and quartzite) from 21.3m to 35.1m. It is noteworthy that overburden material also occurs within the Cretaceous Lacbiche section, as rounded pebbles from 47.0-48.5m and as till from 51.5-54.5m. It is considered likely that the entire interval (including the overburden and aggregate material) at this location is glaciotectonically deformed, though the possibility of a pre-glacial sand and gravel deposit cannot be discounted.

The gravel beds encountered contained clasts of varying size (pebbles to small boulders, up to 10 cm); most of the gravel encountered was sub-rounded to rounded (though some quartzite and limestone clasts were angular). The upper parts of hole 12BK-01 above casing had to be re-conditioned likely due to lost circulation related to gravel.

The Eymundson Creek Target is located generally over the Buckton South Zone (Figure 103) over the hummocky top of the Birch Mountains, centered over UTM coordinates 446400E 6389400N (NAD27 z12).

19.2 RUN-OF-RIVER SMALL HYDRO PRELIMINARY EVALUATION

The general region around Fort McMurray is characterized by variable physiography typically comprising low, often swampy, relief punctuated by a handful of features protruding above the otherwise flat terrain. The Birch Mountains over which DNI's SBH Property is located, are the most conspicuous topographic features in the region, and represent by far the greatest topographic relief in the with an elevation ranging 750m-820m asl which protrude conspicuously some 500m-600m above the surrounding areas 250m asl.

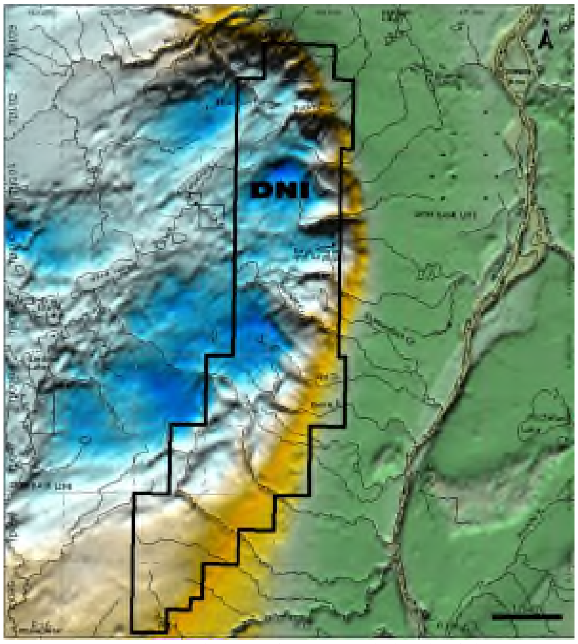

Figure 104: Topographic relief image and sketch of the Property and surrounding Birch Mountains. NAD27-Zone12.

The eastern parts of the Birch Mountains define a distinct sharp erosional edge rising above the flood plains of the Athabasca River, and offer some opportunities for run of river hydro power generation by utilizing the available topographic relief.

The Birch Mountains are characterized by many river and creek incisions in poorly consolidated stratigraphy, defining river valleys which are progressively deeper as they near the erosional edges of the Birch Mountains. Drainage in the area defines an approximate radial pattern outward from the Birch Mountains (Figure 104).

With the exception of the McIvor River located to the north of the Property, all other drainages are relatively narrow (1m-5m wide) seasonal rivers and creeks with depths ranging 0.5m-1m, which are charged during spring and summer and during rains. Although the flow in the foregoing rivers and creeks slows by late summer and autumn they continue to carry water nonetheless and a handful might be suited to support run-of-river hydro generation given the excellent topographic relief they drain through. Field observations from 2012 field visit noted that mid-summer or late-summer flow rates ranging 1m3 to 5m3 per second are realistic estimates although more details on-site measurements would be needed for expanded design.

DNI's conceptual industrial plan for potential mining operations at the Buckton Zone include an attempt to benefit from the 400m-500m of topographic relief between the top of the birch Mountains and the areas surrounding it. To this end, a preliminary evaluation was carried out by DNI during mid-2011 to early-2012 to explore the viability of generating seasonal run-of-river-hydro by harnessing a handful of small rivers and creeks on the Property. Asphalt Creek, GOS Creek, Pierre River and Big Creek offer four potential waterways which might suited for the foregoing purposes.

DNI's work entailed a broad literature review and a field visit to some potential rivers/creeks in 2012, which enabled formulation of a preliminary model to estimate the potential hydro power that might be produced under various scenarios relying on the calculations below.

- Flow (m^3/s) = Width (m) × Depth (m) × Speed (m/s)
- Power (w) = Acceleration Due To Gravity ($9.81 m/s^2$) × Density Of Water ($1000 kg/m^3$) × Flow (m^3/s) × Head (m) × Efficiency

Results from this work are summarized in Table 63 for hydro power that might be produced over a 400m head, from river widths of 1m, 3m and 5m, with river bed depths ranging 0.5m and 1m, and for flow rates ranging 0.5-25 m3/second.

Width (m)	Depth (m)	Speed (m/s)	Flow (m^3/s)	Head (m)	Efficiency	Power (kW)
1	0.5	1	0.5	400	60%	1,177
1	0.5	3	1.5	400	60%	3,532
1	0.5	5	2.5	400	60%	5,886
1	1	1	1.0	400	60%	2,354
1	1	3	3.0	400	60%	7,063
1	1	5	5.0	400	60%	11,772
3	0.5	1	1.5	400	60%	3,532
3	0.5	3	4.5	400	60%	10,595
3	0.5	5	7.5	400	60%	17,658
3	1	1	3.0	400	60%	7,063
3	1	3	9.0	400	60%	21,190
3	1	5	15.0	400	60%	35,316
5	0.5	1	2.5	400	60%	5,886
5	0.5	3	7.5	400	60%	17,658
5	0.5	5	12.5	400	60%	29,430
5	1	1	5.0	400	60%	11,772
5	1	3	15.0	400	60%	35,316
5	1	5	25.0	400	60%	58,860

Table 63: Summary of power (kw) which might be generated from various river flows and waterway dimensions.

The study concluded that, considering the excellent head provided by the topographic relief over the erosional edges of the Birch Mountains, generation of run-of-river hydro may be feasible and that turbines can be selected to suit the different heads that might be presented by the different rivers/creeks as follows:

Low head	<10m	Cross flow axial flow propeller turbine
Medium head	10-200m	Cross flow Francis Pelton Turgo turbine
High head	200-1000m	Francis Pelton Turgo impulse turbine [41]

The study also concluded that the expected development time to install run-of-river hydro could be as short as 2-5yrs, and that installation costs can be expected to be in the range of $1,500-$5,000 per kW of power production, and that annual maintenance costs would be an estimated minimum of $2,000.

Other than a preliminary inspection of a handful of rivers and creeks over the parts of the Birch Mountains, DNI has not yet collected the necessary dimensional and water flow information to prepare estimates of the power which can be harvested[42].

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[41] Williams, Ron. *Small Hydropower Handbook.* March 2008. http://www.smallhydropower.com/book/CHAPTER1-2-3.pdf.

[42] Information might be extracted for some drainages from the EIA submitted by Teck Cominco for its Fronteer oil sands mining project located adjacent to the northern half of the east Property boundary.

20. CONCLUDING SUMMARY, WORK IN PROGRESS AND RECOMMENDATIONS

20.1 OVERVIEW OF CONCLUSIONS 2012-2014 WORK PROGRAMS

DNI commenced its exploration work on the Property prior to commencing land assembly in September 2007, and has since actively continued its work on the Property to advance its development. A detailed report of its work for the period 2007-2012 was previously filed in Alberta Mineral Assessment Reports MIN20100017 and MIN20120007 (Sabag 2010 and Sabag 2012).

The exploration work completed by DNI in 2012-2014 follows recommendations of its NI-43-101 Technical Report for the Property (Sabag 2008), and concludes work programs which were prescribed by the foregoing report relating to polymetallic shale hosted mineralization on the Property to advance at least one of the mineralized Zones on the Property through resource delineation to a Preliminary Economic Assessment.

The 2012-2014 programs, collectively achieved significant milestones in advancing exploration of polymetallic shale hosted mineralization on the Property by expanding previously delineated resources at Buckton, upgrading a portion thereof, and advancing them through a positive Preliminary Economic Assessment. The programs also successfully delineated a second mineral resource at the Property, the Buckton South Zone maiden resource.

Nine HQ diameter vertical holes cored during the summer 2012 to test portions of the Buckton and Buckton South polymetallic Mineralized Zones confirmed polymetallic mineralization at the Buckton South Zone, and served to expand Inferred mineral resources previously delineated at the Buckton Zone in addition to upgrading of a portion thereof to the Indicated resource class.

Holes drilled over the Buckton South Zones were the first drilled over the Zone and reported grades and downhole geology similar to that reported from the Buckton Zone located 7km to the north. The holes supported delineation of an initial Inferred maiden resource over a portion of the Buckton South Zone.

A most significant development during the period was the recognition that cover rocks, consisting of Labiche Formation shales previously regarded as waste, overlying the Second White Speckled Formation shale also represent recoverable value which meets resource classification base cutoff thresholds. Whereas prior work had envisaged polymetallic shale hosted mineralization on the Property to be confined to the Second White Speckled shale, supported by drilling and leaching testwork the iterative resource studies completed during 2012-2013 demonstrated that the recoverable metallic mineralization is hosted in a continuous shale package consisting of the combined Labiche and Second White Speckled Formation shales. Preliminary leaching tests also demonstrated that metals contained in the Belle Fourche Formation shales beneath the Second White Speckled are also recoverable suggesting that the polymetallic shale package may well be ultimately shown to be considerably thicker.

Together with drilling completed during the summer 2012, incorporation of Labiche shales into resources served to expand Inferred resources previously identified at the Buckton Zone several times to delineated the Updated and Expanded Buckton resource consisting of 4.4 billion tonnes of Inferred and 272 million tonnes of Indicated mineral resources containing recoverable Mo-Ni-U-V-Zn-Cu-Co-Li-REE-Y-Sc-Th as the basis for the Buckton Preliminary Economic Assessment. A 497 million tonne initial maiden Inferred resource was also delineated over a portion of the Buckton South Zone which is located 7km to the south of the Buckton Zone.

Leaching testwork programs completed during the 2012-2014 in most part reiterated prior leaching testwork, with the exception of: (a) work completed at AITF reporting extraction of metals from the Belle Fourche Formation shales by the same methods as those used for the Second White Speckled and Labiche shales, and (b) work completed at Canmet which advanced the testwork to the initial column leaching stages and reported metals extractions similar to those previously documented only from the stirred tank experiments. The Canmet work furthermore, served to identify a number of leaching parameters which can enhance recoveries or reduce reagent consumption, and provided the basis for design of the metals leaching and processing flowsheets incorporated int the Buckton PEA.

The PEA achieved its principal objective of evaluating viability of producing metals from the Buckton Deposit, and formulated a conceptual plan for high throughput open pit mining and metals recovery flowsheets for the production of Ni-U-Zn-Cu-Co-REE-Y. It was particularly successful in identifying the critical mining and processing parameters which can have a significant impact on economics at Buckton. Whereas mineral resource studies for the Buckton Deposit estimated recoverable Ni-Mo-U-V-Zn-Cu-Co-Li-REE-Y, certain metals were provisionally omitted from the PEA based on economic considerations (Mo-Li-V) or due to uncertainties in their markets (Sc-Th). As such, the PEA contemplates production of saleable final products of Ni-Co and Zn-Cu as sulfides, U as oxide “yellowcake”, and REE-Y as separated oxides.

The Buckton PEA demonstrated that the Buckton Deposit has the potential to be a significant supplier of Uranium and REE. The mining design is a low strip ratio, high tonnage co-production of Ni-U-Zn-Cu-Co-REE-Y from the Labiche and Second White Speckled formations. The metals extraction design basis is bio-heap leaching, followed by metals extraction from leach solution, and a process plant for separating purified individual REE oxides. The projected average annual production capacity is approximately 1 million pounds of uranium yellowcake and 5,500 tonnes of rare earth oxides, of which over 40% are made up of heavy rare earth elements.

The PEA also identified a number of key opportunities which can significantly enhance economics through strategic cost reductions and/or revenue enhancements, some of which can be achieved with minimal additional testwork. DNI’s subsequent evaluation of some of the foregoing identified modifications which might increase revenues and/or reduce costs toward enhancing NPV/IRR by multiples and shortening payback while also reducing capital costs. Some of the enhancements identified through capture of co-product Scandium hold potential for also reducing mining rate.

DNI’s recognition of the potential of the Pelican sandstone Formation as a source to natural sand proppant (fracsand) represent yet another milestone in DNI’s efforts and success to identify additional value to mineral resources which might exist on the Property.

In addition to achieving significant milestones in advancing the polymetallic zones at the property through a preliminary assessment of economic viability, DNI’s exploration work completed during the 2012-2014 period also serves to equivocate historic geological interpretations for the Property and the surrounding Birch Mountains and similarly equivocates prior interpretations by DNI showing them to have been too narrow in scope.

While historic work and exploration by DNI concerned themselves entirely with the Second White Speckled Formation black shale and polymetallic zones therein, DNI broadened scope of its exploration to also focus on the overlying Labiche Formation black shale (previously regarded as cover waste material) as a host to valuable metallic mineralization, and more recently also merits of the Belle Fourche Formation shales (Shaftesbury Formation) beneath the Second White Speckled Formation as yet an additional host to recoverable metallic mineralization, although. In the foregoing regard, the collective historic and prior work by DNI are equivocated by DNI’s 2012-2014 programs and provide only a partial discussion of the polymetallic mineralization which exists on the Property and its ultimate potential.

20.2 WORK IN PROGRESS

The only work that is currently in progress is ongoing review of sand samples collected during the July fracsand sampling program, with the intention to select a suite of samples and concentrates to be submitted for rigorous fracsand testing to Proptester or Stimlabs. DNI is also formulating a follow-up sampling program to collect larger and more systematic samples from prospective parts of the Asphalt Creek and Tar River exposures sampled in July, and to inspect other parts of the Property further south which were acquired in April in search of exposures of the Pelican Formation for future sampling.

There is no work in progress relating to the polymetallic shale projects on the Property other than wrap-up reporting of miscellaneous activities.

20.3 RECOMMENDATIONS

20.3.1 Polymetallic Shale Projects

DNI's leaching testwork programs completed during the past several years have successfully demonstrated that metals can be collectively extracted from DNI's polymetallic black shales, that the metals can be recovered from the leaching solutions by processing flowsheets as formulated by the Buckton PEA, and that mining operations at Buckton would have positive economics which can be further enhanced by operational optimizations. Although additional leaching testwork would expand the existing database, it will do little to advance development of the polymetallic black shales, notably the Buckton Deposit, toward production if the testwork carried out in isolation from a broader scope of work to advance toward a pilot demonstration bulk test to demonstrate recovery of metal final products from the shales. As such, it is recommended that no further leaching tests be carried out in isolation from broader work intended to advance toward pilot demonstration. It is recommended in this regard that DNI commence preliminary planning to advance toward the foregoing pilot demonstration to comprise its next stage of work on the Buckton Deposit and the polymetallic black shales elsewhere on the Property. This work would require two-three years for completion and would likely cost approximately $10 million. Given depressed current metal markets, however, DNI may well defer such work until markets have improved.

Additional recommendations are made below relating to possible future leaching testwork.

Drilling

The only drilling that would be warranted at this time is the drilling of holes over the 7km distance separating the Buckton Deposit and the Buckton South resource to confirm that the two mineral resources are indeed connected as suggested by countless surface anomalies and subsurface information extrapolated from oil/gas well downhole records in the area. Such drilling would, however, only serve to further expand the Buckton Deposit (likely double the size) which is already of immense size and its economics would not incrementally benefit from additional tonnage. As such, no further drilling is recommended.

Leaching Testwork

Considerable bench scale leaching/bioleaching testwork has been carried out to date which collectively achieved their objective of demonstrating that metals can indeed be collectively extracted from the Second White Speckled Formation, the Labiche Formation, and the Bell Fourche Formation shales. The tests investigated various leaching conditions which have a direct affect on metals extraction or on reagent consumption, and also identified a number of parameters which can enhance metals recoveries. Nearly three quarters of this work consists of stirred tank leaching tests (AITF and Canmet), whereas a quarter of them represent initial column leaching tests carried out at Canmet. None of the tests has advanced to establishing optimum leaching parameters to enable design of a definitive optimum metals processing flowsheet.

All leaching testwork completed to date has been carried out on surface samples or a handful of drill core composites, focusing mainly on the Second White Speckled Formation shale. Some tests were also carried out at the AITF on individual samples from the Labiche Formation shale and, more recently, on a sample from the Belle Fourche Formation shale.

It is recommended that no further leaching tests be carried out on individual samples of the shales, and that the next stage of leaching testwork focus on testing weighted composite samples from the Buckton Deposit, to be constructed from drill core archives on hand. It is recommended in this regard that once DNI has decided to proceed with additional leaching tests, it conduct the test on a weighted composite sample which best represents each of the three shales at the Deposit, that each be separately tested, and that a blended weighted composite be also prepared that is representative of a mixed Second White Speckled and Labiche Formation shales. Preparation of weighted composites would require 2-3 months to complete and would likely cost approximately $60,000 including related analytical work.

To the extent that column tests, requiring several months to complete, conducted at Canmet reported extractions similar to those from stirred tank leaching completed over a much shorter few week period, it is recommended that, once DNI has decided to proceed with additional leaching tests, the leaching of the above composite samples initially rely mostly on stirred tank tests, before expanding the tests to the column leaching tests. In the latter regard, it is also recommended that larger columns be tested to expand on Canmet's testwork which relied on 1m long columns and was intended as a preliminary foray into column testing. This work would likely require one year and likely cost approximately $200,000-$400,000.

Although further leaching testwork will serve to collect additional information that would be beneficial to better design of metals leaching and processing flowsheets, it is recommended that no additional leaching tests be carried out in isolation from more strategic planning relating to design of a broader scope of work intended to advance the Buckton Deposit toward an ultimate pilot demonstration.

Buckton PEA

The Buckton PEA successfully demonstrated that the Buckton Deposit represents a formidable long term future source of Ni-U-Zn-Cu-Co-REE-Y and that it can be mined with positive economics. Subsequent work carried out by DNI identified many operational and processing modifications which can significantly enhance economics of the Deposit by reducing reagent consumption or by enhancing metals processing parameters. DNI's work also identified significant additional economic enhancements which might be achieved through the recovery of co-product Scandium from the leaching solution. The financial latitude afforded by capture of foregoing value from Scandium might enable scaling down of the mining operations contemplated by the PEA, and help also to simplify processing circuits by excluding some lower value metals toward significant reductions in capital costs necessary to place the Deposit into production.

It is recommended that DNI internally examine iterations of the cash flow model from the Buckton PEA to identify, prioritize and optimize various enhancements identified to date in preparation for ultimately revising and updating the PEA with the help of independent consultants. This work would likely require two months to complete at an estimated cost of approximately $50,000. Revision of the PEA would likely require six months to complete at an estimated cost of approximately $200,000.

General Geology

While historic work, and DNI's initial exploration focus, concerned itself entirely with the Second White Speckled Formation black shale and polymetallic zones therein, DNI broadened scope of its exploration in 2011-2012 to also focus on the overlying Labiche Formation black shale as a host to valuable metallic mineralization. The Labiche shales were previously regarded as cover waste material overlying the Speckled shale. DNI has since also recognized merits of the Belle Fourche Formation shales (Shaftesbury Formation) beneath the Second White Speckled Formation as yet an additional host to recoverable metallic mineralization, although DNI's exploration efforts have not yet commenced to evaluate this Formation other than via initial metals leaching tests.

In the above regard, the historic work, and DNI's early exploration work summarized in prior reports are narrow in their scope and, by being pre-occupied with the Second White Speckled Formation, provide only a partial discussion of the polymetallic mineralization which exists on the Property and its ultimate potential. The databases underlying the foregoing, nonetheless, contain considerable information from the Labiche and Belle Fourche Formations and a review of this data may well serve to broaden interpretations to evaluate the two foregoing additional potential hosts of polymetallic mineralization which exists on the Property.

It is recommended that DNI give consideration to re-visiting the historic databases and data from its work programs to update its interpretations of polymetallic mineralization that exist on the Property, with an eye to making a determination whether enrichment vectors might be identified for groupings of metals of economic potential with the benefit of information and guidelines from the Buckton PEA. This work would likely require four months to complete at an estimated cost of approximately $80,000.

20.3.2 Fracsand Projects

Although DNI's review of samples from its fracsand sampling program is in progress, the information gathered so far serves to identify locations with the coarser cleaner sands and others which report the higher yields. It is recommended that a selection be made once the review is completed, to consist of three samples and that they be submitted to Proptester or Stimlabs for rigorous fracsand testwork, to characterize the samples and fully test the 1620, 2040, 4060, and 6070, 70100 mesh size fractions, to include conductivity tests for each. Estimated cost $60,000.

It is also recommended that the Asphalt and Tar exposures be re-sampled in detail before the onset of winter to collect larger and more continuous channel samples which better represent the exposures than the reconnaissance grab/channel samples collected in July. The foregoing sampling should focus on the lower parts of the exposures, away from its upper contacts with shales and on parts away from intercalated shale material. This work would likely require 3 months to complete, including sample beneficiation, at an estimated cost of approximately $100,000. Laboratory testing of select samples from the foregoing would likely require 3 months for completion (mostly lab turnaround time) and would cost an estimated $100,000 (apprx $10,000-$12,000 per sample depending on the number of grain size fractions tested from each).

It is also recommended that any available Pelican exposures located further to the south of the Tar River be inspected in the field and also sampled, since those areas were recently acquired by DNI and have not yet been inspected. This work would likely require 2 months to complete, including sample beneficiation, at an estimated cost of approximately $50,000.

Subject to favourable results from the above tests, DNI may also elect to review and re-interpret downhole wireline geophysical logs from its 2009 subsurface stratigraphic database of oil/gas wells, in addition to those to be acquired for all additional drilling from the area. While the primary objective of the foregoing would be to identify sections of potential coarse sands in the Pelican sections, the secondary, but equally as important objective, would be to make a determination of whether the available information might be sufficient for the estimation of volumetric resources over certain areas. This work would likely require 2 months to complete at an estimated cost of approximately $75,000.

20.3.3 Land Tenure Management

The permits comprising the Property are being renewed by filing of this report and related expenditures to 2020-2022 dates, such that most of the permits over the eastern two-thirds of the Property over polymetallic shale and fracsand targets will bear a 2022 renewal anniversary. It is recommended that DNI file the necessary applications 2018-2019 to convert some of the permits, or portions thereof, over the Buckton and Buckton South polymetallic resources to mineral leases.

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276 Pages (including Cover & TOC)
22 Sections
7 Appendices
104 Figures
63 Tables
14 Plates

22. CERTIFICATION

CERTIFICATE OF THE AUTHOR

I, Shahé F.Sabag, of 591 Hillsdale Avenue East, Toronto, Ontario, Canada, M4S 1V1, hereby certify that I am responsible for the overall preparation of this Report entitled "*Assessment Report On Exploration Programs 2012-2014, Buckton and Buckton South Zones and Vicinity, SBH Property, Birch Mountains, Athabasca Region, Alberta, Canada; prepared for DNI Metals Inc.",* dated September 30, 2014, with an effective date September 30, 2014 (the "Report"), and that:

- I am a graduate of the University of Toronto with Honours Geology B.Sc degree (1974) and Specialist Geology M.Sc. degree (1979);
- I have actively practiced my profession since 1974 and have been involved in mineral exploration for base and precious metals, industrial minerals and uranium throughout North America (notably Ontario, Quebec, Alberta, Saskatchewan, NWT, Utah, Nevada and Arizona) during which time I have implemented, directed, managed and evaluated regional and local exploration programs, including underground and open-pit exploratory and pre-development work;
- I am a member of the Association of Professional Geoscientists of Ontario (APGO Member #250), the Canadian Institute of Mining and Metallurgy, the Prospectors and Developers Association, the Utah Mining Association and the Alberta Chamber of Resources;
- I have visited, actively mapped and sampled over, the Property, and surrounding areas, on countless occasions during the period 1993-1999 and 2009-2014;
- DNI's 2012-2014 work programs reported upon herein were carried out under my direction or supervision, or by me, as DNI's QP for the project;
- I expect to receive no remuneration from DNI Metals Inc. other than payment of fees and disbursements for services rendered in connection with preparation of this Report;
- I am President and CEO, and a director, of DNI Metals Inc. ("DNI"), and that I am, accordingly, not independent of DNI; and that I hold securities of DNI including stock options granted to me under DNI's Stock Option Plan;
- I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI-43-101") and certify that by reason of my education, my licensure from a professional association as defined in NI-43-101, and my past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI-43-101. That I, furthermore, certify that I am the designated Qualified Person for DNI Metals Inc. in connection with the Property;
- I acknowledge that as of the date of the certificate, and to the best of my knowledge, information and belief, this Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. This Report is, however, not intended as a NI-43-101 technical report;
- I consent to the filing of the Report with the Alberta Department of Energy, and any publication and reproduction by them of the Report, in whole or in part, including its electronic publication in the public company files or on their websites accessible by the public.

Executed this 30th day of September, 2014, in the City of Toronto, Ontario, Canada.

[Seal]
APGO#250

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Shahé F.Sabag MSc PGeo