Critical Minerals Americas Inc.

Alberta Critical Metals Projects – SBH Property – Athabasca Region

Overview

Constrained supplies of critical metals compel the discovery of metal deposits hosting long term domestic supplies which can advance into production quickly. Bulk mineable deposits which are at surface offer the best such opportunities, especially if advantaged with infrastructure and supplies of reagents nearby.

Mineralized Zones have been discovered in black shales at the 850km² SBH Property held by Critical Minerals Americas Inc., adjacent to the Alberta oil sands. The Zones are mineralized with recoverable Rare Earth Elements, Lithium and Scandium, and offer opportunities capable of supporting mining operations over many decades which will also consume much of the waste Sulphur from oil sands operations in addition to consuming CO_2.

The above Mineralized Zones hold potential to advance quickly toward mining production as bulk mineable metallic aggregations extractable by open pit rip-mining methods, whose contained metals are recovered by bioheapleaching processes using naturally occurring bio-organisms.

The Company is advancing development of two of the known Mineralized Zones to complete Preliminary Economic Assessments within the next two years.

Critical Minerals Americas Inc.

Alberta Critical Metals Projects – SBH Property – Athabasca Region

Safe Harbour Statement

This presentation and all content relating to historic information from the Property includes forward looking statements. While these statements represent our best current judgment, they are subject to risks and uncertainties that could cause actual results to vary. See NI-43-101 Technical Reports from historic work available from SEDAR or contact the Company.

--

A "**Mineralized Zone**" (otherwise an "Exploration Target" under NI-43-101) is an aggregation of mineralization of encouraging or enticing grade discovered through extensive surface and drill samplings, within a realistic volume of rock, whose ultimate size and economic merits have not been fully confirmed by systematic drilling and, as such, it is conceptual in nature and is intended solely to demonstrate the potential of identifying mineralized material subject to future systematic in-fill grid drilling.

"Mineral Resources" are NOT Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of any mineral resources reported will be converted into a Mineral Reserve.

One of the historic Mineral Resources at the Property, is a portion of a larger historic Mineral Deposit evaluated in 2014 beyond a resource study through the rigors of a "**Preliminary Economic Assessment Study" (PEA)** which established metrics for mining excavations and metals recovery processing. Mineable tonnages outlined by the **Preliminary Economic Assessment** represent mineralized material within an optimized pit shell which met economic threshold criteria in 2014, and represent tonnages then deemed economically extractable by open pit method.

Exploration history of the property spans two decades, 1990's-2010's, hence **some of the terminology then in effect my well not be compliant today**. Historic terminology is sometimes used herein for clearer continuity in referencing.

Critical Minerals Americas Inc.

Alberta Critical Metals Projects – SBH Property – Athabasca Region

Alberta Holds One of the Largest Accumulations of Recoverable Critical Minerals in the World

The *Right* Type of Deposit
at the *Right* Location
at the *Right* Time

SBH Property – 3 Large Mineralized Zones – 3BB-7BB tonne ea
In Flat Black Shales Exposed at/near Surface
Extending over Many 10's km^2
Quick Production Ramp-Up Potential

Recoverable & Mineable
Base Metals - REEs - Lithium - Scandium

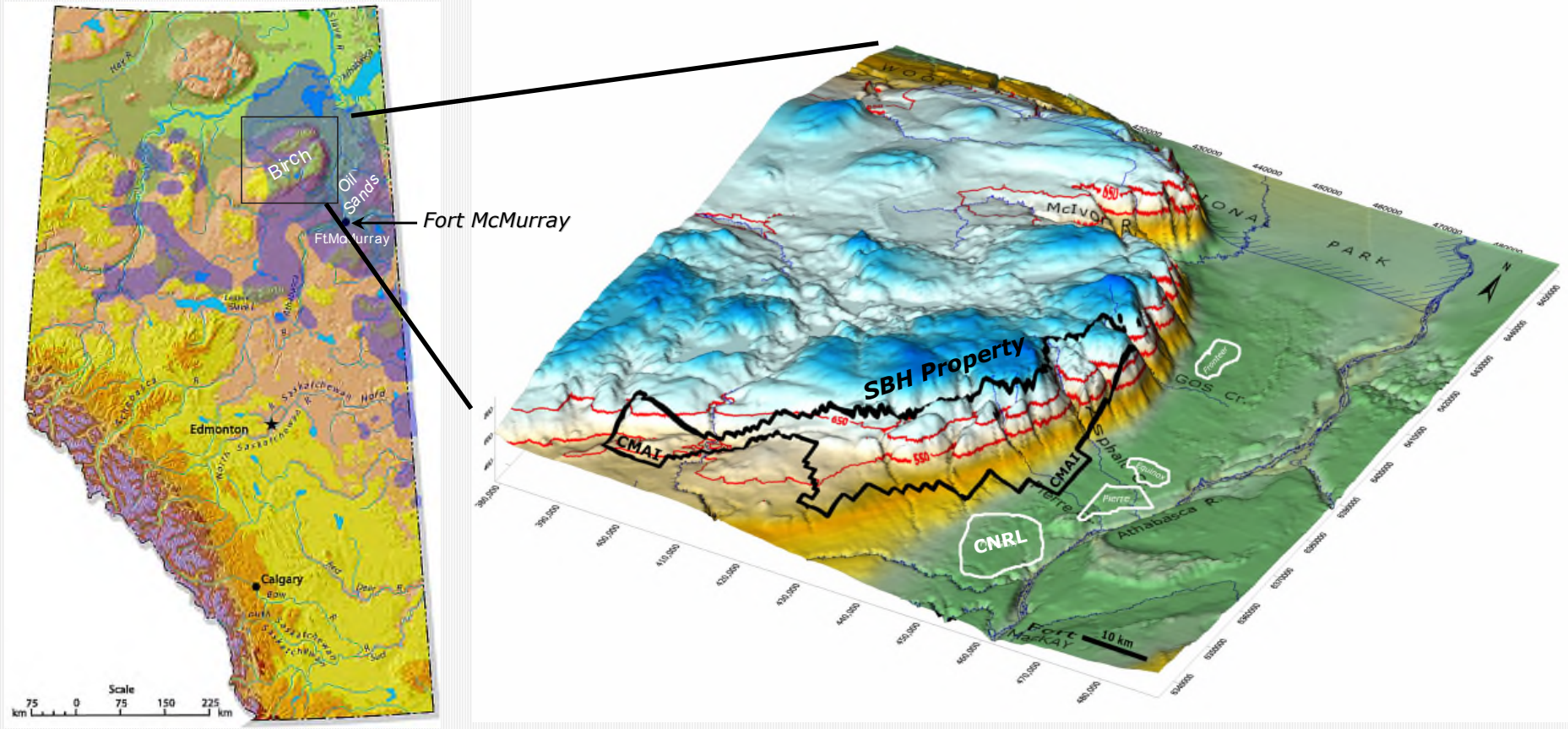
A Distinctly Albertan Story
Showcasing Innovative "Green" Mining at Its Best
For Decades to Come

Critical Minerals Americas Inc.

Alberta Critical Metals Projects

Mo – Ni – U – V - Zn – Cu – Co –REE – Li – Sc – Th

Athabasca Region, Alberta, Canada – 850 sq km Property – 100% CMAI



3 Mineralized Zones – incl 2 Resources – Free-Dig Bulk Mining Targets

Largest Known North American Concentration Of Critical Minerals + REE + Li-Sc

Metals Recoverable by Bio-Heapleaching – ~12BB-16BB Tonnes – 60++ yr Supply

850 km² Property – Prospective Shales Confirmed Over 265km² - Partly Exposed

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Six Mineralized Areas & Zones Discovered 1990's

Six Mineralized Areas

incl

Mineralized Zones

20km² -30 km² ea

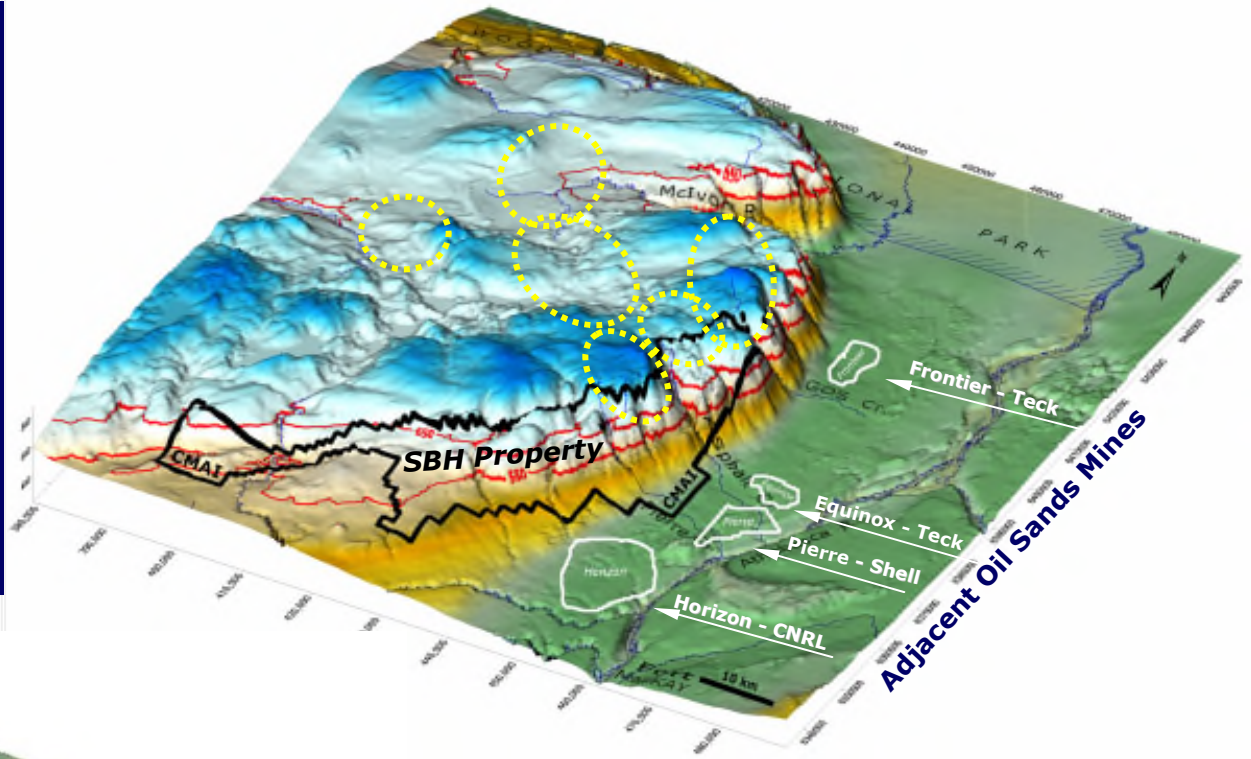
3BB-7BB tonnes ea

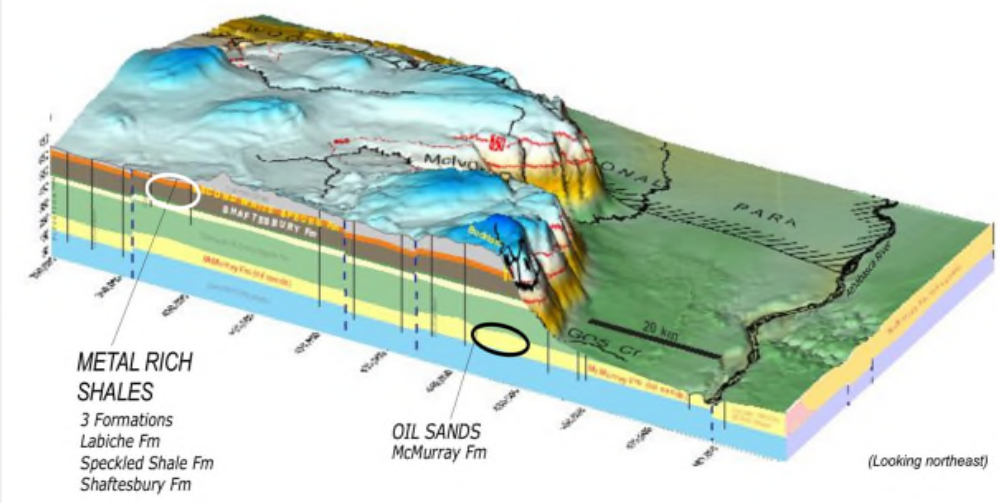
Partly Drill Confirmed

Incl Inferred Resources

Mineable & Recoverable

Mo-Ni-U-V-Zn-Cu-Co-REE-Li-Sc-Th





Metalliferous Black Shales

Geo Confirmed by 600+ OilGas Wells

Higher Grades at Pty than NE-Alta

Discovered 1993 – Expl 1993-2014

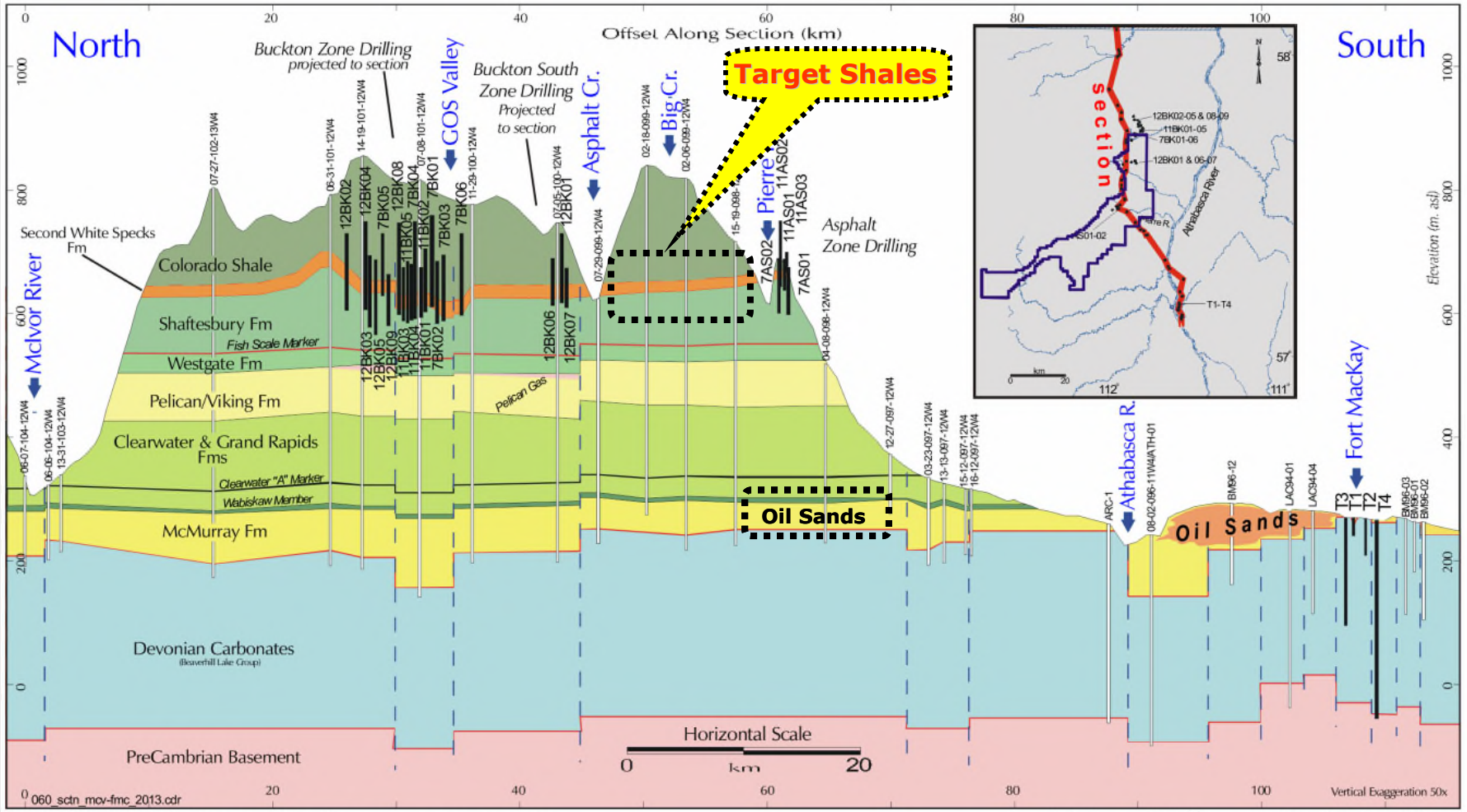
$12MM Spent to Date

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Excellent Stratigraphic Continuity 100+ Km

Stratigraphy, Mineralized Zones Discovered, Drilling, Oil/Gas Wells
Multi-Metal Black Shale Formations – 3Shale-Package – Continuous 50+ Kms



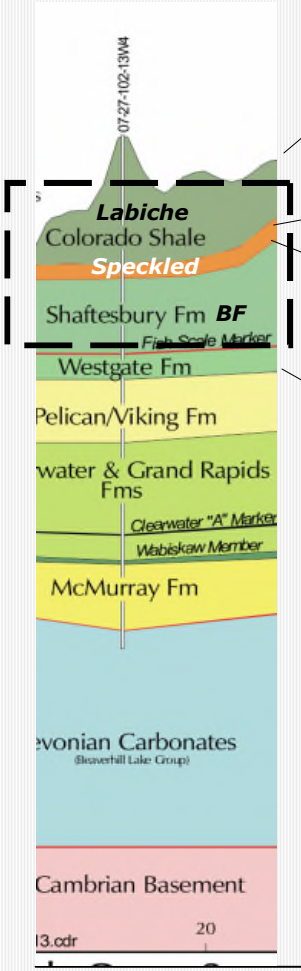
North-South Cross Section (Looking Easterly) McIvor Valley to Fort MacKay

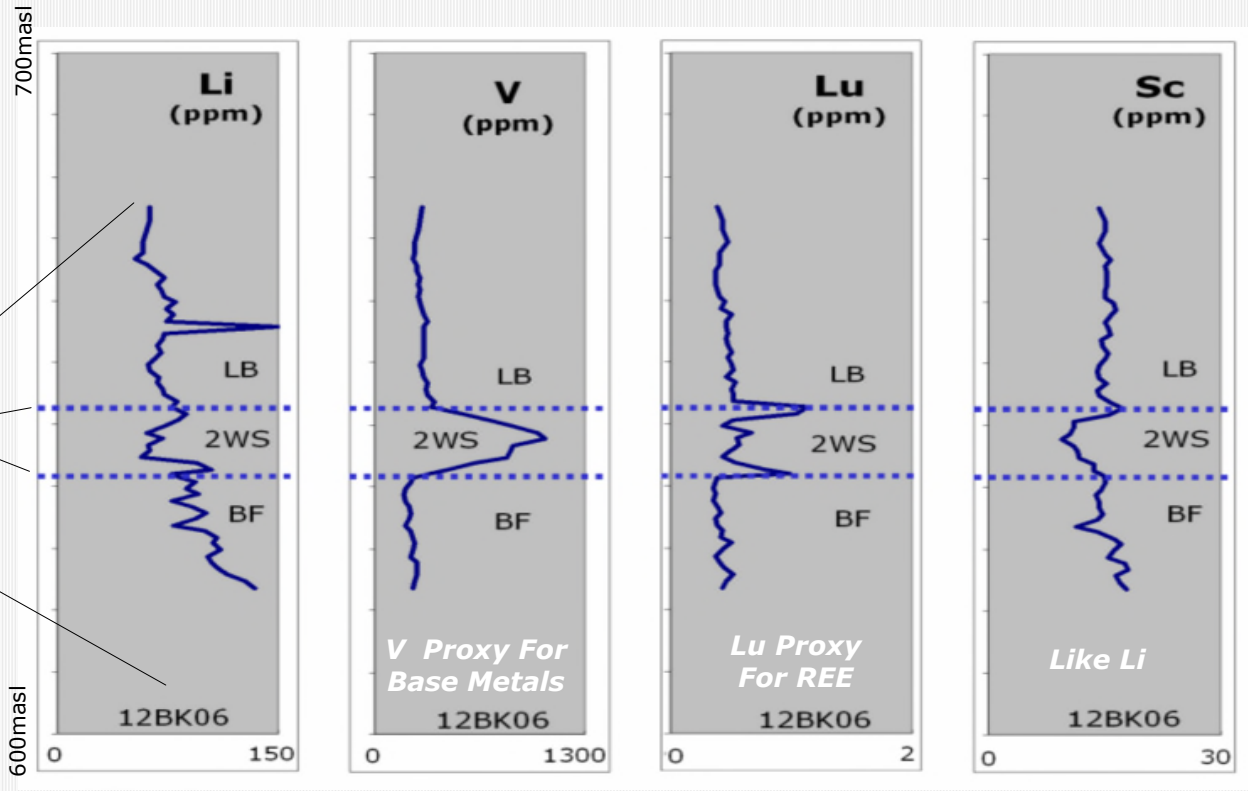
** See Safe Harbour Statement at beginning of slides*

Critical Minerals Americas Inc.

Alberta Critical Metals Projects

Evolving 30yr Focus – 1 Shale then 2 then 3 Shales





Timeline Evolving Focus

1994-2012

2012-2014

NEXT STAGE

Earliest Historic Resources Focus on Base Metals Only
In Second White Speckled Shale Formation

Later Historic Work Also Captured Labiche Shale - Base Metals + REEs

Shaftesbury Mineralized Volumes Drilled but Omitted
Leaching Results Arrived Too Late to Capture Into Resources

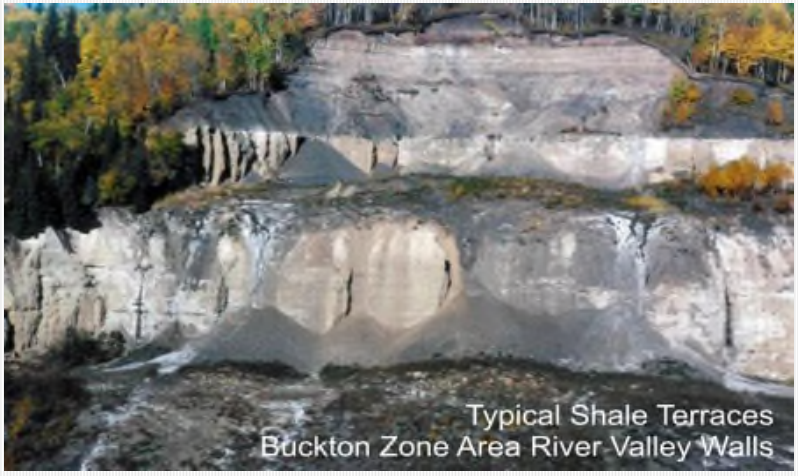
Shaftesbury With Similar/Better Recoverable Grades REE+Li+Sc
Shaftesbury Tonnages To Be Incorporated Into Resource Updates – Especially South Part Property

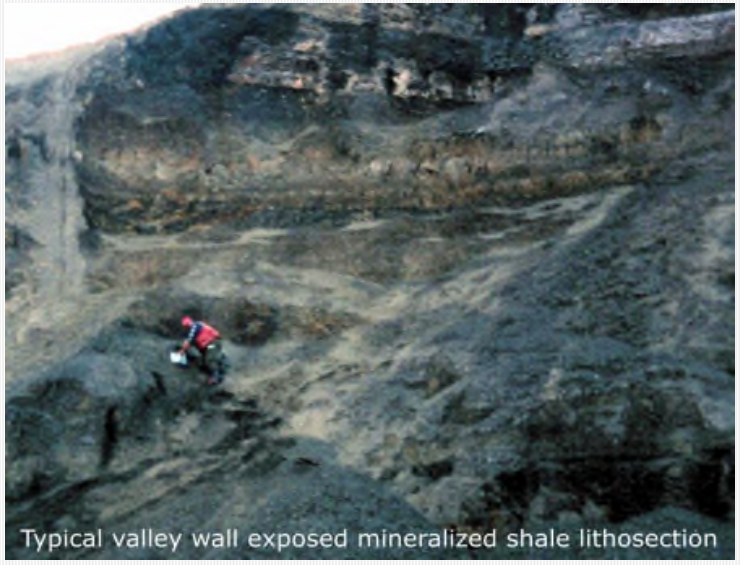
** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Target Shales Exposed In Valley Walls - Sampled

Target Shales Exposed in Valley Walls → Consistent Metals Anomalies

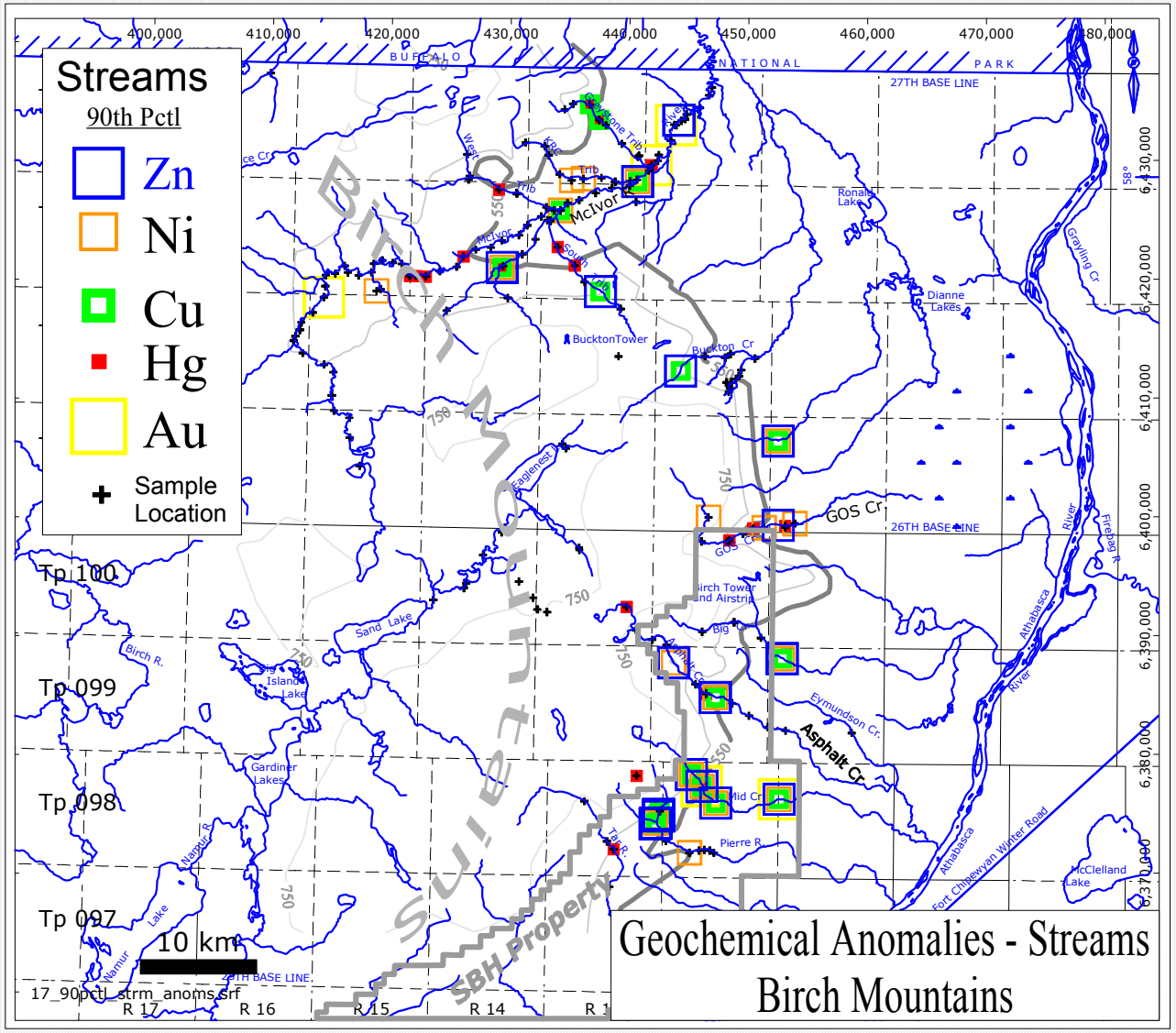




** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Birch Mountains Drains Metals From Shales



Birch Mountains Drainages Geochemically Anomalous All Metals

Birch Mountains Drainages Mineralogy Is Anomalous Sulfides+Gold

Birch Mountains Lakes Geochemically Anomalous

Birch Mountains Soils Geochemically Anomalous Around Domes

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Prospective Black Shales Over 30% of Property

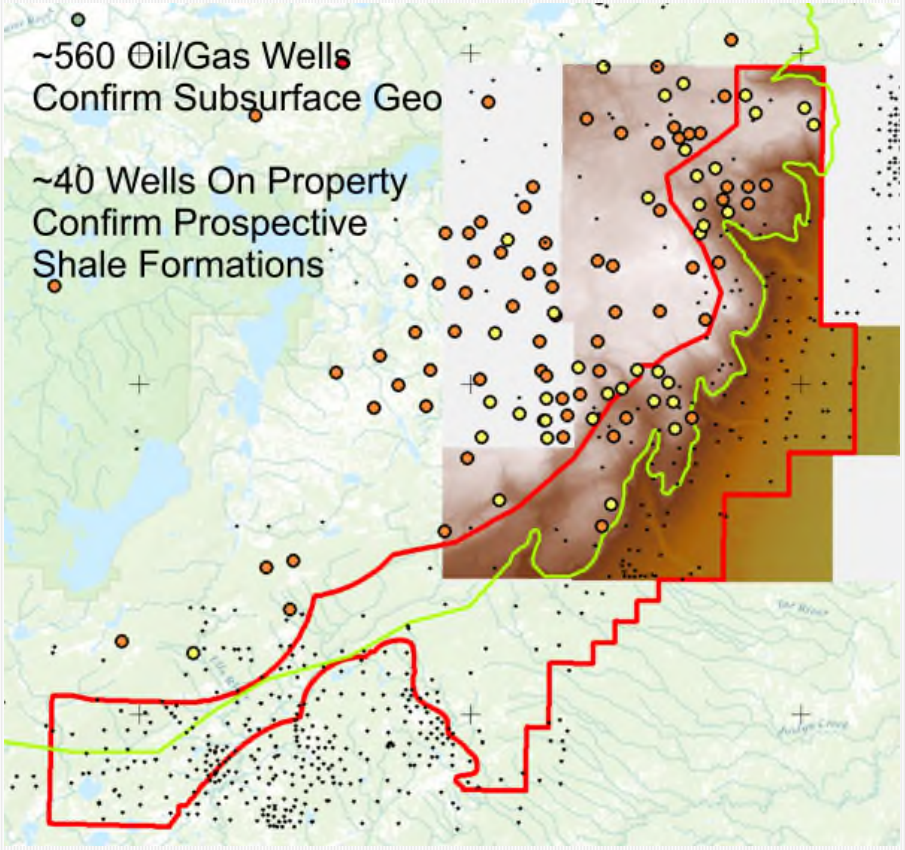
600+ Oil/Gas Wells Confirm Prospective Black Shales Under Birch Mountains

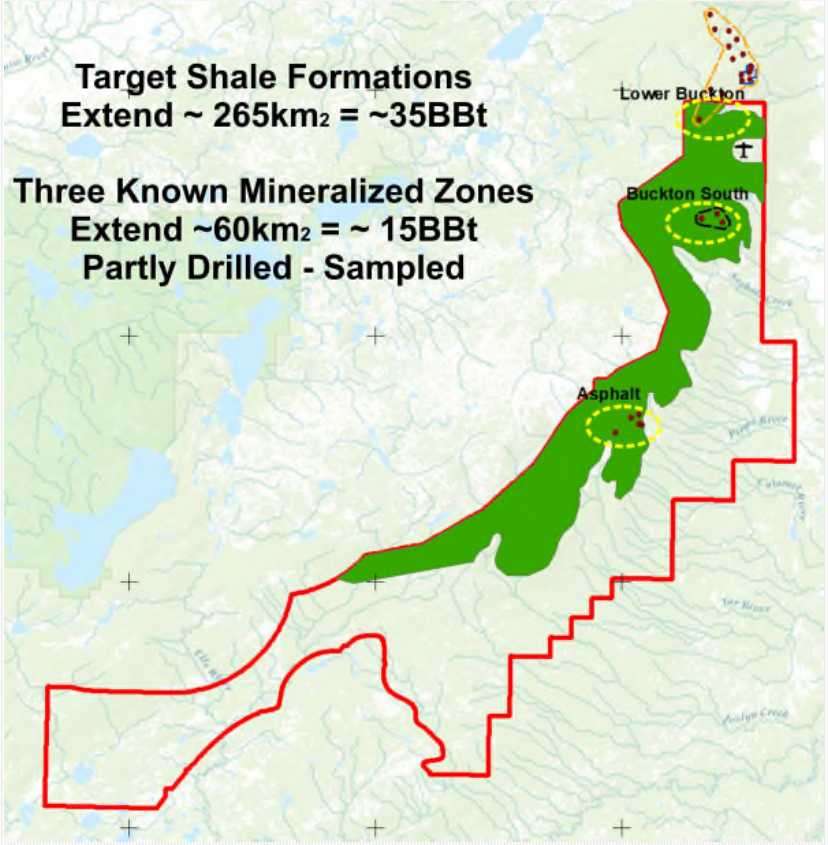
40+ Oil/Gas Wells Confirm Prospective Black Shales at the Property

25 Diamond Drill Cored Holes Confirm Mineralized Zones & Historic Resources on Property

265 km² Prospective Black Shales at The Property – Potential for ~35 Billion t

Three Mineralized Zones Together = ~ 60km² = ~ 15 Billion t – Partly Drill Confirmed

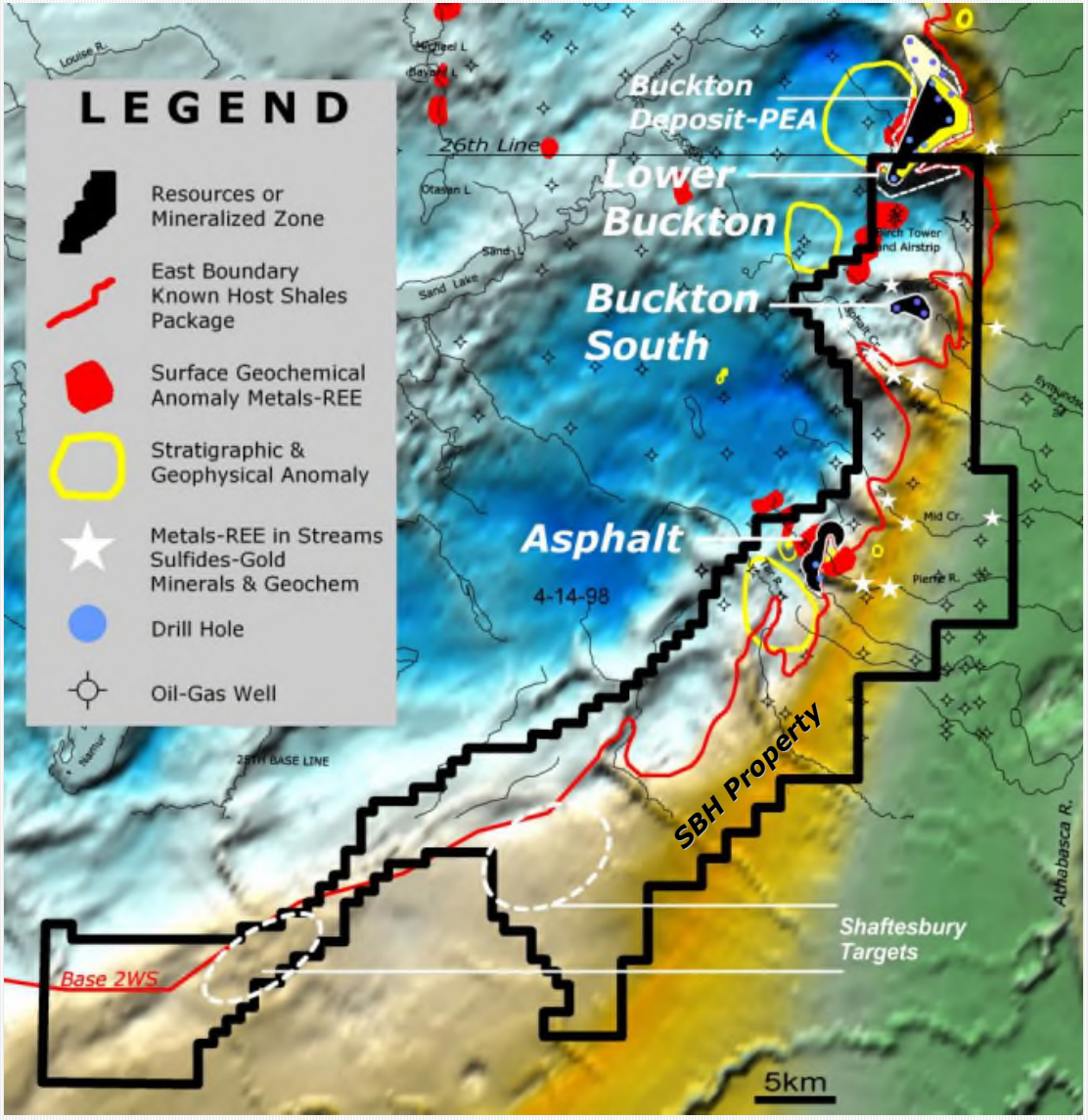




** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

3 Min Zones Tested For 30km - North Half Property



Metalliferous Black Shales

Higher Grades at Pty than NE-Alta
Geol Confirmed by 600+ OilGas Wells
Zones Exposed in Valleys
Zones Confirmed by historic Drilling
Collective Metals Recovery Confirmed
Bio-Heap-Leaching
Free-dig Bulk Mining Open Pit

Mature Projects

Discovered 1995
$12MM Spent to Date
Drilling 1997, 2011, 2012
Recovery R&D 2009-2013
Resource Studies 2011-2013
Historic PEA Study 2014 a Template

Classic Black Shales

Poorly Consolidated
Ideal Free-Dig Rip Mining Candidates
Metals Recovery by Bioleaching

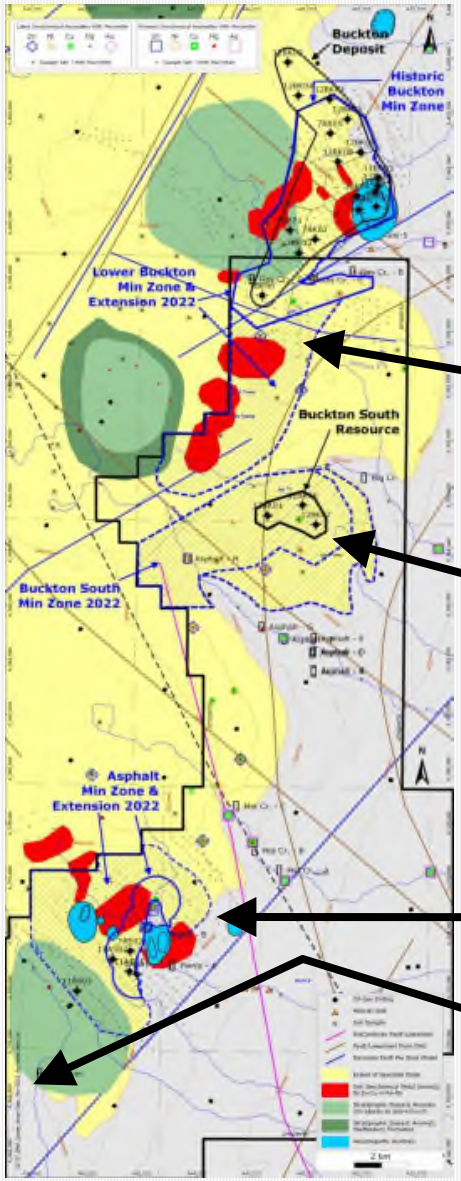
Prior Work Over North Half Only

South Half Targets For Field Follow-up

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

3 Mineralized Zones - OPEN - Partly Drilled



North Half Property

Extensive Historic Exploration

3 Mineralized Zones – 20km²-30km² ea – 12BB-18BB t

Includes 1BB t historic Mineral Resources

Flat – Stratabound – Uniform

Includes Extension of Historic Buckton Deposit

Partly Drill Tested – Exposed in Valleys – All Sampled

"Measured" - Nothing Left to Sample - $12MM Spent

Lower Buckton Resource & Min Zone

6.3BB-6.8BB t – 28km² - 208MMt-227MMt/km²

Incl ~500MMt South Tip historic Buckton Deposit

Speckled + Labiche Shale Fm

Buckton South Resource & Min Zone

3.3BB-6.4BB t – 22-33km² - 150MM-195MMt/km²

Incl ~500MMt Inferred Resource

Speckled + Labiche + Shaftesbury Shale Fm

Asphalt Mineralized Zone

2.8BB-4.2BB t - 24km² -> 119MM-179MMt/km²

Speckled + Shaftesbury Shale Fm

South Half Property - Untested

Speckled + Shaftesbury Shale Formations

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

3 Mineralized Zones - Mineable & Recoverable

Excellent Geological Continuity – Flat - Open Pit Mineable

Exceptional Stratigraphic Continuity over 10's Kms
Confirmed 100's Oi/Gas Wells + Verified by Core Drilling
Confirmed by Valley Lithosections Exposed
Prior Work → Very Confident Estimation of Geometry & Shape

Excellent Grade Continuity – Uniform Grade Over >35km

Uniform Grade over 10's Kms – Surface Sampling & Drilling
Uniform Resource Studies Whittle Shell Grade Continuity - 0.5km-2.5km – avg 1km
Considerable Prior Work → Very Confident Estimation of Average Grade

Metals Recoverability – Collectively Leachable

All Bio-Leaching R&D Testwork Confirm Metals Recoverability
Bio-Organisms Adapt well and Quickly to the Alberta Shales
No Toxicity Challenges – No Competition Challenges – Rapid Matrix Adaptation
Metals Occur in Charged Ionic Form – Easy to Liberate

New Insights

Hydromet R&D Discoveries – For Future Expansion

Benchtest Bio-Leaching R&D Testwork → Can Use CO_2 Pre-Treatment
Scaled up Column Leaching → Can Use CO_2 Pre-Treatment
Scaled up Column Leaching → Can Use Abiotic Processing but Lower Recovery
Scaled up Column Abiotic Leaching → Tenfold Faster Leaching Time but Lower Recovery

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Summary - Updated Min Zones & Hist Resources

Historic Buckton Deposit

4.7*BBt* Resource (PEA 4.5*BBt*)

80m thick – 22km^2 – 214*MMt*/km^2

3 Mineralized Zones & Hist Resources

3*BBt*-7*BBt* Each - Min Zones & Resources

40-80m thick – 22-33km^2 – 120-227*MMt*/km^2

	Summary of All Porposed Mineralized Zones and Expansions					Comparative Resources	
	Lower Buckton	Buckton South		Asphalt		Buckton South	Buckton Dpst
	Updated & Expanded Proposed	New Proposed	New Proposed	New Proposed	Updated & Expanded Proposed	Inf Resource Resource Study	Inf Resource Resource Study
Host Shale	LB-2WS	LB-2WS	LB-2WS-BF	LB-2WS	LB-2WS-BF	LB-2WS	LB-2WS
Mineralized Zone Tonnage (t)	6,319MM - 6,813MM	2,799MM - 4,455MM	3,296MM - 4,952MM	2,820MM - 3,418MM	3,497MM - 4,239MM	497MM	4,712MM
Area (sq km)	27.7	18.6-29.6	18.6-29.6	23.7	23.7	3.3	22
Tonnes per sq km (MMt/km2)	208MM - 227MM	150MM	195MM	119MM - 144MM	148MM - 179MM	150MM	214MM
Estimated Grades (ppm)							
Mo	15-17	17-17	9-14	14-23	12-20	17	15
Ni	67-71	71-69	57-64	56-72	54-68	71	68
U	9-10	10-10	8-9	8-13	8-12	10	9
V	340-404	404-404	328-368	329-392	310-385	404	341
Zn	170-185	185-185	163-173	151-179	146-170	185	170
Cu	40-47	47-48	41-45	39-56	38-53	47	40
Co	15-15	15-15	14-15	12-15	12-14	15	15
LREE	159-163	159-166	161-164	135-165	140-170	159	163
HREE	21-22	22-23	21-22	19-24	19-25	22	21
Y	31-32	31-33	30-32	27-34	27-35	31	32
Th	11-14	10-10	10-11	8-9	9-10	10	10
Sc	10-10	14-15	15-15	12-12	13-12	14	11
Li	70-71	70-72	76-76	58-65	65-72	70	71
Mineral Resources Included (t)	500MM	-	-	-	-		
Mineral Resources Excluded (t)	-	497MM	497MM	-	-		
TTL Restated - Resource as MinZone (t)	6,319MM - 6,813MM	3,296MM - 4,952MM	4,268MM - 6,412MM	2,820MM - 3,418MM	3,497MM - 4,239MM		
Restated Area (sq km)	27.7	21.9-32.9	21.9-32.9	23.7	23.7		
Tonnes per sq km (MMt/km2)	208MM - 227MM	150MM	195MM	119MM - 144MM	148MM - 179MM		

MM=million; (t)=Metric Tonne; Light and Heavy REEs shown are: LREE=Ce,Pr,Nd,Sm; HREE=Tb,Dy,Ho,Er,Tm,Yb,Lu; Proposed Mineralized Zone for Lower Buckton includes all tonnages of any Mineral Resources thereupon deeming them to be Mineralization only; Mineralized Zone Proposed for Buckton South excludes Buckton South Maiden Resource; Buckton South Restated Mineralized Zone includes Maiden Resource after deeming it to be Mineralization only. Host Rocks Codes: LB=Labiche Shale, 2WS=Second White Speckled Shale, BF=Shaftesbury Shale (Belle Fourche)

MM=million; (t)=Metric Tonne; Light and Heavy REEs shown are: LREE=Ce,Pr,Nd,Sm; HREE=Tb,Dy,Ho,Er,Tm,Yb,Lu; Buckton Indicated Resource restated as Inferred to enable addition into the total.

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Recoverable Metal "Budget" 3 Zones - World Class

Estimated Metals "Budgets" on Par or Better than Headlined Discoveries Elsewhere

Especially Li - Sc – HREEO

Li_2CO_3 ~770,000t - Sc_2O_3 ~ 28,000t - REEOs ~ 1,000,000t

Metal Budget Over Mine Life (t)							
Metal Budget Over Mine Life (t)	**Lower Buckton**	**Buckton South**		**Asphalt**		**Three Mineralized Zones Combined**	
Host Shale	LB-2WS	LB-2WS	LB-2WS-BF	LB-2WS	LB-2WS-BF	LB-2WS	LB-2WS-BF
Mineralized Zone Tonnage (MMt)	6,319-6,813	2,799-4,455	3,296-4,952	2,820-3,418	3,497-4,239	11,938 - 14,686	13,112 - 16,004
Area (sq km)	27.7	18.6-29.6	18.6-29.6	23.7	23.7	70 - 81	70 - 81
Tonnes per sq km (MMt/km2)	208MM	150MM	195MM	119MM	148MM		
Metals/Oxide Budget (t)							
Mo	1,931 - 2,366	933 - 1,547	595 - 1,376	783 - 1,567	826 - 1,649	3,647 - 5,480	3,352 - 5,391
Ni	217,216 - 247,918	98,665 - 161,989	96,408 - 161,353	81,036 - 126,229	96,022 - 147,129	396,917 - 536,136	409,646 - 556,400
U3O8	42,127 - 49,867	20,487 - 33,784	18,082 - 33,632	17,429 - 32,471	19,913 - 37,032	80,043 - 116,122	80,122 - 120,531
V2O5	230,819 - 294,568	121,018 - 19,2617	115,864 - 195,329	99,405 - 143,603	116,130 - 174,918	451,242 - 630,788	462,813 - 664,815
Zn	514,560 - 604,086	248,139 - 396,186	258,599 - 411,635	204,411 - 293,331	245,373 - 346,715	967,110 - 1,293,603	1,018,532 - 1,362,436
Cu	58,451 - 73,997	30,400 - 49,562	30,808 - 51,102	25,576 - 43,674	30,453 - 51,692	114,427 - 167,233	119,712 - 176,791
Co	54,677 - 59,614	24,219 - 38,610	26,048 - 40,992	19,897 - 28,863	24,479 - 34,736	98,793 - 127,087	105,204 - 135,342
LREEO	318,671 - 353,803	141,116 - 234,878	168,416 - 258,604	121,182 - 178,638	155,228 - 228,317	580,969 - 767,319	642,315 - 840,724
HREEO	71,089 - 78,728	32,383 - 55,131	37,355 - 58,736	28,474 - 42,772	35,116 - 56,285	131,946 - 176,631	143,560 - 193,749
Y_2O_3	124,098 - 137,869	55,008 - 93,679	62,670 - 99,384	48,332 - 73,582	59,400 - 93,081	227,438 - 305,130	246,168 - 330,334
ThO_2	14,657 - 21,007	6,298 - 13,736	7,462 - 11,280	5,170 - 6,551	6,751 - ,8949	26,125 - 41,294	28,870 - 41,236
Sc_2O_3	10,005 - 10,977	4,471 - 10,086	7,508 - 11,486	5,131 - 6,314	6,654 - 8,184	19,607 - 2,7377	24,167 - 30,647
Li2CO3	327,623 - 357,872	145,004 - 237,538	187,414 - 282,058	122,553 - 166,485	170,430 - 226,551	595,180 - 761,895	685,467 - 866,481
Mine Life Hypothetical 72MM tpa (yrs)	88 - 95	39 - 63	46 - 69	39 - 47	39 - 59		

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Guidelines From Mining & Processing Templates

Historic Buckton Deposit PEA 2014 & Talvivaara Mine
Excellent Templates for What Can be Achieved
For Mineralized Zones Discovered on the Property

Guidelines from Other Open Pit Deposits & Mining Operations

Many Free-Dig High Tonnage Open Pit Heap Leach Operations Worldwide

Oil Sands a Good Template for Mining Flat Uniform Grade Surface Deposits in the Region

Historic Buckton Deposit 2014 Positive PEA a Good Mining Template

10% of Buckton Deposit (4.5BB t) is On the Property - ~500MM t at Lower Buckton

96.4% of Resources Captured Into Mining Pit Shell – 0.5:1 Strip Ratio

PEA + Scoping Confirm Resources are Mineable

Post-PEA Scoping Identifies Many Easy Enhancements

Relies on Leaching R&D & CanMet Column Bioleaching of the Shales

Provides Template For 72MM tpa 64 year Operation

Regards Buckton Deposit an HREE Deposit Based on Economic Value

Estimates for Sulfur and H_2S Consumption & Excess Hydro → ESG Benefits

Buckton Deposit Economics Depend on Mining Rate Rather than Grade

Talvivaara Mine a Good Template as Bioheapleaching Processing Operation

Operations Consistent with Buckton Deposit PEA

Offers Heaping, Aeration and Irrigation Metrics and Separation Guidelines

68% Lower CO_2 Footprint than Comparable Metal Producers

Talvivaara Regarded as "Green" Mining at its Best

* See Safe Harbour Statement at beginning of slides

Alberta Critical Metals Projects

Vision = The Next Bio-Heapleaching Mine

Alberta Black Shales = One of the Largest Accumulations of Recoverable Critical Minerals in the World

The "*Right*" Type of Deposit - at the "*Right*" Location - at the "*Right*" Time
In Mature Infrastructure – In Stable Mining Jurisdiction – Access to Reagents
Short Ramp-Up to Production

Bird's Eye View of Typical Mining Scenario

Step-1: Excavate
Free-Dig - High-Volume - Open Pit

Step-2: Recover Metals+REE+Li+Sc
Bio-Heapleaching – Also Possible Abiotic Leaching (S or S+CO_2)
→ Potential CO_2 Sink

Step-3: Metals Separation
On-Site *OR* Off-Site

Step-4: Backfill "Inert" Spent Shale
Possible CO_2 Sequestration

Consumes S + H_2S + CO_2 Along the Way = "Green Mining"

Alberta Critical Metals Projects

Mineralized Shale Poorly Consolidated - Mineable

Mineralized Shales Poorly Consolidated

Amenable to Free-Dig "Ripping"

Like Oil Sands Mines

→ High Mining Rate

100,000 tpd -500,000 tpd

Historic PEA Template - 72MM tpa

Potential Also For In-Situ

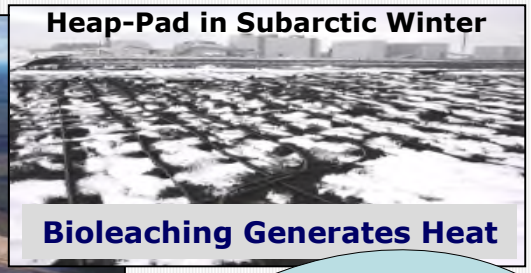
Borehole Slurry Mining

Continuous Rip-Mining Oilsands

Alberta Critical Metals Projects

Bird's Eye View of Bio-Heapleaching - Leachable

Bio-Heapleaching Black Shales at Talvivaara Mine a Template for Alberta Black Shales
Talvivaara Mine a Perfect Example of Short Pre-Production Timeline (7yrs)

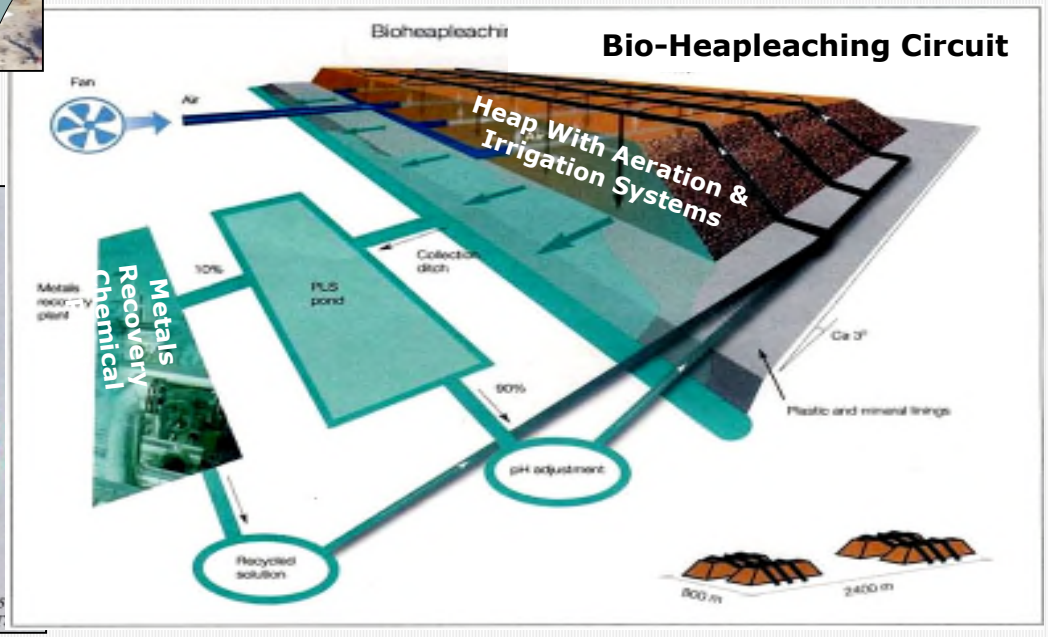


Bioleaching
Natural-Bugs + Air + Water
*+ **S** + **CO_2***

Collective Recovery
of all Metals
Good Recoveries

Low Opex – **Low** Capex
Low Energy – **Low** Footprint

Mineralized Rock Excavated by Open Pit
(Slurry Borehole Extraction Possibilities)
Spread On Large Heap Leaching Pads



Critical Minerals Americas Inc.

Alberta Critical Metals Projects

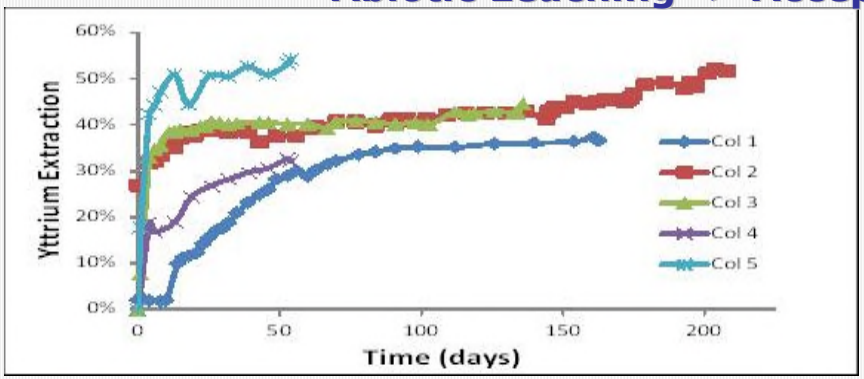
Leaching R&D - Quicker Recovery Options

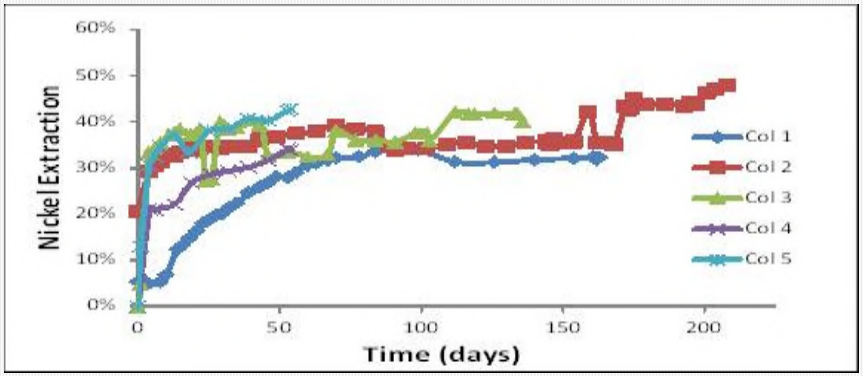
Bioleaching Takes Time - 9-14 mo Leach Cycle

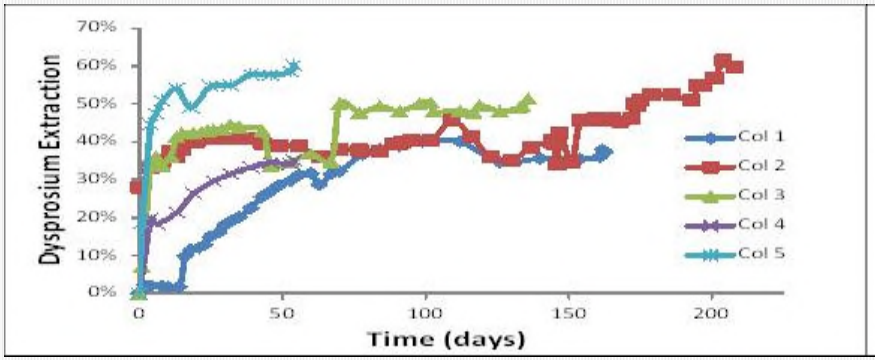
Alberta Metals Occur as Charged Ionic Forms
Metals – especially REEs – Leach Quickly – Faster Than Talvivaara
unlike Talvivaara where they occur in sulfides requiring aggressive acid digestion

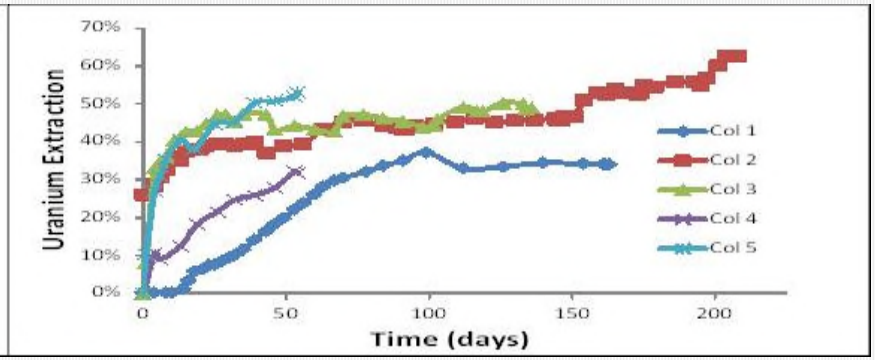
Much of What is Recoverable is Recovered in the Earliest Days !
-> Sacrifice Some Recovery for Larger Throughput ?

Abiotic Leaching -> Acceptable *BUT* Lower Recoveries









** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Bioleaching is "Greener" than the "Other Guys"

Bio-Heapleaching Consumes Sulphur + H_2S + CO_2

Bio-Organisms Need to Consume S for Energy – CO_2 for Biomass

Talvivaara's annual Nickel Sulfate production

68% Lower CO_2 Emission Than Comparable Operations

"Green" Ni + CO_2 Offsets Sold at Premium

Talvivaara - Environmental Lifecycle Audit 2020

benchmarked by the Nickel Institute

Aiming for CO_2 Neutral by 2039

Talvivaara Annual Mining Throughput = 15MMtpa

Prevents Emission of 620,000 tonnes of CO_2

IF 72MMtpa Throughput -> 3MM tonnes Annual CO_2 Emissions Prevention ?

Bioleaching Remains a Niche Technology in Mining Industry

Increasing ESG Imperatives Toward Net Zero CO_2 Mining Emissions by 2050

An Incentive to Expand this Technology Moving Forward

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

Metals Bioleaching = Sulfur Clean-up

Bitumen Upgrading Produces Waste Sulfur

- ~1t Sulfur per 100-150 bbl Upgraded
- ~20 million t Stockpile – 3 Pyramids 25acresx100ft
- ~2-3 million t New Sulfur Waste Produced Annually
- Acid Drainage – Groundwater Contamination

Sulfur Stockpiling & Maintenance is Costly

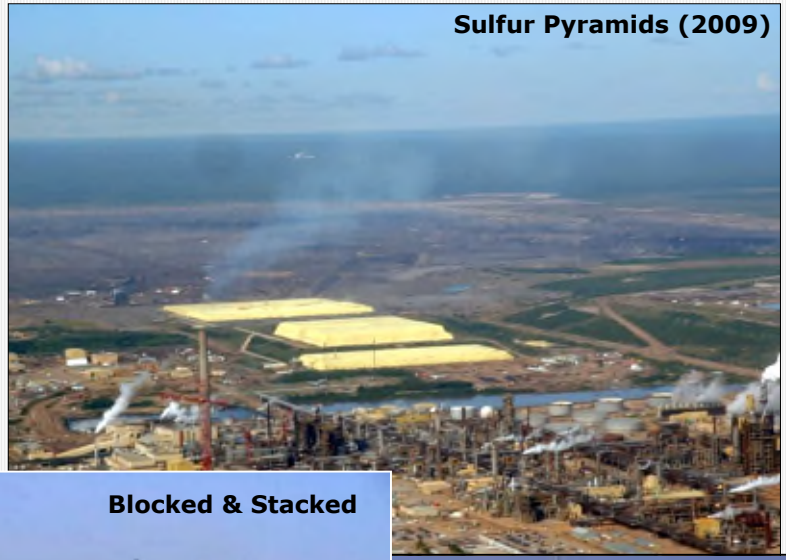
- Blocking, Stockpiling, Monitoring ~$5-$10/t (*2014 estm*)
- Shipping to Port - Truck+Rail ~$72-$100/t (*2014 estm*)
- Waste Sulfur Oversupply - Athabasca Landlocked
- Carbon Footprint of Shipping Sulfur Waste?
- Carbon Footprint of Managing Sulfur Waste?

Sulfuric Acid - Metal Leaching Reagent

- Bioleaching Consumes Sulfur
  Talvivaara Consumes ~270,000 tpa SulfAcid
  Talvi@75tpa = ~ 0.5 MM tpa Sulfur Consumption
- Abiotic Leaching Also Consumes Sulfur

Metal Leaching = Sulfur Clean-Up

BIGTIME !


Sulfur Pyramids (2009)


Blocked & Stacked


Mildred Lake Sulfur Pyramids (2005)


Monitoring Costs

Alberta Critical Metals Projects

Regional Environmental Synergies

Bio-Heapleaching Processing of Metal Rich Black Shales
Can Clean Up ALL Oil Sands Waste Sulfur + Some CO_2

Will Consume 1MM++ tpa of Local Sulfur Waste From Oil Sands

Current stockpile is +25MM t stacked in 3 pyramids

Will Consume CO_2 + Sequestration Opportunities

Plus Many Other Benefits to Oil Sands and Other Alberta Industries

Next Stage R&D Tests Need Less $ Than What Oil Sands Spend on S Mitigation

Synergy Checklist	Critical Metals Mining From Bio-Leaching Black Shales		Oil Sands Operations
Sulfur	Consumes Sulfur	←	Produces Waste Sulfur
CO2	Modest CO2 Sink	←	Produces CO2
CO2	Potential CO2 Sequestration Sink	←	Produces CO2
Sulfate	Produces Waste Sulfate	→	Can Use
H2S	Consumes H2S	←	Produces H2S
Hydro	500m Elevation Drop Can Produce Hydro	→	Consumes Hydro
Hydro	Excess Heat/Power From Sulfuric Acid Production	→	Consumes Hydro
Heat	Produces Waste Heat	→	Consumes Heat
"Spent" Shale	Backfilled	→	Maybe Can Use
Regional Infrastructure	Existing		Existing
Community Economy	Disconnected From Energy Markets		Dependant On Energy Markets
Investment Leverage	High Leverage		High Leverage
Funds Needed to Advance to Pilot	~$1MM		Spends More on Sulfur Mitigation

Alberta Critical Metals Projects

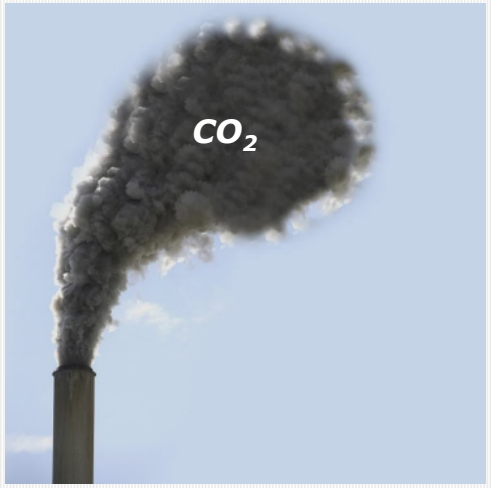
Industrial Cross-Breeding Opportunities

Contrarian Possibilities

Metal Mining *OR* Profitable Waste Management?

Before

After



Alberta Critical Metals Projects

Right Type of Deposit - Right Place - Right Time

Right Type Deposit
Flat – Near/At Surface
Free-Dig Bulk Mining
Long Minelife
Bioheapleaching
Collective Metals Recovery
Production Within 8 Years
S+CO_2 "Sink" + ESG

Right Place
Stable Jurisdiction
Infrastructure + Workforce
ALL Reagents Next Door

Right Time
Significant Domestic
Long Term Supply
Critical Metals

How Many Deposits Can Reach Production Before 2035 ?

** See Safe Harbour Statement at beginning of slides*

Alberta Critical Metals Projects

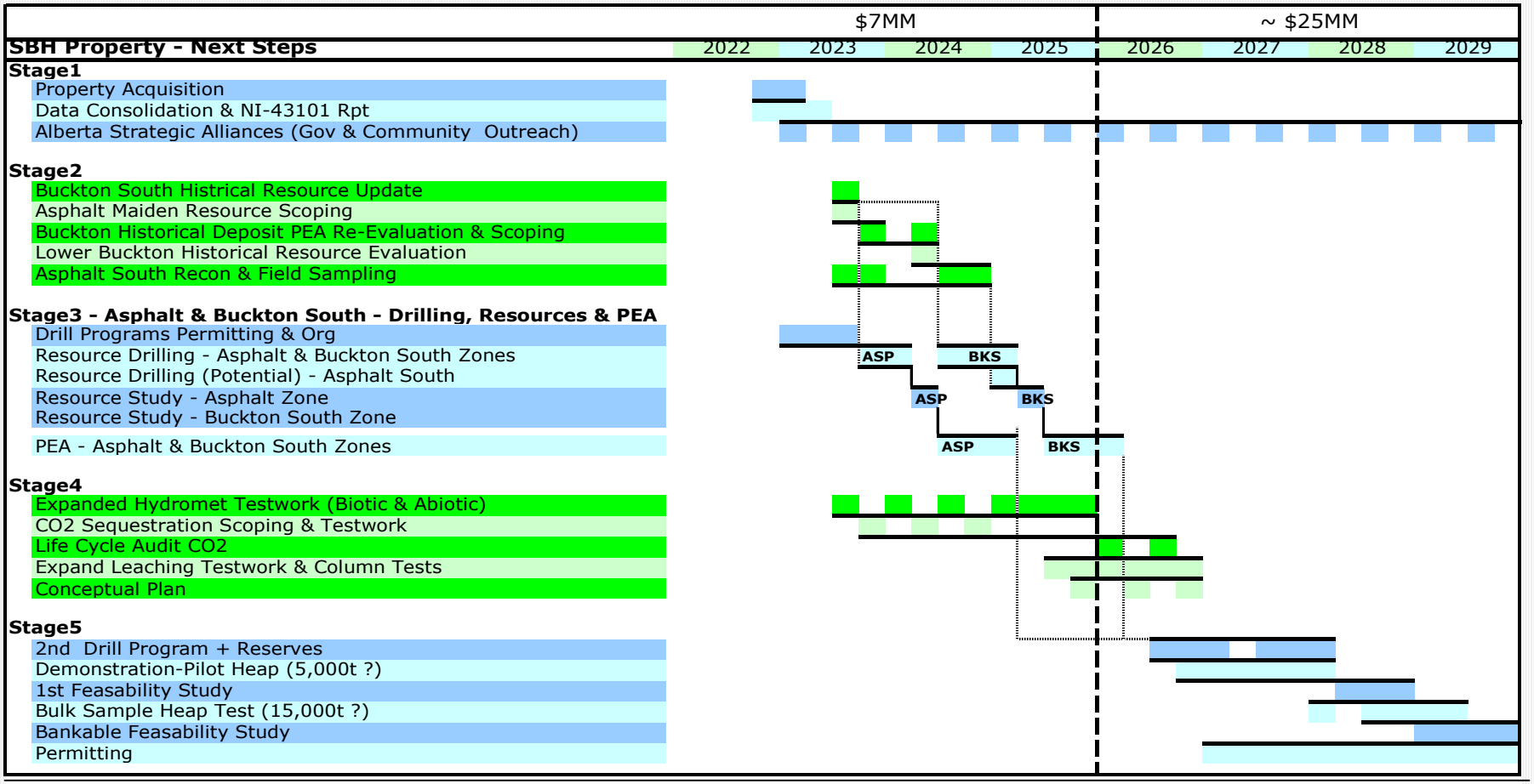
Next Steps - Advance 2 Mineral Zones to PEA 2025

Advance Two of Three Known Mineralized Zones Through PEA by End 2025

2023-2024: Systematic Resource Drilling – Satisfy NI-43-101

2023-2025: Expand & Scale Up HydroMet Testing – Post Column Tests - Larger Samples

2023-2024: Expand On Enviro Baseline Testwork – CO_2e , S , H_2S , Excess Hydro



** See Safe Harbour Statement at beginning of slides*

Critical Minerals Americas Inc.

Alberta Critical Metals Projects – SBH Property – Athabasca Region

Management & Technical Team
Participated in All Prior Work On The Property - 1990's-2014

Historic Work Legacy Information Extracted
34GB Digital Database - 17,372 Files - 2,070 File Folders

Geotechnical, Engineering and Hydrometallurgical
Prior Work on the Property By

APEX Geoscience	Activation Laboratories
P&E Engineering	CanMet
Hatch	ARC/AITF
Brierly Consultancy	AGS
BRGM (France)	GSC

** All Information Publicly Available in Alberta Assessment Reports*

Critical Minerals Americas Inc.

Management

Denis Clement, B Com LLB, LLM. - President & CEO, and Director

dclement@criticalmineralsamericasl.com

Mr. Clement is a highly experienced international business executive with over 30 years of experience in international finance, law, M&A, banking, and management primarily in the oil and gas, mining, finance, and tech industries. As founding President of CGX Energy, he negotiated the first Guyanese offshore oil licenses and oversaw its offshore operations. In additional Mr. Clement has been instrumental in financing venture opportunities throughout the world in mining and other business activities. Mr. Clement is a member in good standing of the Ontario Law Society.

John MacKenzie, BSc, B Com, CPA CA - CFO and Director

jmackenzie@criticalmineralsamericas.com

Mr. MacKenzie is a Founder and CFO of Evergreen Environmental Inc. an anaerobic digester of organic waste producing Renewable Natural Gas (RNG). After spending ten years in the Entrepreneurial Services Group at E&Y / CG, Mr. MacKenzie spent fifteen years as founder and CEO at AllCanada Express (ACE), Canada's largest international large jet cargo airline, now part of Cargojet (TSX-V: CJT.TO) and six years as COO at ORNGE, O n m ntario's air ambulance provider. Mr. MacKenzie was former CEO of New Ruby Mining Corporation and Bronte Gold Corp. private Ontario exploration companies and has been an advisor to numerous domestic and international clients in the mining, financial services, energy, aviation, technology, and emergency medical services.

Exploration & Operations

Shahe F Sabag BSc, MSc, PGeo - Technical Director

deminco@aol.com

Mr.Sabag is President of Demin Management Corporation. He has over 50 years of experience in management and technical capacities in the launch of many exploration and development campaigns for a variety of commodities including base metals, precious metals, industrial minerals, critical minerals, Rare Earths, uranium, diamonds, placer gold and peat. He has served as a Senior Officer and Director of a number of private and public corporations since 1985, and was formerly VP of Tintina Mines Limited, President of NSR Resources Inc. and Algomin Inc., and served as Director of Canspar Resources Inc., Algonquin Capital Corporation and Aurogin Resources Ltd.. He was also a Member of the Alberta Chamber of Resources Steering Committee, and principal of Ecoventures an emissions reduction industrial cross-breeding project design venture. He was an active member of Ontario's Pilot Emissions Reduction Trading pilot (PERT), and served as a director of its successor Cleanair Canada Inc. He is also a past member of the Canada Rare Earth Element Network (CREEN). Mr.Sabag has participated in all prior exploration work on the SBH Property all of which was carried out under his direction as an officer of Tintina Mines, NSR Resources and DNI Metals.

William Kerr BSc, PGeo - Operations Manager

will_c_kerr@hotmail.com

Mr.Kerr is a geologist with over 45 years in the Canadian and international exploration and mining industry. He was directly responsible for discovery of two of the worlds four highest grade uranium deposits, (Phoenix and Midwest A) and was a geophysical contractor 45 years ago for the surveys that defined the conductors that became the other two (McArthur River and Cigar Lake). He was QP for the mining of all the McClean Lake deposits, by operator AERVA, the most recent open pit U mines in Canada. He has spent many years in Ontario and was exploration manager for Dome Mines for the Red Lake and Timmins offices. During that time, he was involved, in varying degrees, with discovery and delineation of economically mineable gold deposits at Dona Lake, Detour Lake, and Musslewhite. He has personally ground-staked more than 500 claims, and was awarded in 1996, and maintains, a lifetime Prospector License through MNDM. Mr.Kerr has participated in prior work on the SBH Property during its early discovery stages as Field Exploration Manager of Tintina Mines.