

TUZEX CLAIMS: REPORT No. 3
Continued Geological and
Geochemical Survey
(Enzyme Leach)

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Minfile 092C-119

Alberni Mining Division
Southern Vancouver Island, B.C.

NTS 92C-087
Lat. 48° 53'
Long. 124° 41'

Owned and Operated by
H.J. Wahl and J. Ruza

Prepared by H. J. Wahl, P. Eng. B.C. **GEOLOGICAL SURVEY BRANCH**
November 2002 **ASSESSMENT REPORT**

27,069

LIST of FIGURES

- Fig. 1** General Location Map, scale 1:50,000
- Fig. 2** Claim Map, scale 1:30,400
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- Fig. 3** Regional Geology
- Fig. 3A** Compilation Map, showing location Flora West EZL soils traverse,
plus rock sample locations, scale 1:10,000
- Fig. 4** Field Sketch, No. 3 showing, scale 1:250
- Fig. A** Location 2002 Enzyme Leach Soils, Cutlines,
Rock, Float Samples, and other features, scale 1:5,000

APPENDICES

1. Acme Analytical Reports A204793, A204809, and 809R.
2. Actlabs, Work order 26162 Enzyme Leach Assays
3. Rock Sample Description List
4. Enzyme Leach Interpretation Report, Tuzex project by
Gregory T. Hill 23 Jan. 2003.

SUMMARY

The 2002 assessment program on the Vancouver Island Tuzex Property, was performed during 24-28 October inclusive. Expanded enzyme leach (EZL) soils work plus geological reconnaissance was completed on the property.

Integration of current plus past EZL surveys has indicated a substantial Zn Pb Cu oxidation anomaly some 1300 meters long oriented in a WNW direction, and divergent by some 30° from the trend of the main flora deformation zone.

This feature lies within one of the largest undrilled and untrenched conventional Pb Zn Ag soil anomalies on Vancouver Island. The property hosts an abundance of mineral showings and new float funds, with good to better ore grade values.

Current work also identified an area in the southeast claim quadrant showing favorability for quartz vein and skarn gold deposition. A new rock sample from this area returned 789 ppm Au from a dark, high silica rock carrying Cu Zn sulphides in disseminated form.

Costs for the 2002 work program total \$ 9,207.76.

INTRODUCTION

During the period 24-28 October 2002 inclusive, continued enzyme leach soils work and geological survey was conducted on the subject claims, by co-owners H. Wahl and J. Ruza. Work was focused on the western area of the Flora Deformation Zone (soils traverse FL 300 road), a search for the high grade Copper Zone, and investigation of high grade gold zones in the S.E. quarter of the Tuzex claim (319260). This is the third report of field work by the writer on the Tuzex property. Repetitive details covered in earlier reports are omitted.

LITTLE NITINAT RIVER 92C 15E

Scale 1:50 000 Échelle

PYRITE ZONE
PB-ZN-AG SOIL ANOMALY

TUZEX

PLACE FIX

TUZEX

GRAND PROPERTY

JASPER PROPERTY

ZONE OF INTEREST

SHOWING TRENCH

PROPERTY BOUNDARIES

PROPERTY BOUNDARIES

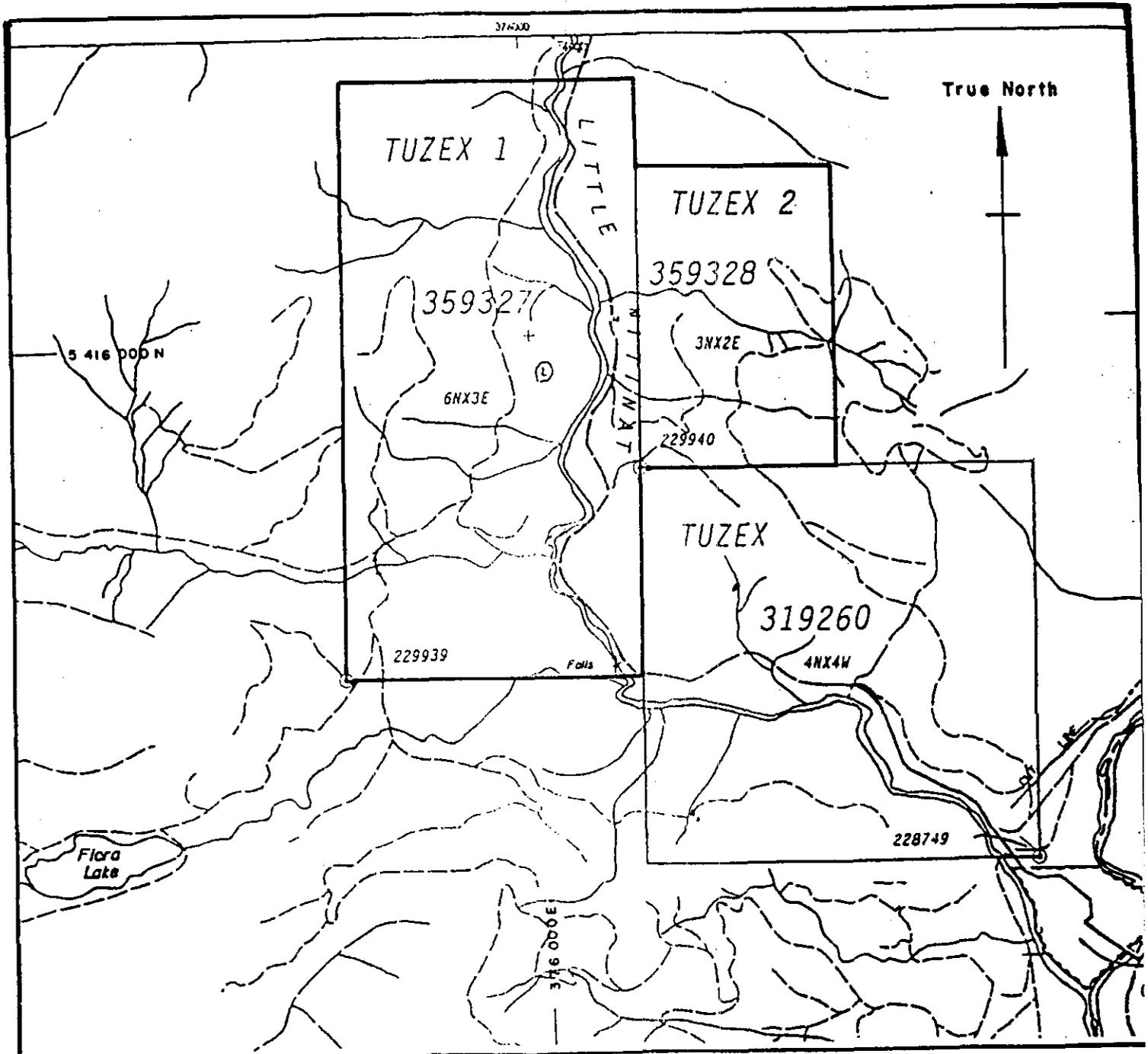
PROPERTY BOUNDARIES

PROPERTY BOUNDARIES

PROPERTY BOUNDARIES

Metres 1000 0 1000 2000 3000 4000 Metres

FIG 1



TUZEX PROPERTY ALBERNI MINING DIVISION, B.C.	
CLAIMS MAP MINERAL TITLES REFERENCE MAP 092 C087	
Date: Sept., 2001	Scale: 1:30 400
Figure: 2	

LOCATION AND ACCESS: (Fig. 1)

The Tuzex claims (40 units) are located on Vancouver Island straddling the Little Nitinat River, 45 km WNW of Lake Cowichan and 40 km south of Port Alberni. Specific locational details are:

NTS 92C 087
Lat. 48° 53'
Long. 124° 41'

The property is accessible from Lake Cowichan by all weather gravel logging roads operated by Timber West and MacMillan Bloedel. Travel time from Cowichan Lake is about 1 hour. The South Nitinat ML runs through the approximate center of the claim group, with numerous spur roads providing fair to good access to the balance of the claimed area.

The claims are sited on Tree Farm License 44, Block 2, operated by MacMillan Bloedel. Extensive logging has occurred in the past and is ongoing.

PROPERTY: (Figs. 1,2, 3)

The property consists of 3 metric claim blocks as follows:

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Good To Date</u>
Tuzex	16 (4Nx4W)	319260	15 Dec. 2002
Tuzex-1	18 (6Nx3E)	359327	15 Dec. 2002
Tuzex-2	<u>6 (3Nx2E)</u>	359328	15 Dec. 2002
Total:	<u>40 units</u>		

The above are situated in the Alberni M.D. and are currently in good standing.

TERRAIN/ TOPOGRAPHY

The property is located within rugged, forested, mountain terrain common to the B.C. Coastal Zone. Elevations range from 40 meters ASL in the Little Nitinat River Valley to 800 meters ASL in the adjacent ridge lines. Much of the area is regenerating cut blocks, while the main soil anomalous zone is largely covered by 70 to 80-year-old stand of second growth timber. The river valley itself is densely brushed and full of large, rotting, timber debris.

Overburden consists of glacial drift estimated at 2-10 meters in thickness. Some thin, crudely stratified outwash was also observed. Much of the drift is stained orangey in color, reflective of the large oxidizing alteration system on the claims. Most of the secondary roads are still in good condition or could easily be restored. Road width on the secondary trails is usually 6-7 meters.

WORK PERFORMED:

Soils Survey:

FL 300 Road 26 ea. for EZL analysis
Copper Zone area 7 ea. for EZL analysis.
Silt 2 ea. Conventional assays 32EL ICP + Au

Rocks Samples

12 ea. for 32 EL ICP + Au
Line cutting 350 meters plus trail breaking.

HISTORY:

Full details of previous activity on and around the Tuzex Claims have been detailed in Ref. (11).

REGIONAL GEOLOGY (Fig 3, 2A)

The Tuzex claims are contained within the Insular Belt which includes strata ranging from Late Paleozoic to Tertiary. The foregoing are cut by a quartz dioritic to granodioritic intrusive suite referred to as the Island Intrusions, of stock-like to batholithic dimensions.

All of the above are heavily faulted by a series of NW to NE trending breaks. The Tuzex claims are located at a NW-NNE fault intersection within acid to intermediate volcanics of the Bonanza sub group of early Jurassic age. The Bonanza Group is host unit to the Island Copper Mine, a former producer operated by BHP, located at the north end of Vancouver Island. The Island Copper Mine was the most successful operation on the island (345 mt at 0.41% Cu + Mo, Ag, Au, and Re) and establishes the Bonanza Group as a dominant time/stratigraphic mineral unit.

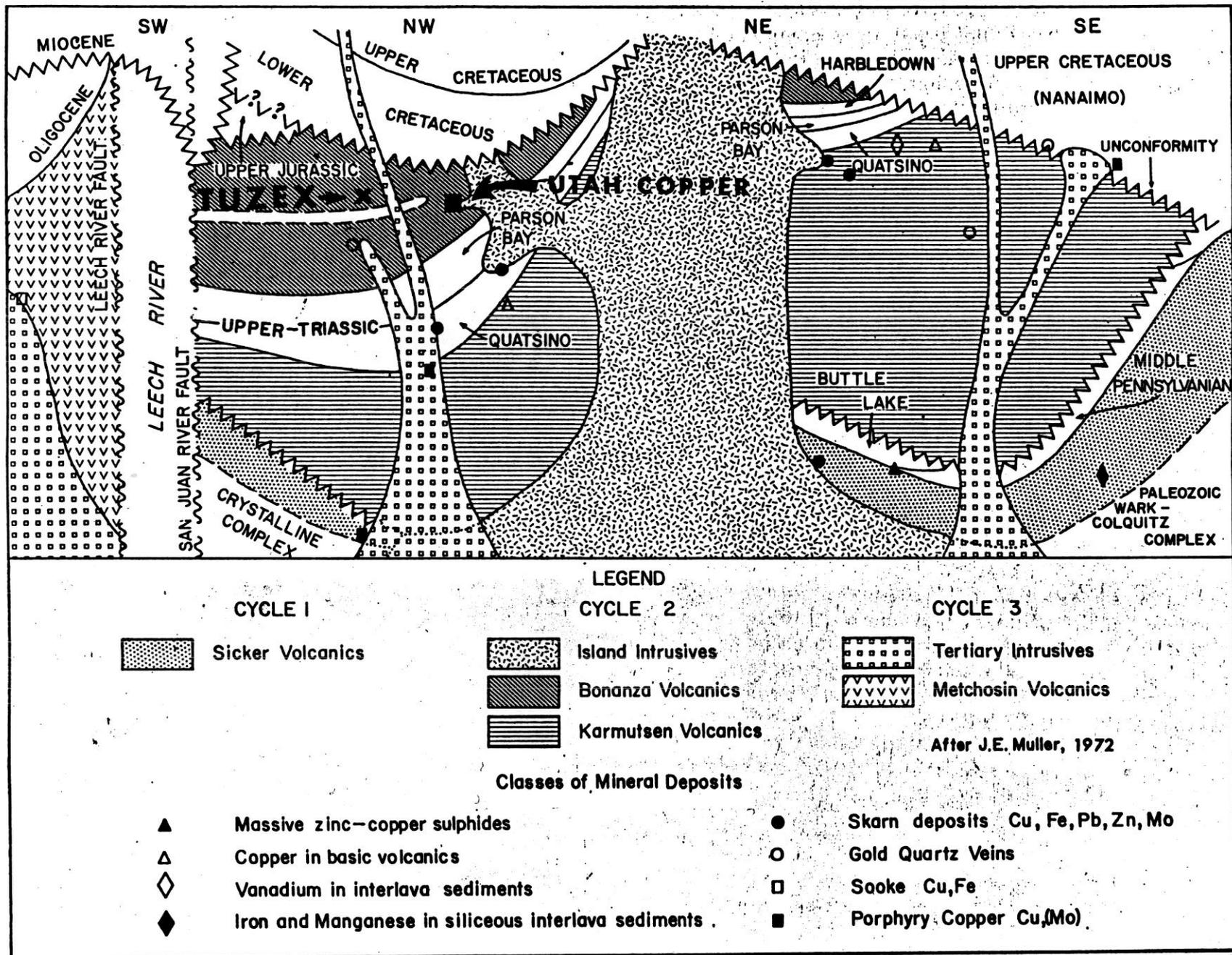


FIGURE 2A Diagrammatic section of Vancouver Island showing three cycles of volcanism and the stratigraphic position of the principal mineral deposits.

Figure from Cim, Bull. Oct. 1972

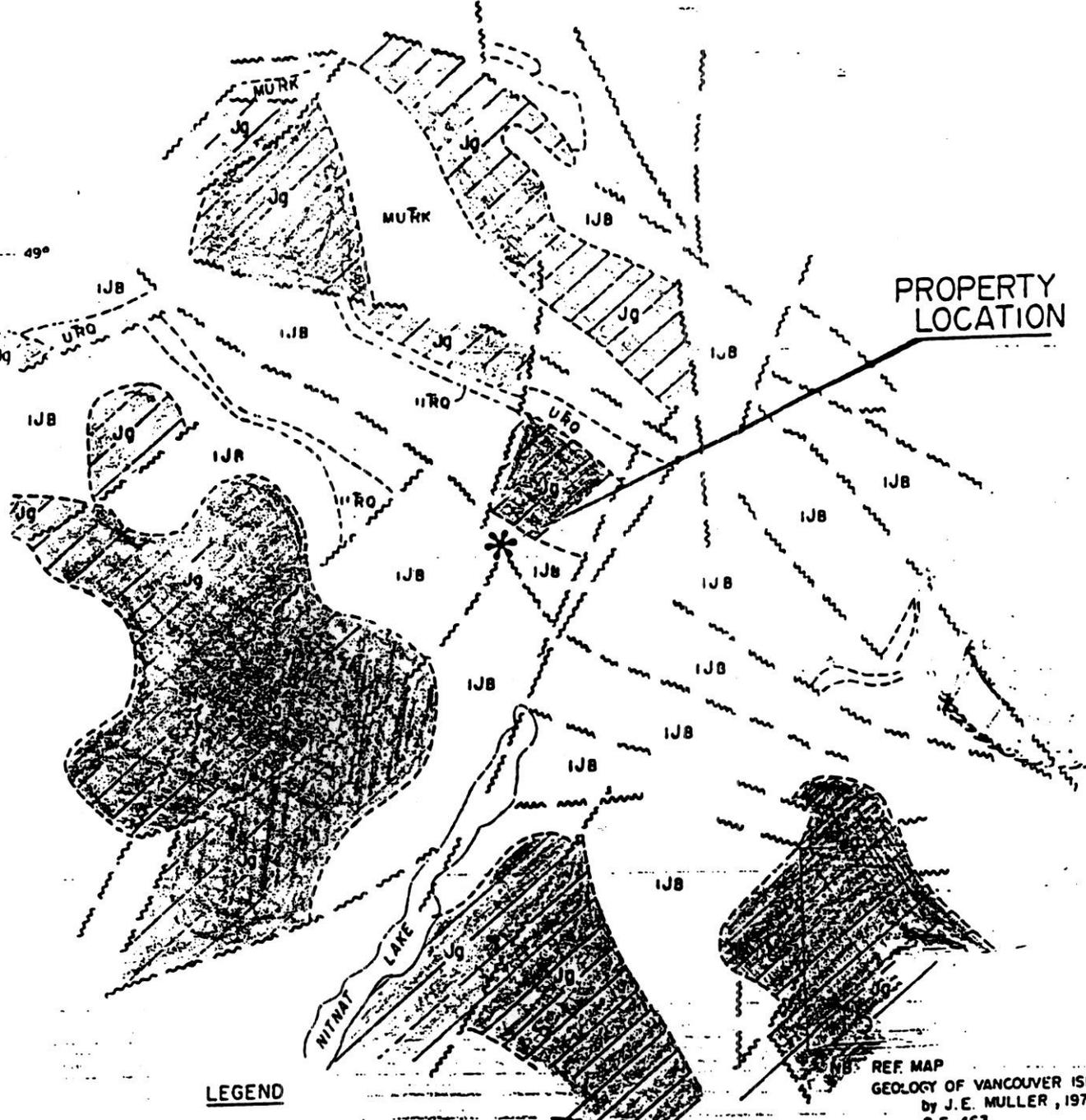
Volcanism, Plutonism and Mineralization: Vancouver Island - By K.E. Northcote and J.E. Muller

124°50'



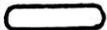
49°

PROPERTY LOCATION



LEGEND

JURASSIC

-  Jg **INTRUSIVE UNITS**
GRANODIORITE, QUARTZDIORITE, GRANITE
QUARTZ MONZONITE
-  IJB **BONANZA VOLCANICS** LAVA, TUFF, BRECCIA,
IJB ARGILLITE, GREYWACKE

TRIASSIC

- URO LIMESTONE (QUATSINO)
- MURK BASALTIC LAVA, PILLOW LAVA, BRECCIA TUFF

SYMBOLS

-  FAULT
-  GEOLOGICAL CONTACT

REF. MAP
GEOLOGY OF VANCOUVER ISLAND
by J.E. MULLER, 1977
O.F. 463

TUZEX CLAIMS

REGIONAL GEOLOGY

H. J. WAHL, PENG B.C. AUG. 1999 **FIG. 3**

124°50'

PROPERTY GEOLOGY (Fig. A)

Full details of previous work are documented in Ref. (11). New findings include the undernoted:

Flora Deformation Zone (West)

The western exposure of this zone occurs between stations 1375N + 1550N on the FL300 logging road. Between 1375 – 1400 N a prominent gossan zone some 20 meters high is exposed in the west bank of the road. The rock is all quartz, sericite, pyrite alteration material cut by secondary oxidized and kaolinitic shears from 1-20 cm in width. A composite sample of these shears over 25 m returned Cu 71, Pb 2516, Zn 6140, Ag 19.1, Cd 43, As 190, and Au 98.6 (ppb) – Sample FW-14R.

The gossan zone occurs at the western end of a silver-in-soils anomaly (conventional) (Refs. 11 & 12) some 800 meters long X 300 meters wide that overlies and parallels the deformation zone. The soils silver feature is part of a larger Pb Zn soil anomalous zone and is included therein. Peak values approach 42 ppm Ag.

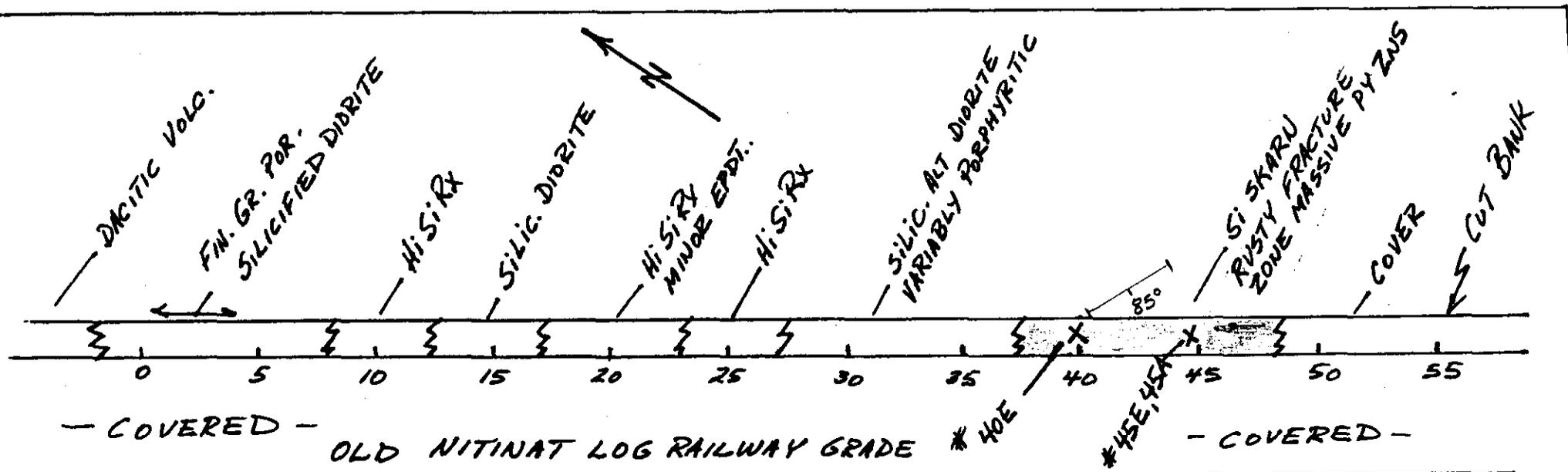
Other exposures of Si-SRCT-Py alteration rock were located along the FL300 road traverse including FW-1330R and 1060R. Both these samples carry values and are described in Appendix 3. Alteration intensity appears to increase starting at station 10N to beyond 1550N.

Copper Zone

A concerted attempt was made to re-locate this previously identified zone without success. AR 13,706 describes this showing as a north trending pod 10 meters long located along a shear and terminated to the south by a fault. Falconbridge grab samples returned values of 7.5% Cu, 0.36% Zn, 495 Au (ppb) and ppm 6,406 Ag. Current sampling of two small pieces of rusty float in the vicinity of where this occurrence should locate returned 6.5% Cu, 262 g/t Ag, and ppb 631 Au. It appears that widening of the Nitinat M.L. roadbed has covered the surface exposure of the Copper Zone. A semi-circular line of EZL soils was completed (Fig. A) to test for sub-surface sulphides.

Showing No. 3 Area – Gold Zone (Fig. 4)

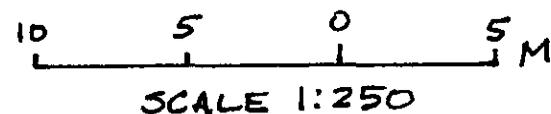
At showing No. 3, previous sampling by prospector Ruza returned assays of 9-34 g/t Au plus Cu Pb Zn Ag values. A rock face up to 3 m high is exposed over a 60-70 m area on the east side of the old railroad grade. A series of



ASSAY RESULTS, PPM EXCEPT AU PPB

SAMPL.#	TYPE	CU	PB	ZN	AS	AG	AU
40E	GRAB	151	27	765	64	1.7	28.6
45A	"	87	4	195	26	1.4	4.6
45E	0.5m	1839	141	17204	519	7.6	233.4
RX-49	GRAB	1578	282	8491	787	21.7	789.2

RX-49 IS 120M SOUTH ALONG GRADE



TUZEX CLAIM No. 319260

ALBERNI M.D. 92C 087

No. 3 SHOWING, GEOLOGY
AND SAMPLE LOCATIONS
PLAN FIELD SKETCH
FIG. A

H.V. WAHL, P. ENG. B.C. | OCT. 2002

silicified diorite dikes has strongly altered and pyritized dacitic volcanics to a lean epidote-silica skarn carrying irregular masses of pyrite and black sphalerite. Sample 45E returned interesting gold values to 233 ppb from a 0.5m wide oxidized zone, which is poorly exposed at the base of the rock face.

A further 120 meters south of No. 3, along the old grade, a second rusty zone was located being a high silica zone with minor epidote and disseminated pyrite. Sample RX-49 returned 789 ppb Au plus anomalous levels for Cu Pb Zn Ag.

Combined with the JR Vein zone, discovered in 1999, strongly anomalous gold values have now been identified over a 700 x 300 m size area. The Wellington-Young soils grid of 1990 covered a portion of this area resulting in a Zn Ag soils anomaly over the JR Vein Zone (Anomaly B, Fig. 4, ref 11), however samples were never assayed for Au.

Nitinat River Adit (Fig.A)

This site was examined and was found to be 1.75 m high opening about 10m long, running easterly. The adit is collared at the high water mark and is centered within a 40 m wide, intensely fractured zone of quartz-sericite-pyrite alteration rock of the general type located throughout the claims.

GEOCHEMISTRY

Silt Samples: Two silt samples were collected during the current work (Fig.A) as follows:

BRX-15

This sample was collected above the bridge of a west-flowing drainage and returned no particularly interesting values. The upstream area is likely sourced in unmineralized rock.

T204S

This sample comes from a creek that drains across the Flora Deformation Zone and passes by the alleged Copper Zone showing. Values for Pb and Zn are in the threshold range, but other elements are not particularly of interest. Outcrop located in the creek is silica alteration rock (204R) lacking significant base metal values.

Enzyme Leach Sample Program (Fig. 3A, Appendix)

As part of the continuing enzyme leach (EZL) geochemical program new samples were collected along the FL300 Road at 100 and 50 m spacings. The subject road crosses the western end of the Flora Deformation Zone. A shorter,

looping traverse was completed around the "Copper Zone" area, starting and ending at the Nitinat ML.

All samples were collected using industry standard procedures, i.e. samples were dug with an intrenching tool and placed in numbered Kraft envelopes. Care was taken on the FW line to collect samples well away from previous disturbances. Sampled materials were invariably B horizons.

The enzyme leach analytical results are given in Actlabs Report #25954, which is appended. Data interpretation is given in the report of 23 January 2003, by G.T. Hill, also appended.

The referenced report has integrated all the EZL data including current sampling, resulting in the identification of a WNW trending Zn Pb Cu zone >1300 m in length and \approx 50 meters wide. This zone runs at an acute angle (30°) to the northwesterly trending Flora Deformation Zone.

A second zone may also exist in the alteration embayment some 400 m south, but more sampling is required to expand on this.

CONCLUSIONS

Continued EZL geochemical work plus integration of past surveys, has now refined a substantial oxidation anomaly within the more diffuse conventional Pb Zn Ag soils anomalous area defined by past work.

Current reconnaissance work has identified a 1km x 0.5 km area in the southeast claim area that shows potential for vein/skarn gold mineralization in an area with little previous work.

RECOMMENDATIONS

The property is ready for backhoe trenching/drilling on the feature areas identified to date. Future survey work should be directed to the southeast claim area to expand upon indicated gold potential.

Prepared by


H. Wah, P.Eng. B.C.

STATEMENT OF COSTS

Work on the Tuzex Project was performed by:

H.J. Wahl, P.Eng. B.C.
RR#10, 1416 Ocean Beach Esplanade,
Gibsons, B.C. VON 1V3

and

Jaroslav Ruza
#508-1415 St. Georges St.,
North Vancouver, B.C. V7L 4R9

H.J. Wahl, field work, 5 days @ \$600/day	\$3,000.00
H.J. Wahl, reporting, 4 days @ \$400/day	1,600.00
J. Ruza, field work incl. prospecting, 5 days @\$350/day	<u>1,750.00</u>
Sub Total:	<u>\$6,350.00</u>

Field Vehicle, 2001 Cummins Dodge Quad Cab 4x4 @ \$140/day for 5 days	700.00
Code 01-Travel Expenses	576.24
Code 04-Maps, prints, photocopy	31.72
Code 06-Postage, freight, communications	47.49
Code 07-Field Equip. & Supplies	160.20
Code 11-Assays (rocks, soils)	<u>1,342.11</u>
Sub Total:	<u>\$2,857.76</u>

Grand Total: \$9,207.76

Certified True and Correct
H.J. Wahl, P.Eng. B.C.



REFERENCES

- 1) Osborne, W.W., *Geological Report on the Little Nitinat Area*, Noranda Exploration Co., 06 Oct. 1972 (un-catalogued file B.C.D.M. Victoria, B.C.)
- 2) Osborne, W.W., *Supplement to the 1972 Report on the Little Nitinat Property*, Noranda Exploration Co., 31 May 1973 (as above)
- 3) Poloni, John R., P.Eng., *Report on the Diamond Drill Program (1979-80)* Summit et al claims, for Summit Pass Mining Corporation, 10 Feb 1980 AR 7731.
- 4) Noel, G.A., P.Eng., *Report on the IKE Claims, Nitinat River Area, Vancouver Island, Alberni M.D.* for Admiral Energy & Resources Ltd., 10 March 1981.
- 5) Jones, H.M., P.Eng. *Jumbo Claim, Nitinat River area, Vancouver Island, Alberni M.D.* For Admiral Energy & Resources Ltd., 08 June 1982. AR 11, 143.
- 6) Chandler, T.E., *Geological, Geochemical and Geophysical Assessment Report on the Nitinat Claims, Alberni M.D.* for Falconbridge Ltd. 1985. AR 13,706.
- 7) Mehner, D., F.G.A.C., *Assessment Report on a VLF Geophysical Survey and Soil Geochem Sampling of the N.I. 1, 2, & 3 claims for Lucky 7 Exploration Ltd.* April 1988. AR 17,406
- 8) Verzosa, R.S., *1989 Geochemical Survey on the Tuzex, Explor 1, and Explor II Mineral Claims, for Wellington-Young Resources,* Ar 19,849.
- 9) Sookochoff, L. P.Eng., *Geological Assessment Report on the Tuzex Mineral Claim,* 04 November 1996.
- 10) Allen, G.J., P. Geo., *Report on Geological Mapping, Prospecting and Rock and Moss Mat Sampling on the Tuzex Claim Group for Lenka Ruza,* 25 Sept. 1998.
- 11) Wahl, H.J., P. Eng., *Tuzex Claims, Report of Field Work, Enzyme Leach Soils Survey and Data Compilation,* August 1999.
- 12) Wahl, H.J. P.Eng., *Tuzex Claims: Report No. 2 Continued Geological and Geochemical Survey (Enzyme Leach),* November 2001.

APPENDIX - 3

Rock Sample Descriptions TUZEX trip of 24-28 October 2002, incl.

Assays in ppm except Au in ppb

- FW-14R** Gossan zone, N. end of FW Road traverse. Sampling emphasized kaolin-sericite shears. Harder fragments from intervening rock are all quartz with 10-30% disseminated and stringer silvery Py, and $\pm 1\%$ disseminated black ZnS. Also vuggy areas with drusy Qtz and xtalline Py in 2-3 cm thick masses. Sample width 25 m.
Cu 71, Pb 2516, Zn 6140, Ag 19.1, Cd 43, As 190, Au 98.6
- FW-1330R (grab)** Very pale grey silica rock with pale green blotchy areas, 15-30% Py as disseminations and irregular blotches associated with black ZnS which weathers to brick red color. Traces calamine.
Cu 28, Pb 1067, Zn 2643, Ag 3.0, Cd 20.5, As 32, Au 5.8
- FW-1060R (grab)** Pale grey amorphous silica rock, less Py than above samples $\approx 1-2\%$ disseminated ZnS, PbS.
Cu 31, Pb 170, Zn 913, Ag 1.6, Cd 14.1, As 32, Au 6.5
- 204 R (grab)** Copper showing creek, outcrop, west bank ≈ 100 upstream from ML. Pale grey silica rock. Chloritized pyroxenes $\approx 40\%$ in quartz groundmass cut by 1-2ms thick secondary QVs trace Py, possible ZnS on fractures which are Fe oxide stained.
Cu 87, Pb 7, Zn 419, Ag 0.6, Cd 4.9, As 12, Au 3.7
- 205R** 1 kg angular float from Nitinat ML ditch (E side) 60m N. of hydro pole 204. Massive Py-Cpy float. Also includes second nearby piece for total weight of 2.5 kg.
Cu 65,466, Pb 472, Zn 736, Ag >200, Cd 19, As 2063, Au 631.4
- ML2+28R** 28 m south of hydro pole #200, east side road. Chips over 5 m area. White to pale grey silica rx, 15-25% dism. Py, trace calamine stain.
Cu 21, Pb 24, Zn 38, Ag 0.7, Cd 0.5, As 27, Au 34.2
- ML-189R** Nitinat ML by hydro pole 189, opposite N and line TA (2001) grabs from center 60 m wide (N to S) Py rusty zone exposed in road bed.

Silica altered fine grained diorite? Chloritized mafics and epidote.
Trace fresh Py, but abundant dark brown limonite on fractures.
Cu 85, Pb 6, Zn 104, Ag 0.6, Cd 0.5, As 11, Au 1.7

BRX-1 40 m west of bridge on Nitinat ML, north side of creek by old timber
trestle. Grabs. Pale grey to very light green silica rx >30% fine
dusty pyrite.
Cu 280, Pb 23, Zn 89, Ag 2.3, Cd 0.5, As 77, Au 18

40E #3 showing

Silica skarn, west end large fracture face striking 118 dip 85 SW
chips over 1.5 m area. Pale grey silica rock, variable irregular
masses Py and ZnS (grabs).
Cu 151, Pb 27, Zn 765, Ag 1.7, Cd 8.6, As 64, Au 28.6

45E #3 showing

Chips from 0.5 m wide sulphide zone which is covered to west.
Appears to be vuggy quartz-epidote vein zone with massive
aggregates of Py and ZnS. Exposed at base of outcrop face.
Cu 1839, Pb 141, Zn 17204, Ag 7.6, Cd 158.9, As 519, Au 233.4

45A #3 showing

Chips from rock above??, adjacent?? No. 45E. Silica rock, carries
15-20% dism. dark grey ZnS.
Cu 87, Pb 4, Zn 195, Ag 1.4, Cd 1.0, As 26, Au 4.6

RX-49

New zone, 120 m south of #3 along old grade. Grabs. Somewhat
darker grey silica rock, carries >30% disseminated and blebby
aggregates dark ZnS + Py.
Cu 1578, Pb 282, Zn 8491, Ag 21.7, Cd 62.2, As 787, Au 789.2



GEOCHEMICAL ANALYSIS CERTIFICATE



Wahl, Herb PROJECT TUZEX File # A204793
R.R. 10, 1416 Ocean Beach, Gibson BC V0N 1V3 Submitted by: Herb Wahl

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm	Tl ppm	S %	Ga ppm
G-1	1.3	2.5	2.6	44	<.1	4.4	4.1	539	1.93	.5	2.0	<.5	4.3	99	<.1	<.1	.1	41	.63	.083	10	16.4	.51	241	.144	1	1.03	.117	.50	2.6	<.01	2.8	.3	<.05	5
T-204S	1.8	33.3	16.7	143	.1	8.0	11.0	751	3.39	7.7	.3	8.0	1.3	48	.6	.1	.8	71	.72	.081	7	14.2	.96	90	.076	1	2.68	.011	.06	.3	.02	5.3	.1	.14	7
BRX-1S	1.3	38.1	5.5	62	.1	11.2	14.5	807	3.44	5.2	.3	<.5	1.1	41	.2	.1	.1	89	.73	.073	8	20.5	1.04	76	.193	4	2.27	.019	.07	.2	.02	7.0	.1	.10	7
STANDARD DS4	6.9	121.6	30.5	158	.2	33.9	11.9	799	3.08	22.8	5.8	26.0	3.7	29	5.4	4.7	4.9	72	.55	.087	17	169.3	.57	138	.089	2	1.78	.031	.15	4.3	.29	3.5	1.2	<.05	6

GROUP 1DA - 10.0 GM SAMPLE LEACHED WITH 60 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 200 ML, ANALYSED BY ICP-MS.
UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
- SAMPLE TYPE: SILT SS80 60C

DATE RECEIVED: OCT 30 2002 DATE REPORT MAILED: Nov 10/02 SIGNED BY: *C. Leong* TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX-1



GEOCHEMICAL ANALYSIS CERTIFICATE



Wahl, Herb PROJECT TUZEX File # A204809

R.R. 10, 1416 Ocean Beach, Gibson BC V0N 1V3 Submitted by: Herb Wahl

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Tl ppm	Hg ppm	Au* ppb
S1	<1	13	12	17	.5	1	<1	4	.03	5	<8	<2	<2	3	<.5	5	<3	<1	.15	<.001	<1	3	<.01	5	<.01	<3	<.01	.71	.02	<2	<5	<1	<.2
40E	<1	151	27	765	1.7	11	20	1150	4.25	64	<8	<2	<2	66	8.6	12	<3	65	1.57	.118	6	22	1.39	39	.12	4	2.54	.09	.10	<2	<5	2	28.6
45A	3	87	4	195	1.4	8	17	1176	3.76	26	<8	<2	3	58	1.0	15	<3	56	1.12	.103	7	17	1.49	35	.12	3	2.57	.16	.10	5	<5	<1	4.6
45E	<1	1839	141	17204	7.6	9	144	1541	12.85	519	<8	2	<2	28	158.9	8	46	29	2.37	.054	3	17	.97	15	.05	4	2.22	.02	.08	<2	<5	2	233.4
204R	2	87	7	419	.6	10	20	957	4.60	12	<8	<2	<2	50	4.9	9	<3	153	2.36	.079	6	30	1.79	34	.25	5	3.04	.07	.08	<2	<5	<1	3.7
205R	4	65466	472	736	>200	243	328	1018	22.96	2063	<8	<2	<2	2	19.0	<3	26	58	.06	<.001	4	8	.51	9	.01	<3	1.33	.01	.04	6	<5	<1	631.4
BRX-1	3	280	23	89	2.3	8	14	1286	4.24	77	<8	<2	<2	25	<.5	5	<3	27	2.16	.105	9	7	1.00	33	.13	6	1.62	.02	.27	<2	<5	2	18.0
FW-14R	4	71	2516	6140	19.1	4	7	3262	4.49	190	<8	<2	<2	11	43.0	<3	<3	10	.40	.065	8	9	.21	23	<.01	4	.75	.01	.34	<2	<5	1	98.6
FW-1060R	2	31	170	913	1.6	1	3	1177	1.65	32	<8	<2	<2	13	14.1	<3	<3	8	.48	.066	20	5	.39	204	<.01	5	1.02	.04	.31	<2	<5	<1	6.5
FW-1330R	15	28	1067	2643	3.0	2	6	2561	2.73	32	<8	<2	<2	16	20.5	<3	<3	3	.93	.066	11	10	.17	26	<.01	4	.74	.01	.35	<2	<5	<1	5.8
RE FW-1330R	14	28	1035	2613	2.9	1	6	2491	2.63	30	<8	<2	<2	16	20.3	<3	<3	2	.89	.064	11	8	.16	26	<.01	<3	.71	.01	.35	<2	<5	1	4.7
ML-2+28R	2	21	24	38	.7	10	8	365	2.97	27	<8	<2	2	18	<.5	<3	<3	9	1.25	.052	7	14	.27	62	.01	<3	.72	.02	.33	<2	<5	1	34.2
ML-189R	2	85	6	104	.6	6	9	1274	3.27	11	<8	<2	<2	23	<.5	3	<3	28	.88	.122	12	11	1.42	123	.03	3	1.97	.03	.25	<2	<5	1	1.7
RX-49	1	1578	282	8491	21.7	61	94	1116	5.72	787	<8	2	<2	50	62.2	5	68	51	1.40	.070	3	127	.97	26	.09	6	2.13	.20	.11	<2	<5	2	789.2
STANDARD DS4/AU-R	6	124	33	156	.4	35	12	813	3.16	21	8	<2	3	29	5.5	6	6	75	.54	.091	17	170	.59	146	.09	3	1.74	.04	.17	5	<5	1	450.0

GROUP 1D - 0.50 GM SAMPLE LEACHED WITH 3 ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 10 ML, ANALYSED BY ICP-ES.
 UPPER LIMITS - AG, AU, HG, W = 100 PPM; MO, CO, CD, SB, BI, TH, U & B = 2,000 PPM; CU, PB, ZN, NI, MN, AS, V, LA, CR = 10,000 PPM.
 ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
 - SAMPLE TYPE: ROCK R150 60C AU* IGNITED, ACID LEACHED, ANALYZED BY ICP-MS. (10 gm)
 Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 31 2002 DATE REPORT MAILED: Nov 12/02 SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX-1



ASSAY CERTIFICATE



Wahl, Herb PROJECT TUZEX File # A204809R

R.R. 10, 1416 Ocean Beach, Gibson BC V0N 1V3 Submitted by: Herb Wahl

SAMPLE#

Ag** Au**
gm/mt gm/mt

205R
STANDARD R-1/AU-1

261.6 .73
100.5 3.23

GROUP 6 - PRECIOUS METALS BY FIRE ASSAY FROM 1 A.T. SAMPLE, ANALYSIS BY ICP-ES.
- SAMPLE TYPE: ROCK PULP

DATE RECEIVED: NOV 13 2002 DATE REPORT MAILED: Nov 21/02 SIGNED BY: *C.L.* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX-1

Quality Analysis...



Innovative Technologies

Invoice No.: 26954
 Work Order: 26162
 Invoice Date: 14-NOV-02
 Date Submitted: 07-NOV-02
 Your Reference: A204792
 Account Number: 477

ACME ANALYTICAL LABORATORIES LTD
 852 EAST HASTINGS
 VANCOUVER, B.C.
 V6A 1R6
 ATT: CLARENCE LEONG

CERTIFICATE OF ANALYSIS

33 PULP(S) were submitted for analysis.

The following analytical packages were requested. Please see our current fee schedule for elements and detection limits.

REPORT 26954 CODE 7 - ENZYME LEACH ICP/MS (ENZYME.REV1)

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

CERTIFIED BY :

A handwritten signature in black ink, appearing to be "E. Hoffman".

DR E.HOFFMAN/GENERAL MANAGER

ACTIVATION LABORATORIES LTD.

1336 Sandhill Drive, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or +1.888.228.5227 FAX +1.905.648.9613

E-MAIL ancaster@actlabs.com ACTLABS GROUP WEBSITE <http://www.actlabs.com>

Enzyme Leach Job #: 26162 Report #: 25954

Customer: ACME Labs

Geologist: C. Leong

Customer's Job #: A204792

Trace element values are in parts per billion. Negative values equal NOT DETECTED at that lower limit. Elements arranged by suite and by atomic mass.

Values = 999999 are greater than the working range of the instrument. S.Q. = That element is determined SEMIQUANTITATIVELY.

Regular Package:

Sample ID:	Oxidation Suite:													Base Metals:					Base Metal - Chalcophile Association											
	S.Q.	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	S.Q.	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi
FW 1550N	4600		530	126	11	7	-5	1	4.3	-1	-1	-0.01	13.1		1	0.3	0.6	72	15	70	714	2130	2	-0.5	4.1	42.6	-0.1	-0.8	3.6	-0.8
FW 1500N	-2000		802	163	17	15	-5	-1	3.2	-1	-1	0.02	0.72		-1	0.3	0.5	24	-3	35	142	1020	-1	-0.5	0.9	9.2	-0.1	-0.8	1.0	-0.8
FW 1450N	9580		948	262	13	17	10	8	1.6	-1	-1	0.15	0.05		-1	0.8	0.8	210	15	97	1930	455	3	-0.5	0.2	68.3	-0.1	-0.8	2.9	1.5
FW 1400N	-2000		200	265	7	25	8	7	2.9	-1	-1	1.71	-0.05		2	6.9	18.0	538	71	2080	124000	6080	6	0.6	1.5	815	0.3	-0.8	1.6	3.0
FW 1350N	9390		1010	228	9	18	-5	-1	2.2	-1	-1	0.02	2.02		6	0.5	0.6	40	-3	94	987	625	-1	-0.5	-0.2	30.7	-0.1	-0.8	1.7	2.9
FW 1300N	12600		1420	505	9	13	13	32	5.7	-1	-1	0.07	1.24		3	0.5	0.6	19	-3	58	1020	149	-1	-0.5	-0.2	49.7	-0.1	-0.8	1.2	1.9
FW 1250N	12800		2620	393	11	9	15	-1	3.9	-1	-1	-0.01	-0.05		1	0.6	1.0	32	-3	43	449	420	-1	-0.5	-0.2	11.6	-0.1	-0.8	1.8	0.8
FW 1200N	11500		1350	573	20	5	7	-1	0.7	-1	-1	-0.01	-0.05		-1	0.3	0.6	38	-3	17	68	22	-1	-0.5	-0.2	3.8	-0.1	-0.8	0.5	-0.8
FW 1150N	17400		1960	561	16	8	15	-1	1.3	-1	-1	-0.01	-0.05		-1	0.5	1.1	55	7	30	328	171	2	-0.5	0.2	34.4	-0.1	-0.8	1.1	-0.8
FW 1100	10000		1130	468	36	4	8	-1	0.3	-1	-1	-0.01	-0.05		-1	0.5	1.0	44	-3	16	80	13	2	-0.5	-0.2	7.3	-0.1	-0.8	0.6	-0.8
FW 1050	8990		983	334	8	5	-5	-1	0.4	-1	-1	-0.01	-0.05		-1	0.6	0.9	33	-3	11	77	75	4	-0.5	-0.2	6.2	-0.1	-0.8	0.9	-0.8
FW 1000	45200		3060	458	3	4	10	-1	0.2	-1	-1	-0.01	-0.05		-1	0.5	0.7	47	-3	9	74	8	2	-0.5	-0.2	7.1	-0.1	-0.8	0.4	-0.8
FW 950N	20600		4310	443	19	6	42	-1	0.8	-1	-1	-0.01	-0.05		-1	0.7	1.0	7	-3	24	125	295	-1	-0.5	-0.2	2.7	-0.1	-0.8	1.1	-0.8
FW 900N	38200		1600	445	70	12	11	6	0.8	-1	-1	0.08	-0.05		-1	0.7	1.2	36	-3	33	139	87	-1	-0.5	-0.2	5.0	-0.1	-0.8	1.0	-0.8
FW 850N	36300		525	175	107	16	10	44	1.4	-1	-1	-0.01	-0.05		-1	0.8	0.6	53	16	84	864	46	2	-0.5	-0.2	16.4	-0.1	-0.8	1.4	-0.8
FW 800N	10400		830	306	33	7	8	-1	1.1	-1	-1	0.01	-0.05		-1	0.6	1.2	116	26	88	853	65	1	-0.5	-0.2	24.4	-0.1	-0.8	1.7	-0.8
FW 750N	11000		1670	512	33	4	6	-1	1.5	-1	-1	0.12	-0.05		-1	0.3	0.9	79	-3	33	37	17	-1	-0.5	-0.2	14.2	-0.1	-0.8	0.9	-0.8
FW 700N	20600		827	329	51	16	10	7	1.5	-1	-1	0.06	-0.05		-1	0.5	1.1	24	-3	191	260	100	2	-0.5	-0.2	18.1	-0.1	-0.8	1.7	-0.8
FW 650N	-2000		840	167	40	3	-5	-1	0.2	-1	-1	-0.01	0.36		-1	0.5	0.4	24	-3	35	95	25	-1	-0.5	-0.2	5.6	-0.1	-0.8	1.1	-0.8
FW 600N	21500		626	207	66	12	10	-1	1.0	-1	-1	-0.01	-0.05		-1	0.6	1.4	48	18	120	633	34	2	0.8	-0.2	16.1	-0.1	-0.8	1.2	-0.8
FW 550N	2310		1650	311	34	3	7	-1	0.3	-1	-1	-0.01	-0.05		-1	0.3	0.6	35	-3	29	79	40	-1	-0.5	-0.2	7.6	-0.1	-0.8	0.7	-0.8
FW 500N	29000		1260	356	119	22	14	-1	0.6	-1	-1	-0.01	-0.05		-1	0.6	0.7	32	9	139	352	42	-1	0.5	-0.2	5.0	-0.1	-0.8	1.0	-0.8
FW 400N	74600		1640	333	91	6	15	-1	0.6	-1	-1	-0.01	-0.05		-1	0.3	1.5	14	-3	69	-10	4	-1	0.7	-0.2	5.2	-0.1	-0.8	0.4	-0.8
FW 200N	27500		1340	335	68	9	30	-1	0.9	-1	-1	-0.01	-0.05		-1	0.5	1.6	24	25	34	208	4	1	-0.5	-0.2	6.0	-0.1	-0.8	0.5	-0.8
FW 100N	12600		1700	330	118	4	10	-1	0.6	-1	-1	-0.01	-0.05		-1	0.2	1.6	8	-3	19	33	3	-1	-0.5	-0.2	4.7	-0.1	-0.8	0.2	-0.8
FW 00	5980		1790	267	41	3	-5	-1	0.2	-1	-1	-0.01	-0.05		-1	0.4	1.7	12	-3	18	29	9	-1	-0.5	-0.2	4.4	-0.1	-0.8	0.7	-0.8
NM 50E	21600		462	189	58	97	8	-1	0.9	-1	1	-0.01	-0.05		-1	0.9	1.1	213	25	157	3570	54	3	0.5	-0.2	58.0	-0.1	-0.8	0.5	1.2
NM 100E	9360		2380	455	82	4	8	-1	0.2	-1	-1	-0.01	-0.05		-1	0.5	0.9	7	-3	21	55	2	-1	-0.5	-0.2	2.5	-0.1	-0.8	0.2	-0.8
NM 150E	8460		1060	248	85	5	12	-1	0.4	-1	-1	-0.01	-0.05		-1	0.7	1.0	37	10	76	233	3	-1	-0.5	-0.2	9.6	-0.1	-0.8	0.4	-0.8
NM 200E	21100		793	238	136	4	-5	-1	0.4	-1	-1	-0.01	-0.05		-1	0.8	1.1	71	23	94	367	3	-1	0.7	-0.2	5.2	-0.1	-0.8	0.4	-0.8
NM 250E	2750		989	327	52	3	12	-1	0.3	-1	-1	-0.01	-0.05		-1	1.2	1.1	15	15	23	165	3	-1	-0.5	-0.2	6.3	-0.1	-0.8	0.2	-0.8
NM 300E	77700		1370	259	100	6	45	-1	0.8	-1	-1	0.04	-0.05		-1	1.1	1.3	95	44	39	211	8	2	-0.5	-0.2	12.0	-0.1	-0.8	0.7	-0.8
NM 350E	25000		837	178	82	5	-5	-1	0.6	-1	-1	-0.01	-0.05		-1	1.0	0.9	25	-3	162	124	1	-1	-0.5	-0.2	3.9	-0.1	-0.8	0.7	-0.8

Certified By:



D. D'Anna, Dipl. T.
ICPMS Technical Manager, Activation Laboratories Ltd.

Date Received: 07-Nov-02

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Unless otherwise instructed, samples will be disposed of 90 days from the date of this report.

Date Reported: 13-Nov-02

Enzyme Leach Job #: 26162 Report #

Trace element values are in parts per billion

Values = 999999 are greater than the wc

Regular Package:

Sample ID:	High-Field Strength Elements:							
	S.Q. Ti	S.Q. Cr	Y	Zr	Nb	Hf	Ta	
FW 1550N	-100	-20	17.7	5	-1	0.2	-0.1	
FW 1500N	167	-20	12.2	3	-1	0.2	-0.1	
FW 1450N	-100	-20	27.1	5	-1	0.2	-0.1	
FW 1400N	-100	-20	78.5	3	-1	0.3	-0.1	
FW 1350N	-100	-20	33.0	3	-1	0.2	-0.1	
FW 1300N	-100	-20	17.5	3	-1	0.1	-0.1	
FW 1250N	-100	-20	15.5	5	-1	0.2	-0.1	
FW 1200N	-100	-20	5.1	2	-1	-0.1	-0.1	
FW 1150N	144	-20	10.7	6	-1	0.2	-0.1	
FW 1100	138	-20	9.8	7	-1	0.3	-0.1	
FW 1050	-100	-20	19.7	4	-1	0.2	-0.1	
FW 1000	-100	-20	6.7	2	-1	-0.1	-0.1	
FW 950N	173	-20	10.8	5	-1	0.2	-0.1	
FW 900N	264	-20	12.7	8	-1	0.3	-0.1	
FW 850N	963	-20	16.9	7	-1	0.2	-0.1	
FW 800N	466	-20	44.0	9	-1	0.4	-0.1	
FW 750N	264	-20	17.4	6	-1	0.2	-0.1	
FW 700N	357	-20	20.9	8	-1	0.3	-0.1	
FW 650N	126	-20	22.0	8	-1	0.4	-0.1	
FW 600N	750	-20	17.8	8	-1	0.4	-0.1	
FW 550N	200	-20	15.0	8	-1	0.3	-0.1	
FW 500N	752	-20	11.8	20	-1	0.6	-0.1	
FW 400N	312	-20	13.6	10	-1	0.5	-0.1	
FW 200N	861	-20	7.4	9	-1	0.5	-0.1	
FW 100N	360	-20	20.0	6	-1	0.3	-0.1	
FW 00	194	-20	16.8	7	-1	0.3	-0.1	
NM 50E	921	-20	12.3	6	1	0.3	-0.1	
NM 100E	233	-20	12.0	3	-1	0.2	-0.1	
NM 150E	664	-20	9.4	5	-1	0.3	-0.1	
NM 200E	866	-20	11.8	6	-1	0.3	-0.1	
NM 250E	516	-20	6.8	14	-1	0.4	-0.1	
NM 300E	1070	-20	18.8	11	-1	0.4	-0.1	
NM 350E	243	-20	18.1	9	-1	0.4	-0.1	

Rare Earth Elements:

La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
11.1	102	5.3	24.8	7.4	2.3	5.8	1.0	5.2	0.9	2.7	0.4	2.7	0.4
10.8	33.7	3.3	14.2	3.3	1.2	2.9	0.5	2.6	0.5	1.4	0.2	1.3	0.2
15.9	51.8	5.4	23.3	6.3	2.3	5.4	1.1	5.7	1.1	3.3	0.4	2.4	0.3
76.1	293	27.5	127	35.3	10.6	24.6	4.6	22.2	4.1	10.6	1.4	8.7	1.2
23.7	55.0	7.6	34.2	8.4	3.0	6.5	1.5	6.5	1.3	3.6	0.5	3.1	0.5
16.6	70.0	5.2	22.5	5.7	2.1	4.5	0.8	3.9	0.7	1.9	0.3	1.7	0.2
11.8	35.6	3.8	17.1	4.8	1.4	3.7	0.7	3.9	0.8	1.9	0.2	1.7	0.2
4.2	10.2	1.4	6.3	1.5	0.5	1.4	0.2	1.3	0.2	0.6	-0.1	0.5	0.1
10.0	27.9	2.9	12.6	3.2	1.2	2.6	0.5	2.1	0.5	1.3	0.1	1.0	0.1
7.0	19.9	2.9	13.3	3.0	0.9	2.7	0.5	2.4	0.5	1.4	0.2	1.5	0.2
24.3	138.0	8.2	34.9	7.1	2.0	6.2	1.0	4.6	0.8	2.3	0.3	1.9	0.3
9.7	21.3	2.2	8.7	1.9	0.6	1.7	0.3	1.3	0.3	0.7	-0.1	0.6	-0.1
18.2	38.2	4.4	17.7	3.8	0.8	3.2	0.5	2.3	0.4	1.3	0.1	0.8	0.1
17.2	10.5	3.7	15.2	3.5	0.9	2.6	0.4	2.0	0.4	1.2	0.2	1.2	0.1
16.8	32.6	4.3	19.0	4.3	2.0	3.6	0.6	3.0	0.6	1.7	0.2	1.6	0.2
30.0	31.5	10.4	47.6	10.9	3.8	8.6	1.6	7.8	1.6	4.9	0.6	4.4	0.6
17.3	11.1	4.4	20.3	4.6	1.5	3.4	0.6	3.3	0.7	1.9	0.3	1.8	0.3
17.3	29.1	4.9	21.8	5.2	1.7	4.3	0.8	3.7	0.8	2.2	0.3	2.1	0.3
14.4	40.7	6.7	34.1	9.4	2.1	6.9	1.1	5.7	1.2	3.1	0.4	2.4	0.3
11.1	32.0	3.8	18.6	4.6	1.7	4.0	0.7	3.5	0.7	2.1	0.3	1.9	0.3
10.2	22.9	3.5	16.9	4.4	1.2	3.4	0.6	3.2	0.6	1.7	0.2	1.5	0.2
6.5	17.2	2.6	11.5	3.1	1.2	2.7	0.5	2.8	0.5	1.4	0.2	1.4	0.2
4.9	6.7	1.8	9.2	2.6	0.9	2.2	0.5	2.4	0.5	1.4	0.2	1.4	0.2
3.4	5.9	1.0	5.2	1.5	0.5	1.2	0.3	1.7	0.3	0.8	0.1	0.7	-0.1
5.7	8.5	1.9	10.1	2.6	0.7	2.2	0.5	2.8	0.7	1.9	0.3	1.7	0.3
9.2	24.2	3.5	16.4	4.1	1.1	3.4	0.6	3.4	0.7	1.9	0.3	1.6	0.2
4.2	10.6	1.6	7.5	2.3	1.0	2.0	0.4	2.5	0.5	1.5	0.2	1.6	0.2
2.7	8.4	1.4	7.0	1.9	0.5	1.4	0.3	1.9	0.4	1.2	0.2	1.2	0.2
3.7	9.7	1.5	7.6	2.2	0.7	1.8	0.4	2.3	0.5	1.4	0.2	1.4	0.2
4.8	13.1	1.9	9.1	2.6	0.7	2.2	0.5	2.6	0.6	1.6	0.3	1.6	0.2
3.8	10.4	1.3	6.6	2.0	0.5	1.5	0.3	1.8	0.4	1.0	0.2	1.2	0.1
11.4	18.1	3.2	14.5	3.3	1.1	3.4	0.6	3.6	0.7	1.9	0.3	1.6	0.2
9.1	24.6	3.5	17.1	4.9	1.3	4.0	0.8	4.5	0.8	2.5	0.3	2.0	0.3

Lithop

S.Q. Li	Be
2	-2
-2	-2
4	2
57	20
-2	-2
-2	-2
2	-2
2	-2
-2	-2
-2	-2
2	2
2	-2
-2	-2
5	-2
5	4
-2	3
-2	-2
-2	-2
3	2
-2	-2
-2	-2
4	-2
2	-2
-2	-2
4	4
-2	-2
7	-2
6	-2
4	-2
3	-2
-2	-2

Enzyme Leach Job #: 26162 Report #Trace element values are in parts per bill
Values = 999999 are greater than the wc

Sample ID:	<u>h/e Elements:</u>							<u>P.G.E.s:</u>			
	S.Q.	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
FW 1550N	-100	55400	183	35	0.8	301		1	-1	-1	-1
FW 1500N	-100	13100	67	165	0.3	909		-1	-1	-1	-1
FW 1450N	-100	44300	115	354	0.6	952		-1	-1	-1	-1
FW 1400N	-100	167000	149	169	1.1	567		-1	-1	-1	-1
FW 1350N	-100	48900	64	411	0.3	1100		-1	-1	-1	-1
FW 1300N	-100	55200	43	582	0.3	826		-1	-1	-1	-1
FW 1250N	-100	22500	68	162	0.2	387		-1	-1	-1	-1
FW 1200N	-100	12100	52	240	0.2	696		-1	-1	-1	-1
FW 1150N	-100	35500	84	190	0.3	1230		-1	-1	-1	-1
FW 1100	-100	24600	58	131	0.2	371		-1	-1	-1	-1
FW 1050	-100	33300	74	100	0.4	1020		-1	-1	-1	-1
FW 1000	-100	15700	62	287	0.1	858		-1	-1	-1	-1
FW 950N	-100	646	85	79	0.6	157		-1	-1	-1	-1
FW 900N	-100	10700	80	588	0.2	509		-1	-1	-1	-1
FW 850N	-100	104000	49	994	-0.1	2330		-1	-1	-1	-1
FW 800N	-100	41400	68	285	0.3	1080		-1	-1	-1	-1
FW 750N	-100	30200	62	406	0.2	866		-1	-1	-1	-1
FW 700N	-100	23000	88	562	0.4	841		-1	-1	-1	-1
FW 650N	-100	14100	88	90	0.5	524		-1	-1	-1	-1
FW 600N	-100	45000	47	516	0.2	2030		-1	-1	-1	-1
FW 550N	-100	17100	42	234	0.2	593		-1	-1	-1	-1
FW 500N	-100	19700	67	769	0.2	1270		-1	-1	-1	-1
FW 400N	-100	6210	43	570	0.2	756		-1	1	-1	-1
FW 200N	-100	13500	70	527	0.1	343		-1	-1	-1	-1
FW 100N	-100	2030	25	183	-0.1	175		-1	-1	-1	-1
FW 00	-100	4320	41	86	0.1	221		-1	-1	-1	-1
NM 50E	-100	14300	48	472	0.2	716		-1	-1	-1	-1
NM 100E	-100	1890	21	132	-0.1	213		-1	-1	-1	-1
NM 150E	-100	4830	61	348	0.2	540		-1	-1	-1	-1
NM 200E	-100	3630	62	303	0.2	375		-1	-1	-1	-1
NM 250E	-100	3690	30	167	-0.1	263		-1	-1	-1	-1
NM 300E	-100	11800	60	450	0.1	538		-1	-1	-1	-1
NM 350E	-100	3860	50	188	0.3	588		-1	-1	-1	-1

Interpretation of Enzyme LeachSM Data for the Tuzex Project, H. Wahl

by: Gregory T. Hill, Enzyme Exploration Services, Inc.

23 January 2003

Introduction

Enzyme LeachSM data measured from *B*-horizon soil samples on the Tuzex property have been reviewed. A total of 93 samples were collected by H. Wahl between 1999 and 2002 along seven sample traverses: Lines TA, TC, TD, TX, 57A, FW, and NM (Figure 1). The majority of soil samples comprise glacial drift which occurs as a thin cover throughout most of the sampled area.

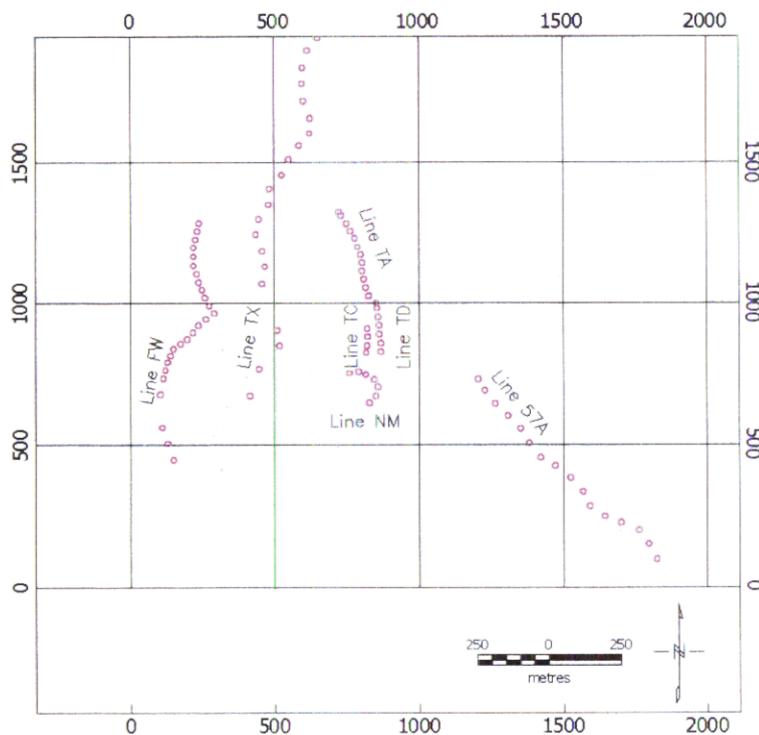


Figure 1. Sample Location Map.

Base Metals

The base metals are extremely enriched in several samples at the northern end of Line FW in an area where Cu, Pb, and Zn showings occur. Other lower-contrast, but strong base metals responses are found on Lines TA, TD, and NM. Weaker base metals highs occur along Line TX. In the case of Zn, a high on Line TX occurs midway along a linear Zn trend marked by the two

areas of highest Zn response on Lines TA (TA 0+50) and FW (FW-1400N). These Zn highs define a WNW-trending zone that is subparallel to the NW-trending Flora shear zone (Figure 2). Lead also clearly defines this trend but this metal is much more enriched in the central and western parts of the trend along Lines FW (FW-1400N) and TX (TX-16). Indium and Cd are also enriched in these samples along the WNW trend; they are partitioned to the western and eastern portions, on Lines FW and TA and absent (In) or only very weakly enriched (Cd) along Line TX.

Thallium, Ni, and Co form halos that encompass the WNW Zn-Pb-Cu zone. The halos formed by these three metals are clearly zoned relative to one another (Figures 2 and 3). The WNW high occurs within the northern margin of the Ni central low, within the northern part of the Co halo, and within a broad apical Tl high surrounded by a distal Tl halo. The Tl distribution is particularly interesting as it is marked by distinctive Tl depletions that define an annular Tl low, indicating that a subtle Tl halo is present largely beyond the sampled area. Thallium also forms a proximal WNW-trending halo associated with the WNW Zn-Pb-Cu zone as indicated by Tl highs on Lines FW and TX, and subtle highs on Lines TA and TC.

Oxidation Suite

Vanadium forms the most distinctive halo in the Tuzex survey. This halo surrounds the Zn-Pb-Cu zone and a distinctive V central low corresponds with this WNW base metals high. Zoning of the oxidation anomaly is strongly indicated by the inverse relationship between V and Tl (Figure 4). Vanadium forms a moderate-contrast halo in the space where the annular Tl low occurs. This is not a one-to-one relationship and is not attributable to instrumental interferences. It is suspected that this inverse relationship reflects electrochemical conditions within this zone of an electrochemical cell centered near TX-17. The Vanadium distribution suggests that this center is west of TX-17, but the central lows of other elements are centered in slightly different locations. The V distribution and those of other elements, such as Co, suggest that the central low extends to the ESE although it appears to become much more subtle in this direction.

Molybdenum forms a distinctive halo centered slightly SW of the V halo (Figure 5). This pattern shows a similar relationship to the V distribution, to the WNW Zn-Pb-Cu high, where these base metals occur tangential to the oxidation suite halos or central lows. Zoning within this oxidation anomaly is further demonstrated by the relationships between these oxidation suite elements and some base metals. These data strongly suggest that mineralization at Tuzex is related to the Flora shear zone. From a geochemical standpoint, some of the clearest evidence of this is illustrated in Figure 6, which shows that the Mo central low is bisected by the Flora shear. The Zn-Pb-Cu zone is tangential to the Mo central low and appears to truncate against the Flora zone near Line FW. On the southern margin of the Mo central low, a WNW-trending embayment within a mapped alteration assemblage truncates against the Flora shear. Taken together, these two WNW-trending zones appear to be offset along the Flora shear in a sinistral sense. Additionally, a NNE-trending fault or shear in the southern part of the survey curves to the NNW where it appears to truncate against the Flora shear. This may represent drag, providing further evidence of sinistral movement of the Flora shear.

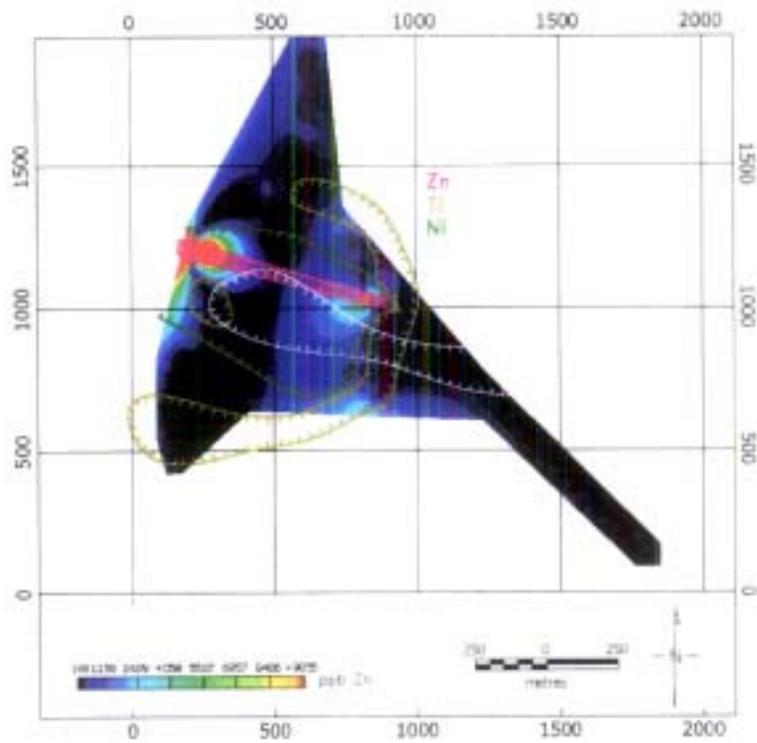


Figure 2. Zinc distribution truncated at 9855 ppb Zn showing WNW-trending Zn-Pb-Cu zone and Tl, Ni, Co central (Tl, Ni, Co) and annular (Tl) lows.

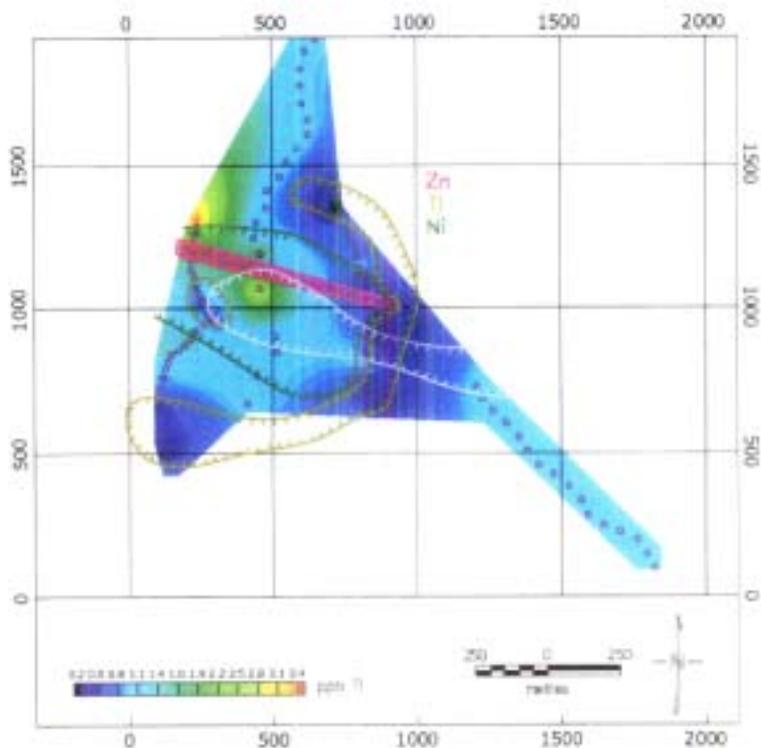


Figure 3. Thallium distribution showing WNW-trending Zn-Pb-Cu zone and Tl, Ni, Co central (Tl, Ni, Co) and annular (Tl) lows.

Other oxidation suite elements are also distributed into halos. However, the patterns formed by most other oxidation suite elements are not as interpretable. This is likely due to the paucity of sampling between sample traverses.

High Field Strength Elements

Zirconium and Ti form distinctive halos surrounding depleted central lows (Figure 7). The Zr and Ti distributions are somewhat similar to the V and Mo distributions and suggest that a mineralized and/or altered zone trends to the WNW and is roughly bounded by the Zn-Pb-Cu high on the north and WNW-trending alteration assemblage embayment on the south.

Lithophile Elements and REE

These groups of elements appear to be partitioned into the oxidation anomaly but most do not form distinctive patterns. Of these elements, Sr forms the most interpretable pattern. This element is commonly redistributed within oxidation anomalies due to changes in pH within an electrochemical cell. The lack of distinctive patterns among the other lithophile elements and REE are likely due to the paucity of samples and possibly to geochemical variations over time associated with flux variations associated with electrochemical cells.

Discussion and Conclusions

A distinctive oxidation anomaly is centered in the western portion of the Tuzex soil survey. The Enzyme LeachSM geochemical distributions suggest that the mineralized system is strongest in the western and central portions and becomes weaker to the east. However, a high level of confidence cannot be attached to this statement due to the paucity of samples, particularly in the eastern part of the oxidation anomaly.

A WNW-trending Zn-Pb-Cu zone occurs tangential to the center of the oxidation anomaly and is recommended as a high-priority target. Additional base metals zones may also be present south of the center of the anomaly, one of which may be adjacent and parallel to the alteration embayment. In order to further assess this, additional sampling is recommended in the southern part of the anomaly. In addition to these WNW-trending zones, the Flora shear zone should be tested by drilling or trenching at the center of the Mo central low. Additional drill or trench testing may also be warranted to the ESE of the Mo central low, within the V central low.

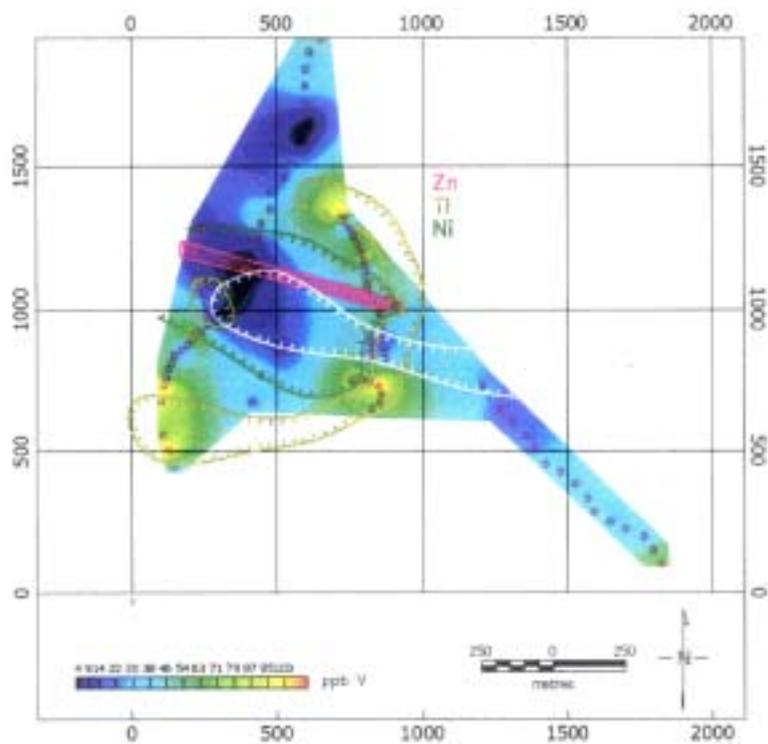


Figure 4. Vanadium distribution showing WNW-trending Zn-Pb-Cu zone and Tl, Ni, Co central (Tl, Ni, Co) and annular (Tl) lows.

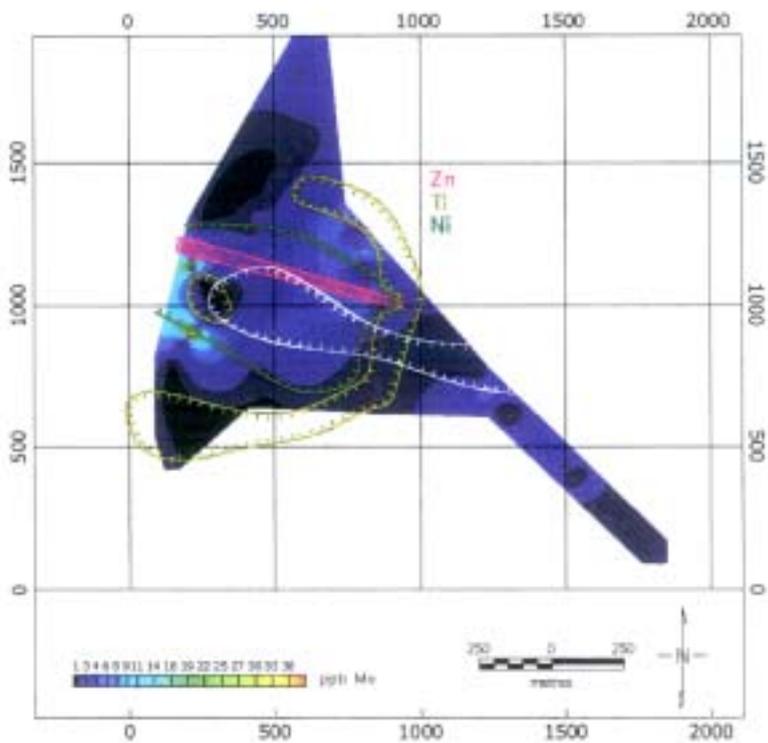


Figure 5. Molybdenum distribution showing WNW-trending Zn-Pb-Cu zone and Tl, Ni, Co central (Tl, Ni, Co) and annular (Tl) lows.

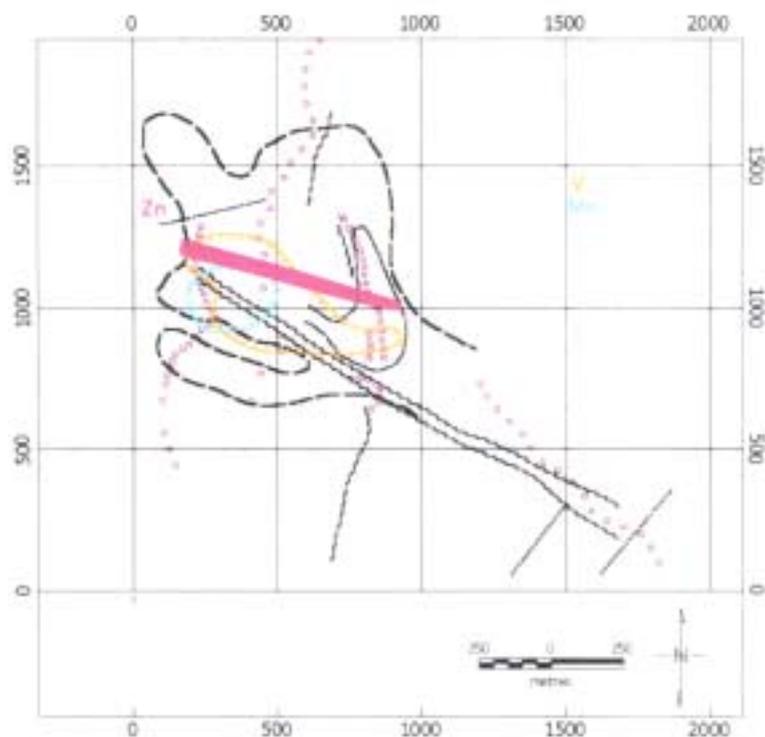


Figure 6. Outlines of Mo and V central lows and WNW Zn-Pb-Cu zone with structural and alteration features.

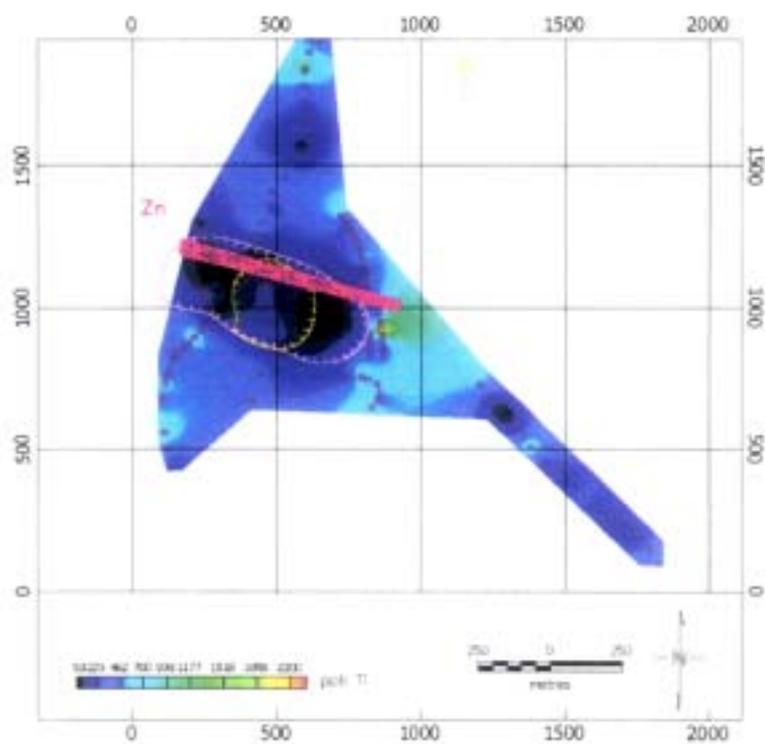
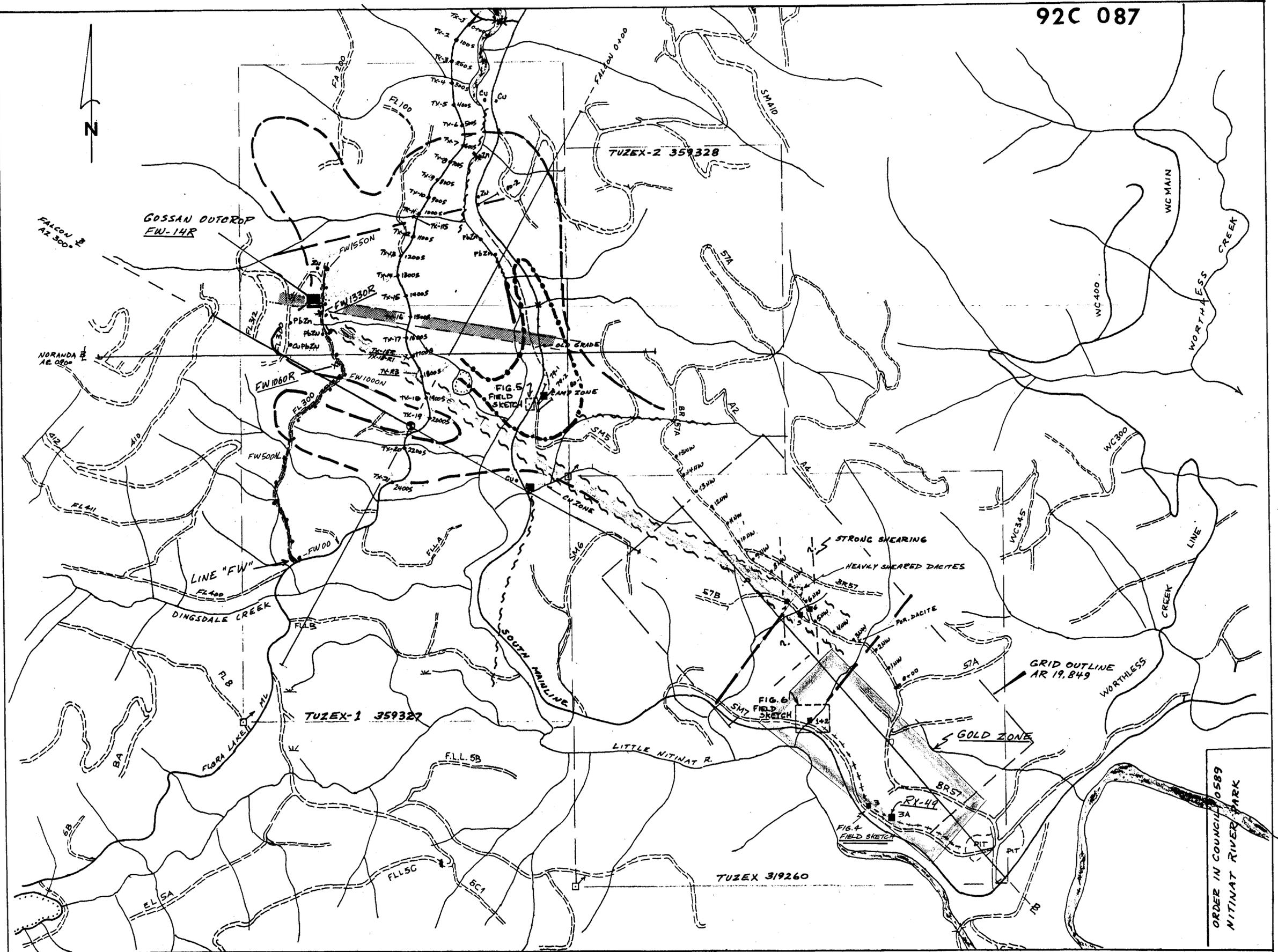
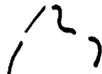
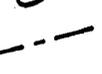


Figure 7. Titanium distribution showing WNW-trending Zn-Pb-Cu zone and outlines of Zr and Ti central lows.



LEGEND

-  OUTLINE ALTERATION ZONE
 -  OUTLINE NORANDA I.P. ANOMALY
 -  PHOTO-LINEAR
 -  ENZYME LEACH SOIL SAMPLE SITE
 -  FW-1060R ROCK SAMPLE SITE
- ENZYME LEACH ZnPbCu ZONE
RE GREG HILL REPORT OF 23 JAN 2003

500 0 500 M
SCALE 1:10,000
BASE CARTOGRAPHY FROM
MACMILLAN BLOEDEL TIMBERLANDS
MAP SCALE 1:20,000 PLOT OF 12-01-1999

FIG.3A

TUZEX CLAIMS
ALBERTI MINING DIVISION VANCOUVER ISLAND, B.C.
<u>COMPILATION MAP</u>
LOCATION OF EZZL SOIL TRAVERSES, SILT & ROCK SAMPLE COLLECTION AREAS UP-DATED NOV. 2002
H.J. WAHL, P.ENG. B.C. AUGUST, 1999

GEOLOGICAL SURVEY BRANCH
ASSURANCE REPORT

27039①

H. Wahl

