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REPORT ON THE
M.U.T. GROUP OF MINERAL CLAIMS
SALMO PROJECT
NELSON MINING DIVISION
for
BENSON MINES LTD. (N.P.L.)

John R. Poloni, B. Sc., P. Eng. June 23, 1978

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by

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John R. Poloni and Associates Ltd., 5502-8B Avenue, Delta, B.C.

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1.0 SUMMARY AND CONCLUSIONS

The M.U.T. Group of mineral claims and the United Verde crown grants are owned by Benson Mines Ltd. by option and grub staking agreement, respectively. The property is located on Lost Creek approximately 7.5 miles south of Salmo, B.C. in the Nelson Mining Division. The main zones of interest are associated with the contact zones of limestone and limy argillite and intrusives where the presence of skarns containing tungsten and molybdenum are sought. On the United Verde claims quartz veins containing lead zinc and silver have been mined in past years.

The property has the potential of containing skarn zones with economic volumes and grades of tungsten and molybdenite mineralization and also lead-zinc and silver bearing veins which could be mineable.

2.0 INTRODUCTION

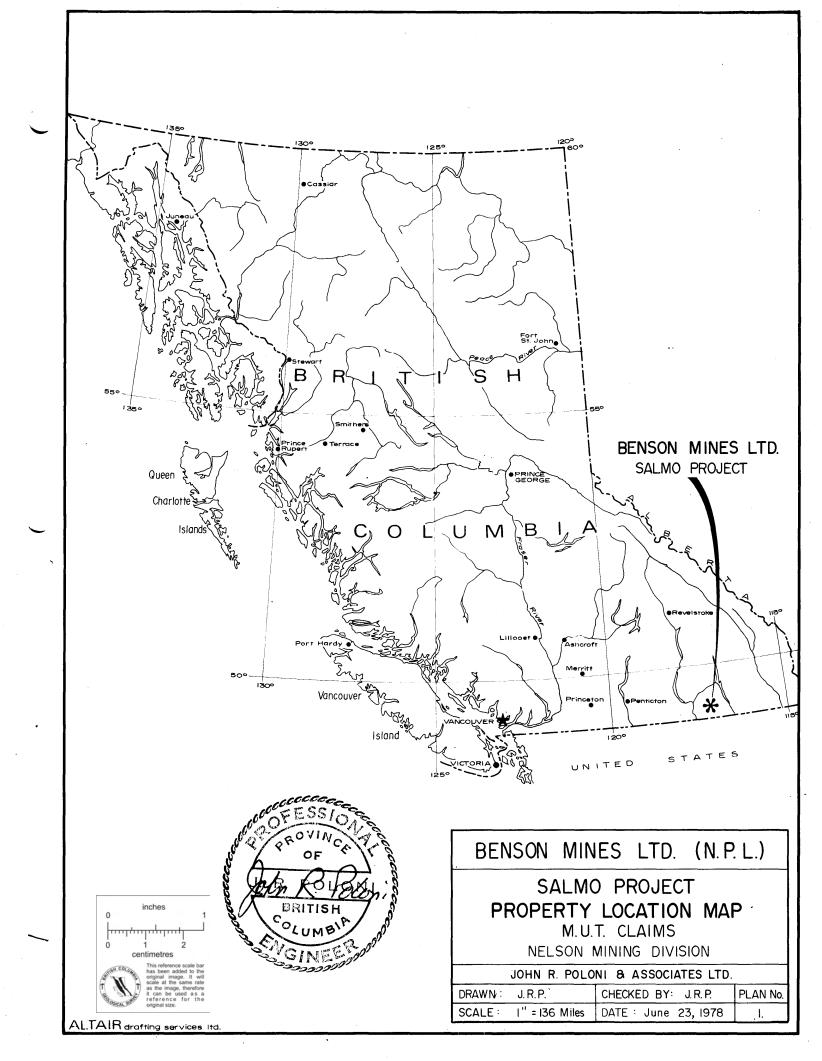
The M.U.T. Group of mineral claims located at Lost Creek, 7.5 miles south of Salmo, B. C., is owned by option agreement by Benson Mines Ltd. of Vancouver, B.C. Recent exploration, including diamond drilling has shown the presence of molybdenum - tungsten minerals in skarn, and silver, lead-zinc minerals in quartz veins in association with a major thrust fault called the Black Bluff fault.

This report is based on a personal examination of the showings, detailed logging of drill hole A-78-2, and a study of previous reports and governmental publications. The author spent the period June 14, 1978 to June 20, 1978 on the property.

A summary of exploration is presented and recommendations are made for a continued program of work, including, geological and geochemical surveys, trenching and further diamond drilling. This work will cover a detailed examination of the four United Verde crown grants and the M.U.T. Group of six claims containing 84 units. An estimate of costs has been prepared.

LOCATION MAP

Plan No. 1



3.0 LOCATION AND ACCESSIBILITY

The claims are located on Lost Creek about 7.5 miles south of Salmo, B.C. Plan No. 2. Elevations range from 3,000 to 5,000 feet above sea level with the property covering two heights of land, the south slope of Nevada Mountain and the north west slopes of Lost Mountain.

Access is via road, south from Salmo, B.C. along
Highway No. 3 to the South Salmo River for 9 miles, then
easterly along the river for 2 miles to Lost Creek. A
4-wheel drive road leads northerly towards the M.U.T.
claims for approximately four miles. A branch of this road
crossing the south arm of Wilson Creek, leading to the
United Verde workings requires upgrading. The northerly
part of the claim group on Nevada Mountain, can be reached
by a road along the north side of Lost Creek.

The N.T.S. Map reference is 82 F/3; Latitude $49^{\circ}05$ 'N and Longitude $117^{\circ}12$ 'W.

4.0 CLAIM INFORMATION

The M.U.T. Group of claims and the United Verde crown grants lie in the Nelson Mining Division of British Columbia. Plan No. 2.

Benson Mines Ltd. of Vancouver holds the claims by option and grub staking agreements. Claims data is as follows:

Claim (Units)	Record No.	Expiry Da	<u>te</u>
Located			
M.U.T. 1 (10)	371 (11)	Nov. 30	/
M.U.T. 2 (10)	372 (11)	Nov. 30	/
M.U.T. 3 (16)	373 (11)	Nov. 30	/
M.U.T. 4 (16)	374 (11)	Nov. 30	/
M.U.T. 5 (16)	377 (12)	Dec. 7/	
M.U.T. 6 (16)	378 (12)	Dec. 7/	
Crown Granted	United Verde		

Name	Lot No.	Acreage	Date of Purchase
Gold Bar	14445	42.55	June 15/78
Silver Crown	14444	28.71	June 15/78
Silver Bar	14443	43.78	June 15/78
Mispickel	14442	42.82	June 15/78

Mr. E. S. Peters of Vancouver, B.C. has a grub staking agreement with Benson Mines Ltd. on the United Verde crown granted claims.

Claims information was obtained from the officers of Benson Mines Ltd. from Mr. E.S. Peters and from claims maps from the Mining Recorder's office in Vancouver and Nelson, B.C.

5.0 HISTORY

5.1 PAST HISTORY

Governmental reports indicated that the Molly Group of crown granted claims was originally located for molybdenite and a small shipment made during World War I. In 1942, Joe Gallo, of Howser, discovered Scheelite in association with molybdenite in skarn and considerable trenching was undertaken. Trenches on the M.U.T. claims were probably undertaken during this period. No history of the adit located on Lost Creek, Plans No. 3 and 5, was found in the literature, but as the geological and mineralogical nature is similar to the molybdenite tungsten showings in the area, the history of discovery is probably similar.

The United Verde crown grants were originally called the Southern Belle property. These were staked by C.E. Wilson in 1895 and later acquired by the Trail Mining Co. operated by Joe Rozeck, Calvin Hicks and others. Two working levels were established, the lower level consisting of a cross-cut for 136 feet. Drifting amounted to 72 feet on two quartz veins in the lower level. A sample across 12 inches of vein material ran: Au 0.02 oz./ton, Ag 4.0 oz./ton, Pb 3.5% and Zn 1.0%. Work on the upper level amounted to 50 feet of drifting, 20 feet of raise and 31 feet of winze. In the raise, 17 inches of vein material assayed: Au-Tr, Ag 2.40 oz./ton, Pb 6.5% and Zn 1.2%. A few tons of sorted ore were shipped which ran Ag 27.3 oz./ton, Pb 30% and

and Zn 0.8%. (Ref. British Columbia Minister of Mines Report 1918).

The property name was changed from the Southern

Belle to the United Verde in 1921, according to the

British Columbia Minister of Mines Report. The report

states "The principal lead is 15 feet wide between clear

well defined walls from which the ore breaks freely. Galena

is irregularly disseminated in bunches and stringers through
out the entire width of the lead which is drifted on for

30 feet. The drift, widened to the full width of the vein,

showed mineralization throughout, with ore in both faces.

A sample across 15 feet gave: gold 0.08 oz., silver 12.9 oz.,

lead 21.6 percent and zinc 1.3 percent."

5.2 RECENT HISTORY

The property was staked as the M.U.T. group of claims in November and December 1976. Geological mapping and sampling of showings, road repair work, the establishment of a survey grid, and the drilling of A-77-1 were undertaken in 1977. The United Verde claims were examined by J. H. Montgomery, P. Eng. in 1977 accompanied by V.M. Ramaling-aswamy, geologist in charge of work on the M.U.T. claims. Mr. Montgomery and Mr. Geshard von Ronen, P. Eng. reported of the M.U.T. project during 1977 and early 1978.

Old dumps, surface showings, and vein material, were sampled by V. M. Ramalingaswamy at the United Verde during 1977. Three samples of vein material picked from the dumps assayed between 1.51 - 5.83% Pb, 0.17 - 6.30% Zn and 1.24 - 4.66 oz./ton Ag. Two samples of vein material from

underground in the "Big" vein and the first vein assayed 5.78% Pb, 2.17% Zn, 3.12 oz./ton Ag and 0.28% Pb, 5.54% Zn, 0.66 oz./ton Ag respectively.

Two surface samples of skarn type, limy argillite taken along the access road to the main M.U.T. camp at location C, Plan No. 4 assayed 1.09% and 1.01% WO₃ respectively.

During 1978, two drill holes were completed to June 20, in an attempt to better define the areas of tungsten mineralization found in A-77-1. The results of this work will be discussed in Section 7.0, Work Programs and Results.

6.0 GEOLOGY

6.1 REGIONAL PICTURE

James T. Fyles and C. G. Hewlett, British Columbia Department of Mines Bulletin No. 41, mapped the stratigraphy and structure of the Salmo Lead-Zinc area. described in 1959, the area is underlain by late Precambrian and early Paleozoic sedimentary and metamorphic rocks, Mesozoic volcanic rocks, and late Mesozoic and Tertiary granitic rocks. The map area is divided into four belts westerly to easterly, the Mesozoic volcanic area, the Mine Belt, the Black Argillite Belt, and the Eastern Belt. These areas are separated by three eastward and southward dipping regional thrust faults. Granitic masses are later intrusions. Volcanic rocks are found northwest of the Salmo and north of the Pend d'Oreille Rivers. All known major lead-zinc deposits from the Jack Pot to the Reeves MacDonald mines are found in the Mine Belt. Lying east of the Mine Belt, the Black Argillite Belt covers an area up to two miles wide. Eastern Belt is separated from the Black Argillite Belt by the Black Bluff Thrust Fault. Plan No. 3.

Montgomery J. H. 1977, describes the Argillite Belt as being composed of Unit 9, the Active Formation of Ordivician Age; Unit 5, the Reeves Member of the Laib Formation of Lower Cambrian Age and Unit 4, the Truman member of the same formation and also of Lower Cambrian age. The Eastern Belt is composed of the Upper Laibs Formation also of Lower Cambrian age.

Mineral deposits of interest in the area include the Molly Mine, the Jumbo claims, the Tungsten King and Dodger, the Jack Pot, the Reeves MacDonald and the H. B. Mine.

6.2 LOCAL GEOLOGY

The main areas of interest on the M.U.T. claims is underlaid by argillite, limestone and limy argillite of the Active Formation adjacent to the Lost Creek stock intrusive contact. Scheelite and molybdenum occurs in contact areas in garnet-diopside skarn and also in quartz stringers in the altered granite near the contact zone.

On the United Verde claims, lead, zinc and silver mineralization has been found in quartz veins in close proximity to the Black Bluff fault zone. Here Cambrian rocks have overridden Ordovician rocks.

From work undertaken by Ramalingaswamy V. M. in 1977 and observations by the author, sulfides appear to occur in the United Verde mine in quartz veins in zones of crushed argillite and argillaceous limestone.

In view of the favourable geology and the presence of molybdenum, tungsten, silver, lead and zinc mineralization a further program of exploration is warranted.

7.0 WORK PROGRAMS AND RESULTS

During 1977 geological, physical and drilling exploration was undertaken on the M.U.T. claims. The results of these surveys have been summarized by V. M. Ramalingaswamy in a report dated March 10, 1978 titled, "Report on Geological, Physical and Drilling Work", M.U.T. Claims Group, Salmo Area, B.C.

Work programs consisted of geological mapping, physical work including building and repair of property and drill site access roads, and diamond drilling. These programs were shown to cost \$19,098.00 with the largest expenditure being for cat work and the diamond drilling of A-77-1.

During 1978 two further drill holes were completed A-78-1 and A-78-2 for a total meterage of 353.0 meters.

Program results on the M.U.T. claims are extremely encouraging and while no wide sections of ore grade materials have yet been encountered, narrow sections of tungsten and molybdenum values of importance have been obtained. Drill hole A-77-1 contained narrow widths of from 0.06 to 0.33% WO₃. Zone C, Plan No. 4, called the "1% Showing" assayed 1.01 and 1.09% WO₃ across approximately 2.0' in surface outcrop. Trace values of tungsten were observed in both holes A-78-1 and A-78-2 and while no assays were done, sections of the core indicated tungsten by lamping.

The rediscovered adit on Lost Creek, shown as Zone B, Plan No. 4, contains garnet-dropside skarn at a limestone-

granite contact having values of between 0.18 to 0.68% WO₃ in four-2 foot chip samples.

Section 5.2 describes the recent history of the property including the results of an examination of the United Verde crown granted claims. Assays on chip samples of two veins cut by the lower level cross cut gave 5.78% Pb, 2.17% ZN, 3.12 oz. Ag/ton and 0.28% Pb, 5.54% Zn and 0.66 oz. Ag/ton.

Plan No. 6, a section through the area of drilling during 1977-78, indicates that the limestone granite contact was not cut in drilling. Drill hole A-77-1 had cut limestone and skarn containing tungsten minerals ranging from 0.06 to 0.33% WO₃. Drill hole A-78-1 was located to intersect the assumed or projected zone of contact of the granite with this tungsten bearing skarny limestone, however it entered a highly faulted section of argillite which contained only brecciated sections of limestone. The hole had to be aborted short of projected target. A-78-2, an inclined hole to the North West, cut only argillite and limy argillite with minor tungsten minerals, before being stopped in highly altered granite. Plan No. 6, the present interpretation of the geology, shows that the limestone containing the tungsten minerals cut in A-77-1 was possibly cut off by a granitic protrusion. A further drill hole is warranted, located between A-77-1 and A-78-2 to test for the limestone granite contact area.

8.0 EXPLORATION TARGETS

An examination of all pertinent data on the M.U.T. and United Verde claims indicates that several areas are prime targets for exploration for tungsten, moly-bdenum, lead, zinc and silver mineralization. A listing and description of these zones of interest follows with locations shown as areas A to H inclusive in Plan No. 4.

Area A

This the present target area where three drill holes have been completed, tungsten mineral intersected but no limestone granite contact area yet tested, section 7.0. At least one further hole is required.

Area B

The contact zone between a limestone unit over 300 feet thick in the active formation and the intrusives of the Lost Creek stock contain tungsten-molybdenum in skarn as shown Plan No. 5. The adit in the contact zone cuts limestone and skarn and contains mostly potassium feldspar, diopside, tremolite and pyrrhotite. The intrusive is highly altered and devoid of mafics.

Two short drill holes are required to explore this skarn and examine extensions of the tungsten-molybdenum mineralization recently sampled.

Area C

The "One percent Showing" requires further exploration. This is described as an area of hornfels containing tremolite and secondary biotite over

300 feet thick visible in a road cut. Mineralization is mainly rusty weathering pyrrhotite and pyrite containing tungsten with assays of 1.01 and 1.09% WO₃. Detailed mapping, soil geochemistry, and bulldozer trenching are necessary initially. Diamond drilling of at least one hole would be necessary after further detailed sampling.

Area D

Immediately south of the Molly group of claims and in close proximity to the intrusive contact, is Area D where mapping has shown that the dip direction of bedding is opposite to the regional trend, indicating the possible occurrence of a trough. A well defined trough exists in the contact area skarn on the Molly claims, where the limestone unit has been converted to a wollastonite-garnet skarn. Detailed mapping, and trenching is necessary, with closely controlled soil geochemistry. Diamond drilling will be needed if results of the initial surveys are encouraging.

Area E

The Jumbo claims have been explored by adit, drift and winze in the contact zone between limestone or limy argillite and granite. A channel sample across 5 feet assayed 0.50% WO₃ and 0.03% MoS₂ according to Little H.W., Economic Geology Series, No. 17, G.S.C. 1959. While these claims are not controlled by Benson Mines Ltd., areas of similar

geological interest are found in close proximity which require detailed surveys. Geological mapping, soil geochemistry, bulldozer trenching are necessary prior to any diamond drilling.

Area F

The contact zone between the Nelway Dolomite and the Lost Creek stock is a prime exploration target, especially where cut by the Black Bluff regional thrust fault. This area requires preliminary geological and geochemical surveys as no known mineralization is presently indicated.

Area G

Prospecting of this area for the possible occurrence of skarn on the south eastern side of the Reeves Limestone is warranted. This will require preliminary surveys of geochemistry and geology.

Area H

Area H includes the United Verde claims where geological, geochemical surveys and bulldozer trenching are necessary to evaluate the extent of silver, lead-zinc mineralization previously explored and mined by adit, drift, raise and winze.

9.0 RECOMMENDATIONS

The geology on the M.U.T. claims is similar to that found on the Tungsten King and Molly Mine properties where scheelite has been found in skarn which has developed in limestone and limy beds of the Active formation. The eight zones of exploration interest, section 8.0, require detail surveys.

Geochemical Soil Sampling

Survey grids are to be established using 200 foot line and 200 foot station intervals. Soil samples collected, will be analysed for molybdenum, tungsten and in the case of the United Verde claims for lead, zinc and silver.

Geological Mapping

A geological map of all outcrops should be prepared on a scale of 1:2000 with detailed maps at a smaller scale for areas of prime importance.

Trenching

Bulldozer trenching is necessary in the area of the "One percent Showing", in Area D south of the Molly claims and on the United Verde claims. Further trenching could be necessary subject to the success of preliminary geology and geochemistry surveys.

Diamond Drilling

At least three drill holes are necessary to fully test two of the target areas. One hole is required between drill holes A-77-1 and A-78-2. Two holes are required to test Area B where tungsten and molybdenum mineralization has been sampled.

Further drilling is contingent on the results of preliminary surveys, but from the nature of the geology and mineralization found to date, plans should be made to drill at least three further holes.

10.0 COST ESTIMATE

1.	Line Cutting 50 line kilometers @ \$70.00	\$	3500.00
2.	Geochemical Surveys - collection of samples including sample prepara and analysis	tio	n 6000.00
3.	Geological Mapping Geologist for 2 months		3000.00
4.	Bulldozer Work Road Work (United Verde, etc.) 30 hours @ 50.00		1500.00
	Trenching United Verde, One percent Showing, Area D 150 hours @ 50.00		7500.00
	Mobilization costs		1500.00
5.	Transportation, Food, Camp, Supplies, Truck Rental		3000.00
6.	Diamond Drilling AQ core size 350 m @ 35.00	,	12250.00
7.	Contingencies		3000.00
	Total	\$ 4	1,250.00

June 23, 1978

Delta, B. C.

Respect Fulls Submitted,

OF

J. R. POLONI

John R. Coloni

B. Schaper

APPENDIX A

References

REFERENCES

- James T. Fyles and C. G. Hewlett 1959,
 "Stratigraphy and Structure of the Salmo Lead-Zinc Area", British Columbia Department of Mines, Bulletin No. 41.
- 2. J. H. Montgomery, Ph. D., P. Eng. September 3, 1977, Report on the M.U.T. Group of Mineral Claims, Nelson Mining Division, B. C.
- V. M. Ramalingaswamy, March 10, 1978, Report on Geological, Physical and Drilling Work, M.U.T. Claims Group, Salmo, B. C.
- 4. Gerhard von Rosen, P. Eng., January 12, 1978, Progress Report on the M.U.T. Mineral Claims, Salmo, B.C.
- 5. A. E. Weissenborn, Editor, U.S.G.S., Lead-Zinc Deposits in the Kootney Arc., Bulletin No. 61, 1970.
- 6. Minister of Mines Reports for British Columbia 1918, 1919, 1920 and 1921.
- 7. H. W. Little, 1959, Tungsten Deposits of Canada. Geological Survey of Canada Economic Geology Series No. 17.

APPENDIX B

Certificate

CERTIFICATE

- I, John R. Poloni, of 5502 8B Avenue, in Delta, in the Province of British Columbia,

 DO HEREBY CERTIFY THAT:
 - 1. I am a Consulting Geologist.
 - 2. I am a graduate of McGill University of Montreal, Quebec, where I obtained a B. Sc. degree in Geology in 1964.
 - 3. I am a registered Professional Engineer in the Geological Section of the Association of Professional Engineers of the Province of British Columbia.
 - 4. I have practiced my profession since 1964.
 - 5. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
 - 6. I have personally visited the United Verde property.
 - 7. I have no interest in the properties or securities of Benson Mines Ltd. nor do I expect to receive or acquire any.

Dated this 23rd day of June 1978.

J. R. POLONI

BRITISHON

John R. POLONI

John R. POLONI

POLONI

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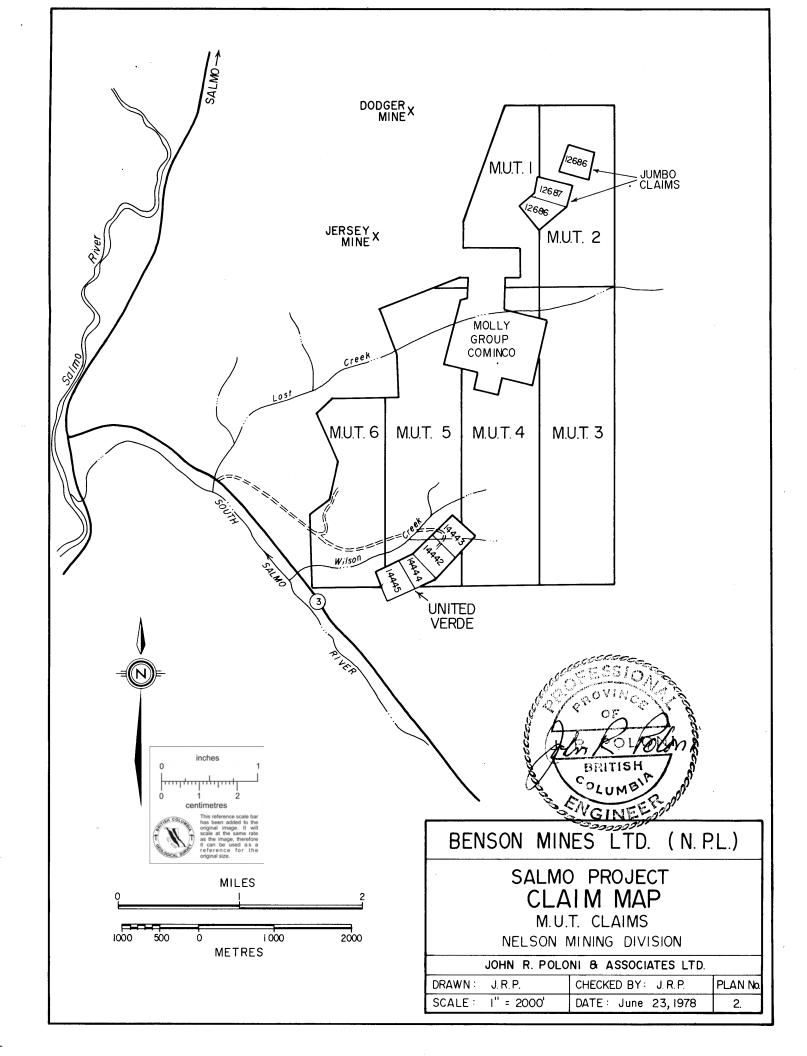
John R. POLONI

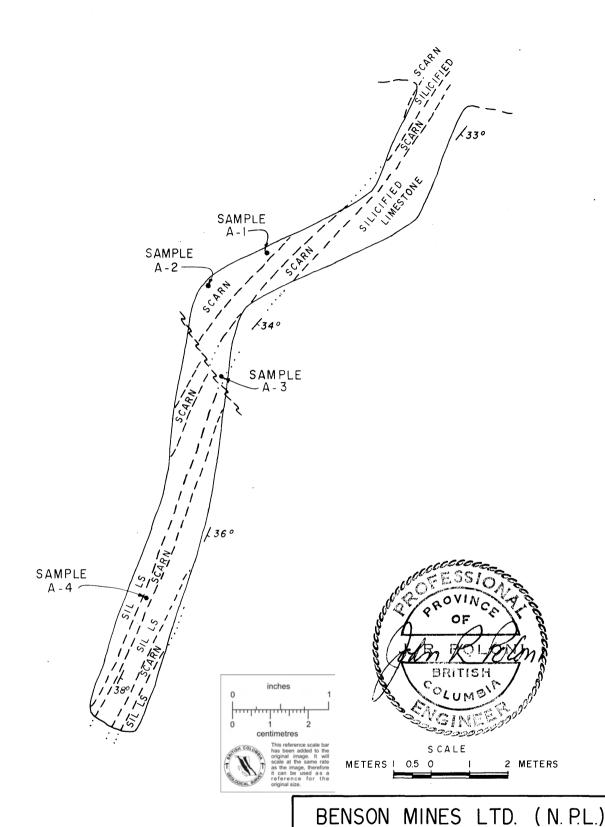
PO

B. Sc., P. Eng.

APPENDIX C

Maps		Scale
Plan #2	Claim Map M.U.T. Claims	As shown
Plan #3	Geology Map M.U.T. Claims	1:2000
Plan #4	Zones of Exploration Interest	1:2000
Plan #5	Tungsten Adit Lost Creek	As shown
Plan #6	Section A-A ¹	As shown





NOTE

MAPPED BY: V.M. RAMALINGASWAMY
SCARN: PYRRHOTITE, K-SPAR, DIOPSIDE
TREMOLITE, SCHEELITE, POWELLITE, Mo.
SILICIOUS LIMESTONE: TREMOLITE, WOHASTONITE,
TRACE SCHEELITE
FOR ASSAY DATA REFER TO APPENDIX C.

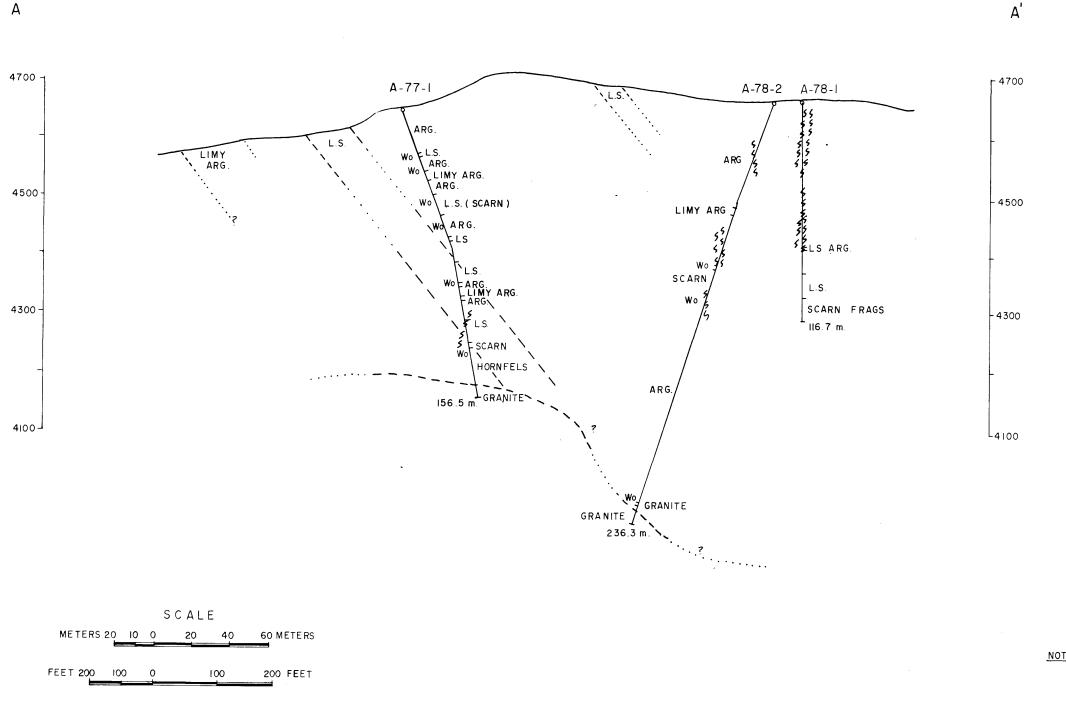
M.U.T. CLAIMS

NELSON MINING DIVISION

SALMO PROJECT

TUNGSTEN ADIT-LOST CREEK

DRAWN: J. R.P. CHECKED BY: J. R.P. PLAN No. SCALE: AS SHOWN DATE: June 23, 1978 5





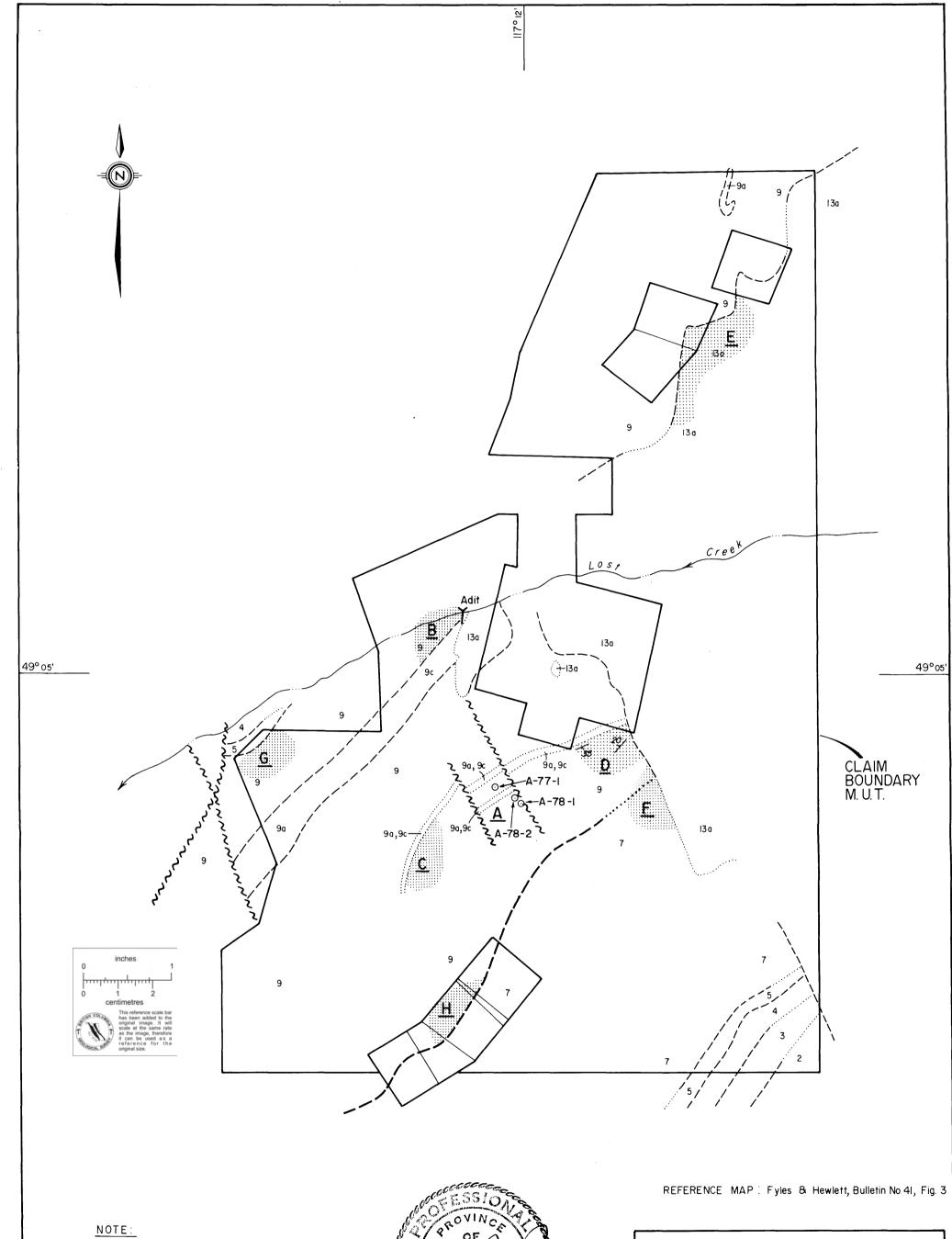
NOTE LOOKING N.E.

BENSON MINES LTD. (N. P.L.)

SALMO PROJECT

M.U.T. CLAIMS NELSON MINING DIVISION

	JOHN R. POLO	NI & ASSOCIATES LTD.	
RAWN:	J. R. P.	CHECKED BY: J.R.P.	PLAN No.
SCALE:	1" = 2000'	DATE: June 23, 1978	6



- FOR GEOLOGY REFER TO PLAN No.3
- -- FOR DESCRIPTION OF ZONES OF EXPLORATION POTENTIAL REFER TO SECTION <u>8</u>



BENSON MINES LTD. (N. P.L.)

SALMO PROJECT ZONES OF EXPLORATION INTEREST

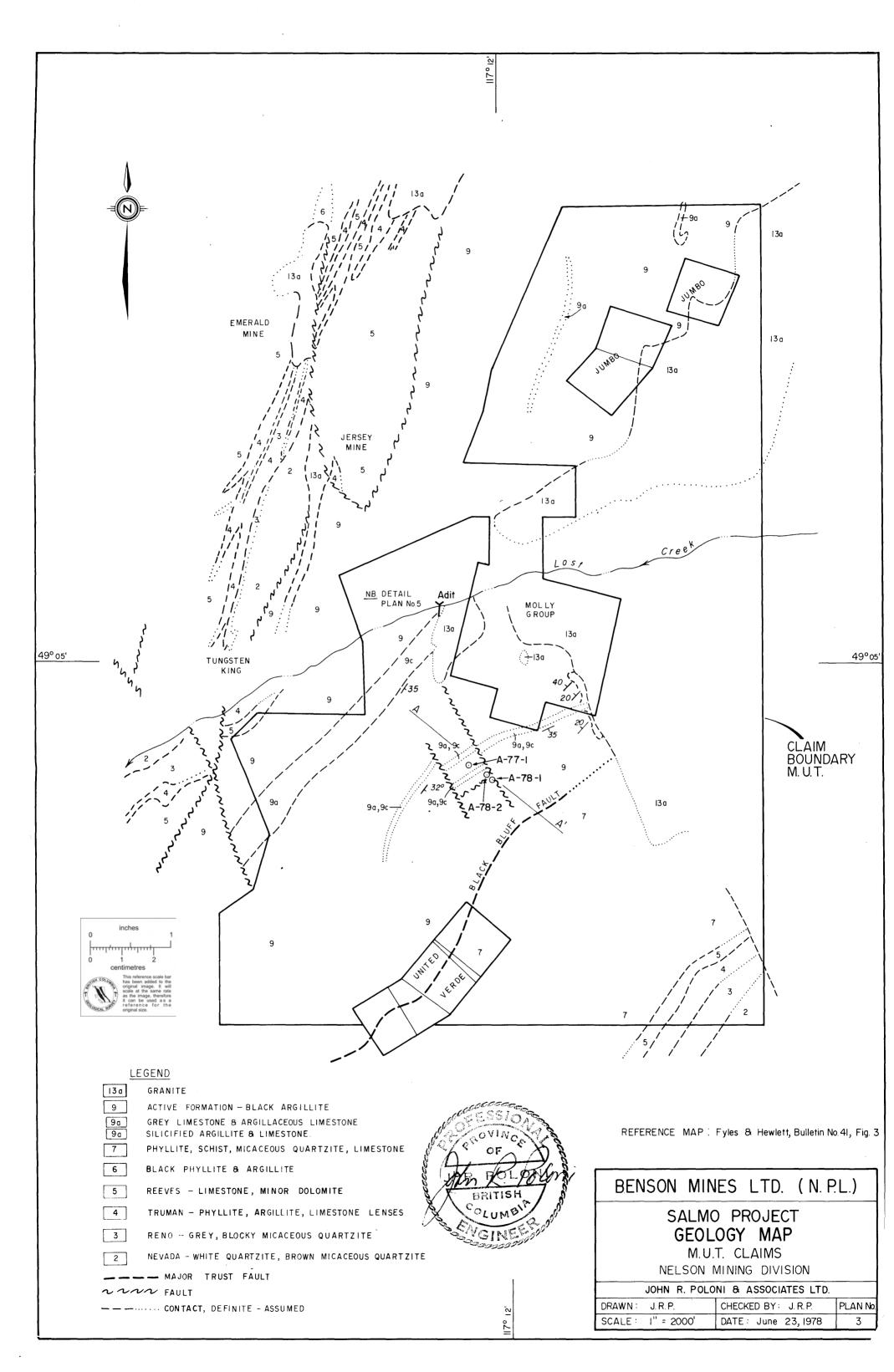
M.U.T. CLAIMS

NELSON MINING DIVISION

JOHN R. POLONI & ASSOCIATES LTD.

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DRAWN:	J. R. P.	CHECKED BY: J.R.P.	PLAN No.
SCALE:	l'' = 2000'	DATE: June 23,1978	4

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APPENDIX D

- 1. Sample location and description United Verde
- 2. Assay Data United Verde
- 3. Assay Data One percent Showing
- 4. Assay Data Tungsten adit Lost Creek
- 5. Assay Data A-77-1 Selected intervals
- 6. Drill Logs A-77-1, A-78-1, A-78-2.

UNITED VERDE 1977

INITIAL ADIT SAMPLES

Assay No.	Sample No.	Location and Description
61901	U.V. 77-1	5', Easterly open cut on South Wilson Cr.
61902	U.V. 77-2	6', CU. stain crushed zone, minor qtz. ca. veins
	U.V. 77-3	15', Same as above - sample omitted.
61904	U.V. 77-4	3', Vein with CU. Stain.
61905	U.V. 77-5	5', Vein, qtz. & crushed gouge.
61906	U.V. 77-6	4', Vein, same as above.
61907	U.V. 77-7	5', Veinlets of qtz. in crushed argillite.
61908	U.V. 77-8	5', Heavy oxidized fault zone, veinlets qtz.
61909	U.V. 77-9	Banded dolomite at end of 3rd adit.
61910	U.V. 77-10	Samples on dump from big vein.
61911	U.V. 77-11	Dump rock #2 adit portal.
61912	U.V. 77-12	Dump rock #1 adit portal.
61913	U.V. 77-13	4', Big vein, north side.
61914	U.V. 77-14	First X-cut drift on first vein.



CHEMEX LABS LTD.

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AREA CODE:

TELEX:

043-52597

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 32453

INVOICE NO.

20046

TO: Capcan Investments 904 - 845 Dunsmuir

Mr. E. Peters

RECEIVED

May 18, 1977

Vancouver, B.C.

ATTN:

ANALYSED

May 20, 1977

0.110.5.10	7	%	%	oz/ton	
SAMPLE NO. :	Cu	Рb	Zn	Ag	
61901	0.02	0.04	0.09	0.02	
2	0.01	<0.01	0.38	0.08	
4	0.01	0.41	0.82	0.17	
5	0.01	0.14	0.40	0.03	
6	0.03	1.33	0.22	1.03	
7	0.02	0.04	0.36	0.08	
8	<0.01	0.20	0.35	0.13	
9	<0.01	0.01	<0.01	<0.01	
10	0.29	1.51	6.30	1.44	DUMP VEIN MATERIAL
11	0.12	5.83	0.17	4.66	DUMP " "
12	0.03	1.84	3.53	1.24	DIMP "
13	0.29	5.78	2.17	3.12	JEIN GIZ 4/6
61914	0.33	0.28	5.54	0.66	" " "

MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA



10 Showing

GENERAL TESTING LABORATORIES

DIVISION SUPERINTENDENCE COMPANY (CANADA) LTD.

Zuve 1001 EAST PENDER ST., VANCOUVER, B.C., CANADA, V6A 1W2
PHONE (604) 254-1647 TELEX 04-507514 CABLE SUPERVISE

MR. ERNIE PETERS Zune WEST WIND MINES LTD. 904 - 885 Dunsmuir Street Vancouver, B.C.

GRAB

CERTIFICATE OF ASSAY

No.:7709-2958

DATE: Oct. 7/77

We hereby certify that the following are the results of assays on:

TO:

Ore and Rock samples

	XXXXXXXXX	XXXXXX	Molybdenit	e Zinc	Tungsten	XXX	XX	XXX
MARKED	OZ/ST	OZ/ST	1		1			
	GR/MT	GR/MT	MoS ₂ (%)	Zn (%)	WO3 (%)			
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E-071485								
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01 - 9 - 77			< 0.001	0.079	1.09			
02 - 9 - 77			< 0.001	0.011	1.01			
03 - 9 - 77			**	-	trace			
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NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST PULPS AND REJECTS WILL BE STORED FOR A MAXIMUM OF ONE YEAR.

. REPORTS ARE THE CONFIDENTIAL PROPERTY OF CLIENTS. PUBLICATION OF STATE-TATS. CONCLUSION OR EXTRACTS FROM OR REGARDING OUR REPORTS IS NOT PER-MITTED WITHOUT OUR WRITTEN APPROVAL. ANY LIABILITY ATTACHED THERETO IS LIMITED TO THE FEE CHARGED. A adlaw

- Chemist

PROMOGRACION SON BOX



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CERTIFICATE OF ASSAY

No.: 7806-1350

DATE: June 20/78

We hereby certify that the following are the results of assays on:

	XXXXXX	A SUVER	Tung	reten	Molyb	derren	XXX	XXX	XXXX	XXX
MARKED			WO	(%)	No (%)				
N-8013										
										44.
A 1			0.	18	0.01	3	2'	C41P		
A 2			0.	68	**		2'	,		
A 3				48					·	
							2′	-		
# 4			Q.	26	-		2'			
				·						
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n at										
E DE COTO DETANCE - : -					<u></u>				,	1
E: REJECTS RETAINED ONE PULPS AND REJECTS WI	LL BE STORED FO	ETAINEU THRE DR A MAXIMUN	MONTH	IS. ON I	HEQUEST					





DDH #A-77-1 SURCTED INTERVALS

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

· ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO.

33366

TO: Westw

Westwind Mines
904 - 885 Dunsmuir

INVOICE NO.

22940

Vancouver, B.C.

RECEIVED

Dec. 20/77

ATTN:

ANALYSED

Dec. 22/77

ATTN:				,,	(21020	Dec. 22/77
SAMPLE NO. :	%	% DI	%	%		
71 201	Mo 0.036	Pb	Zn	wo ₃	Action to the second se	
71301	0.030	< 0.01	1.46			
71302		. 0.01	1.40	0.06	BOTTO	M
71303				0.08		
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REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

•			
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	10.		

PROJECT: M.U.T. SALMO

CATION: Near Upper Trench near Cabin ORDINATES: 41° 05'N, 117° 12'W

TS: 82F3E ELEV, 4650 (Approx)

CLINATION: 70° SE AZIMUTH: NI30°E

TAL DEPTH 512' \$456.5 metres)

PRIZ. PROJ. VERT. PROJ.

		SURVEY
LENGTH	שופ	AZIMIUTH

HOLE STARTED: Noy 20, 1977
HOLE COMPLETED DEC 16, 1977
DRILLED BY: LOGAN DIAMOND DEILLING

CORE SIZE: AQ RECOVERY: 90-95 %.

SCALE ICENTIMETER - IMETER

LOGGED BY V. M. RAMALINGASWAMY

OFF			VERT. T		ERYSTAL OR	-1		17-18 11-11-C	SAMI	21115	A	554Y	
DEP	77/	PE MIN	5 TYPE	LITHOLOGY	SIZZ	COLOR	SEDDING	REMARKS	ilo.	LENGTH.			
					5/17 5/17 5/18 180 UN	black	30*	Argillite with light colored Calcific bands. 4.5m to 9m. Calcife, Byrrhotte, pyrite filled fractures perp. to badding. In places calcite changing to					
-	5 Veir	let lim.	ind text time, for the party to the party text to the party text text text text text text text te			black		epidote.					
	Vei	victical.				black	30°						

HOLE No. 1-77-1 PROJECT M.V.T. SALMO HOGE 2 of 11.

NOLINATION: 70'SIE AZIMUTH: NIBO'E COOKDINATES: 49°05'N, 117° 12'N DEALE; Icm - Imeter LOGGEOF! V.M.R.

SPTH	SCCONE	7. AY	GREČEIA LVPA		RYSTAL			Drag gove	SAMI	PLIN6		155	AY	
1	HINERA TYPE	MINS	TYPE	LITHOLOGY	GRAIN SIZE	COLOR	SEDDING	REMARKS	No	LENGTH				
13m					51.27 51.27 51.26 61.26 61.26	black	- 30°	Silicified limestone. 12.5m to 128 Syngenetic pyrite, sericitie Cleavages. 14.15m fautt zone 12.8 to 24m Argillite. Syngene- tic pyrite & pyrrhotite with graphi- tic shears. 17.3 m. fracture filled with						
20-	veinlet	Pyrik, Cpidote	Chem. Q. tectonic			black	30°	epidote perp. to bedding sugges proximity of skarn or contact metamorphism of angillite.	ونه					
	vein let	pyrik				grey	40°	24 to 24.3 Contact met. limestone with epi-			e Magail Merili Territori			
25 -		pyrik Scheckk	ket			black	7 *	quartz-pyrite-veinlets. few grains of blue-white scheelite						
N. (1.2)	NOT THE	The state of	POR TO								1	100	13.44	

PROJECT M.U.T. SALMO

INCLINATION: 70°S SE AZIMUTH: NIBO'E COORDINATES: 49°05'N , 117° 12'W SCALE: 1cm-Incher LOGGEO SY: V.M.R.

SPIH SECONDARY MINERALIZATION	2 68.50011	1 / 14/12/72	CHYSTAL COAIN	CO. 02	SEDOMG	REMARKS	SAMP	271110		ASS	AY
TYPE MINS		LITHOLOGI	SIZE	1020		, , , , , , , , , , , , , , , , , , , ,	No	LENGTH	WO3		
28 Vein 30			WOON	blue	- 30°	31.5 to 35.5 Interbedded linestone with argillite Converted to medium grade skam Clots of tremolite - epidole - secon biotite (some garnet?)	1	meters			
Vein 9tz diss. Scheel diss. Scheel diss. Scheel	2			light grey			7/3/2 `	31·1 +0 31·19	082	7	3001
Vein Scheel Pyrr.)	tect.			dark gruy	30°	34-35 Band of contact met. argillite (Hornfels) filled with quark segregations filled with					-
vein "	•			grey		Pyrile - 3 stages of deformation. Scheelite related to final stage. 35-37 Silicified limestone with band of dark gray skarned lst.		26 16 4	0.0.00		
diss. Schee				grey	30"	38.6 to 38.39 m MoHled textured homfels with		36.16 to 36.30	•08 %	[40:n	
	die Chan			black	and the sa	f clots of trem. & epidok 40.9 to 48.8 m. Fighly hornfelsed hard argillite the quartz-calcile pyrotolike pyrite ventets Trace sprakerte	of distances		Control of	Car Mark	

FLOJECT NIUT. SALMO

Poge 4 of 1

INCLINATION: 70°SE AZI	MUTH: NIBOE COOKDINATES:	49.05'N , 117° 12'W	SCALE: Imeter- Ich	1 LOGGEORY: V.M.R
USPTH SECONDARY RESCEN	LITHOLOGY GRAIN COLOR SEDDING	•	SAMPLING	ASSAY
1 THE MILE TYPE	SIZE		No LENGTH	Wo.

SPTH	SECON	DARY LIZZION	rezozie.	LITHOLOGY	CRYSTAL	00,000	E 7 D 14/	REMARKS	SAMI	PLING		ASS	AY	
4	TYPE	MINS	TYPE	LITHOLOGY	SIZE	COLONIS	ייייייייייייייייייייייייייייייייייייייי		No	LENGTH				WO.
43.	Vein	2/2.pym	ket		51.7 51.7 51.7 7.10 6	dark gruy -				Meters				%
45 -	Vain Vein	atz.spl cal-pyrr stz-pyrr	N 			black				-	-1		• !	
-	11	11 A	n			grey, brown		48.8 to 51.1. Medium to high grade skarn Alternate lands of fine grains Alternate lands of fine grains	7/3/0	49.61 49.70		Jon	4 ·	-30
50	diss.	scheelis pyrnone schaelis pyrohek	c ch'em			green grey, brown		garnets (grossenlar) the lighter minor epi. I trem. The lighter bands (pure) of limestones appear to have reacted more intensely		51.68 %		Hen		- 16
•	diss.	Schee lik				green dark grey		51.1 to 56.9 & Them. to 59.7 Hornfels with silici fication, purp swandary blothe and diopside. A epidok in veins. Some motted texture between 55.4 to 55.9	ynie					
· ·	Vein	gnarts- pyrrhet	teet, Ie .			purple		- appearance of Secondary biolite.						
55 -	diss. Vein	scheelig Etc. cal	tet.			brown		biohite.			,			
	Trivier.		भागीनामास्य १८८१		7					**CT3.50		ROSE DE	go trend was	1,500
58-	cuss :			_		7761.37	र को अन्तर देशि इ.स.च्या	्रि _{क्र} क्षक्ष्मकृति स्थितिक । स्थापित । स्थापित स्थापित स्थापित स्थापित । स्थापित स्थापित स्थापित स्थापित स्थापित स्थापित स्थापित	7/308	57.4 % 57.7		7.2.	ĺ	12:

dort 30° School Chem. School	OSOT					14/13/0 V .11	•		49°05'N , 117° 12'W SCALL	SAM	PLIN6		15	SAY	
diss. School Chem. 60 - diss. School " biss. School " tiss. S. Scho		1 11/2	MINS	TYPE	LITHOLUGT	SIZE	COLON	, , , , , , , , , , , , , , , , , , ,	ALMANIO	No	LENGTH				
tiss. R. Scheelte. " Liss. R. Scheelte. " List. R. Scheelte. "	•	diss.	Scheel	Chem.		WING W			Contact metamorphosed hard			_			
Vein Scheelie chem. Vein Sphakrie ket		boi fra	here				durk	•	hims of quarte. Same pyr quarte-calcite veinlets. Scheelite observed is a little less than the Samples	-					
vain scheckie chem. Vain sphakeite ket Pyrite Vain Sphakeite ket Avec dark To 8 to 72.1 Tectonically breenaked anyillaceous limestone	65	frebre	Scheeli oh. Sph Cal. Pyl Scheelin	, ketonic			1	30°							
		vein diss.	Sphaleri Pyrite	te beet			dark		70.8 to 72.1 Technically						

SALMO

INCLINATION: 70°SE AZIMUTH: NIBO'E COORDINATES: 49°05'N , 117° 12'W SCALE: Icm - In _ LOGGEORY: V.M.R SECONDARY MINERALIZATION ASSAY SAMPLING arrocit REMARKS LITHOLOGY COLORSEDDING TYPE LENGTH MINS 73 35° black رم ركم ket 23 77.6 to 85.6 9-4, 75 -Argillike with bedding plane dark diss. schee segregations of grant. WIT grey diss. Sands of Silicified arg. linestage diss. scheel. hen-epi (at 82.6 to 83.1) Dark 85.6 \$ 88.5 Slump Sticified Skarny limestone. calate grey bxn. spotted mothled texture. The Parphyroblasts are epidote 80. and bremolik. (85.7-86, gray 87.9 to 88.5) Interbedded Vain trace. diss. School argillite (86.7 to 87.7) Some Vain ket. k-spar at 87.7 black . Vuin calcite grey to grun 85 - fract. ket black diss. grey h Coarse grained schoolite.

& scherite

MIT SALMO

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INCLINATION: 70°SE AZIMUTH: NIBOE COORDINATES: 47° DS'N 117° 12'W - DCALE: Imehr-1cm LOGGEDEY: V.M. ASSAY SAMPLING REMARKS LITHOLOGY BRAIN COLORISEDDING TYPE No LENGTH 111.4 MINS Scheelik chem 88.9 to 94.3 diss. 25° Silvaified limestone - contact . facture true metamorphosed to garnet (gross.) scheel 16an 91.88 k grey .15% diopside skarn with rains of 71307 92.04 diss. gnark-calcite-diopchem 19ht 90 to 90.2 MoHed texture with 7/306 to 92.46 calcite Vein test. grey scheelit K. spar. spi - from veins. wheelike wat chem 94.3 to 97.7 tet. 250 silicified angillite with 2 quark Segregations. pyrite Sphalenia grey ty secretive and pyrrholite along bedding 97.7 to 98.6 Silicified dark Contact met. linestone with grey 250 Calait - secondary biohit, quarts, 15 epidok - Veins . .05 Pyrrhoh 97.8 A 102.5 alteration along 71304 97.98 gruy diss. .01 facture. 275 100 99.1 to 71305 cher 99.37 250 flim pyrite diss fract. Scheelit 100 dark Liss grey Scheeling 47.22 250 103-

NCLII	NATION SECON NINERA	1. 70°5	E A	ZIMUTH: NI30	E CO	OKOIN	ATES:	PEMARKS	SAMP		£ 100	36ED 455		<u> </u>
4	TYPE	MINS	TYPE	Lithology	SIZE	COLOR	SCODING	REMARAS	No	LENGTH				WO,
103	i Vain	pyrrhohi Goy, Jara Eni K-Sp	chian.		11,12 11,12	gray	20°	103.8 to 104.2, 104.9 to 105.3 Contract met. coarse mobiled fexture with gts. Epi. Some k-spors.						
105-		dióp pyrik		000		dark grey grey	24.	105.8 to 106.2 Same as above with primary slump breeliahou 109.7 to 110.3 & 110.5 to 111.5 Solution collapse breediation. Matrix with Sphalerik & Calaik.		•	-		•	
. 011	slump	jyrthoh	priman			dark gray light gray		fragments - black argillite. Zebra texture observed in fag- ments.						
• •	1	pgyskoki pyrik, Calcite, Loidste	b beetoni	20		<i>3</i> rry		-112.4, 112.6, 112.8-113.9 Argillike converted to high grade hornfels > 2 Secondary biolite in fragment At 113.8 bedding destroyed Diopside grossular gt. along	5. 7/303	3.33 6 3.5			170, KBL	.08%
 115	tectoric	scheelik Scheelik Byrrhohn Byrike Sphalen	le le				25*	Vein perp. to bedding. blocky argillites. some sphalerik zones.	And the second s			• • • • • • • • • • • • • • • • • • •		
117		Sohaleri	e tect											

	SECON	LIZZTION	GRECE IA	ZIMUTH. NI	A.C.	1	£	!	SAM	PLIN6	ASS	AY	
	TYPE	MINS	TYPE	TITHOTOGA	SIZE	COLOX	SEDDING	A E MARILE	No	LENGTH			工
77			prim.		\$10.7 \$10.7 \$10.00	black grey	20°	118 to 118.5 argillaceons lines to contact met. 9tz, chlorik, phlog sph. from 118.5 to 118.8 Major Fault zone 120.5 - 121.	of the				
120				~~~~		dark grey					 -		•
	Vein, fractive					gry	۰مد	124 - Cross-conting vein-pyrite pyrrholite secondary biolite, diopside & garnet - bedding	,				
	diss. Vain drss.	Schcelik Pyrite, Pyritokik Epy. tace	l					deshoyed completely. 126.16 126.4 Skarn - from diop. garnets 127. appearence of K-spar.					
125	11.	pyrrhokt. pyrite, py, 94	,,,,,			dark gruy	***************************************	128 to 128.7, 129.5 to 130.0 Mottle					edelitingen er en entre desembles er en entre e
	vain	kam, gt. Sphalerik Syrchold Syrik	ket			эгч	20*	130.3, 131.4 Hornfels with veinlets. 131.4 Skarn with k-felspar.					
30-	Vein.	Scheen	, ,			dark grey		·			9		
•	Veia "	same as re				dark	20°						

MCLINATION: \$70°SE AZIMUTH: NIBOE COOKDINATES: 49°05 N, 117° 12'N DEALE: Inche-len LOGGEORY VMR

USPTH	, PARTICIPAL TO A STATE OF THE	acros 11	117H01064	- ORIN	50102	CEDDING	REMARKS	SAM	PLIN6		ASS	AY	
4	TYPE	MINS	TYPE	1/1401067	SIZE	COLOX	JEDDIN G		No	LENGTH	Pb	Zn	
133	· kain	taus scheeli pyrrhoh pyrik	kect		2/12 2/17 2/17 1/0/0/17	grey 20°	20°	135.3 to 147.7 Wornfels with bedding plane fractures. 137 to 138.2 Secondary biother					
	van	Sphaler Sphaler	ket ket			dark grey	20*	to 140.9 9th vains with pyrrholite 142. to 142.7 Vains with secondary bt & k-spar alknown sphalorite 144. 3 to 145.1 Hornfels with hairline fractures with alteration envelopes.	X •		_		
140	•	sphaler	e ker		J	durk gruy	20°	145.8 to 146.2 secondary biolite. 147.2 k-spar bordering quark- veinlets.	7/302	142 +0	.036%	1.46%	Colon
145	Vain &	sphalerit sphalerit sphalerit sphalerit	feet			gry	20	• •				,	
	Thanks Thanks	sphalerik pyrite pyrrhok				dork grey to brow	1	148.5 to 147.5 Spoked hernfels Leavily inlain with purply brown sec. biolite in places dispeide & 9th [148.7] K-spar (149)					

PAGE 13

OGGED

EAH	Second	PALIZATION	2x*		GRAN		BEDDING	REMARKS	SAME	DUNG	ASSAY
М	-	MINIS		LITHOLOGY	Size	Colour	4	KEMAKES	NO	LENETH	
145								ARG AS AMOUNT GUYBL			
					GREY		800	187.90 - 196.00 Speckled Variety. Minuon GTZ-colc film = Ry ARG 196.00 - 203.46 Speckled VARIETY. HINDR OTZ-COLC INCL			
3								4 STP. GREY BC., PY ARG 203,46-210.79. AS ABODE @ 210.00-210.03 Q12 Calc STR @ 85° ARG 210.79-21830 AS ABOVE			
	,							Dense Black Variety, Py XTALS AND SMILLS ARG 21830 - 225.67.			
								@219.62 - 219.92 Six Aleacher Seel will Py-Pyre 650 @224.18-224.27 Bleuched 512 Seeth Possible Scare 650			
								@ 225.48-225.51 S.L.Scc1480° DRG 225-47m -22652 ARG AS ABOUT BRANITE 22652-226:90	#*		
								ARG 236.98-239. 11" ARG AS A	ed us		

.

the total

406680

1.27/	Secon	WARY LIZATION	2		GRAIN			2-11-14-	SAH	LING	ASSAY
M	TYPE	HINS	TYPE	LITHOLOGY	SIZE	Colour	BEDDUG	REMARKS.	No	LENGTH	
-/-		1790									
	•			-	1		-				
180 -											
								ACG -180.74 - 189.90			
							864	Special Variety 186 22 dies			
								20 colo pin # 70-72"			
								This side of Py 8411			
						-					
123											
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			1 9	-							
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190					38	AL LA					-
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		T Photo									

EPIH	Seconsi	LIZATION	Bx .		GRAN		BEDDING	REMARKS	SAH	PLING	ASSAY
H	-	-	TYPE	LITHOLOGY	Size	Colour	2 CODING		No	LENG14	
160.		TREELISE Ry Rypa The Sheelite				Consy- Black	800	DEG 159.39-166.5 @ 160.06-160.70 OTZ Splack with py peyer , The Schoolite @ 161.3 Seemy Sect with schoolite & @ 161.52-161.56 OTZ 11866 CS Bland Py Pyren			
	Account of the second of the s							are generally has great colour mottles appearance with 972 coloite felmial \$ 60° to use			
163						gruy Black	\$0°	ARG 166.5-173.46. GREY UNRIETY with giz BALLIE Spland & SIR. Thin Sector g searing material. Itemorphy Pyro & Brot. Te in nerrow sector 0167.42 167.44 Searn with Bird.			
170								@ 170.69 - 170.74 972 Fresh @ 750 @ 172.60 - 172.65 5, LICIONS SIK @ 700 G Hard. ARG 173.46 - 180.74			
						BLACK	80.	BLACK DENSE VARIETY @ Gomes Specified DIZ Culcule Speach 2 follows			
175											

PAGE 10

LOGGED

DEPTH	SECON	BARY	Bx		GRAW	1	2-02-16	REMARKS	SAMP	LING	ASSAY
M	The second second	MINS	A STATE OF THE PARTY OF THE PAR	LITHOLOGY	Size	COLOUR	BEDDING	in the same of the	NO	LENGTH	
		Py, Pyre ZNC			Time	24	89.	OTZ-CACC FIL @131.71 -137.80 OTZ LAHIN. ATED ZONG. CONTAINING RY, PYRE, ENTITE, ZINC? @141.70 -141.74. CP.DOTE,			
145								Py CALC INFILM 1160 CORE ARG 14466-151.83			
					JINE	BL.	800	AS ABOUT, UNITORN TENTIFED BLACK HUNGLOUS CALL STZ			
		Py.PyRR				GREY		FIL AS II TOLORE WITH PLA			
150		215.					860	FRAES ARE. @ WALKO - 146.94 DISS RY PYER, SPHALLRITE.			
								(SUGHTLY) MINCEPLIZED SECTAL WITH PY, PYER, SPHALERITE (SIST, 50-151.60 BLENCHED SCLIN FIRELY DISS PYER + ZNS?			
185							80°	ARGINITE 151.83 - 159.39 (AS ABOUL) @152.30-152.41 BLENCHED SECTION @153.78-153.93 OTZ INCL.WITH AYRR @ FCS.			
								@155.5-155.8 Blacked Sect			

	UASSA	200	THUS	2.00.6.5	1		GRAIN	1	* *8	COLLECT	AUNOS MONION	HId3(
		דפיתו		REHARKS	Sevents	Colonie	₹2.5°	די גון מד מפא	JUKS.	S WILL	7dK1	W
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			·		And the state of t							
				4 27 51 - 8 5 10 54 57 11 10 54			e de la compansión de l					- 09/
				STANDED AND BUT THE REAL STANDS	2 a D	13	2.7					
				MAN HILLSOND OUR SYMME				1		0 119117	mas	
				2 1/1 27.00 - 5.00.00 10000000000			and the state of t	The state of the s		JE Schulde		-
	* 3			STATE OF WAS COME.								The second secon
				184 /4 1 0 10 151 - 21 1810				And the second s				281
delibility in the second				1005 15151 - 68151 0 1005 1101 (0120005 00)								
		The same of the sa		0 252 2 6 27 27 28 28 28 38 38 38								
				- 13 451 00 XEI - 187813			and a second sec					
diagnosis	A.A.			11 2 10 11111 11 7 23 1014 100 -	,02	78	3,07					
				שוני המונים ואלינים או הוא האו האולים או				A CONTRACTOR OF THE CONTRACTOR				041
				BLACK UNIFORTEXTURED								Table 1

לסכפה I

PROJECT - MUT

7-8t-4 ON 370H

R B

LOGGED JRP

ерти	SECOND	ARY LIZATION	Bx +	(-1:-61	GRAIN	L	BEDONG	REMARKS	SAMA	UNG	ASSAY
H	-	Hins		LITHOLOGY	SIZE	COLOUR	L	<i>NEMARICS</i>	No	LENGTH	
110		Py, PyOP. COLLIFE GTZ			fine	BIACK	80°	109.20 - 115.85 ARGINITE - BLACK DENSE BROKEN-FISSICE BEDDING @80° CONTAINING THIN FILMS CALCITE HINDR SILFIDE PYRICE, RYREHOTITE, SPETIONS			
								PORCER CAM JARIETY: MINOR NUMBER CALCUTE FILLED FROET. UZES & 11 to CORE			
115		By ALRE			Time	BLACK	€0*	@115.85-116.1 BE CALCITE STRINGER ZONE CS @ 45° 116.1-123.0 ARGELITE GEN DENSE CONTAINING INFREQUENT GTZ FIL WITH RJ URJER. @ 118.0			
120 -		CALCITÉ						DISE Py for 0.1-m. @ 170.0-170.13 GTZ FIL WITH PY PYRE CS@ 850			
		zy żyre OTZ			Fure	BLACIC	80°	ARG 123,00-130.38 DENSE BLACK UNIFORMTEXTURED VERY HINOR SULFINES, GEN, III THIN SEAMS WITH DTZ @ 129.36-129.44 GTZ-CAK. C: BLEND @ 75-80°			

PO,

108-

SCALE ICM - Imetre LOGGED BY. INCLINATION ___ AZIMUTH ___ COORDINATES_ MINERALIZATION BRECCIA LITHOLOGY SIZE SAMPLING COLOR SEDDING ASSAY REMARKS TYPE MINS No LENGTH METRES 92.1 40 93.1 92 Pyrricht black argithte with syrgente Ayres & porrisinte no crambilino Skapa times chem. 94, bin 93.1 4 94.4 Colore Show with home of biolity FAU Sel Colone & quarte, how of 95 the when schooling 217 1- at 94.4. 94.4 = 103 done grey from the with 100 t- Fritt Egyppente suit à Syntake Spinister & malendar 96.2.97.12 Chi.4 (6") The regulate is Solaley 4 & santal with this a bt 100from . Spile is tricing !? 103 to 103.6 SLAM -Clots of trans lit, bands 415 Arm, trigte 102 6 104.9 - Skan scheiling chim sports hernfels out clob & hom, bt. Coline, 10, Veinlets at 106.3 104.7 105-105.7 to 106.24 tout zone 106.4 to 109.2 dooted hands blides & from st. Sharn from 108 to 108.6

trace Scheelite

PAGE (OF ___

	SE CON DI MINERA	HRY	BEECEIA	1 17110	GRAIN	Cours	Readure		SAMA	LING	ASSAY
PTH	Type	MINS.	TYPE	LITHOLOGY	SIZE	CULOR	DEDUNG	REMARKS	No.	LENGTH	
76					CLAY SILT FINE MED. CRSE.			77.1 to 79.9 Orenalations, highly Justiced - Jamilt zone wit grage at 79.9			
30 -	reinlet	ealure of #	lest foult	fowlt.				80.4 to 85.2 fault zone with gonge and highly factored rack graphite slip planes.			
5 - 1	bestum	Calant tem	het Chem	~~ ~~				85.2 to 87.5 interfedded argithite with him argithite has string clots of tremobite. 87.592, highly crushed rock with gamest games			
90 -	rcinles	Calak gk, ken	Sheet	fault zone				2000 is filled with calabe, Kenn, boll goi and pyroboble beinless:			

HENO A-78-2 PROJECT MUT SCALE ICM-IMETE LOGGED BY -INCLINATION ____ AZIMUTH ____ COORDINATES. DEDTH SECONDARY BRECCIA LITHOLOGY SIZE COLOR BEDDING SAMPLING ASSAY REMARKS. TYPE TYPE MINS. No. LENGTH METRES 60,5 Crennlations 60 tost. Calut Ket 11.9 to 64.9 Interfedded bry argillars and araillates 65 -65.2 \$ 72.2 Thighly for hard, cremulated argilite with graphitic Ship planed - Calate - 9te Veinles in perp factures (68.6) Caluk 72.4 fault zone Genvatins with \$0. fault capita feet

INCLINATION____ AZIMUTH ____ COORDINATES_____, ___ SCALE ICM - Imetre LOGGED BY ____

h	MINERAL	ARY	BRECCIA	LITHOLOGY	GRAIN	Carre		0=4140==	SAME	PLING		Ass	AY
DEPTH	Type	MINS.	TYPE	LITHOLOGY	Size	WLOR	BEDDING	REMARKS	No	LENG TH			
ETRES					CLAY SILT FINE MED								
44							50"	Cremilatins				3	4.00
45 :	hast.	Octob po		1			0,				1 - 6		
-							400	47.6 Grandshows with graphihi ships.					
	restant.	Cacult		1				0 / 2 242					
								50, purp fractives to heater					
\$0.								the little to be brown					
-							30°	52.0 arg? Inte band.					
								53.6 Crenelations.					
							70°						
1								55.2 perp factors.					
35-		Certif		1				57.) aluit po, veni.					
								58.3			1		
		Calinto		1				58 to 58.8 calate 9th, po, wollastomte veind					
	* *	4b11	11	N				59.7 to 60 higher liny argilate					
60				-			30°						

PAGE _ OF_

SCALE ICM-IMETE LOGGED BY AZIMUTH ____ COORDINATES INCLINATION

FPTH	SECONE	DARY	BRECCIA	LITHOLOGY	GRAIN	Count	LEDDIAL	25,110,55	SAMP	LING		ASS	AY
	TYPE	MINS.	TYPE	LITTOLOGY	SIZE	WLOK	DEDUNG	REMARKS	No	LENGTH			
ETRES 28					CLAY SLT FINE MED CRSE		250	29.2 Same as neare WITE 2nd bt. Crenulatines Through out.					
30 .							60*	31.1 Fault zone with Crenwlations on both side					
, ,		Calcute Po.	*et				50	32.6, 83 later k veindets With Merketile.					*-
35				~~~			90"	37.2 fault sine with line bedding fup. to fault plane with colorite, gt tillings.					
40	fact.	Clark bon h	het "	11			25°				4		
14							650						

PAGE (- OF -

CPTU	SECONDA MINERAL	IZATION	BRECCIA	LITHOLOGY	GRAIN	COLOR REDOVE	05:44 0:55	SAMA	LING	ASSI	AY	
TELIM	TYPE	MINS	TYPE	LITHULDSY	SIZE	COLOR BEDDING	REMARKS	No.	LENGTH			1
METRES					CLAY SILT FING MED	2						
/2	12 - 10	cates#	tout	1			<i>F</i>					-
14			het				Socker Kningford &					
15												
	\$2.75.00	5. tyl	4.7				65- 17 Coss - 1-1 - 1 - 1 - 1 - 1 - 1 - 1					-
				The second secon			la					-
20 -		2 m () () () () () () () () () (21.0 25 ve					-
		0.6.41 72		1								The state of the s
	Kark-rt		lect				242 factore I bering with					-
	v	,,					25.2 to 26.0 po, caset, ep = 27 14 & We			The state of the s		-
25 -							people levine			Annual and an annual and		The Person of the last
		4213 61		1			26.4 Somet as abore			the state of the s		The second name of

DRILLING IN FEET CONVERTED TO METERS

FOR LOG. PROJECT: HOLE NO. 4-78-2

Page 1 of 14

			SURVEY
LOCATION:	LENGTH	DIP	AZIMUTH
COORDINATES:	380'	72.8°	
NTS: ELEV: INCLINATION: _70 AZIMUTH: N292E	750'	72,30	
HODIT PUNT VEDT PONT.			

HOLE STARTED : HOLE COMPLETED . DRILLED BY : KOOTENAY EXPLURATION DEILLING CORE SIZE A RECOVERY: 95 % LOGGED BY V. M. RAMALINSASWA MY

DEPTH	SECON	LIZATION	20500	LITHOLOGY	CRYSTAL		0.500	REM4RK5	SAMI	PLING	455	AY
:	TYPE	MINS	TYPE	LITHOLOGY	SIZE	COLOR	SEPDINE	KEMMAND	Ho.	LENGTH		
netres D.					2000 2000 2000 2000 2000 2000 2000 200			0-6-3 argillite with helpt stores				
-		Calent egi-	lect.	X Z		dork grey to grey	30°	bands. Cremelations cross. Enthing to et res At 5.5. with spir temporar & lately				
-							30 °					
5												
		Cole A.	Let.					6.3 - 7.3 argitute nit hyper colored Sounds.				
		calcite toollast. hem. to epi		//				7.3- 6" band calcite, well, epi chl., hear, po., graphite slips.				
		0						7.3 A 14 9 grantation but argulation but with crease cutting factures with	1		7	
10 =		L						and a long facture (311 po pum 12.3 to 13.3				
12		n		, =		1.1						

PROJECT M. U.T. SALMO PAGE HOLE (NO. A-78-1 INCLINATION YERTICALAZIMUTH __ COORDINATES ____, __ SCALE ICM-IMETE LOSGED BY VM R SECONDARY MINERALIZATION BRECCIA GRAIN SAMPLING ASSAY COLOR BEDDING TYPE LITHOLOGY REMARKS LENGTH METRES 109 110.7 Small frequents of high grade skarn with epi, cut, tem 9t, 9t. pyrikulta. Shirkensilled on 111.4 Calcite filled fault some 110 tun 92 cal, 5+ them 114.9 to 115.1 skorn. pyris hanket 115-116.2 to 116.4 skarn rein cal . py. them them them them the them. End of Hole 120

HOLE (NO. A-78.) PROJECT M.V.T. SALMO PAGE JOF 8

INCLINATION VERTICAL AZIMUTH COORDINATES , SCALE ICM-Imetre LOGGED BY VMR

	SECON	DARY	BRECCIA	LITHINGS	GRAIN	COLOR	BEDDINE	REMARKS	SAM	MPLING:		ASSI	4 /
EPTH	TYPE	MIN.	TYPE	LITHOLOGY	SIZE	COLON		KEMARKS	No	LENGTH			
98	/	them told the pure	Chem		S.L.Y F.W.E MED CRSE		20°	with recrystallized portions blades of tremother, calcute, gt & pyrrhelit. 93.9 to 96.7 Cremblins with graphite she Manes. 94.7 to 94.9			_		
		hour, and a contract						dark & light colored bands 94.9 to 96 black argillate with a two lighter colored bands. 96 to 99.7 fault zone Hill gonge at 99.3 to 99.7 herp, fractures at 97.6 Graphilic ship stands at 98.6 to 99.4					
05.		cal epi ton. Cal epi ton.				light gray gran	30°	bight colored himstone what colored himstone what metamorphised with benchite (Worte Caleite & pyrrotite in portions caluite be pyrrotite in portions caluite be pyrrotite in portions accompetallized in portions recompetallized in portions recompetallized in portions graphilic portions.					
09 -							30'	106:1 to 116:7 fault zone will interse graze, fragments of high graze skarn trapped in his fault zone.					

HOLE (NO. 4-78-1

PROJECT M. U. T. SALMO PAGE 6 OF 8

COORDINATES SCALE 1cm - Invetre LOGGED BY VMR

	SECONDARY MINERALIZATION	BRECCIA		GRAIN		BEDDING	0	SAMP	LING	TIL.	A55	AY
EPTH	MINERALIZATION	TYPE	LITHULOGY	SIZE	COLOR	BEDDING	REMARKS	No.	LENGTH			
TRES		and the second s		SILT SILT PINE MED CRSE	dark grey grey	20	77.2 477.3 King argillate with ling bents.					
80 -	Menite Callete		Jon		black dark gray	80°	78.4 to 79.6 Cremulations - 79.6 fetonic bx with Calcult matrix fagments are argillite					
25	1014 2						79.6 & 83.0 Aarher Wered argillate with graphishe ship planes. Lighter colorer bands Calat reinlets been to dedding planes. (pyrrhol creminations. 83 to 83.8 Argillate with highter colored bands. With Syngenetic pyrrholic					
	runlet Calain	hert ,					83.8 to 86.6 Fart of the fault zone - notice graphitic portions, bedding Campot be recognized - Clade reinlets.					
	Calcik	led, tit	J				86.6 to 89.2 argiliste with slip planes. 89.2 to 90.8					
40 -	van Cal, gratemonts	ket		1001			high breceived himy argillit with breceived portions (technic & codimentary 90.8 to 93.2			9		
93 -							darker world argillate with grants - translate 92.5 to 93.3 light wolored band at 91.4.	no				

PAGE (5 0 8

HOLE (NO A-78-1 PROJECT (MUT SALMO PAGE 5 OF 8

INCLINATION VERTICAL AZIMUTH ___ COORDINATES ___ SCALE 1cm- Imetre LOGGED BY VMR

	MINIERA	DARY	BRECCI	1	6RAW	COLOR	BEDDING	P	SAM	PUNG	ASSAY		
DEPTH	TYPE	MINS.	TYPE	LITHOLOGY	SIZE			REMARKS	No	LENGTH			
TETRES					12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
61				×2.5/-	30000			b2.5 Crenulations					
				~~~				fourt zone 64.3 to 65. Who Crendations on either side of finit.					
65 -								66.7 Crennlations.			m		
- 70 -	fact.	Str-	keet.	***				69.2 to 69.8 Crenulations.					
75 -	food.	h	<b>.</b>		F		the all	73.5-74.5 trendations.					
77 -													

SCALE ICM - Imeter LOGGED BY VMR VERTILAL A-MITH COOR DINATES

9115	SECON	DARY	BRECCIA		GRAIN		15.00	p-	SAMPLI	WG	ASSAY	
EPTH	TYPE	MINS.	TyPE	LITHOLOGY	SIZE	COLOR	BEDDING	REMARKS	No	LENGTH .	IÍ	
erres 46	hin	gh-cal	£2÷.	K	CRS ET		20	black argillite (graphitic Schoot				
50-	forther further	ryer cal	ku+.				80	50.4 to 57 Seh I to core. Filhistose layers wrapping.				
	fact.	that the	tat.				30 30	around the buy layers				
	fact ",	Statent Chi pyri toridi						59 6 60.1				
60 -				2				19 6 60.1 fault zone: graphine songe				

HOLE ( NO A-78-1

PROJECT ( M.U.T. SALMO PAGE ( 3 OF 8

SCALE ICM - IMETE LOGGED BY VME COORNINATES INCLINATION VERTICAL AZIMUTH

	SECONDARY BRECCI	A ,	GRAIN	Coine	BEDDING	D=10	SAMI	PLING	ASSAY		
PTH	TYPE MINS TYPE	LITHOLOGY	SizE	LULUN	OCODING.	REMARKS	No.	LENGTH			
TRES			SILAY SILT NENE NEED		20	Create hims the to forthing. graphitic garge.					
	keinhi 95 cull Pyrr			Hack	30*						
		m m		Mack		349 236.1 Pault zone WIE many tanks.					
5		~		1.	20						
		W		Dark	80	39.1 to 40.5 fauts 2012					
	built gh all	M				Staphisti ship planed.  41.5 to 43.5 fm H zone  with Cal. 9th veint in The  zone  Cremulations.					
5	strol	444		black	20	44.8 to 45.6  Ste al voins in tectoricals beto zones.					

M. U.T. SAZMO PAGE ( 2 OF 8 PROJECT 1 HOLE NO. A -78-1 SCALE 1cm-Imetre LOGGED BY VMR INCLINATION YERTICAL AZIMUTH ____ COORDINATES. DEPTH MINERALIZATION BRECCIA LITHOLOGY SAMPLING. ASSAY SIZE COLOR BEDDING REMARKS TYPE TYPE MINS LENGTH METRES gray dark gray Creantahone 15 gre-cal verilet. veint ster cremulations 18.9 % 19.6 hinge is a drag told (?) Shecal Let-21.6 40 22.9 Just some with culcul filler staplific garge zone. bunters it ent 24.8 commating me to facility) was a bedding (schoolsky) 25 al. 29 - toin 1st tal ket.

Poge 11 of 11

DIH SECON	J. 70 SI	BRECCIA	117112125	GRAIN	COLOR SEDDING	REMARKS"	SAMP	LING	ASS	AY
150   END	MINS	gtz-scr. ps k-span. rel bt.		2 2713 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718 1718		Granite · alkred and bleached the majic minerals are completed. The majic minerals are completed destroyed. In place spotted.  Highly silicified. Two stages of alkrahion.  O Quartz. Sericite - pyrite with hady between . Sericite mostly green. at.  150.4 130.9, 151.2, 151.4,  152.5, 153.2  Molybdenite at \$\frac{1}{2}\$.152.3, 153.2.  O k. spor & secondary bt.  Veinlets with alteration enveloned is 4.6, 155, 155.6 with moly late.	71301	152.3.5- (+race)		-03 G

## DIAMOND DRILL RECORD

PROPERTY MUT GROUP BENSON HINES LTD

Hole No. <u>13-14-</u> Sheet No. <u>13-14</u>

Location: Claim No.	
Lat	Started
Elevation of Collar	Completed
Datum	Ultimate Depth
Bearing	Proposed
Direction at Start: Dip	

Fe	eet	Total	SE	CTION			Core	Foliation
Dri	illed	Depth	From	To	Feet	REMARKS (LOG)	Recovery	Inclinati
		1	225.67	236.52	0.85	ARG (AS ABOUE)		
R	epent		226.52	226.90	0,38	GRANITE - BLENCHED ALTERED.		
of F	PAGE					Devois of MARIC GENERALLY		
13	3.	1	226.90	229.11	2.2/	ARG (AS ABOVE) TR. Scheel. IR		
			239.11	23028	1.17	GRANITE GREY GREEN VARIETY BLENCH	D	
						MINOR RY. POSSIBLE WHISPS OF HOLYE		
		( N. 190)	230.28	230.60	0.32	ARG AS ABOUE		
			230.60	236,28	5.68	GRANITE (AS ABOUE)		
						END OF HOLE		
						775° or 236,28 m		
l sy							1	

Drilled by:

Geologist in Charge