QUESNEL PROJECT

JEZEBEL CLAIMS GROUP

GEOCHEMISTRY AND GEOLOGY

REPORT # 2

CARIBOO MINING DIVISION

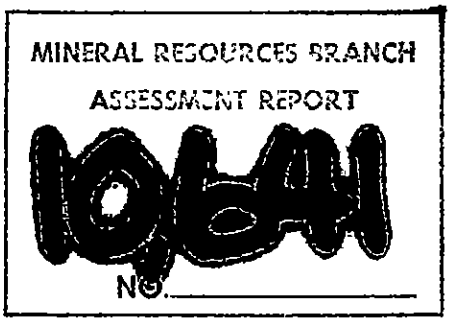
N.T.S. 93A/2

RECORD NUMBERS OF JEZEBEL CLAIMS

JEZEBEL 1	3656(6)
JEZEBEL 2	3657(6)
JEZEBEL 3	3658(6)
JEZEBEL 4	3659(6)

Author: J. Helsen

Date : July 1982



ABSTRACT

Geological and Geochemical surveys were carried out on the Jezebel Claims Group south of the Boss Mountain Molybdenum Mine. The work was carried out by a crew of five people during the second half of June and the first week of July, 1982. Moving in was postponed on several occasions because of bad weather, and late spring conditions resulting in extensive snow cover throughout June.

The property was found to be slightly anomalous with regards to W values in soils and sediments. These anomalous values are contributed to the presence of a granitic intrusion in the southern part of the property. With regards to other elements such as Cu, Pb, Zn, Ag and Mo the property is definitely not anomalous.

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INTRODUCTION

The Jezebel claims group was staked during the staking rush caused by the release of Open Files #776 and #777 in 1981. Previous work in the area helped in narrowing down interesting target areas.

The work on the property was carried out by a crew of five people consisting of:

T. Donnelly	Party Chief
V. Nishi	Senior Assistant
S. MacKenzie	Junior Assistant
A. Bradley	Junior Assistant
D. Halwas	Junior Assistant

Moving in to the property of the crew and gear was postponed on several occasions because of the extensive snow cover. The crew was finally moved in on June 14. Because of foul weather during the last week no food supplies could be flown in, forcing the crew to come down to the valley on July 5 to picked up by helicopter. The camp gear could not be flown out until July 8, 1982 resulting in additional nights in motel. The breakdown of the work including travel, bad weather, etc. in mandays is as follows:

Period 1 June 13 - 21	(inclusive)	9 x 5 = 45 mandays
Period 2 June 22 - July 9	(inclusive)	18 x 5 = 90 mandays

The first period will be considered for 1981 - 1982 assessment purposes, where as the second period will be used for the 1982 - 1983 assessment work (more details in Appendix 1 - Statement of Costs).

Transportation to and from the helicopter landing spot was carried out by rental vehicles which were later on parked on the Boss Mountain molybdenum mine property. Helicopter transportation was provided by Northern Mountain Helicopters, Inc.

LOCATION, ACCESS, TOPOGRAPHY

Location

The Jezebel claims group occurs near the eastern edge of the 93A/2E N.T.S. Mapsheet. The Boss Mountain molybdenum mine lies about 30 km straight west from the LCP. This LCP was placed in a swampy depression on the northern slope of the Deception Mountain massif. Wells Gray Park is situated some 40 km to the east of the claims.

Access

Immediate access to the property is by helicopter only, but two good roads lead towards the property. These are the Hendrix Creek road to Boss Mountain molybdenum mine and the Clearwater Lake Road but the closest distance from either of these roads is about 35 km. A branch of the Hendrix Creek Road, however, gives access to Hotfish Lake from where access to the property is reduced to about 20 km. From the Hotfish Lake Road a trail goes in a northeastern direction towards Mica Mountain. Depending on the state of this abandoned trail the distance to the property could be even further reduced although only by about 3 km. Access

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roads are via 100 Mile House and consequently the following N.T.S. maps are needed: 93A and 92P (1:250,000) as well as 92P/15; 93A/1 and 2 (1,50,000) (Figure 1.).

Many good open spaces exist along the Hotfish Lake Road which are ideal for helicopter landing spots. This cannot be said for the Hendrix Lake Road, which moreover is more travelled and has powerlines along it.

Topography

The very rugged part of the claims consists of peaks, steep cliffs and a drainage system into the Redfern Creek. The southern part is much less rugged and consists of a more gentle slope gradually going from alpine vegetation into sparsely wooded (conifers) terrain. The southern part of the Deception Mountain massif is surrounded at the eastern, southern and western edges by the Deception Creek. The southern slope is drained by a radial drainage system into the Deception Creek.

The highest point on the property is Deception Mountain with the peak at about 2,330 m above sea level.

CLAIM STATUS

The Jezebel claims were staked on May 26, 1981 during the Williams Lake staking rush. This rush was caused by the release of Open Files #776 and #777 respectively indicated as BC RGS-5 1980 (N.T.S. 93A) and BC RGS-6 1980 (N.T.S. 93B). More details on the claims are given in Table 1. The LCP is situated at 52°05'39"N/120°31'46"W, about 1.5 km SSW of Deception Mountain peak in the Cariboo Mining Division.

TABLE ONE: Recording Information on the Jezebel Claims staked on May 26, 1981

Claim Name	Record No.	Recording Date	Units (Hectares)	Staked by
JEZEBEL 1	3656	June 22/81	20 (25)	J. Helsen
JEZEBEL 2	3657	June 22/81	20 (25)	J. Helsen
JEZEBEL 3	3658	June 22/81	20 (25)	J. Helsen
JEZEBEL 4	3659	June 22/81	20 (25)	J. Helsen

Figure 1 shows the location of the claims, which were grouped into the Jezebel Claims Group on June 21, 1982.

REGIONAL GEOLOGY

The generalized geological map taken from Campbell (1963) (Figure 2) shows the Deception Mountain Massif, and consequently the Jezebel claims group, as lying completely within the Lower Cambrian (or Younger ?) Snowshoe Formation (Cariboo Group). This Formation according to Campbell (1961 and 1962) consists here of quartz mica schists commonly garne Fiferous; quartzites; quartz-feldspar-mica-gneiss, thin bedded marbles, amphibolite; and apparently many small pegmatite bodies.

According to the more recent Parsnip River geology compilation (Map

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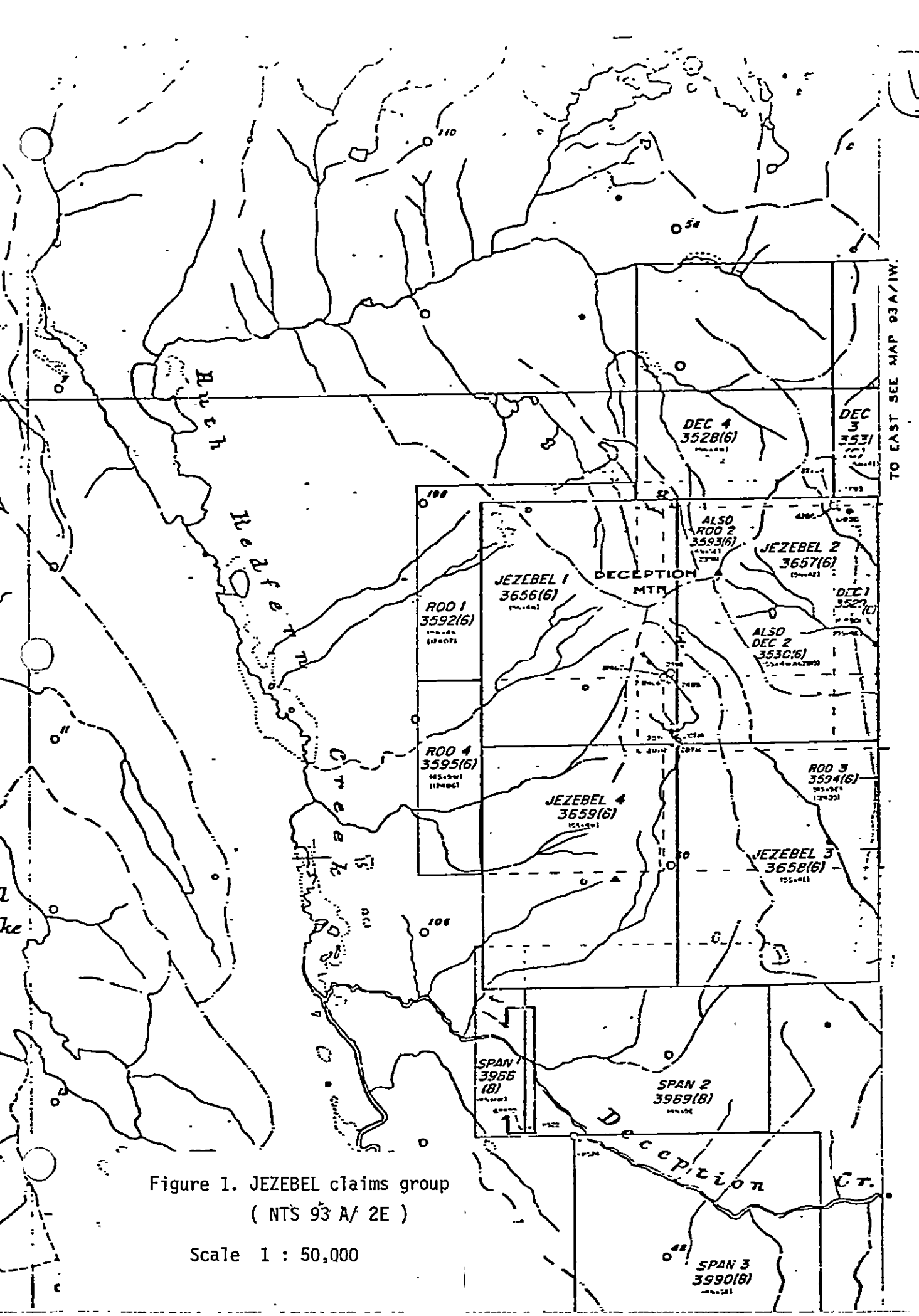

Figure 1. JEZEBEL claims group
(NTS 93 A/ 2E)

Scale 1 : 50,000

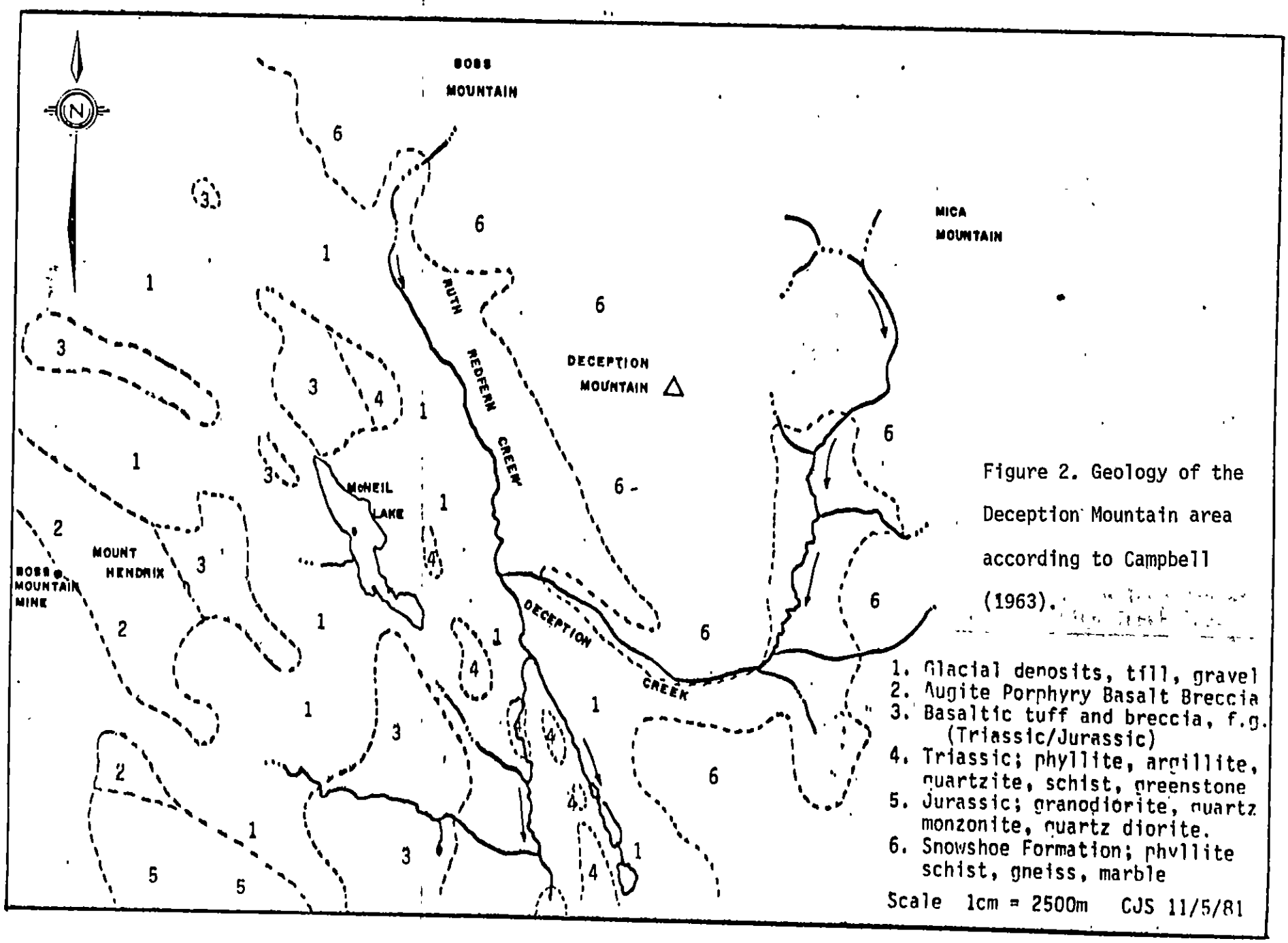

Figure 2. Geology of the Deception Mountain area according to Campbell (1963).

1424 A) the Deception Mountain massif now lies within the Proterozoic Hadrynian Kazc group.

This controversy has been an old one and as yet has not been resolved. For the purpose of this report however, the age controversy is of minor importance for the time being. What is clear from existing maps is that no younger intrusions occur within the Deception Mountain Massif.

GEOLOGY OF PROPERTY

From the G.S.C. maps it was believed that the whole property was underlain by either Lower Cambrian Snowshoe Formation or Proterozoic Kaza group rocks depending on the author involved. About 30% of the southern half of the claims group however, is underlain by an intrusion of granitic composition. Because of the scarcity of outcrop in this part of the property the boundary of this intrusion is difficult to delineate. There are, however, some outcrops, not just boulders. On the basis of these outcrops the average composition of this leucocratic, quartz rich intrusive body was determined as follows:

45 to 55%	quartz	)
40 to 50%	feldspar	)
5 to 10%	biotite	) biotite - muscovite granite
tr.to 2%	muscovite	)

The outcrops in question seem to be close to the contact with the schist and contain veins and veinlets some of which apparently show pink alteration envelopes (K. feldspar alteration ?).

The predominant country rock on the property (Snowshoe Fm. or Kaza Group) makes up th Deception Mountain peak. It consists mainly of a 'phyllitic' schist which because of varying quartz content has a texture ranging from gneissic to extreme schistosity. The average composition although variable ranges from:

40 to 60%	quartz + feldspar
30 to 40%	biotite
12 to 15%	muscovite

These rocks vary from fine to medium grained. Some samples of these schists from the eastern part of the property contain thin beds (up to 5 cm) which are somewhat calcareous. The beds in these rocks strike roughly NS and dip to the west with the dip steepening on the western part of the claims. The rocks of this formation here appear to be part of a large anticline. The composition of the schists varies systematically from being quartz rich in the west through an alumina-rich phase to the slightly calcareous sediments to the east. These calcareous sediments are stratigraphically lower than the quartz rich ones, suggesting a regressive sequence. This further suggests the possibility of limestone beds lower in the sequence which could host skarn deposits. Unfortunately because of snow conditions, the area further east was inaccessible.

There are two distinct generations of quartz veins found in the schists. The earlier set of veins are generally, but not exclusively concordant with bedding and contain traces of chalcopyrite and bornite. They are medium to coarse grained and sometimes contain muscovite, tourmaline, kyanite,

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corundum (?) and feldspar in selvages along the contact with the country rock. However, no samples have revealed the presence of scheelite under the UV light. The second generation of veins are sometimes parallel to the first set and may be a late phase of the first, but they are mainly cross-cutting. They contain mostly quartz and feldspar in varying ratios, and small amounts of muscovite.

GEOCHEMICAL SURVEY

A regional survey carried out by Mattagami in the Deception Creek drainage system in 1979 pointed towards interesting concentrations of tungsten in heavy minerals. The proposed work consisted of the following:

- Establishing a grid system with a NS baseline and EW lines (Fig. 3).

- Soil survey along the grid lines, silt survey when appropriate.

- Geophysics consisting of a VLF-EM and a magnetometer survey.

- Geology

Due to the heavy snowfall during the previous winter season combined with a cool and late spring the claims were still 75% covered with thick snow banks making the execution of the original plans impossible. Soils were collected along a grid system which was established more or less following the disappearing snow. A total of about 520 soils were collected on the property, as well as 13 sediments, 2 pans and 9 rocks for geochemical analysis. All rocks, sediments, soils, and heavy mineral concentrates were analyzed for W. In addition all rocks, sediments, heavy minerals and every fifth soil sample (total 104 soils) analyzed for Cu,Pb,Zn,Ag, and Mo.

The samples were forwarded to the Noranda Exploration Company, Limited laboratories in Vancouver for above mentioned analyses. For more details see Appendix 2.

An attempt was made to collect the soils from the B-horizon, but it is evident that in such rugged terrain as the Deception Mountain Massif the soils collected range from very immature talus material to more mature soils of the B-horizon in the lower sparsely wooded slopes of the southern half of the claims group.

Figures 4 and 7 show the sample locations for soils and sediments, pans, and rocks respectively. The W results in soils are plotted on Figure 5 where as the additional Cu,Pb,Zn,Ag and Mo results (every fifth) soil are plotted on Figure 6. Because the Ag and Mo results are predominantly on or below the detection i.e. 0.2 and 2 ppm these values are marked as ___, ___ respectively. Only values greater than 0.4 ppm Ag and 4 ppm Mo are plotted on Fig. 6.

The highest values for the various elements as obtained in soils and sediments are given in Table 2. No values for rocks or pans have been received yet.

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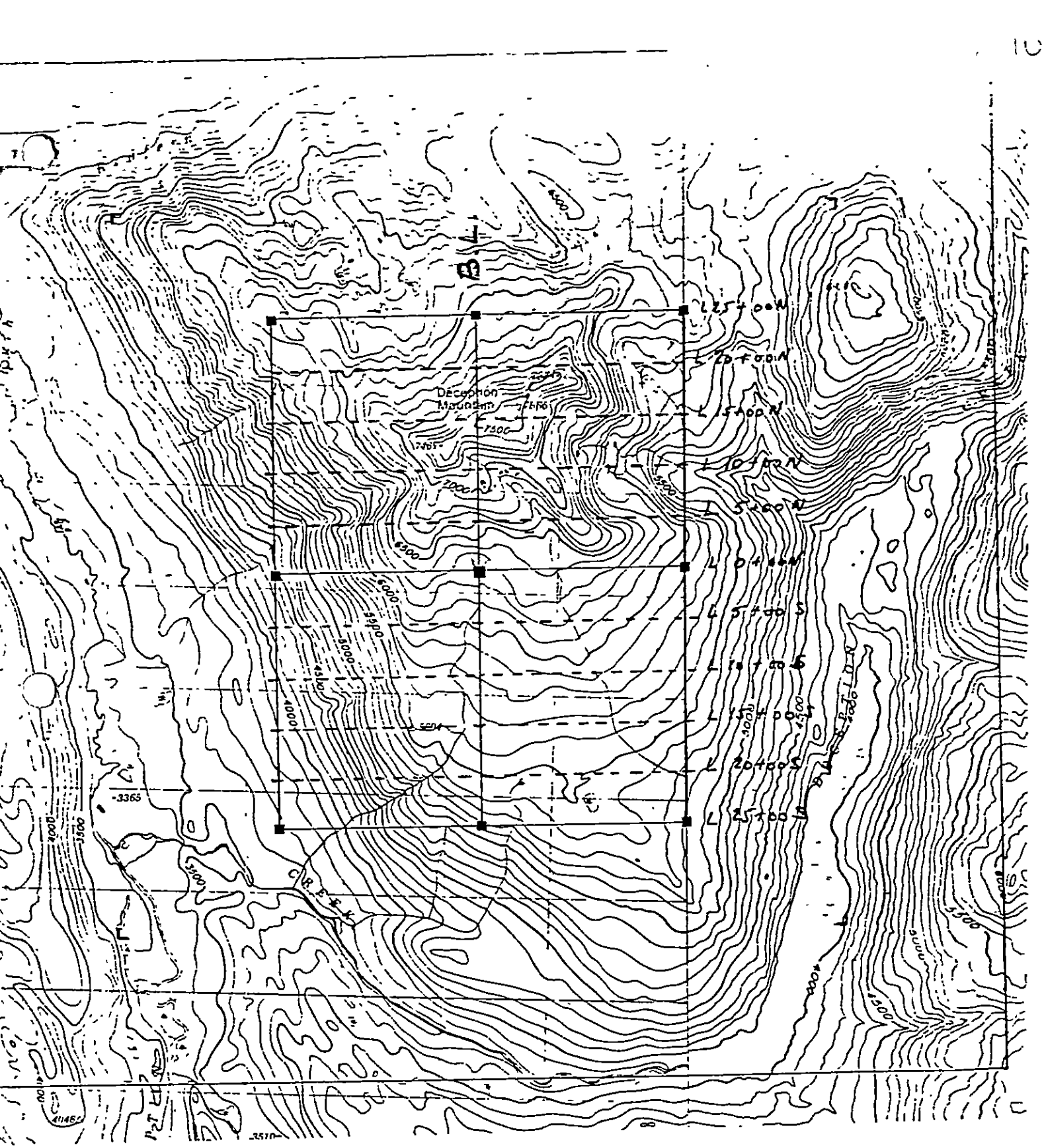

Figure 3: JEZEBEL claims with proposed grid system, Scale about 1:50,000

TABLE 2: Highest Values for W, Mo, Cu, Pb, Zn, Ag (ppm)

Sample Type #	W	Mo	Cu	Pb	Zn	Ag
Soils	80	8	62	22	250	1.0
Soil #	P7226	P7450	P7040	P7290	P7360	P7390
Sediments	30	4	30	14	120	0.4
Sediments #	P7007	3 Sam.	S7012	S7005	S7002	S7011

With a few exceptions made, mainly for some 3 Zn values in soils, the Jezebel claims group is not anomalous with respect to Mo,Cu,Pb,Zn and Ag. It should be kept in mind that only every 5th. sample was analyzed for these elements. In the case of soil sample P-7360 (250 ppm Zn) the two nearest samples i.e. at about 225 m on the same grid line only contain 18 ppm and 42 ppm Zn definitely not indicative for a Zn anomaly.

The highest W value on the property is 80 ppm. Higher to slightly anomalous W values lie at both sides of the inferred intrusion boundary. This boundary, however, is not very well delineated because of lack of outcrop in certain areas. This may well explain why the highest value of 80 ppm W falls outside the inferred intrusion boundary.

CONCLUSIONS AND RECOMMENDATIONS

From the geochemical and geological surveys the following conclusions can be drawn:

1. The Jezebel claims are not anomalous with regards to Cu,Pb,Zn,Ag and Mo mineralization.

2. The southern half of the two southern claims of the Jezebel claims group show slightly anomalous W values in soils.

3. These slightly anomalous W values seem to coincide with the inferred granitic intrusion boundary.

4. About 75% of the property is made up by highgrade metamorphic two mica schists and 25% consists of a two mica granitic intrusion.

5. Further work should consist of geophysical surveys over the contact zone area of the inferred granitic intrusion.

6. Geochemical surveys should be extended into the southwest corner of the Jezebel 4 claim.

REFERENCES

G.S.C. 1963, Map 1-1963, Geology Quesnel Lake (East Half);
Geology by R.B. Campbell, 1961 and 1962

G.S.C. 1979, Map 1424-A, Parsnip River, Sheet 93
Geological Compilation by H.W. Tipper, R.B. Campbell,
G.C. Taylor, and D.F. Stott, 1974.

Helsen J.N., April 1982, Quesnel Project, Jezebel Claims
Report #1, Proposal for Exploration Company Report
Not in report for assessment purposes.

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CERTIFICATE

I, Jan Helsen, of the City of Edmonton, Province of Alberta, do hereby certify that:

1. I am a geologist residing at 7305 - 180th Street, Edmonton.
2. I am a graduate of the University of Leuven, Belgium with a "Licenciaat in Geologie".
3. I am a graduate of McMaster University, Ontario, with a M.Sc. (1970) and a Ph.D. (1976) in geology.
4. I have been practicing my profession since 1976 and am at present Exploration Geologist with Mattagami Lake Exploration Limited.
5. I am a fellow of the Geological Association of Canada.
6. I supervised the work that is described in this report.

Dated: September 8, 1982

J. Helsen.

GEOLOGICAL ASSOCIATION OF CANADA · J. HELSEN · FELLOW ·

STATEMENT OF COSTS

Period 1 from June 13 to June 21, inclusive. A total of 45 mandays were spent on the property.

NAME	WAGE*/DAY	GEOLOGY + MANDAYS	GEOLOGY + COST ($)	GEOCHEMISTRY ++ MANDAYS	GEOCHEMISTRY ++ COST ($)	TOTAL COST ($)
Dommelly	102.82	8	822.56	5	514.10	1,336.66
Nishi	97.10	3	291.30	5	485.50	776.80
Mackenzie	71.27	3	213.81	5	356.35	570.16
Bradley	56.78	3	170.34	5	283.90	454.24
Halwas	67.30	3	201.90	5	336.50	538.40
TOTAL	395.27	20	1,699.91	25	1,976.35	3,676.26

* These figures include bushpay, payroll burden, etc.
\+ These figures include 1 days of travel, 1 bad weather, etc.
++ These figures include 1 day of flying in campgear and setting up camp.

Total cost for 9 days of operation

Wages	
45 mandays	$ 3,676.26
Camp operation	
$ 50.00 / manday	2,250.00
Equipment Rental	
SBX 100 radio @ $ 300.00 / month	90.00
SBX 11A radio @ $ 160.00 / month	48.00
Vehicle Rental and Operation	
Panel Van (Bow Mac) @ $ 600.00 / month	180.00
GMC Jimmy (Grove) @ $ 1,000.00 / month	300.00
100 l. gasoline @ 42¢ / litre (both trucks)	42.00
Helicopter Transportaion	
4.2 hrs. Sling job @ $ 395.00 / hr.	1,659.00
2.1 hrs. Food supply / supervision	829.50
6.3 hrs. @ 23 gallons Jet fuel / hr. and @ $ 2.00 / gallon	289.80

GEOCHEMICAL ANALYSES

376 Soils analyzed for W @ $3.00/sample	$ 1,128.00
376 Soil preparation @ $0.50/sample	188.00
Telephone, Postage, Freight	150.00
Drafting	200.00
Report Writing	400.00
Supervision of Crew	300.00
Total cost for 45 mandays (June 13 - 21 inclusive)	$11,730.56

PERIOD 2 from June 22 - July 8, 1982. A total of 90 mandays were spent on the property

NAME	WAGE/DAY *	GEOLOGY		GEOCHEMISTRY +		TOTAL COST
		Mandays	Cost	Mandays	Cost	
Donnelly	102.82	4	411.28	17	1,747.94	2,159.22
Nishi	97.10	1	97.10	17	1,650.70	1,747.80
MacKenzie	71.27	1	71.27	16	1,140.32	1,211.59
Bradley	56.78	1	56.78	16	908.48	965.26
Halwas	67.30	1	67.30	16	1,076.80	1.144.10
TOTAL	395.27	8	703.73	82	6,524.24	7,227.97

* These figures include bushpay, payroll burden etc.

\+ These figures include 1 day travel, 3 days foul weather, breaking camp etc.

Total cost for 18 days of operation.

Wages

90 mandays $7,227.97

Camp Operation

$50.00/manday $4,500.00

Equipment Rental	
SBX 100 radio @ $300.00/month	$ 180.00
SBX 11A radio @ $160.00/month	96.00
Vehicle Rental and Operation	
Panel Van (Bow Mac) @ $600.00/month	1,360.00
GMC Jimmy (Grove) @ $1,000.00/month	600.00
150 litres gasoline @ 42¢/litre (for 2 trucks combined)	63.00
Helicopter Transportation	
Jetranger 206B food supply 1.4 hrs.	
crew pick-up 2.5 hrs	
attempt to move 1.6 hrs.	
sling out job 3.5 hrs.	
@ $395.00/hr. 9.0 hrs.	3,555.00
Jet fuel @ 23 gallons/hr. and $2.00/gallon	414.00
Geochemical Ananlyses	
144 Soils for W,Mo,Cu,Pb,Zn,Ag @($3.00 + 1.50 + 4 x 0.60/sample)	993.60
144 Soils preparations @ $0.50/sample	72.00
13 Sediments for W,Mo,Cu,Pb,Zn,Ag @ $6.90/sample	89.70
13 Sediments preparations @ $0.50/sample	6.50
6 Rocks for W,Mo,Cu,Pb,Zn,Ag @ $6.90/sample	41.40
6 Rock preparations @ $2.50/sample	15.00
2 Heavy mineral concentrates for W,Mo,Cu,Pb,Zn,Ag @ $6.90/sample	13.00
2 Heavy mineral concentrate preparations @ $2.50/sample	5.00
Telephone, Postage, Freight	150.00
Drafting	200.00
Report Writing	400.00
Supervision of Crew	300.00
Total Cost for 90 mandays (June 22 - July 8, 1982)	$ 19,282.97

APPENDIX 2

Methodology of the Geochemical Laboratory

Physical methods of sample treatment.
Rock and core samples involve crushing and pulverizing with a rotary plate or a ring and puck pulverizer, whichever is appropriate. Subsequently, the -200 mesh sample is rolled to insure uniformity.

For sediment and soil samples, these are dryed at ca.80°C for 24 to 48 hours.

The samples are then sieved to -80 mesh with nylon screen; the +80 mesh (reject) material is discarded.

The panned - heavy mineral samples are analyzed as received without further sample preparation, except where the material is too coarse; this material is passed through a -40 mesh screen.

Perchloric-nitric acid decomposition ($HClO_4$-HNO_3)

The analysis of soil, sediment and rock geochemistry to determine the lighter transition elements, is carried out by decomposition with a perchloric plus nitric acid mixture. The procedure for preparing geological samples for trace analysis by atomic absorption is as follows:

> Weigh 0.40g of sample and digest with 4ml perchloric acid (70%) plus nitric acid (4+1) for 4 hours at reflux temperature.
> After digestion, each sample is diluted to 10ml with water. This solution is used for the determination of Cd, Cr, Co, Cu, Fe, Pb, Mn, Mo, Ni, Ag, V and Zn with a Varian AA-475 complete with background correction.
> Complete dissolution of such elements as Cr, Fe, Mn and V is not always achieved, and may be of little significance for geochemical exploration purposes.

A brief description of elements requiring specific techniques

Determination of mercury and the elements that form volatile hydrides i.e. As, Bi, Sb, Se and Te are carried out with a hydride vapour generation accessory (Varian M-65). The hydride is formed by sodium borohydride reaction with an acidified solution of the sample. This enables measurement of trace quantities by atomic absorption.

Fluorine: 0.25g sample is sintered with sodium carbonate-potassium nitrate flux and dissolved in water. The fluoride content is compared to standards on a specific ion electrode meter. (U.S. G.S. Paper 700-C).

Gold: 10.0g sample is digested with aqua regia. Gold is extracted into MIBK from the aqueous HCl solution. Atomic absorption is used to determine gold, and a sensitivity of 10ppb is attained. (At. Absorpt. Newsl. 6, 126, 1979).

Tin: 0.5g sample is heated with ammonium iodide: tin present as cassiterite is converted into stannic iodide, which sublimates. The sublimate is dissolved in 1M HCl. A pink tin complex is formed with gallein. This allows colormetric comparison with standards to determine tin to as low as 2 ppm. (R.E. Stanton, 1962).

Tungsten: 1.0g sample is sintered with carbonate flux and is leached with water. The leachate is treated with KSCN. This forms a yellow tungsten thio-cyanate which is extracted into tri-n-butyl phosphate. This permits colormetric comparison with a standard series to ca. 4 ppm (F.N. Ward, 1963).

Uranium: Sample digestion will depend on the extraction requested, however, if not specified, an aliquot is taken from the perchloric-nitric decomposition. The aliquot is taken diluted with water and buffer, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex). Sensitivity of 0.1 ppm in geological samples is easily obtained.

Hydrofluoric-perchloric-nitric decomposition ($HF/HClO_4$-HNO_3)

The analysis of silcate rock for major elements, i.e. alkaline and earth alkaline metals, is performed by decomposition with hydrofluoric-perchloric-nitric acid, with subsequent removal of the fluoride ion. Total dissolution of the major constituents is accomplished and this method is suitable for determination of Na, K, Mg, Ca, Mn, Fe, Rb, Sr, and Ba. Silicon is not determined since it volatilizes during dissolution.

This method is not intended to replace the elaborate fusion techniques (eg. $LiBO_2$ fusion) for major oxide analysis, and should be used as a supplementary method for geochemical exploration where quick results are necessary. (Anal. Chim. Acta 32, 1, 1965).

Whole rock analysis employing lithiumborate fusion

An atomic absorption procedure is used for the analysis of rock to determine Si, Al, Fe, Mg, Ca, K, Na, Mn, Cr, Sr, and Ti. The method employs a lithium metaborate ($LiBO_2$) fusion and dissolution in diluted nitric acid. This is recommended for whole rock analysis of rocks and core of widely ranging major element composition. (Atomic Absorpt. Newsl. 2, 25, 1969).

The lab intends to implement the Bernas Type teflon-lined bomb for decomposition of ores and minerals at a later date.

The lab will continue the policy that after operating costs of the lab have been covered, any surplus will be rebated on a pro-rated basis.

There is considerable difference of opinion regarding what geochemical methods to use in exploration. Since there is no universally suitable method for any geochemical analysis which is mainly due to varying sample material, in order to maintain quality control and consistent data, it is important to request the same decomposition and analytical methods, when various labs are contracted.

For further information please contact the Noranda Vancouver Laboratory at the following number: (604) 684-9246.

APPENDIX 3

GEOCHEMICAL RESULTS IN SOILS AND SEDIMENTS

NORANDA EXPLORATION CO. LTD.

LOCATION HATTAGAMI EDH. | PROJECT 174 #7-56 | SHEET 6

SAMPLE Nos. | COLLECTOR D.d. | DATE RECEIVED July 13/82

4	S-7000		10	32	6	0.2	2	<2		
5	01		12	44	6	0.2	<2	<2		
6	02		28	120	10	0.2	4	17		
7	S-7003		10	42	8	0.2	4	<2		

T.T. No.	SAMPLE No.	1	2 Cu	3 Zn	4 Pb	5 Ag	6 Mo	7 W	8	G.C.I. NUMBER
78	S-7004		12	44	6	0.2	2	15		
9	05		22	100	14	0.2	4	10		
80	06		6	36	2	0.2	2	25		
1	07		10	48	4	0.2	<2	30		
2	08		22	94	8	0.2	<2	<2		
3	09		8	54	2	0.2	<2	<2		
4	10		18	84	8	0.2	<2	25		
5	11		24	80	8	0.4	2	<2		
6	12		30	66	10	0.2	2	<2		
87	S-7013		8	26	4	0.2	<2	<2		

NORANDA EXPLORATION CO. LTD.

LOCATION Mattagami EOM. | PROJECT 174 7-56 | SHEET 1

SAMPLE Nos

MATERIAL Soil | COLLECTOR D.H. | DATE RECEIVED 23/07/'8

ANALYST D.B. | DATE ANALYSED 29/07/'8

REMARKS Cu Zn Pb Ag Mo IN P.P.M.
0.2g / 2 Ml $HClO_4$: HNO_3 / 5ml.

T.T. No.	SAMPLE No.	1	2 Cu	3 Zn	4 Pb	5 Ag	6 Mo	7	8	G.C.I. NUMBER
1	CHECK NL-3		~~68~~	~~60~~	~~10~~	~~0.6~~	~~4~~			
2	P*7040	✓ ✓	62	92	6	0.2	< 2			
3	50	✓ ✓	36	74	10	0.2	< 2			
4	55	✓ ✓	22	78	12	0.2	< 2			
5	60	✓ ✓	28	70	8	0.2	< 2			
6	65	✓ ✓	24	60	10	0.4	< 2			
7	75	✓ ✓	16	44	8	0.2	< 2			
8	80	✓ ✓	16	54	6	0.4	< 2			
9	85	✓ ✓	14	52	6	0.2	< 2			
10	90	✓ ✓	20	64	8	0.2	< 2			
1	7095	✓ ✓	26	58	6	0.2	< 2			
2	7100	✓ ✓	14	38	10	0.2	< 2			
3	05	✓ ✓	24	60	8	0.2	< 2			
4	10	✓ ✓	26	50	10	0.2	< 2			
5	15	✓ ✓	18	32	8	0.4	< 2			
6	20	✓ ✓	22	48	14	0.4	< 2			
7	25	✓ ✓	20	52	10	0.2	< 2			
8	30	✓ ✓	42	76	8	0.2	< 2			
9	35	✓ ✓	20	44	6	0.2	< 2			
20	40	✓ ✓	12	18	6	0.2	< 2			
1	45	✓ ✓	6	26	8	0.2	4			
2	50	✓ ✓	10	26	8	0.4	< 2			
3	55	✓ ✓	14	48	6	0.4	< 2			
4	60	✓ ✓	18	50	10	0.4	< 2			
5	65	✓ ✓	16	48	14	0.2	4			
6	70	✓ ✓	14	26	8	0.2	< 2			
7	75	✓ ✓	14	34	10	0.2	< 2			
8	80	✓ ✓	14	42	12	0.2	< 2			
9	85	✓ ✓	12	42	8	0.2	< 2			
30	P* 7190	✓ ✓	12	82	10	0.2	4			

NORANDA EXPLORATION CO. LTD.

LOCATION MATTAGAMI EDM. | PROJECT 174 #7-56 | SHEET 2

MATERIAL SOIL | SAMPLE Nos.

COLLECTOR D.H. | DATE RECEIVED 23/07/'82

ANALYST D.B. | DATE ANALYSED 29/07/'82

REMARKS Cu, Zn, Pb, Ag, Mo IN P.P.M.
0.2g/2ml $HClO_4$:HNO_3/5ml

T.T. No.	SAMPLE No.	1	2 Cu	3 Zn	4 Pb	5 Ag	6 Mo	7	8	G.C.I. NUMBER
31	P# 7195	✓ ✓	10	26	12	0.2	2			
32	7200		46	130	16	0.2	< 2			
3	05	✓ ✓	36	68	8	0.2	< 2			
4	10	✓ ✓	40	68	8	0.2	< 2			
5	15	✓ ✓	28	72	10	0.2	< 2			
6	25	✓ ✓	14	52	8	0.2	< 2			
7	30	✓ ✓	20	70	8	0.2	< 2			
8	35	✓ ✓	48	100	6	0.2	< 2			
9	40	✓ ✓	28	62	8	0.2	< 2			
40	45	✓ ✓	18	50	8	0.2	< 2			
1	50	✓ ✓	36	40	10	0.2	< 2			
2	55	✓	12	32	8	0.2	< 2			
3	60	✓	22	54	6	0.2	< 2			
4	65	✓ ✓	12	34	8	0.2	< 2			
5	70	✓	14	40	8	0.2	< 2			
6	75	✓	30	76	6	0.2	2			
7	80	✓	18	46	8	0.2	< 2			
8	85	✓	26	50	10	0.2	< 2			
9	90	✓	14	30	22	0.6	2			
50	7295	✓	26	120	10	0.4	4			
1	7300	✓	12	42	12	0.2	< 2			
2	05	✓	50	34	6	0.2	< 2			
3	10	✓	16	46	6	0.2	< 2			
4	15	✓	12	24	6	0.2	< 2			
5	20	✓	6	10	4	0.2	< 2			
6	25	✓	8	30	8	0.2	< 2			
7	30	✓	14	58	4	0.2	< 2			
8	35	✓	10	24	8	0.2	< 2			
9	40	✓	16	66	10	0.4	6			
		✓	12	42	6	0.2	4			

NORANDA EXPLORATION CO. LTD.

LOCATION MATTAGAMI EDM. | PROJECT 174 #7-56 | SHEET 3

MATERIAL SOIL | SAMPLE Nos

COLLECTOR D.H. DATE RECEIVED 23/07/'82

ANALYST D.B. DATE ANALYSED 29/07/'82

REMARKS Cu, Zn, Pb, Ag, Mo IN P.P.M

.2g/2ml $HClO_4$: HNO_3 /5ml

T.T. No.	SAMPLE No.	1	2 Cu	3 Zn	4 Pb	5 Ag	6 Mo	7	8	G.C.I. NUMBER
61	P# 7350	✓	18	72	6	0.4	4			
2	55	✓	6	18	2	0.2	< 2			
3	60	✓	26	250	12	0.4	4			
4	65	✓	14	42	6	0.2	2			
5	70	✓	10	28	10	0.4	4			
6	75	✓	22	58	6	0.2	< 2			
7	80	✓	26	46	8	0.2	< 2			
8	85	✓	8	18	2	0.2	< 2			
9	90	✓	14	48	10	1.0	< 2			
70	7395	✓	18	32	6	0.4	< 2			
1	7400	✓	16	50	6	0.2	2			
2	05	✓	10	24	4	0.2	< 2			
3	10	✓	14	28	10	0.2	4			
4	15	✓	14	50	8	0.2	2			
5	20	✓	16	30	6	0.2	< 2			
6	25	✓	16	42	8	0.2	2			
7	30	✓	14	26	6	0.2	2			
8	35	✓	20	54	6	0.2	4			
9	40	✓	14	48	6	0.2	2			
80	45	✓	18	52	10	0.2	6			
1	7450	? ?	28	80	12	0.4	8	?		
2	7505	✓	14	48	8	0.2	2			
3	10	✓	12	28	10	0.2	< 2			
4	15	✓	18	58	8	0.4	2			
5	20	✓	26	58	10	0.6	4			
6	25	✓	14	38	10	0.2	2			
7	30	✓	18	42	8	0.2	< 2			
8	35	✓	10	40	4	0.2	< 2			
9	40	✓	16	40	12	0.4	< 2			
90	P# 7545	✓	18	40	10	0.4	< 2			

NORANDA EXPLORATION CO. LTD.

LOCATION MATTAGAMI EDM. | PROJECT 174 #7-56 | SHEET 4

SAMPLE Nos.

MATERIAL SOIL | COLLECTOR D.H. | DATE RECEIVED 23/07/'82

ANALYST D.B. | DATE ANALYSED 29/07/'82

REMARKS Cu, Zn, Pb, Ag, Mo IN P.P.M

.2g/2ml $HClO_4$:HNO_3/5ml

T.T. No.	SAMPLE No.	1	2 Cu	3 Zn	4 Pb	5 Ag	6 Mo	7	8	G.C.I. NUMBER
91	P#7550	V	10	24	6	0.4	2			
2	55	V	18	120	10	0.4	4			
3	60	V	14	38	8	0.4	2			
4	65	V	12	26	8	0.4	< 2			
5	70	V	10	22	10	0.2	< 2			
6	75	V	16	22	10	0.4	< 2			
7	80	V	20	38	6	0.6	< 2			
8	85	V	10	24	8	0.2	< 2			
9	7590	V	8	16	6	0.2	2			
100	CHECK NL-3		~~22~~	~~66~~	~~6~~	~~0.8~~	~~6~~			
1	7595	V	10	18	6	0.2	2			
2	7000	V	16	42	8	0.2	< 2			
3	05	V	20	64	8	0.2	< 2			
4	10	V	38	86	12	0.2	< 2			
5	20	V	26	86	8	0.2	< 2			
6	25	V	30	60	12	0.2	< 2			
7	30	V	40	92	10	0.2	< 2			
8	35	V	38	72	12	0.2	< 2			
9	2200		24	60	4	0.2	< 2			
110	01		16	40	2	0.2	< 2			
1	02		14	26	2	0.2	< 2			
2	03		28	52	2	0.2	< 2			
3	04		18	44	2	0.2	< 2			
114	P#2205		14	52	4	0.2	< 2			
~~5~~										
~~6~~										
~~7~~										
~~8~~										
~~9~~										

NORANDA EXPLORATION CO. LTD.

LOCATION MATT

MATERIAL SOIL

REMARKS TUNGSTEN IN P.P.M

PROJECT 174 #7-56 SHEET 1

SAMPLE Nos.

COLLECTOR D.H. DATE RECEIVED /07/82

ANALYST D.B. DATE ANALYSED 29/07/82

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
42	P # 7109				< 2	✓				
43	P # 7111				< 2					
44	7112				< 2					
45	7113				< 2					
46	7114				< 2					
47	7116				< 2					
48	7117				< 2					
49	7118				< 2					
50	7119				< 2					
51	7121				< 2					
52	7122				< 2					
53	7123				< 2					
54	7124				< 2					
55	7126				< 2					
56	7127				< 2					
57	7033				< 2					
58	7034				< 2					
59	7036				< 2					
60	7037				< 2	✓				
61	7041				< 2					
62	7038				< 2	✓				
63	7042				< 2	? wk				
64	7001				< 2	✓				
65	7002				< 2					
66	7003				< 2					
67	7004				< 2					
68	7006				< 2					
69	7007				< 2					
70	7008				< 2					
71	P # 7009				< 2	✓				

NORANDA EXPLORATION CO. LTD.

LOCATION MATT

MATERIAL SOIL

REMARKS TUNGSTEN IN P.P.M.

PROJECT #174 #7-56 | SHEET #2

SAMPLE Nos.

COLLECTOR D.H. DATE RECEIVED 1/07/82

ANALYST D.B. DATE ANALYSED 29/07/82

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
72	P* 7011				< 2	V				
73	7012				< 2	V				
74	7013				< 2	V				
75	7014				< 2	V				
76	7018				< 2	V				
77	7019				< 2	V				
78	7021				< 2	V				
79	7022				< 2	V				
80	7023				< 2	V				
81	7024				< 2	V				
82	7026				< 2	V				
83	7027				< 2	V				
84	7028				< 2	V				
85	7029				< 2	V				
86	7031				< 2	V				
87	7032				< 2	V				
88	7153				< 2	V				
89	7154				< 2					
90	7157				< 2					
91	7158				< 2					
92	7159				< 2					
93	7161				5					
94	7162				5					
95	7163				< 2					
96	7164				< 2					
97	7166				< 2					
98	7167				5					
99	7168				< 2					
100	CHECK G7				~~22~~					
101	P* 7139				< 2	J				

NORANDA EXPLORATION CO. LTD.

LOCATION _____ PROJECT #174 #7-56 SHEET #3

MATT SAMPLE Nos. _____

MATERIAL SOIL COLLECTOR D.H. DATE RECEIVED 1/07/82

ANALYST D.B. DATE ANALYSED 29/07/82

REMARKS TUNGSTEN IN P.P.M.

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
102	P# 7128				< 2	U				
103	7129				< 2	"				
104	7131				< 2					
105	7132				< 2					
106	7133				< 2					
107	7134				< 2					
108	7136				< 2					
109	7137				< 2					
110	7138				< 2	"				
111	7141				< 2	"				
112	7142				< 2	"				
113	7143				< 2	"				
114	7144				< 2	"				
115	7146				< 2	"				
116	7147				< 2	"				
117	7148				< 2	"				
118	7149				< 2	"				
119	7151				< 2	V				
120	7152				< 2	"				
121	7082				< 2	"				
122	7083				< 2	"				
123	7084				< 2	"				
124	7086				< 2	"				
125	7087				< 2	"				
126	7088				< 2	V				
127	7089				< 2	V				
128	7091				< 2	V				
129	7092				< 2	V				
130	7093				< 2	V				
131	P#7094				< 2	V				

NORANDA EXPLORATION CO. LTD.

LOCATION MATT

MATERIAL SOIL

PROJECT 174 #7-56 SHEET # 4

SAMPLE Nos

COLLECTOR D.H. DATE RECEIVED /07/8

ANALYST D.B. DATE ANALYSED 29 /07/8

REMARKS TUNGSTEN IN P.P.M.

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBE
132	P# 7096				< 2	✓				
133	7097				< 2	✓				
134	7098				< 2	✓				
135	7099				< 2	✓				
136	7191				17	✓				
137	7192				15	✓				
138	7193				10	✓				
139	P# 7194				15	✓				
140	CHECK G7				~~15~~					
—	—				—					
	P7156 }					✓				
	P7169 } I.S. for W					✓				
2	P# 7040			—	< 2	✓				
3	50				< 2	✓				
4	55				< 2	✓				
5	P# 7060				< 2	✓				

NORANDA EXPLORATION CO. LTD.

LOCATION _____ PROJECT 174 #7-56 SHEET 6

MATT SAMPLE Nos. _____

MATERIAL S/S COLLECTOR D.H. DATE RECEIVED 1/07/82

ANALYST D.B. DATE ANALYSED 29/07/82

REMARKS TUNGSTEN IN P.P.M.

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
46	P# 7065				< 2	V				
7	75				10	|				
8	80				< 2	|				
9	85				< 2	|				
50	90				< 2	|				
1	7095				< 2	|				
2	7100				< 2	|				
3	05				< 2	|				
4	10				< 2	|				
5	15				< 2	|				
6	20				< 2	|				
7	25				< 2	|				
8	30				< 2	|				
9	35				15	|				
60	40				< 2	|				
1	45				10	|				
2	50				< 2	|				
3	55				< 2	|				
4	60				< 2	|				
5	65				< 2	|				
6	70				< 2	|				
7	75				< 2	|				
8	80				< 2	|				
9	85				7	|				
70	90				15	|				
1	7195				5	|				
2	7200				< 2	|				
3	05				< 2					
4	10				< 2	|				
5	P# 7215				< 2	V				

NORANDA EXPLORATION CO. LTD.

LOCATION HATT | PROJECT 174 #7-56 | SHEET 7

MATERIAL S/S | SAMPLE Nos.

COLLECTOR D.H. | DATE RECEIVED /07/82

ANALYST D.B. | DATE ANALYSED /07/'82

REMARKS TUNGSTEN IN P.P.M.

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
76	P# 7225				5	V				
7	30				5	"				
8	35				< 2	"				
9	40				< 2	"				
80	45				< 2	"				
1	50				< 2	"				
2	55				< 2	"				
3	60				< 2					
4	65				< 2	"				
5	70				< 2	"				
6	75				< 2	"				
7	80				< 2	"				
8	85				< 2	J				
9	90				5	"				
90	7295				15	"				
1	7300				7	"				
2	05				17	"				
3	10				10	"				
4	15				2	"				
5	20				2	V				
6	25				7	"				
7	30				2	"				
8	35				2	"				
9	7340			—	10	V				
100	CHECK G7				20	—				
1	7345				10	V				
2	50				2	J				
3	55				< 2	V				
4	60				7	V				
5	P# 7365				< 2	J				

NORANDA EXPLORATION CO. LTD.

LOCATION _____ PROJECT 174 #7-56 SHEET 8

MATT SAMPLE Nos. _____

MATERIAL S/S COLLECTOR D.H. DATE RECEIVED /07/'82 / /

ANALYST D.B. DATE ANALYSED /07/'82 08/82

REMARKS TUNGSTEN IN P.P.M.

T. O.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER	G.C.I. NUMBER
6	P# 7370				2	✓					
7	75				< 2	|					
8	80				< 2	|					
9	85				12	|					
0	90				< 2	|					
1	7395				< 2	|					
2	7400				10	|					
3	05				10	|					
4	10				10	✓					
5	15				15	|					
6	20				2	|					
7	25				< 2	|					
8	30				< 2	|					
9	35				< 2	|					
20	40				7	|					
1	45				5	✓					
2	7450				5	?					
3	7505				5	✓					
4	10				< 2	|					
5	15				10	|					
6	20				15	|					
7	25				25	|					
8	30				< 2	|					
9	35	=		-	20	|					
30	40	—	=		< 2	|					
1	45	=		:	5	|					
2	50	≡			10	|					
3	55	—			5	|					
4	60				15	|					
5	P# 7465				15	✓					

NORANDA EXPLORATION CO. LTD.

LOCATION Malt.

MATERIAL Silt - Soil

REMARKS Tungsten in ppm

PROJECT 174 # 7 56 | SHEET 10

SAMPLE Nos.

COLLECTOR DH DATE RECEIVED / /

ANALYST DB DATE ANALYSED 10 8 / 82

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
25	P 7049				< 2	✓				
6	51				< 2	✓				
7	52				< 2	✓				
8	53				< 2	✓				
9	54				< 2	✓				
30	56				< 2	✓				
1	57				< 2	✓				
2	58				< 2	✓				
3	59				< 2	✓				
4	7061				< 2	✓				
5	62				< 2	✓				
6	63				< 2	✓				
7	66				< 2	✓				
8	67				< 2	✓				
9	68				< 2	✓				
40	69				< 2	✓				
1	7076				10	✓				
2	77				5	✓				
3	78				< 2	✓				
4	79				7	✓				
45	P 7081				—	✓				
—	—									

NORANDA EXPLORATION CO. LTD.

LOCATION _____ PROJECT 174 # 7-56 SHEET 9

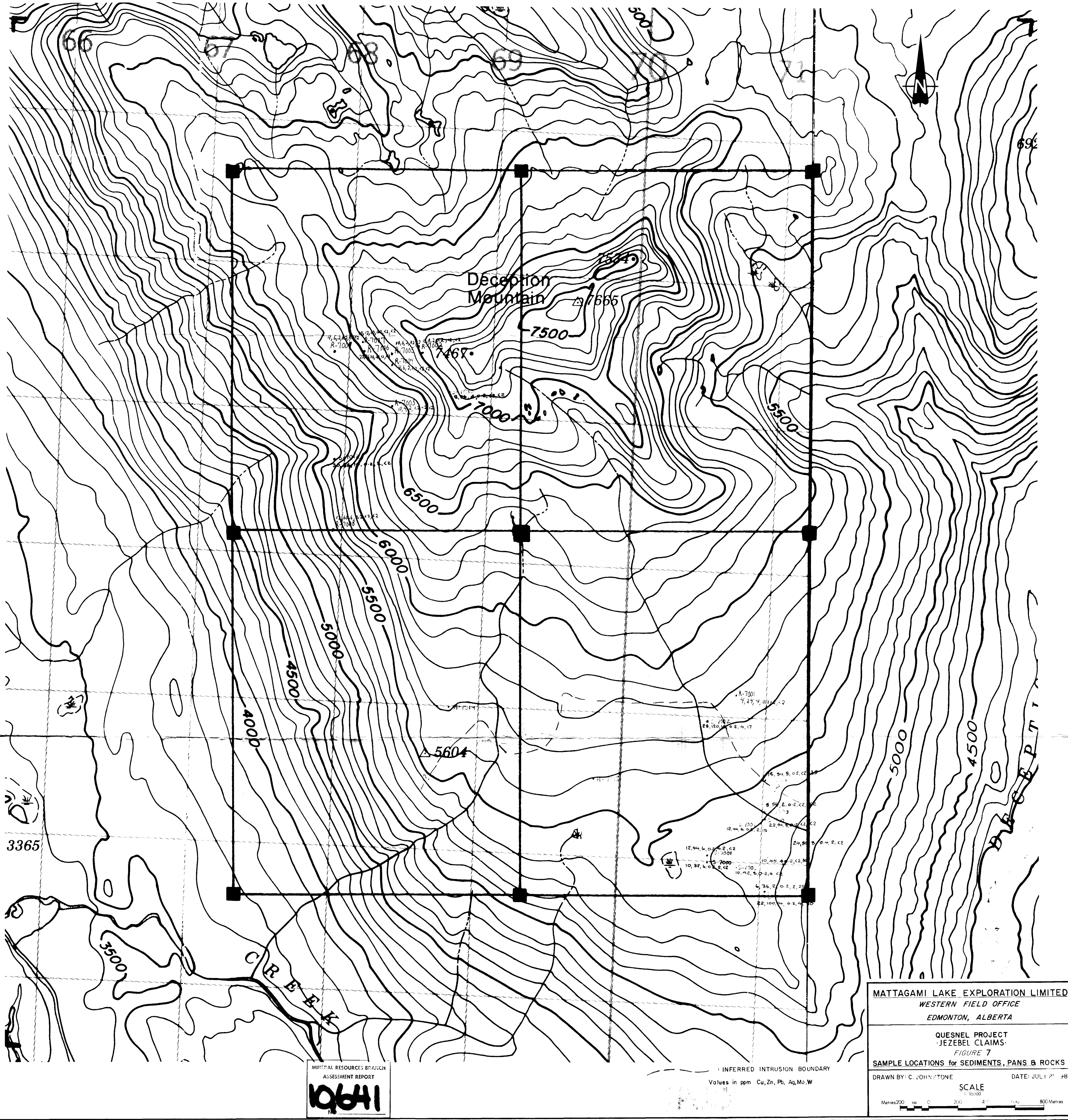
MATT SAMPLE Nos. _____

MATERIAL S/S COLLECTOR D.H. DATE RECEIVED /07/82

ANALYST D.B. DATE ANALYSED /07/'82

REMARKS TUNGSTEN IN P.P.M.

T.T. No.	SAMPLE No.	1	2	3	4 W	5	6	7	8	G.C.I. NUMBER
136	P# 7570				< 2	✓				
7	75				< 2	"				
8	80				< 2	"				
9	7585				< 2	"				
140	CHECK G7				25	"				
—	—				—					
1	CHECK G7				15					
2	P 7590				20					
3	7595				< 2	✓				
4	7000				< 2	✓				
5	05				< 2	✓				
6	10				< 2	✓				
7	20				< 2	✓				
8	25				< 2	✓				
9	30				< 2	✓				
10	7035				< 2	✓				
7	7196				< 2	✓				
8	97				7	✓				
9	98				5	✓				
20	7199				< 2	✓				
1	7043				< 2	✓				
2	44				< 2	✓				
3	47				< 2	✓				
24	P 7048				< 2	✓				


Deception Mountain
7534
7665
7500
7467
7000
6500
6000
5500
5000
4500
4000
3500
5604
3365
CREEK
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10641
INFERRED INTRUSION BOUNDARY
Values in ppm Cu, Zn, Pb, Ag, Mo, W
MATTAGAMI LAKE EXPLORATION LIMITED
WESTERN FIELD OFFICE
EDMONTON, ALBERTA
QUESNEL PROJECT
·JEZEBEL CLAIMS·
FIGURE 7
SAMPLE LOCATIONS for SEDIMENTS, PANS & ROCKS
DRAWN BY: C. JOHNSTONE
SCALE
1:10,000
Metres 200 100 0 200 800 Metres

Deception Mountain

△7665

7504

7467

7500

7000

6500

6000

5500

5000

4500

4000

△5604

3500

3365

5500

5000

4500

C R E E K

N

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10,641

INFERRED INTRUSIVE BOUNDARY

≠ 0·4 Ag : -
≠ 2 Mo : -

MATTAGAMI LAKE EXPLORATION LIMITED
WESTERN FIELD OFFICE
EDMONTON, ALBERTA

QUESNEL PROJECT
·JEZEBEL CLAIMS·
FIGURE **6**
SAMPLE LOCATIONS for SOIL
Cu, Zn, Pb, Ag & Mo in (p.p.m.)

DRAWN BY: C. JOHNSTONE
DATE: JULY 21·1982

SCALE
1 10,000

Metres 200 100 0 200 400 600 800 Metres

Deception Mountain

△7665

7544

7467

7500

7000

6500

6000

5500

5000

4500

4000

3500

△5604

3365

CREEK

INFERRED INTRUSION BOUNDARY

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,641
NO.

MATTAGAMI LAKE EXPLORATION LIMITED
WESTERN FIELD OFFICE
EDMONTON, ALBERTA

QUESNEL PROJECT
·JEZEBEL CLAIMS·
FIGURE 5
SAMPLE LOCATIONS for SOIL
Tungsten (W) in (p.p.m.)

DRAWN BY: C. JOHNSTONE. DATE: JULY 21 · 1982

SCALE
1: 10,000
Metres 200 100 0 200 400 600 800 Metres

Deception Mountain

7564

7665

7500

7467

7000

6500

6000

5500

5000

4500

4000

5604

3500

3365

C R E E K

Inferred Intrusion Boundary

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 10941

MATTAGAMI LAKE EXPLORATION LIMITED
WESTERN FIELD OFFICE
EDMONTON, ALBERTA

QUESNEL PROJECT
·JEZEBEL CLAIMS·
FIGURE **4**
SAMPLE LOCATIONS for SOIL

DRAWN BY: C. JOHNSTONE. DATE: JULY 21·1982

SCALE
1:10,000

Metres 200 100 0 200 400 600 800 Metres