81- 1250 - 10036

ASSESSMENT REPORT

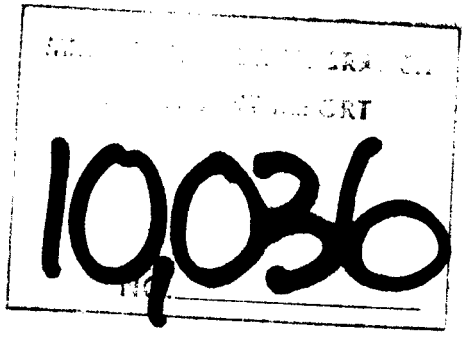
GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL AND PROSPECTING REPORT ON THE LIZARD AND LIZARD #2 MINERAL CLAIMS (18 UNITS) PEMBERTON MAP AREA

LILLOOET MINING DIVISION

by

P. NEWMAN, M.R. VULIMIRI AND S. CRAWFORD

LOCATION: N.T.S. 92J/7
Latitude 50°27' North
Longitude 122°42' West



OWNER: P. NEWMAN

OPERATOR: SEREM LTD.

DATES WORK PERFORMED: November 28-29, 1980,
January 17-19, 1981, and
April 4-10, 1981

DATE OF REPORT: February 1982

ABSTRACT

Prospecting, geological, geochemical and geophysical work by Serem personnel was carried out during the winter of 1980 and the spring of 1981 on the Lizard and Lizard #2 mineral claims situated 16 kilometres northeast of Pemberton, B.C.

The work centered mainly around the skarn zones near the contact of the volcanics and limestones with quartz diorite.

Detailed prospecting along with geological mapping; the sampling of skarn outcrops, along with a geochemical soil sample survey; and a geophysical Proton magnetometer survey was completed in the above-mentioned area.

Mineralization of interest discovered so far is mainly restricted to the skarn type rocks and consists of (in order of importance) tungsten (mainly scheelite with a little powellite), molybdenum (molybdenite), copper (chalcopyrite) and magnetite.

Another skarn showing, consisting of mainly galena, sphalerite and chalcopyrite, occurs about 250 metres north of the above.

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

The Lizard and Lizard #2 mineral claims are located at 50°27' north latitude and 122°40' west longitude in the provisional map area 92J/7 Pemberton, Lillooet mining division (Figure 1). The claims range in elevation from around 701 metres (2300 feet) up to around 1676 metres (5500 feet). The area is mainly forested, although the area of main interest so far is an old logged-off area overgrown with willow, etc.

Outcrop is good in most areas, approximately 60%, with steep cliffs to the west and to the east of the claim. Glacial till on the southern units restricts outcrop exposure in an area around the geological contact.

Access to the claim is excellent, the claims being just off the Pemberton to D'Arcy highway, and then by old logging roads to various areas of the property.

The Lizard #2 claim, incorporating the Lizard claim, a total of 18 units, was staked on November 27th, 1980 by P. Newman and recorded on December 1, 1980.

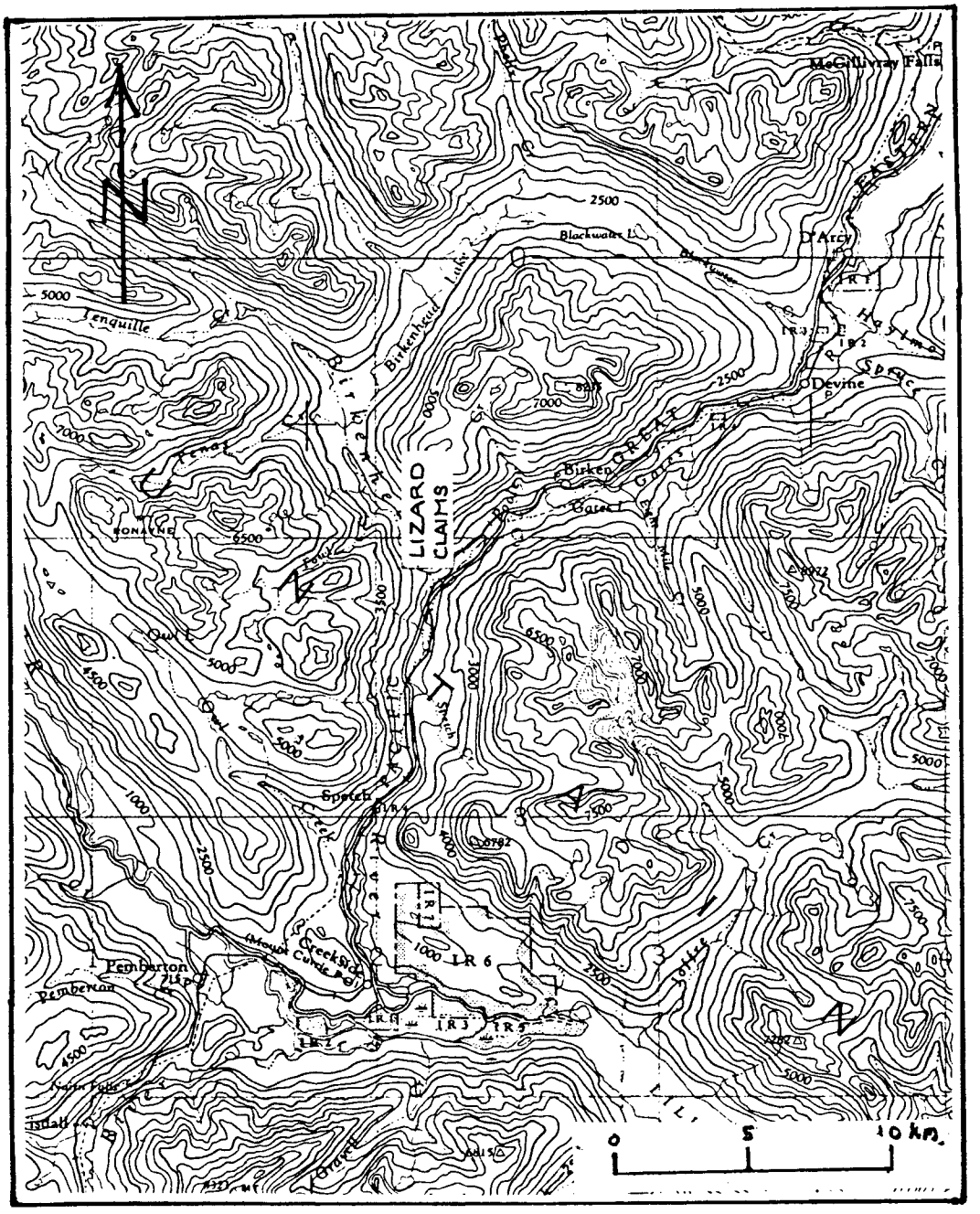


Figure 1. Location of Lizard and Lizard #2 Claims.

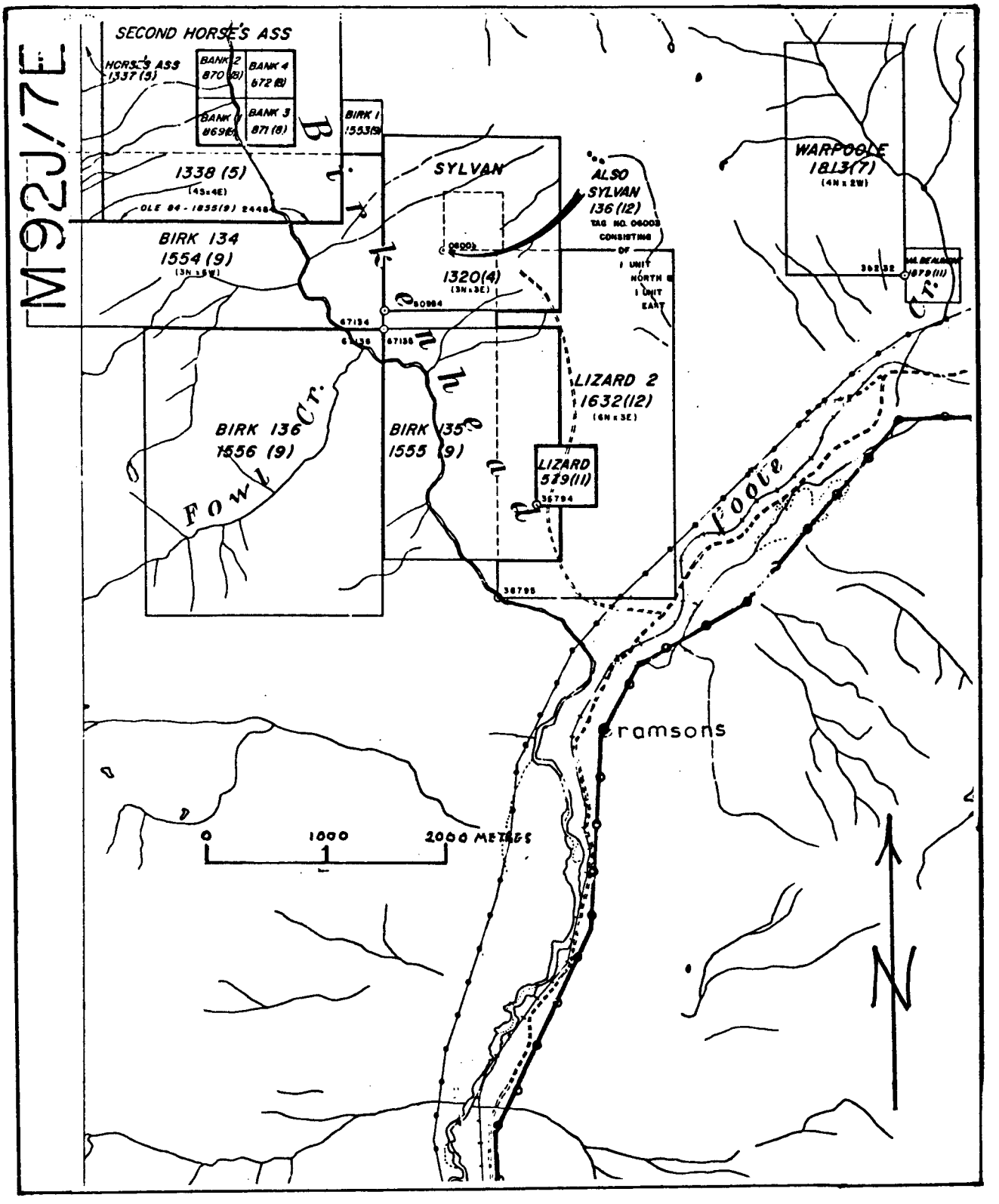


Figure 2. Claims Map: Lizard and Lizard #2 Claims.

GEOLOGY

The property is underlain by limestones with interbedded volcanic rocks of the Triassic Hurley Formation. The Hurley Formation consists of limestone and volcanic rocks comprised of tuffs and tuffaceous sediments. The Hurley Formation is intruded by the Cretaceous quartz diorites (Figure 3). Skarn zones are found at the contact between the intrusive quartz diorite and the limestone. High grade skarns consist of predominantly grossular garnet, diopside, quartz and epidote, whereas lower grade skarns consist of tremolite, wollastonite and calcite.

ALTERATION AND MINERALIZATION

Mineralization mainly consists of scheelite, molybdenite and minor powellite and is associated with garnet-diopside skarn zones. The assays are up to 5.75% WO_3 and .648% molybdenum in grab samples, and up to .150% WO_3 and .03% molybdenum over 1.8 metres in channel samples.

Extensive alteration zones occur in the quartz diorite intrusion in proximity to the skarn. The alteration zones are present mainly along fractures and consist of K-feldspar-quartz zone, quartz-sericite-pyrite zone, and propylitic alteration zone. At the contact with the skarn, the intrusion is very siliceous due to depletion of mafics.

PROSPECTING

A total of 8 days prospecting by Serem personnel was completed during November 1980 and April 1981. Initial prospecting consisted of an overall look at metasedimentary and volcanic rocks which occur throughout the western part of the claim. More prospecting to the east is required to determine the nature of rocks and any mineralization in that area, with particular attention to skarns.

Detailed prospecting at the contact between the quartz diorite and metasediments-metavolcanic rocks was also done using Ultraviolet light were possible, the work being hampered in one area due to glacial deposits.

Ultraviolet light and conventional prospecting was done in detail around the main area of interest, at and near the contact, in the southwest portion of the claim. Extensive garnet-diopside skarn rocks, mineralized in places with scheelite, molybdenite, minor chalcopyrite, powellite and magnetite, occur here. Several areas with tungsten (scheelite) mineralization were outlined. Further work was done around two geochemical anomalies, one area having some tungsten mineralized float.

GEOCHEMICAL SOIL SAMPLING AND GEOCHEMICAL ANALYSIS

A grid of 6350 metres was established, covering the main area of interest around the contact and to the north. The grid covers one unit and partially two others (Figures 4 and 5). Lines, using compass and Topafil beltchain, were run north and south from an east-west baseline. Flagged stations at 50-metre intervals were set up on lines 50 metres apart. Soil samples were collected at each station throughout the grid and were analysed at Min-En Laboratories in North Vancouver for the following elements: WO_3, molybdenum, lead and zinc. Soil samples were generally good, although samples from the southeast portion of the grid were mainly glacial deposits.

Soil sample stations were narrowed to 25-metre intervals around 3+75S - 1+25E at a later date, due to tungsten mineralization in float in that area.

GEOCHEMICAL ROCK SAMPLING AND ANALYSIS

A total of 12 metres of continuous channel sampling at several locations were taken over skarn-type rocks. Overburden had to be cleared at several locations to achieve good exposure. Grab type samples were also collected from the same vicinity along with one grab sample from an unrelated showing to the north of the grid area. Again, samples were analysed at Min-En Laboratories in North Vancouver for WO_3, molybdenum, copper, zinc, and gold, and the last mentioned sample for copper, lead, zinc, and silver.

GEOCHEMICAL METHOD

Samples were sent to Min-En Laboratories and analysed for gold, silver, copper, lead, zinc, molybdenum and tungsten. The analytical procedure for each element is briefly described below:

The samples are dried at 95° C. The samples are then screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

For gold, a suitable sample, weight 5 or 10 grams, is pretreated with HNO_3 and $HClO_4$ mixture.

After pretreatment, the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

Sample solutions are prepared with Methyl Iso-Butyl Ketone for the extraction of gold.

With a set of suitable standard solutions, gold is analysed by Atomic Absorption instruments. The obtained detection limit is 5 ppb.

For silver, copper, lead, zinc and molybdenum, samples weighing 1.0 gram are digested for 6 hours with HNO_3 and $HClO_4$ mixture.

After cooling, the samples are diluted to standard volume. The solutions are analysed by Atomic Absorption Spectrophotometers using the CH_2H_2-Air Flame combination for silver, copper and lead. The C_2H_2-NO_2 mixture is used for molybdenum.

For tungsten, the sample is analysed by a fusion-colorimetric method.

GEOPHYSICAL PROTON MAGNETOMETER SURVEY

A proton magnetometer survey covering 6350 metres of line was completed covering the surveyed grid. Readings were taken at 50 metre stations with a base station set up on the baseline (Figure 6).

The instrument used is a Geometrics G826 proton precession magnetometer. It measures total intensity of the earth's magnetic field and has a sensitivity of $\pm$ 1 gamma over a range of 20,000 to 90,000 gammas. The sensor was mounted on an eight-foot staff and held vertically at arm's length. Readings were taken twice at each station to check for magnetic storms. Diurnal fluctuations were corrected by the loop-back method. No magnetic storms occurred during the time that the survey was performed.

TOPOGRAPHIC ELEVATION SURVEY

Elevations were determined throughout the grid area using a Thommen Altimeter, with mapped contour lines at 10-metre intervals.

Table of Rock Assays

Sample No.	Type	Grid Location	WO_3 %	Mo %	Cu %	Zn %	Au Oz/Ton
4704	Skarn, Grab	1+00E-2+00S	5.75	.648	--	--	.002
4705	Skarn, Channel over 1.5 m.	1+00E-2+00S	0.081	.019	--	--	.001
4706	Skarn, Channel over 1.8 m.	1+00E-2+00S	0.150	.022	--	--	.001
4717	Skarn, Grab	1+00E-2+25S	0.113	.030	--	--	.009
2251	Skarn, Grab	0+00E-3+50S	0.001	--	7.90	0.06	--
2252	Skarn, Grab	0+00E-3+50S	0.001	--	0.890	0.30	.001
2253	Skarn, Grab	1+00E-3+75S	0.001	--	0.256	0.07	.003
2254	Skarn, Channel over 3 m.	0+75E-2+25S	0.044	.008	--	0.03	.044
2255	Skarn, Channel over 3.1 m.	0+75E-2+25S	0.032	.002	--	0.04	--
2256	Skarn, Channel over 2.4 m.	0+75E-2+25S	0.018	.001	--	0.03	--
2257	Skarn, Channel over 1.5 m.	1+00E-2+25S	0.020	.011	--	0.05	--
2258	Old DDH Core, Grab Sample	1+00E-2+00S	0.001	.001	--	0.02	--
4721	Skarn, Grab - from showing due north of grid area		0.002	--	6.15	7.25	.001

Pb %	Ag Oz/Ton
8.4	6.38

CERTIFICATE OF QUALIFICATIONS

I, Peter Newman, certify that:

1. I am a prospector, employed by Serem Ltd.

2. I have been involved in prospecting for the last 8 years and have been employed by several mining companies including Seren Ltd., Pamicon Developments Ltd., and Silver Standard Mines.

3. I have personally prospected the claim group and the area during the last three years.

P. Newman.

Vancouver, B.C.

Peter Newman.

CERTIFICATE OF QUALIFICATIONS

I, Mohan R. Vulimiri, certify that:

1. I am a geologist, employed by Serem Ltd.

2. I am a graduate with a Master of Science degree in Economic Geology from the University of Washington.

3. I have been involved in mineral exploration in British Columbia since 1970 and have acted in responsible positions since 1974.

4. I have personally examined the property.

5. I have no financial interest, either direct or indirect, in the property.

6. The information contained in this report was obtained under my supervision.

Mohan Vulimiri

Vancouver, B.C. Mohan R. Vulimiri.

CERTIFICATE OF QUALIFICATIONS

I, Sheila A. Crawford, certify that:

1. I am a geologist, employed by Serem Ltd.

2. I have an Honours Bachelor of Science degree (First Class) in Geology from Carleton University in Ottawa, Ontario.

3. I have worked in mineral exploration or geological mapping since 1976 and have acted in responsible positions since 1979.

4. I personally examined the property.

5. I have no financial interest, either direct or indirect, in the property.

Vancouver, B.C.

Sheila A. Crawford.

STATEMENT OF EXPENDITURES

Geochemical Analyses and Assays

Soil Samples			
150 analysed for WO_3, Mo, Pb, Zn	@ $ 9.55	$1,432.50	
Rock Samples			
15 assayed for WO_3, Mo, Zn, Au	@ $36.25	$ 543.75	
			$1,976.23

Wages

Geochemical Grid and Soil Sampling, Elevations:			
P. Newman	8 days @ $ 70.00	$ 560.00	
Proton Magnetometer Survey:			
P. Newman) D. Dolsen)	6 days @ $ 70.00	$ 420.00	
Prospecting:			
P. Newman) D. Coffin)	8 days @ $ 70.00	$ 560.00	
Geology:			
S. Crawford	3 days @ $ 92.00	$ 276.00	
M. Vulimiri	2 days @ $100.00	$ 200.00	
Channel Sampling:			
P. Newman	3 days @ $ 70.00	$ 210.00	
Compilation of Data, Draughting, etc.:			
S. Crawford	3 days @ $ 92.00	$ 276.00	
M. Vulimiri	½ day @ $100.00	$ 50.00	
			$2,552.00

Meals and Accommodation

5 people for a total of 15 days @ $32/day	$ 480.00

Transportation

Transportation Vancouver to property to Vancouver	$ 464.91
TOTAL	$5,473.14

INTERPRETATION

Scheelite mineralization with minor powellite and molybdenite is associated with diopside-grossular garnet skarn showings and correlates very well with the anomalous tungsten and molybdenum values obtained through soil geochemical surveys.

Anomalous tungsten values occur on lines 0+50N, 0+00E to 1+00E. Marginal anomalies occur on the northwest corner of the grid. These values are possibly due to skarn zones at depth.

Marginal magnetometer anomalies are coincident with known skarn showings. On the northeast part of the grid, magnetometer surveys returned high anomalies. This area is underlain by a thick pile of mafic volcanic rocks.

As mentioned in the section on Alteration and Mineralization, the quartz diorite intrusion exhibits intense potash feldspar, propylitic (chlorite and epidote) and minor quartz-sericite-pyrite alteration zones. These alteration zones occur as enveloped along fractures. The zones probably represent a porphyry system with molybdenum mineralization at depth.

CONCLUSIONS AND RECOMMENDATIONS

Scheelite with minor molybdenite and powellite occurs in diopside-garnet skarn. In the main zone, the skarn attains a thickness of at least 20 metres.

Skarn zones also occur at other locations of the property. Detailed prospecting is required to evaluate these zones. The area to the northeast of the main

skarn showing is covered glacial deposits. Trenching may be useful in this area to extend the skarn zone.

Detailed mapping of the area, underlain by the intrusion, is needed to evaluate the porphyry potential.

If the results are favourable from the above methods, then drilling possibly should be carried out to evaluate both for scheelite and for molybdenum mineralization.

0+00E 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E 3+50E 4+00E 4+50E 5+00E

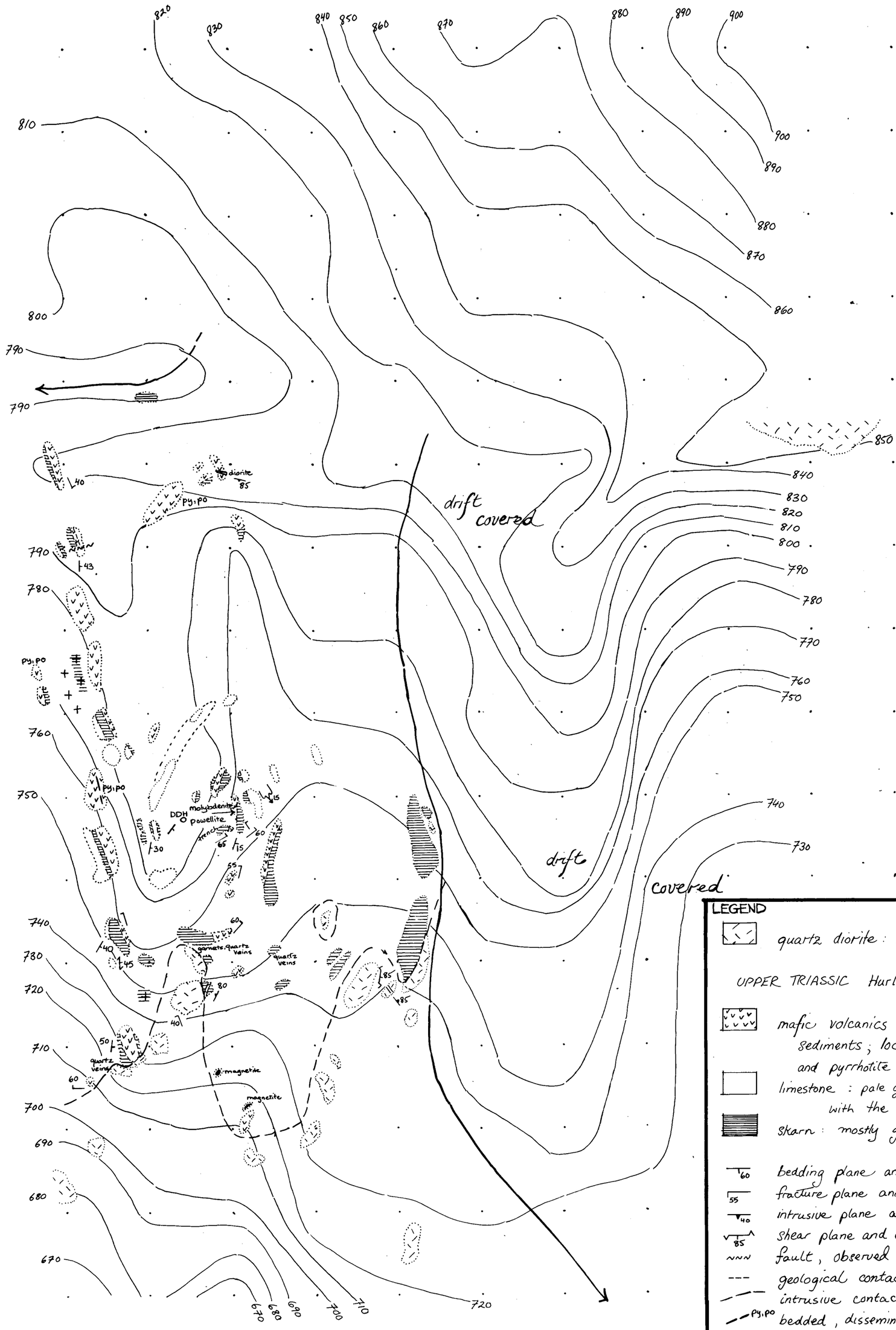
2+50N
2+00N
1+50N
1+00N
0+50N
0+00S
0+50S
1+00S
1+50S
2+00S
2+50S
3+00S
3+50S
4+00S
4+50S
5+00S

Claim post 2 units north

Claim post 1 unit north

drift covered

drift covered



LEGEND

- quartz diorite : medium to coarse grained
- UPPER TRIASSIC Hurley Formation
- mafic volcanics : grey to green tuffs and tuffaceous sediments ; locally containing disseminated pyrite and pyrrhotite
- limestone : pale grey , mostly recrystallized ; interbedded with the mafic volcanics
- skarn : mostly garnet-diopside grade.
- 60 bedding plane and dip
- 55 fracture plane and dip
- 40 intrusive plane and dip (dike)
- 85 shear plane and dip
- fault , observed
- geological contact , observed
- intrusive contact , approximate
- py,po bedded , disseminated pyrite , pyrrhotite
- magnetite massive or vein magnetite
- outcrop ; subsurface extension
- ++ frost heave
- 750 topographic contour in metres , 10 metre intervals
- stream , with downslope arrow

N

S.E.R.E.M. LTD.

PROJECT LIZARD CLAIMS

TITLE

GEOLOGY AND TOPOGRAPHIC FEATURES

DATE 5/81	DATA S. CRAWFORD, P. NEWMAN
N.T.S. 92J/7E	DRAWN S. CRAWFORD
SCALE 1:2000	CHECKED

0 20 40 60 80 metres

FIGURE 3

	0+00E	0+50E	1+00E	1+50E	2+00E	2+50E	3+00E	3+50E	4+00E	4+50E	5+00E
2+50N	3·3	2·1	5·1	2·1	2·2	4·2	3·4	3·2	2·3	.	.
2+00N	5·3	2·2	4·1	2·1	<2·1	4·2	<2·1	3·3	2·2	.	.
1+50N	2·2	3·2	4·1	3·1	<2·2	<2·2	2·2	4·1	3·1	.	.
1+00N	2·2	2·1	2·2	2·2	3·2	<2·2	2·1	<2·2	3·1	.	.
0+50N	15·2	3·1	17·1	2·2	2·2	2·2	2·2	<2·2	2·1	.	.
0+00S	<2·2	<2·3	<2·3	2·3	3·3	<2·2	2·2	<2·2	<2·3	2·3	3·2
0+50S	5·3	<2·2	<2·1	<2·3	2·3	<2·2	<2·3	2·2	3·2	.	.
1+00S	<2·2	<2·4	<2·3	2·2	<2·1	<2·2	<2·2	2·2	3·1	.	.
1+50S	2·3	2·2	3·4	<2·2	<2·1	<2·4	<2·2	2·1	3·1	.	.
2+00S	12·2	<2·3	32·8	<2·2	<2·3	<2·4	<2·2	3·1	2·1	.	.
2+50S	6·3	<2·3	4·5	<2·4	<2·3	2·2	<2·1	2·1	3·2	.	.
3+00S	<2·3	3·6	<2·3	<2·2	2·5	<2·2	<2·2	.	.	.	.
3+50S	25·6	<2·2	2·3	8·1	<2·4	2·2	3·3	<2·3	.	.	.
4+00S	<2·3	<2·1	5·1	5·1	7·5	<2·4	<2·3	<2·2	.	.	.
4+50S	<2·4	<2·1	<2·3	2·3	<2·2	<2·1	3·1	<2·2	.	.	.
5+00S	<2·2	<2·1	<2·1	<2·2	2·2	<2·1	<2·3	.	.	.	.

claim post
2 units north

claim post
1 unit north

N

LEGEND

3·2 soil sample : ppm W, ppm Mo

≥3 ppm W, ≥6ppm W, ≥12 ppm W, ≥24ppm W

≥4ppm Mo , ≥8 ppm Mo

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PROJECT LIZARD CLAIMS

TITLE TUNGSTEN AND MOLYBDENUM IN SOILS

DATE 5/81	DATA P.NEWMAN, S. CRAWFORD
N.T.S. 92J/7E	DRAWN S. CRAWFORD
SCALE 1:2000	CHECKED

0 20 40 60 80 metres

FIGURE 4

	0+00E	0+50E	1+00E	1+50E	2+00E	2+50E	3+00E	3+50E	4+00E	4+50E	5+00E
2+50N	18·119	12·174	11·70	13·166	13·196	10·62	21·222	20·86	29·82	·	·
2+00N	21·181	12·71	11·176	7·115	9·175	7·65	6·191	18·209	22·203	·	·
1+50N	29·164	15·87	9·162	9·222	10·145	10·72	7·136	11·218	17·106	·	·
1+00N	16·151	15·271	8·322	7·156	9·133	12·105	10·399	17·109	14·120	·	·
0+50N	11·243	19·184 13·78	17·150	9·122	8·56	7·185	13·146	17·239	18·209	·	·
claim post 2 units north 0+00S	14·287	11·140	17·163	20·152	15·210	13·126	18·99	19·256	24·183	21·139	20·76
0+50S	41·307	13·88	10·133	12·50	19·76	10·158	15·151	11·106	18·135	·	·
1+00S	15·670	13·94	11·68	12·358	11·189	9·477	11·227	6·91	15·145	·	·
1+50S	31·147	13·25	19·426	13·93	12·73	13·675	10·273	11·176	13·427	·	·
2+00S	23·175	18·112	18·284	13·172	11·327	11·825	8·120	10·80	10·71	·	·
2+50S	32·112	14·198	16·320	14·126	8·124	6·199	6·144	13·273	13·176	·	·
3+00S	25·174	27·241	13·151	16·98	15·47	14·326	12·420	·	·	·	·
			11·252	17·193	12·39						
3+50S	27·240	13·170	14·342	13·279	14·158	11·269	12·310	15·209	·	·	·
			10·229	14·94	12·270						
4+00S	18·173	9·168	13·126	15·92	14·131	11·65	11·77	11·70	·	·	·
			13·95	10·319	8·143						
4+50S	13·59	10·66	13·281	12·231	14·194	8·221	8·74	10·92	·	·	·
claim post 1 unit north 5+00S	8·302	11·282	10·190	13·114	16·193	11·146	12·189	·	·	·	·

300 · 40 · 600 · 300 · 300 · 300 · 300 · 600 · 300 · 300 · 300

N

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,036

LEGEND

19·356 soil sample : ppm Pb, ppm Zn

40 ⩾ 40 ppm Pb

600 300 ⩾ 300 ppm Zn, ⩾ 600 ppm Zn

S.E.R.E.M. LTD.

PROJECT LIZARD CLAIMS

TITLE

LEAD AND ZINC
IN SOILS

DATE	5/81	DATA	FIGURE
N.T.S	92J/7E	DRAWN S. CRAWFORD	5
SCALE	1:2000	CHECKED	

0 20 40 60 80 metres

0+00E 0+50E 1+00E 1+50E 2+00E 2+50E 3+00E 3+50E 4+00E 4+50E 5+00E

2+50N 2+00N 1+50N 1+00N 0+50N 0+00S 0+50S 1+00S 1+50S 2+00S 2+50S 3+00S 3+50S 4+00S 4+50S 5+00S

Claim post 2 units north

Claim post 1 unit north

LEGEND

contours; 57250 to 58750 γ

7334 magnetometer reading; 57334 gammas (corrected)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,036
NO.

S.E.R.E.M. LTD.

PROJECT LIZARD CLAIMS

TITLE

PROTON MAGNETOMETER SURVEY

DATE 5/81	DATA P. NEWMAN, D. DOLSEN
N.T.S. 92J/7E	DRAWN S. CRAWFORD
SCALE 1:2000	CHECKED

0 20 40 60 80 metres

FIGURE 6