

REPORT ON
GEOLOGIC MAPPING AND LINECUTTING PROGRAM
ON
LOCKHART NO. 1 CLAIM
OF
20 UNITS, RECORD NO. 1657
LOCATED IN THE NELSON MINING DIVISION

49° 30' North Latitude
116° 45' West Longitude
NTS 82-F-7, 10 West Half

FOR

PCR INDUSTRIES LTD.
#201-1401 LONSDALE AVENUE
NORTH VANCOUVER, B.C.
V7M 2H9

BY

U. MOWAT

AUGUST 10, 1982

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10,677

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INTRODUCTION

A program of geological mapping and linecutting was undertaken on the Lockhart No. 1 Claim of 20 units from May 14 to May 21, 1982. The program employed 5 men. Ninety hectares were geologically mapped and 3,090 meters were flagged.

LOCATION

The Lockhart No. 1 Claim is located on the east side of Kootenay Lake, 48 kilometers north of Creston, B. C. The legal claim post of Lockhart No. 1 is located 1,000 meters due east of Lockhart Beach Provincial Park, on the north side of Lockhart Creek. The nearest town to the property is Boswell, located 3 kilometers to the south.

TOPOGRAPHY

The property lies in the Purcell Mountain Range. Elevation of the property rises from 671 meters at the western edge over a distance of 2,500 meters to 1,769 meters at the eastern edge. Generally, topography is extremely rugged, with numerous rock bluff to cliff faces and talus slopes. It is not uncommon to find slopes of 30 to 50° on the property.

ACCESS

The property is partially accessible from Highway 3A by an old logging road which is very overgrown in most places with scrub cedar and tag alder. The road is also washed out in spots. The logging road leaves Highway 3A from a point immediately behind the Heidelberg Inn.

HISTORY

The Lockhart No. 1 Claim, record number 1657, consisting of 20 units, in the Nelson Mining Division, was staked on May 9 and 10, 1980 by A. O. Birkeland, P. Eng. as agent for W. V. Williams. The claims were recorded on May 13, 1980 in Vancouver and were subsequently transferred to Power-Can Resources Ltd. Power-Can Resources Ltd. changed their name to PCR Industries Ltd. on July 8, 1982.

The main showing of the Lockhart No. 1 Claim was located several years ago by Lawrence Johnson who found the galena mineralization while building a logging road with a cat (personal communication). Although there are no written records of prospecting activity on the Lockhart No. 1 Claim, numerous claim posts give evidence of frequent staking and restaking, starting in 1947. At various times, the Lockhart No. 1 has been called Heidi MR #2, Lockhart, Kevin, D87358, C87358, E87358, and F87358.

The first assessment work performed on the Lockhart No. 1 Claim was done by Pamicon Developments Ltd. from October 29 - November 30, 1980 (Assessment Report No. 8889). The work program consisted of prospecting, grid preparation, geochemical sampling and geological mapping in the vicinity of the main showing. Additional exploration work, consisting of mapping and line cutting was performed over the major part of the Lockhart No. 1 Claim from May 1 - 13, 1982 by Power-Can Resources Ltd.

REGIONAL GEOLOGY

The Lockhart No. 1 Claim is underlain by the Horsethief Creek Series of Windermere Age. The Horsethief Creek Series conformably overlies the Toby Formation and is conformably overlain by the Hamill Series. The general trend of the Horsethief Creek Series is in a northeast direction and shows evidence of much folding. Granitic intrusives of Mesozoic? age are known to intrude the Horsethief Creek Series to the northeast and the south of the Lockhart No. 1 Claim.

The Horsethief Creek Series is composed of argillite that is generally slaty, dark grey to black, occasionally greenish grey, finely laminated to uniform and occasionally sandy. It weathers with a rust or buff colour.

Minor beds of a blue grey crystalline, generally non-magnesian limestone occur as beds and lenses. This unit is not common.

A small part of the Horsethief Creek Series is composed of white, siliceous massive beds of quartzite that are occasionally limy and contain fragments of slate or limy material.

Conglomerate beds composed of rounded pebbles or cobbles of quartz or quartzite are also found throughout the Horsethief Creek Series. Size of fragments range from 2.5 - 15.0 cm and are set in a gritty, siliceous matrix. Angular fragments of feldspar occur throughout the conglomerate and grow up to 2.5 cm across. The finer conglomerate beds contain small, pea-sized pebbles of blue quartz that are quite characteristic. Most conglomerates are of the siliceous variety although some beds are composed of angular blocks of sandy, magnesian limestone in a cement of similar composition.

PROPERTY GEOLOGY

The Lockhart No. 1 Claim is underlain by the following rock types:

- 1) The most dominant rock type on the property consists of a dark grey, steel-like phyllite which occasionally weathers to a deep maroon colour from the leaching of pyrite. Although pyrite is not commonly found, euhedral cubes of pyrite up to 2.5 cm have been noted on the eastern part of the claims. Pyrite has also been found as stringers along bedding planes in the phyllite. These stringers are composed of euhedral pyrite cubes up to 5 mm

in size. Irregular voids (generally roundish) have been noted in the phyllite. It is believed that an amorphous conglomeration of pyrite, gypsum? or carbonate? has weathered out to form these voids leaving caverns up to 1 meter deep and 0.6 meters wide. The leaching out of the former material has produced a yellow-white coating resembling in appearance and smell that of deposits associated with hot springs.

2) Greenish grey, highly lustrous phyllite:

This rock type is generally found when the dark grey phyllite comes into contact with another rock type. The author believes that this variety of phyllite represents a shear zone that has undergone the same regional metamorphism which has produced the dark grey, steely phyllite. No mineralization was seen in this unit. It displays gradational variations from being very lustrous to a sandy greenish lustrous phyllite in which the mica flakes are not as large as that of the lustrous variety of phyllite. This may be a sheared sandstone as it seems to grade into the buff sandstone units on the property.

3) Sandstone/Quartzite:

There are several varieties of sandstone/quartzite on the property:

- a) The most common variety is a buff, fine grained sandstone/quartzite with a dominantly siliceous matrix. Occasionally, the matrix contains minor lime or mica. Mica appears when the sandstone/quartzite unit approaches the lustrous green grey phyllite. Minor pyrite clots of up to 4 mm were noted occasionally. Another variation of this unit is the bedding? In most cases, the sandstone/quartzite has a bedding thickness of 15 cm to 30 cm. It also occurs as a very massive unit with no apparent bedding planes whatsoever. The thinner bedded sandstone/quartzite appears to overlie the massive unit.
- b) A rare occurrence of a laminated dark grey to medium grey, fine grained sandstone with a siliceous matrix and much magnetite (7%) was noted on the southwest corner of the claims. No stratigraphic relationships to the other units were discernible.
- c) Sandstone/quartzite as in unit (a) with 0.5 to 1 cm subangular blue quartz fragments. This unit possibly overlies unit (a).
- d) Sandstone/quartzite with white rounded to subrounded quartzite boulders, scattered sporadically throughout. This unit is gradational to unit (4).

4) Conglomerate:

This unit is composed of well sorted, well rounded white quartzite boulders ranging in size from 3 cm to 30 cm. There is very little interstitial matrix. Bonding consists of a light contact cement at best of silica or silica/mica or thin smears of lustrous green phyllite. A brilliant green mica has been noted in numerous conglomerate outcrops which may be a green muscovite or possibly fuchsite? Where the conglomerate is in contact with the greenish grey, highly lustrous phyllite (shear phyllite) the quartzite boulders have been stretched to resemble French loaves of bread and have been found to be elongated up to 42 cm. Mica in the conglomerate is particularly well-developed under these circumstances. The conglomerate has in one locale on the property formed a pebble dyke in the buff, fine grained sandstone. The dyke trends N 20° E and is vertical.

5) Dark green grey talcy phyllite:

The relationship of this unit to the other rock types is not known although it is suspected that this unit is a change in grade of metamorphism. This unit only outcrops in the central portion of the claim.

6) Black Basalt Dyke:

The dyke trends N 10° E and dips 75° northwest. The dyke has a minor amount of 5 mm euhedral pyrite crystals disseminated throughout. It also has light grey chill margins that are 2.5 cm wide and are sheared. The dyke itself is unshered and is 25 cm wide.

7) Limestone:

Only one outcrop of limestone has been located to date. It occurs in the northwest portion of the property and appears to be a fault controlled block. It is a finely laminated dark grey and white banded argillaceous limestone, striking N 45° W and dipping 20° to the southwest. It is cut by quartz and carbonate veinlets.

STRUCTURE

The general structure of the area is that of a broad, northerly trending anticline. In portions of the area, large north to northeast trending faults cut the anticlinal structures. Numerous granitic bodies intrude the area surrounding the claim.

The structure on the property is fairly complex. Generally, beds dip in a westerly direction and are folded and faulted, making the stratigraphy a fairly complex system. The major structures such as large quartz veins, folds, faults and joints trend from N 10° W to N 10° E. A subsidiary set of joints predominantly trend 090°. Folds range from being tight isoclinal to recumbent, and in some cases appear to be nappes.

Faults on the property appear to have more of a vertical displacement than any horizontal movement.

All rocks have been regionally metamorphosed, although the sandstone units least show the effects. Evidence of this regional metamorphism is noted from the phyllitic rocks, schistosity in certain units, as well as the elongation of the white quartzite boulders in some of the conglomerate outcrops.

MINERALIZATION

Mineralization has been discovered sporadically over the entire property. The main showing, the upper showing, was not exposed at the time of examination. However, several pieces of galena, encrusted with cerussite were found in rubble at the site of the showing. The upper showing is hosted, according to past reports, by the elongated white quartzite boulder conglomerate which was exposed by a road cut.

The lower showing, also at one time exposed by a road cut, was also completely covered at the time of the property examination. This showing reportedly consisted of galena, sphalerite as small blebs in a 5 cm wide quartz veinlet. Several small pieces of quartz containing smears of galena were discovered nearby this showing.

Three other occurrences of galena mineralization were located on the property. In all cases the mineralization was in quartz veins and was fine grained and very rarely associated with pyrite. It was also noted that the galena mineralization had a strong tendency to be hosted by the white quartzite boulder conglomerate unit and occurred in structurally controlled quartz veins.

ALTERATION

Alteration on the property is restricted to massive amounts of quartz veining and minor amounts of sericite/muscovite development in the white quartzite boulder conglomerate. The quartz veins are erratic in nature, varying in size from 2 cm to 7 meters in width. Pinching and swelling in the veins are very common features. Quartz veins shatter upon impact and are highly fractured, presumably from the structural deformation of the area (folding and faulting). No continuous veining has been found. Most of the larger veins have a bearing of N 10° W - N 10° E.

Pyrite has been noted throughout the property, but is definitely more prominent on the more easterly portions. Minor pyrite has been found in the quartz veins but the most common occurrences of pyrite are in the dark grey, steely phyllite where euhedral cubes of 2.5 cm occur. In general, pyrite content and size increases towards the eastern side of the property.

PHYSICAL WORK

Physical work on Lockhart No. 1 Claim consisted of grid preparation. Work was performed from May 14 - 16, 1982. Three thousand and ninety meters (3,090 m) were flagged with stations thirty (30 m) meters spacings. All lines are orientated east-west and are 150 meters apart. Due to late snow conditions, most lines could not be completed to cover the upper portions of the claim. As well, the upper portions of these lines could not be mapped because of the snow cover.

PURPOSE

A program of geological mapping of the Lockhart No. 1 Claim was undertaken to explore the occurrence of galena mineralization. A grid was established in preparation for future work.

RESULTS

The mapping program has indicated that galena mineralization is structurally controlled in quartz veins and is associated or hosted by the white quartzite boulder conglomerate.

CONCLUSIONS

It is intended that further work will be performed on the Lockhart No. 1 Claim, consisting of additional line cutting, additional mapping and eventually soil sampling and geophysics.

Respectfully submitted,

U. Mowat

U. Mowat

PCR Industries Ltd.
#201-1401 Lonsdale Avenue
North Vancouver, B. C.
V7M 2H9

August 10, 1982

ITEMIZED COST STATEMENT

Limousine		9.00
Taxi		15.00
Truck Rental		
1 week at \$240.00/week		240.00
Insurance at \$60.00/month		30.00
6% tax		14.40
Gas		80.00
Wages		
Geologist		
17 days at \$100.00/day		1,700.00
Assistant		
61 hours at \$10.00/hour		610.00
Linecutters		
2 men at \$200.00/day/man for 3 days		1,200.00
equipment, truck at \$100.00/day for		
3 days		300.00
10% contingency		150.00
Accommodation		
1 room for 8 days at \$13.88/day		111.04
6% tax		6.66
1 room for 1 day at \$13.88/day		13.88
6% tax		.83
1 room for 2 days at \$13.88/day		27.76
6% tax		1.67
1 room at Cranbrook		43.46
Food		
May 14	66.88	
May 15	58.96	
May 16	52.68	
May 17	38.40	
May 18	28.23	
May 19	19.50	
May 20	25.92	
May 21	39.82	
May 22	<u>4.95</u>	335.34
Drafting		
28.5 hours at \$20.00/hour		570.00

Reproduction

65.50

TOTAL

\$5,524.54

AUTHOR'S QUALIFICATIONS

I, Ursula G. Mowat, do hereby certify that:

- 1) I am a geology graduate of U. B. C. having graduated in 1969 with a B. Sc. in geology.
- 2) I have practiced my profession as a geologists for 11 (eleven) years in all phases of geologic exploration (oil and gas, coal and minerals).
- 3) I have no interest or holdings in PCR Industries Ltd.

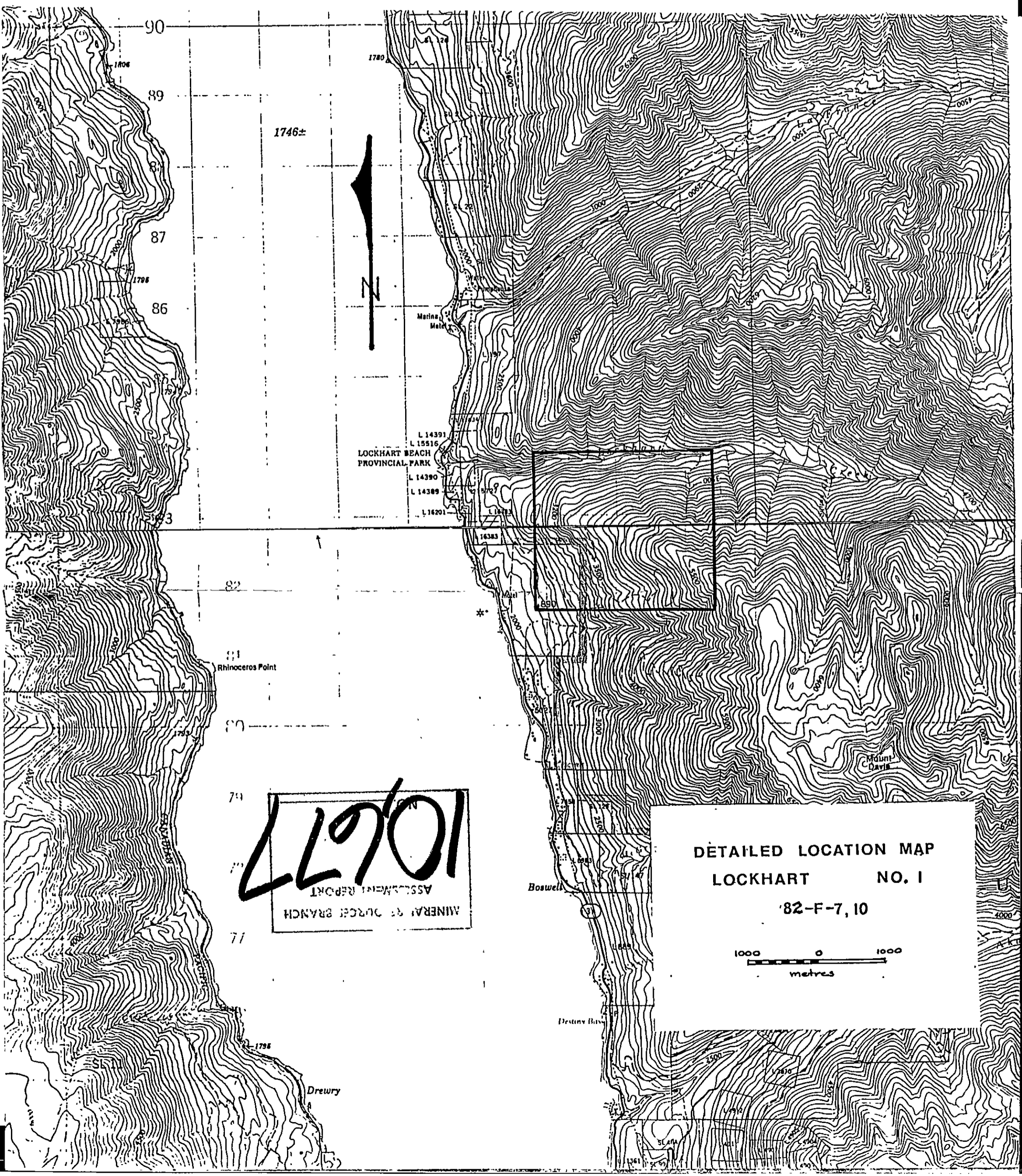
DATED in Vancouver, B. C. this first (1) day of October, 1982.

Respectfully submitted,

Ursula G. Mowat

Ursula G. Mowat

PCR Industries Ltd.
#201-1401 Lonsdale Avenue
North Vancouver, B. C.
V7M 2H9



1746±



L 14391
L 15516
LOCKHART BEACH
PROVINCIAL PARK
L 14390
L 14389
L 16201

Rhinoceros Point

MINERAL SURVEY BRANCH
ASSESSMENT REPORT
10/6/77

DÉTAILED LOCATION MAP
LOCKHART NO. 1
82-F-7, 10


1000 0 1000
metres

Boswell

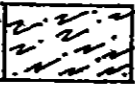
Destiny Blvd

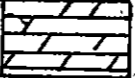
Drewry


Post - Triassic


 Chiefly granite, granodiorite, and quartz diorite


Windermere

 Lardeau Series
Micaceous and chloritic schists; quartzite and limestone; paragneisses

 Badshot Formation: magnesian limestone

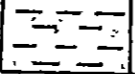
 Hamill Series
Grey, green and white, silicious quartzite

 Horsethief Creek Series
Green, argillaceous quartzite; blue-grey limestone; arkose, pebble conglomerate

 Toby Formation: conglomerate


Purcell


Upper Purcell:

 Mount Nelson Formation: laminated argillite, magnesian limestone, quartzite

 Dutch Creek Formation: laminated argillite, magnesian limestone, quartzite

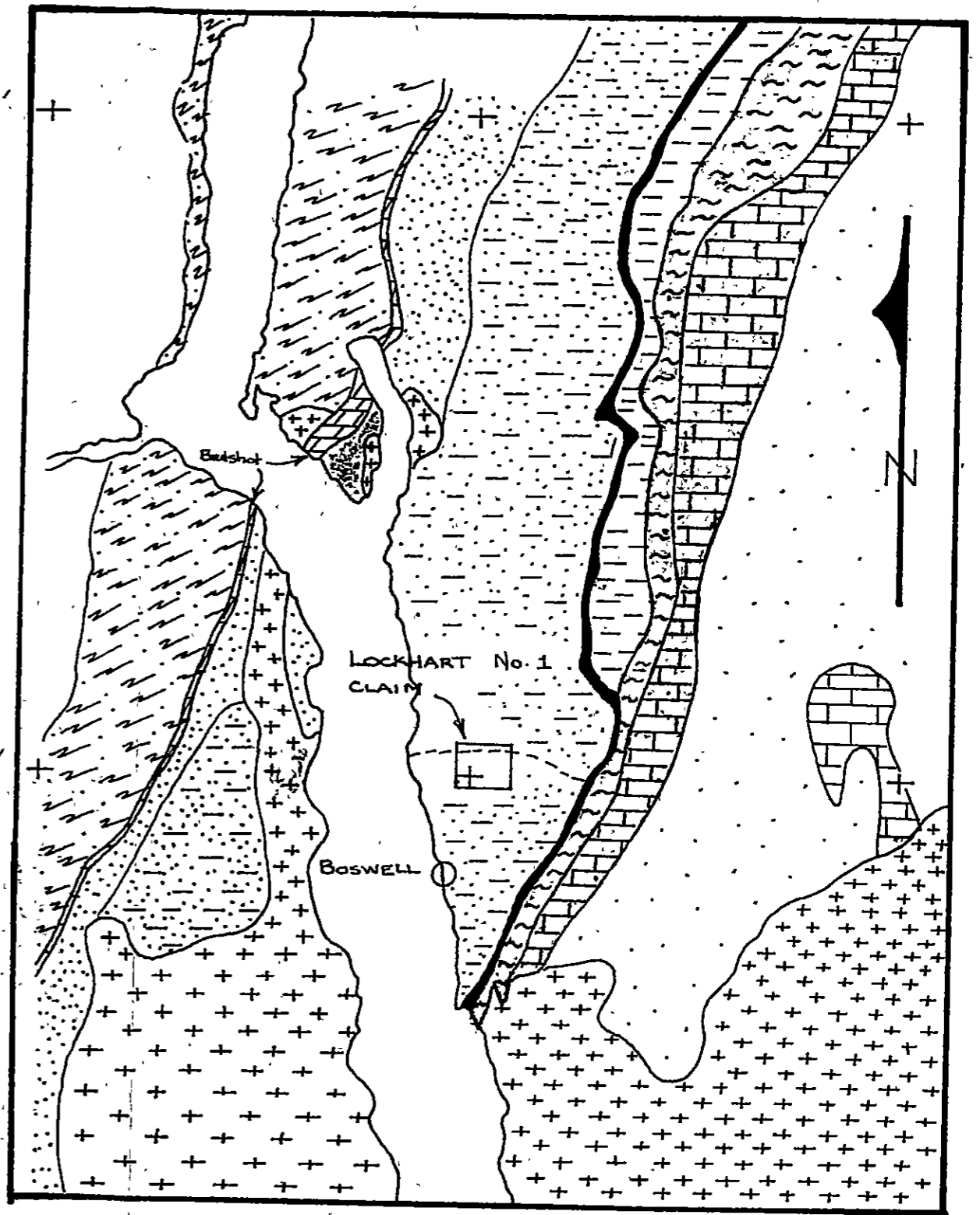
Lower Purcell

 Kitchenay-Siyeh Formation: chiefly vari-coloured magnesian limestone and argillite; calcareous quartzite

 Creton Formation: green, purple and grey; argillaceous quartzite; some argillite

49° 45'

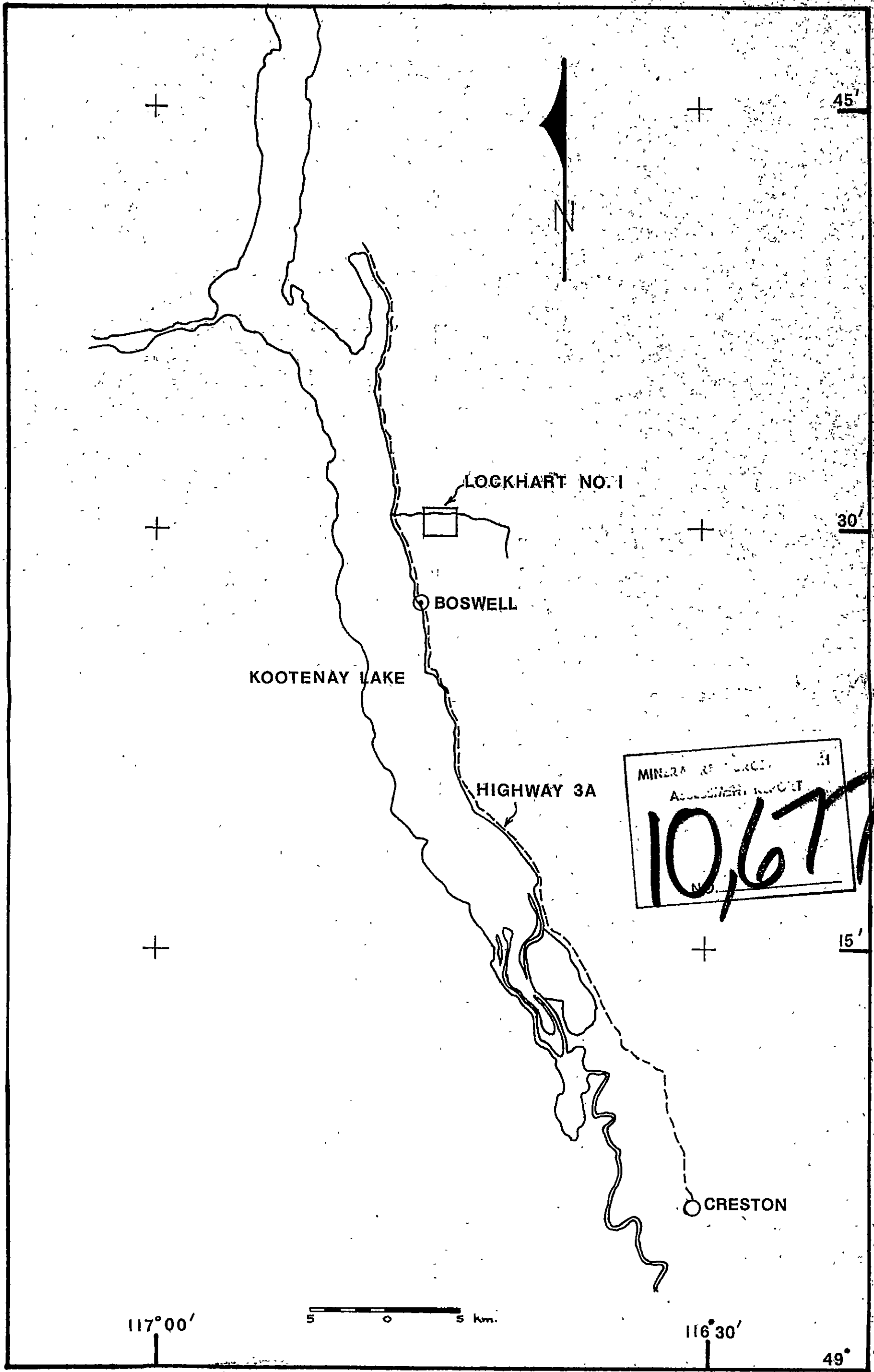
49° 30'



GENERAL GEOLOGY
LOCKHART NO. 1 CLAIM LOCATION

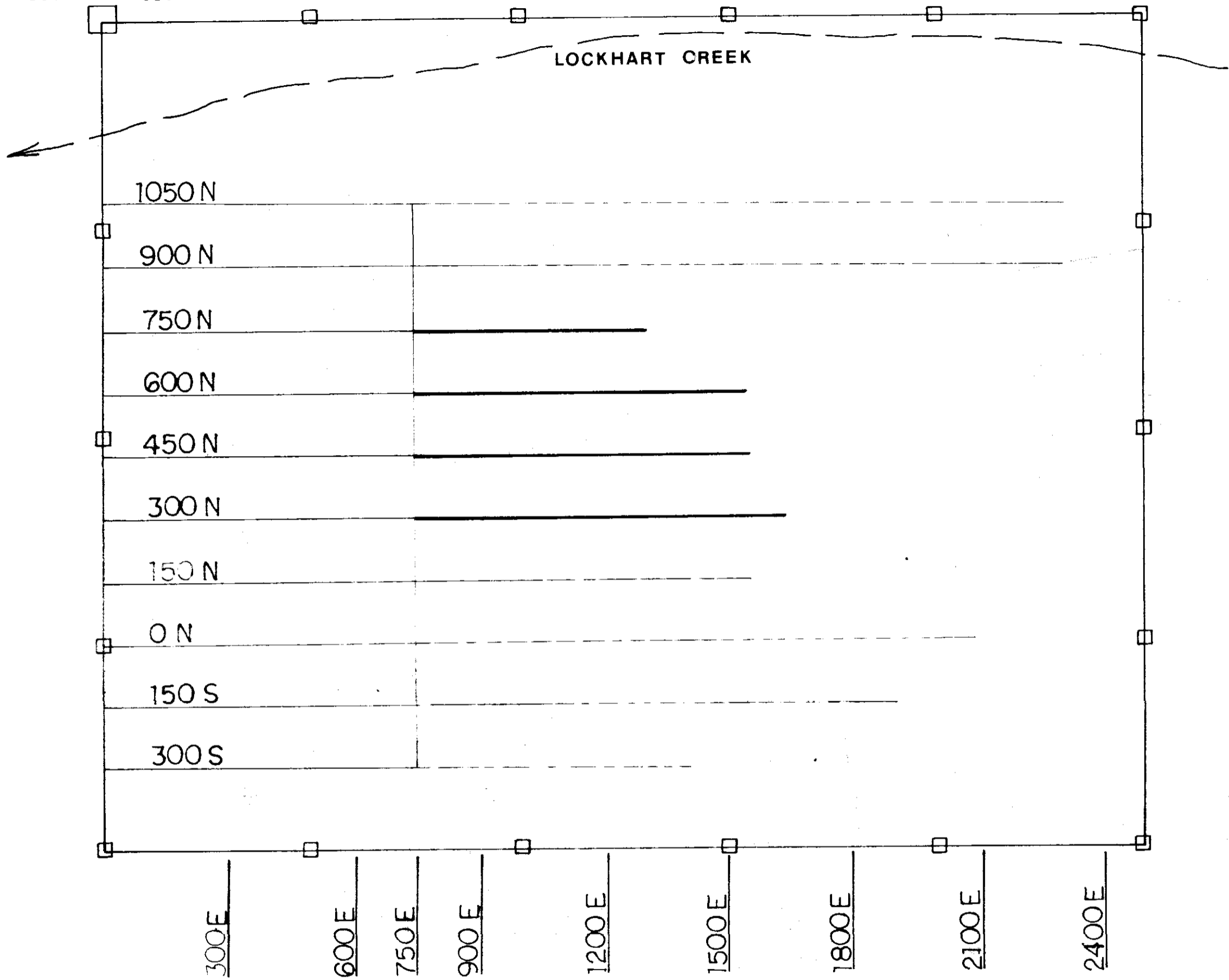
82 F

MINERAL RE. DIVISION
10,677

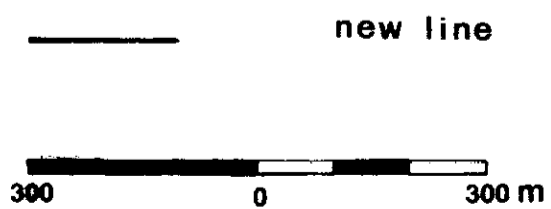


LOCATION MAP
LOCKHART NO.1 CLAIM
82-F

LCP LOCKHART NO. 1
record no. 1657

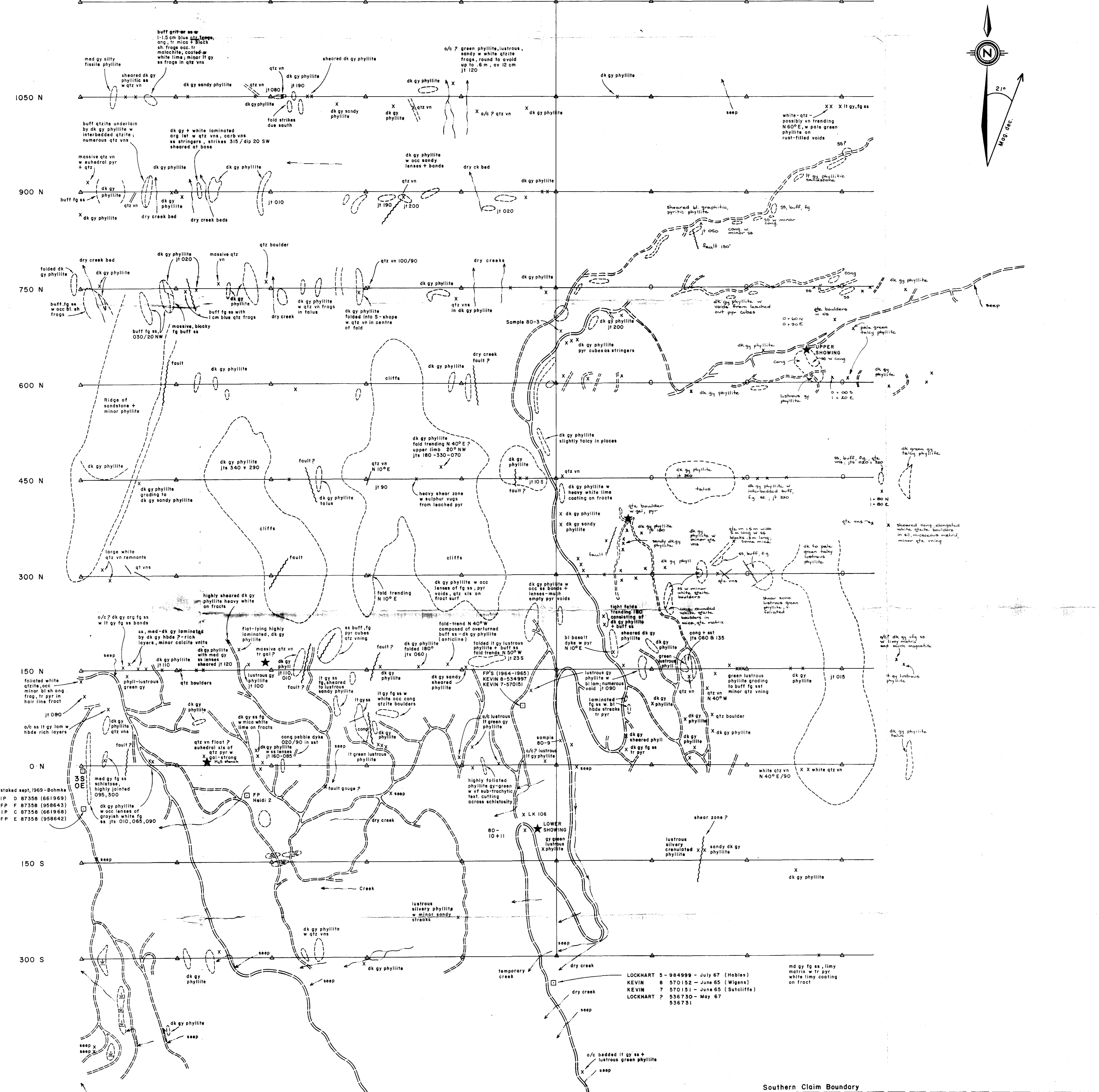
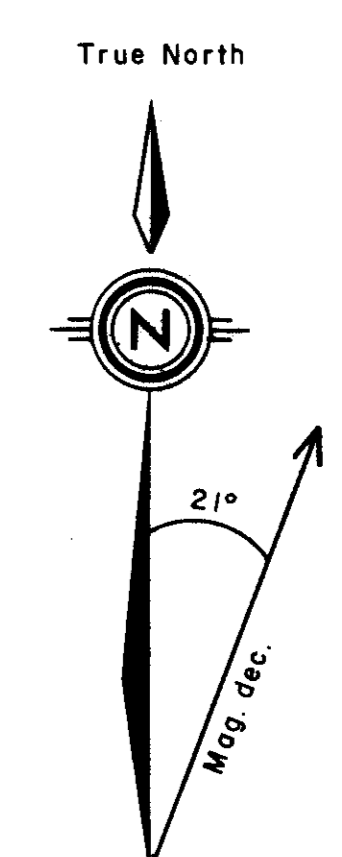


LOCATION MAP OF NEW GRID LINES



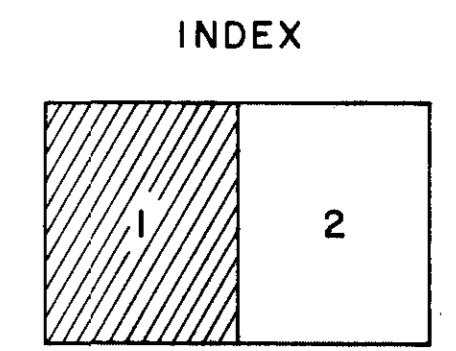
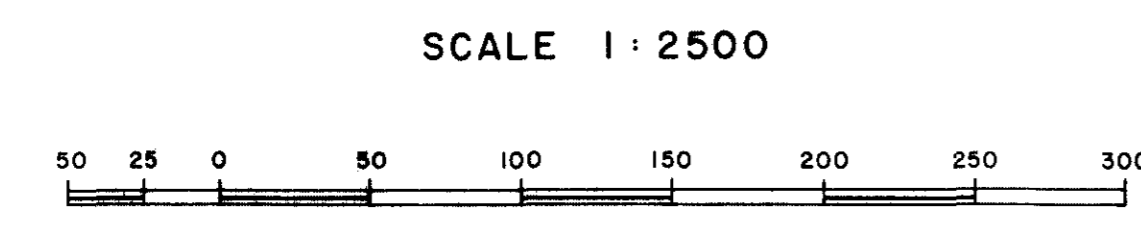
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
10671
No.

BASE LINE
0E 150 E 300 E 450 E 600 E 750 E 900 E 1050 E 1200 E



staked sept, 1969 - Bohmke
IP D 87358 (661969)
FP F 87358 (958643)
IP C 87358 (661968)
FP E 87358 (958642)

LOCKHART 5 - 984999 - July 67 (Hobbes)
KEVIN 8 570152 - June 65 (Wigners)
KEVIN 7 570151 - June 65 (Sutcliffe)
LOCKHART ? 536730 - May 67
536731



- LEGEND:
- ← Creeks
 - == Main Road
 - Skid Trail
 - Outcrop
 - Claim Post
 - ★ Mineralization
 - ▲— Base line, Flagged line
 - New line

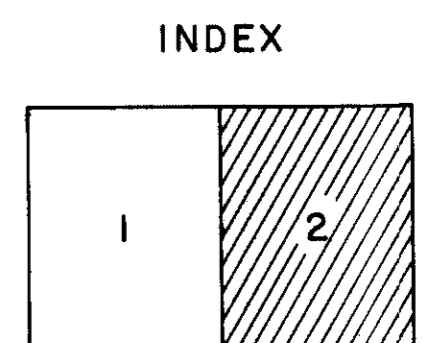
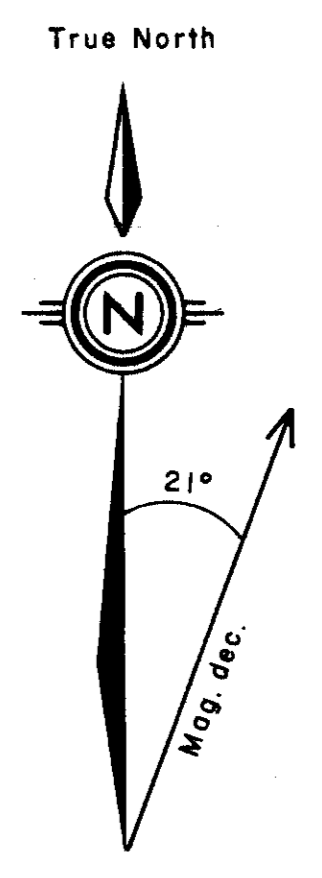
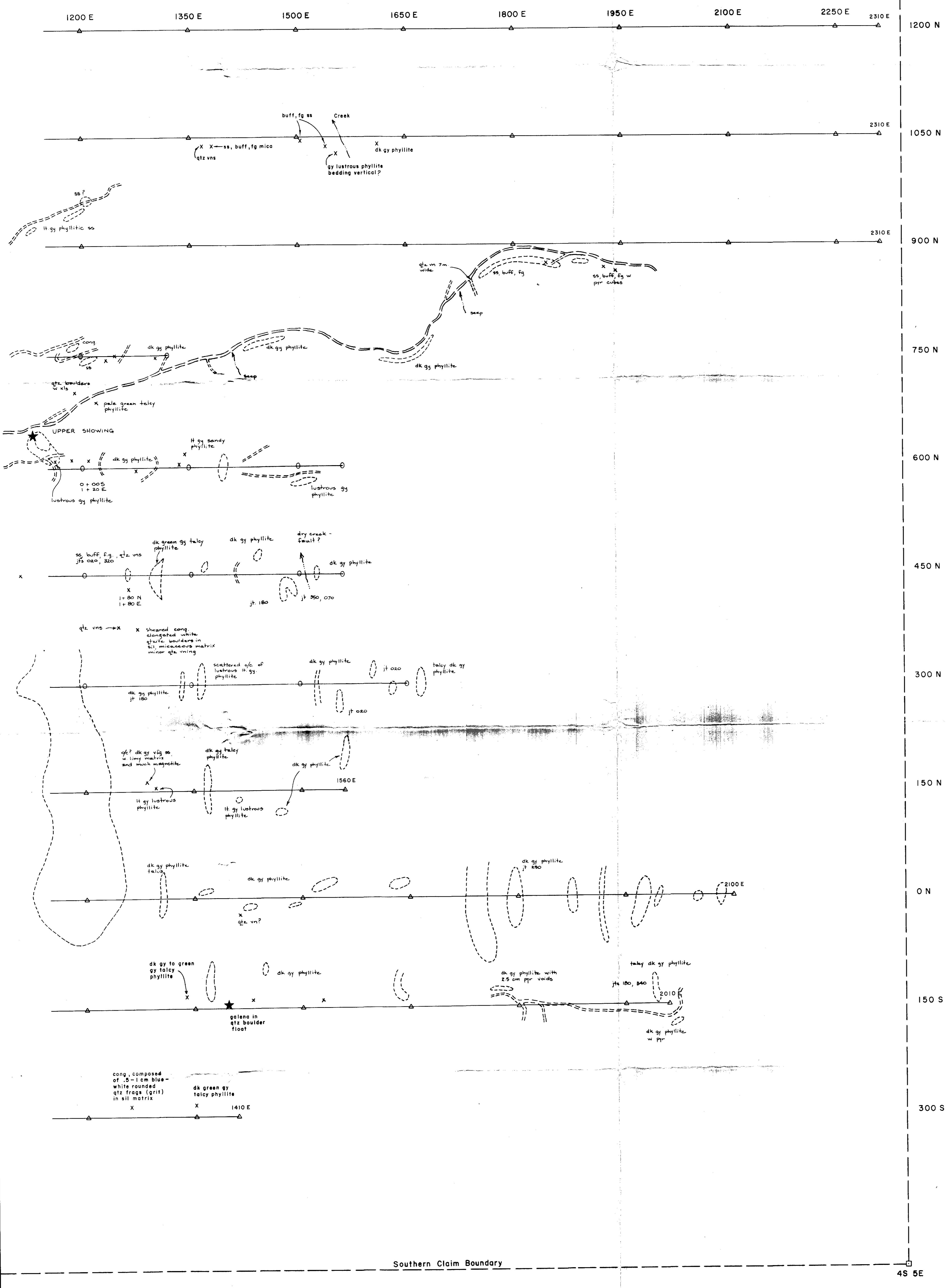
POWER-CAN RESOURCES LTD.

DETAILED GEOLOGY & GRID MAP
OF LOCKHART No. 1 CLAIM

MAP 1

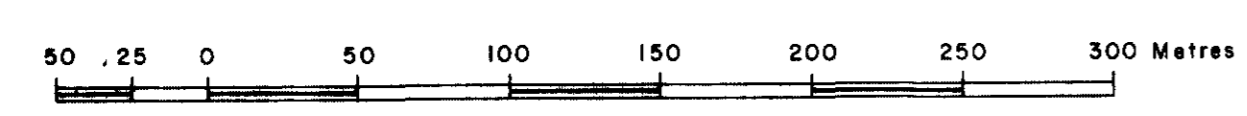
DATE: JUNE, 1982	CHAIN & COMPASS SURVEY
SCALE: 1:2500	
DRWN BY: EDCO LTD.	

10677



- LEGEND:**
- Creeks
 - Main Road
 - Skid Trail
 - Outcrop
 - Claim Post
 - Mineralization
 - Base line, Flagged line
 - New line

SCALE 1:2500



POWER-CAN RESOURCES LTD.

**DETAILED GEOLOGY & GRID MAP
OF LOCKHART No.1 CLAIM**

MAP 2

DATE:	JUNE, 1982	CHAIN & COMPASS SURVEY
SCALE:	1:2500	
DRAWN BY:	EDCO LTD.	

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10.67