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GEOPHYSICAL SURVEY

by

Gary C. Lee, P. Eng.

June 1993

BOCR MINERAL CLAIMS

FILMED

Atlin Mining Division, B.C.
Grant No. 301503

Owner: Marvin Sherman

Work done by Gary C. Lee

Map 104N/11W
Latitude 59° 40' Longitude 133° 26'

Date submitted: _____

GEOLOGICAL BRANCH
ASSESSMENT REPORT

22,945

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INTRODUCTION

General

From June 10 to June 15, 1993, a one man exploration crew(myself) completed a chain and compass grid, a magnetometer survey, and a V.L.F. survey on the BOCR mineral claims. The BOCR claim(301503) consists of nine units(3x3) and is owned by Marvin Sherman.

Location and Access

The property is located 25 kilometres by road from Atlin, B.C. via the Surprise Lake road and a good four wheel drive road up the west side of Boulder Creek and thru the survey area. The property is on the east-facing slope seperating Boulder and Birch Creek. The claim is located about $59^{\circ}40'$ North Latitude and $133^{\circ}26'$ West Longitude and was formerly known as the Cinbar claim of Yukon Revenue Mines Ltd. The maps on page 2 and 3 show the location of the property.

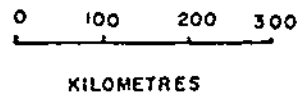
History

The general history of the area can be found in two reports, "The Boulder Creek Tungsten Prospect" by Albert Reeve, P.Eng. Sept. 22, 1978 and "Report on Satellite Remote Sensing and Air Photo Interpretation, Boulder Creek Property" by Ron Robertson on March 1, 1988 and will not be covered here. Specifically, in 1943, 0.9 tons of cobbled ore assaying 15.2% wO_3 , .31 Oz./ton Au., .18% Sn was shipped from a prospect which appears to be located on the N.E. corner of the claim(Reeve, 1978). Newmont

PROPERTY



LOCATION MAP

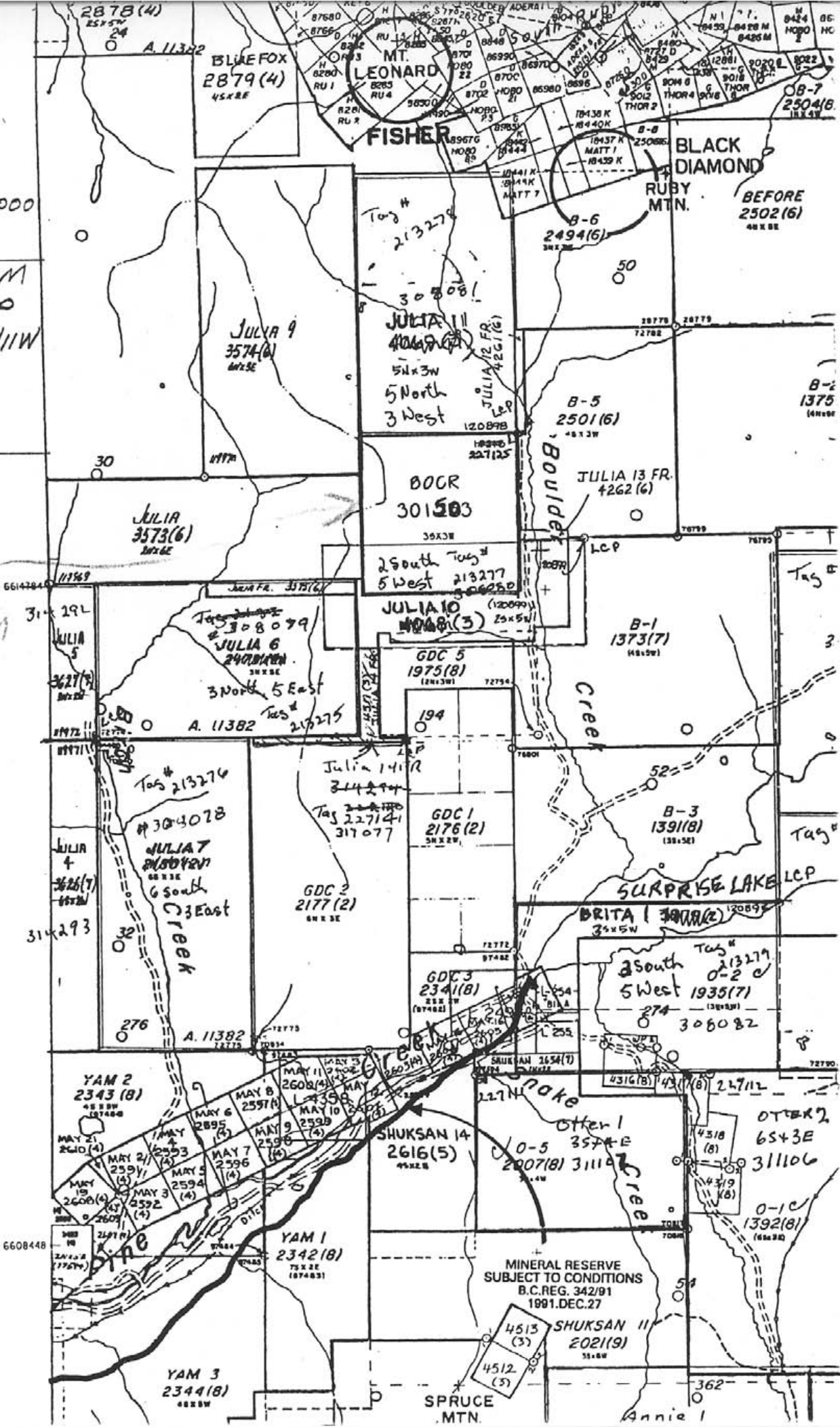




SCALE 1:50,000

BOCR CLAIM
CLAIM MAP
NTS 104N/11W

BOCR
CLAIM



MINERAL RESERVE
SUBJECT TO CONDITIONS
B.C. REG. 342/91
1991.DEC.27

4513 (3)
4512 (3)

SPRUCE
MTN.

Annie 1

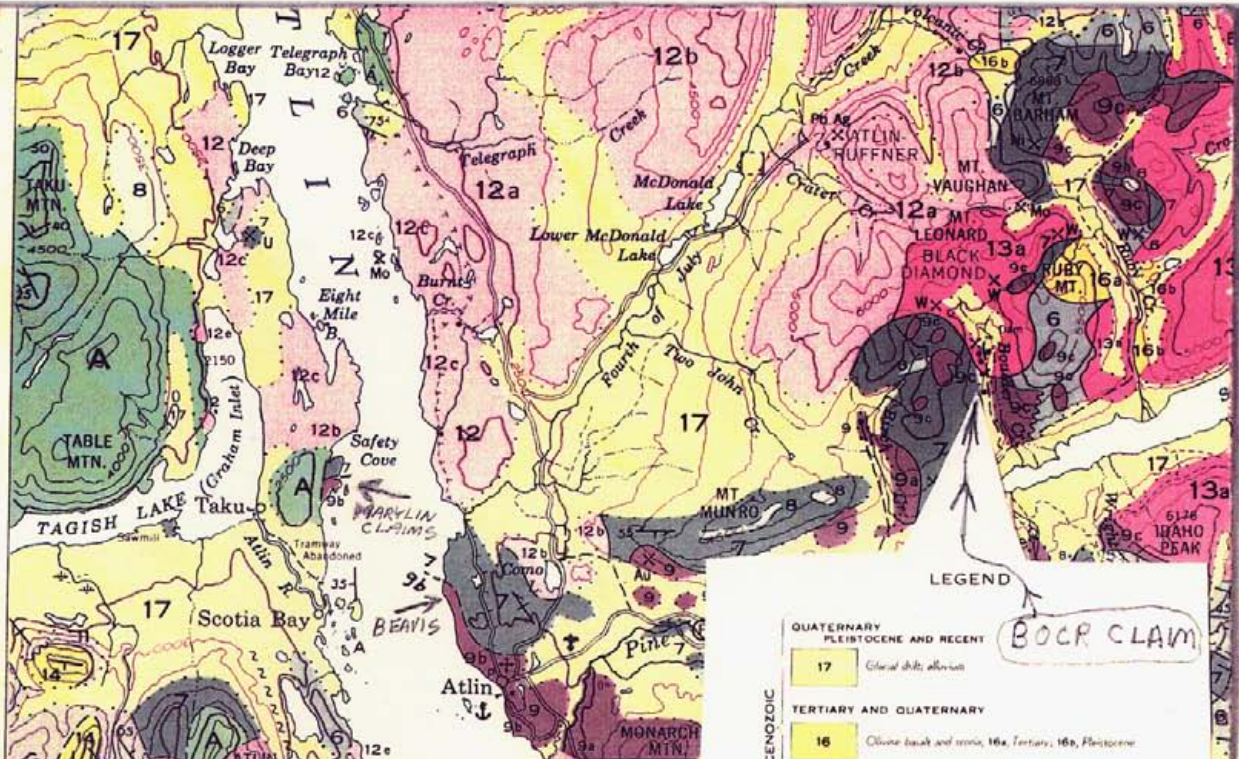
Mining Corp., in 1963, carried out a magnetic and geological survey and excavated 12 trenches on the central part of the claim(Reeve,1978). No records of this work could be located at the time of writing of this report. In 1978 and 1979, Yukon Revenue Mines Ltd. carried out a limited mag., trenching, winkie drill and I.P.(Peter Walcott) program. The drill section on the Winkie drilling can be found on pg. 6 and some of the I.P. anomalies are located on the map in the pocket. Reeves report has maps showing the location of all of the trenches with limited assay results.

Topography

The property ranges from 3700 feet to 4800 feet and with the exception of some talus in the N.W. corner, the property is easily traversed. The claim is covered by brush, willow, alders and the occassional patch of spruce trees.

Grid and Field Procedure

Both the Newmont(1963) and Yukon Revenue(1978) grids had completely disappeared from the field. After closer examination, a few old cuttings were found from the Newmont baseline and consequently part of this grid was reestablished, and can be seen on the map in the pocket. The lines were run in at approx. 120 metres in order to correspond with the old Newmont spacing of 400 feet. This made it possible to recover some of the I.P. anomalies which were run at 400 ft. spaced lines. The stations are marked with orange and blue flagging at 20 metre intervals(felt pen) and are not re-cut. Approx. 4000 metres of lines and cross lines(XL) were surveyed.



BOCR CLAIM Pg 5
 GEOLOGY MAP (104N)
 G.S.C - AITKEN - 1960
 AND
 PHOTO OF TRENCH CONTAINING
 MASSIVE SULPHIDES (RED BROWN) + WINKIE DRILLING
 LOCATION

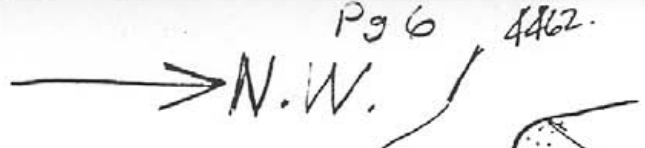
1:250,000
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 N



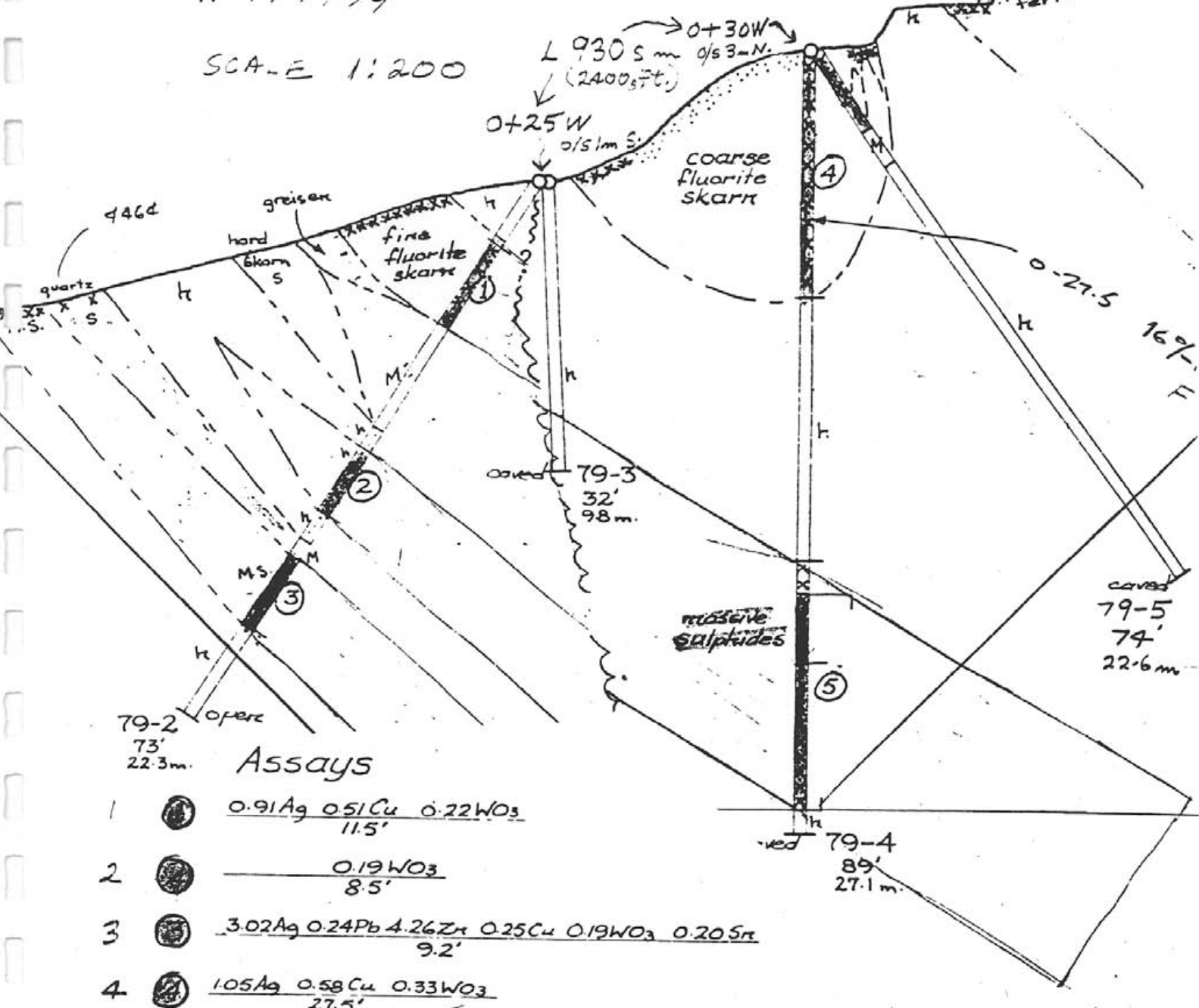
- LEGEND
- BOCR CLAIM
- QUATERNARY
PLEISTOCENE AND RECENT**
- 17 Glacial drift, alluvium
- TERTIARY AND QUATERNARY**
- 16 Oligocene basalt and tuff, 16a, Tertiary, 16b, Pleistocene
- TERTIARY (?)**
- 15 15a, quartz monzonite; 15b, granophyre; 15c, gabbro and diorite
- CRETACEOUS OR TERTIARY
SLOTTED GNEISS**
- 14 Andesite, basalt, albite trachyte, albite rhyolite, diorite, and related pyroclastic rocks; conglomerate, sandstone
- CRETACEOUS**
- 13 13a, alkalic; 13b, quartz monzonite
- JURASSIC (May be in part older and younger)**
- COASTAL INTRUSIONS**
- 12a, 12b, 12c, 12d, 12e, 12f, 12g, 12h, 12i, 12j, 12k, 12l, 12m, 12n, 12o, 12p, 12q, 12r, 12s, 12t, 12u, 12v, 12w, 12x, 12y, 12z
- JURASSIC**
- 11 LABERGE GROUP
Volcanic greywacke, siltstone, mudstone, shale, conglomerate, minor concretionary sandy limestone
- TRIASSIC (?)**
- 10 Greywacke, chert, argillite, conglomerate, tuff, slate, greenstone, igneous limestone, soap
- PENNSYLVANIAN AND PERMIAN
ATLIN INTRUSIONS**
- 9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i, 9j, 9k, 9l, 9m, 9n, 9o, 9p, 9q, 9r, 9s, 9t, 9u, 9v, 9w, 9x, 9y, 9z
- CACHE CREEK GROUP**
- 6, 7, 8
- PENNSYLVANIAN AND/OR PERMIAN**
- 4, 5
- MISSISSIPPIAN AND/OR EARLIER
SYLVESTER GROUP**
- 3
- PRE-PERMIAN**
- 2
- PRECAMBRIAN OR PALAEZOIC**
- 1
- A**

Un differentiated, mostly volcanic rocks of uncertain, possibly several ages. Andesite, basalt, agglomerate, tuff, breccia, diorite and quartz diorite porphyries, rhyolite. In part probably Triassic, probably equivalent to 10

YUKON REVENUE MINES LTD.
 WINKIE DRILL PROJECT
 BOULDER CREEK, ALTAIR
 NOV. 1979



SCALE 1:200



Assays

1	①	0.91Ag 0.51Cu 0.22WO ₃	11.5'
2	②	0.19WO ₃	8.5'
3	③	3.02Ag 0.24Pb 4.26Zr 0.25Cu 0.19WO ₃ 0.20Sr	9.2'
4	④	1.05Ag 0.58Cu 0.33WO ₃	27.5'
5	⑤	1.98Ag 2.21Zr 0.27Cu 0.14WO ₃ 2.86Ag 4.64Zr 0.39Cu 0.24WO ₃	23.5' 8.0'

Horst fault

4463 12.08Ag 0.42Pb 17.7Zr 0.64Cu 0.05WO₃ 0.015Sr
7.5' ~ 2.3m.

4464 2.26Ag 0.40Pb 1.30Zr 0.46Cu 0.24WO₃ 0.025Sr
6.5' ~ 2.0m. H

4465 5.96Ag 0.16WO₃
5' ~ 1.5m.

4466 0.06Au 0.82Ag 0.12WO₃
6.5' ~ 2.0m.

4467 1.38Ag 0.60Cu 0.41WO₃ 0.045Sr
10.8' ~ 3.3m.

A Geonics EM-16 was employed for the V.L.F. survey with readings taken at 20 metre intervals. Both the in-phase and quadrature were read. All stations were read by facing the direction of the transmitting station and thence turning clockwise 90° before taking the readings. Most lines had to be read on Maine, Seattle, and Hawaii since the conductor directions were unknown. With one exception, Maine turned out to be the best station and the results are computer plotted on page 10.

Magnetometer readings were taken at 10 metre spacing with a Scintrex MF-2 fluxgate magnetometer. The instrument reads the vertical component of the earth's magnetic field. Readings were taken to the nearest 10 gammas in short loops and corrected for diurnal. Each loop was subsequently corrected to adjacent loops throughout the survey.

ECONOMIC GEOLOGY

As shown on Aitken's geology map pg. 5, there are three geological formations contacting on the property: 1 - Greenstone and volcanic greywacke; 2 - Alaskite; and 3 - Talc-bearing ultramafic rocks. As seen on the drill section on pg. 6 there are fluorite skarns and massive sulphides within the above. The sulphides are showing the best assays in Ag, Pb, Zn, Cu, WO₃ and Sn. It is unknown how many of these samples were assayed for gold? It is something to be considered since Boulder Creek has produced placer gold off and on since the turn of the century.

Of more general interest to the south on Pine Creek, C. H. Ash and R. L. Arksey have noted in their paper entitled The Listwanite-Lode

Gold Association in British Columbia - "Linears defined by aeromagnetic lows in serpentinite may delineate zones of carbonatization. Magnetite formed during the serpentinization of ultramafic rocks produces a strong magnetic signature. Carbonatization results in the destruction of magnetite, creating zones of reduced magnetic susceptibility. The application of aeromagnetic lows as an exploration tool in delineating zones of carbonatization in ultramafics has been discussed by Gresens et al (1982). This approach has been applied by Homestake Mineral Development Co. in the Atlin camp and has proven successful (D. Marud, personal communication, 1989)."

PURPOSE

- 1) To see if the massive sulphides can be delineated by V.L.F. and Mag. association.
- 2) To keep an eye out for mag. lows which may be good lode prospects as discussed in the Economic Geology section.

RESULTS

The V.L.F. results plotted (by computer) can be seen as profiles on pg. 10. The location of the V.L.F. cross-overs have been transferred to the Magnetometer Map and the V.L.F. Composit contained in the pocket. Also, the old I.P. results have been transferred to this map as well.

INTERPRETATION AND CONCLUSIONS

The conductor running from L730s @ 0+30W in a west by southwest direction (as indicated by the V.L.F. cross-overs on L730s, XL 0+50W @ 750s and XL 100W @ 7+85s) with its associated mag. activity on the easterly part cuts almost directly over the massive sulphide occurrence as seen on the drill section on pg. 6. Thus it is

reasonable to assume that this geophysical application is an excellent tool for picking up other massive sulphides in the area. With this in mind, one can see on the map in the pocket, that there are three other conductors with magnetic activity on or near them. These occur on XL 200W @ 1120S, B.L. @ 550S and a possible conductor intersecting XL 100E @ 800S and XL 150E @ 825S. It also should be noted that where ever I. P. was done there is an I.P. anomaly close by. Since these conductors are "open ended" there should be more lines put in and geophysically surveyed in order to obtain their extent.

Another interesting correlation is the mag. lows centred on L730S @ 0+60E, L610S @ 0+50E and 0+20W with their corresponding I.P. anomalies. This should be investigated with regard to gold prospecting as discussed in the Economic Geology section.

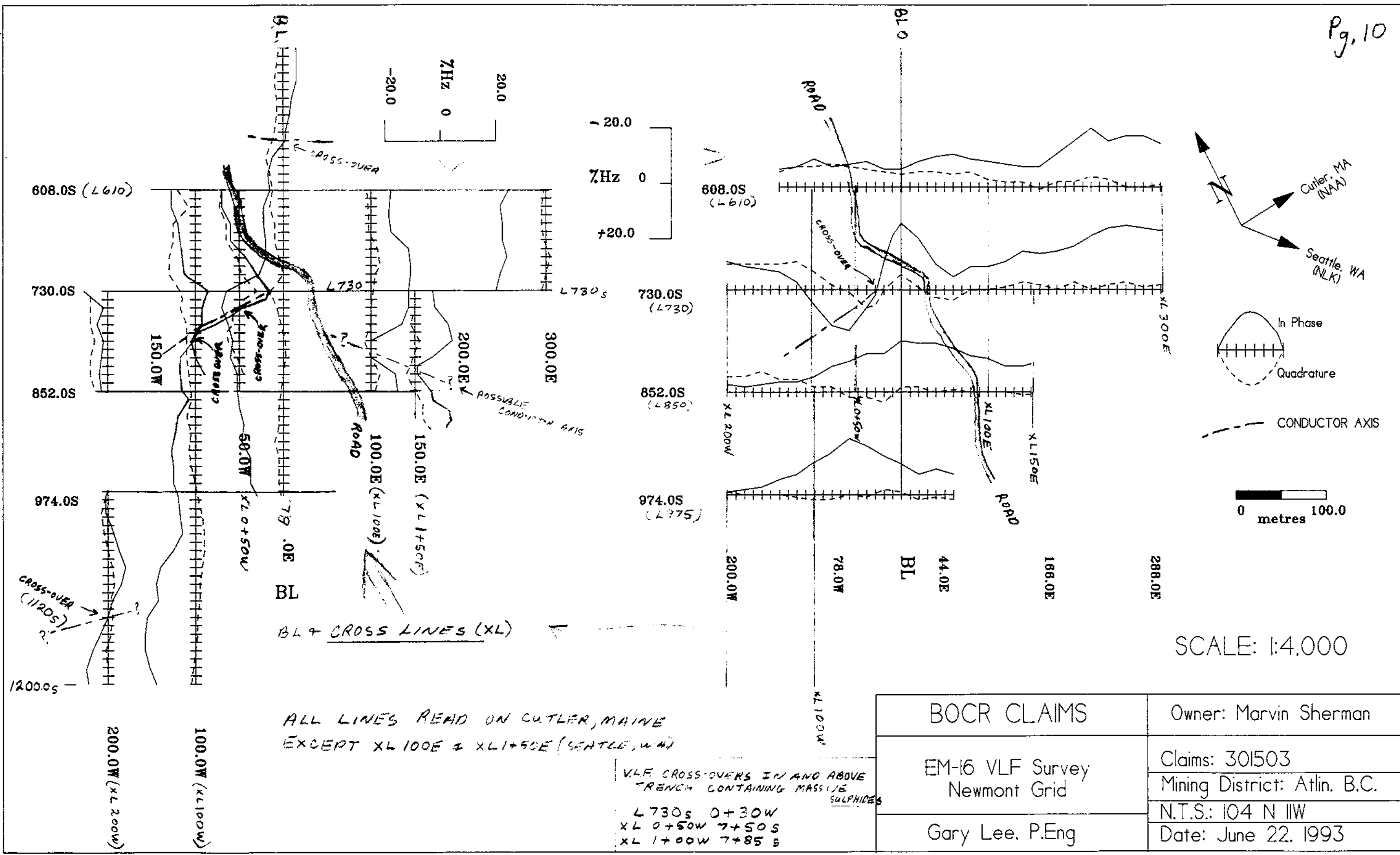
It should be noted that L100W between 1100S and 1200S was only read on Maine and should be read on Seattle and Hawaii since there is both magnetic activity and an I.P. anomaly in the area.

RECOMMENDATIONS

- 1) The grid be expanded as mentioned previously and especially northeast where the hand cobbled shipped ore was reported to originate from and read both with Mag. and V.L.F.
- 2) Make an effort to see if any of the old Newmont records can be recovered.
- 3) Initiate a trench and/or drill program with the purpose of testing all pertinent anomalies.

Respectfully submitted,


Gary C. Lee, P. Eng.



ALL LINES READ ON CUTLER, MAINE
EXCEPT XL 100E & XL 1+50E (SEATTLE, WA)

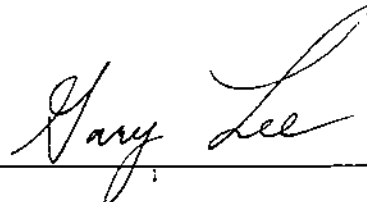
VLF CROSS-OVERS IN AND ABOVE
TRENCH CONTAINING MASSIVE
SULPHIDES
L730s 0+30W
XL 0+50W 7+50S
XL 1+00W 7+85S

BOCR CLAIMS	Owner: Marvin Sherman
EM-16 VLF Survey Newmont Grid	Claims: 301503
	Mining District: Atlin, B.C.
Gary Lee, P.Eng	N.T.S.: 104 N IIW
	Date: June 22, 1993

STATEMENT OF QUALIFICATION

I, GARY C. LEE, of the City of Whitehorse, Yukon Territory, DO
HEREBY CERTIFY that:

- 1) I am a self-employed Geological Engineer.
- 2) I am a graduate of the University of Toronto, Toronto, Ontario, with a degree in Applied Science - Geological Engineering (Mineral Exploration option).
- 3) I am a member of the Professional Engineering Associations of **the Yukon, B. C. and Ontario.**
- 4) I supervised and carried out the work described in this report.



Gary C. Lee, P.Eng.

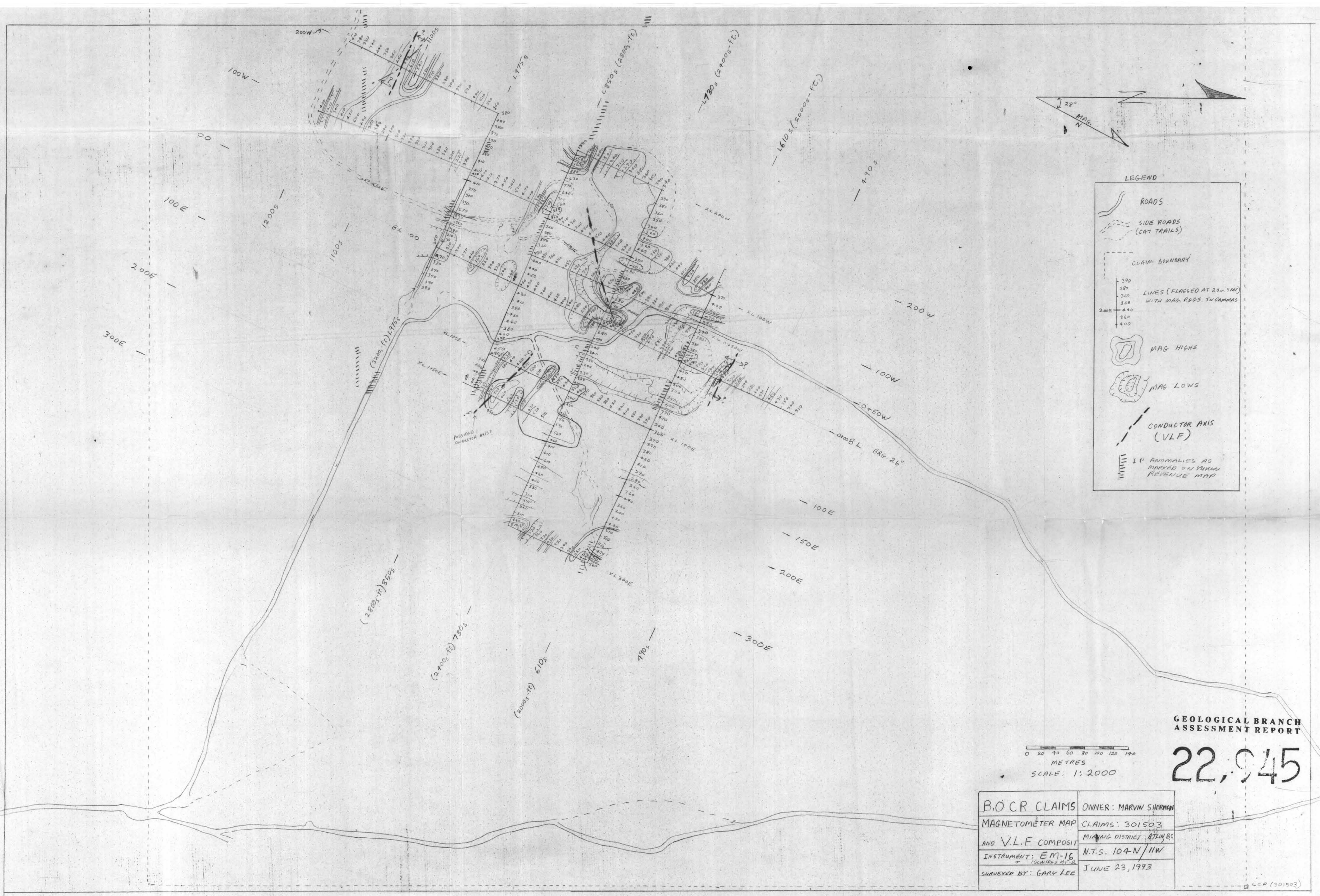
Date: June 22/93

BOCR MINERAL CLAIM

ATLIN MINING DIVISION

STATEMENT OF COSTS - GEOPHYSICAL SURVEY

<u>Field</u>	<u>\$</u>
Engineer 6 days @ \$275.00/day	1650.00
Mag. and V.L.P. Rental	180.00
Supplies, groceries, meals	175.00
Truck(4x4 with camper)	275.00
Mob. & Demob.	225.00
<u>Report</u>	
Data reduction, plotting, contouring, and report writing	600.00
Computer plotting	107.00
Typing	45.00
Report Reproduction	65.00
	<u> </u>
<u>Total</u>	<u>3322.00</u>



LEGEND

- ROADS
- SIDE ROADS (CAT TRAILS)
- CLAIM BOUNDARY
- LINES (FLAGGED AT 20-5M) WITH MAG. PGS. IN DAMMS
- MAG HIGHS
- MAG LOWS
- CONDUCTOR AXIS (VLF)
- IP ANOMALIES AS MARKED ON YUKON REVENUE MAP

0 20 40 60 80 100 120 140
METRES
SCALE: 1:2000

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,945

B.O.C.R. CLAIMS	OWNER: MARVIN SHERMAN
MAGNETOMETER MAP	CLAIMS: 301503
AND V.L.F. COMPOSIT	MINING DISTRICT: ATLIN BC
INSTRUMENT: EM-16	N.T.S. 104N/HW
SURVEYED BY: GARY LEE	JUNE 23, 1993