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MAGNETOMETER REPORT
 ON THE
 COOKE - NATION PROJECT
 BOW CLAIMS
 OMINECA MINING DIVISION
 NTS 93K/16E; 93N/1E

BY
 PERRY B. GRUNENBERG, B.Sc, F.G.A.C.
 HUGHES-LANG EXPLORATION LTD.

DECEMBER, 1989

FILMED

CLAIMS WORKED

CLAIM NAME	# UNITS	RECORD #	TAG NUMBER	DATE
BOW 1	20	10127	97855	FEB. 25, 1989
BOW 2	20	10128	97856	FEB. 26, 1989
BOW 3	18	10129	97857	FEB. 26, 1989

LOCATION: ^{55°}54°00'N LATITUDE, 124°07'W LONGITUDE
 OWNER: COOKE - NATION SYNDICATE
 OPERATOR: HLX RESOURCES LTD.
 PROJECT GEOLOGIST: PERRY GRUNENBERG

GEOLOGICAL BRANCH
 ASSESSMENT REPORT

19,585

HUGHES-LANG EXPLORATION LTD.
MAGNETOMETER REPORT
ON THE
BOW CLAIMS

SUMMARY

The BOW claims consist of 58 units in 3 modified grid claims located 76 kilometers north of Fort St. James. The claims were staked over a magnetic anomaly as outlined by regional airborne survey. The close proximity of the Mount Milligan MBX deposit, where porphyry Cu-Au mineralization is associated with magnetite bearing intrusive rocks, suggests that the exploration model for the BOW claims should include locating strong magnetic highs. A ground magnetometer survey totaling 17.2 line kilometers was conducted in mid-November of 1989. The results of the ground survey reflect a portion of the airborne survey results, showing a strong magnetic gradient culminating to the west of the grid. Further surveying should be conducted to the west of the present grid to detail this anomaly.

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HUGHES-LANG EXPLORATION LTD.
BOW CLAIMS

1. INTRODUCTION

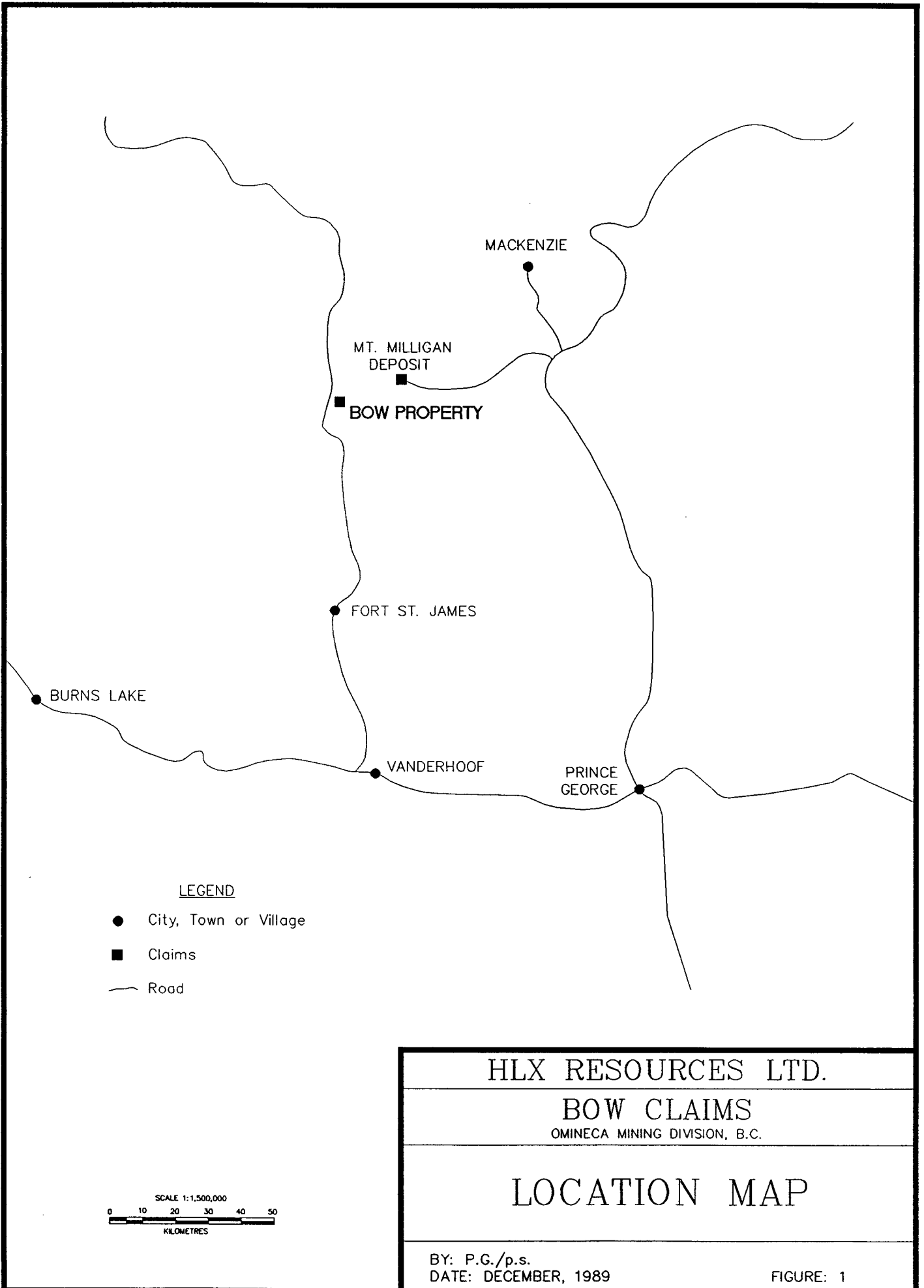
The Bow claims are located approximately 76 kilometres north of Ft. St. James in north-central British Columbia. The property was staked in 1989 and was optioned from the Cooke - Nation Syndicate by HLX Resources Limited shortly thereafter.

The claims were originally staked to cover aeromagnetic anomalies which are believed to be caused by alkaline intrusions. Alkaline intrusions in the Mt. Milligan-Nation River area may host porphyry copper-gold mineralization. The model employed in the search of this style of mineralization is one of disseminated pyrite and chalcopyrite associated with hypabyssal and coeval alkaline (quartz deficient) intrusions. These alkaline intrusions are characterized by an abundance of magnetite which is traceable by airborne magnetometer survey, showing up as small domes of magnetically high values. The disseminated copper and iron sulphides usually occur on the margins of these intrusions.

Since the area of the claims is generally covered by an extensive layer of glacial cover, the best way to define zones of possible mineralization are by a combination of ground magnetometer and induced polarization surveys.

1.1 LOCATION AND ACCESS

The Bow claims are located 76 kilometers north of Fort St. James in the Omineca Mining Division of north-central British Columbia (Figure 1). The claims cover a total of 58 units which are centered at latitude 54°00' North and longitude 124°07' West (Figure 2).



LEGEND

- City, Town or Village
- Claims
- Road

SCALE 1:1,500,000
0 10 20 30 40 50
KILOMETRES

HLX RESOURCES LTD.

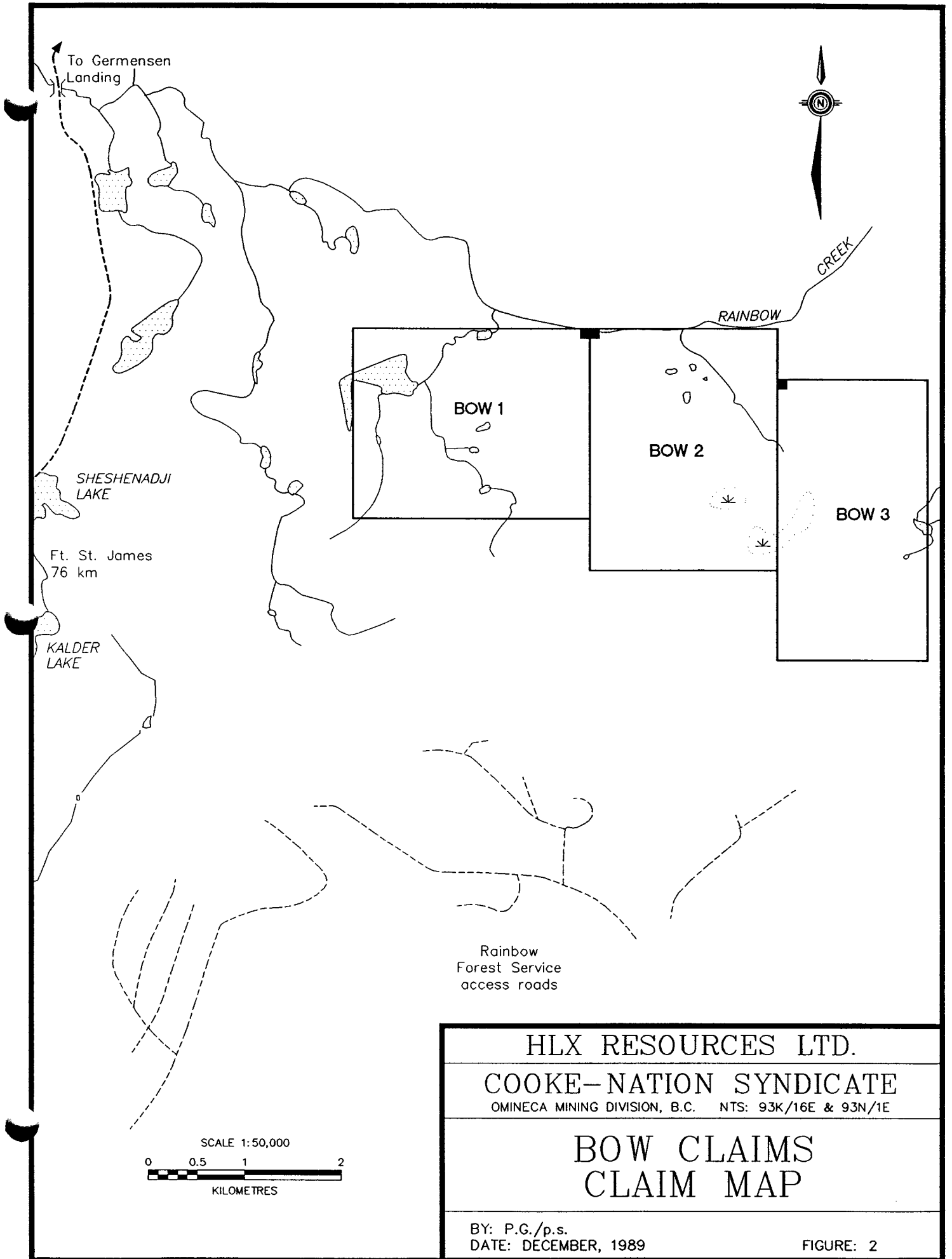
BOW CLAIMS

OMINECA MINING DIVISION, B.C.

LOCATION MAP

BY: P.G./p.s.
DATE: DECEMBER, 1989

FIGURE: 1



The western margin of the claims roughly parallels a section of the road from Fort St. James to Manson Creek and Germansen Landing, coming to within 3 kilometers of the property. This is a well maintained gravel surface road which is kept open throughout the year. Smaller spur roads are being developed near the claims as logging continues in the area. At present, the closest spur road comes to within 2 kilometers of the southern boundary of the claims. Access to the property is by highway 27 which junctions with highway 16, 102 kilometers east of Prince George. Fort St. James is located 60 kilometers north of highway 16 at the northern terminus of highway 27. Road access north to Germansen Landing at 76 kilometers passes Kalder Lake, located 3 kilometers east of the property.

Northern Mountain Helicopters maintains a base in Fort St. James which allows access to the property by a 25 minute flight from the base, or a 5 minute "hop" from Kalder Lake.

1.2 PHYSIOGRAPHY, VEGETATION AND CLIMATE

The Bow claims are located on the Nechako Plateau, west of the Rocky Mountain Trench. Much of this area lies on glacially deposited material in an area of low topographic relief. Maximum relief in this area is about 450 metres (1500 feet). Drumlins and eskers striking northeast are present about the property. The property lies along Rainbow Creek which flows north into the Nation River. Numerous small lakes, creeks, and swamps are present within the property.

Most of the claim area is forest covered, with open pines in areas of good drainage, and spruce, balsam and fir in wetter areas. Thick growths of alder, devil's club and wild rose may be encountered along creek valleys.

The property experiences typical northern interior climate, with relatively dry summers and moderate snowfalls in winter. Average July temperatures are 20°C and average January temperatures are -10°C.

1.3 CLAIM INFORMATION

The claims are all located within the Omineca Mining Division and consist of 3 modified grid claims totalling 58 units (Figure 2). Claim information is listed in table I.

TABLE I
CLAIM STATUS

CLAIM NAME	UNITS	RECORD NUMBER	ANNIVERSARY DATE
BOW 1	20	10127	FEBRUARY 25
BOW 2	20	10128	FEBRUARY 26
BOW 3	18	10129	FEBRUARY 26

1.4 HISTORY

Exploration of the Nechako Plateau dates back to the late 1800's and early 1900's when the numerous watercourses of the area were prospected by a wave of individuals following placer gold strikes north from the Cariboo gold fields. Limited placer gold production continues to date from a variety of creeks in the area.

In the late 1960's and early 1970's regional exploration for copper porphyries covered much of the Nechako Plateau. Results of these surveys was often discouraging since exploration techniques employed were not capable of handling the deep glacial overburden of the area.

Of more recent interest is exploration activity on the Mount Milligan (MBX) property currently being jointly developed by Continental Gold Corporation and B.P. Resources Canada Limited. Here, copper-gold porphyry mineralization has been dicovered by drilling and trenching

of a combination of soil geochemistry and magnetometer surveys. The deposit consists of disseminated copper-gold and pyrite mineralization occurring within upper-Triassic lower-Jurassic Takla basalts marginal to coeval syenite-monzonite-diorite stocks. The deposit has drill inferred geological inventory in the order of 200 million tons, with grades ranging from 0.01 ounces per ton to 0.09 ounces per ton gold, and 0.2 percent to 1.0 percent copper. The economics of putting this deposit into production is currently being evaluated by several major mining companies.

1.5 WORK DONE BY HUGHES-LANG EXPLORATION LTD. IN 1989

Work was completed on the property by Hughes-Lang Exploration during the period November 10 to 16, 1989. Work was done by a two person crew working out of a fly-camp located on Rainbow Creek. Work included 16 kilometers of line surveying using hip chain and compass, followed by 17.2 kilometers of magnetometer survey with readings every 25 meters.

2.0 GEOLOGY

The area of the Bow claims is flat to rolling country, where bedrock is generally obscured by widespread glacial cover. Regionally the property lies within the northwest trending central volcanic core of the upper-Triassic lower-Jurassic Takla group of the Quesnel Belt. Takla volcanics are dominated by subaqueous alkalic pyroxene porphyritic andesite and basalt flows and pyroclastics with subordinate intercalated tuffs and argillites. Intruding the volcanic stratigraphy are comagmatic alkaline syenite-monzonite-diorite stocks and younger calcalkaline plutons.

The area is marked by "pull-apart" fault structures which trend northwesterly and northeasterly.

More detailed analyses of geology in the area has been obtained from extensive drilling of the Mount Milligan "MBX" property. At this location, Mark Rebagliati of Rebagliati Geological Consulting, and David Copeland of C.E.C. Engineering Limited, have summarized the geology as follows:

" At the base of the Takla volcanic section, pyroxene-amphibolite porphyritic andesite flow and fragmental units are overlain by a sequence dominated by latite fragmentals. A thinly bedded to massive trachyte tuff separates the latite fragmentals from the overlying sequence of interbedded augite crystal latite tuffs and augite porphyritic latite flows. These latitic units are, in turn, overlain by a second trachyte tuff unit, which is followed by a sequence dominated by massive augite porphyritic latite flows. Occasional thin units of trachyte tuff occur intermittently within the upper-most latite flow sequence.

The porphyritic monzonite stock is fine grained with 20% to

60% plagioclase laths in an aphanitic matrix of potassium feldspar. Biotite and hornblende are minor constituents. In plan, the roughly equidimensional stock has a highly irregular outline. Drilling indicates that both the east and west contacts dip moderately to steeply to the west-southwest.

An intrusion breccia, comprised of rounded to subangular monzonite clasts in a comminuted monzonite matrix, has formed a partial ring complex around the west, south and east perimeter. Rounded latitic volcanic xenoliths occur in portions of the breccia. The contact between the breccia and the volcanics varies from abrupt to gradational across 10 to 50 feet, whereas brecciated and fractured monzonite forms the internal contact with the stock.

On the east side of the porphyritic monzonite stock, a porphyritic monzonite dyke up to 150 feet thick occupies the plane of the Rainbow Fault, a sinuous, easterly-dipping, low angle, reverse fault. The dyke, which crosscuts the intrusion breccia, extends for 1,300 feet along strike and down dip from the stock before pinching out.

The distribution of the mineralization and related alteration assemblages are spatially associated with the monzonite stock and the Rainbow Fault. "

3. MAGNETOMETER SURVEY

The claims were staked over an area of magnetically high values as recorded by government airborne survey (see figure 3). The survey results display a series of east-southeast trending lobes with magnetic gradients in the order of 1300 gammas. Ground survey lines were designed to establish the location of magnetically high zones relative to the claim block.

3.1 INSTRUMENT AND SURVEY TECHNIQUES

A Gem Systems GSM proton precession magnetometer was utilized to measure magnetic variations on the claims. The GSM magnetometer has a resolution of 1 gamma, accuracy of plus or minus 1 gamma over an operating range of 20,000 to 100,000 gammas in 23 overlapping steps, and a gradient tolerance of up to 5000 gammas per meter.

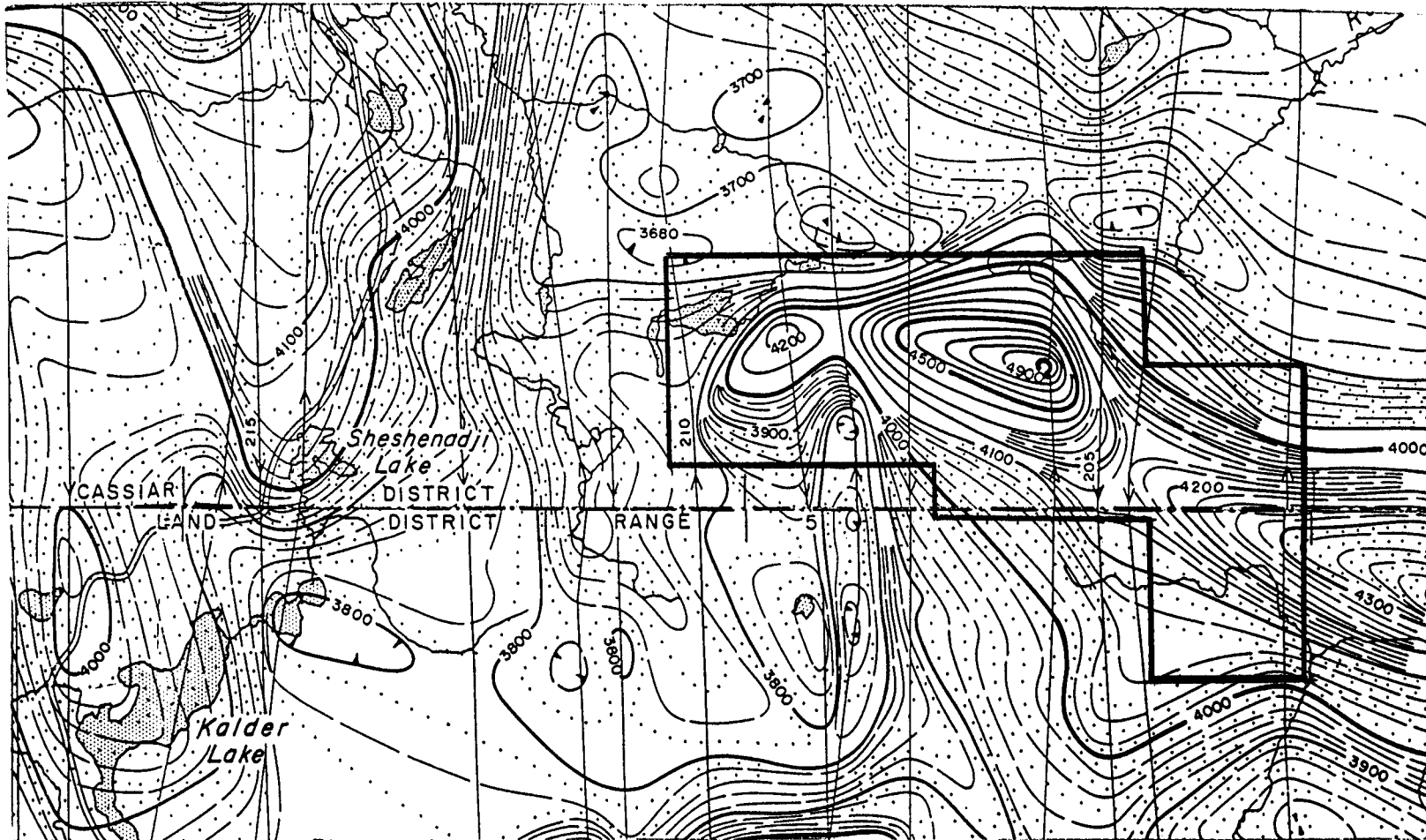
A base station was established and readings were corrected for diurnal and day to day variations. Readings were taken along previously established north-south trending flagged lines, with line spacing of 200 meters, and station spacing of 25 meters. The time of day was recorded at each station and later used to correct the field readings. A total of 17.2 line kilometers was surveyed in this manner.

3.2 PRESENTATION AND DISCUSSION OF RESULTS

The location of survey grid lines with some topographical featuring is shown on Figure 4. Results of the magnetometer survey have been contoured and are shown in Figure 5. Readings are in gammas with a base of 57,000 and contour intervals of 250 gammas.

The magnetometer readings show a range of values from 57,552 to 60,337

gammas. The results display a generally weak gradient of increasing values from the east side of the grid to the west (lines 4+00E to 6+00W), culminating in a strong magnetic increase towards the western boundary (lines 8+00W and 10+00W). This increase in results appears to be tracing the eastern margins of the central "lobe" of magnetic high values as displayed by the regional airborne survey results (Figure 3). The ground survey should be extended to the west to further trace this strong magnetic anomaly.



Note: Reconstructed from survey maps
 numbered 1583G Tezzeron Creek (93K/16)
 and 1584G Wittsichica Creek (93N/1)

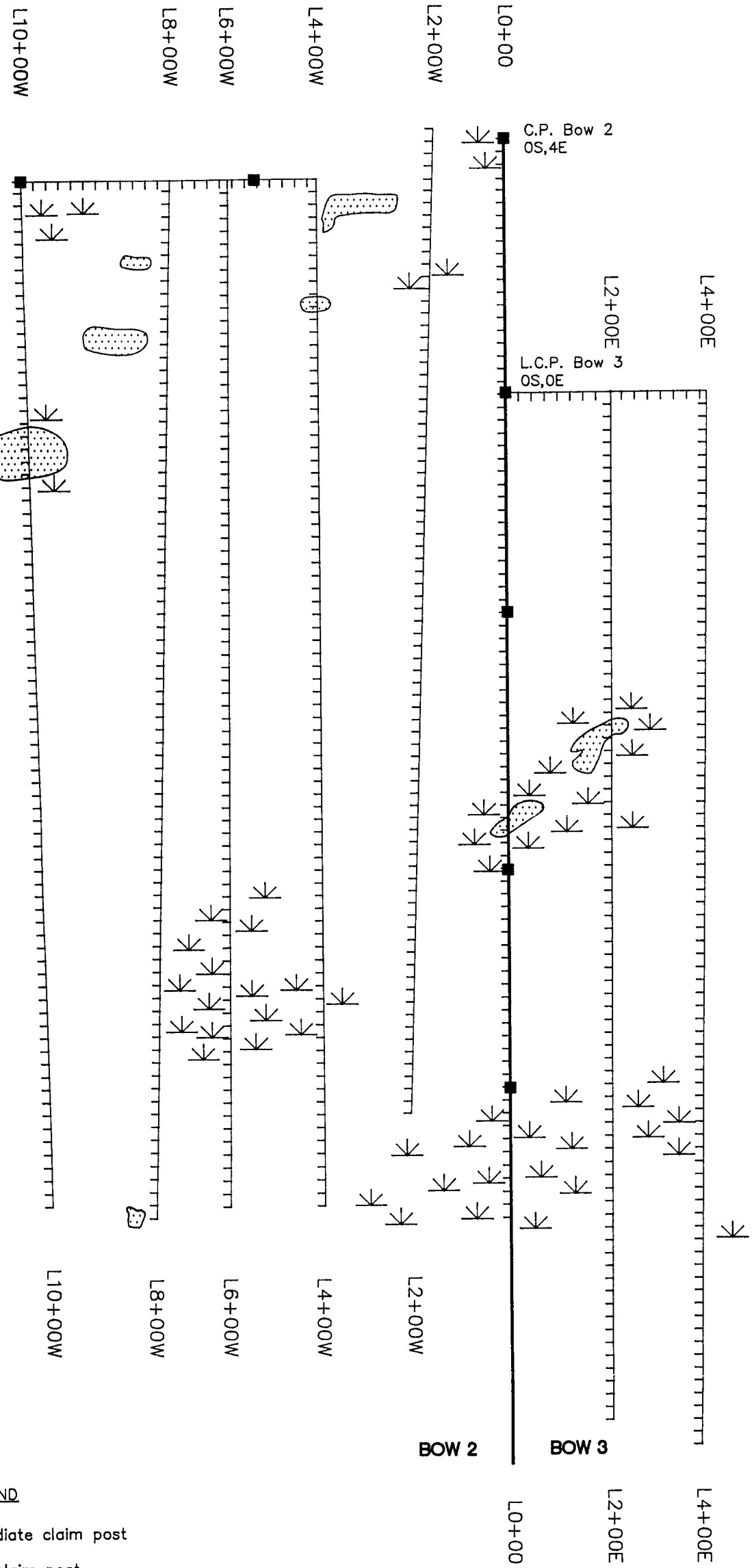
HLX RESOURCES LTD.

BOW CLAIMS
 OMINECA MINING DIVISION

REGIONAL AEROMAGNETIC
 CONTOUR MAP

BY: P.G./p.s.
 DATE: DECEMBER 15, 1989

SCALE: 1:63,360
 FIGURE: 3



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

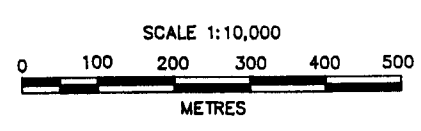
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L0+00S

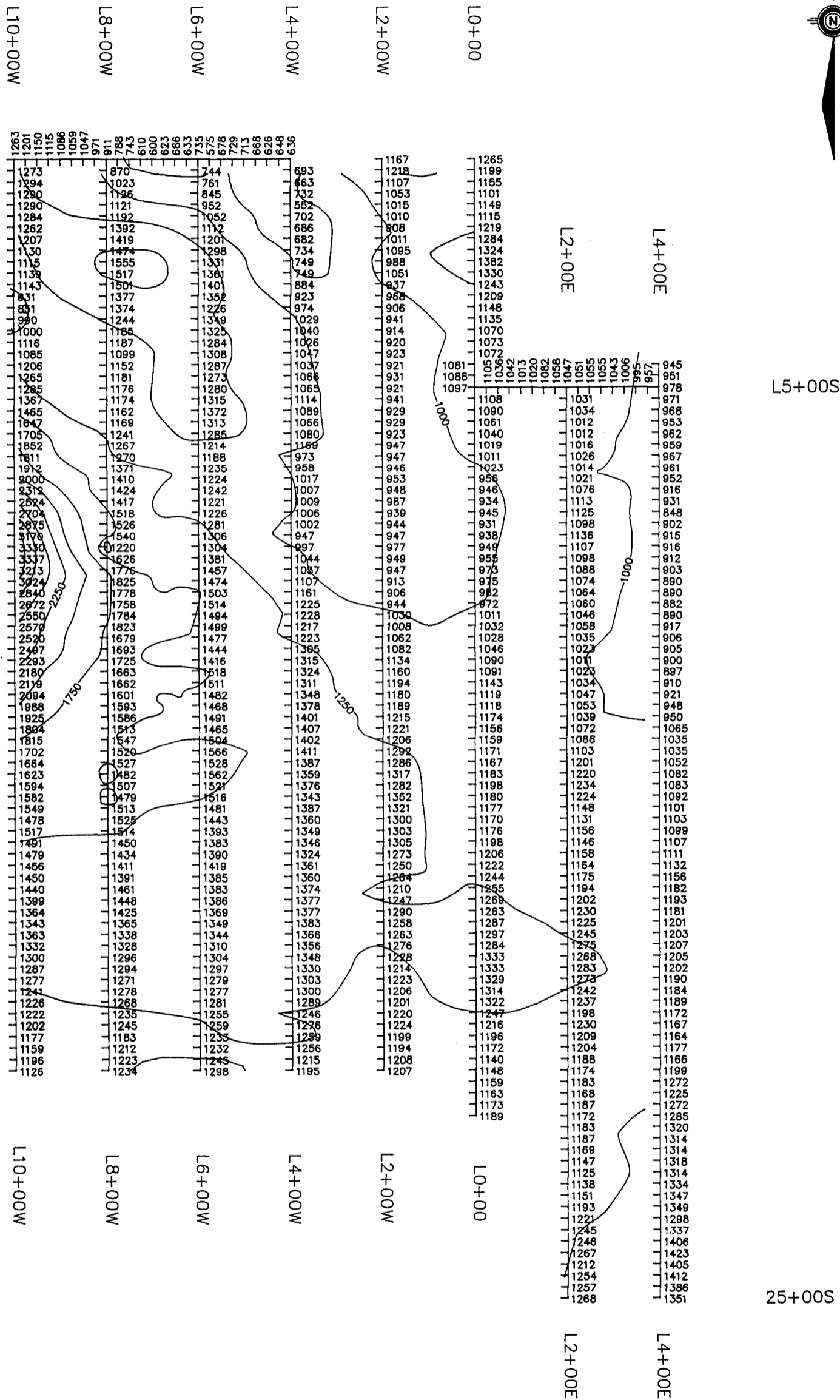
20+00S

LEGEND

- Intermediate claim post
- C.P. ■ Corner claim post
- L.C.P. ■ Legal corner post
- ☪ Pond
- ↘ Swamp
- Claim boundary

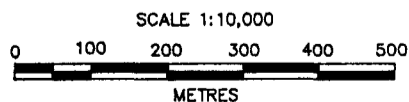


HLX RESOURCES LTD.	
COOKE-NATION PROJECT	
<small>OMINECA MINING DIVISION, B.C. NTS: 93K/16E & 93N/1E</small>	
BOW CLAIMS GRID MAP	
<small>BY: P.G./p.s. DATE: DECEMBER, 1989</small>	<small>FIGURE: 4</small>



19,585

GEOLOGICAL BRANCH
ASSESSMENT REPORT



Note: Contour interval = 250 gammas
Base = 57,000 gammas

HLX RESOURCES LTD.	
COOKE-NATION PROJECT	
OMINECA MINING DIVISION, B.C. NTS: 93K/16E & 93N/1E	
PROTON MAGNETOMETER SURVEY (BOW CLAIMS)	
BY: P.G./p.s. DATE: DECEMBER, 1989	FIGURE: 5

4. CONCLUSIONS

The regional aeromagnetic results show that the BOW claims overlay an area of high magnetics. The ground magnetometer survey covered in this report has been successful in partially reproducing the results of the aeromagnetic survey. Considering the close proximity of the Mount Milligan MBX deposit, where mineralization is associated with magnetite bearing intrusive rocks, the exploration model for the BOW claims should include locating strong magnetic highs. The ground survey results indicate that a strong magnetic high centers to the west of the grid. Continued magnetic surveying should be designed to further outline this anomaly.

Respectfully submitted,



Perry B. Grunenberg, B.Sc., F.G.A.C.
Hughes-Lang Exploration Ltd.

REFERENCES

COOKE, D.L., 1989; A Statement of Proposal for the WITT, KC and BOW Claims, Mt. Milligan Area, Omineca M.D. (letter dated March 16, 1989).

COPELAND, D. and REBAGLIATI, M., 1989; Mt. Milligan, An Alkaline Intrusive Related Porphyry Gold-Copper Deposit (from a newsletter revised in September 1989).

REGIONAL MAGNETOMETER SURVEY, reference to airborne magnetometer surveys from Geophysics Division of the Geological Survey of Canada, Department of Mines and Technical Surveys, Maps accompanying Geophysics Papers numbered 1583 and 1584, Survey flown June through September, 1961.

SPECIFICATIONS for the G S M - 8 MAGNETOMETER were obtained from the Instruction Manual as provided by GEM SYSTEMS of Willowdale Ontario, Canada, February, 1980.

STATEMENT OF QUALIFICATIONS

PERRY GRUNENBERG, B.Sc.

ACADEMIC

1982 B.Sc. in Geology The University of British Columbia

PROFESSIONAL

1985	Mark Management Ltd. Vancouver, B.C.	Project Geologist on geological, geophysical and geochemical surveys near Dawson, Y.T.
1984	Mark Management Ltd. Vancouver, B.C.	Project Geologist on geological, geophysical, geochemical and diamond drilling programmes near Dawson, Y.T.
1983	Strato Geological Engineering Ltd. Vancouver, B.C.	Project Geologist contracted to work properties near Virginia City, Nevada, Wenatchee, Washington, and several locations in southern B.C.
1982	P and L Exploration Vancouver, B.C.	Geologist involved in evaluating potential placer gold prospects near Quesnel and Princeton, B.C.

SUMMER EMPLOYMENT

1981	Mark Management limited	Assistant Party Chief
1980	Kennco Explorations	Senior Assistant
1979	Riocanex	Junior Assistant
1978	Riocanex	Junior Assistant

**COST STATEMENT
COOKE NATION SYNDICATE
2-16 NOVEMBER, 1989.**

GEOPHYSICAL SURVEY

Salaries, wages and benefits: 2 pers., 23m days @ \$155.65		\$ 3,579.95
Food and accommodation @ \$25.32		582.42
Shipping		168.58
Field telephone service		119.00
Drafting: RWR Mineral Graphics		247.38
Supplies		569.25
Helicopter: NMH 206B, 10-16 Nov., 2.6hrs @ \$634.50		1,649.70
Fuel		315.61
Rentals: Action Honda generator EG650	\$106.00	
HLX Res. 4WD Blazer, 10days @ \$60	600.00	
Ezekiel field equip, 17m days @ \$10	170.00	
Appian proton magnetometer, 5days @ \$27	<u>135.00</u>	1,011.00
Maintenance		130.31
Consulting fees: Adder Exploration and Development Ltd.		312.50
Archean Engineering Ltd.		975.00
Report preparation		<u>1,987.02</u>
TOTAL COST		<u>\$11,647.72</u>