

ASSESSMENT REPORT ON A MAGNETOMETER SURVEY

OF THE SCOTCH PROPERTY

SCOTCH MINERAL CLAIM

Scotch Creek Area

KAMLOOPS MINING DIVISION, B.C.

NTS: 82L/13E, 82L/14W
Latitude: 50° 57' North
Longitude: 119° 30' West
Owner/Operator: Brican Resources Ltd.
Author: K.L. Daughtry
Date: July 31, 1986

FILMED

**GEOLOGICAL BRANCH
ASSESSMENT REPORT****14,998**

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SUMMARY

Exploration work on the SCOTCH property since 1970 has resulted in the discovery of a stratigraphically controlled zone of sulphide mineralization parallel to the contact between metamorphosed volcanic rocks of the Eagle Bay formation and younger argillaceous limestone of the Sicamous formation. Previous geophysical surveys delineated co-incident EM and magnetic anomalies related to the sulphide zone.

Steep magnetic gradient in the anomalous zone caused significant errors in grid line location, and consequently, the delineation of targets for drilling and trenching. The current detailed survey was conducted over part of the main anomaly in an attempt to resolve discrepancies between previous surveys and to fill in detailed data between the earlier widely-spaced survey lines.

Further detailed geophysical surveys should be effective in delineating trenching and/or drilling targets.

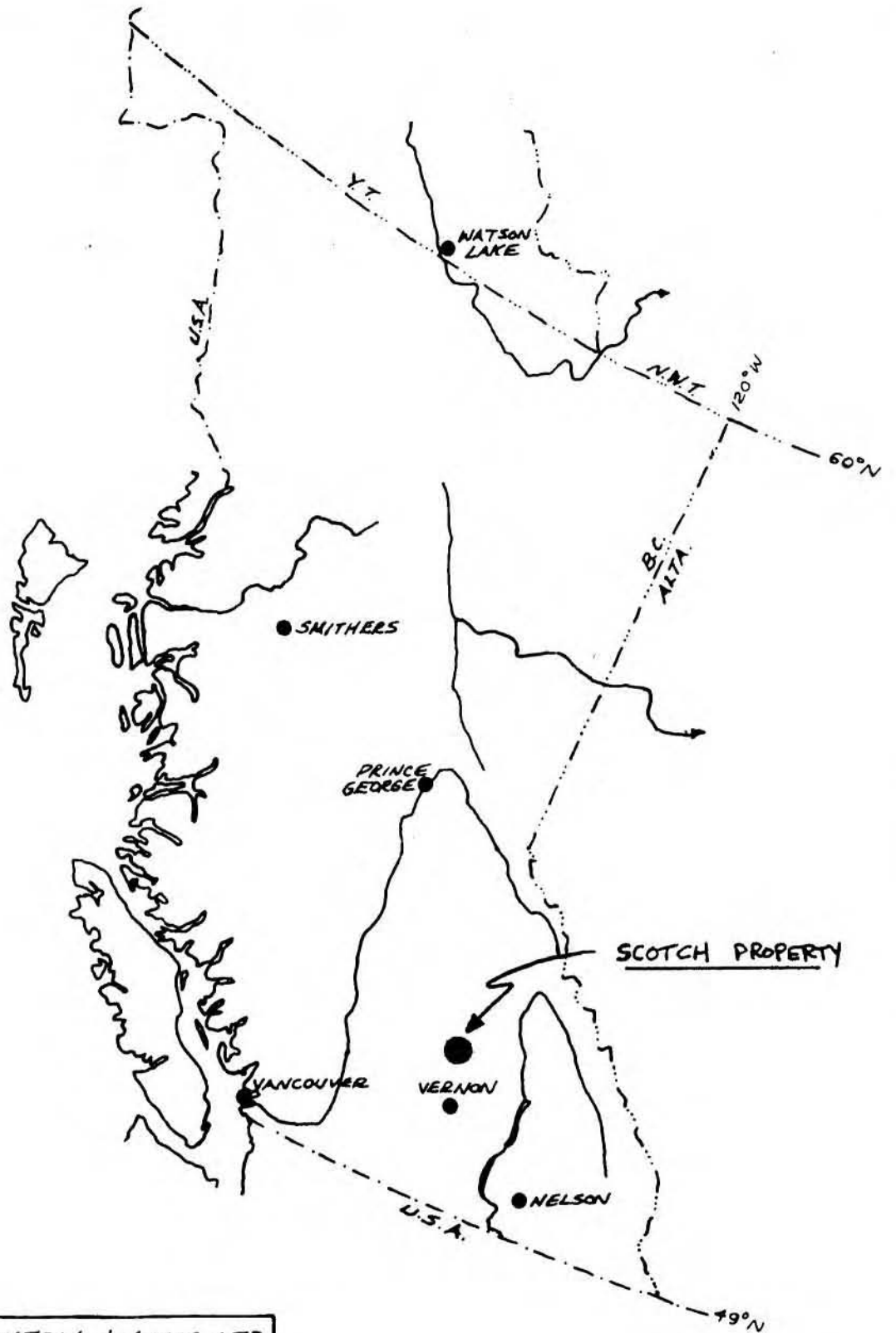
LOCATION, ACCESS, TOPOGRAPHY

The SCOTCH claim is located east of Corning(Lee) Creek on the southerly sloping flank of the Adams Plateau west of Scotch Creek, about 4 km (2.5 mi) north of the north shore of Shuswap Lake (Figures 1 and 2). The co-ordinates of the Legal Corner Post of the SCOTCH claim are $50^{\circ}57.0'$ North and $119^{\circ}30.7'$ West. The National Topographic System reference for the claims is 82L/13E and 82L/14W. The elevation of the Legal Corner Post is 1160 m (3800 ft) a.s.l.

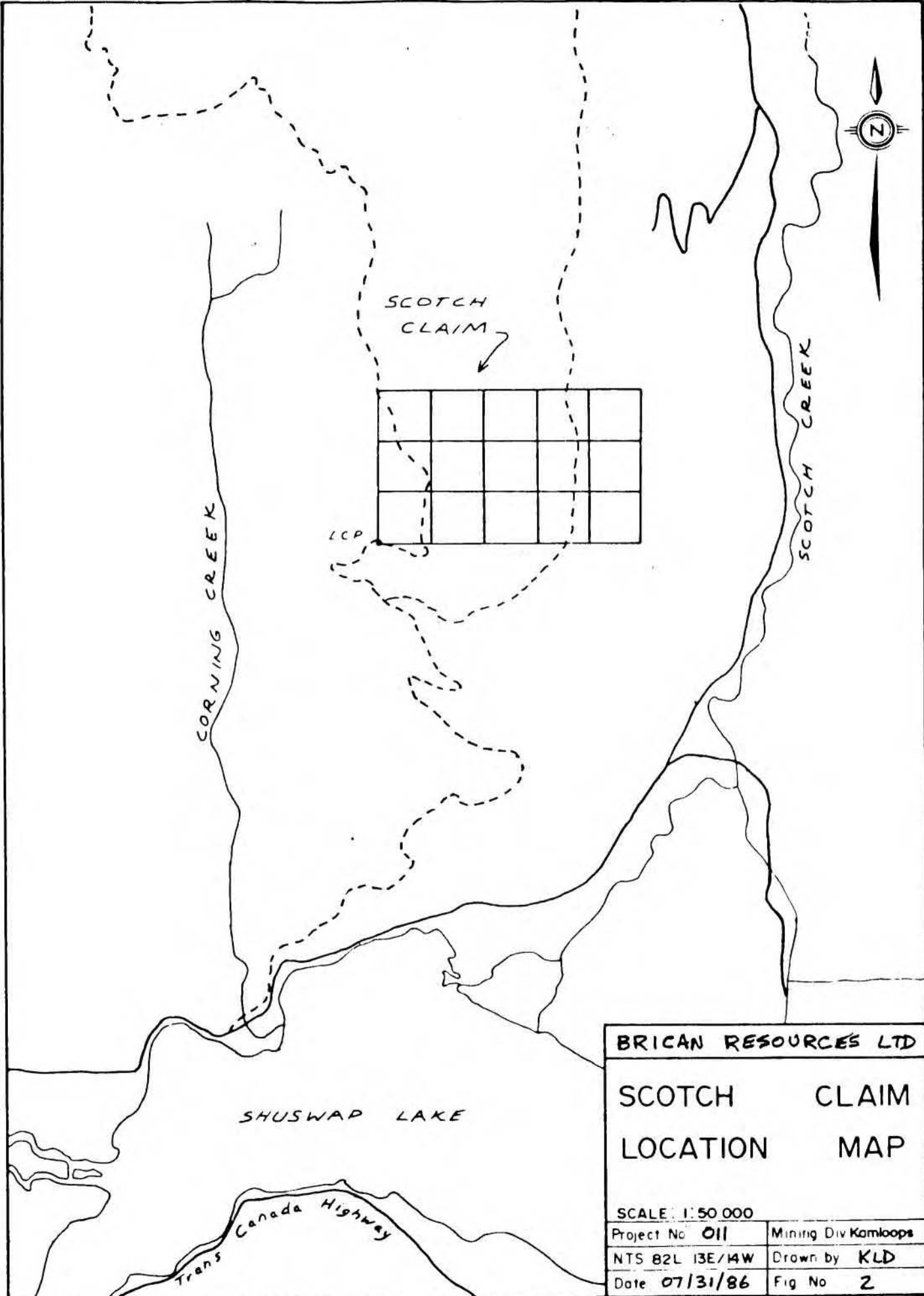
Kamloops is 68 km (42 mi) to the southwest. Access to the property from Kamloops is via the Trans-Canada Highway east to Squilax bridge, thence easterly on the Squilax-Celista highway for 10 km (6 mi) to the mouth of Corning(Lee) Creek, thence northerly on the old Lee Creek logging road for 10 km (6 mi) to the Legal Corner Post. Several new and old logging roads and a road along the B.C. Hydro powerline provide good access to most parts of the property for standard two-wheel vehicles.

The topography on the property is generally a moderate southward slope from Adams Plateau to Shuswap Lake. Corning(Lee) Creek has incised steep northerly-trending valleys into this slope. Elevations vary from 1160 m (3800 ft) a.s.l. at the Legal Corner Post to 1340 m (4500 ft) a.s.l. at the north boundary of SCOTCH claim.

Parts of the property have been logged in recent years, parts have old burns with thick second growth vegetation and deadfall, and parts have original tall timber. The area of the property is generally free of snow from mid-May to mid-November.



K.L. DAUGHTRY & ASSOC. LTD	
BRICAN RESOURCES LTD	
LOCATION MAP SCOTCH PROPERTY	
07/31/86	FIG. NO. 1



BRICAN RESOURCES LTD

SCOTCH CLAIM
LOCATION MAP

SCALE: 1:50 000

Project No 011	Mining Div Kamloops
NTS B2L 13E/4W	Drawn by KLD
Date 07/31/86	Fig No 2

PROPERTY

The SCOTCH property consists of the SCOTCH claim in the Kamloops Mining Division.

<u>Claim</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Owner</u>	<u>Expiry Date</u>
SCOTCH	15	371	Brican Resources Ltd.	May 7, 1987

The SCOTCH claim was staked by K.L. Daughtry in April 1976, and sold to Brican Resources Ltd. shortly thereafter.

HISTORY

The first record of exploration activity in the area of the SCOTCH property is a reference to the IRON POT showing on Acid(Ruby) Creek, a tributary of Scotch Creek, about 1000 m northeast of the SCOTCH claim. In the 1930 Annual Report of the B.C. Minister of Mines it is reported that two short adits were driven on a narrow zone of massive pyrrhotite with pyrite, and minor chalcopyrite. Apparently the objective was precious metal mineralization but no values were obtained on sampling.

Scotch Creek itself has had some placer gold production, about 2000 ounces being reported to date.

In the 1960's claims were staked by major companies to cover the copper showings on Nikwikwaia Creek, 7 km northwest of the SCOTCH but apparently no major exploration work was carried out.

In 1970, during the course of a regional exploration project, strong geochemical anomalies in copper and zinc were detected in stream sediments on Corning and Nikwikwaia Creeks. Follow-up prospecting resulted in the discovery of massive and disseminated stratabound pyrrhotite-pyrite-chalcopyrite-sphalerite mineralization on Nikwikwaia, Corning and Acid Creeks. The most attractive mineralization found at this stage was a 1-ton boulder of massive sulphide mineralization discovered on the east fork on Corning Creek. A grab sample of this boulder contained over 10% copper. Two hundred claims were staked to cover the potentially favourable geological setting.

In 1971, a reconnaissance scale grid was flagged out over the southern part of the claim block and soil sampling and magnetometer surveys were conducted over

41-line miles (66 km). This work indicated the presence of 10,000-foot long magnetically anomalous zone on the present SCOTCH claim which was co-incident with anomalous copper and zinc values in soils. The magnetic anomaly appeared to lie parallel with the stratigraphy and was correlative with a sulphide-bearing sequence of phyllites. Two holes were diamond drilled to test the strongly magnetic zone and intersected sulphide bearing phyllite with varying amounts of pyrrhotite, pyrite and chalcopyrite.

K.L. Daughtry staked the SCOTCH claim to cover the magnetic anomaly in 1976 and sold the property to Brican Resources Ltd. Craigmont Mines Ltd. optioned the claim shortly afterward and subsequently staked an additional six claims, totalling 104 units, covering much of the old claim block.

Craigmont then conducted a regional airborne Dighem survey which included the ground around the SCOTCH claim. Many conductors were indicated and a strong magnetic anomaly was delineated co-incident with one of these in the area of the previously known magnetic anomaly. A ground follow-up programme was initiated in which a total of 48 line-kilometres of grid was installed. Geochemical soil, magnetometer and VLF EM-16 surveys were carried out over the entire grid. These more detailed surveys provided a more distinct delineation of anomalous zones than the 1971 work. The large anomaly on the SCOTCH claim appeared as remarkably co-incident geochemical, magnetic and electromagnetic anomalous zones. Several other attractive anomalies were discovered.

In 1977 Craigmont drilled 4 holes to test geophysical targets on the main anomalous zone. Three of these holes were drilled in the same area as the first two holes of the 1971 programme. The first two holes intersected the same sulphide zone as the previous work. The third hole intersected better copper

mineralization than had previously been found in the heavy to massive sulphide zones. The fourth hole intersected the sulphide zone near the west end of the anomaly. No further work was done and the claim was returned to Brican effective September 30, 1978.

Esso Resources Canada Ltd. optioned the SCOTCH property from Brican in March 1979 and conducted further ground magnetometer and electromagnetic Max Min surveys. This work confirmed the presence of strong magnetic anomalies and electromagnetic conductors but the Esso surveys located the anomalies with a significant apparent displacement from the locations defined by Craigmont. One short hole was drilled by Esso in the western part of the SCOTCH claim to test one of the conductors. This hole intersected both sulphide mineralization and graphitic schist.

In 1983, Esso carried out geological mapping and lithogeochemical studies. The option was subsequently terminated and the claims were returned to Brican in 1984.

In 1985, Brican conducted a programme of backhoe trenching in an attempt to expose the source of the main geophysical anomaly. This trenching revealed an extensive zone of sulphide mineralization but no source of the magnetic anomaly and no strong conductor was evident.

The previous surveys were run with line spacings of at least 200 m. This lack of detail, coupled with the discrepancies in location of conductors between previous surveys, prompted Brican to undertake the more detailed magnetic survey which is the subject of this report.

REGIONAL GEOLOGY

The SCOTCH property straddles the contact between intermediate to felsic volcanic and volcaniclastic rocks of the Eagle Bay formation and argillaceous and carbonaceous limestone and calcareous argillite of the Sicamous formation. This contact trends easterly across the southern slope of the Admas Plateau from Adams Lake to Scotch Creek.

Although the Eagle Bay rocks overlie the Sicamous formation to the north of the contact, the entire sequence appears to have been overturned in this region. Consequently, the Sicamous formation is thought to be of Upper Triassic age and to conformably overlie the Paleozoic Eagle Bay formation.

Late, steep normal faults are thought to occupy many of the deeply incised valleys in the area, most notably Nikwikaia, Corning and Scotch Creeks.

PROPERTY GEOLOGY

The SCOTCH claims are underlain by a tightly folded sequence of metavolcanic and metasedimentary rocks with a well developed foliation generally striking east-west and dipping between 25° and 50° northward. A small stock of rhyolitic quartz-eye porphyry outcrops near the southeast corner of the property and numerous rhyolite, quartz porphyry, feldspar porphyry, andesite and microdiorite dykes occur. A large pluton of intermediate composition intrudes the metamorphic rocks northeast of the property. Several north-south fault zones are believed to occur in the area, most notably in Scotch Creek and Corning Creek valleys.

The Sicamous formation, consisting predominantly of black argillaceous limestone and argillite underlies the southern part of the claims. Structurally overlying this unit is the "Lower" Eagle Bay formation, comprising chlorite phyllite, chlorite-sericite phyllite, sericite-phyllite, quartz-eye sericite and quartz-eye chloritic phyllite and minor crystal tuff, limestone, dolomite and chert. This assemblage was originally thought to be entirely metasedimentary. Later work indicated the presence of some tuffaceous horizons, and the most recent interpretation is a metamorphosed series of felsic to intermediate flows, subaqueous ash flows, crystal tuffs, tuffaceous sediments, and pelitic calcareous and cherty sediments.

The entire sequence on the property is believed to be overturned. The general north-south succession of rock types from massive andesite and dacite or rhyolite flows north of the claims, through a pyroclastic sequence and exhalite-bearing sequence to sedimentary rocks, supports this concept. Also, the contact between Sicamous and Eagle Bay rocks is known to be gradual and

conformable, but the Eagle Bay lithology varies markedly at various points along the contact. This suggests that the Sicamous sediments were deposited upon an uneven surface of volcanogenic Eagle Bay rocks without an erosional break.

The bedding is seen to be parallel or sub-parallel to the foliation in some places, but the general distribution of rock types suggests a northerly dip of about 15° in some parts of the property, much flatter than the dip of the foliation. The fold style is recumbent isoclinal with axes parallel to foliation. Future geological studies must anticipate the possibility of a relatively complex fold structure, further complicated by facies changes in individual lithologic units typical of a volcanogenic environment.

MINERAL OCCURRENCES

Stratabound and stratiform dispersed and massive sulphide mineralization has been discovered in several places on and near the SCOTCH property. Thicknesses of mineralized zones vary from a less than 1 metre to over 50 metres. The predominant sulphide mineral seen to date is pyrrhotite, with lesser pyrite and variable amounts of chalcopyrite and sphalerite.

Pyrrhotite occurs as disseminated grains and blebs on foliation planes, as aggregates of coarse blebs and streaks and as lenses of heavy or massive sulphide up to 3 metres thick. Pyrite is generally present as disseminated grains or in thin bands of massive sulphide up to 10 cm thick. Chalcopyrite occurs as disseminated grains on foliation planes, as coarse blebs, as paint on fractures in quartz-carbonate veins, and in heavy to massive sulphide lenses up to 3 m thick and grading up to 10% copper. The higher copper grades appear to correspond to areas of more intense fracturing.

Sphalerite has been noted in several places, usually associated with other sulphides. One occurrence of a thin stratiform band (2.5 cm) has been noted in outcrop. Galena is rarely seen, but angular float of massive galena and sphalerite has been found. The origin of this float may be remote from its present location.

Assays from drill core indicates that wide sections of sulphide-bearing rock may grade between 0.1% and 0.15% copper with traces of silver. Several heavy to massive lenses have assayed as follows:

DH #2	2.1 m	0.3% Cu		Tr Ag	Tr Au
	0.3 m	1.7% Cu		0.2 oz Ag	.01 oz Au
	0.5 m	4.7% Cu		0.5 oz Ag	.04 oz Au
DH #3	2.1 m	0.2% Cu		.02 oz Ag	Tr Au
DH SC -3	3 m	1.0% Cu	.05% Zn	.5 oz Ag	.01 oz Au
	3 m	.05% Cu	Tr Zn	.3 oz Ag	.005 oz Au
	3 m	.2% Cu	.1% Zn	.3 oz Ag	.005 oz Au
	1 m	.03% Cu	1.3% Zn	.4 oz Ag	.008 oz Au

The geological setting and nature of mineralization on the SCOTCH property is typical of the Omineca-type copper-pyrite deposits. Exploration should be directed toward discovery of two types of deposits: massive sulphides corresponding to mineralization at Kutcho Creek, Goldstream River and Chu Chua Mountain, and large zones of dispersed sulphides as at Harper Creek.

MAGNETOMETER SURVEY

The regional aeromagnetic maps show a small magnetic high in the area of the Main Anomaly. The Dighem survey carried out by Craigmont indicates the presence of a large number of conductors apparently related to stratigraphy in the area of the SCOTCH property. Many have no co-incident magnetic anomalies and some of these are certainly due to graphitic horizons in the Sicamous formation.

The ground magnetometer surveys have delineated a 2200 m long anomaly co-incident with the geochemical anomaly related to widespread pyrrhotite mineralization in the sulphide zone near the Eagle Bay-Sicamous contact. Maximum magnetic relief in previous surveys is in the order of 4000 gammas. Several other low-order anomalies have been defined which appear to be related to stratigraphy in other parts of the property. A large anomalous area has been partially defined in the southeast corner of the SCOTCH claim. This area is thought to be underlain by Sicamous limestone and a Tertiary quartz porphyry pluton.

The present survey was planned to provide detailed data over part of the main geophysical anomaly. A 500-metre base-line was installed at 077° with cross-lines at 50-metre intervals (Figure 3). Because of the intense local fluctuations in magnetic field a compass could not be used and the grid was installed with picket-lines. (Previous grids encountered severe problems in line orientation over the anomalous zone resulting in substantial errors in location).

The grid was installed by J.M. Graham with the assistance of J. Osterhagen. The magnetic survey was conducted by J. Osterhagen, M.Sc., under the direction of

K.L. Daughtry.

A Geometrics Unimag II model G-846 proton magnetometer was used for the survey. Readings were taken at 25-metre stations along each grid line. At each station over that part of the grid south of the base line, the residual magnetic field was measured by taking dual readings with the probe at hip level and at a height of 2 metres above ground level. Readings were also taken at a base station at regular intervals. Diurnal variation was recorded and all readings were corrected. The maximum variation noted was 98 gammas.

Figure 4 is a plot of the corrected readings (hip level) at each station. The plotted readings represent the total magnetic field in gammas above 56,500 gammas (ie. a reading of 57,250 gammas is plotted as 750 gammas). Figure 5 is a contoured map of the values.

The magnetic response varied from a low of 56,826 gammas to a high of 69,000 gammas. The maximum magnetic relief is thus >12,000. The relief between successive 25-metre intervals commonly exceeds 2000 gammas.

In general, a strongly anomalous zone extends northeasterly across the grid from line 2+50E to line 5+00E. This zone is characterized by numerous individual highs and lows, but the overall configuration is of a 150-metre wide anomaly parallel to the stratigraphy in the volcanic rocks.

The measurements of the residual magnetic field (Figure 6) indicate that residual values range from -415 to 3000 gammas. Examination of these values indicated a similar configuration to that in Figure 5, a 150-metre wide anomalous zone with numerous discrete highs and lows.

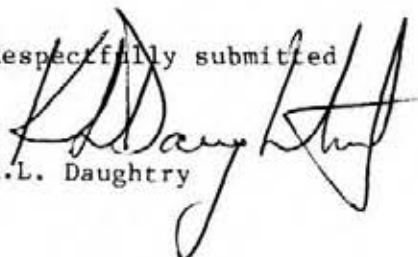
DISCUSSIONS and CONCLUSIONS

The magnetic anomaly is probably due to one or more lenses of massive sulphide mineralization with a high pyrrhotite content. Comparison of the magnetic data from this detailed survey with previous drill hole and trench locations indicates that the drilling and trenching may not have adequately tested the anomaly.

RECOMMENDATIONS

Further detailed geophysical surveys should be conducted to delineate trenching and/or drilling targets.

Respectfully submitted


K.L. Daughtry

Vernon, B.C.

July 31, 1986

REFERENCES

- | | | |
|----------------|------|--|
| Daughtry, K.L. | 1970 | Report of 1970 Field Operations for Shuswap Project. Private report to Shuswap Syndicate and Derry, Michener and Booth Ltd. |
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STATEMENT OF COSTS

Professional Services

K.L. Daughtry, P.Eng.
 Mag Survey & report writing
 May 2,4,12; June 4,5; July 31
 3 days @ \$300/day \$900.00

Expenditures & Disbursements

Grid Establishment & Mag Survey
 John Graham
 May 5,6
 2 days @ \$205/day 410.00

John Osterhagen, M.Sc.
 May 5,6
 2 days @ \$170/day 340.00

Transport
 4 X 4 vehicle usage 3 days @ \$40/day 120.00
 Km 74.40
 Fuel 27.00

Mag rental 2 days @ \$25.00/day 50.00

Camp, food, field supplies 237.27

Secretarial, prints 140.00 \$2298.67

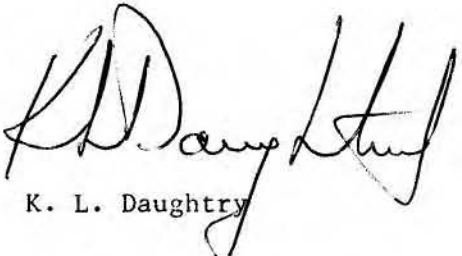
STATEMENT OF QUALIFICATIONS

I, KENNETH L. DAUGHTRY, of R.R. #4, Vernon, British Columbia, DO HEREBY CERTIFY that:

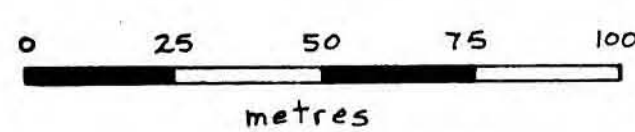
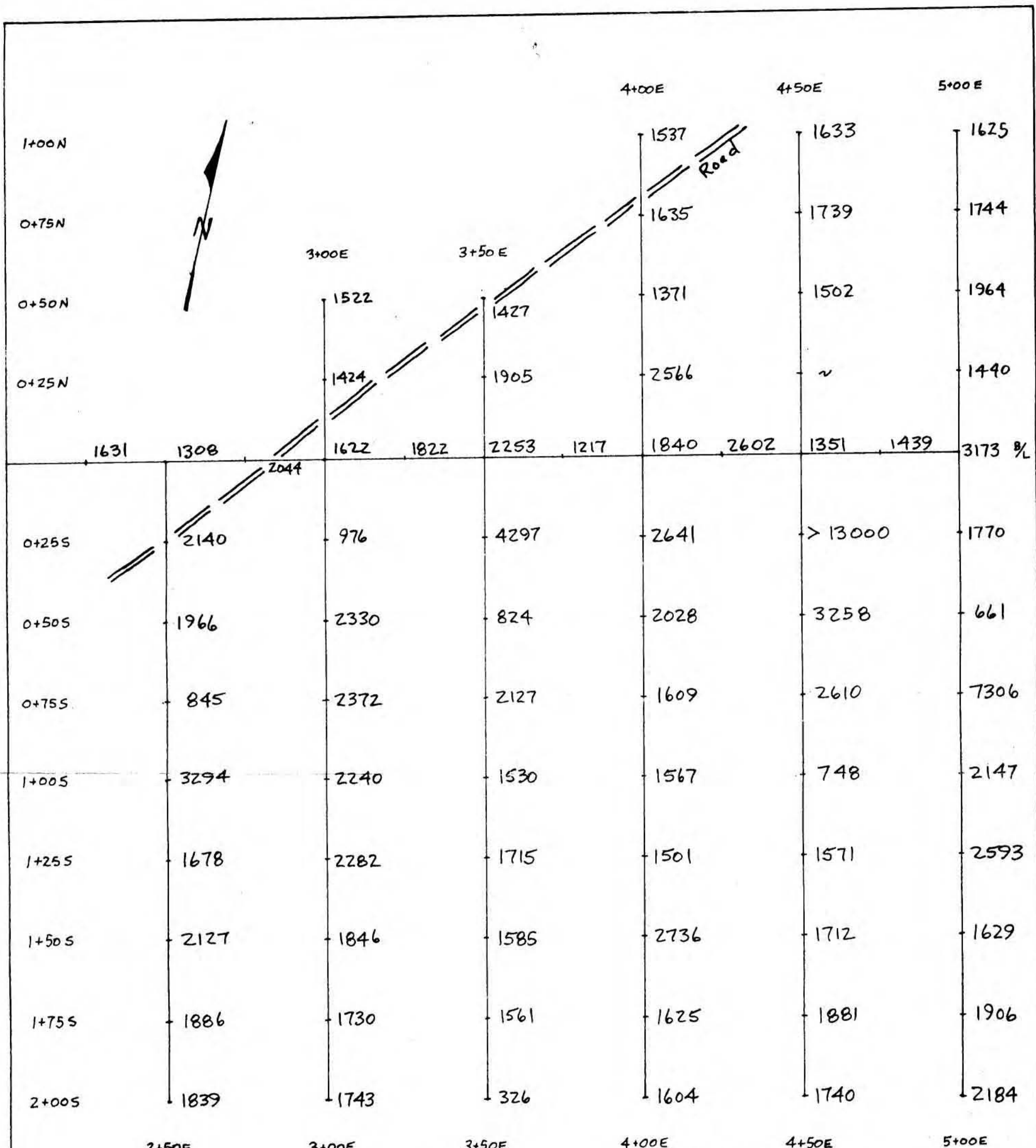
1. I am a Consulting Geologist in mineral exploration.
2. I have been practising my profession for twenty years in Canada, the United States and Ireland.
3. I am a graduate of Carleton University, Ottawa, with a Bachelor of Science degree in Geology and Chemistry.
4. I am a member of the Associations of Professional Engineers of British Columbia, Ontario, and Yukon Territory, and a Fellow of the Geological Association of Canada.
5. This report is based upon knowledge of the SCOTCH property gained from examination, mapping, surveying, sampling and drilling of the property, from the study of numerous reports on the area, and from the conduct of the work herein described.
6. I have a beneficial interest in the property.

Vernon, B.C.

July 31, 1986



K. L. Daughtry



1234 Reading in gammas above 56,500 X

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BRICAN RESOURCES LTD

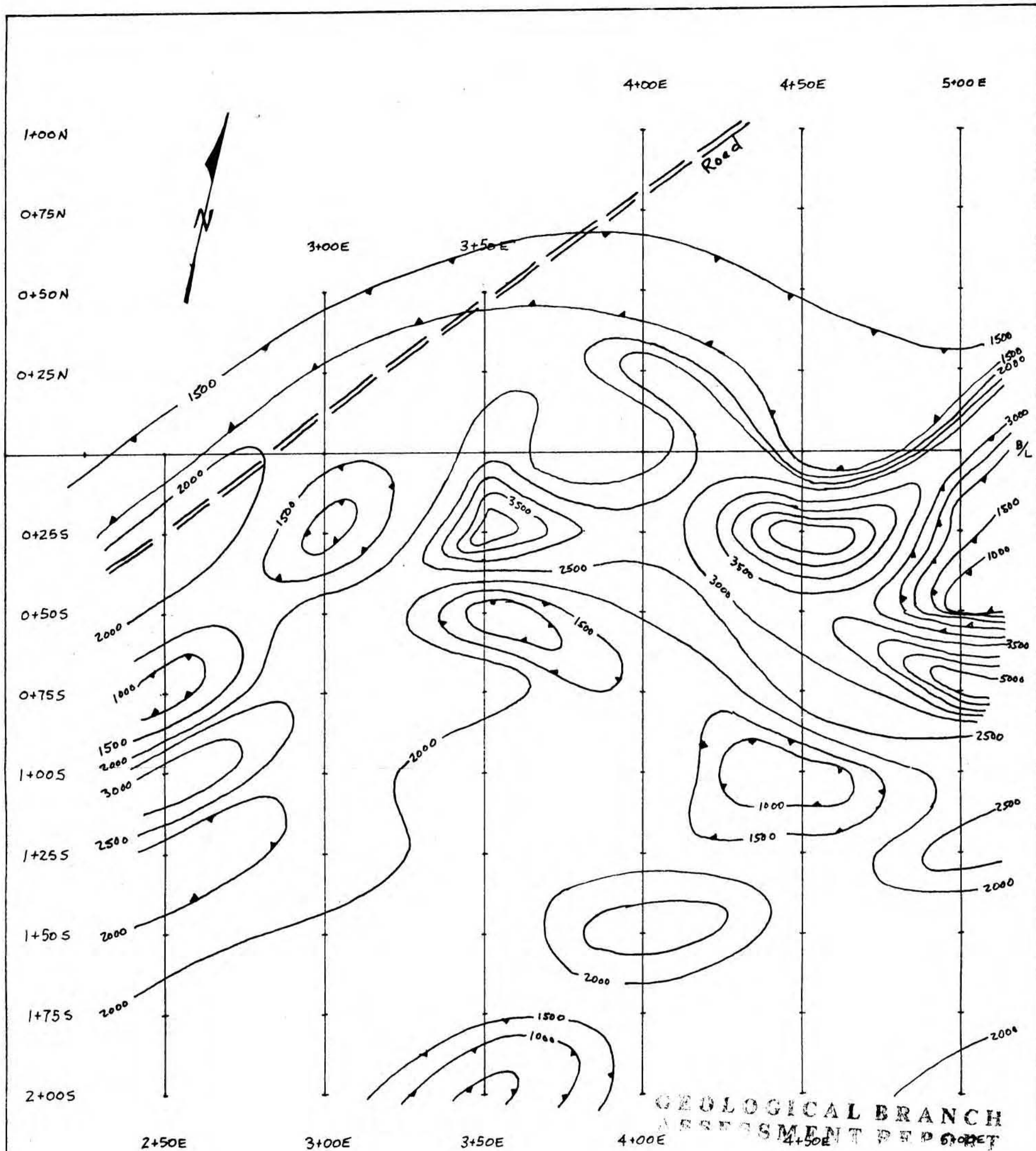
SCOTCH Property
MAGNETOMETER Survey

Kamloops M.D. 82L13:14

Scale: 1:1250 Date: July 31/86

Drawn by KLD Project No 011 Figure 4

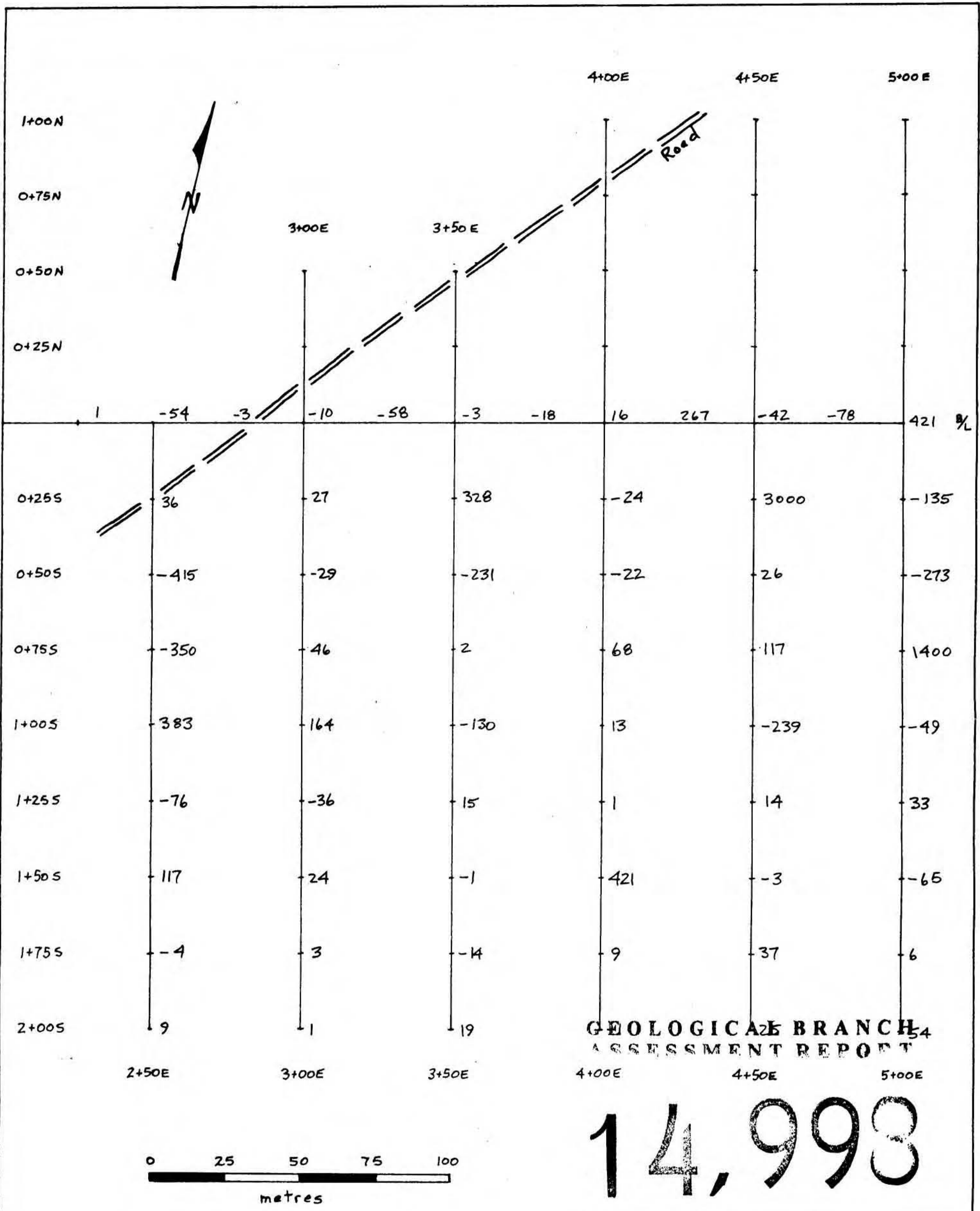
Instrument: Geometrics Unimag II Proton Magnetometer G-864



Contoured at 500 gamma intervals above 56,500 γ

14,998

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BRICAN RESOURCES LTD	
SCOTCH Property MAGNETOMETER Survey (Contoured)	
Kamloops M.D.	82L13:14
Scale: 1:1250	Date: July 31/86
Drawn by KLD	Project N° 011
Figure 5	

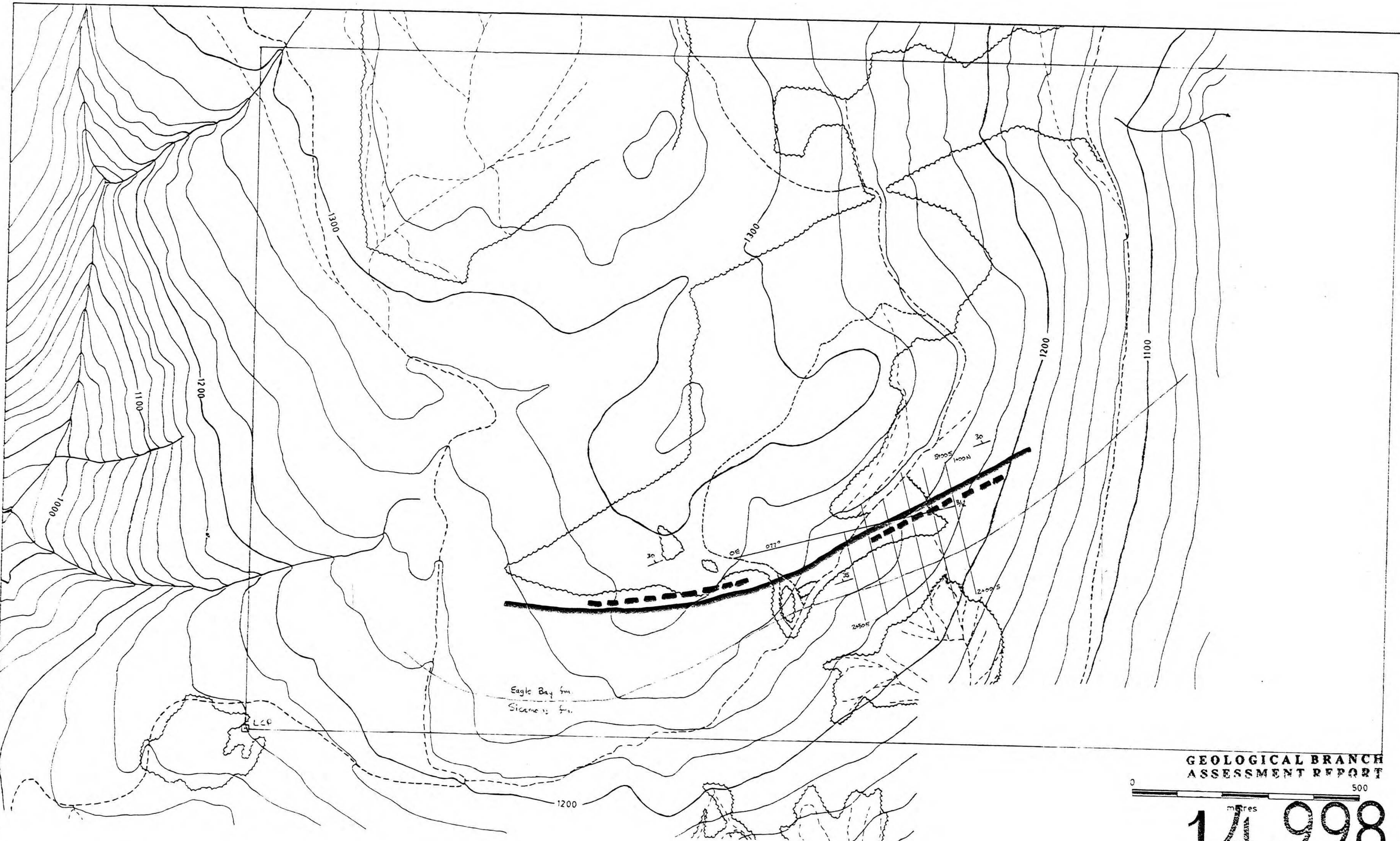


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23 Residual Magnetic Field in gammas

K. L. DAUGHTRY & ASSOCIATES LTD.	
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SCOTCH Property	
MAGNETOMETER Survey	
Residual Magnetic Anomalies	
Kamloops M.D. 82L13:14	
Scale: 1:1250	Date: July 31/86
Drawn by KLD	Project N° 011 Figure 6



MAIN ZONE

— Approximate trace of magnetic anomaly

- - - Strong EM conductor



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0 500 metres
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GRID LOCATION MAP

SCOTCH PROPERTY
Kamloops M.D. 82L13E, 14W

1:5,000
03/31/86
Fig. 3
K.L.D.