SILVER STANDARD MINES LIMITED
(NON-PERSONAL LIABILITY)
808-602 WEST HASTINGS STREET
VANCOUVER 2, B.C.

RECEIVED
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DAWSON, Y.T.
I.A. & N.D.

1972 GEOCHEMICAL & GEOHPYSICAL ASSESSMENT REPORT

on the

RECEIVED
MAR 15 1973
MINING
INSPECTOR'S OFFICE
WHITEHORSE, Y.T.

SCROGGIE CREEK PROJECT "C" CLAIMS

Yukon Territory

Latitude - 62° 56'N

Longitude - 138° 31'W

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of $ 3,300

D.B. Craig

~~Resident Geologist or Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

by

Roy C. McMichael, P. Eng.
Geological Engineer

February 1973

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SUMMARY:

Silver Standard Mines Ltd. (N.P.L.) and American Smelting & Refining Company of Canada Limited conducted a prospecting program on the Scroggie Creek claims from August 12 to August 23, 1972. Mr. Neil Thomsen of 808-602 West Hastings Street, Vancouver 2, B.C. and Mr. Dan Lacroix, of General Delivery, Whitehorse, Y.T., completed the work under the direction of the author. A total of 26 man-days and $2,950.55 was spent on the Scroggie Creek property.

Work performed on the group consisted of line cutting, geochemical sampling and geophysical surveying. Approximately 17,600 lineal feet of line was cut, over which soil samples were collected. In addition, a geophysical survey covering approximately 43,000 feet of line was conducted, utilizing a Crone portable VLF-EM unit.

INTRODUCTION:

Field work was performed on the Scroggie Creek property during the 1972 field season which supplemented and augmented work completed in the summer of 1971. Currently, eight claims are held by Silver Standard Mines, and are located in the Dawson Mining Division (Claim Sheet 115-J-15).

The property is located 180 air-miles northwest of Whitehorse, Yukon Territory, at 62° 56'N, 138° 31'W (Fig. 5). River transportation was used from Minto north to the mouth of Isaac Creek on the Yukon River, at which point a helicopter was used to move men and supplies to the property.

CONCLUSIONS AND RECOMMENDATIONS:

A geochemical survey indicated anomalous concentrations of molybdenum and copper metal, with molybdenum being of primary importance. Values over the area suggest the area is only weakly anomalous in copper. The additional geochemistry in 1972 did expand the area of interest for molybdenum.

It is recommended that the claims be kept current pending a resurgence of the molybdenum market, at which time additional geochemical sampling, geological mapping, and bulldozer trenching would be necessary to further the assessment of the property.

GEOLOGY (Fig. 3):

The general Scroggie Creek geology is described by D.D. Cairnes in his 1917 report on Scroggie, Barker, Thistle, and Kirkman Creeks, Yukon Territory", Memoir 97. He describes the rocks along Scroggie and Mariposa Creeks as mainly mica gneisses and schists. Granites and pegmatites also occur, and locally, may be garnetiferous. Occasional semi-basic to basic dikes occur, grading from andesite to diabase in composition.

Outcrop at the Scroggie Creek property ("C" claims) is extremely rare. Reconnaissance mapping of the showings in 1971 indicated that the mineral occurs in a highly siliceous medium-grained quartz-feldspar porphyry. Both biotite schist and rhyolite occur as a knoll immediately north of the porphyry occurrence. A small capping of epidote-rich skarn was also observed on the property.

Copper mineralization occurs as finely disseminated chalcopyrite in the porphyritic rocks. Pyrite is also associated with the copper-bearing mineral in approximately 50/50 proportions. Finely disseminated molybdenite occurs in a quartz-rich breccia as quartz vein fracture coatings and also as disseminated particles in the host rock. The intensely silicified breccia zone, approximately 400 feet wide and of unknown strike length, exists in the central portion of the grid and contains the only molybdenum showing on the property. A northwest-southeast trending shear borders the breccia zone on the north. The main zone is also flanked on the east and west by two lineaments which appear to intersect south of the showing, as noted on air photos.

GEOCHEMISTRY (Figs. 1 and 2):

A soil grid was established in 1971 with a chain and compass survey. In 1972 an additional 17,600 feet of line was cut at 400-foot spacings with stations every 100 feet (i.e. L 20 S, L 24 S, and L 32 S, plus the base line from 16 S to 32 S).

Samples were collected at even-numbered stations, and a total of 86 soil samples were shipped to Chemex Labs of Vancouver to be analyzed for copper and molybdenum by the atomic absorption method.

An anomaly, 3000 feet long and 1200 feet wide of + 100 ppm copper, had been outlined in 1971. The anomalous copper area was not expanded appreciably in 1972.

Molybdenum appears to be the element of primary importance at Scroggie Creek. An anomalous zone, 2400 feet long and 800 feet wide of + 60 ppm molybdenum, had been outlined in 1971. Values range from 0 ppm molybdenum to 260 ppm molybdenum over the grid.

The 1972 program expanded the anomalous zone to the south an additional 600 feet. The area now is 3000 feet long and approximately 800 feet wide, of + 60 ppm molybdenum. A small anomaly 400 feet long and 400 feet wide of + 30 ppm molybdenum and open to the south appears at the southernmost extremity of the grid.

GEOPHYSICS (Fig. 4):

A VLF-EM (Radem) ground survey was conducted over the anomalous area at Scroggie Creek. Approximately 43,000 feet were surveyed with the "Crone" VLF-EM unit.

Detailed field procedures can be found in the "Operators Manual", published by Crone Geophysics Ltd., Messessauga, Ontario (Appendix "A"), and data treatment procedures in an article by Dr. D.C. Fraser of Geophysical Engineering and Surveys Ltd., entitled "VLF-EM Data Processing" (Appendix "B").

The area from the point of view of EM is unresponsive. Because of the very weak response, no correlation between either EM data and mineralization, or EM data and geology, can be made.

STATEMENT OF EXPENDITURES

as at September 30, 1972

Staking & filing	$ 150.99
Prospecting	56.51
Geophysical Surveys	56.51
Geochemical surveys	75.00
Line cutting	212.90
Sampling & assaying	135.18
Rotary wing charters	1,613.51
Truck expense	23.71
Communications	13.31
Camp & accommodations	207.20
Transportation - Materials	174.00
- Personnel	231.73
	$ 2,950.55

Respectfully submitted,

Roy C. McMichael, P. Eng.
Geological Engineer

February 1973

CERTIFICATE OF QUALIFICATIONS

I, Roy C. McMichael, with business and residential addresses in Vancouver, B.C., do hereby certify that:

1. I am a geological engineer in the permanent employ of Silver Standard Mines Ltd. (N.P.L.), of 808-602 West Hastings Street, Vancouver 2, B.C.

2. I am a graduate of Colorado School of Mines (Geological Engineering 1966).

3. I am a registered Professional Engineer of the Province of British Columbia (Reg. No. 8093).

4. I have practiced and supervised in the field of geological engineering for 5 years.

5. I have personally supervised the geochemical, and geophysical surveys completed on the C 1-4, and C 33-36 mineral claims described in this report.

Roy McMichael

Roy C. McMichael - P. Eng.
Geological Engineer

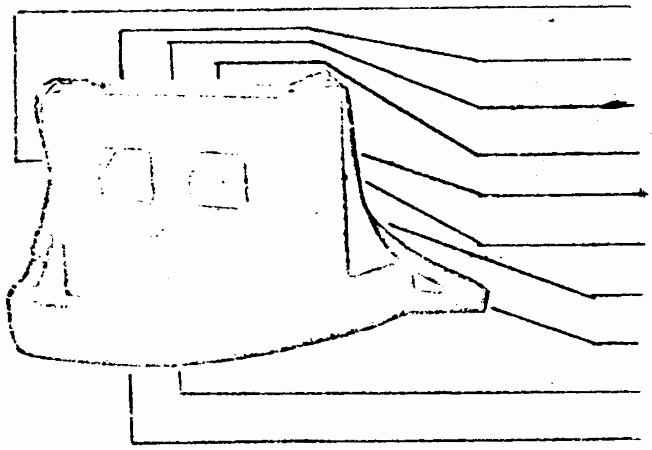
Appendix 'A'

CRONE GEOPHYSICS LIMITED

979 LAKESHORE ROAD E.
PORT CREDIT, ONTARIO

TELEPHONE 274-2704

FIGURE 1.



The RADEM receiver is essentially a specially designed transistor radio. It is used to measure the direction of the magnetic component of the V.L.F. (Very Low Frequency) field. The direction of this field, in particular the dip angle, is distorted by the presence of a conductor within the earth. Thus by measuring the dip angles, the presence of a conductor can be detected and its location determined. The normal V.L.F. field is horizontal. The effect of a conductor is to force the field to flow around it as in Figure 2. Thus if dip angle measurements are made they will produce a profile such as in Figure 3 with the conductor being located at the cross-over point.

FIGURE 2.

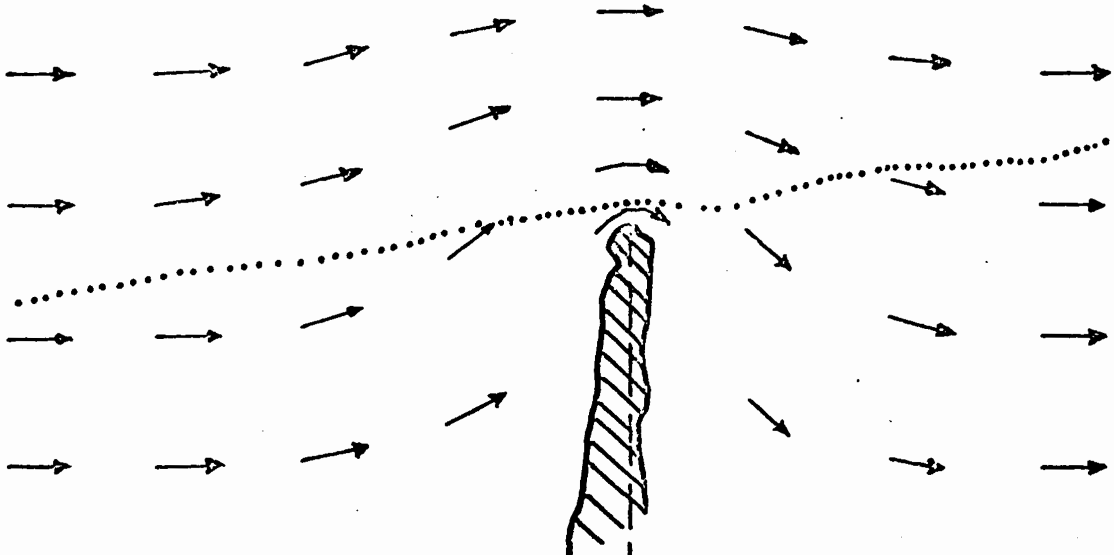
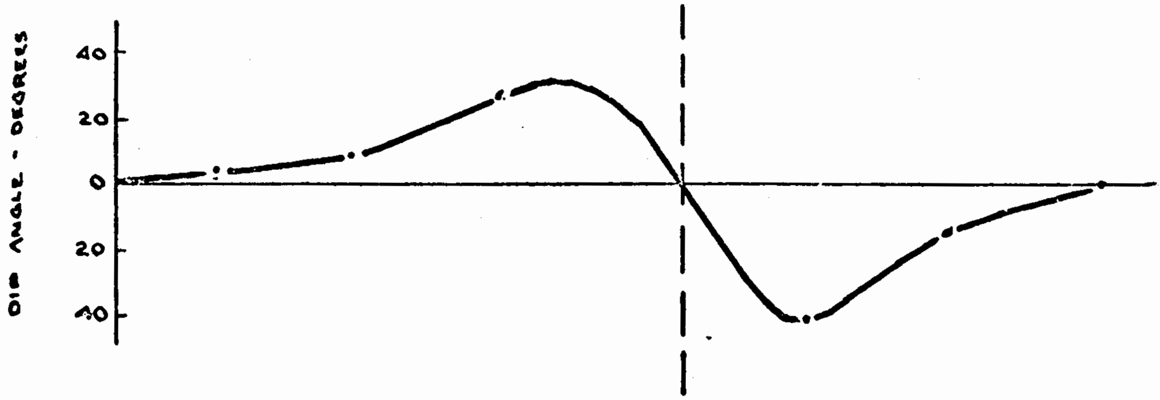


FIGURE 3.

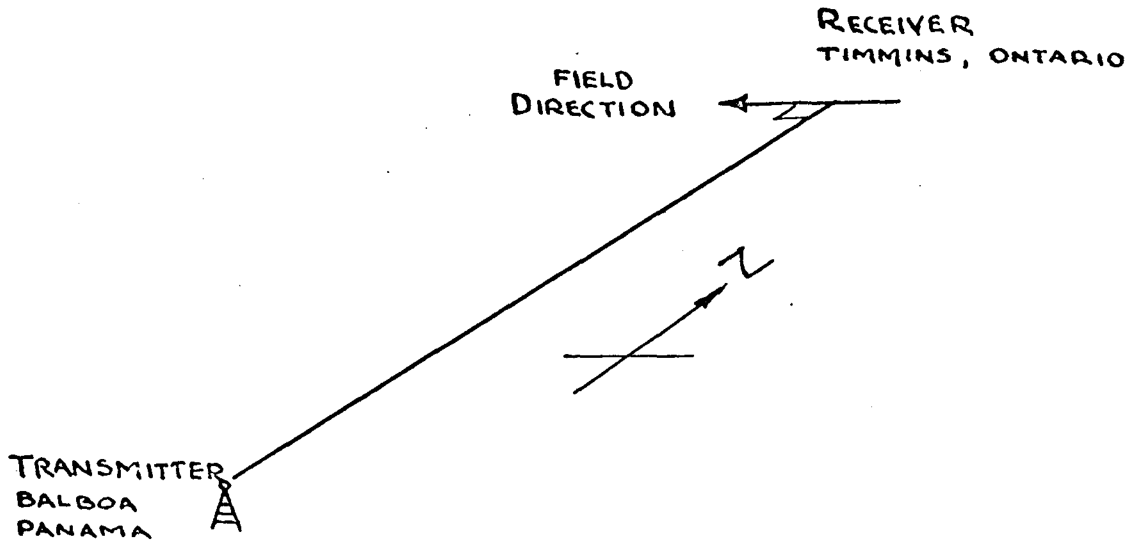


THE VERY LOW FREQUENCY RADIO TRANSMITTING STATIONS

The purpose of these stations is to broadcast over large distances navigational and other information for use by ships and submarines. Numerous stations are situated around the globe and a considerable number are in the process of construction. Operational stations are located at Cutler Maine, Annapolis Maryland, Fort Collins Colorado, Seattle Washington, Balboa Panama, Rugby England, Lualualei Hawaii, Guam and N.W. Cape Australia. The frequency range used varies between 12 and 24 KC's and is thus 10 times higher than the normal frequencies used in mineral prospecting. This results in the RADEM method being more sensitive to lower conductivity and smaller sized bodies than normal EM equipment.

The direction of the magnetic component of the field from a VLF station is horizontal and perpendicular to the line between the operator and the transmitting station (see Figure 4). In this example

FIGURE 4.



the receiver at Timmins, Canada, is using the Panama Station that is due south of Timmins. The normal field direction in this case will be horizontal in an east-west direction. This field would couple with a north-south striking conductor. Thus for maximum coupling and therefore best results select a transmitter station located in the same direction as the geological strike. With the Timmins, Ontario, example Panama should be used in areas of north-south geological strike and Seattle Washington in areas of east-west strike. If the geological strike is not known then it is best to read two stations that are located in directions perpendicular to each other.

The U.S. naval VLF stations are shut down for periods of 4 to 8 hours every week for routine maintenance. This shutdown schedule is published by the U.S. Navy and is forwarded to RADEM users by Crone Geophysics.

OPERATION OF THE RADEM RECEIVER:

- Turn the unit ON by means of the ON-OFF switch. This can be left on all day since the battery drain is very low.
- Turn the station selector switch to the station you wish to use.
- Adjust the volume control knob such that the signal can be clearly heard.

- The purpose of this next step is to align the RADEM receiver with the VLF field direction. This is done by holding the instrument in front of you like a book with the meter panel horizontal. Your entire body should then be rotated until an audio null is heard then the null direction pinpointed by obtaining a minimum reading on the field strength meter. If you have difficulty obtaining a null and the field strength meter stays off scale greater than 100 then reduce the volume control until the meter pointer is on scale.

- The next step is to determine the dip angle of the VLF field. The RADEM receiver should be brought up to eye level with the meter panel now vertical. The receiver is rocked towards the left and right until the null position is again determined using the audio signal for a coarse adjustment and the visual field strength meter for the fine adjustment. Hold the instrument in the null position and read the Dip Angle.

- Note the direction in which the arrow in CRONE is pointed. <u>This arrow points towards the conductor.</u> Thus if the Dip Angle is 36° and the arrow is pointed in an easterly direction the reading is 36° E. and the conductor is towards the east.

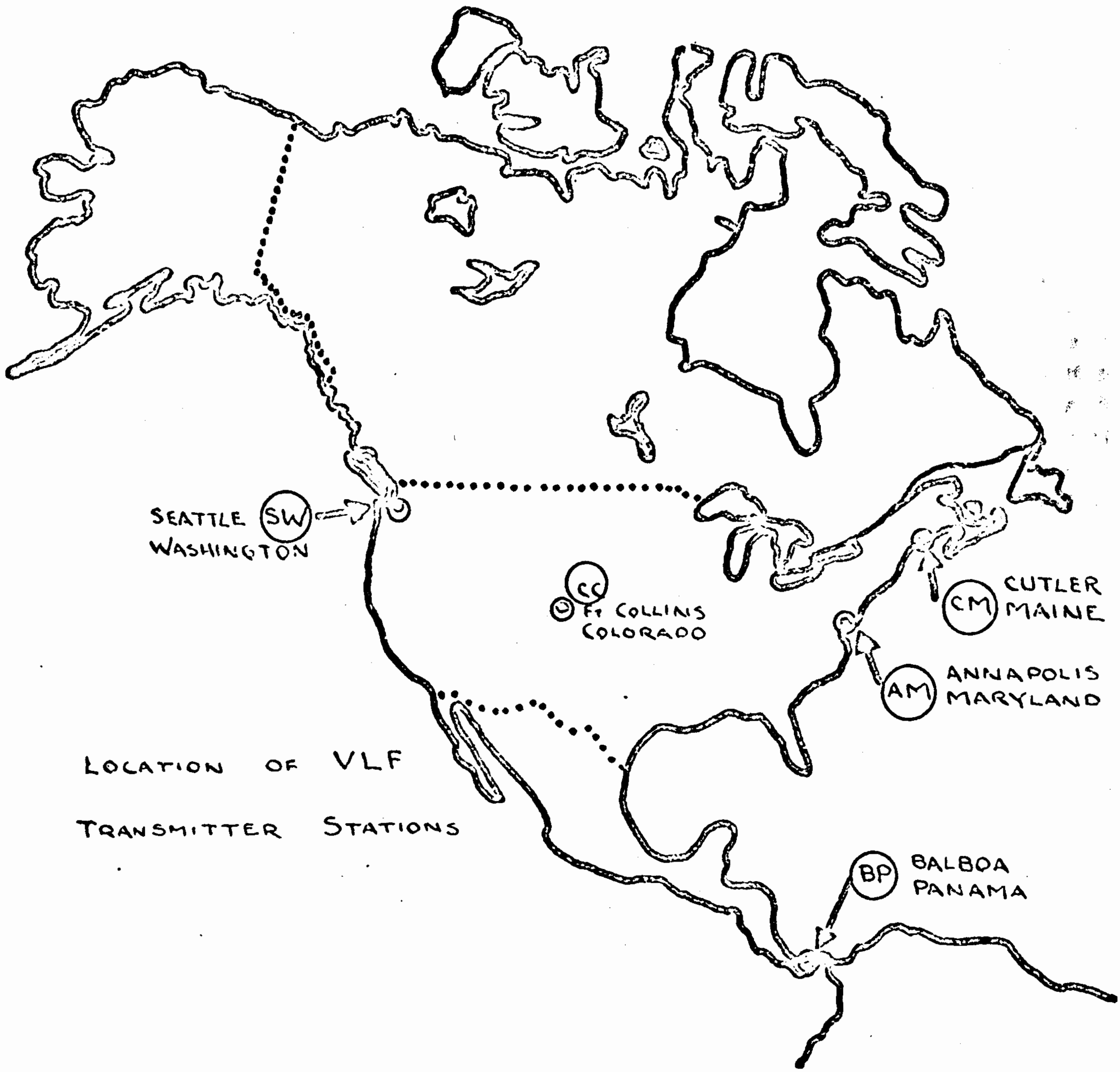
- The batteries can be checked by pushing the battery test buttons. The field test meter should read 7.0 or greater. If the reading is below 7.0 the battery should be replaced.

<u>ADVANTAGES:</u>

- ONE MAN OPERATION
- NO LINE CUTTING REQUIRED
- EASY TO OPERATE
- DETECTS SMALL SULPHIDE LENSES
- DETECTS DISSEMINATED SULPHIDES
- OPERATES IN AREAS OF HIGH HYDRO INTERFERENCE
- CAN BE OPERATED IN A BOAT FOR LAKE OR RIVER SURVEYS

<u>DISADVANTAGES</u>

- PICKS UP EDGES OF CLAY BEDS AND CONDUCTIVE OVERBURDEN
- NO CONDUCTIVITY ANALYSIS
- DIP AND DEPTH ANALYSIS OF PROFILES NOT AS DEFINITE AS WITH STANDARD EM SYSTEMS



LOCATION OF VLF TRANSMITTER STATIONS

APPENDIX 'B'

VLF-EM Data Processing

D. C. FRASER, Chief Geophysicist,
Geophysical Engineering and Surveys Limited,
(Keevil Mining Group Limited),
Toronto, Ontario

ABSTRACT

Geophysical Engineering and Surveys Limited of the Keevil Mining Group have routinely conducted ground surveys with VLF-EM receivers for the past two years. Both Crone's Radem and Ronka's EM16 have been used.

VLF-EM dip-angle data often yield complex patterns which require considerable study for a proper interpretation. A method was developed which allows field operators to transform the noncontourable dip angles into contourable data, producing conductor patterns which are immediately apparent to exploration personnel untrained in VLF-EM interpretation.

VLF-EM contoured data generally peak very close to the top of a conductor, thereby allowing drill holes to be spotted accurately. However, the data generally should not be used alone to select drill targets because structures may be sufficiently conductive to yield strong anomalies. Thus, magnetic and/or vertical-loop EM correlations may be considered as necessary criteria for drilling.

VLF-EM surveys can replace IP surveys in certain environments. For example, the Restigouche orebody in the Bathurst camp of New Brunswick yielded a VLF-EM anomaly as distinct as that obtained by IP, although the body did not respond to vertical- or horizontal-loop EM. However, the cupriferous breccia pipes of the Tribag mine near Batchawana, Ontario yield strong IP anomalies but not VLF-EM anomalies, illustrating that disseminated ore targets should be sought with IP rather than with VLF-EM.

INTRODUCTION

A METHOD HAS BEEN DESCRIBED (Fraser, 1969) which enables somewhat noisy, noncontourable dip-angle data to be transformed into less noisy, contourable data. This data processing is performed routinely by field personnel, and simply involves additions and subtractions.

Both magnetic and VLF-EM data can be collected by a single individual as part of a ground evaluation program. The VLF-EM method can provide contour maps which may be as useful to exploration geologists as magnetic maps. The key to the usefulness, however, lies in the data processing, because raw dip-angle data frequently are more confusing than elucidating. This point is illustrated in *Figure 1*, which presents dip-angle data from the Temagami mine in Ontario. Clearly, the complex pattern requires some thought for proper interpretation. Conversely, *Figure 2* provides a conductor pattern which is immediately apparent even to those untrained in VLF-EM interpretation. It is obtained from the data of *Figure 1*, using the method described in the Appendix. The contoured units are expressed in degrees. Only the positive quantities are contoured.

D. C. FRASER obtained a Bachelor's and a Master's degree in geology at the University of New Brunswick and, in 1966, a Ph.D. degree in geophysics at the University of California at Berkeley. He has performed research on induced polarization, resistivity, magnetics, gravity and electromagnetics, including the design of new interpretation methods employing, in part, digital filtering and correlation techniques. Recently, he has been involved to a considerable extent in mapping conductivity inhomogeneities, first with ground equipment as a thesis problem, and then with airborne equipment in collaboration with Barringer Research Limited.

Dr. Fraser has worked for several petroleum and mining companies and currently is chief geophysicist of Geophysical Engineering & Surveys Limited, a member of the Society of Exploration Geophysicists and of the CIM, and a past president of the Canadian Exploration Geophysical Society.

PAPER PRESENTED: at the 72nd Annual General Meeting of the CIM, Toronto, April, 1970.

KEYWORDS: Geophysical exploration, Data processing, Electromagnetic surveys, Dip angles, VLF-EM surveys, Filter theory, Contouring.

CIM TRANSACTIONS: Vol. LXXIV, pp. 11-13, 1971.

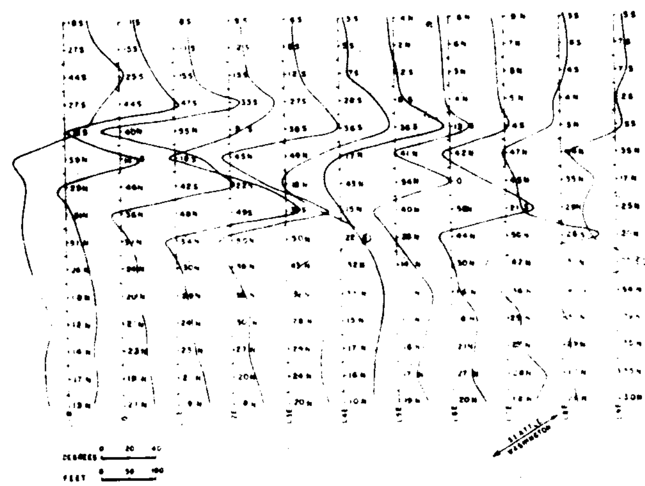


FIGURE 1 — Dip-angle VLF-EM data in the vicinity of the Temagami mine. The arrow defines the primary field direction from the transmitter at Seattle, Washington (after Fraser, 1969).

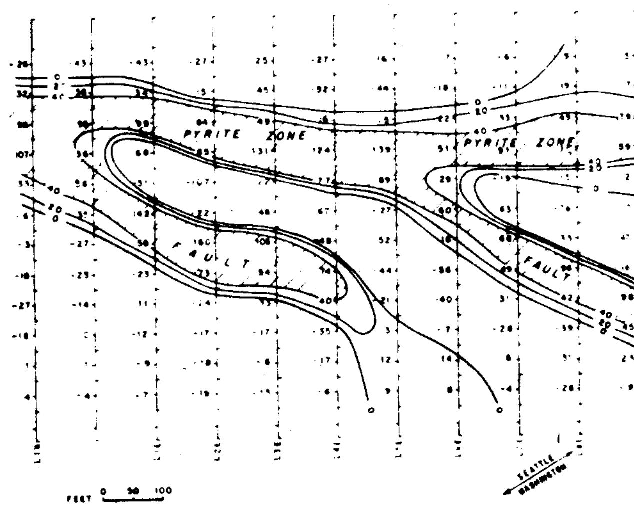


FIGURE 2 — Contoured VLF-EM data, in degrees, as calculated from the map of Figure 1 (after Fraser, 1969).

FIELD EXAMPLES

The following field examples were chosen to illustrate the three primary uses to which VLF-EM has been applied by Geophysical Engineering and Surveys Limited.

General Prospecting

General prospecting or ground evaluation provides the most common use for VLF-EM. Ground often is obtained which requires only a general approach to exploration, as when there is insufficient geological information regarding the specific target sought. In such cases, magnetic and VLF-EM surveys are routinely performed without the guidance of a geophysicist. VLF-EM conductors are tested by short traverses with vertical-loop EM. The anomaly patterns generally are sufficiently clear so that mapping, trenching, drilling or abandonment will be decided without consulting a geophysicist. Exceptions can occur when patterns become complex.

Figure 3 illustrates a survey in which two strong VLF-EM conductors were obtained. The southern anomaly has vertical-loop EM correlation and the northern one does not. The VLF-EM anomaly with vertical-loop correlation also coincides with a magnetic anomaly, and probably is due to magnetic sulphides. It will be drilled shortly. The other equally strong VLF-EM anomaly without vertical-loop correlation does not parallel the magnetic patterns, and probably is due to a fault.

In Place of IP

There are certain environments where VLF-EM can be used as an alternate to IP. These are the environments characterized by massive or heavily disseminated sulphides which occur within 300 feet of surface and yet do not respond to conventional EM. IP was considered to be the most suitable geophysical method for the detection of such bodies (Hallof, 1967). However, it is well worth testing VLF-EM in these environments because of the very substantial cost savings that result if the method is responsive. As an example, *Figure 4* illustrates a VLF-EM survey over the Restigouche orebody in the Bathurst area of New Brunswick. *Figure 5,* showing IP chargeability contours, allows a comparison to be made of the relative merits of IP and VLF-EM for this type of mineralization. The Restigouche body did not respond to vertical- or horizontal-loop EM because of the high sphalerite content of the massive sulphides.

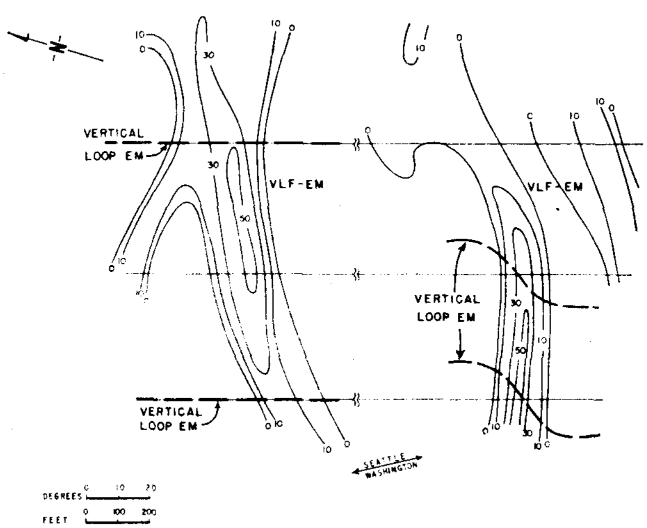


FIGURE 3 — Contoured VLF-EM in degrees and vertical-loop EM profiles (1,200 hz) from a property evaluation survey in the Uchi Lake area.

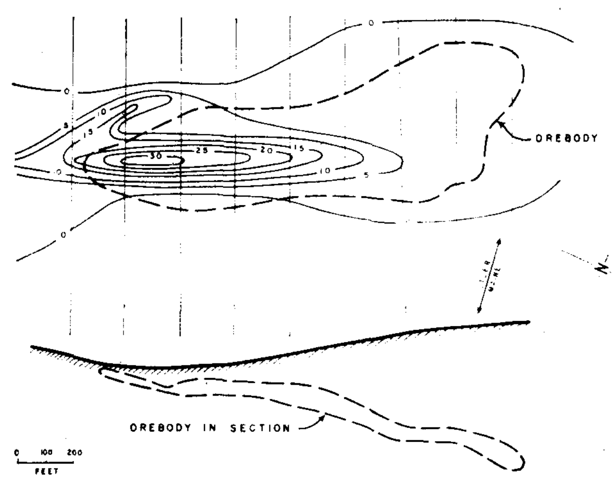


FIGURE 4 — Contoured VLF-EM in degrees from the Restigouche orebody, illustrating that the method is a viable alternate to IP in this environment (cf. Figure 5).

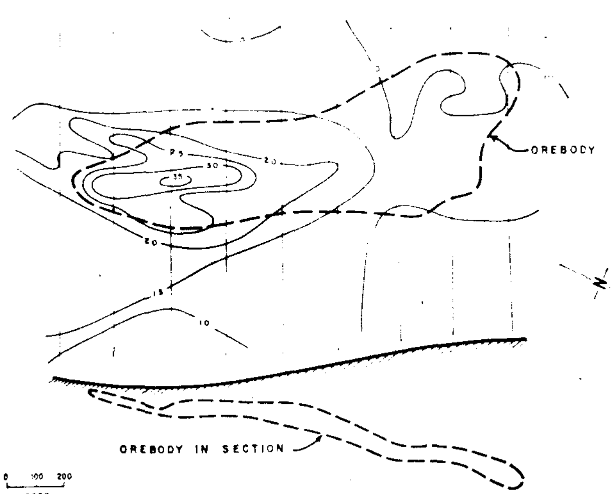


FIGURE 5 — Gradient-array IP chargeability in milliseconds over the Restigouche orebody, for comparison with the VLF-EM data of Figure 4.

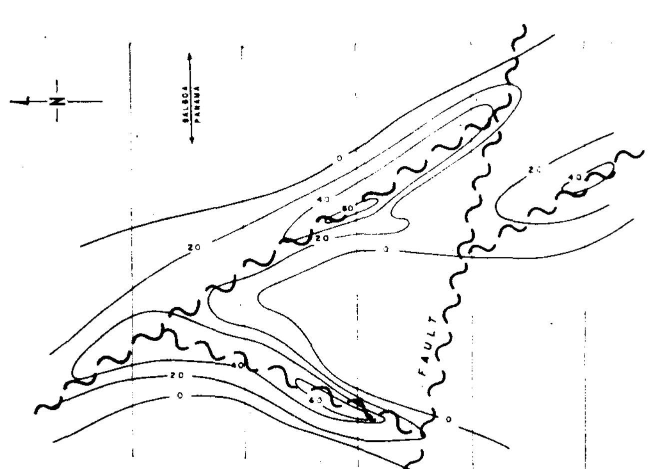


FIGURE 6 — Contoured VLF-EM in degrees from a fault-mapping survey in the Cobalt area.

Other environments described in Hallof (1967) would not be as amenable to the use of VLF-EM in place of IP. A truly disseminated copper deposit will not provide a VLF-EM anomaly but will yield a large IP effect, as was found to be the case for the breccia pipes of the Tribag mine near Batchawana, Ontario.

Structural Interpretation

Inasmuch as VLF-EM responds well to structures, the method has been applied to the mapping of faults. An example is shown in *Figure 6,* which depicts a portion of a survey in the Cobalt area of Ontario. The property was a silver prospect where the veins were postulated to be associated with faults. VLF-EM appeared to be the most reasonable geophysical method available to aid in tracing these faults. Considerable drilling has been done on this property, and the fault interpretation was verified.

Figure 2 illustrates that faults can be as conductive to VLF-EM as massive pyrite. In this Temagami example, the faults contain a brecciated matrix with some hematite cementing. They yield a strong IP anomaly, but are non-conductive to conventional EM.

DEPTH OF EXPLORATION

The relatively high transmitted frequency of approximately 20,000 hz severely limits the depth of exploration in areas of conductive overburden. As an example, penetration of the 100 to 200 feet of clay in the Timmins area often is not achieved.

In regions where the overburden has a less exceptional conductivity, such as the Bathurst area, depth of exploration generally is limited to about 300 feet. This depth was predicted from model curves in Fraser (1969), and appears to be true in practice, as over the Restigouche deposit (*Figure 4*).

CONCLUDING REMARKS

VLF-EM surveys are exceptionally easy to perform, but the dip-angle data may be exceedingly difficult to interpret correctly. This latter point has produced unfavourable comments regarding the utility of VLF-EM as a prospecting tool. The data-processing method used to transform somewhat noisy, noncontourable dip angles into less noisy, contourable data greatly increases the value of VLF-EM surveys.

The efficiency of data flow is significantly increased in the case of an active mining company performing such surveys in large quantities. This is because the contoured maps may be used directly by geologists in charge of their various projects, rather than requiring a geophysicist to study each dip-angle map.

Contoured VLF-EM maps form a useful complement to magnetic maps. The survey and data-processing cost is similar to that for a hand-held fluxgate magnetometer.

For general exploration in the Shield, VLF-EM conductors generally should be tested with vertical-loop EM to separate massive sulphides (and graphite) from conductive structures. As such structures can be mapped with VLF-EM, this provides another use for the method. Further, some massive and heavily disseminated sulphides, which do not respond to conventional EM, will yield VLF-EM anomalies as distinct as those obtained by IP. These three uses of VLF-EM, i.e., for general prospecting, mapping of structures and as a judicious alternate to IP, form our primary applications of VLF-EM to property evaluation.

APPENDIX

The Data-Processing Technique

THE DATA-PROCESSING TECHNIQUE is described in detail by Fraser (1969), where it is also discussed in terms of filter theory*. The method is very simple to apply, as is shown by the example of *Figure 7*. This figure illustrates that the contourable quantity is the sum of the values at two adjacent stations minus the sum at the next two adjacent stations. The above-referenced paper presents a tabulation method suited to the processing of this dip-angle data. The calculations are performed in the field by the instrument operators.

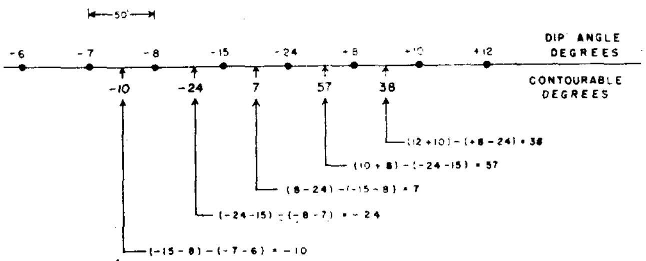


FIGURE 7 — Example of the data processing calculations, illustrating that the contoured quantities are obtained simply from additions and subtractions performed on the dip angles.

A 50-foot station interval is recommended to avoid the problem of near-surface conductors appearing as deeper conductors, as could occur if the station spacing was larger. In actual practice, data are collected at 100-foot intervals, with 50-foot readings being taken where anomalies occur. Later, 50-foot artificial data are interpolated in non-anomalous areas prior to performing the calculations. This procedure avoids some confusion in the contour patterns which would result from near-surface 'geological noise'.

Normally, only the positive values are contoured, because the negative quantities generally represent anomaly flanks. Consequently, the inclusion of negative contours would serve only to confuse the conductor patterns. However, if a backward crossover was produced by a geological source, an erroneous interpretation of the contour map and the dip-angle profiles would result. To date, such a crossover has not been recognized on the predominantly in-phase dip-angle data.

REFERENCES

Fraser, D. C., (1969), Contouring of VLF-EM Data; *Geophysics*, Vol. 34, pp. 958-967.

Hallof, P. G., (1967), The Use of Induced Polarization Measurements to Locate Massive Sulphide Mineralization in Environments in which EM Methods Fail; paper presented at Canadian Centennial Conference on Mining and Groundwater Geophysics, Niagara, Ontario.

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*The technique is analogous to passing the dip-angle data through a bandpass filter which (1) completely removes DC bias and greatly attenuates long wave lengths, (2) completely removes Nyquist frequency noise, (3) phase-shifts all frequencies by 90 degrees and (4) has the bandpass centered at a wave length of five times the station spacing.

APPENDIX 'C'

TRANS NORTH TURBO AIR LTD.

BOX 4338 PHONE 668-2177
WHITEHORSE, YUKON

ATAC MEMBER

TO:

Silver Standard Mines Ltd.
#808, 602 W. Hastings Street
Vancouver, B.C.

ATTN: Mr. R. McMichael

DATE August 31, 1972 INVOICE NO. A1067-2

P.O. NO.

TO: Charge you with the following helicopter charters:

Bell 47G-3B-2 Helicopter CF-QJW
Pilot: W. Kennerknecht

FLYING:	August 1, 4, 9 & 16, 1972	
	6.5 hours at $155.00 per hour (rate when carrier supplies fuel)	$1,007.50
PLUS:	Excess cost of fuel at following points: Charterer assessed with cost of fuel over $.60 per gallon	
	Midway: 40 gallons at $.47 per gallon	18.80
	Carmacks: 115 gallons at $.41 per gallon	47.15

Bell 47G-3B-2 Helicopter CF-QJX
Crew: E. Olsen and R. Johnsen

FLYING:	August 13,16 & 23, 1972	
	10.1 hours at $155.00 per hour (rate when carrier supplies fuel)	1,565.50
PLUS:	Excess cost of fuel at following points Charterer assessed with cost of fuel over $.60 per gallon	
	Mayo: 139 galons at $.20 per gallon	27.80
	Minto: 43 gallons at $.47 per gallon	20.21

OK
32

OK
32

.../2

RECEIVED

TERMS: ONE PERCENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

TRANS NORTH TURBO AIR LTD.
BOX 1977, WHITEHORSE, YUKON

DAILY FLIGHT REPORT

DATE Aug 13 / 72

CHARTERER: Silver Standard Mines
ADDRESS:

AIRCRAFT: B-2 CF - QJY AREA: YUKON ☐ B.C. ☐ ALTA. ☐ NWT ☐

CHARTER FROM:	PASS.	CARGO	HRS.	PASS. NAMES OR REMARKS
Mayo				
Tern L.				
Scougale Cr.				
Mayo			4.1	
			4.1	
1883.0				
1883.1				
4.1				
				Sumayou
TOTALS				

TNTA FUEL 4.1 HRS. MAYO

E N Olsen
PILOT'S SIGNATURE

TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

Nai...
CHARTERER'S SIGNATURE

& Johnsen

№ 8926

TRANS NORTH TURBO AIR LTD.

BOX 4977, WHITEHORSE, YUKON

DAILY FLIGHT REPORT

DATE Aug 16

CHARTERER: Silver Standard

ADDRESS:

AIRCRAFT: CF - QTV AREA: YUKON ☑ ALTA. ☐ B.C. ☐ NWT ☐

CHARTER FROM:	PASS.	CARGO	HRS.	PASS. NAMES OR REMARKS
Wind				
Carmacks			2.4	
			2.4	
TOTALS			2.4	

TNTA FUEL 2.4 HRS. ~~MAYO~~ MINTO

TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

Ed Olsen

PILOT'S SIGNATURE

CHARTERER'S SIGNATURE

Johnsen

№ 8929

TRANS NORTH TURBO AIR LTD.

BOX 4977, WHITEHORSE, YUKON

DAILY FLIGHT REPORT

DATE Aug 23

CHARTERER: Silver Standard

ADDRESS:

AIRCRAFT: Bell 47G3B2 CF - QJP AREA: YUKON ☑ ALTA. ☐ B.C. ☐ NWT ☐

CHARTER FROM:	PASS.	CARGO	HRS	PASS. NAMES OR REMARKS
Mayo				
Scrogie Cr.				
Minto				
Base Camp				
Minto			3.6	
TOTALS				

P. miller, cook, for Steve Keller

3.6

TNTA FUEL 3.6 HRS.

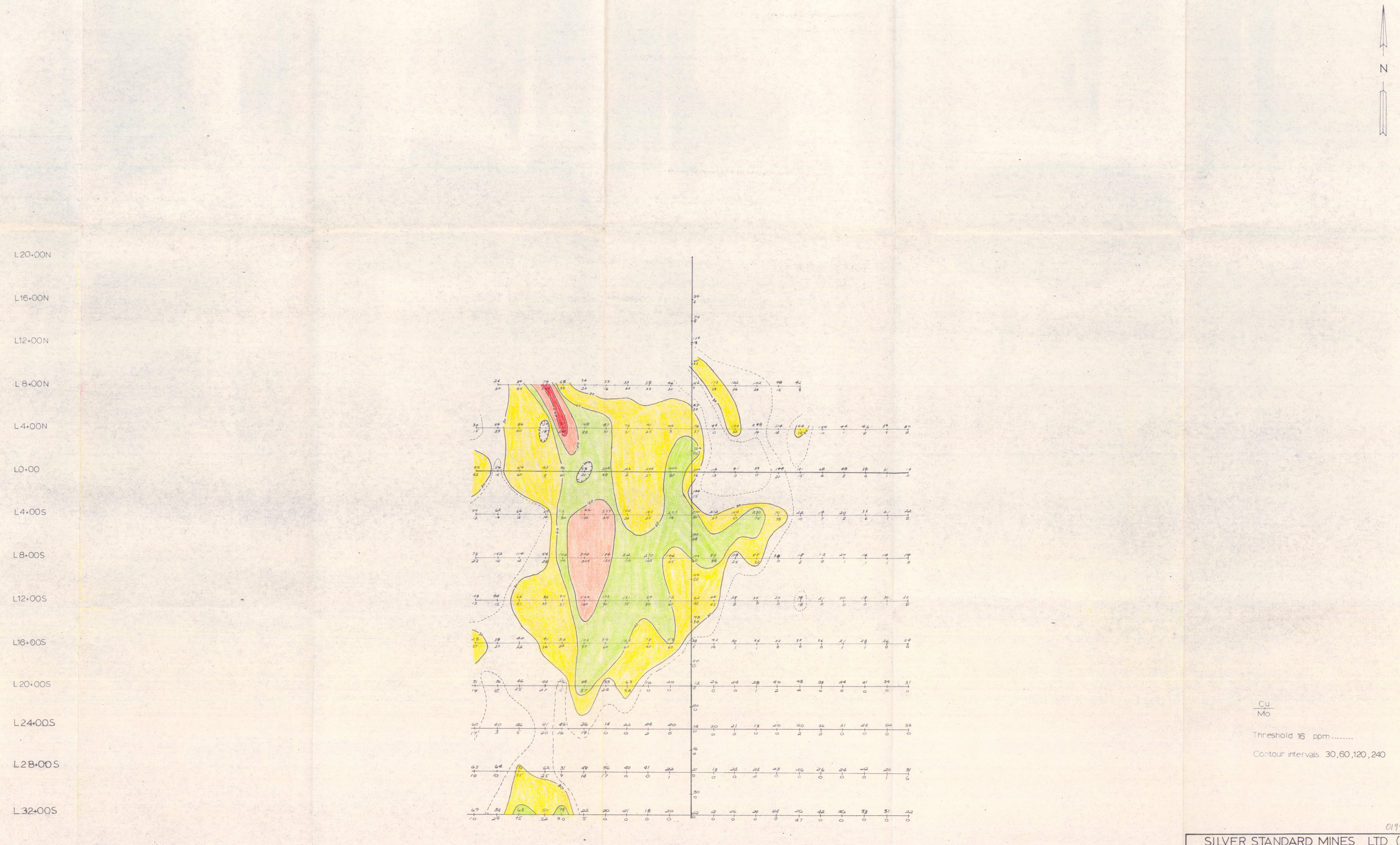
TERMS: ONE PER CENT INTEREST PER MONTH WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

Ed Olsen
PILOT'S SIGNATURE

David [illegible]
CHARTERER'S SIGNATURE

No 8937

N
L20+00N
L16+00N
L12+00N
L 8+00N
L 4+00N
L0+00
L4+00S
L8+00S
L12+00S
L16+00S
L20+00S
L 24+00S
L 28+00S
L 32+00S
BASE LINE
Cu / Mo ppm
Threshold 66 ppm
Contour intervals 100, 200, 400
019906
SILVER STANDARD MINES LTD (NPL)
Geochemical Survey
COPPER
SCROGGIE CREEK
Yukon
Date: Dec. 20, 1972
Figure: 1
Scale: 1" = 400'
Dwn. by:



019906

SILVER STANDARD MINES LTD (NPL)

Geochemical Survey

MOLYBDENUM

SCROGGIE CREEK

Yukon

Date: Dec. 20, 1974	Figure: 2
Scale 1" = 400'	Dwn by:

019906

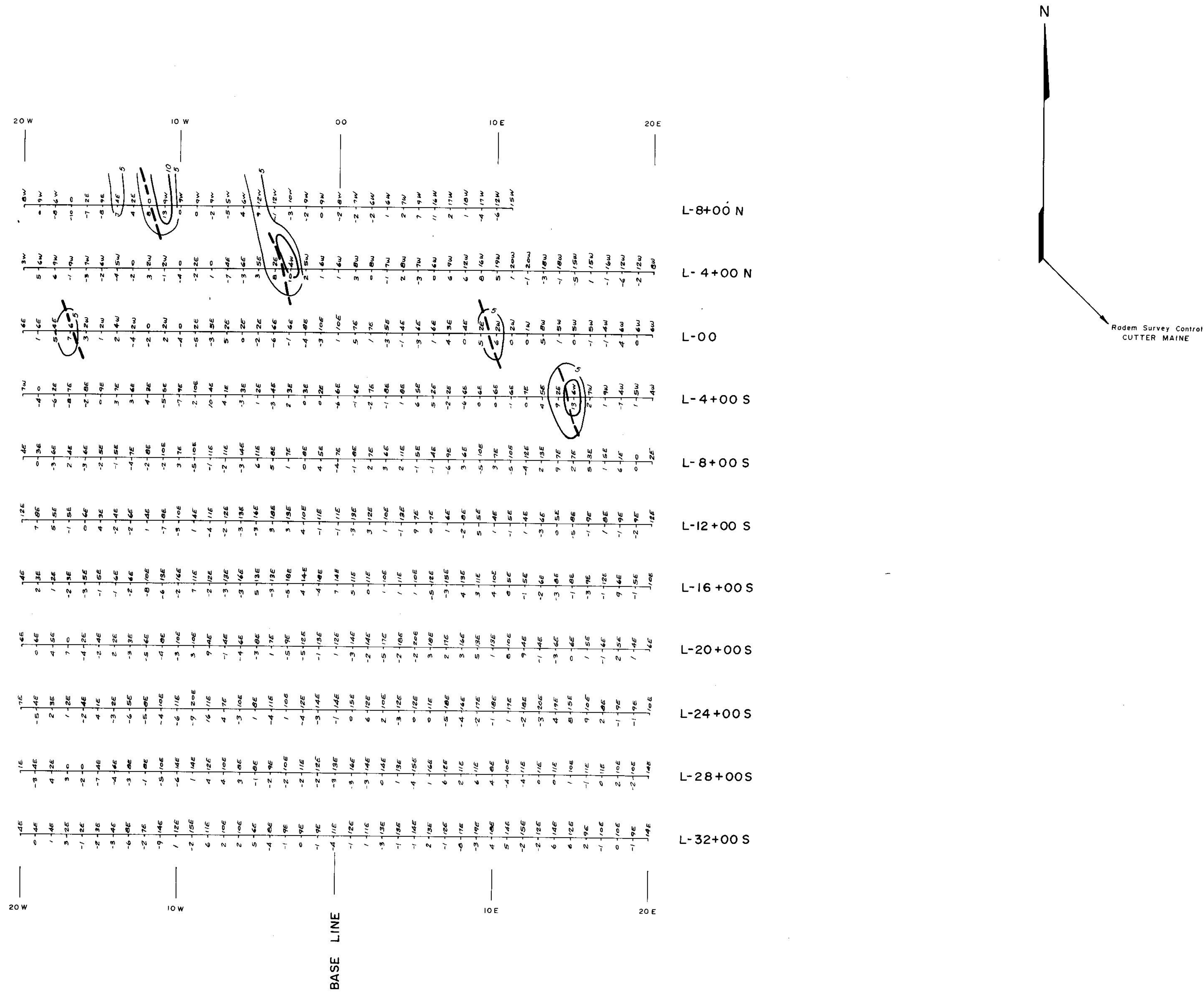
SILVER STANDARD MINES LTD (NPL)

SCROGGIE CREEK

Yukon

GEOLOGY OUTCROP MAP

Date : Dec. 20, 1971		Figure : 3
Dwn. by : [illegible]		Scale: 1" =400'



LEGEND:

- Dip angle
- Filter value
- Approx. location of conductor
- Contour interval: 5°

400' 0' 400' 800' 1200' 1600'

SCALE IN FEET

019906

SILVER STANDARD MINES LTD. N.P.L.		
SCROGGIE CREEK PROPERTY		
RADEM SURVEY		
JAN. 73	R.McM. / rwr	FIG. 4

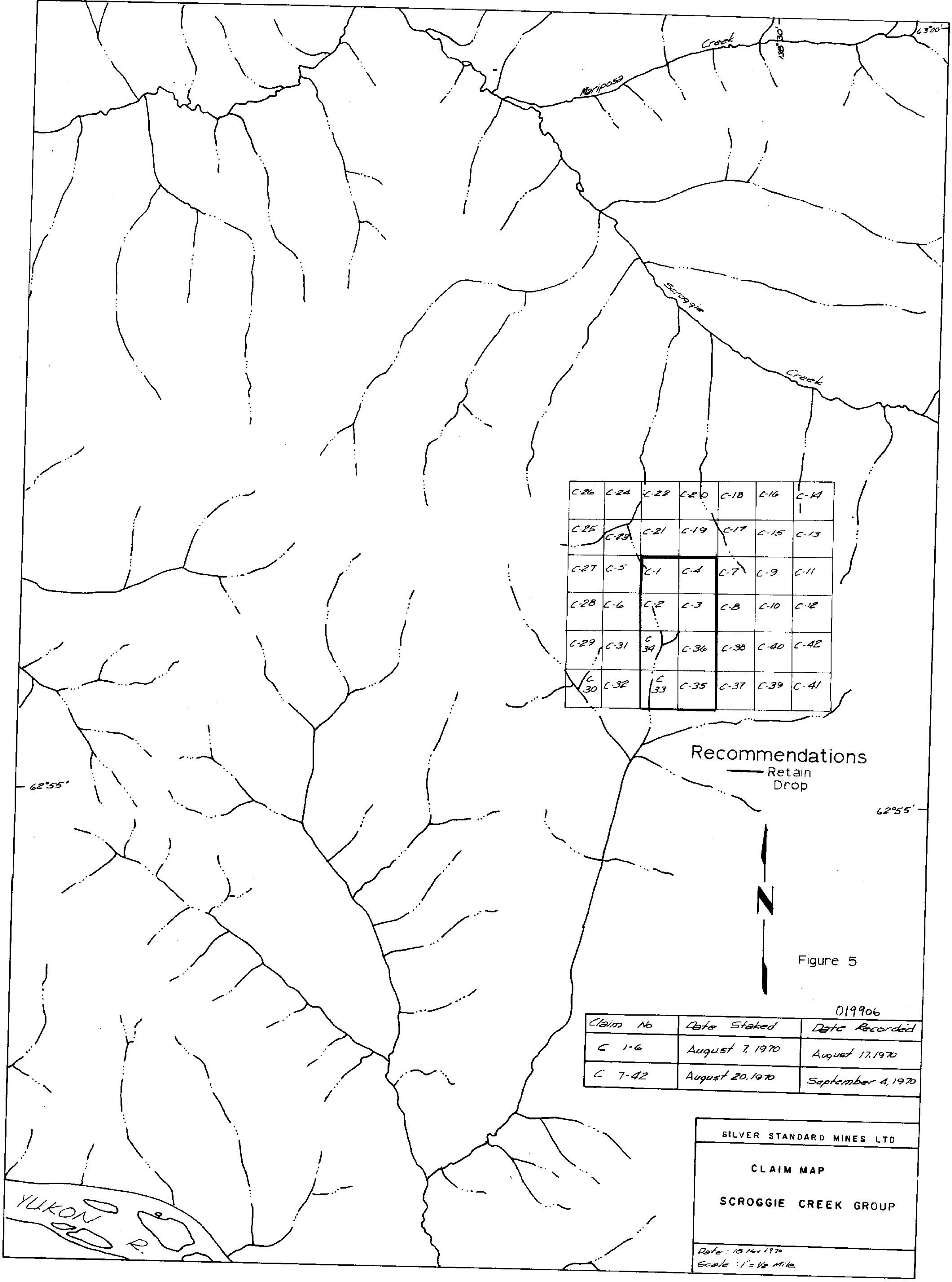


Figure 5

019906

Claim No.	Date Staked	Date Recorded
C 1-6	August 7, 1970	August 17, 1970
C 7-42	August 20, 1970	September 4, 1970

SILVER STANDARD MINES LTD

CLAIM MAP

SCROGGIE CREEK GROUP

Date : 18 Nov 1970
Scale : 1" = 1/2 Mile