84-#972—13115

GEOCHEMICAL/GEOPHYSICAL REPORT

ON

SOIL GEOCHEMISTRY AND VLF-EM SURVEYS

OVER THE

GRAND UNION PROPERTY

ERIE CREEK, SALMO AREA

NELSON MINING DIVISION

BRITISH COLUMBIA

PROPERTY	: 15 km N30°W of Salmo on confluence of Slide Creek with Erie Creek.
	: 49° 117° SE
	: N.T.S. 82F/16W
WRITTEN FOR	: HOMESTEAD RESOURCES INC. #1220-609 Granville Street Vancouver, B.C., V7Y 1G5
WRITTEN BY	: David G. Mark, Geophysici GEOTRONICS SURVEYS LTD. #403-750 West Pender Stre Vancouver, B.C., V6C 2T7
DATED	: August 22nd, 1984

GEOTRONICS SURVEYS LTD.
Engineering & Mining Geophysicists
VANCOUVER, CANADA

13115

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SUMMARY

Soil geochemistry and VLF-EM surveys were carried out over a portion of the Grand Union property during June and July, 1984. The property is located 16.5 km N30°W of the Town of Salmo, British Columbia at the confluence of Slide Creek with Erie Creek. Access to much of the property is easily gained by a two-wheel drive vehicle. The terrain consists of gentle to steep slopes forested with light to moderately dense coniferous trees. The purpose of the surveys was to locate probable zones of gold or sulphide mineralization both directy and through mapping the structure.

Homestead's Grand Union property occurs on an intrusive contact between granodiorites of the Nelson Batholith and volcanics and sediments belonging to the Rossland Formation, Hall Formation, and the Sinemurian Beds. On the adjoining property to the immediate south occurs the Second Relief quartz vein from which was mined 250,000 tons grading 0.39 oz/ton gold. The Rand and Inez quartz veins occurs on the Grand Union property from which some mining was done as well. The gold mineralization is greater where sulphide content is greater, the sulphide being pyrite, pyrrhotite and chalcopyrite.

The VLF-EM readings were taken every 25 meters on 50- and 100-meter separated lines. They were then Fraser-filtered, plotted and contoured. The soil samples were dug every 25 m on lines perpendiclar to the VLF-EM lines, subsequently tested for 5 metals (arsenic, silver, lead, zinc, copper) statistically analyzed, plotted, and contoured.

CONCLUSIONS

1. The VLF-EM survey has picked up the known mineralization on the property, principally the Rand vein. (No work was done over the Inez vein.) The soil geochemistry response over the Rand vein was quite spotty.

2. In addition, the VLF-EM survey has picked up 5 strong conductors that are parallel and sub-parallel to the Rand vein. There is therefore a good probability that these conductors are quartz vein systems containing sulphides with which there should be associated gold mineralization. The conductors are labelled c to g.

3. Conductor c is a prime exploration target since not only is it a strong conductor indicating sulphides to be the causative source, but it correlates extremely well with soil geochemistry anomalies, especially arsenic and zinc which are often pathfinders for gold. Soil sampling was not done across conductors d to g (except for part of f).

4. It appears the extension of the Second relief vein has been picked up by the soil geochemistry and VLF-EM surveys on the Grand Union property.

5. The VLF-EM response in the western part of the survey area is quite complex indicating complex geology and/or cross-structure. There is also an interesting soil geochemistry response in this area, principally zinc, that occurs adjacent to the Nelson Batholith granodiorite contact. This therefore is also an area of exploration interest.

6. In general, the soil geochemistry response is quite spotty. Therefore, soil geochemistry can be a very useful exploration tool but it should be kept in mind that it may not respond to all mineralization on the property.

RECOMMENDATIONS

1. The soil geochemistry survey should be continued over the remainder of the property, especially in the area of VLF-EM conductors d, e, f and g.

2. VLF-EM conductor c should be trenched by backhoe in the area of the strongest soil geochemistry results.

3. The five strong VLF-EM conductors should be tested by a conventional EM system, such as the MaxMin II EM. The VLF-EM is quite useful as an initial exploration tool but preferably should not be used for spotting drill targets. The MaxMin EM will more accurately locate the target as well as give its dip, conductivity-thickness and depth to top.

4. If the MaxMin II EM system does not work, then it is advisable to test the induced polarization resistivity method. Induced polarization should respond to the sulphide content and the resistivity should respond to the correlating alteration.

5. Diamond drilling should be carried out, since the above should result in the optimum location of targets.

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INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data and the interpretation of VLF-EM and soil geochemistry surveys carried out over a portion of the Grand Union property during the period of June 18th to July 8th, 1984.

The VLF-EM survey was carried out by Geotronics Surveys Ltd. under the field supervision of Adam Szybinski, geologist with the aid of Norman Eenkooren. The soil samples were picked up by employees of Homestead Resources Inc. during the same period. A total of 24.1 line km of VLF-EM survey were done and a total of 982 soil samples were picked up.

The primary purpose of the VLF-EM survey was to locate probable zones of gold-silver mineralization, with the secondary purpose being to delineate geological structure as an aid in the explora-

tion for gold-silver mineralization. That of the soil sampling was to locate gold mineralization directly. Besides silver, the samples were tested for lead, zinc, copper and arsenic. These metals are useful as pathfinders for gold and silver mineralization.

The surveys were done on the verbal recommendation of Laurence Sookochoff, P.Eng., consulting geological engineer to Homestead Resources Inc.

PROPERTY AND OWNERSHIP

Much of the following information on the description of the property has been taken from J.S. Kermeen's geological engineering report on the property.

The property consists of 23 Crown Grants or claims staked within the Nelson Mining Division as shown on Sheet 2 and as described below:

Name	Record No.	Lot No.	Anniversary Date
Reverted Crown Grants			
Grand Union	590	2467	Apr. 14
Star Shine	1147	2466	Aug. 08
Risk Fr.	1148	14655	Aug. 08
Peggy Fr.	1149	14656	Aug. 08
Lucy	1150	14661	Aug. 08
Gus Fr.	1151	14662	Aug. 08
Eva Fr.	1152	14665	Aug. 08
Dolly	1314	14664	Oct. 26
Rhodes Fr.	1315	14667	Oct. 26
Amos	1316	14670	Oct. 26
Lee	1831	14658	July 22
Pitt	1832	14659	July 22
Winnie	1833	14660	July 22
Dale	1834	14663	July 22

Crown Grants

Rand Fr.	14666
Inez Fr.	14669
Cliff	2915

Staked	Units		
Digit	1	1181	Aug. 27
Lil Geez	1	592	Apr. 14
Rush #1	15	3552	Oct. 26
Rush #2	10	3553	Oct. 26
Deejay	12	3452	Aug. 09

The claims are either owned outright or held by lease by Homestead Resources Inc. of Vancouver, British Columbia.

LOCATION AND ACCESS

The property is located 16.5 km N30°W of the Town of Salmo, B.C. at the confluence of Slide Creek with Erie Creek. Salmo is located 32 km due south of Nelson and 32 km N70°E of Trail.

The geographical coordinates are 49°19'N latitude and 117°24'W longitude.

Access to the property is easily gained by a logging road which runs northerly along Erie Creek from a point on Highway #3 that is about 4 km west of Salmo and 35 km east of Trail. The property is about 18 km along the logging road from the highway.

PHYSIOGRAPHY

The property lies within the central part of the north-trending Selkirk Mountains which is a physiographic division of the Columbia Mountains. The terrain consists of moderate to steep slopes throughout most of the property and lies across the south-easterly-trending Erie Creek valley.

Elevations vary from about 1,120 meters a.s.l. at the southern boundary of the property on Erie Creek to 1,740 meters a.s.l. within the eastern corner of the property to give an elevation difference of 620 meters.

The main water sources would be the southerly-flowing Erie Creek as well as its westerly-flowing tributary, Slide Creek.

The property is covered with heavy timber with dense underbrush.

HISTORY OF PREVIOUS WORK

Since gold-bearing quartz veins have been known to exist on and around the property since 1899, various types of physical work have been done since that time. On the property itself, the most recent exploration work has been a mercury in soil gas survey, a magnetometer survey and geological mapping carried out for Calmark Explorations in 1969. Homestead did some small scale surface mining in 1981.

On the Second Relief vein to the immediate south of the property, sporadic mining has been carried out prior to 1933, and continuous mining from 1933 to 1941. Total production was 250,000 tons grading 0.39 ounces gold/short ton and 0.13 ounces silver/short ton.

GEOLOGY

The geological desciption given below has been furnished by geologist, Z.A. Szybinski, who made geological observations on the property while carrying out the VLF-EM survey. This is especially useful for correlations with the soil geochemistry surveys and

the VLF-EM survey. However, a more thorough desciption, especially of the mineralization, is given in Kermeen's engineering report and Sookochoff's engineering report under preparation.

The Grand Union property is located in a geologically significant area, that is, on the contact between interbedded argillites, andesitic volcanics, tuffs, slates and sandstones underlying the southern, southeastern and central parts of the property, and the granodiorite intrusion of the Nelson Batholith underlying the northern part of the property.

According to classification by Little (1960), the stratified rocks may be members of the Lower Jurassic Rossland Formation and Sinemurian Beds. Some of them may represent the Middle-Upper Jurassic Hall Formation as well.

With limited outcrop it was difficult to show a geological picture of the property. However, a geological sketch using the VLF-EM grid as a base was done and is shown on Sheet 3 at a scale of 1:2,500.

The following rock units are shown on the sketch:

- argillites interbedded with tuffs, slates and fine-grained andesites, which probably represent Sinemurian Beds;

- fine-grained, rarely porphyritic, hard andesites and minor volcanic breccia, which may be a volcanic member of the Rossland Formation;

- interformational, finely laminated argillites, sandstones, slates and conglomerates, believed to be members of the Hall Formation;

- varieties of medium-to coarse-grained plutonic granites from quartz diorite to monzonite which represent the Lower Cretaceous Nelson Batholith.

Many types of dykes (not shown on the sketch) with genetic relationships to both volcanic and plutonic rocks cut the above described rock units. They are divided into pre-mineral dykes (diorite porphyry) and post-mineral dykes (andesites, basalts, lamprophyte, granite, porphyry etc).

Almost all stratified rocks are regionally metamorphosed (low grade), often with well marked cleavage, which is partially destroyed by thermal metamorphism. Thermally metamorphosed slates have developed local modules (spotted or knotted slates) produced by aggregates of mica or other new minerals.

The structural trend of the layered rocks on the property is chiefly east-west, almost parallel to the Nelson granodiorite contact. This geological situation is made more complex by a network of faults with strikes from east-west to northwest-southeast.

Within the andesitic volcanics of the Rossland Formation occur auriferous quartz veins. Three of them, Inez, Rand and possibly Second Relief, are known to occur on the Grand Union property. The Inez vein is visible on the surface and can be easily traced. The Rand can be traced only by underground workings. The northeast end of the Second Relief vein lies within the northeastern part of the property covered by the VLF-EM grid. The gold mineralization is associated with sulphide content of veins notably pyrite, pyrrhotite, and chalcopyrite.

VLF-EM SURVEY

(A) Instrumentation and Theory

A VLF-EM receiver, Model 27, manufactured by Sabre Electronic Instruments Ltd. of Burnaby, B.C. was used for the VLF-EM survey. This instrument is designed to measure the electromagnetic component of the very low frequency field (VLF-EM), which for these surveys is transmitted at 24.8 KHz from Seattle, Washington.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic field (primary) by a strong alternating current usually through a coil of wire. If a conductive mass such as a sulphide body is within this magnetic field, a secondary alternating current is induced within it which in turn induces a secondary magnetic field that distorts the primary magnetic field. It is this distortion that the EM receiver measures. The VLF-EM uses a frequency range from 16 to 24 KHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore is more susceptible to clay beds, electrolyte-filling fault of shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods to pick up. Consequently the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization. (In places it can be used instead of I.P.). However, its susceptibility to lower conductive bodies results in a number of anomalies, many of them difficult to exlain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

(B) Field Procedure

The survey consisted of 24.1 line km of VLF-EM survey over much of the property.

The VLF-EM survey has been carried out on two grids, one on the west side of Erie Creek, and the other on the east side. The base line for each grid runs in a 60°E direction, except for a 450 m section on the east grid which runs in a 55°E direction. The west grid baseline has a length of 15,000 m and the east grid base line, 10,500 m. The cross lines were run perpendicular to the two base lines at a 50 m and a 100 m spacing with the instrument readings taken at a 25 m interval facing towards the transmitter at Seattle.

(C) Compilation of Data

The VLF-EM field results were plotted on Sheet 4 at a scale of 1:2,500. They were then reduced by applying the Fraser-filter and the filtered results subsequently plotted on Sheet 5 at a scale of 1:2,500 as well. The filtered data was plotted between actual reading stations. The positive dip-angle readings were then contoured at an interval of 4°.

The Fraser-filter is essentially a 4-point difference operator, which transforms zero crossings into peaks, and a low pass smoothing operator which induces the inherent high frequency noise in the data. Therefore, the noisy, non-contourable data are transformed into less noisy, contourable data. Another advantage of this filter is that a conductor that does not show up as a crossover on the unfiltered data quite often shows up on the filtered data.

SOIL GEOCHEMISTRY

(A) Survey Procedure

The samples were picked up at 25-meter centers on lines parallel to the base lines for the VLF-EM survey. They were dug with a D-handled shovel at about a 15- to 20-cm depth. The horizon sampled was B. Samples were placed in brown, wet-strength, paper bags (gussett bags) with the sample number marked thereon.

(B) Testing Procedure

All samples were tested by Acme Analytical Laboratories Ltd. of Vancouver, B.C. The sample is first thoroughly dried and then sifted to -80 mesh. A 0.5 gram amount of the pulverized material was then put into a test tube with subsequent measured additions of perchloric acid and nitric acid. The mixture was next heated to 95° C for one hour. The parts per million (ppm) metal was then measured by atomic absorption.

(C) Treatment of Data

The statistical parameters as given below were calculated by computer.

The background value for each metal is calculated as the average. The sub-anomalous threshold value, (a term used by the writer to denote the minimum value that is not considered anomalous but still important as an indicator of mineralization) is taken at one standard deviation from the background value and the anomalous threshold value is two standard deviations away.

As a result of the above, the statistical parameters for each metal are shown in the following table with the sheet number that

the geochemistry values for each of the metals were plotted on.

Metal	As	Ag	Pb	Zn	Cu
Sheet number	6	7	8	9	10
Background value	6	0.31	14	66	61
Sub-anomalous threshold value	15	0.64	26	135	65
Anomalous threshold value	24	0.97	30	204	99

All values are in ppm. On each Sheet, the background value, sub-anomalous threshold value, and anomalous threshold value were contoured.

A compilation map, Sheet 11, at a scale of 1:2,500, has been drawn of the anomalous soil geochemistry results for all 5 metals as well as the lineations that the writer feels are the mapping of the VLF-EM conductors. Some of the VLF-EM anomalies are caused by more than one conductor which is not apparent from the contouring on Sheet 5.

DISCUSSION OF RESULTS

(A) Background Discussion

The major cause of the VLF-EM anomalies, as a rule, are geologic structures such as fault, shear and breccia zones. It is therefore logical to interpret VLF-EM anomalies to likely be caused by these structural zones. Of course, sulphides may also be a causative source. But in the writer's experience, when VLF-EM anomalies correlate with sulphide mineralization, the anomalies are usually reflecting the structure associated with the mineralization rather than the mineralization itself.

There is some variation in intensity from one VLF-EM anomaly to the next. This is not only due to the conductivity of a causative source, but also the direction it strikes relative to the direction to the transmitter. In other words, those conductors lying closer to the same direction as the direction to the transmitter (S60W in this case), can be picked up easier than those that are lying at a greater angle. Depending upon its conductivity, a conductor may not be picked up at all if it is at too great an angle. However, on this particular survey are some VLF-EM conductors that have strong intensity and yet are not at an optimum direction to the transmitter. This is therefore an indication of the causative source being a strong conductor, possibly sulphides.

The survey has produced interesting results throughout the property, particularly the VLF-EM highs. These highs are of greater economic interest since they may be reflecting sulphides, fracturing and/or alteration any of which could be associated with gold mineralization. The highs often are at points of intersection of two or three conductors striking in two or three different directions. If the conductors are in fact geological structures, then the points of intersection become amenable to mineralizing fluids.

VLF-EM conductors of interest have been labelled by the lower case letters 'a' to 'k'. Soil geochemistry anomalies that do not correlate with any conductors but are of interest have been labelled by the letters 'l' to 'q'.

(B) Discussion of Anomalies

VLF-EM conductor 'a' is a reflection of the Rand vein. The anomaly is not that strong but this could be due to the fact that this section of the Rand vein has been mined out. There is also an arm to the conductor that the writer has labelled a'.

The soil geochemical expression of the Rand vein is quite poor. Along the vein/VLF-EM conductor, there are spotty anomalous results in only lead and zinc.

Conductor 'b' is a 1-line anomaly that occurs on the western edge of the survey area and therefore could be open to the west. The interesting point about this anomaly is that it could be reflecting the northeastern end of the Second Relief vein.

Conductor 'c' is considered by the writer to be the most exciting anomaly within the survey area for the following reasons:

1. The correlation with the soil geochemistry anomalies is excellent, especially the arsenic and zinc anomalies which have a good length along the strike. The arsenic reaches a high of 106 ppm and the zinc, 694 ppm. The silver and lead anomalies results are spotty along conductor 'c' with highs of 1.5 and 54 ppm respectively. There is no direct copper correlation though a copper anomaly with a high of 769 ppm occurs off-center and sub-parallel to the conductor. A lead anomaly with a high of 131 ppm correlates with the copper anomaly.

2. The conductor has a relatively high intensity suggesting the causative source may be sulphides, which are known to occur with the gold veins in this area.

3. The conductor has a minimum length of 600 m being open to the west.

Conductor c occurs within argillites of the Sinemurian Beds with the western section occurring parallel to and to the immediate south of the contact with granodiorites of the Nelson Formation.

Further observations of conductor c is that it (1) strikes easterly, (2) appears to be faulted in the area of line 13+00 E, and (3) may change direction to northeasterly at the eastern end as indicated by the letter c, which would add 150 m to the length of the conductor.

However, the segment labelled c' may be due to a different source since it does appear to correlate directly with the projection of the Rand-Inez vein as mapped by Read.

Conductors d, e, f and g are parallel and sub-parallel to conductor c, having the same easterly strike. These anomalies also have strong intensity suggesting the causative source to be sulphide veins that hopefully carry gold. No soil geochemistry was done in this area except for the eastern part of conductor f.

However on the strike extension of conductor f, where no VLF-EM surveying was done occurs a soil geochemistry anomaly that is anomalous in arsenic (281 ppm), zinc (277 ppm), silver (1.4 ppm), copper (247 ppm) and lead (46 ppm). The copper and lead anomalies occur off-center of conductor f and sub-parallel to it, as they do for conductor c.

Conductors d, e, f and g occur in argillites of the Hall Formation as well as possibly andesite flows of the Rossland Formation. Conductor e occurs parallel to and to the immediate south of the contact with granodiorites of the Nelson Formation. All conductors are open in at least one direction.

Conductor h is a conductor of only about 100 m in length but correlates directly with arsenic (431 and 746 ppm), zinc (341 ppm) and silver (1.7 ppm) anomalous results. The strike is northeasterly.

Conductor i correlates directly with a zinc anomaly that reaches a high of 243 ppm.

Conductor j correlates with spotty zinc and silver anomalous values.

Conductor k runs through a zinc anomaly (discussed below as anomaly q) the strike of which appears to be perpendicular to it.

All conductors in this area, say west of line 4+50 E, are quite complex in nature which is an indication of complex geology and/or cross structure. This, in turn, can be an indication of an area of mineral potential. These conductors strike mainly in two directions, southerly and southwesterly. A southeasterly-striking fault has been drawn by the writer between lines 2+00 E and 2+50 E which is strongly indicated to occur from the VLF-EM results.

There are other soil geochemistry anomalies worthy of further discussion that do not correlate with any VLF-EM conductor. The first is a copper-zinc anomaly labelled l that strikes N30°W which is parallel to the VLF-EM survey lines. The strike direction therefore precludes any correlation with the VLF-EM results. The anomaly has a minimum length of 500 m is open to the northwest and may be open to the southeast. It reaches a high of 495 ppm zinc and 422 ppm copper.

Anomaly m occurs next to Slide Creek. It is anomalous in lead (67 ppm), silver (1.0 ppm), zinc (217 ppm) and arsenic (42 ppm). It occurs in the corner of the survey area and therefore the strike direction can not be determined. It is possible this anomaly could be caused by contamination from tailings.

Anomaly n occurs in the eastern grid area and is of interest since it would well be the northeastern extension of the Second

Relief vein. It is widely anomalous in silver (1.8 ppm) and also anomalous in zinc (235 ppm), arsenic (53 ppm) and copper (.128 ppm). The contouring suggests a strike almost perpendicular to that of the Second Relief vein but this may simply be due to grid bias.

Anomaly o is of interest since it correlates with an adit on the northern edge of the survey area and has very high soil results. Though the anomaly is small, it is open to the north. It is anomalous in silver (18.9 ppm), lead (78 ppm), copper (340 ppm), zinc (252 ppm) and arsenic (459 ppm). The underlying rock-rype is granodiorites of the Nelson Formation.

Amonaly q is principally a zinc anomaly (mentioned above in relation to conductor k) that bends around and occurs adjacent to the Nelson Formation contact. The underlying rock types are argillites of the Sinemurian Beds and andesite flows of the Rossland Formation. The zinc anomaly reaches a high of 243 ppm. The anomaly is also anomalous in arsenic (89 ppm), lead (45 ppm), silver 2.7 ppm and copper (117 ppm), though the anomalous results of these metals are quite spotty. Also of exploration interest is that oxidation has been noted throughout this zone.

Anomalous soil results to the immediate west of anomaly m are thought to be caused by tailings south of the survey area.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark,
Geophysicist

August 22, 1984

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GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #403-750 West Pender Street, Vancouver, British Columbia.

I further certify:

1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

2. I have been practising my profession for the past 15 years and have been active in the mining industry for the past 18 years.

3. I am an active member of the Society of Exploration Geophysicists and a member of the European Association for Exploration Geophysicists.

4. This report is compiled from data obtained from VLF-EM and soil geochemistry surveys carried out by Geotronics Surveys Ltd., under the supervision of myself and under the field superivsion of Adam Szybinski from June 18th to July 8th, 1984.

5. The work was done entirely on the verbal recommendations of Laurence Sookochoff, P.Eng., who is the consulting geologist for Homestead Resources Inc.

6. I am not a shareholder of Homestead Resources Inc. nor do I hold any interest in the Grand Union property claims, nor will I receive any interest as a result of writing this report.

David G. Mark
Geophysicist

August 22, 1984

AFFIDAVIT OF EXPENSES

The soil geochemistry and VLF-EM surveys were carried out from June 20th to July 8th, 1984 over the Grand Union property, Erie Creek, Nelson M.D., B.C. to the value of the following:

FIELD:

VLF-EM Survey

Geophysical technician & helper, 119 hours at $40/hr	$ 4,760
Vehicle rental, including gas, 14 days at $110/day	1,540
Room and Board, 14 days at $109/day	1,400
Survey supplies	100
VLF-EM unit rental, 2 weeks at $125/week	250
	$ 8,050

Soil Geochemistry Survey

Crew chief and helper, 180 hours at $35/hour	$ 6,300
Room and board, 18 days at $100/day	1,800
4-wheel drive truck rental and gas	2,090
Survey supplies	160
	$10,350

LABORATORY:

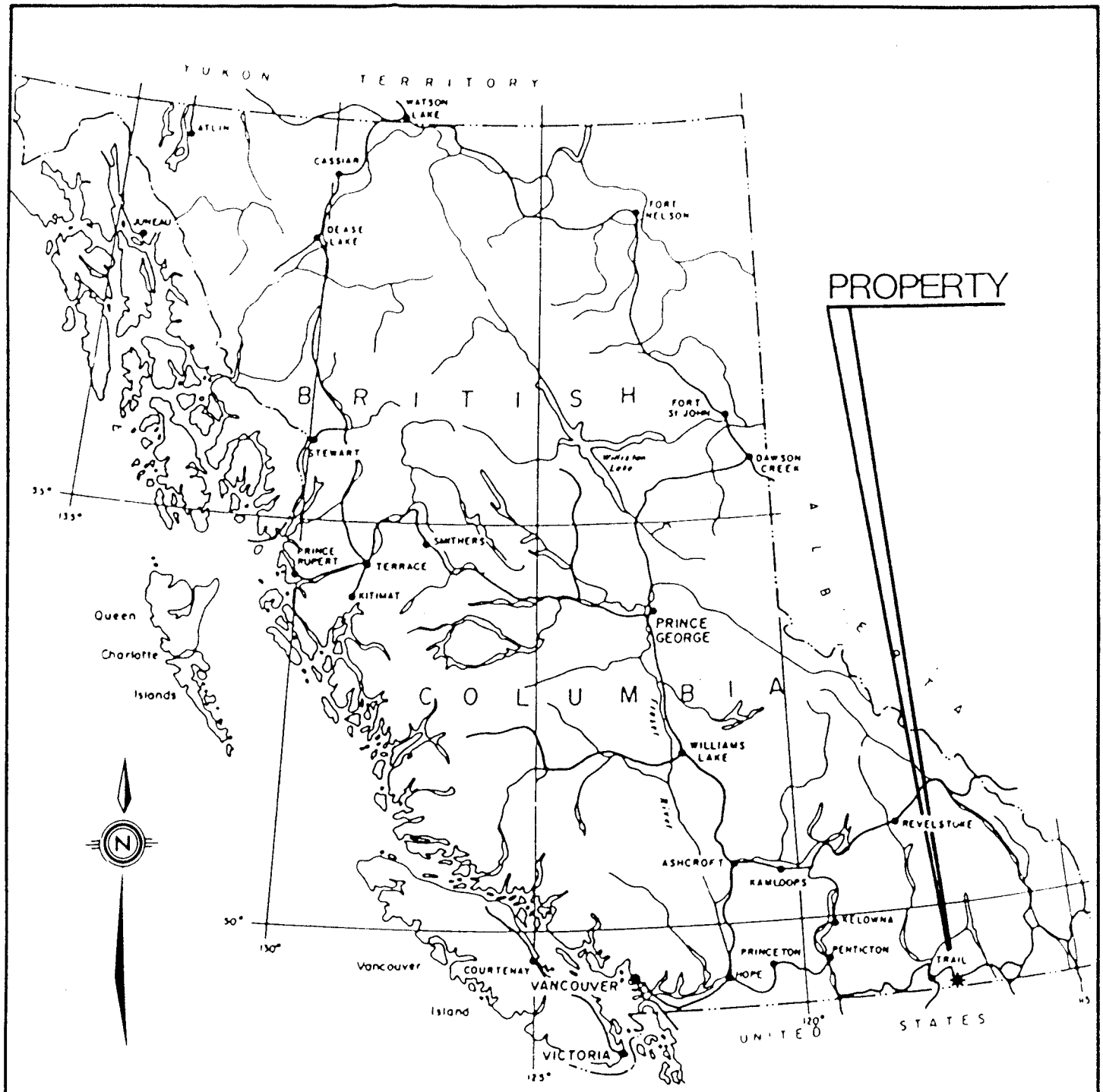
Sample preparation and testing for 5 elements including arsenic, silver, lead, zinc and copper, 982 samples at $5/sample	$ 4,910

REPORT: (includes soil geochemistry results)

Geophysicist, 15 hours at $40/hour	$ 600
Geophysical technician, 35 hours at $25/hour	625
Drafting and printing	1,300
Typing, photocopying and compilation	150
	$ 2,675
Grand Total	$25,985

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark, Geophysicist
Manager



GEOTRONICS SURVEYS LTD.

HOMESTEAD RESOURCES INC.

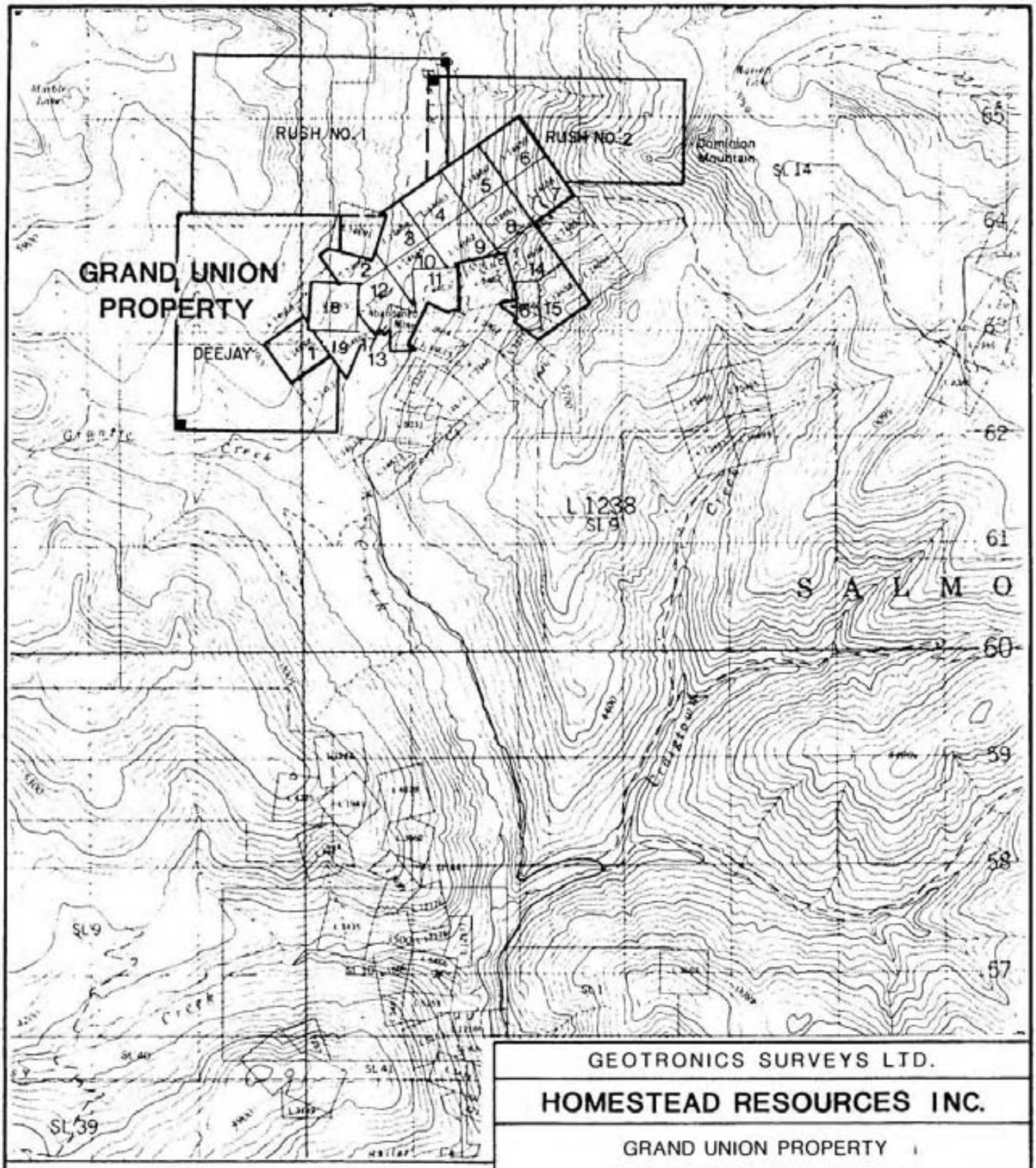
GRAND UNION PROPERTY

ERIE CREEK - SALMO AREA

NELSON MINING DIVISION

LOCATION MAP

SCALE	DATE	NTS	JOB NO.	SHEET NO.
1:6,300,000	AUGUST, 1984	84F/6	84-32	1



1. AMOS
2. RHODES FR
3. DOLLY
4. DALE
5. WINNIE
6. PITT
7. LEE
8. LUCY
9. GUS FR.
10. EVA FR
11. GRAND UNION
12. RAND
13. LI'L GEEZ
14. PEGGY FR
15. RISK FR.
16. STARSHINE
17. DIGIT
18. CLIFF
19. INEZ FR.

0 1 2 3 km

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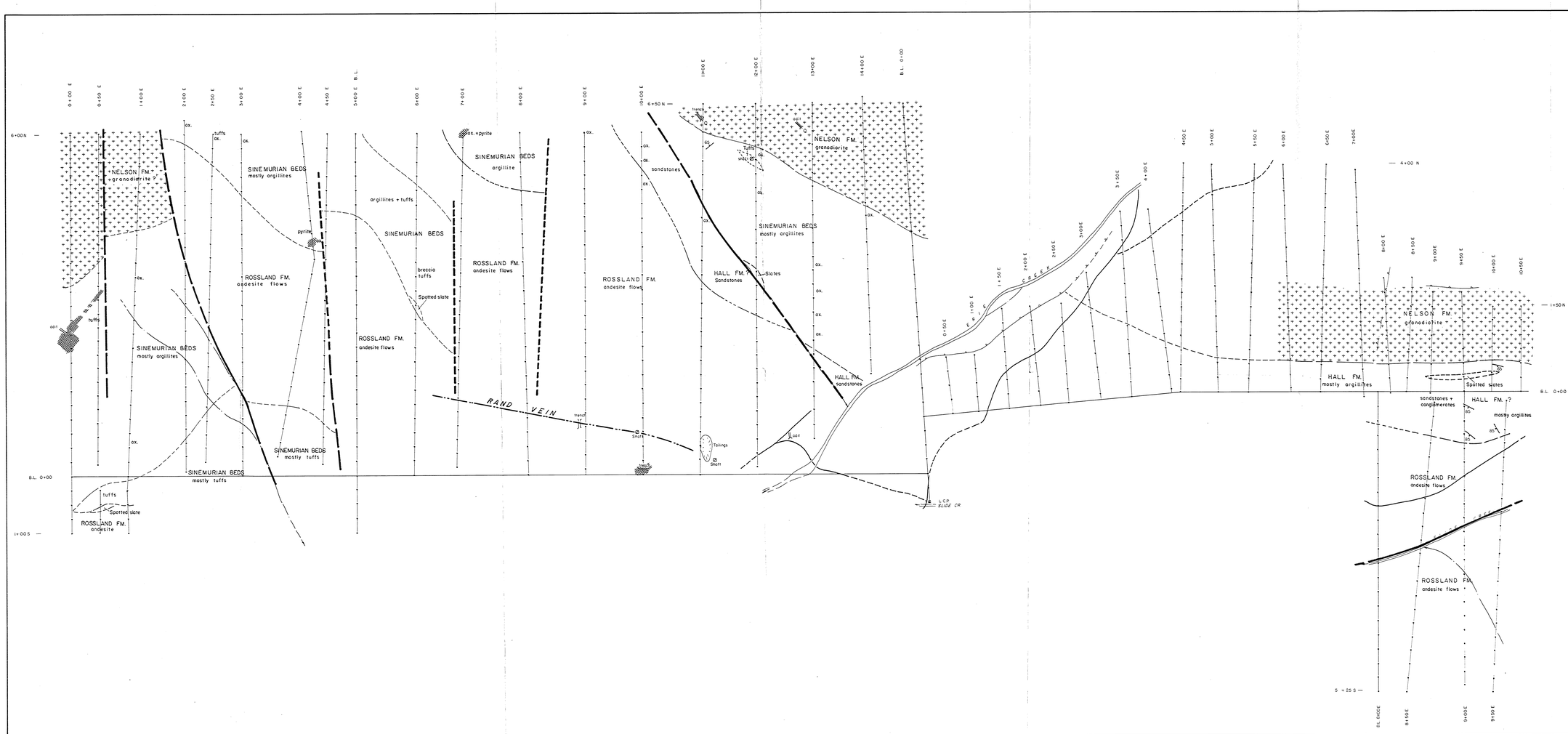
ERIE CREEK - SALMO AREA

NELSON MINING DIVISION

CLAIM MAP

SCALE	DATE	NTS	JOB NO.	SHEET NO.
1:50,000	AUGUST, 1984	84F/6	84-32	2



LEGEND

- VLF Station
- Creek
- Road
- Escarpment
- Strong ox. and mineralised zone
- Q Quartz vein
- Fault (defined , approximate , assumed)
- Geological boundary (defined , approximate, assumed)
- 85 Bedding

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,115

GEOLOGY BY Z.A. SZWANSKI

To accompany geochemical & geophysical report by David G. Mark , Geophysicist, July 1984

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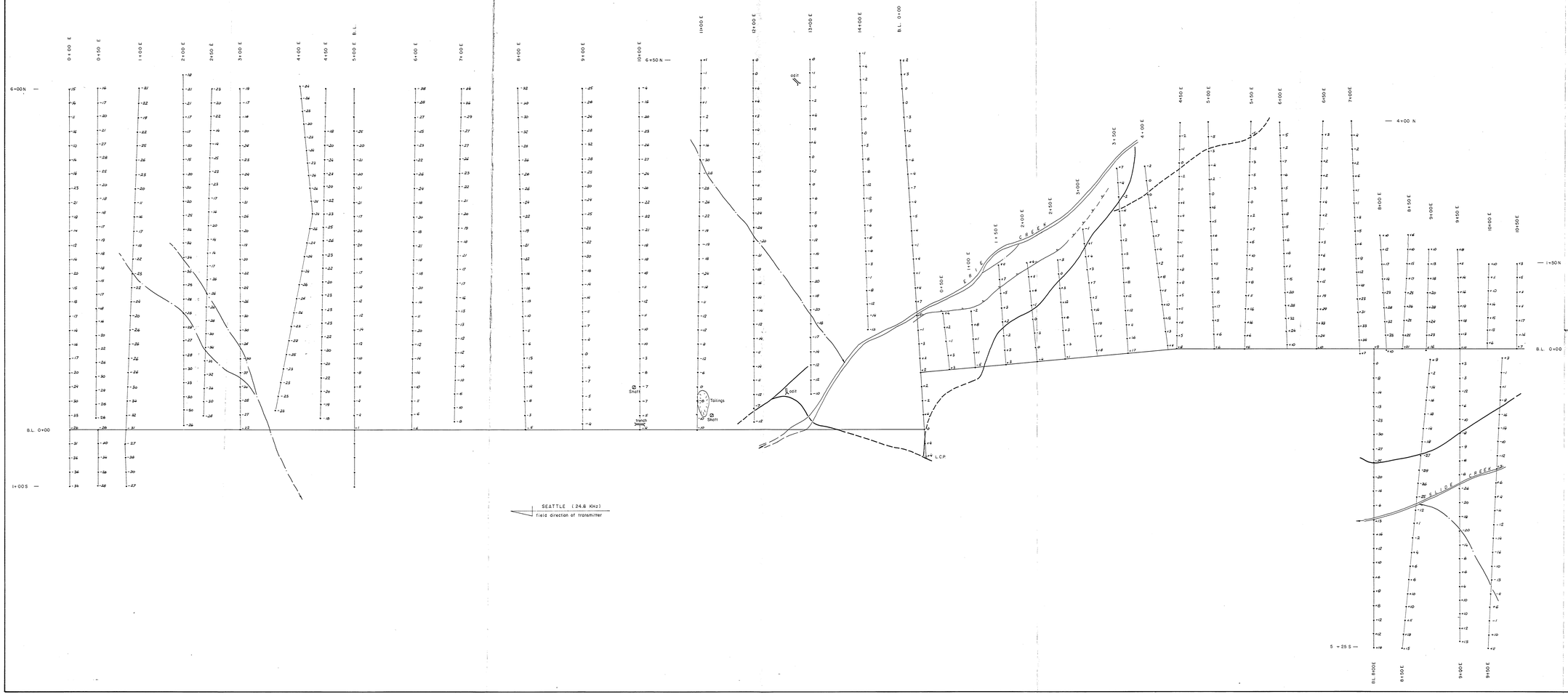
GEOLOGICAL SKETCH

Drawn by	Date	Project No.	N.T.S.	Scale	Sheet No.
F.Y.C.	July 1984	84-32	82F-6W	1:2500	3



LEGEND

- VLF Station
- Creek
- Road
- Escarpment

To accompany geochemical & geophysical report by D.G. Mark, geophysicist, July, 1984.

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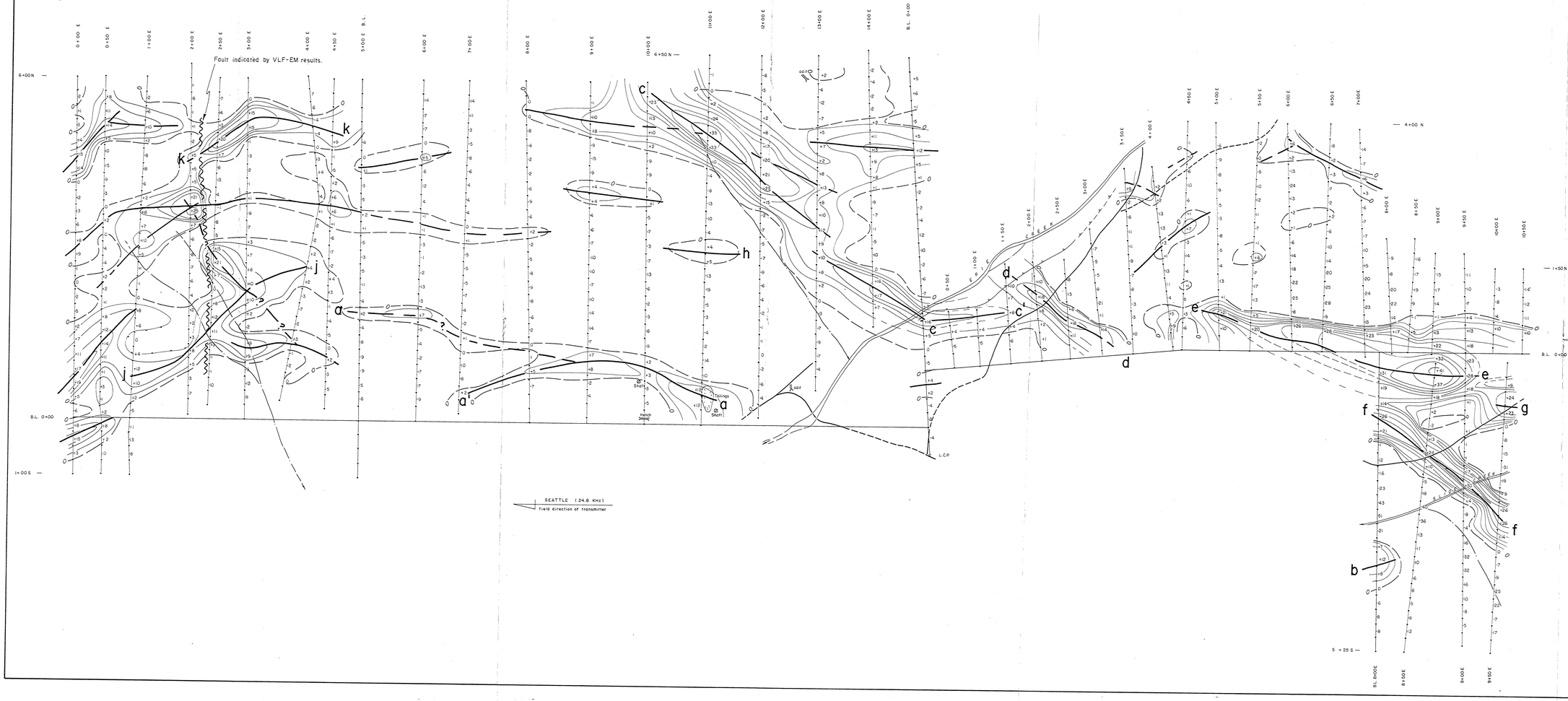
VLF-EM SURVEY

RAW DATA

Drawn by:	Date:	Project No.	N.T.S.	Scale	Sheet No.
A.S.	July 1984	84-32	82F-6W	1:2500	4


Fault indicated by VLF-EM results.
SEATTLE (24.8 KHz)
field direction of transmitter
LEGEND
VLF Station
Creek
Road
Escarpment
VLF-EM Contours at 4° interval
VLF-EM Conductors
GEOLOGICAL BRANCH
ASSESSMENT REPORT
13,115
To accompany geochemical & geophysical report by David G. Mark, Geophysicist, July 1984
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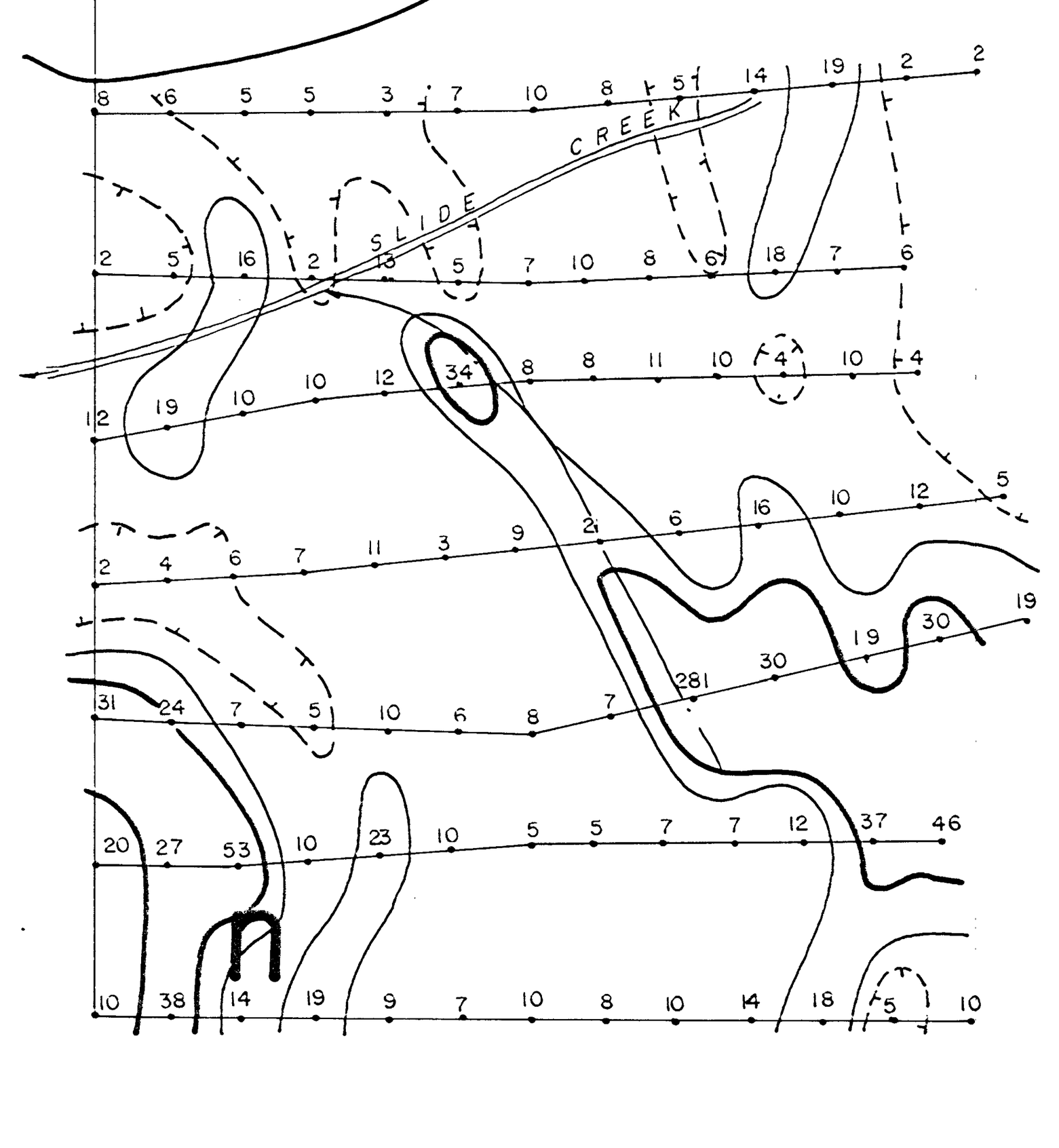
SALMO AREA
NELSON M.D., B.C.
VLF-EM SURVEY
FRASER FILTERED DATA AND CONTOURS
Drawn by: A.S.
Date: July 1984
Project No. 84-32
N.T.S. 82F-6W
Scale 1:2500
Sheet No. 5



0 50 100 200 METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,115

To accompany geochemical & geophysical report by David G. Mark, Geophysicist, July 1984

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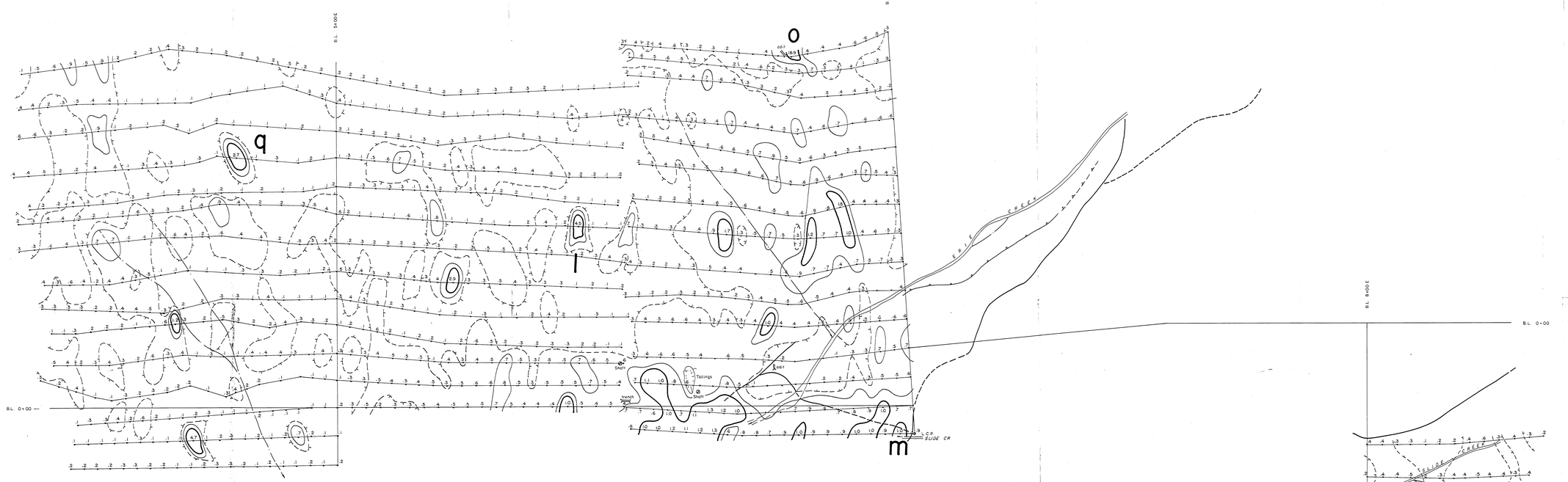
SOIL GEOCHEMISTRY SURVEY

ARSENIC

DATA AND CONTOURS

Drawn by:	Date:	Project No.	N.T.S.	Scale	Sheet No.
F.Y.C.	July 1984	84-32	82F-6W	1:2500	6



LEGEND

- Soil sample location
- Creek
- Road
- Escarpment
- 12 Silver in ppm

Background	.31 ppm
Sub-anomaly	.64 "
Anomaly	.97 "

0 50 100 200 METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,115

To accompany geochemical & geophysical report by [illegible], Geologist, July 1984

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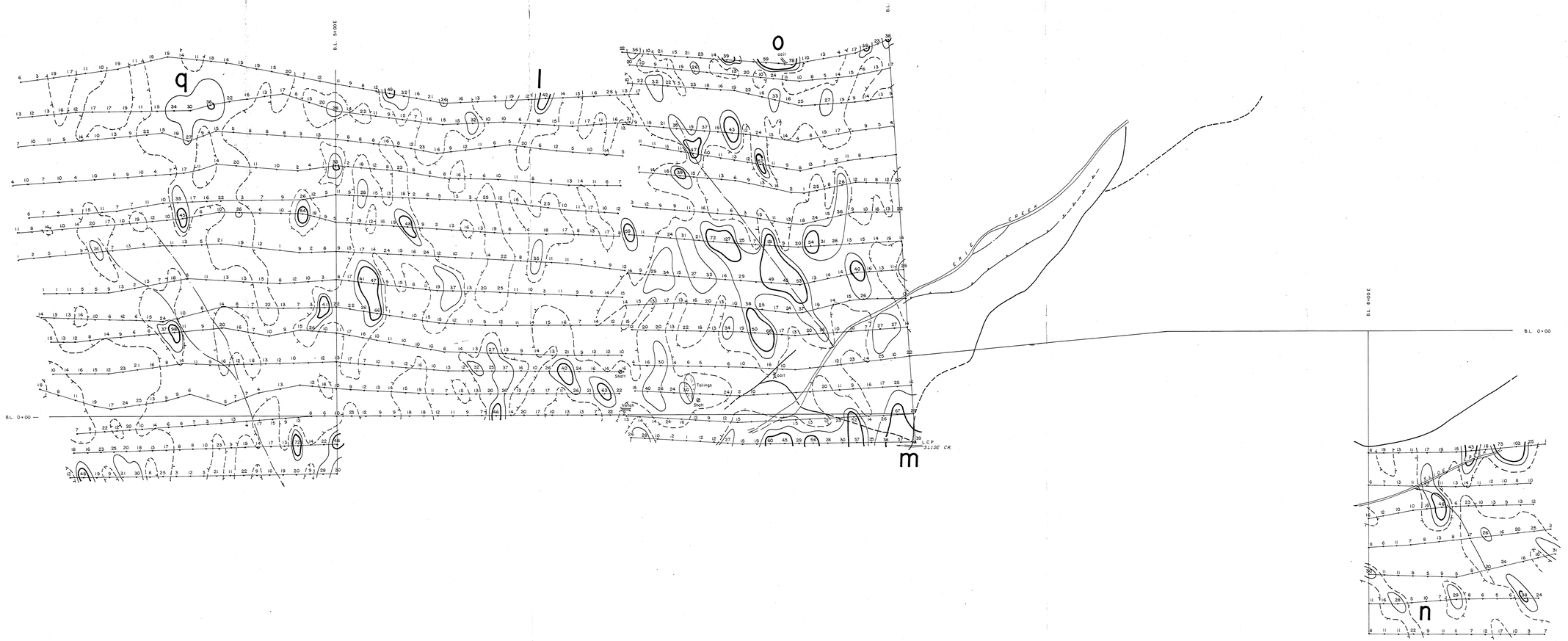
SOIL GEOCHEMISTRY SURVEY
SILVER
DATA AND CONTOURS

Drawn by:	Date:	Project No.	N.T.S.	Scale	Sheet No.
F.Y.C.	July 1984	84-32	82F-6W	1:2500	7



LEGEND

- Soil sample location
- Creek
- Road
- Escarpment
- 41 • Pb in ppm

- Background 14 ppm
- Sub-anomaly 26 "
- Anomaly 38 "

0 50 100 200 METRES

13,115

To accompany geochemical & geophysical report by Donald Mark Geophysicist, dated May 4

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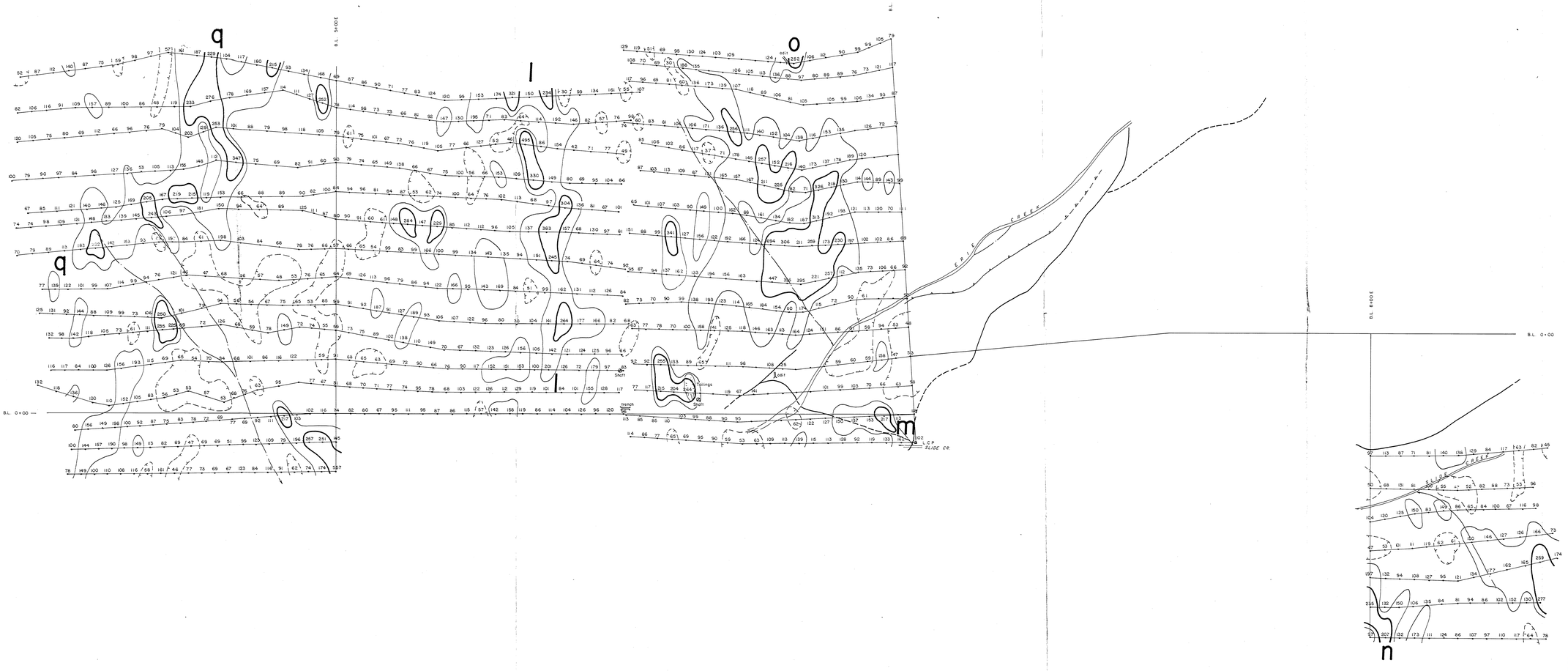
SOIL GEOCHEMISTRY SURVEY
LEAD
DATA AND CONTOURS

Drawn by:	Date:	Project No.	N.T.S.	Scale	Sheet No.
F.Y.C.	May 1984	84-32	82F-6W	1:2500	8



LEGEND

- Soil sample location
- Creek
- Road
- Escarpment
- 215• Zn in ppm

Background	66 ppm
Sub-anomaly	135 "
Anomaly	204 "

0 50 100 200 METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,115

To accompany geochemical survey report by David G. Mark, Vancouver, B.C., July 1984

GEOTRONICS SURVEYS LTD.

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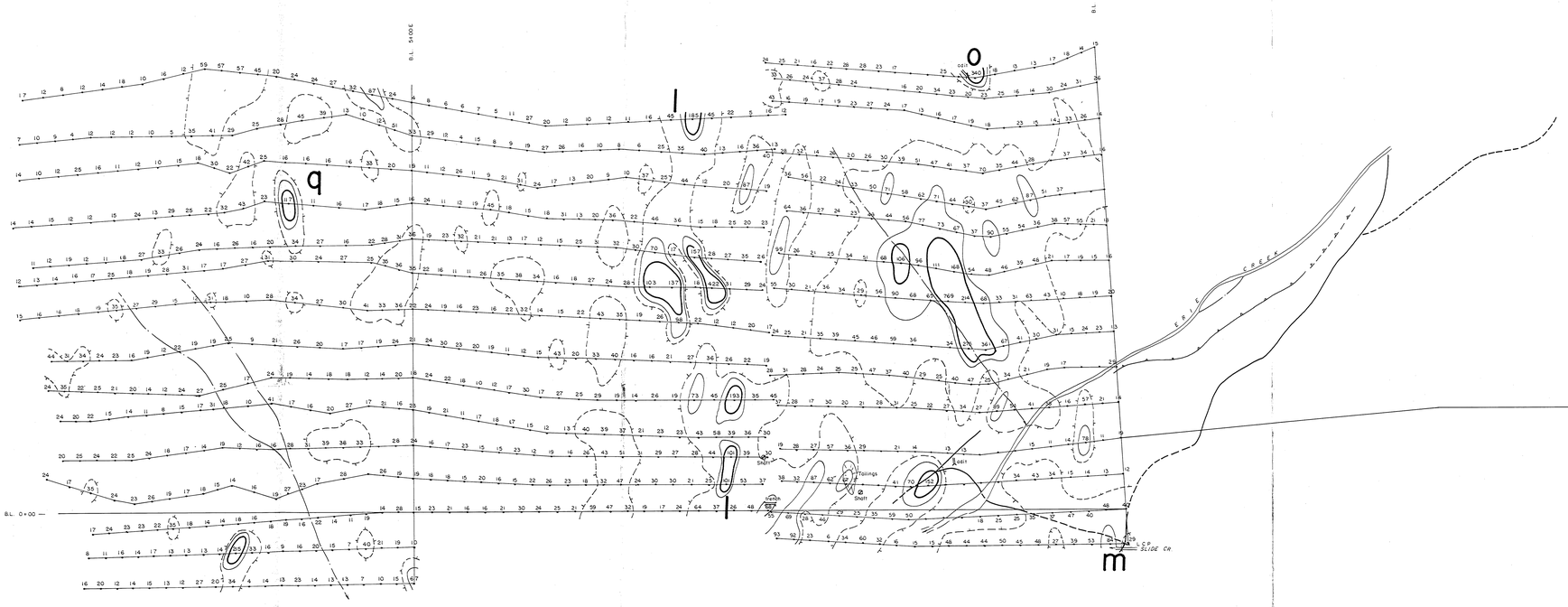
NELSON M.D., B.C.

SOIL GEOCHEMISTRY SURVEY
ZINC
DATA AND CONTOURS

Drawn by:	Date:	Project No.	N.T.S.	Scale	Sheet No.
F.Y.C.	July 1984	84-32	82F-6W	1:2500	9



LEGEND

- Soil sample location
- Creek
- Road
- Escarpment
- 50- Cu in ppm

- Background 31 ppm
- Sub anomaly 65 "
- Anomaly 99 "

0 50 100 200 METRES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,115

To accompany geochemical & geophysical report by David G. Mark, Geophysicist, June 1984

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HOMESTEAD RESOURCES INC.

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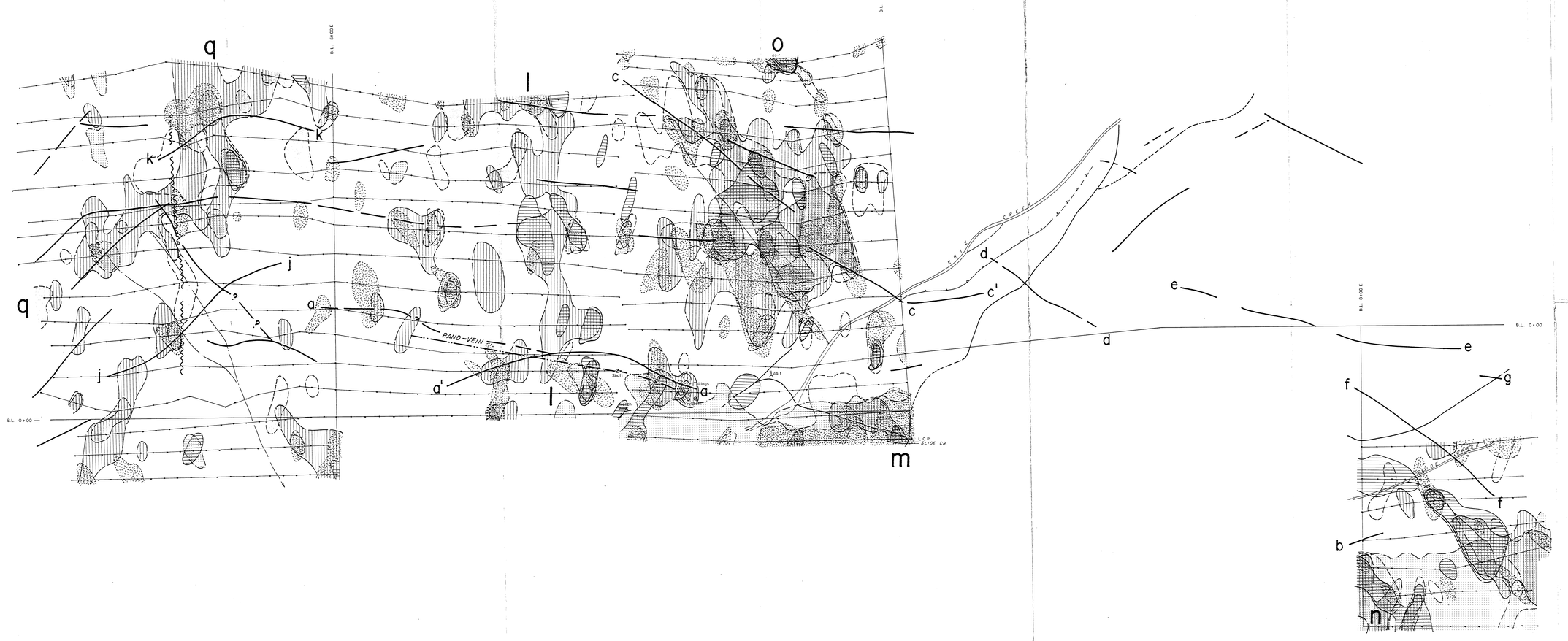
SALMO AREA
NELSON M.D., B.C.

SOIL GEOCHEMISTRY SURVEY

COPPER

DATA AND CONTOURS

Drawn By	Date:	Project No.	N.T.S.	Scale	Sheet No.
F.Y.C.	July 1984	84-32	82F-6W	1:2500	10



LEGEND

- Soil sample location
- Creek
- Road
- Escarpment
- VLF-EM Conductors.
- Cu sub-anomaly and anomaly
- Pb " " "
- Zn " " "
- Ag " " "
- As " " "

0 50 100 200 METRES

GEOCHEMICAL ASSESSMENT REPORT

13,115

To accompany geochemical & geophysical report by David G. Mark, Geophysicist, July 1984

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SOIL GEOCHEMISTRY SURVEY
COMPILATION MAP

Drawn by	Date	Project No.	N.T.S.	Scale	Sheet No.
P.Y.C.	July 1984	84-32	82F-6W	1:2500	11