83-#749-12032

Geological and Geochemical Report on the

GRAN 7 Claim

Owned and Operated By

BP Minerals Limited

Omineca Mining Division

NTS 93F/3~~W~~E

Located Approximately 13 km South Southwest of

Capoose Lake

Longitude 125°12', Latitude 53°12'

M. Smith
Project Geologist

Dr. S.J. Hoffman
Geochemist

BP Minerals Limited
November 14, 1983

BPVR 83-6

Summary

The GRAN 7 Claims were evaluated by a reconnaissance geological survey and a grid geochemical survey, using topofil and compass control. Soil samples were collected at 100 metre intervals on 200 metre line spacings, stream sediments were collected at some line intersections with drainages.

The anomalous feature of the soil geochemistry was a gold drainage anomaly which followed the drainage from north to south claim boundary and was also located in soils at several localities. Anomalous levels in copper, lead, zinc, silver, and nickel were associated with a magnetite skarn intrusion which trends southeast through the claims.

In addition to the magnetite skarn, epidote-garnet-tourmaline alteration noted in andesitic ash tuffs along the southern claims boundary, along with feldspar-epidote veining, suggests a heat source to the south, perhaps coeval to the emplacement of the magnetite skarn. Two outcrop chip samples from the skarn returned low contrast silver and base metal anomalies.

The geological reconnaissance indentified an alteration environment similar to that of a major silver prospect 7 km to the north.

Recommendations

1. The magnetic skarn zone and its projected extension to the west should be fully evaluated using a systematic soil geochemical survey at a density of 50 m X 100 m, complimented by detailed geological mapping.

2. The grid survey should be continued to the south to determine if the LAID claims are associated with more significant gold anomalies than are found on the southernmost line of the present survey.

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Introduction

The GRAN 7 Claims were acquired in August 1982 to protect the western extension of a multielement soil anomaly on the GRAN 6 claims. The present study was done to evaluate those anomalies and represents a preliminary evaluation of the soil geochemistry and geology.

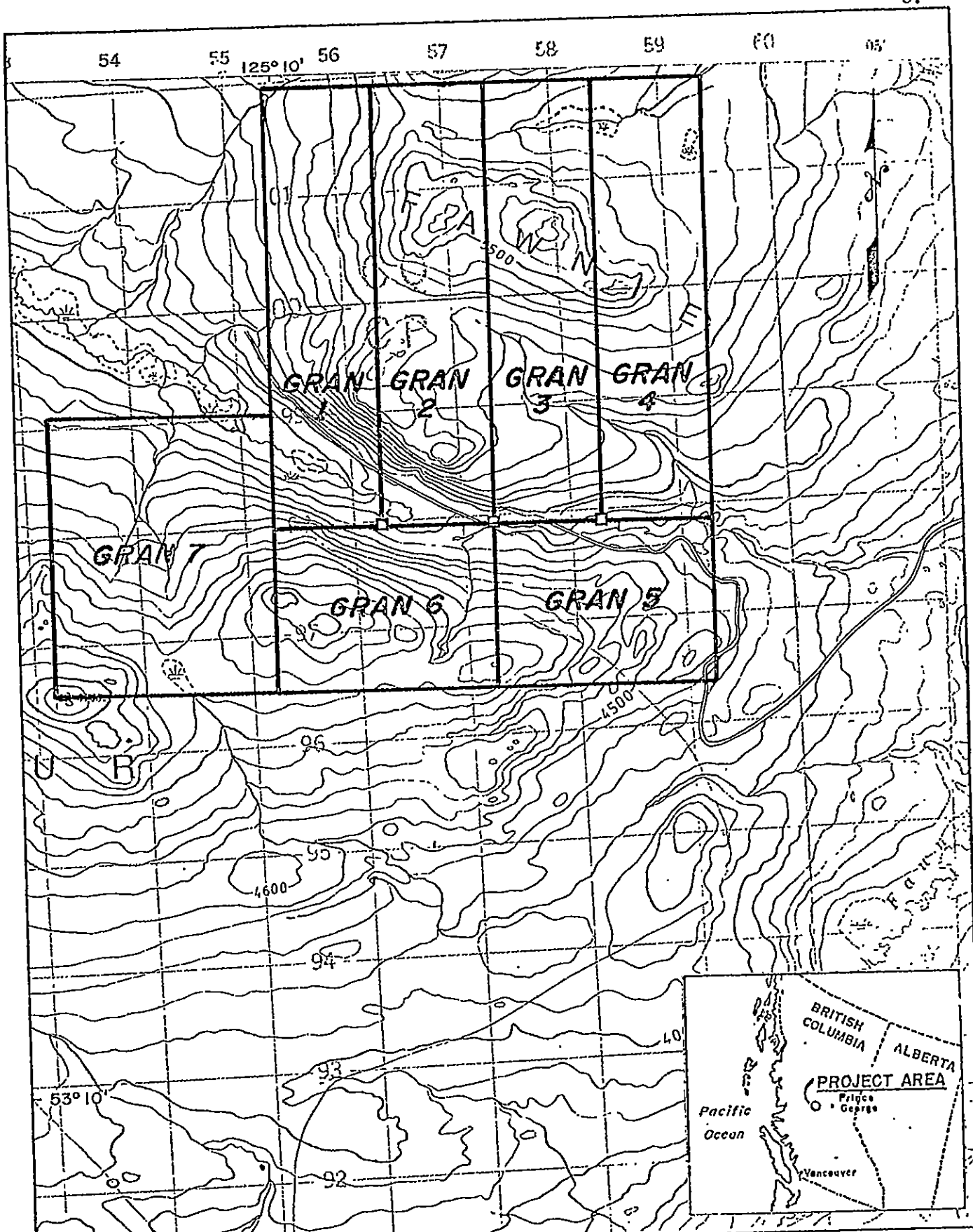
Objectives of the present survey were to evaluate and define the soil anomalies on the north eastern claim boundary, to do a reconnaissance soil survey and geological mapping along soil lines over the whole claims group, and to investigate a strong magnetic anomaly on the claims.

Work Program in 1983

A program of grid establishment, reconnaissance geochemical grid sampling and geological mapping was carried out on the claims during the period August 20-25, 1983. The program was conducted by 3 BP Minerals geologists.

A north south baseline was established along the eastern claims boundry with origin at the southern limit of the claims. To provide continuity with the geochemical survey grid on Gran 6 to the east, the west tie line on that grid was used as the baseline for the present survey. A paralel tie line was established along the west boundary of Gran 7 some 1700 metres to the west. The length of these control lines is 2700 metres, and both intersect the northern claims boundary. The control lines are blazed, flagged, and marked with aluminum tag markers at 100 metre intervals. Soil grid lines were established at 200 metre intervals from the baseline, over most of the claim group, using compass and topofil. These lines are also flagged and marked with aluminum tags denoting location and soil sample number every 100 metres.

A total of 203 soil, 10 stream sediments, and 3 rock samples were collected for analysis. Geological reconnaissance mapping was carried out while soil sampling, and representative hand specimens taken of each lithology.



BP Minerals Limited

GRAN CLAIMS
CAPOOSE LAKE PROJECT
CLAIM LOCATION MAP

SCALE 1 : 50,000		NTS 93F/3	FIG 1
529-81-6	DATE NOV. 1983	PROJ 529	
To accompany report BPVR 83-6			

Location and Access (Fig. 1)

The Gran 7 Claims are located in the Fawnie Mountain Range, NTS Map Sheet 93F/3, 115 km southwest of Vanderhoof, B.C.

The LCP of the claims is situated at UTM co-ordinates 355000E, 589900N, west of the Gran 6 claim group.

Access is via the Kluskus Forestry Road to a point 142.5 km from the Engen Mill, thence by the Granges access road northwest for 12 km. The LCP for the Gran 7 claims is 150 metres south of the road.

Land Status

The Gran 7 claims are wholly owned by BP Minerals Limited, and consist of 20 contiguous units in one claim block. The recording and expiry dates for the claims is tabulated below.

Claim Name	Units	Record No.	Recording Date	Expiry Date
GRAN 7	20	4777	27/09/82	27/09/86

Geology

Regional Geology

Due to difficult access and extensive overburden, little regional mapping or mineral exploration has been done in the area. The only government mapping available is GSC Memoir 324 (Tipper, 1963) and GSC Maps 1424 and 1505A.

Oldest rocks in the area are Jurassic andesitic volcanic rocks and minor interbedded argillite which was assigned to the lower part of the Hazelton Group in recent compilation maps (GSC Maps 1424A, 1505A). These rocks had previously been mapped as Takla Group by Tipper. Conformably overlying these rocks is a sequence of Middle Jurassic interbedded greywacke, shales, pyroclasitc rocks and rhyolite to andesite flows which are also assigned to the Hazelton Group. The Granges Capoose Lake bulk silver deposit is hosted by rhyolite breccias and argillites of this sequence.

Intruding the Hazelton rocks are cretaceous and/or Tertiary stocks and batholiths of granitic to dioritic composition..

Geology of the Gran 7 Claims

As stated previously, the objectives of the present survey were primarily reconnaissance in nature, conducted on the soil grid lines. Chip samples and outcrop samples were routinely collected from mineralized outcrops and representative lithologies. The geological map (Fig. 2) is located in the pocket of this report.

In general, the geology of the claims group consists of probable Hazelton Group andesitic ash to lapilli tuff, of Middle Jurassic age. These volcanics are cut by a southeast trending magnetite-epidote skarn, averaging 300 metres in apparent width which outcrops on the western claim boundary.

Description of Map Units

Hazelton Group

Andesitic tuff - Map Unit 1: This unit is a dark olive green, grey weathering, fine grained, mainly lapilli tuff, with lapilli from several mm to 3 cm; andesitic to basaltic in composition, in a fine grained andesitic matrix. The unit frequently exhibits epidote alteration, occuring as disseminations and infrequent fracture fillings. On the south claim boundary, these rocks are more altered, showing horn-felsing, feldspar-epidote veining, and minor garnet and tourmaline in one location.

Magnetic Skarn - Map Unit 2: This unit occurs as a sill or dike like intrusive body consisting mainly of massive magnetite with up to 30% epidote. Exposed only on the western claims boundary in 2 outcrop areas, this unit is mapped on the basis of its strong magnetite expression. No contact relationships between the skarn and the andesite tuff were observed. The unit trends southeast across the south-west corner of the claims, averaging 300 metres in apparent width. Two outcrop chip samples of the unit returned an average 6 ppm silver and minor gold.

Structure

No bedding or other attitudes were noted during the present study. The skarn unit appears to pinch out at its southern end, as no compass deviation was noted on L3+00N.

Due to time limitations no work was done to define the width or extent of the skarn to the west.

Alteration

As noted in the unit description of the andesitic tuffs, the unit is epidote altered in most locations. In addition, the rocks in the southwest corner of the claim group exhibit feldspar-epidote veining accompanied by aplite veins, minor garnet and tournaline, and minor pyrite and pyrhotite. At one outcrop, weak hornfelsing was noted.

Economic Geology

No economically significant mineral occurrences were noted during the present survey. Several significant geochemical anomalies, discribed in the geochemical report are co-incident with the more altered rocks in the southwest quarter of the claims block. Although two outcrop rock chips of the magnetite skarn didn't return significant gold or silver values, this unit should be investigated in more detail.

The gold soil and stream sediment anomaly (Fig. 4G) is economically significant in that the anomalous values increase to the south, to a high of 160 ppb in one soil sample on the southernmost soil line. It is this same area which is underlain by rock alteration similar to the that of the Granges bulk silver prospect, 7 km to the north.

Sample Collection and Analysis

Soil samples were taken of the top of the B soil horizon at 100 metre intervals along lines spaced at 100 metres to 200 metres apart. Horizontal distances were not generally corrected for surface slope, and lines were positioned using topographic features and tie lines. Coordinates of the station were noted on an aluminum tag which was affixed to a nearby tree. The sample number was also noted on the aluminum tags.

Samples carefully avoided organic-rich material and were placed in Kraft paper envelopes (10 cm X 23 cm) and allowed to air dry at ambient temperatures. Samples were submitted to Acme Analytical Laboratories in Vancouver, B.C., for ICP (inductively coupled plasma) analysis of about 30 elements. Analytical procedures are reported in Appendix 1, and a list of analytical data indexed to field technical information and coordinates is found in Appendix 2.

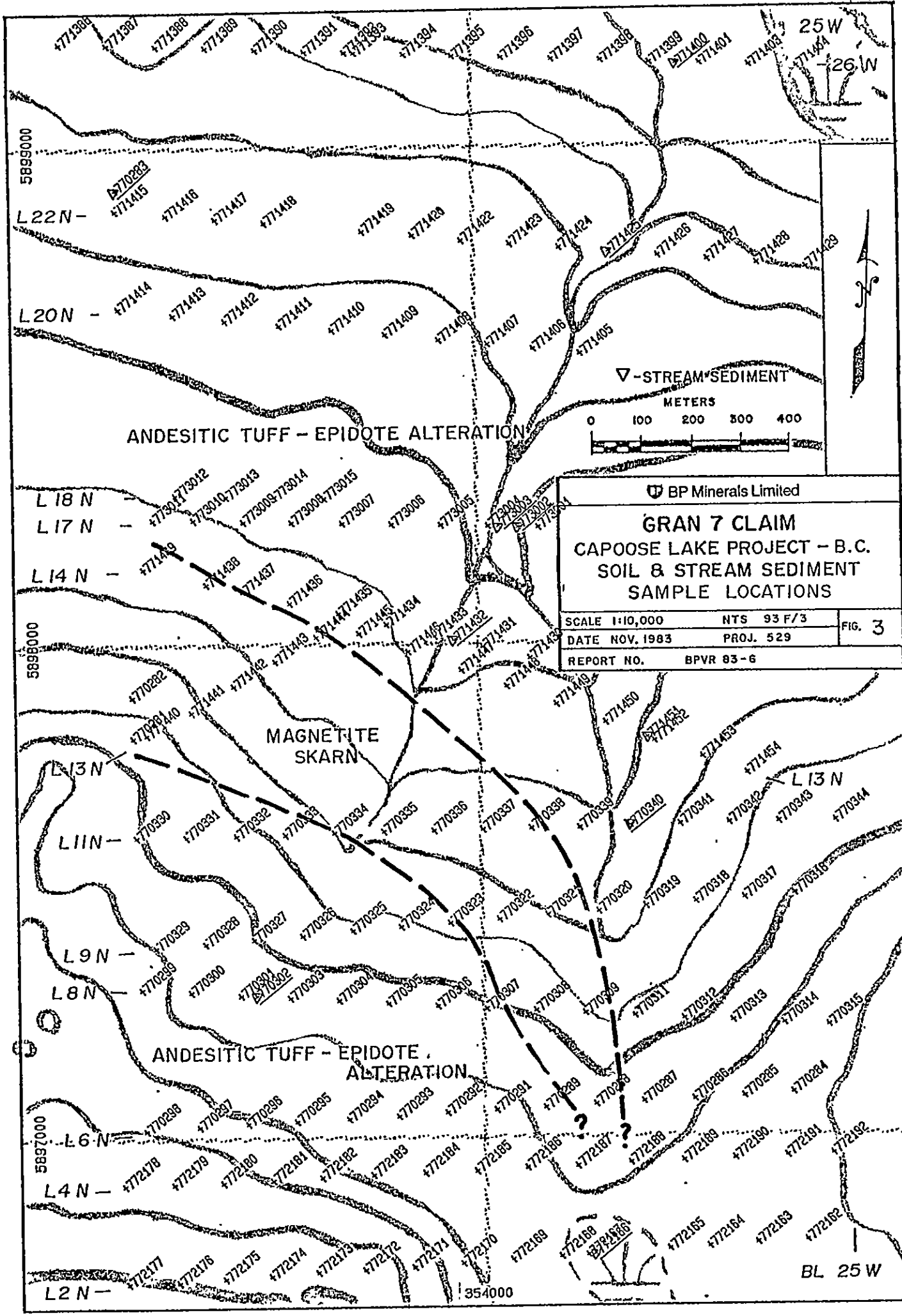
Method of Data Evaluation

Appendix 2 lists the field technical data and analytical results in three parts, appropriately numbered in the upper right hand corner of each page. Histograms were drawn to summarize the distributions of metal values in soils (Plate 1 in pocket). Selection of arithmetic or logarithmic scales is determined by reference to the detection limit for an element and a number 25X that detection limit. If the maximum values is less than 25X the detection limit, the hisogram is calculated by incrementing the detection limit value

arithmetically up to 25X the detection limit. If the maximum value exceeds 25X the limit, both arithmetic and logarithmic scales have been plotted, the scale increments being a constant factor of the detection limit or the standard deviation interval.

In view of the abnormally great influence exceptionally high values have on the construction of a histogram, data sets have been truncated (T on Plate 1) where this is prudent (i.e. where the maximum value is >25X the detection limit and truncation does not leave the remaining maximum value <25X the detection limit). Truncated data have been replotted in arithmetic or logarithmic format; all values greater than the mean plus 1.9 standard deviation interval truncation limit being plotted in the greatest concentration class interval.

Histograms are interpreted subjectively to arrive at size coding intervals for the dots shown on Fig. 4. The largest dots represent the most anomalous conditions; numbers printed next to the largest dots represent the maximum values of the survey. The second largest dots represent weakly anomalous values. Dot selection otherwise attempts to divide the data into recognizable populations. Each population is subdivided by dot size selection to highlight the upper approximate 5 and 10 percentiles of the population. Anomalous conditions do not necessarily have to be indicated by the very largest dots, but can also be defined relative to the majority of surrounding lower values. The largest dots are considered anomalous under all conditions, save if their distribution is random throughout the survey area.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L9N
L8N
L6N
L4N
L2N
5899000
5898000
5897000
354000
BL 25 W
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT SAMPLE LOCATIONS
SCALE 1:10,000 NTS 93 F/3
FIG. 3
DATE NOV. 1983 PROJ. 529
REPORT NO. BPVR 83-6

Description of Results

1. Introduction

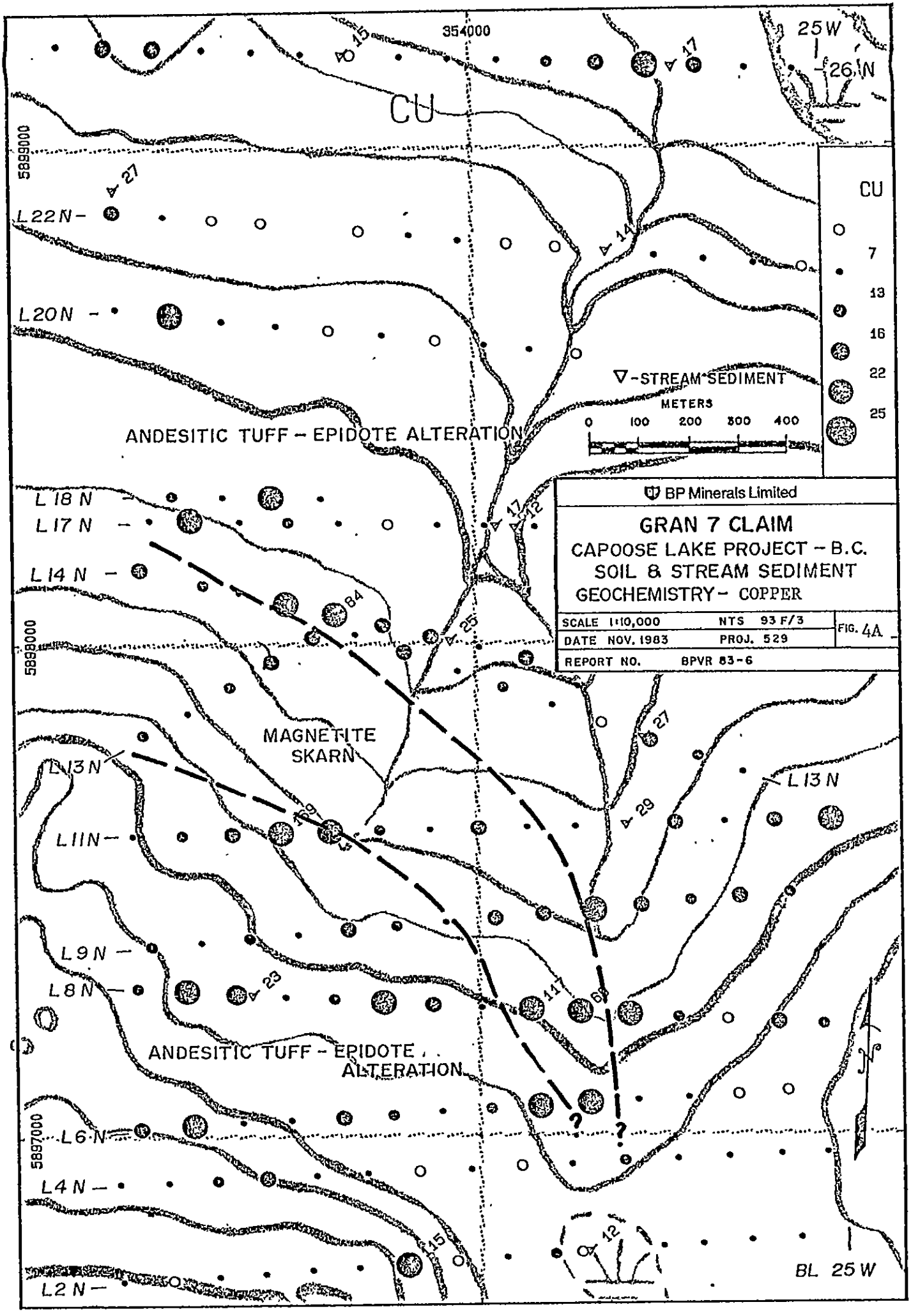
Soil and stream sediment sample locations are plotted on Fig. 3. Symbol plots illustrating trace element levels in soils are presented for ten elements which are associated with significant variations in concentration values. Stream sediment data represented by a triangle symbol on each symbol plot, are displayed in numerical format in view of the limited number of samples available on GRAN 7. Stream sediment geochemistry is described only where metal levels are unusually high. Otherwise the following descriptions refer to soil survey results.

2. Copper (Fig. 4A)

Copper values are enhanced in the west and south of the claim group. The western anomaly coincides or lies downslope of the magnetite skarn unit. The eastern anomaly is found in the source region of a tributary of the main stream draining the claim.

3. Lead (Fig. 4B)

A gradient in lead concentrations is noted across the claim, highest backgrounds lying to the south. Anomalous conditions represented by values greater than 18 ppm lead are isolated. The skarn zone is characterized by lead levels having a low to intermediate value.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L18N
L17N
L14N
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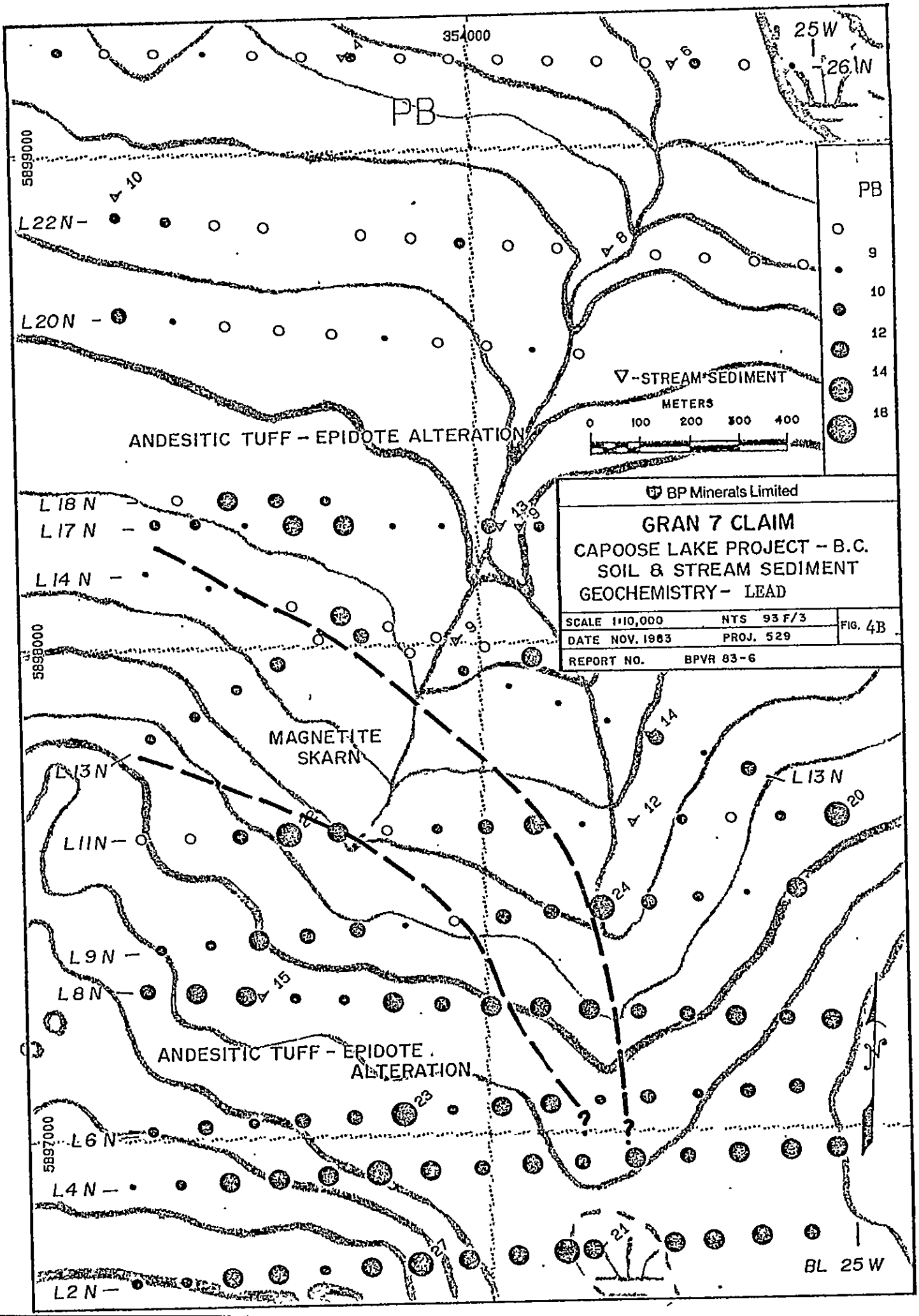
L13N
LIIN
L9N
L8N
5897000
L6N
L4N
L2N
BL 25W
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
CU
7
13
16
22
25
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - COPPER
SCALE 1:10,000 NTS 93 F/3
DATE NOV. 1983 PROJ. 529
REPORT NO. BPVR 83-6
FIG. 4A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L13N
LIIN
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L8N
5897000
L6N
L4N
L2N
BL 25W
PB
9
10
12
14
16
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - LEAD
SCALE 1:10,000
NTS 93 F/3
FIG. 4B
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6

4. Zinc (Fig. 4C)

Zinc also exhibits a marked zonation across the grid area, values being distinctly lower in the north. Zinc accumulation to the 200 to 400 ppm level characterizes the skarn zone and regions downslope, concentrating in the west-central portion of the grid. Highest zinc values correlate in position with the highest copper values.

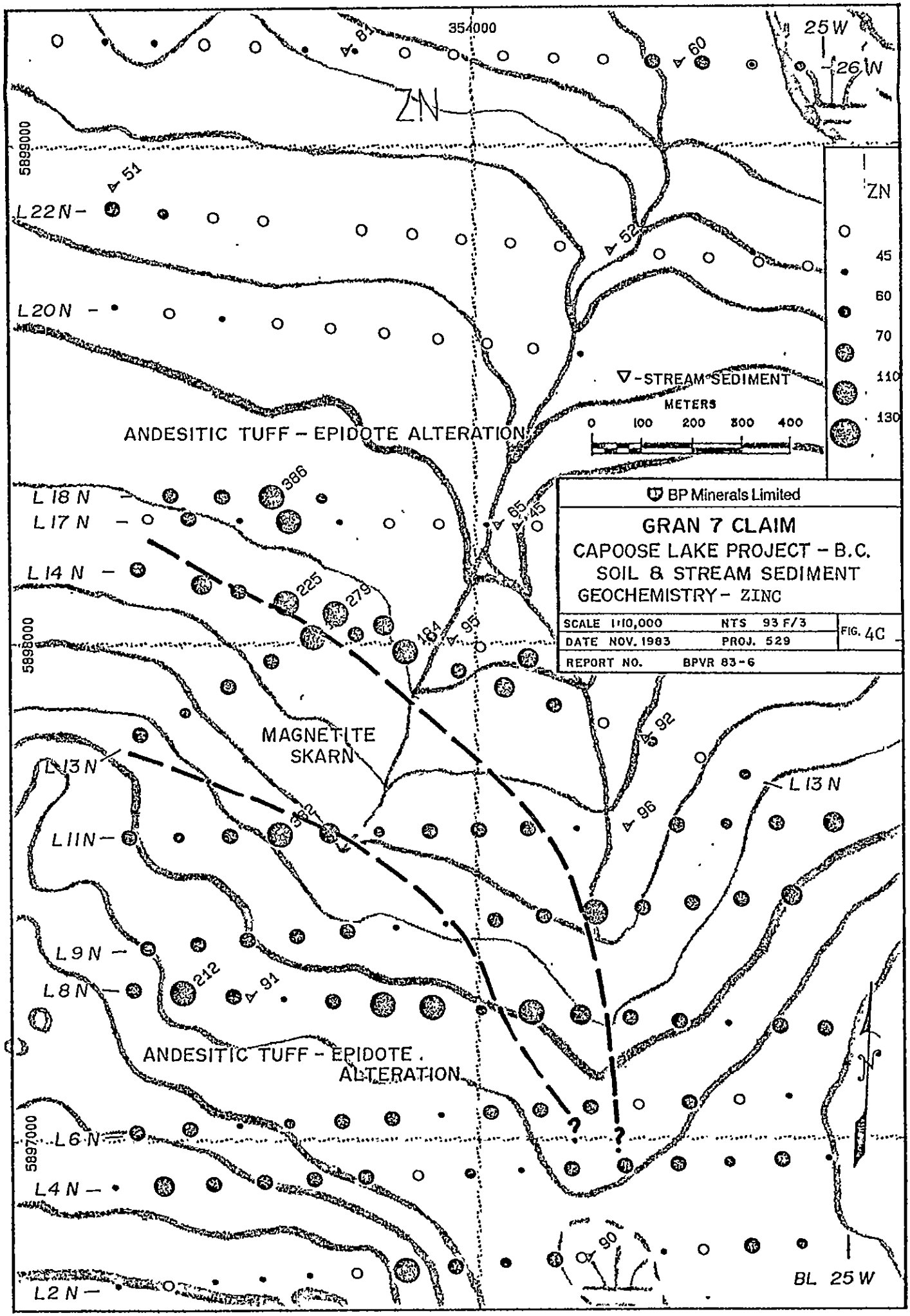
5. Iron (Fig. 4D)

The iron distribution suggests an approximate north northwest trend of high values, beginning in the centre of the grid in the south, passing through the cluster of zinc and copper-rich samples, and trending off the grid in the northwest. The geochemical feature corresponds with the location of the skarn zone or lies slightly downslope. Slightly weaker iron accumulation characterizes the western end of the grid. Both zones are defined by iron contents exceeding 3.2%.

The majority of values on the eastern half of the grid are less than 2.5% iron. Zones of high or low values crosscut local topography, suggesting they are controlled by the provinence of the overburden.

6. Manganese (Fig. 4E)

Manganese is more erratically distributed than iron. Most samples contain less than 325 ppm manganese, representing normal backgrounds expected in silicate minerals. Values exceeding this number tend to constitute isolated features which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26 W
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L8N
5897000
L6N
L4N
L2N
BL 25W
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
ZN
45
60
70
110
130
▽ - STREAM SEDIMENT
METERS
0 100 200 300 400
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - ZINC
SCALE 1:10,000
NTS 93 F/3
FIG. 4C
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6
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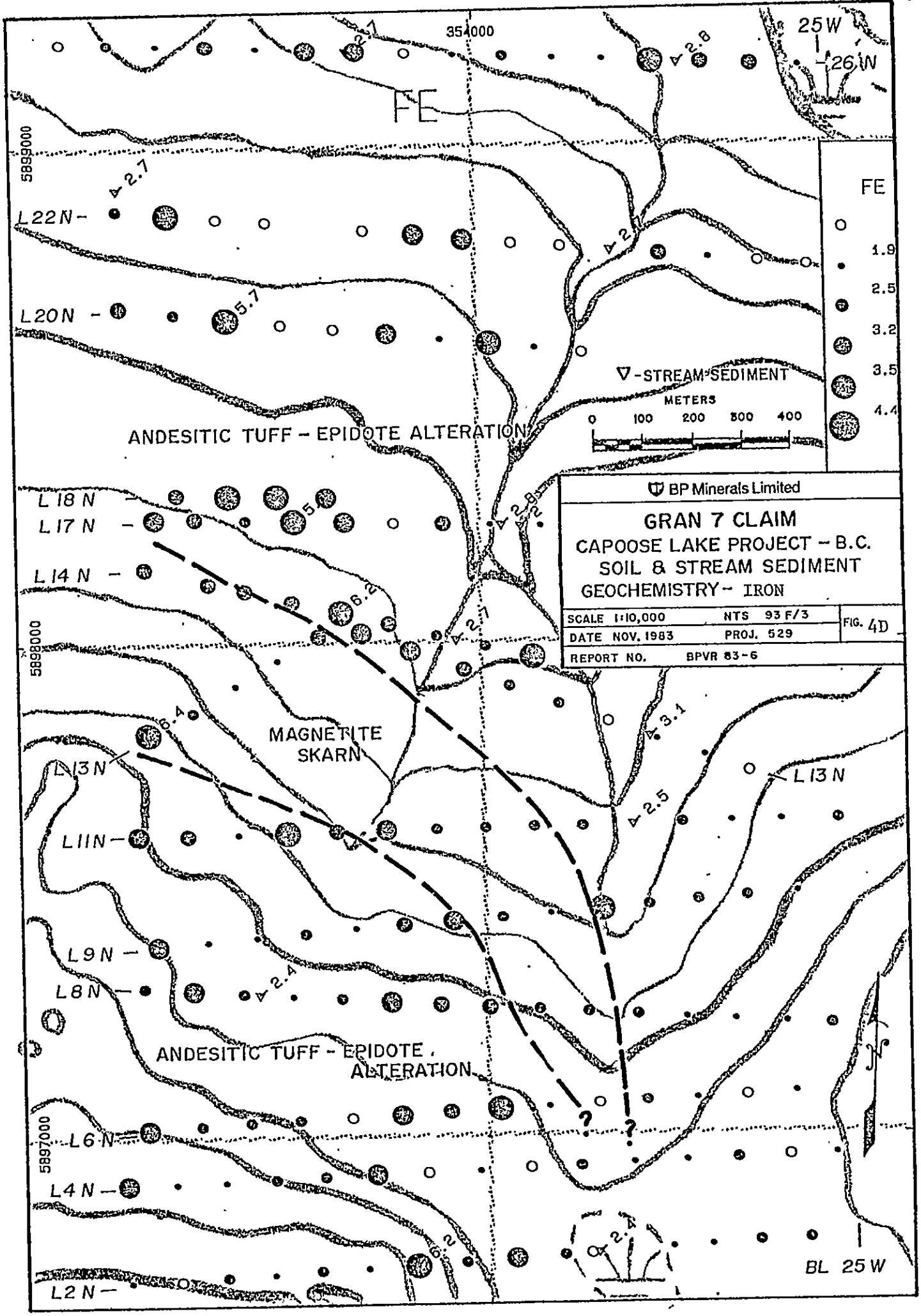
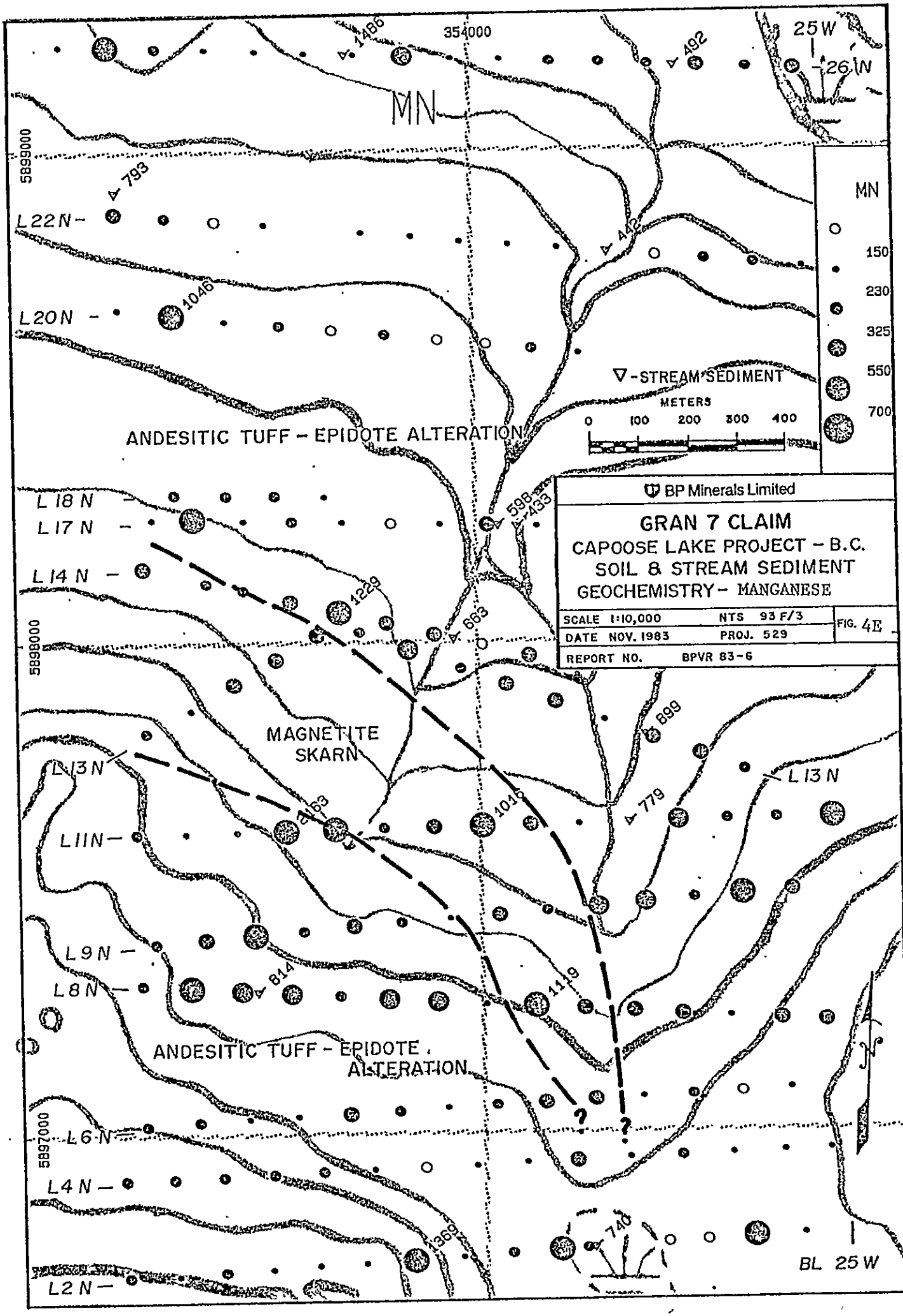
225
279
184
212
81
60
51
52
65
45
95
92
96
91
90


354000
25W
26W
FE
5899000
L22N
L20N
5.7
FE
1.9
2.5
3.2
3.5
4.4
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
ANDESITIC TUFF - EPIDOTE ALTERATION
L18N
L17N
L14N
5898000
6.2
MAGNETITE SKARN
6.4
L13N
L11N
L9N
L8N
2.4
ANDESITIC TUFF - EPIDOTE ALTERATION
5897000
L6N
L4N
L2N
BL 25W
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - IRON
SCALE 1:10,000
NTS 93 F/3
FIG. 4D
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6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L8N
L6N
L4N
L2N
1486
492
793
442
1046
598
433
1229
663
899
779
1016
1163
814
1119
740
1369
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
BL 25 W
▽ - STREAM SEDIMENT
METERS
0 100 200 300 400
MN
150
230
325
550
700
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - MANGANESE
SCALE 1:10,000
NTS 93 F/3
FIG. 4E
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6

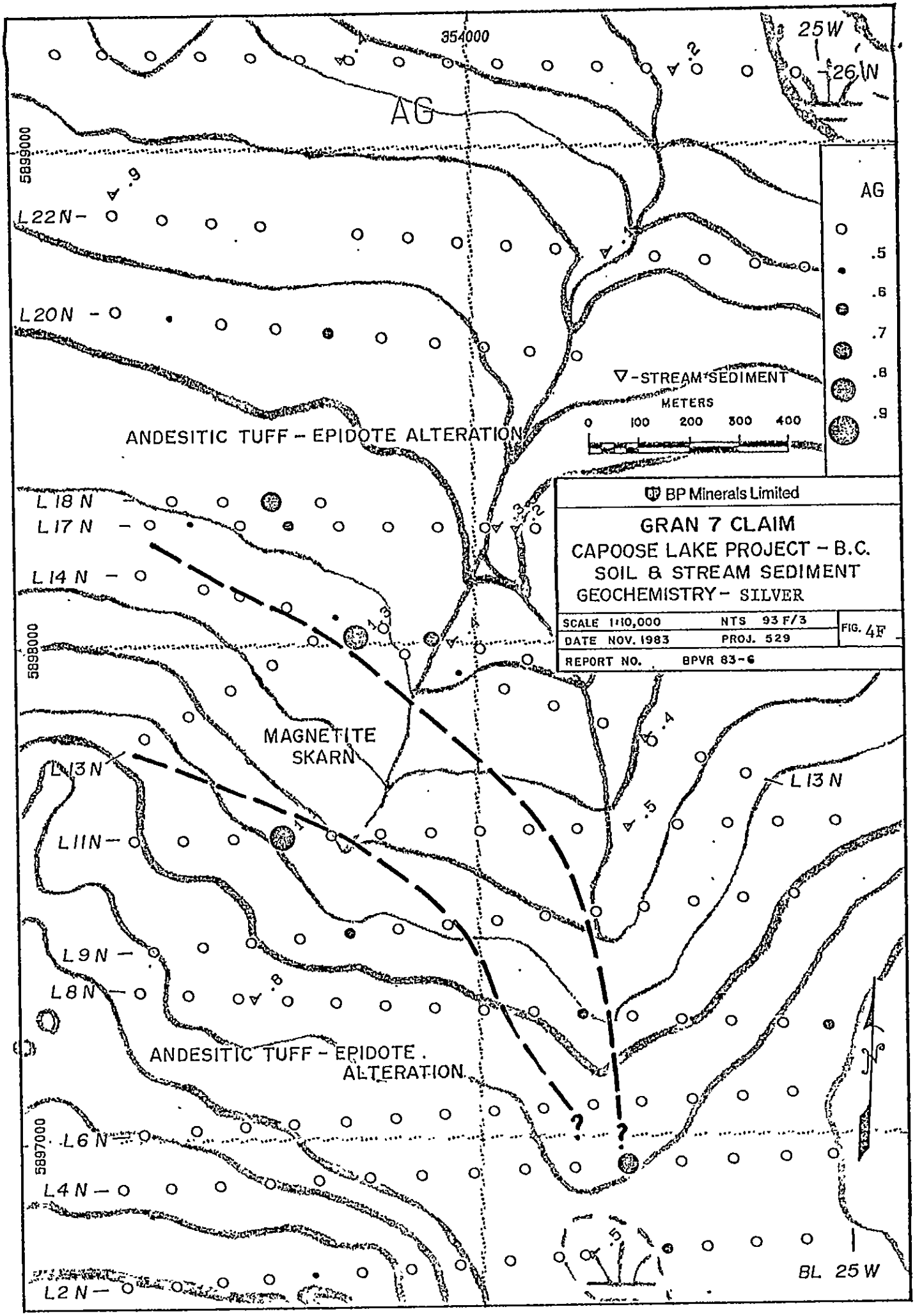
are probably related to local controls promoting manganese enrichment. Manganese has not accumulated in seepage zones adjacent to creeks. Clustering of high manganese values is noted in the west-central portion of the grid in association with the skarn zone. Manganese and iron anomalies, however, are not sympathetically distributed.

7. Silver (Fig. 4F)

Two silver values exceed 1.0 ppm. Sampling is not sufficiently detailed within the area where these silver-rich samples were taken to comment on their significance. Three of the four silver values exceeding 0.7 ppm are located near the skarn zone.

8. Gold (Fig. 4G)

Gold values on GRAN 7 are typically at the detection limit of 5 ppb. Anomalous results in soils are characteristically in isolated samples. Maximum values are in the 85 to 150 ppb range. Three stream sediment samples contain in excess of 35 ppb gold. Many of these are accompanied by enhanced gold levels in adjacent soils. The source of the gold in the drainage appears to be the east-central portion of the grid, an area remote from base metal anomalies. The source of gold in some of the samples along the southernmost line may lie on the LAID claims to the south.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ANDESITIC TUFF - EPIDOTE ALTERATION
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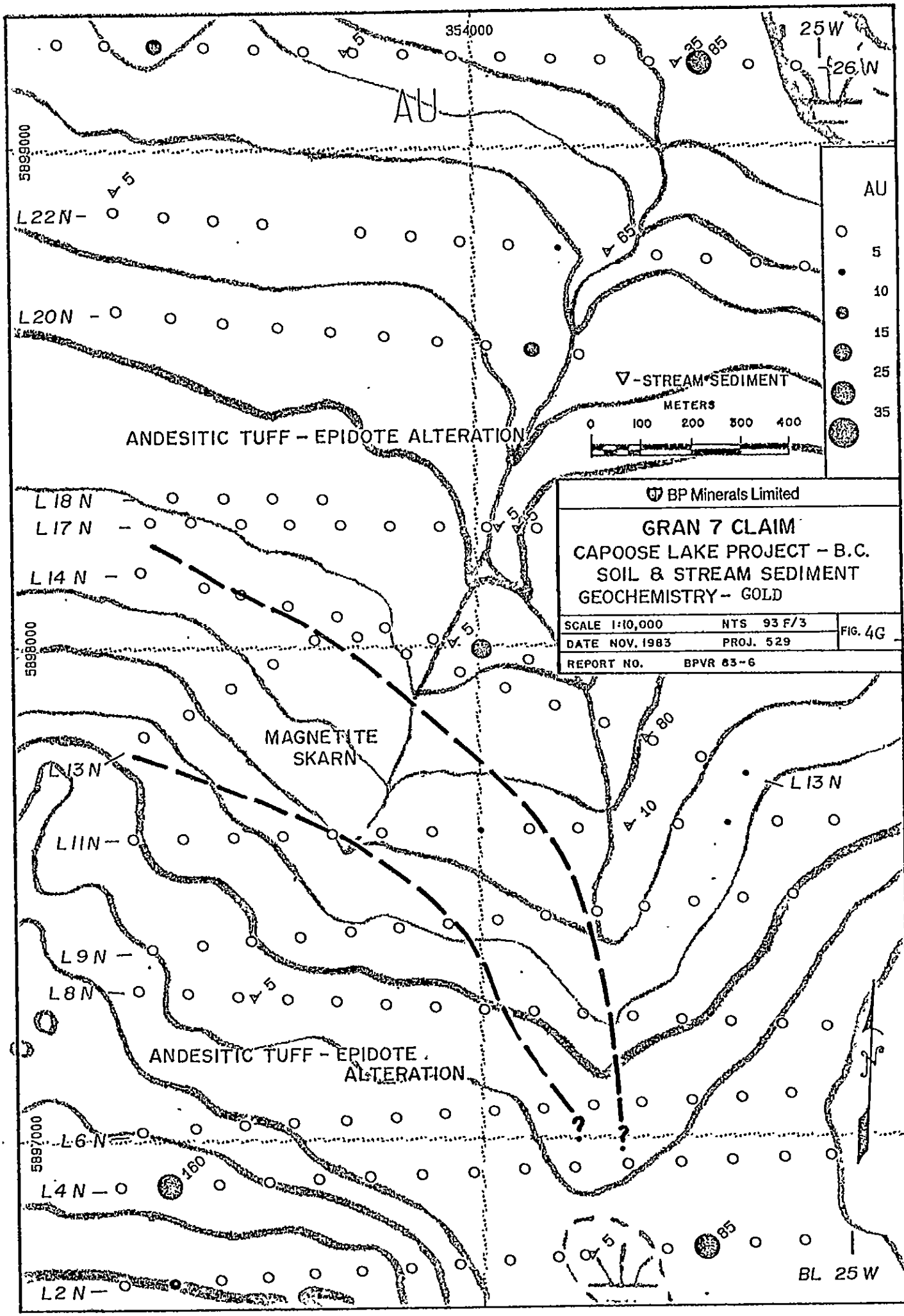
L17N
L14N
5898000
MAGNETITE SKARN
L13N
L11N
L9N
L8N
ANDESITIC TUFF - EPIDOTE ALTERATION
5897000
L6N
L4N
L2N
BL 25W
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - SILVER
SCALE 1:10,000
NTS 93 F/3
FIG. 4F
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6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▽-STREAM SEDIMENT
METERS
0 100 200 300 400
ANDESITIC TUFF - EPIDOTE ALTERATION
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - GOLD
SCALE 1:10,000 NTS 93 F/3
DATE NOV. 1983 PROJ. 529
REPORT NO. BPVR 83-6
FIG. 4G
L18N
L17N
L14N
5898000
MAGNETITE
SKARN
L13N
L11N
L9N
L8N
ANDESITIC TUFF - EPIDOTE
ALTERATION
5897000
L6N
L4N
L2N
160
BL 25W

9. Arsenic (Fig. 4H)

Arsenic distributions on the northern half of the grid resembles that of copper and zinc. Values are typically low, less than 11 ppm. A cluster of enhanced values of greater than 16 ppm is found in a zone downslope of the skarn area.

Backgrounds increase locally in the south. A distinctive geochemical unit can be defined along the southernmost three lines by values exceeding 20 ppm. Average arsenic values in the south are greater than 11 ppm. A weak correlation is noted between the arsenic and iron distributions.

10. Vanadium (Fig. 4I)

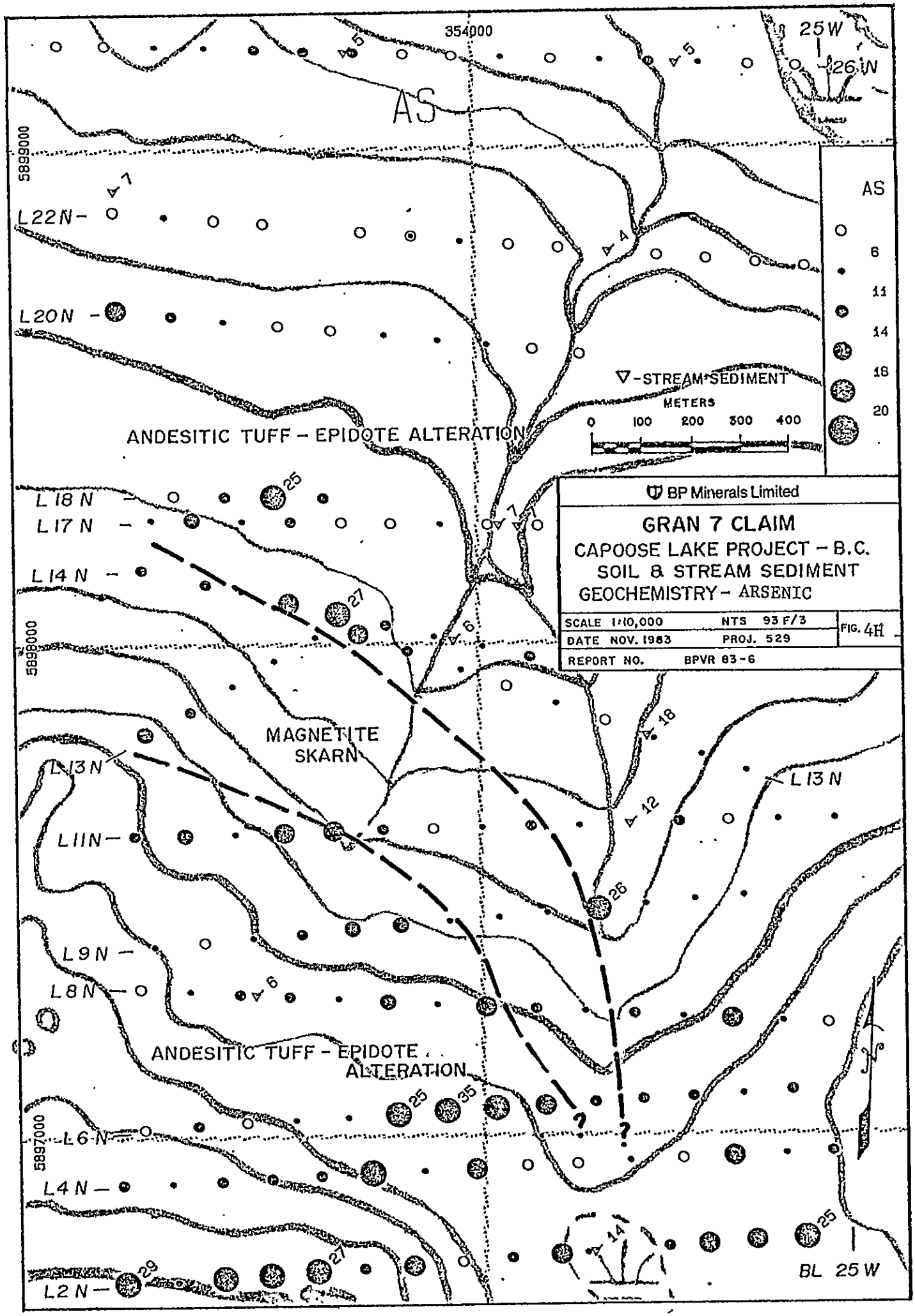
Vanadium follows iron. Highest values cluster in the northwest, whereas lowest values are found on eastern portions of the grid.

11. Calcium (Fig. 4J)

Calcium contents in soils are greatest on central portions of the grid, rising from values of less than 0.25% to greater than 0.5%, to a maximum of 1.04%. Calcium enrichment in the west correlates with the skarn unit, whereas a bedrock association cannot be suggested in the east.

12. Other Elements

The distribution of other elements are not presented in map form, but their main characteristics are described. Molybdenum exhibits two isolated samples having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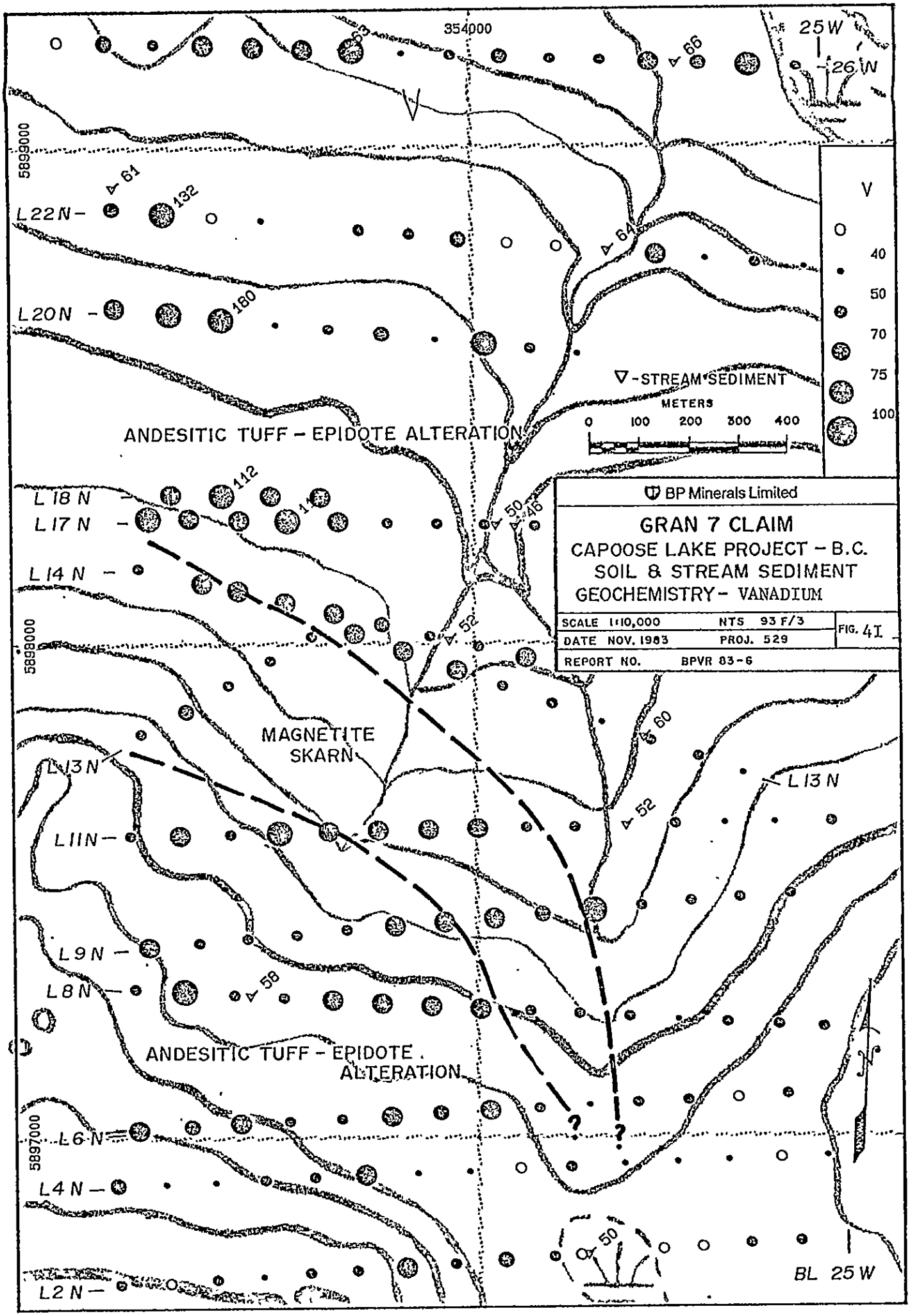
L4N
L2N
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
BL 25W
AS
6
11
14
16
20
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - ARSENIC
SCALE 1:10,000
NTS 93 F/3
FIG. 4H
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6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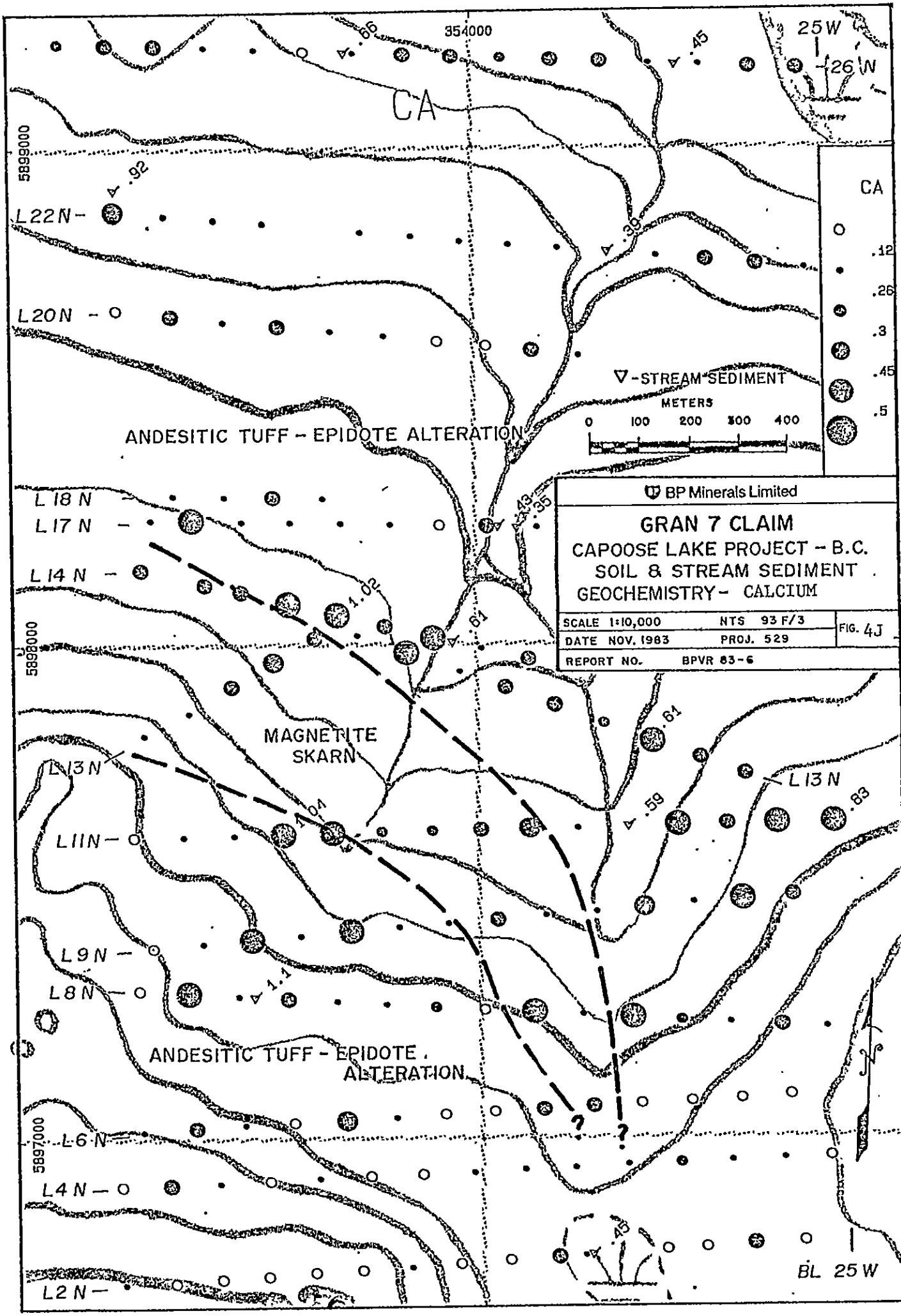
L9N
L8N
L6N
L4N
L2N
BL 25W
V
40
50
70
75
100
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
61
132
64
66
180
112
50
46
52
60
58
50
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT
GEOCHEMISTRY - VANADIUM
SCALE 1:10,000
NTS 93 F/3
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6
FIG. 4I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L14N
5898000
L13N
LIIN
L9N
L8N
5897000
L6N
L4N
L2N
.66
.45
.92
.39
.43
.35
1.02
.61
.61
.59
.83
1.04
1.1
.45
ANDESITIC TUFF - EPIDOTE ALTERATION
MAGNETITE SKARN
ANDESITIC TUFF - EPIDOTE ALTERATION
BL 25W
CA
.12
.26
.3
.45
.5
▽-STREAM SEDIMENT
METERS
0 100 200 300 400
BP Minerals Limited
GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
SOIL & STREAM SEDIMENT GEOCHEMISTRY- CALCIUM
SCALE 1:10,000
NTS 93 F/3
FIG. 4J
DATE NOV. 1983
PROJ. 529
REPORT NO. BPVR 83-6

greater than 10 ppm values which coincide with anomalous copper values of 115 ppm (31 ppm molybdenum) and 117 ppm (11 ppm molybdenum) in the south. The nickel and chromium patterns resemble that of zinc, with a maximum nickel content of 22 ppm. Cobalt surprisingly follows calcium. Maximum cobalt content is 24 ppm. Similarly strontium, barium and potassium follow calcium. Other elements such as bismuth, antimony, cadmium and tungsten are at detection limit values.

Discussion of Results

Geochemical anomalies on GRAN 7 are weak. Their significance must be tempered by a knowledge that geochemical responses at the Granges Capoose Lake prospect on nearby Fawnie Nose are not particularly outstanding, despite occurrence of mineralized rock at surface above treeline, in a residual weathering environment. Abundance of glacial overburden on GRAN 7, thicker in the north than in the south, restricts geochemical dispersion from bedrock sources and has the effect of reducing anomaly contrast to background. Glacial dispersion trains are not apparent on GRAN 7; anomalies appear to be locally derived, displaced downslope only by gravity or groundwater dispersion.

Low backgrounds in the north may be geologically controlled. Flattening of topography and absence of outcrop alternatively suggest thicker tills. The different geochemical character of tills compared to those in the south may indicate a greater transport distance. Alternatively higher backgrounds in the south may be due to incorporation of local material under the influence of gravity and promoted by the steeper slopes. Interpretation of the iron and vanadium patterns as being local enrichments reflecting underlying geological units supports this hypothesis. Both interpretations indicate location of mineral occurrences beneath overburden in the north will be more difficult than in the south.

Base and precious metal anomalies are of two types, represented by:

(1) Copper, lead, zinc, silver and nickel associated with the magnetic skarn.

(2) Gold in isolated soil samples and in about 1/3 of the drainage samples.

The base metal-silver anomaly is within an area where sampling is essentially reconnaissance in nature. Underlying geology is favourable and extends off the grid to the west. The area underlain by the present weak geochemical anomaly and the favourable geological zone to the west should be sampled at a 50 metre interval along lines 100 metres apart to establish the location of metal-rich zones in a more systematic fashion.

Gold enhancements in soils and stream sediments represent an interesting feature whose significance cannot be determined solely on the basis of present sampling. Some of the highest values are found in the south. Continuing the sampling to the south perhaps would identify more significant gold anomalies in the latter region.

Conclusions

The geochemical survey has indicated weak base and precious metal anomalies on GRAN 7. These are defined on the basis of a relatively reconnaissance scale of surveying. Followup should constitute a more detailed evaluation of interesting areas at a 50 metre X 100 metre sample density, the grid being extended into areas which have geologic favourability to the west and perhaps to the south.

APPENDIX 1

Analytical Procedures

ICP Multielement Analysis

ACME ANALYTICAL LABORATORIES L
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone : 253 - 3158

GEOCHEMICAL LABORATORY METHODOLOGY - 1982

Sample Preparation

1. Soil samples are dried at 60°C and sieved to -80 mesh.
2. Rock samples are pulverized to -100 mesh.

Geochemical Analysis (AA and ICP)

0.5 gram samples are digested in hot dilute aqua regia in a boiling water bath and diluted to 10 ml with demineralized water. Extracted metals are determined by :

A. Atomic Absorption (AA)

Ag*, Bi*, Cd*, Co, Cu, Fe, Ga, In, Mn, Mo, Ni, Pb, Sb*, Tl, V, Zn
(* demotes with background correction.)

B. Inductively Coupled Argon Plasma (ICP)

Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cu, Cr, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Geochemical Analysis for Au

10.0 gram samples that have been ignited overnite at 600°C are digested with hot dilute aqua regia, and the clear solution obtained is extracted with Methyl Isobutyl Ketone.

Au is determined in the MIBK extract by Atomic Absorption using background correction (Detection Limit = 5 ppb direct AA and 1 ppb grahite AA.)

Geochemical Analysis for Au, Pd, Pt, Rh

10.0 - 30.0 gram samples are subjected to Fire Assay preconcentration techniques to produce silver beads.

The silver beads are dissolved and Au, Pb, Pt and Rh are determined in the solution by Atomic Absorption.

Geochemical Analysis for As

0.5 gram samples are digested with hot dilute aqua regia and diluted to 10 ml. As is determined in the solution by Graphite Furnace Atomic Absorption (AA) or by Inductively Coupled Argon Plasma (ICP).

ACME ANALYTICAL LABORATORIES LTD.
Assaying & Trace Analysis
852 E. Hastings St., Vancouver, B.C. V6A 1R6
Telephone: 253-3158

Geochem Whole Rock

A .1 gm sample is fused with .6 gm $LiBO_2$ and is dissolved in 100 mls of 5% HNO_3. The analysis is completed by either AA or ICP.

Other Digestions by Request

A. .5 gm by 1 ml nitric and 3 ml perchloric acid to fuming, final volume of 10 mls.

B. .5 gm by 5 ml hydrofloric nitric, 5 ml hydrochloric and 5 ml perchloric acid, to fuming, final volume 50 mls.

ICP GEOCHEMICAL ANALYSIS

A .500 GRAM OF SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 NITRIC ACID TO HYDROCHLORIC ACID TO WATER AT 90 DEG. C FOR 1 HOUR.
THE SAMPLE IS DILUTED TO 10 MLS WITH WATER.
THE RESULTS ARE REPORTED IN PPM EXCEPT FOR : FE, CA, P, MG, BA, TI, AL,NA, AND K WHICH ARE IN PERCENT.
THIS LEACH IS PARTIAL FOR : CA , P, MG, AL, TI, LA, NA, K, W & CR
IS= INTERNAL STANDARD.

O/USA CERTIFIED STD GXR-2
EGC

BURN # 1 30GE 14:17 23FEB82

IS									
1367									
MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS
1.09	69.6	647	496	14.7	13.6	6.62	.843	1.61	20.9
U	Au	TH	SR	CD	SB	BI	V	CA	P
3.37	2.32	3.07	65.9	4.06	38.1	2.52	34.9	.676	.070
LA	CR	MG	BA	TI	B	AL	NA	K	W
18.3	18.9	.421	".104	.063	20.1	2.78	.116	.436	.187

*O/USA CERTIFIED STD GXR-4
EGC

BURN # 1 30GE 14:19 23FEB82

IS									
1367									
MO	CU	PB	ZN	AG	NI	CO	MN	FE	AS
284	5503	49.0	58.3	2.91	31.1	10.4	102	2.77	113
U	Au	TH	SR	CD	SB	BI	V	CA	P
7.68	1.53	12.0	57.1	2.76	2.04	19.0	68.3	.786	.168
LA	CR	MG	BA	TI	B	AL	NA	K	W
42.7	54.2	1.42	.011	.116	6.62	2.45	.099	1.27	9.05

ICP Notes

This type of analysis is most suited for low sulphide or metal contents of soils and rocks.
* Detection for Au is 3 ppm and ignore lower values.

APPENDIX 2

Coding Format for Geochemical Samples.
List of Geochemical Data.

GENERAL

1,2 SAMPLE TYPE
- 10 Stream sediment
- 11. Stream water
- 20 Seepage (spring) sediment
- 21 Seepage (spring) water
- 30 Lake sediment - lake center
- 31 Lake water
- 32. Lake sediment - near shore
- 40 Bog-upper 100 cm
- 41 Bog-stagnant water
- 42 Bog-below 100 cm
- 43. Bog-organic material at mineral horizon interface
- 44 Bog-mineral horizon
- 50 Soil-top of the B horizon (or top of the C horizon if B horizon absent)
- 51. Soil-other horizons (organic-rich samples or when 2 samples taken at same hole)
- 52 Frost boil
- 53. Seepage boil
- 55 Deep overburden sample
- 56 Intermediate overburden
- 57. Sample (depth determined
- 58 in field)
- 59.
- 60 Talus fines-mid slope
- 61. Talus fine-in gully
- 62. Talus fines-base of slope
- 63. Talus blocks-hand sample
- 64. Talus block-chips
- 70. Biogeochemical
- 75. Radon-track etch
- 76. Radon-Alpha Meters
- 77. Radon-emanometers
- 80. Bedrock hand sample
- 81. Bedrock chips ± hand sample
- 82. Float hand sample
- 83. Float chips ± hand sample
- 84. Drill core specimens
- 85. Channel sample
- 86 Drill sludge
- 87. Drill chips
- *89. High grade sample
- *90. Special sample-specify (clearly label if high grade

Special note
For keypunchers benefit, 7's should be crossed ⌀ and O's (letter) should be slashed Ø

3,4 YEAR

5-7 PROJECT NUMBER

PROJECT IDENTIFICATION
Blank reconnaissance
A, B, C, etc. - properties, anomalies (List 6)

9 DUPLICATE SAMPLES
*Star both samples (collect 1 in 30)

10,11 SAMPLER IDENTIFICATION
±12 (List 7)

12-15 SAMPLE NUMBER
or
13-15 leave out all numbers ending in 00 and 50

17,18 UTM ZONE
see NTS map sheets; for properties use
XX Property-feet
YY Property-meters
ZZ Property-other

19-24 EAST COORDINATE

25-31 NORTH COORDINATE

34-38 MAP SHEET NUMBER

STREAM SEDIMENTS

40 SAMPLE ENVIRONMENT
1. Next to bank
2. Behind boulders
3. Among roots below stream bank
4. Middle of stream
5. Among grass or reeds of creek bed
6. Bar in creek
7. Middle-very wide, shallow creek
8. Base of slope
9. Composite across stream
A. Soil

42 PRECIPITATE
1. Record colour (report presence of precipitate in immediate vicinity in stream bed. If heavy precipitate, sample separately).

43 OVERBURDEN TRANSPORT
L. Local M. Mixed local
E Extensive & extensive
U. Unknown

45 OVERBURDEN ORIGIN
1. Till-angular boulders
2. Outwash-sandy, rounded boulders
3. Lake sediment sand/silt
4. Alluvium-stream deposit
5. Peat-bog
6. Colluvium*
7. Lake sediment-clay
8. Talus
9. Residual
A. Frost boil* *use only if
B. Seepage boil* former origin
C. Boulder field* cannot be
D. Gravel* identified
E. Soil*

46 BEDROCK
H. Mineralized
P. Present within 100m-200m upslope
D. Present within 100m-200m downslope
B. Underlies sample site
G. Gossan
F. Fe surface stains
R. Radioactivity

47,48 pH

49 SAMPLE TEXTURE
- Ø Organic-decomposed
- 1. Clay
- 2. Silt and fine sand
- 3. Sand
- 4. Gravel
- 5. Frozen
- 6. Cemented
- 7. Precipitate
- 8. Twigs or undecomposed organic matter

50-52 AVERAGE WIDTH OF STREAM-M
decimal point in col 51 (or col 52 if stream> 10 m wide)

53-55 AVERAGE DEPTH OF STREAM-CM

56 STREAM VELOCITY
1. Dry
2. Stagnant
3. Slow
4. Moderate
5. Fast
6. Turbulent

57 INDICATE AS TRIBUTARY
R. Stream enters on right looking down main stream
L. Stream enters on left looking down main stream

58-60 LOCAL BEDROCK COMPOSITION
Estimate-use lists 1-4

61 COLOUR-STREAM SEDIMENTS
1. Colour noted in information

63-66 CONDUCTIVITY-WATER

67 CONTAMINATION
Blank-none
P. possible
D. definite

68 ORGANIC FRACTION
1. Minor amount of undecomposed twigs, leaves, etc.
2. Large amount of undecomposed twigs, leaves, etc.
3. Minor amount of well-decomposed vegetation
4. Large amount of well-decomposed vegetation
5. Mosses
6. Some sediment grains coated in organic matter
7. All sediment grains coated in organic matter
8 Looks like lake sediment material

69 MINERAL FRACTION
1. Primarily light coloured silicate minerals
2. Primarily carbonate sand
3. Minor, but notable content of mafic minerals, resustates etc.
4. High proportion of mafics, resistates

71 GAMMA SOLID ANGLE
1. Ridge 5 A
2 Flat surface (2π) 6 B
3. Base of section (3π) 7 C
4 Deep gullies (4π) 8. D

72-75 GAMMA COUNT AT SAMPLE SITE

76 ROCK
*If bedrock is influencing scint counts

77,78 APPROXIMATE SLOPE ANGLE

79,80 APPROXIMATE SLOPE DIRECTION

SOILS

40 SITE TOPOGRAPHY
1. Hill Top
2. Gentle slope
3. Steep slope> 20°
4. Base of slope
5. Valley floor
6. Depression
7. Level
8. Rolling
9. Bog

41 SAMPLE ENVIRONMENT
1. Tundra-hummocky
2. Tundra-dry
3. Tundra-swampy
4. Grassland, meadows
5 Peat mounds
6. Bog in depression
7. Forest-coniferous
8. Forest-deciduous
9 Forest-mixed
A. Alder or willows
B. Cultivated land
C. Desert, semi-arid
D. Barren
E. Talus fan
F. Bank soil-stream
G. Bank soil-lake
H. Road cut

42 SITE DRAINAGE
1. Dry
2. Moist
3. Wet
4. Saturated

43 OVERBURDEN TRANSPORT
L. Local
E. Extensive
U. Unknown
M. Mixed - two sources

44 WATER MOVEMENT
S Seepage

45 OVERBURDEN ORIGIN
1. Till-angular boulders
2. Outwash-sandy, rounded boulders
3. Lake sediment-sand/silt
4. Alluvium-stream deposit
5. Peat-bog
6. Colluvium
7. Lake sediment-clay
8. Talus
9. Residual
A. Frost boil* *use only if
B. Seepage boil* formed origin
C. Boulder field* cannot be
D. Gravel* identified

46 BEDROCK
H. Mineralized
P. Present within 100m-200m upslope
D. Present within 100m-200m downslope
B. Underlies sample site
G. Gossan
F. Fe surface stains
R. Radioactivity

48 pH

49 SAMPLE TEXTURE
- Ø Organic muck
- 1. Fibrous, peat/ organic matter
- 2. Very sandy
- 3. Sandy
- 4. Sand-silt
- 5. Sand-silt-clay
- 6. Silt
- 7. Silt-clay
- 8. Clay
- 9. Gravel

50,51 TOP OF SAMPLE INTERVAL-CM

52-54 BOTTOM OF SAMPLE INTERVAL-CM

55,56 SOIL HORIZON
- LH. Leaf, humus layer, undecomposed vegetation lying on the ground surface (do not sample)
- AH. Dark grey to black, organic-rich mineral horizon usually no deeper than 15 cm from the surface (do not sample)
- AE. Grey to white (occasionally brown) leached mineral horizon near ground surface, usually sandy; accompanied by BF or BT horizon at depth (do not sample)
- BH. Black, organic-rich mineral horizon at depths greater than 15 cm (do not sample)
- BF. Red brown, iron-rich horizon
- BT. Brown, clay-rich horizon
- BG. Horizon which is water-saturated most of the year, identified by red brown mottles
- BM. Brown horizon which is only slightly different in appearance from underlying parent material
- C1, C2, C3, etc.-Parent material for soil
- CA. White calcium carbonate precipitate in C horizon
- Ø1, Ø2, Ø3 etc.-Bog samples at various depths
- TF. Talus fines

57 SOIL TYPE
- C. Chernozem-prairie soil usually under grassland or meadow, thick Ah >10cm, CA horizon at depth
- S. Solonetz-saline soil, high content of NaCl
- L. Luvisol-BT horizon diagnostic
- P. Podzol-BF horizon diagnostic
- B. Brunisol-BM horizon is only B horizon of profile
- R. Regosol-little or no soil development. No B soil horizon, only LH (maybe) and C horizon
- G. Gleysol-BG horizon diagnostic
- Ø. Organic soil-bog vegetation-no mineral matter

50-60 LOCAL BEDROCK COMPOSITION
Estimate-use lists 1-4

61-66 COLOUR
Munsell notation or abbreviation

67 CONTAMINATION
Blank-none
P. possible
D. definite

68-69 % COARSE FRAGMENTS

70 SHAPE OF COARSE FRAGMENTS
A. Angular
B. Rounded
S. Subrounded, subangular
M. Mixed above types

71 GAMMA SOLID ANGLE
1. Ridge 5. A
2. Flat surface (2π) 6. B
3. Base of section (3π) 7. C
4. Deep gullies (4π) 8. D

72-75 GAMMA COUNT AT SAMPLE SITE
Scint reading at ground level over hole

76 ROCK
*If bedrock is influencing scint counts

77,78 APPROXIMATE SLOPE ANGLE

79,80 APPROXIMATE SLOPE DIRECTION

30. LIST 1

1-- INTRUSIVE ROCKS
- -1- QUARTZ RICH
- --1 Granite
- --2 Quartz Monzonite
- --3 Granodiorite
- --4 Quartz diorite
- -2- INTERMEDIATE
- --1 Syenite
- --2 Monzonite
- --3 Diorite
- --4 Gabbro
- -3- FELDSPATHOID RICH
- --1 Nepheline syenite
- --2 Nepheline monzonite
- -40 ULTRABASIC
- -50 CARBONATITES
- -60 SPECIAL TYPES
- --1 Pegmatite
- --2 Aplite
- --3 Lamprophyre
- --4 Trap
- --5 Felsite
- --6 Intrusion breccia
- --7 Diabase

LIST 2

2-- VOLCANIC ROCKS
- -0- UNDIFFERENTIATED
- -1- BASALT
- -2- ANDESITE
- -3- DACITE
- -4- RHYOLITE
- -5- QUARTZ LATITE
- -6- LATITE
- -7- TRACHYTE
- -8- PHONOLITE
- -9- NEPHELINE LATITE
- --1 Fine grained flows
- --2 Prophyritic flows
- --3 Crystal tuffs
- --4 Ash tuffs
- --5 Lapilli tuffs
- --6 Agglomerate
- --7 Lapilli breccia
- --8 Block breccia
- --9 Turbidite

LIST 3

3-- SEDIMENTARY ROCKS
- -1- ARENACEOUS
- --1 Siltstone
- --2 Mudstone
- --3 Greywake
- --4 Sandstone
- --5 Quartzite
- --6 Conglomerate
- -2- ARGILLACEOUS
- --1 Shale
- --2 Argillite
- -3- CALCAREOUS
- --1 Limestone
- --2 Dolomite
- -4- CHEMICAL PRECIPITAT
- --1 Chert
- --2 Marble
- --3 Iron formation

LIST 4

4-- METAMORPHIC ROCKS
- -1- FINE GRAINED CONTAC
- -2- PHANERITIC
- --1 Meta quartzite
- --2 Marble
- --3 Soapstone
- --4 Hornfels
- --5 Serpentine
- --6 Skarn
- --7 Amphibolite.
- --8 Eclogite
- -3- MECHANICAL
- --1 Mylonite
- --2 Flaser
- --3 Augen
- --4 Ultramylonite
- -40 SLATE
- -50 PHYLLITE
- -60 SCHIST
- -7- GNEISS*
- -8- MIGMATITE*
- --1 *Granite
- --2 Monzonite
- --3 Granodiorite
- --4 Conglomerate
- --5 Sandstone
- --6 Augen
- --7 Granulite
- --8 Quartz diorite
- --9 Diorite
- --0 Amphibolite

pH 4.0 pH 5.5 pH 6.0 pH 6.5 pH 7.0

pH 7.5 pH 8.5 pH 9.0 pH 9.5

LIST # 1
ALL PROPERTY CODES
UTM LIMITS
NORTH 5899500 SOUTH 5896500 EAST 355000 WEST 353000
ALL SAMPLE TYPES
ALL PAIR STATUS

REC#	SMPL#	UTM-E UTM-N									MO	CU	PB	ZN	NI	U	MN	FE	AG
507	8183529	770281	3532975897812	93F03	272U	9B					3	2	9	29	11	10	1608	19.1	5.8
508	8183529	770282	3532965897893	93F03	2						4	2	10	36	11	2	859	19.1	6.2
509	1083529	770283	3532755898919	93F03	4	9	205	53L225			10NE	1	27	10	51	10	9	793	2.7	.9
510	5083529	770284	3546255897087	93F03	272U	9	310	15BFP	RBR	30S	10NW	2	6	14	52	5	2	186	2.4	.1
511	5083529	770285	3545255897080	93F03	272U	9	515	20BFP	RBR	25S	15NW	1	5	14	28	3	3	92	1.2	.1
512	5083529	770286	3544245897075	93F03	272U	9	420	25BFP	RBR	30M	15NW	2	12	12	83	7	5	293	2.5	.1
513	5083529	770287	3543225897071	93F03	272U	9	420	30BFP	RBR	30M	15NW	2	8	14	42	5	7	161	2.7	.4
514	5083529	770288	3542255897066	93F03	272U	9	830	40BMB	GREY	15M	20N	3	26	11	76	7	2	429	1.8	.3
515	5083529	770289	3541245897060	93F03	272U	9	525	35BMB	BR	30M	20NE	3	30	16	80	7	2	419	2.1	.2
516	8183529	770290	3540665897059	93F03	0							1	8	7	24	5	2	519	2.5	.1
517	5083529	770291	3540245897056	93F03	272U	9	320	30BFP	RBR	30M	20E	2	14	18	75	8	6	269	4.7	.1
518	5083529	770292	3539245897051	93F03	272U	9	330	35BFP	RBR	30M	10S	2	9	12	57	6	2	208	3.3	.1
519	5083529	770293	3538255897044	93F03	272U	9	320	30BFP	RBR	25S	10N	4	15	23	101	9	8	257	4.2	.1
520	5083529	770294	3537245897039	93F03	273US9		525	35BMB	GREY	80M	10N	4	22	14	94	6	5	436	1.9	.4
521	5083529	770295	3536185897035	93F03	272U	9	520	30BFP	RBR	40M	20N	2	11	13	63	6	6	210	2.8	.2
522	5083529	770296	3535195897031	93F03	272U	9	425	30BMB	MBR	25M	15N	1	12	11	51	7	12	226	3.2	.5
523	5083529	770297	3534205897025	93F03	272U	9	320	30BMB	MBR	20S	15N	1	27	14	80	9	7	306	2.9	.2
524	5083529	770298	3533135897018	93F03	272U	9	420	30BFP	RBR	50M	N	1	19	12	75	7	3	306	4	.1
525	5083529	770299	3533085897304	93F03	272U	9B	425	30BFP	225RBR		50M	15E	1	16	14	90	8	15	262	3	.5
526	5083529	770300	3534075897298	93F03	272U	9P	420	30BMB	MBR	40M	15NE	1	32	18	212	16	8	954	4.1	.1
527	5083529	770301	3535085897291	93F03	272U	9P	720	30BMB	DBR	85M	15NE	1	24	17	97	9	6	595	2.8	.4
528	1083529	770302	3535405897290	93F03	4	M 9P	103	013L	GRYBL	8		1	23	15	91	8	2	814	2.4	.8
529	5083529	770303	3536085897285	93F03	272U	9	825	30BMB	GREY	50S	15N	2	12	11	60	7	3	568	2.1	.3
530	5083529	770304	3537075897280	93F03	272U	9	420	25BFP	RBR	20S	15N	2	14	12	88	8	2	314	2.9	.1
531	5083529	770305	3538075897273	93F03	272U	9	820	30BMB	GREY	30M	15N	5	44	18	138	13	4	691	3.7	.2
532	5083529	770306	3539075897267	93F03	272U	9	420	25BFP	RBR	50S	15N	2	20	14	134	11	2	681	3.4	.3
533	5083529	770307	3540065897261	93F03	272U	9	420	30BFP	RBR	20S	15NE	2	9	16	63	6	2	211	3.4	.5
534	5083529	770308	3541075897257	93F03	272U	9	825	30BMB	GREY	25S	15N	11	117	16	142	11	10	1119	3	.3
535	5083529	770309	3542065897251	93F03	272U	9	420	25BFP	RBR	20S	15N	6	69	15	114	9	3	397	2.9	.7
536	8183529	770310	3542885897247	93F03	272U							1	87	2	13	8	5	445	6	.1
537	5083529	770311	3543065897245	93F03	272U	9	825	30BMB	DGRY	10S	15N	3	39	14	103	10	14	480	3	.4
538	5083529	770312	3544055897238	93F03	272U	9	425	35BFP	MBR	25M	20N	2	16	13	87	7	7	375	2	.1
539	5083529	770313	3545045897233	93F03	272U	9	425	35BFP	RBR	35M	15N	2	7	15	52	5	2	186	2.3	.1
540	5083529	770314	3546085897227	93F03	272U	9	825	35BMB	GREY	30M	20N	1	18	14	83	8	2	376	2.3	.2
541	5083529	770315	3546995897222	93F03	272U	9	420	25BFP	RBR	30M	15N	2	16	16	83	9	5	345	2.6	.7
542	5083529	770316	3546335897489	93F03	272U	9	830	40BMB	GREY	30M	15NW	1	16	18	111	8	2	519	2.3	.1
543	5083529	770317	3545315897482	93F03	272U	9	825	35BMB	GREY	30M	15NW	1	19	10	84	9	2	723	2.7	.1
544	5083529	770318	3544325897475	93F03	272U	9	425	30BFP	RBR	20M	25NW	2	14	11	76	9	6	279	3.2	.1
545	5083529	770319	3543325897466	93F03	272U	9	825	30BMB	GREY	20M	5NW	1	21	13	98	9	2	610	2.8	.1
546	5083529	770320	3542365897457	93F03	272U	9	425	30BFP	RBR	20M	10NE	6	31	24	156	15	5	688	4.9	.2
547	5083529	770321	3541335897450	93F03	272U	9	820	30BMB	GREY	25S	10NE	4	19	13	85	8	2	310	2.5	.2

548	5083529	770322	3540355897442	93F03	272U	9	530	40BMB	DGRY	40S	20NE	3	19	14	83	8	2	418	2.7	.1
549	5083529	770323	3539355897435	93F03	272U	9	420	30BFP	RBR	25S	25NE	1	13	9	58	7	3	228	3.8	.2
550	5083529	770324	3538355897428	93F03	272U	9	420	25BFP	RBR	50M	25N	1	14	10	56	8	2	238	3.3	.3
551	5083529	770325	3537375897421	93F03	272U	9	820	25BMB	GRYBL	<5	20N	3	21	14	90	9	2	491	2.4	.7
552	5083529	770326	3536355897411	93F03	272U	9	420	25BFP	RBR	40A	20N	2	13	14	84	8	2	323	2.7	.4
553	5083529	770327	3535365897404	93F03	272U	9	820	25BMB	GREY	20M	15N	1	16	18	90	7	2	918	2.2	.2
554	5083529	770328	3534385897396	93F03	272U	9	420	25BFP	RBR	40M	20NE	1	10	11	88	6	4	462	2.4	.1
555	5083529	770329	3533375897388	93F03	272U	9	420	25BFP	RBR	50M	15NE	1	15	11	87	8	2	283	3.9	.2
556	5083529	770330	3533015897612	93F03	272U	9	425	30BFP	RBR	30M	15N	1	9	9	76	6	2	236	3.6	.3
557	5083529	770331	3534015897612	93F03	272U	9	425	30BFP	RBR	20M	15NE	3	14	9	66	7	2	205	3.3	.1
558	5083529	770332	3535035897614	93F03	272U	9	430	35BFP	RBR	30M	15NE	1	20	14	107	6	2	204	2.2	.3
559	5083529	770333	3536025897616	93F03	272U	9	830	35BMB	GRYBL	<5M	15NE	5	169	22	382	16	3	2163	4.7	1.1
560	5083529	770334	3537025897619	93F03	272U	9	730	35BMB	GRYBR	<5M	15N	2	31	17	111	8	2	800	3.3	.2
561	5083529	770335	3538025897621	93F03	272U	9	430	35BFP	RBR	20M	15N	1	15	8	69	8	5	293	4.1	.2
562	5083529	770336	3539045897622	93F03	272U	9	425	35BMB	MBR	30M	15N	1	13	12	79	8	6	343	3.1	.2
563	5083529	770337	3540035897624	93F03	272U	9	730	35BMB	GRYBR	50M	10N	2	18	13	81	9	2	1016	3.1	.3
564	5083529	770338	3541025897626	93F03	272U	9	525	35BFP	RBR	20S	10N	2	13	15	74	8	2	386	2.7	.1
565	5083529	770339	3542005897626	93F03	272U	9	525	35BFP	RBR	30S	10N	1	13	10	59	8	2	225	2.6	.2
566	1083529	770340	3543025897630	93F03	4	U 1	210	023			10N	3	29	12	96	8	2	779	2.5	.5
567	5083529	770341	3544025897632	93F03	272U	9	720	25BMB	GRYBR	20S	20NW	1	19	11	81	9	2	681	2.6	.3
568	5083529	770342	3545025897634	93F03	272U	9	725	30BMB	GRY	20S	20NW	1	10	8	68	6	2	276	2	.3
569	5083529	770343	3546035897635	93F03	272U	9	530	35BMB	GRYBL	30M	15NW	1	17	11	76	7	2	304	2	.3
570	5083529	770344	3547185897636	93F03	272U	9	730	40BMB	GRYBL	40M	15NW	1	41	20	130	8	2	780	2.9	.5
573	5083529	771386	3531665899202	93F03	873E	1	530	40BMB	MBR	30S		1	10	12	42	6	2	175	1.4	.4
574	5083529	771387	3532625899199	93F03	874E	1	540	50BGG	MGYBR	10S		1	19	7	46	8	2	744	2.6	.4
575	5083529	771388	3533615899196	93F03	274E	1	540	45BMB	MOLBR	10S	6N	1	21	9	58	9	4	250	2.4	.3
576	5083529	771389	3534615899193	93F03	272E	1	520	30BFP	MORBR	10S	6N	1	11	10	39	9	4	157	3.4	.4
577	5083529	771390	3535625899188	93F03	272E	1	520	25BFP	MORBR	5S	4N	1	8	8	34	7	2	173	2.4	.1
578	5083529	771391	3536625899183	93F03	272E	1	515	25BFP	MOR	10S	4N	1	11	8	55	8	2	205	3.9	.2
579	1083529	771392	3537435899181	93F03	1	E 1	20.210	4	MBR		6N	1	15	4	81	7	2	1486	2.7	.4
580	5083529	771393	3537625899180	93F03	272E	1	515	25BFP	MORBR	5S	2N	1	7	12	47	6	6	186	3.9	.2
581	5083529	771394	3538635899176	93F03	273E	1	540	50BGG	MGYBR		8N	2	12	8	40	7	2	699	1.5	.2
582	5083529	771395	3539615899172	93F03	272E	1	530	35BFP	MORBR	5S	8N	1	10	9	37	8	2	223	2.4	.3
583	5083529	771396	3540615899169	93F03	272E	1	520	25BFP	MORBR	15S	10N	1	9	6	39	7	2	225	2.8	.1
584	5083529	771397	3541635899164	93F03	272E	1	525	35BMB	MBR	10S	8N	1	14	8	45	7	5	318	2.1	.3
585	5083529	771398	3542635899161	93F03	273E	1	525	30BMB	MOLBR	35S	10N	1	18	7	42	8	3	276	2.3	.1
586	5083529	771399	3543625899156	93F03	272E	1	520	30BFP	MORBR	10S	6N	2	37	7	99	10	2	310	4.7	.3
587	1083529	771400	3544145899153	93F03	1	E 1	22.010	4	MOLBR		6N	1	17	6	60	9	2	492	2.8	.2
588	5083529	771401	3544635899153	93F03	273E	1	530	35BFP	MORBR		4N	1	20	11	101	10	2	521	3.5	.2
589	5083529	771402	3545645899148	93F03	872E	2	530	35BGG	MORGY	35S		1	9	9	33	5	2	161	3.3	.4
590	5083529	771403	3545645899148	93F03	872E	2	530	35BGG	MORGY	35S		1	13	7	56	7	2	263	2.3	.2
591	5083529	771404	3546615899144	93F03	272E	1	540	45BMB	MOLBR	40S	4N	1	13	10	70	8	2	372	2.4	.3
592	5083529	771405	3542135898581	93F03	272M	1	525	35BGG	MGYBR	30S	8E	1	6	8	54	5	2	183	1.7	.3
593	5083529	771406	3541185898592	93F03	874M	1	530	40BMB	MBR	20S		1	11	10	44	6	2	314	2.1	.2
594	5083529	771407	3540255898602	93F03	272M	1	520	25BFP	MORBR	20S	6N	1	12	8	34	5	3	119	4.6	.1
595	5083529	771408	3539265898611	93F03	872M	1	725	30BFP	MORBR	5S		1	6	7	20	4	2	67	2.3	.2
596	5083529	771409	3538185898623	93F03	872E	1	525	35BFP	MORBR	40S		1	12	10	35	8	2	234	3.6	.1
597	5083529	771410	3537105898633	93F03	872E	1	525	30BFP	MORBR	5S		1	6	4	21	3	2	112	1.4	.7
598	5083529	771411	3536035898643	93F03	272M	1	530	40BMB	MOLBR	40S	4N	1	9	7	43	5	2	262	1.9	.2
599	5083529	771412	3534935898653	93F03	872M	1	530	35BFP	MORBR	25S		8	9	4	54	6	2	181	5.7	.1
600	5083529	771413	3533885898665	93F03	273M	1	740	45BGG	MGYOR		4N	5	32	10	34	8	2	1046	3.2	.6

601	5083529	771414	3532785898678	93F03	872E	1	520	30BFP	MORBR	15S		2	10	13	51	6	2	161	3.5	.1
602	5083529	771415	3532745898874	93F03	274E	2	530	40BMB	MOLBR	80S	8N	2	21	12	72	8	2	541	2.7	.3
603	5083529	771416	3533765898864	93F03	872E	2	530	35BFP	MORBR	40S		6	8	12	69	7	2	246	4.8	.1
604	5083529	771417	3534765898856	93F03	872E	2	535	40BGG	MGYBR	30S		1	3	8	16	3	2	91	.7	.2
605	5083529	771418	3535755898849	93F03	273E	2	530	40BGG	MGYBR	40S	4N	1	7	4	29	4	2	156	1.4	.2
606	5083529	771419	3537735898831	93F03	872E	2	530	35BFP	MORBR	10S		1	7	6	35	6	2	163	1.8	.1
607	5083529	771420	3538755898823	93F03	872E	2	520	25BFP	MORBR	10S		1	9	7	42	7	2	187	3.6	.1
608	5083529	771421	3538755898823	93F03	872E	2	520	25BFP	MORBR	10S		1	9	6	44	7	2	152	3.8	.1
609	5083529	771422	3539745898812	93F03	272M	1	525	30BFP	MORBR	10S	8N	2	8	11	43	5	2	164	3.6	.1
610	5083529	771423	3540735898805	93F03	873M	1	530	35BMB	MBRGY	20S		1	6	8	37	4	2	160	1.3	.1
611	5083529	771424	3541735898798	93F03	872E	1	530	35BMB	MOLBR	25S		1	5	9	35	4	2	162	1.3	.2
612	1083529	771425	3542735898790	93F03	1	E 1	22.015	4	MBR		6N	1	14	8	52	9	2	442	2.7	.1
613	5083529	771426	3543735898781	93F03	272E	1	530	35BFP	MORBR	10S	10N	1	9	7	31	6	2	141	3.5	.1
614	5083529	771427	3544735898773	93F03	272E	1	540	50BMB	MOLBR	15S	15N	1	11	7	39	6	2	283	2	.2
615	5083529	771428	3545745898764	93F03	272E	1	530	35BMB	MOLBR	30S	15N	1	13	7	42	5	2	285	1.9	.1
616	5083529	771429	3546735898755	93F03	372E	1	520	25BMB	MOLBR	15S	20N	1	5	7	34	4	3	173	1.3	.1
617	5083529	771430	3541045897968	93F03	871E	1	520	30BFP	MORBR	15S		9	17	16	117	11	4	395	4.8	.1
618	5083529	771431	3540095897991	93F03	872E	1	520	25BFP	MORBR	5S		1	8	8	39	6	2	132	2.9	.3
619	1083529	771432	3539495898005	93F03	1	M 1	21.08	4	MBR		6N	2	25	9	95	8	2	663	2.7	.4
620	5083529	771433	3539105898012	93F03	272M	1	230	35BMB	MOLBR	40S	10N	5	21	7	65	7	3	363	3.1	.8
621	5083529	771434	3538135898036	93F03	272M	1	525	35BFP	MORBR	25S	8N	1	20	4	117	8	2	362	3.4	.4
622	5083529	771435	3537165898059	93F03	272M	1	830	40BMB	MBRGY		4N	6	84	16	279	22	2	1229	6.2	.6
623	5083529	771436	3536175898081	93F03	272M	1	520	30BFP	MORBR	5S	8N	1	27	9	225	15	3	462	3.3	.1
624	5083529	771437	3535225898105	93F03	272M	1	520	30BFP	MORBR	10S	15N	1	11	10	94	7	2	307	3.3	.2
625	5083529	771438	3534495898120	93F03	272M	1	520	25BFP	MORBR	15S	15N	1	15	10	121	7	2	282	3.4	.2
626	5083529	771439	3533215898151	93F03	272M	1	515	30BFP	MORBR	5S	10N	3	18	10	75	7	2	433	3.5	.2
627	5083529	771440	3533245897818	93F03	372M	1	520	25BFP	MORBR	10S	20E	2	16	11	90	10	2	308	6.4	.1
628	5083529	771441	3534155897862	93F03	372M	1	520	25BFP	MORBR	15S	20E	1	11	12	69	7	2	176	3.2	.1
629	5083529	771442	3535015897914	93F03	272M	1	525	30BMB	MOLBR	10S	15E	1	14	11	83	8	2	401	2.5	.1
630	5083529	771443	3535865897964	93F03	272M	1	515	25BMB	MOLBR	5S	15E	1	17	13	77	7	3	402	2.3	.1
631	5083529	771444	3536705898012	93F03	272M	1	525	30BFP	MORBR	15S	10E	1	18	8	192	12	2	335	3.3	.1
632	5083529	771445	3537575898018	93F03	272M	1	525	35BFP	MORBR	40S	8N	1	11	14	89	7	2	237	4.2	1.3
633	5083529	771446	3538565897982	93F03	272M	1	520	25BFP	MORBR	40S	8N	4	22	9	194	10	2	583	3.8	.1
634	5083529	771447	3539645897943	93F03	272M	1	515	20BFP	MORBR	30A	8N	1	12	11	89	7	2	270	3.4	.6
635	5083529	771448	3540565897910	93F03	272E	1	525	30BMB	MOLBR	25S	4N	1	16	10	111	9	2	373	2.6	.3
636	5083529	771449	3541565897874	93F03	271E	1	520	30BMB	MOLBR	30S	4N	1	12	10	85	7	2	409	2.6	.3
637	5083529	771450	3542555897837	93F03	272E	1	515	25BMB	MBR		3N	1	6	10	36	3	2	193	1.5	.1
638	1083529	771451	3543395897807	93F03	1	M 1	21.08	4	MBR		6N	3	27	14	92	9	2	899	3.1	.4
639	5083529	771452	3543535897800	93F03	272M	1	520	30BMB	MOLBR	60S	10NW	1	17	13	62	8	2	462	2.4	.3
640	5083529	771453	3544505897767	93F03	274E	1	430	35BMB	MOLBR	70S	NW	1	15	10	44	8	2	423	2.1	.2
641	5083529	771454	3545405897733	93F03	272E	1	525	35BMB	MOLBR	30S	4NW	1	11	13	70	6	2	252	1.9	.1
660	5083529	772162	3546505896792	93F03	271M	1	525	30BFP	MORBR	15S	5W	2	9	14	65	7	4	188	2.9	.2
661	5083529	772163	3545495896788	93F03	272M	1	530	35BMB	MBR	15S	5W	3	12	18	82	10	2	928	2.8	.5
662	5083529	772164	3544515896781	93F03	271E	1	525	30BFP	MRBR	15S	2W	1	10	16	37	4	2	132	2	.2
663	5083529	772165	3543715896777	93F03	872E	1	530	35BFP	MRBR	20S	2W	2	9	17	52	6	2	147	2	.7
664	1083529	772166	3542205896768	93F03	4	M 1	20.20033		MBR	4	2NE	5	12	21	90	8	2	740	2.4	.5
665	5083529	772167	3542065896766	93F03	272E	1	530	35BMB	LBR	10S	5NE	2	6	15	45	5	2	232	1.5	.2
666	5083529	772168	3541525896763	93F03	273M	1	545	50BGG	MORGY	15S	5NE	5	14	19	78	8	7	895	2.7	.3
667	5083529	772169	3540535896757	93F03	271M	1P	515	20BFP	MRBR	15M	5NE	3	8	17	65	6	7	232	3.7	.3
668	5083529	772170	3539525896750	93F03	371M	1P	510	15BFP	MORBR	25M	25E	2	6	15	74	5	3	207	2.9	.2
669	5083529	772171	3538535896743	93F03	271L	6B	405	08TF	224MBR	60A	10E	31	115	27	159	22	3	1369	6.2	.4

670	5083529	772172	3537535896738	93F03	271M	6P	515	20BMB	MBR	10A	10N	3	9	17	38	5	2	175	2.3	.2				
671	5083529	772173	3536585896734	93F03	871M	6P	515	20BFP	MRBR	15M	5W	2	11	12	56	8	2	222	2.7	.6				
672	5083529	772174	3535635896727	93F03	871M	1	520	25BFP	MRBR	15M	2N	2	9	17	55	6	2	211	2.4	.3				
673	5083529	772175	3534695896722	93F03	271L	6P	520	25BFP	MRBR	20A	10N	2	9	17	53	5	5	246	3.1	.1				
674	5083529	772176	3533755896715	93F03	371L	6P	515	25BMB224	MBR	25A	20N	1	7	12	32	4	3	179	1.5	.3				
675	5083529	772177	3532745896713	93F03	271L	6P	520	25BFP224	DRBR	20M	10N	1	10	12	51	8	2	252	2.5	.3				
676	5083529	772178	3532695896910	93F03	271M	1	525	35BFP	MRBR	20M	10N	1	8	10	50	8	3	268	3.6	.1				
677	5083529	772179	3533675896912	93F03	271M	2P	520	30BFP	LORBR	20M	5N	2	10	11	122	5	5	291	2.1	.1				
678	5083529	772180	3534675896915	93F03	271M	6	520	25BMB	LBR	30M	5N	6	15	16	106	8	2	307	2.2	.2				
679	5083529	772181	3535685896919	93F03	271L	6	520	25BMB224	DBR	30A	15N	4	19	16	81	10	2	293	2.6	.1				
680	5083529	772182	3536685896924	93F03	371M	6P	520	25BFP224	MRBR	20A	25N	2	10	16	73	7	2	263	2.8	.2				
681	5083529	772183	3537725896928	93F03	271M	6	515	20BFP	MRBR	15M	10N	3	11	19	72	7	3	220	4.2	.3				
682	5083529	772184	3538775896931	93F03	271M	6	515	20BMB	MBR	15M	15N	2	6	17	30	3	4	124	1.7	.1				
683	5083529	772185	3539825896934	93F03	271M	1	520	25BFP	MRBR	20M	5N	5	9	14	64	6	2	166	2.3	.3				
684	5083529	772186	3540855896940	93F03	271M	1	525	35BMB	LBR	30M	2N	5	6	15	60	5	2	195	1.6	.1				
685	5083529	772187	3541875896942	93F03	871M	1	525	30BFP	LORBR	10M	2N	4	13	13	87	7	2	391	3	.3				
686	5083529	772188	3542945896948	93F03	872M	2	525	35BFP	LRBR	20M	2NW	2	15	18	82	8	2	227	2	.9				
687	5083529	772189	3544015896951	93F03	771E	2	530	35BMB	LBR	10S		2	13	14	107	8	4	300	2	.4				
688	5083529	772190	3545055896955	93F03	271E	2	525	30BFP	MRBR	15M	5W	2	11	18	70	6	2	171	2.6	.2				
689	5083529	772191	3546115896959	93F03	872M	2	525	30BMB	LORBR	30M	2W	2	10	18	95	6	2	213	1.7	.1				
690	5083529	772192	3547055896962	93F03	271M	2	520	25BFP	MORBR	20S	5W	2	8	17	60	5	2	161	2.2	.3				
691	5083529	773001	3541245898233	93F03	27		710	12BFP	MRDBR	7S	7SW	1	11	11	42	7	2	213	2.2	.1				
692	1083529	773002	3540835898233	93F03	0		31.0	5	4	DBR		5NW	2	12	9	45	7	2	433	2	.2				
693	1083529	773003	3540445898236	93F03	0		21.0	5	4	DBR		5NE	2	17	13	65	8	3	598	2.8	.3				
694	5083529	773004	3540225898236	93F03	272		510	12BFP	RBR	S	3E	2	12	13	47	7	2	412	2.5	.1				
695	5083529	773005	3539265898238	93F03	272		610	15BFP	DRBR		1E	1	11	10	44	8	2	152	3.5	.3				
696	5083529	773006	3538265898240	93F03	272		307	10BFP	MBR		1E	1	6	10	32	4	2	103	1.8	.1				
697	5083529	773007	3537265898243	93F03	272		210	15BFP	DRBR	10S	5NE	1	11	15	52	6	2	184	3.8	.2				
698	5083529	773008	3536235898245	93F03	271		2 8	12BFP	DRBR	40A	2N	2	14	15	133	10	2	273	5.4	.7				
699	5083529	773009	3535255898247	93F03	272		210	15BFP	MBR	20A	5NW	2	8	10	52	5	2	160	3.2	.2				
700	5083529	773010	3534245898251	93F03	272		820	30BFP	MBR	10S	3N	5	35	12	95	12	2	701	3.5	.6				
701	5083529	773011	3533425898251	93F03	271		305	10BFP	ORBR	10S	3N	1	11	11	42	6	2	192	4	.3				
702	5083529	773012	3533885898300	93F03	271		410	15BFP	LBR	15A	2N	1	15	7	86	7	2	311	3.5	.4				
703	5083529	773013	3534915898297	93F03	272		320	30BFP	DRBR	20S	3NE	2	12	16	85	7	2	241	5.2	.5				
704	5083529	773014	3535895898296	93F03	772		25	35BFP	DRBR	30S		1	38	13	386	12	2	281	5.2	.9				
705	5083529	773015	3536905898293	93F03	771		5	10BFP	RBR	20S		1	12	12	68	7	2	220	4.2	.3				

REC#	SMPL#	CO	AU	AU?	AS	HG	SB	SN	W	F	TH	CD	BI	V	BA	SR	SI	AL	CA	MG	MA	K	AE1	AE2	TI	P
507	770281		6	5	1	27		2	2	2		3	1	2	47	20	14	.07	.99	2.34	.25	.01	.01			.06
508	770282		10	5	1	16		2	2	2		2	1	2	41	11	15	.07	.74	.52	.27	.02	.03			.04
509	770283		8	5	1	7		2	2	2		2	1	2	61	131	61	.01	2.21	.92	.36	.01	.07			.03
510	770284		4	5	1	13		2	2	2		2	1	2	60	35	11	.02	1.18	.1	.25	.01	.03			.07
511	770285		2	5	1	8		2	2	2		2	1	2	36	38	10	.02	1.04	.09	.12	.01	.01			.05
512	770286		5	5	1	12		2	2	2		2	1	2	68	51	11	.02	1.69	.12	.45	.01	.04			.08
513	770287		3	5	1	14		2	2	2		2	1	2	65	46	10	.02	1.52	.09	.21	.01	.02			.06
514	770288		5	5	1	14		2	2	2		2	1	2	43	73	29	.02	1.5	.36	.41	.01	.04			.03
515	770289		6	5	1	19		2	2	2		2	1	2	54	53	27	.02	1.56	.33	.36	.01	.03			.04
516	770290		4	5	1	13		2	2	2		2	1	2	28	22	62	.05	.85	1.46	.11	.04	.01			.09
517	770291		6	5	1	22		2	2	2		3	1	2	100	82	12	.02	2.35	.1	.43	.01	.04			.1
518	770292		4	5	1	35		2	2	2		2	1	2	74	86	13	.02	2.23	.09	.34	.01	.03			.07
519	770293		5	5	1	25		2	2	2		2	1	2	87	86	15	.04	3.13	.14	.41	.01	.04			.09

520	770294	8	5	1	11	2	2	2	2	1	2	52	83	42	.03	1.48	.47	.47	.02	.12	.07
521	770295	4	5	1	11	2	2	2	2	1	2	66	58	13	.01	2.16	.12	.29	.01	.03	.05
522	770296	5	5	1	3	2	2	2	2	1	2	90	64	12	.01	1.67	.13	.38	.01	.04	.07
523	770297	7	5	1	13	2	2	2	2	1	2	73	95	39	.02	2.6	.36	.56	.02	.06	.05
524	770298	6	5	1	2	2	2	2	2	1	2	97	228	23	.02	2.61	.15	.68	.02	.2	.18
525	770299	7	5	1	2	2	2	2	2	1	2	66	72	14	.08	4.51	.11	.55	.01	.06	.07
526	770300	19	5	1	9	2	2	2	2	1	2	109	159	54	.02	3.88	.69	1.23	.02	.1	.06
527	770301	7	5	1	12	2	2	2	2	1	2	63	104	30	.02	2.66	.2	.48	.02	.07	.04
528	770302	9	5	1	6	2	2	2	2	1	2	58	126	98	.01	2.21	1.1	.5	.02	.11	.03
529	770303	8	5	1	13	2	2	2	2	1	2	55	83	32	.02	1.67	.32	.52	.02	.1	.06
530	770304	7	5	1	7	2	2	2	2	1	2	79	86	23	.01	2.24	.2	.68	.01	.04	.08
531	770305	9	5	1	16	2	2	2	2	1	2	78	142	29	.01	3.09	.23	.68	.01	.11	.04
532	770306	10	5	1	7	2	2	2	2	1	2	81	94	26	.02	2.35	.27	.6	.01	.08	.04
533	770307	4	5	1	18	2	2	2	2	1	2	81	71	12	.02	1.91	.11	.34	.01	.04	.09
534	770308	24	5	1	14	2	2	2	2	1	2	64	127	45	.02	2.47	.74	.67	.02	.14	.05
535	770309	8	5	1	10	2	2	2	2	1	2	60	75	21	.02	1.87	.24	.54	.01	.04	.05
536	770310	8	5	1	16	2	2	2	2	1	4	147	19	20	.08	.85	1.76	.11	.06	.02	.25
537	770311	9	5	1	12	2	2	2	2	1	2	63	88	39	.01	1.84	.61	.52	.02	.04	.05
538	770312	6	5	1	11	2	2	2	2	1	2	48	78	24	.02	1.5	.28	.43	.01	.04	.06
539	770313	4	5	1	19	2	2	2	2	1	2	55	53	12	.01	1.44	.14	.26	.01	.03	.07
540	770314	6	5	1	10	2	2	2	2	1	2	55	86	29	.02	1.73	.34	.52	.01	.06	.06
541	770315	8	5	1	4	2	2	2	2	1	2	62	80	21	.02	2.01	.17	.5	.01	.04	.04
542	770316	7	5	1	10	2	2	2	2	1	2	54	80	35	.02	1.52	.44	.54	.02	.09	.08
543	770317	8	5	1	11	2	2	2	2	1	2	62	89	46	.02	1.52	.61	.49	.02	.07	.08
544	770318	8	5	1	8	2	2	2	2	1	2	62	73	18	.03	2.13	.23	.39	.01	.03	.07
545	770319	12	5	1	10	2	2	2	2	1	2	65	98	35	.02	1.76	.46	.54	.02	.04	.07
546	770320	12	5	1	26	2	2	2	2	1	2	109	139	23	.02	4.03	.22	.87	.01	.12	.05
547	770321	6	5	1	8	2	2	2	2	1	2	75	54	21	.02	2.2	.18	.61	.01	.05	.07
548	770322	7	5	1	9	2	2	2	2	1	2	77	106	40	.02	2.21	.43	.58	.01	.07	.06
549	770323	6	5	1	10	3	2	2	2	1	2	84	91	15	.03	2.69	.13	.51	.01	.05	.1
550	770324	5	5	1	16	2	2	2	2	1	2	82	72	16	.02	1.8	.14	.48	.01	.06	.1
551	770325	7	5	1	15	4	2	2	2	1	3	62	98	55	.02	2.04	.63	.55	.02	.07	.06
552	770326	6	5	1	13	2	2	2	2	1	3	70	66	23	.02	1.83	.16	.48	.01	.06	.09
553	770327	6	5	1	9	2	2	2	2	1	2	61	92	55	.02	1.88	.55	.5	.02	.06	.06
554	770328	7	5	1	4	2	2	2	2	1	2	59	61	18	.02	1.63	.21	.42	.01	.06	.07
555	770329	6	5	1	11	2	2	2	2	1	4	82	71	10	.04	3.12	.1	.46	.01	.06	.09
556	770330	5	5	1	13	4	2	2	2	1	4	69	67	13	.09	3.62	.12	.46	.01	.06	.09
557	770331	5	5	1	16	2	2	2	2	1	5	87	57	17	.02	2.1	.16	.41	.01	.06	.12
558	770332	5	5	1	7	3	2	2	2	1	3	55	68	15	.02	1.84	.18	.36	.01	.05	.07
559	770333	16	5	1	18	2	2	2	2	2	2	101	196	68	.02	4.17	1.04	1.08	.01	.16	.04
560	770334	9	5	1	18	4	2	2	2	1	2	81	101	44	.03	2.33	.56	.7	.01	.07	.06
561	770335	8	5	1	14	4	2	2	2	1	2	87	66	25	.02	1.59	.29	.5	.01	.06	.11
562	770336	6	5	1	6	6	2	2	2	1	3	84	76	27	.02	1.95	.27	.77	.02	.07	.14
563	770337	14	10	1	8	2	2	2	2	1	3	82	132	39	.02	2.3	.42	.64	.02	.13	.07
564	770338	7	5	1	12	2	2	2	2	1	2	65	88	37	.02	1.86	.48	.66	.02	.07	.1
565	770339	5	5	1	10	2	2	2	2	1	2	56	90	20	.07	2.58	.19	.4	.01	.04	.09
566	770340	8	10	1	12	2	2	2	2	1	2	52	105	40	.02	1.78	.59	.46	.01	.07	.05
567	770341	8	5	1	13	2	2	2	2	1	2	62	113	51	.02	2.03	.56	.64	.02	.09	.07
568	770342	5	10	1	4	2	2	2	2	1	2	50	71	28	.01	1.8	.32	.66	.02	.07	.07
569	770343	5	5	1	9	2	2	2	2	1	2	46	90	49	.01	1.72	.59	.51	.01	.09	.06
570	770344	12	5	1	8	2	2	2	2	2	2	69	99	71	.01	2.7	.83	.6	.01	.11	.04

573	771386	5	5	1	4	2	2	2	2	1	2	36	70	29	.01	1.49	.28	.37	.01	.04	.05
574	771387	7	5	1	3	2	2	2	2	1	2	73	104	38	.01	1.91	.45	.6	.02	.11	.09
575	771388	6	25	1	11	2	2	2	2	1	2	58	71	33	.02	1.93	.4	.46	.01	.07	.1
576	771389	6	5	1	7	2	2	2	3	1	3	84	84	25	.04	4.5	.26	.35	.01	.06	.11
577	771390	4	5	1	13	2	2	2	2	1	2	96	55	17	.02	1.41	.22	.37	.01	.02	.11
578	771391	6	5	1	12	2	2	2	2	1	3	83	45	10	.05	3.79	.09	.31	.01	.02	.11
579	771392	8	5	1	5	4	2	2	3	1	2	63	83	43	.02	1.54	.66	.42	.01	.08	.06
580	771393	4	5	1	13	2	2	2	2	1	4	101	59	13	.04	2.06	.14	.21	.01	.02	.12
581	771394	5	5	1	3	2	2	2	2	1	2	48	74	35	.02	1.4	.42	.39	.01	.05	.09
582	771395	5	5	1	4	4	2	2	2	1	2	57	53	24	.02	1.35	.31	.35	.01	.04	.11
583	771396	5	5	1	10	2	2	2	2	1	2	71	50	22	.02	1.24	.27	.43	.01	.02	.11
584	771397	5	5	1	3	2	2	2	2	1	2	52	63	34	.02	1.66	.39	.43	.01	.04	.07
585	771398	6	5	1	7	2	2	2	2	1	2	54	62	27	.02	1.79	.31	.46	.01	.05	.1
586	771399	9	5	1	14	6	2	2	2	1	4	96	69	16	.06	3.83	.16	.53	.01	.02	.1
587	771400	8	35	1	5	2	2	2	2	1	2	66	73	39	.01	1.29	.45	.5	.02	.08	.09
588	771401	10	85	1	7	5	2	2	2	1	5	75	104	24	.02	2.13	.24	.47	.01	.05	.08
589	771402	4	5	1	3	2	2	2	2	1	5	105	58	25	.01	1.01	.17	.25	.01	.03	.13
590	771403	5	5	1	6	3	2	2	2	1	3	63	78	39	.02	1.35	.34	.53	.01	.05	.1
591	771404	7	5	1	4	4	2	2	2	1	2	55	60	35	.01	1.67	.43	.61	.02	.05	.1
592	771405	4	5	1	5	2	2	2	2	1	2	49	46	23	.01	1.21	.26	.57	.01	.03	.13
593	771406	6	25	1	3	7	2	2	2	1	4	56	73	28	.01	1.45	.31	.48	.01	.03	.1
594	771407	3	5	1	8	2	2	2	2	1	5	101	41	11	.03	1.88	.08	.14	.01	.01	.1
595	771408	3	5	1	8	2	2	2	2	1	2	47	42	12	.09	2.66	.1	.11	.01	.01	.09
596	771409	6	5	1	7	4	2	2	2	1	2	73	48	16	.06	1.98	.19	.38	.01	.03	.1
597	771410	3	5	1	2	7	2	2	2	1	22	52	2	15	.03	.67	.24	.26	.01	.1	.01
598	771411	5	5	1	5	2	2	2	2	1	4	47	42	24	.01	1.21	.32	.48	.01	.06	.09
599	771412	5	5	1	11	5	2	2	2	1	5	180	52	20	.02	1.81	.23	.42	.01	.05	.17
600	771413	9	5	1	13	2	2	2	2	1	3	102	82	30	.01	1.67	.43	.39	.01	.08	.04
601	771414	4	5	1	17	2	2	2	2	1	5	96	51	11	.03	1.92	.11	.34	.01	.02	.11
602	771415	9	5	1	6	2	2	2	2	1	6	72	86	34	.01	1.85	.49	.57	.01	.06	.08
603	771416	6	5	1	11	2	2	2	2	1	5	132	58	16	.01	1.92	.19	.55	.01	.07	.15
604	771417	2	5	1	2	2	2	2	2	1	2	27	30	18	.01	.65	.19	.2	.01	.01	.06
605	771418	4	5	1	4	2	2	2	2	1	3	43	36	20	.01	.91	.26	.32	.01	.03	.07
606	771419	4	5	1	5	2	2	2	2	1	2	51	63	18	.01	1.18	.22	.35	.01	.02	.08
607	771420	5	5	1	8	2	2	2	2	1	2	68	63	13	.1	2.25	.14	.32	.01	.02	.09
608	771421	4	5	1	4	2	2	2	2	1	3	67	62	14	.12	2.62	.14	.25	.01	.01	.09
609	771422	4	5	1	9	3	2	2	2	1	4	74	60	16	.05	3.44	.17	.28	.01	.02	.1
610	771423	4	5	1	2	2	2	2	2	1	2	33	51	19	.01	1.12	.21	.41	.01	.02	.08
611	771424	4	10	1	2	3	2	2	2	1	2	39	37	19	.01	1.15	.23	.58	.01	.01	.11
612	771425	8	65	1	4	2	2	2	2	1	4	64	58	28	.01	1.08	.39	.42	.01	.07	.09
613	771426	4	5	1	2	2	2	2	2	1	5	83	47	13	.05	1.69	.13	.27	.01	.02	.08
614	771427	6	5	1	5	2	2	2	2	1	2	45	41	29	.02	1.25	.37	.42	.01	.05	.07
615	771428	6	5	1	2	2	2	2	2	1	3	61	63	24	.01	1.41	.33	.4	.01	.06	.08
616	771429	3	5	1	2	2	2	2	2	1	2	42	50	15	.01	.92	.17	.33	.01	.02	.08
617	771430	7	5	1	14	2	2	2	2	1	6	92	132	34	.02	3.6	.35	.55	.01	.08	.04
618	771431	4	30	1	9	2	2	2	2	1	4	63	57	20	.02	1.57	.19	.25	.01	.03	.06
619	771432	8	5	1	6	2	2	2	2	1	3	52	87	45	.01	1.68	.61	.52	.02	.09	.05
620	771433	6	5	1	8	2	2	2	2	1	4	65	78	42	.02	2.11	.63	.64	.02	.08	.08
621	771434	8	5	1	12	2	2	2	2	1	3	74	80	39	.02	2.45	.34	1.02	.01	.07	.11
622	771435	16	5	1	27	3	2	2	2	1	2	95	233	71	.02	5.15	1.02	1.03	.01	.16	.03
623	771436	11	5	1	17	2	2	2	2	1	2	78	96	56	.02	2.53	.56	1.37	.02	.08	.12

624	771437	7	5	1	8	2	2	2	2	1	2	79	83	32	.02	2.34	.41	1.12	.02	.08	.16
625	771438	7	5	1	13	2	2	2	2	1	2	83	72	27	.02	1.97	.33	.89	.01	.07	.14
626	771439	7	5	1	12	2	2	2	2	1	2	63	58	27	.02	1.34	.44	.48	.01	.04	.09
627	771440	9	5	1	15	2	2	2	2	1	2	65	57	18	.03	2.53	.25	.43	.01	.02	.09
628	771441	5	5	1	12	2	2	2	2	1	2	73	60	14	.04	2.17	.17	.3	.01	.03	.12
629	771442	7	5	1	9	2	2	2	2	1	2	62	59	28	.02	1.59	.38	.58	.02	.04	.11
630	771443	6	5	1	10	2	2	2	2	1	2	57	66	31	.02	1.48	.46	.51	.01	.06	.1
631	771444	9	5	1	9	2	2	2	2	1	2	70	78	32	.02	1.93	.43	.96	.02	.07	.1
632	771445	5	5	51	18	2	2	2	2	1	2	94	91	21	.09	3.08	.23	.68	.01	.07	.14
633	771446	11	5	1	14	5	2	2	2	1	2	86	83	33	.02	2.6	.54	1.11	.02	.07	.12
634	771447	7	5	1	11	2	2	2	2	1	2	80	76	25	.02	2.14	.21	.84	.01	.06	.14
635	771448	6	5	1	4	2	2	2	2	1	2	61	72	32	.02	2.05	.35	.78	.01	.07	.08
636	771449	7	5	1	9	2	2	2	2	1	2	66	76	38	.02	2.3	.41	1.19	.02	.07	.13
637	771450	3	5	1	2	2	2	2	2	1	2	43	43	20	.02	.81	.29	.25	.01	.04	.09
638	771451	9	80	1	18	3	2	2	2	1	2	60	107	38	.02	1.74	.61	.49	.01	.09	.06
639	771452	7	5	1	8	2	2	2	2	1	2	56	89	42	.02	1.71	.54	.52	.01	.08	.07
640	771453	6	5	1	9	2	2	2	2	1	2	54	64	29	.02	1.35	.43	.45	.01	.07	.07
641	771454	5	10	1	9	2	2	2	2	1	2	45	72	32	.02	1.53	.42	.57	.01	.07	.07
660	772162	4	5	1	25	2	2	2	2	1	2	52	73	12	.06	3.88	.11	.31	.01	.04	.05
661	772163	8	5	1	18	2	2	2	2	1	2	66	133	37	.03	2.14	.44	.55	.02	.13	.03
662	772164	3	85	1	18	2	2	2	2	1	2	36	51	10	.07	2.47	.1	.22	.01	.03	.04
663	772165	3	5	1	14	4	2	2	2	1	2	38	48	9	.11	3.05	.08	.26	.01	.03	.05
664	772166	7	5	1	14	2	2	2	2	1	2	50	242	37	.02	2.12	.45	.47	.01	.09	.03
665	772167	4	5	1	8	2	2	2	2	1	2	36	56	19	.02	.95	.23	.33	.01	.05	.07
666	772168	11	5	1	19	2	2	2	2	1	2	53	72	23	.03	1.49	.31	.57	.01	.06	.06
667	772169	4	5	1	12	2	2	2	2	1	2	74	44	9	.02	1.85	.08	.33	.01	.05	.08
668	772170	4	5	1	6	2	2	2	2	1	2	62	45	11	.02	1.52	.1	.26	.01	.04	.07
669	772171	15	5	1	19	2	2	2	2	1	2	99	67	17	.03	2.38	.22	.2	.01	.04	.06
670	772172	3	5	1	12	2	2	2	2	1	2	59	38	10	.02	1.39	.06	.18	.01	.04	.06
671	772173	5	5	1	27	2	2	2	2	1	2	55	56	10	.05	2.71	.08	.39	.01	.04	.06
672	772174	4	5	1	23	3	2	2	2	1	2	42	57	10	.02	2.18	.1	.35	.01	.05	.03
673	772175	4	5	1	23	3	2	2	2	1	2	57	46	8	.02	1.64	.07	.35	.01	.06	.04
674	772176	2	15	1	11	2	2	2	2	1	3	34	38	8	.02	1.21	.06	.15	.01	.04	.03
675	772177	6	5	1	29	2	2	2	2	1	2	52	63	12	.05	2.75	.13	.37	.01	.03	.05
676	772178	5	5	1	14	2	2	2	2	1	2	74	52	10	.02	1.87	.09	.39	.01	.05	.07
677	772179	4	160	1	10	2	2	2	2	1	2	43	54	32	.03	1.75	.31	.52	.01	.07	.05
678	772180	5	5	1	14	2	2	2	2	1	2	45	51	20	.02	2.11	.14	.54	.01	.06	.04
679	772181	5	5	1	13	4	2	2	2	1	2	58	57	15	.02	2.2	.11	.54	.01	.06	.07
680	772182	5	5	1	14	2	2	2	2	1	2	55	62	13	.06	2.8	.13	.4	.01	.05	.06
681	772183	5	5	1	24	2	2	2	2	1	3	79	50	10	.04	2.68	.1	.43	.01	.07	.07
682	772184	3	5	1	7	2	2	2	2	1	4	41	35	9	.02	.98	.08	.14	.01	.03	.06
683	772185	4	5	1	20	2	2	2	2	1	2	41	60	14	.05	2.8	.14	.31	.01	.05	.05
684	772186	4	5	1	4	2	2	2	2	1	2	40	47	15	.02	1.27	.18	.43	.01	.03	.06
685	772187	9	5	1	5	4	2	2	2	1	2	65	77	19	.02	2.62	.19	.99	.01	.08	.11
686	772188	5	5	1	8	2	2	2	2	1	2	43	72	19	.05	2.66	.17	.47	.01	.06	.05
687	772189	5	5	1	5	2	2	2	2	1	2	44	79	24	.02	1.9	.3	.63	.01	.07	.06
688	772190	4	5	1	20	2	2	2	2	1	2	42	74	17	.06	3.09	.14	.3	.01	.04	.04
689	772191	4	5	1	10	2	2	2	2	1	2	36	81	14	.02	1.79	.13	.4	.01	.05	.05
690	772192	3	5	1	14	2	2	2	2	1	2	46	60	11	.03	1.93	.09	.28	.01	.04	.05
691	773001	6	5	1	3	2	2	2	2	1	2	53	61	17	.02	1.43	.19	.4	.01	.03	.08
692	773002	6	5	1	7	2	2	2	2	1	2	46	56	26	.02	.98	.35	.37	.01	.06	.06

693	773003	7	5	1	7		2	2	2		2	1	2	50	68	32	.02	1.22	.43	.39	.01	.06	.06
694	773004	7	5	1	6		2	2	2		2	1	2	57	66	31	.02	1.41	.33	.38	.01	.03	.09
695	773005	6	5	1	9		2	2	2		2	1	2	68	49	12	.06	1.91	.1	.28	.01	.03	.08
696	773006	3	5	1	4		2	2	2		2	1	3	52	30	16	.02	.92	.18	.18	.01	.02	.08
697	773007	5	5	1	6		2	2	2		2	1	3	92	62	15	.03	1.73	.13	.42	.01	.04	.12
698	773008	7	5	1	14		2	2	2		2	1	2	114	60	13	.03	4.36	.16	.66	.01	.04	.15
699	773009	4	5	1	7		2	2	2		2	1	3	88	47	14	.02	1.89	.13	.34	.01	.03	.12
700	773010	10	5	1	16		2	2	2		2	1	2	76	114	40	.01	2.54	.69	.78	.02	.08	.11
701	773011	6	5	1	11		2	2	2		2	1	2	103	51	19	.02	1.77	.17	.5	.01	.04	.19
702	773012	8	5	1	4		2	2	2		2	1	2	88	54	20	.01	1.95	.26	.84	.01	.04	.17
703	773013	6	5	1	14		2	2	2		2	1	2	112	76	20	.05	3.38	.26	.53	.01	.04	.14
704	773014	8	5	1	25		3	2	2		2	1	2	91	98	41	.03	4.63	.37	.66	.01	.08	.13
705	773015	5	5	1	12		2	2	2		2	1	2	93	48	17	.06	3.53	.2	.54	.01	.06	.11

REC#	SMPL#	LA	AE3	B	CR	AE5	AE6	GRIDE	GRIDN
507	770281	3		2	3			L13N14W	
508	770282	2		2	3			L14W13.9N	
509	770283	17		21	13			L14W24.17N	
510	770284	6		10	12			L6N1W	
511	770285	6		15	8			L6N2W	
512	770286	5		18	9.			L6N3W	
513	770287	5		18	11			L6N4W	
514	770288	9		23	11			L6N5W	
515	770289	9		14	10			L6N6W	
516	770290	2		5	8			L6N6.59W	
517	770291	5		20	15			L6N7W	
518	770292	6		22	13			L6N8W	
519	770293	4		25	15			L6N9W	
520	770294	9		22	10			L6N10W	
521	770295	4		18	13			L6N11W	
522	770296	3		17	16			L6N12W	
523	770297	13		17	16			L6N13W	
524	770298	3		22	13			L6N14W	
525	770299	3		24	13			L8N14W	
526	770300	4		16	30			L8N13W	
527	770301	22		19	15			L8N12W	
528	770302	15		19	14			L8N11.69W	
529	770303	6		20	11			L8N11W	
530	770304	5		13	13			L8N10W	
531	770305	8		15	18			L8N9W	
532	770306	7		16	17			L8N8W	
533	770307	5		19	13			L8N7W	
534	770308	10		17	17			L8N6W	
535	770309	5		17	10			L8N5W	
536	770310	2		2	36			L8N4.17W	
537	770311	10		18	16			L8N4W	
538	770312	7		18	11			L8N3W	
539	770313	5		23	10			L8N2W	
540	770314	8		12	12			L8N1W	
541	770315	8		21	13			L8N0W	
542	770316	5		20	11			L9N1W	
543	770317	10		22	17			L9N2W	

544	770318	5	27	15	L9N3W
545	770319	7	27	14	L9N4W
546	770320	6	20	22	L9N5W
547	770321	5	2	14	L9N6W
548	770322	7	2	16	L9N7W
549	770323	4	2	19	L9N8W
550	770324	4	2	16	L9N9W
551	770325	9	2	16	L9N10W
552	770326	5	2	15	L9N11W
553	770327	8	2	12	L9N12W
554	770328	5	2	11	L9N13W
555	770329	3	2	16	L9N14W
556	770330	4	2	14	L11N14.67W
557	770331	4	2	16	L11N14W
558	770332	4	2	11	L11N13W
559	770333	16	2	30	L11N12W
560	770334	9	2	18	L11N11W
561	770335	4	2	17	L11N10W
562	770336	5	2	16	L11N9W
563	770337	6	2	24	L11N8W
564	770338	5	2	16	L11N7W
565	770339	5	2	17	L11N6W
566	770340	10	2	16	L11N5W
567	770341	10	2	17	L11N4W
568	770342	4	3	13	L11N3W
569	770343	7	2	13	L11N2W
570	770344	12	2	16	L11N1W
573	771386	7	2	14	L24N14W
574	771387	13	2	21	L24N13W
575	771388	10	2	16	L24N12W
576	771389	7	2	24	L24N11W
577	771390	5	2	16	L24N10W
578	771391	4	2	25	L24N9W
579	771392	11	3	22	L24N8.2W
580	771393	5	2	17	L24N8W
581	771394	12	2	23	L24N7W
582	771395	9	2	20	L24N6W
583	771396	5	3	16	L24N5W
584	771397	9	2	16	L24N4W
585	771398	8	2	17	L24N3W
586	771399	4	2	19	L24N2W
587	771400	8	2	21	L24N1.5W
588	771401	7	2	19	L24N1W
589	771402	4	2	15	L24N0W
590	771403	6	2	17	L24N0W
591	771404	6	2	15	L24N0W
592	771405	4	2	14	L20N5W
593	771406	9	3	14	L20N6W
594	771407	4	2	17	L20N7W
595	771408	6	2	20	L20N8W
596	771409	4	2	17	L20N9W

597	771410	3	2	10	L20N10W
598	771411	5	2	14	L20N11W
599	771412	3	2	14	L20N12W
600	771413	16	2	16	L20N13W
601	771414	4	2	15	L20N14W
602	771415	7	2	14	L22N14W
603	771416	3	2	16	L22N13W
604	771417	4	2	7	L22N12W
605	771418	5	3	12	L22N11W
606	771419	5	23	14	L22N9W
607	771420	4	20	17	L22N8W
608	771421	4	12	19	L22N8W
609	771422	5	3	15	L22N7W
610	771423	4	2	9	L22N6W
611	771424	4	2	9	L22N5W
612	771425	7	2	18	L22N4W
613	771426	4	3	15	L22N3W
614	771427	8	2	14	L22N2W
615	771428	6	15	10	L22N1W
616	771429	4	18	11	L22N0W
617	771430	5	4	20	L14N6W
618	771431	4	3	15	L14N7W
619	771432	8	3	15	L14N7.59W
620	771433	13	4	13	L14N8W
621	771434	6	3	17	L14N9W
622	771435	15	2	30	L14N10W
623	771436	6	2	19	L14N11W
624	771437	5	2	9	L14N12W
625	771438	4	2	12	L14N13W
626	771439	5	3	13	L14N14W
627	771440	3	3	15	L13N14W
628	771441	4	2	17	L13N13W
629	771442	5	2	14	L13N12W
630	771443	6	2	14	L13N11W
631	771444	5	2	20	L13N10W
632	771445	4	3	14	L13N9W
633	771446	5	3	17	L13N8W
634	771447	6	3	12	L13N6.9W
635	771448	5	2	12	L13N6W
636	771449	5	2	11	L13N5W
637	771450	4	2	9	L13N4W
638	771451	10	2	16	L13N3.17W
639	771452	11	2	14	L13N3W
640	771453	9	2	15	L13N2W
641	771454	6	2	11	L13N1W
660	772162	6	2	15	L2N1W
661	772163	9	3	24	L2N2W
662	772164	5	3	11	L2N3W
663	772165	5	3	13	L2N3.8W
664	772166	10	3	15	L2N5.3W
665	772167	6	2	13	L2N5.44W

666	772168	7	3	15	L2N6W
667	772169	4	4	13	L2N7W
668	772170	4	4	13	L2N8W
669	772171	4	5	15	L2N9W
670	772172	5	3	14	L2N10W
671	772173	5	3	18	L2N11W
672	772174	5	3	12	L2N12W
673	772175	5	5	11	L2N13W
674	772176	5	3	11	L2N14W
675	772177	5	3	16	L2N15W
676	772178	4	4	15	L4N15W
677	772179	4	3	11	L4N14W
678	772180	4	2	12	L4N13W
679	772181	4	4	12	L4N12W
680	772182	4	3	17	L4N11W
681	772183	5	4	19	L4N10W
682	772184	4	3	10	L4N9W
683	772185	6	3	13	L4N8W
684	772186	4	3	12	L4N7W
685	772187	5	2	13	L4N6W
686	772188	7	2	14	L4N5W
687	772189	5	2	15	L4N4W
688	772190	6	4	15	L4N3W
689	772191	5	2	12	L4N2W
690	772192	6	2	15	L4N1W
691	773001	6	3	15	L16N6W
692	773002	7	3	15	L16N6.4W
693	773003	7	4	14	L16N6.8W
694	773004	7	3	17	L16N7W
695	773005	3	3	19	L16N8W
696	773006	5	2	14	L16N9W
697	773007	4	4	13	L16N10W
698	773008	5	5	22	L16N11W
699	773009	5	7	13	L16N12W
700	773010	7	4	17	L16N13W
701	773011	5	3	14	L16N14W
702	773012	5	3	13	L18N13W
703	773013	5	4	16	L18N12W
704	773014	11	3	19	L18N11W
705	773015	4	4	14	L18N10W

APPENDIX 3A

STATEMENT OF COSTS

Gran 7 Property

STATEMENT OF COSTS

Gran 7 Property

Gran 7 Group - 20 Units

A. Geological and Geochemical Surveys

1) BP Labour:

Project Geologist - Michael Smith Aug. 20-25, incl. 6 days x $200/day	$1,200.00
Project Geologist - Michael Bradley Aug. 20-21, incl. 2 days x $200/day	400.00
Geological Assistant - Sally Robinson Aug. 20-25, incl. 6 days x $125/day	750.00
	$2,350.00
2. Truck Rental- 6 days x $50/day	300.00
3. Accommodation - 6 days x $50/day	300.00
4. Mobilization, Demobilization	450.00
5. Analysis - 203 samples x $9/sample	1,855.00
6. Computer Processing	500.00
7. Geochemist - data interpretation	300.00
8. Drafting	150.00
9. Report writing - 2.5 days x $200/day	500.00
	$6,705.00

APPENDIX 3B

Apportionment of Assessment Credits

Apportionment of Assessment Credits

Gran 7 Claims - August 20-26 inclusive

Value of Work:	1)	Done on property	$6,705.00
	2)	Withdrawal - PAC Account	0
	3)	Applied to claims	6,000.00

Application of Work

Claim No.	Record No.	Units	Recording Date	Apply	
GRAN 7	4777	20	27/09/82	3 years @	$100/unit $6,000.00

TOTAL WORK APPLIED = $6,000.00

Recording Fee = $300.00

September 3, 1983 - Recording Receipt No. 20854444.

APPENDIX 4

List of Qualifications

M. D. Smith
S. J. Hoffman

Statement of Qualifications

Michael D. Smith

I, Michael Smith of Suite 700 - 890 West Pender Street in Vancouver in the Province of British Columbia, Do Hereby State:

1. That I am a graduate of Brock University, St. Catherine, Ontario, where I obtained a B.Sc. (Hons.) degree in Geology in 1975.

2. That I am a Fellow of the Geological Association of Canada.

3. That I have been active in mineral exploration since 1961.

4. That I have practised my profession continuously as a geologist since 1975.

Michael D. Smith
Geologist
BP MINERALS LIMITED

Vancouver, B.C.

List of Qualifications - S.J. Hoffman

BSc 1969 - McGill University (Hons Geology and Chemistry)

MSc 1972 - The University of British Columbia (Geochemistry)

PhD 1976 - The University of British Columbia (Geochemistry)

List of Publications

1. Hoffman, S.J., 1972

Geochemical dispersion in bedrock and glacial overburden around a copper property in south central British Columbia. MSc thesis, unpublished, U.B.C., 209 pp.

2. Hoffman, S.J. and Fletcher, W.K., 1972

Distribution of copper at the Dansey-Rayfield River property, south central British Columbia. J. Geoch. Expl. 1, 163-180.

3. Hoffman, S.J. and Waskett-Myers, M.J., 1974

Determination of molybdenum in soils and sediments with a modified zinc dithiol procedure. J. Geoch. Expl. 3, 61-66.

4. Hoffman, S.J., 1974

Pebble Cards - A record of the coarse fraction of stream sediments for geochemical exploration. J. Geoch. Expl. 3, 387-388

5. Hoffman, S.J. and Fletcher, W.K., 1976

Reconnaissance geochemistry on the Nechako Plateau, B.C., using lake sediments. J. Geoch. Expl. 5, 101-114.

6. Hoffman, S.J., 1976

Mineral Exploration of the Nechako Plateau, central British Columbia, using lake sediment geochemistry. PhD thesis, unpublished, U.B.C., 347 pp.

7. Hoffman, S.J. 1977

Talus fine sampling as a regional geochemical exploration technique in mountainous regions. J. Geoch. Expl. 7, 349-360.

8. Hoffman, S.J. and Fletcher, W.K., 1979

Sequential extraction of copper, zinc, iron, manganese and molybdenum from soils and sediments.
In Geochemical Exploration 1978, Proceedings of the Seventh International Geochemical Exploration Symposium, Golden, Colorado, 289-299.

9. Hoffman, S.J. and Fletcher, W.K., 1981

Detailed lake sediment sampling of anomalous lakes on the Nechako Plateau, central British Columbia - Comparison of trace metal distributions in Capoose and Fish Lakes.
J. Geoch. Expl. 14, 221-224.

10. Hoffman, S.J. and Fletcher, W.K., 1981

Organic matter scavenging of copper, zinc, molybdenum, iron, and manganese, estimated by a sodium hypochlorite extraction (pH 9.5).
J. Geoch. Expl. 15, 549-562.

11. Hoffman, S.J., Arnold, P.M. and Zink, E.W., 1983

Rapid field determination of copper by anodic stripping voltammetry (ASV).
In press, Encyclopedia of Earth Sciences.

12. Hoffman, S.J., 1983

Lake sediment geochemistry.
In press, Encyclopedia of Earth Sciences.

13. Hoffman, S.J., 1983

Geochemical exploration for unconformity-type uranium deposits in permafrost terrain - Hornby Bay Basin, Northwest Territories, Canada. In press, J. Geoch. Expl.

14. Hoffman, S.J., and Mitchell, G.G., 1983

Microcomputers in geochemical exploration. Presented, Helsinki, August, 1983, to be published in the J. Geoch. Expl.

List of Memberships

1. Geological Association of Canada, since 1967.
2. Canadian Institute of Mining and Metallurgy, since 1973.
3. Association of Exploration Geochemists, since 1973.
4. American Society of Agronomy, since 1973.
5. Geochemical Society, since 1983.

Other Qualifications

1. Instructor on methods of geochemical exploration for the B.C. Department of Mines prospecting school, May 1977 - 1983 (7 years).

2. Instructor, Short course on Geochemical Exploration in the Canadian Shield, McGill University, January 1979.

3. Speaker, CIM in Prince George, B.C. on "Lake Sediment Geochemistry", May, 1977.

4. Speaker, Geosciences Council, Yellowknife on "Lake Sedimentary Geochemistry, Hornby Bay area", December 1978, and also December 1980.

5. Instructor, Short course on Geochemical Exploration (computer and statistical applications), Northwest Mining Association, Spokane, Washington, December 1979.

6. Council member, Association of Exploration Geochemists, 1980-1984.

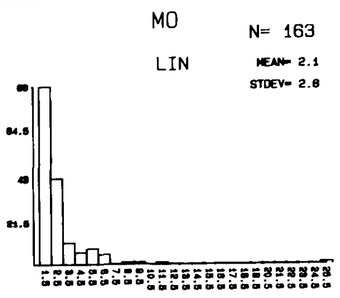
7. Chairman, GOLD-81 Symposium. Precious Metals in the Northern Cordillera: April 12-15, 1981. Co-sponsored by the Association of Exploration Geochemists and the Cordilleran Section of the Geological Association of Canada.

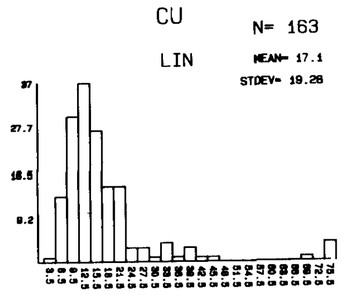
8. Business Editor, Proceedings of the GOLD-81 Symposium published February 1982.

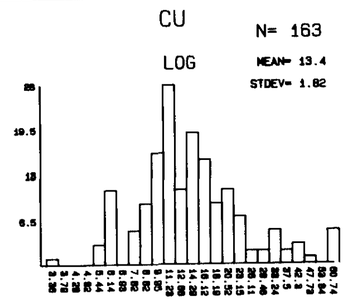
9. Lecturer, Exploration geochemistry, University of British Columbia, credit course, 1983, 1984.

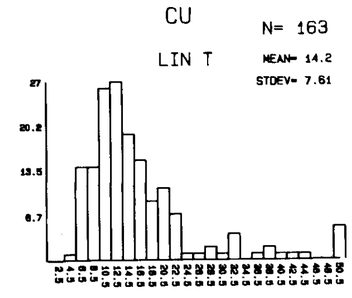
10. Member, committee to determine qualifications for geochemical option of professional geologist (P. Geol.), a sub classification of P. Eng., 1982-1983.

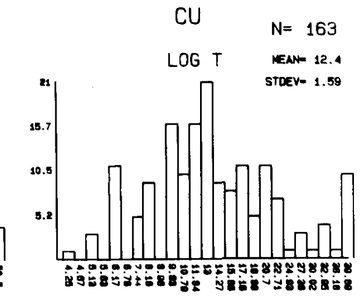
11. Chairman, Geochemistry 1986 Symposium, to be held in Vancouver.

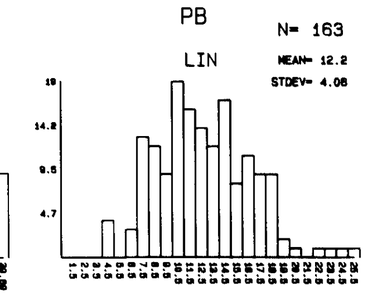


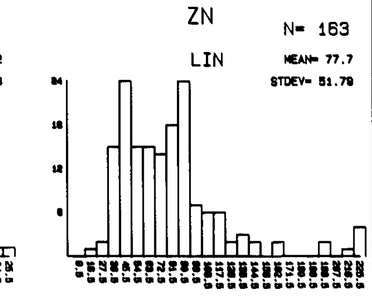


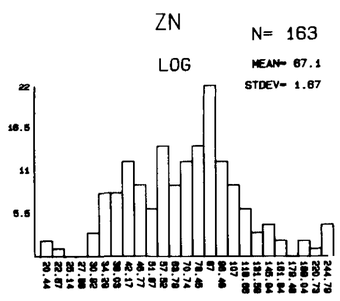


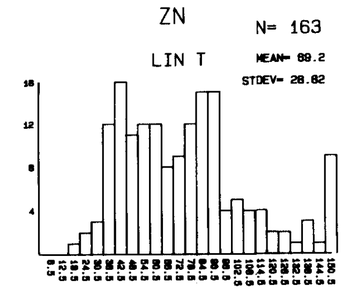


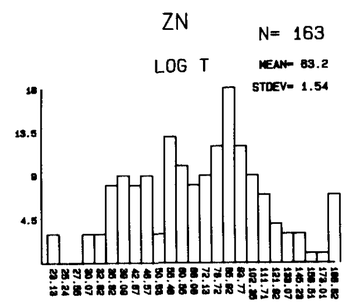


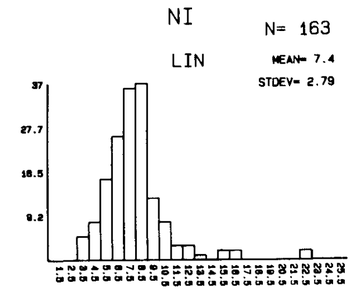


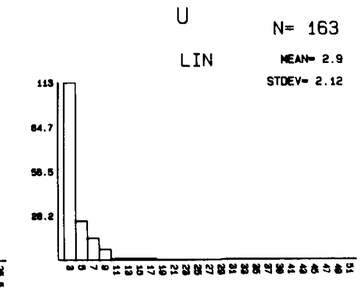


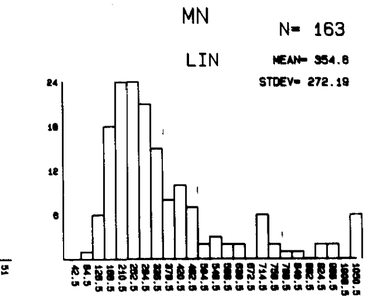


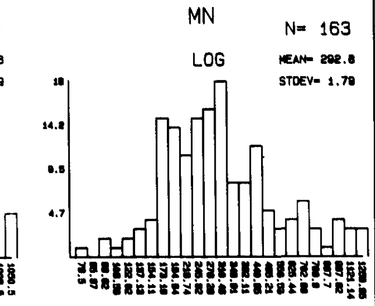


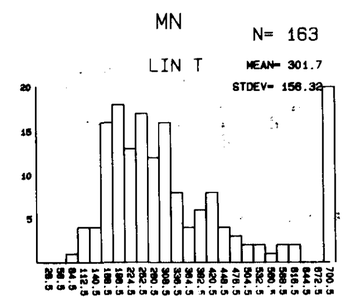


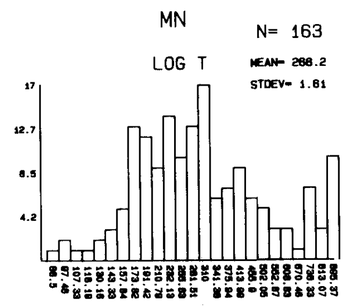


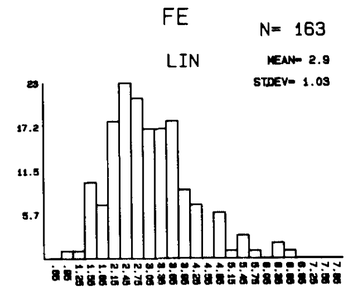


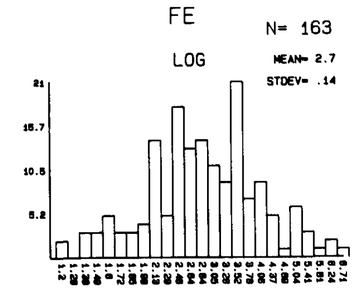


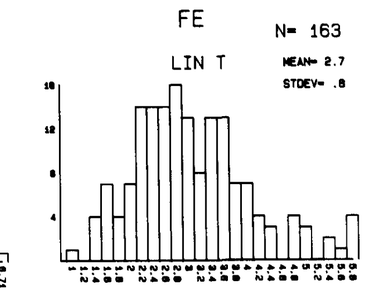


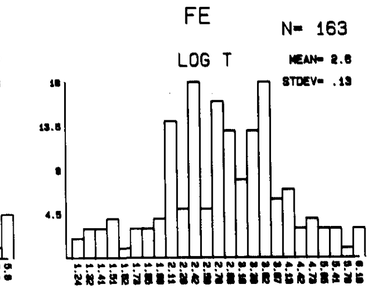


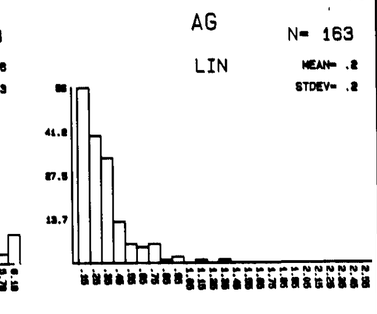


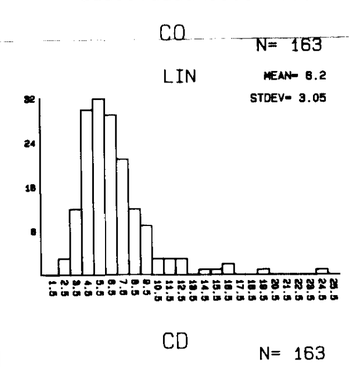


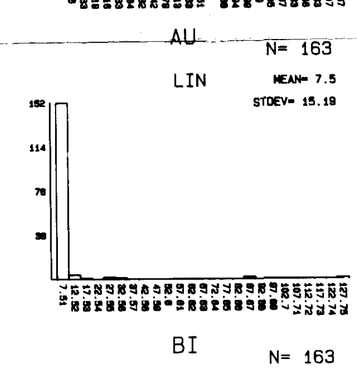


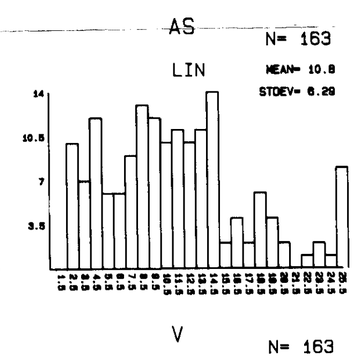


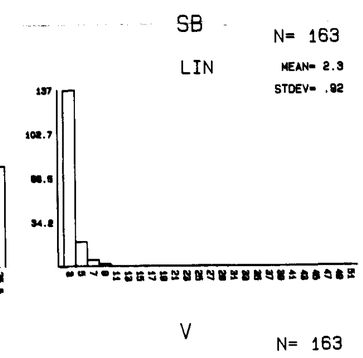


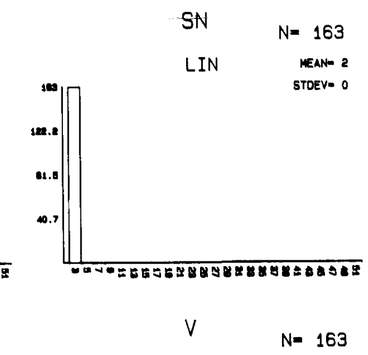


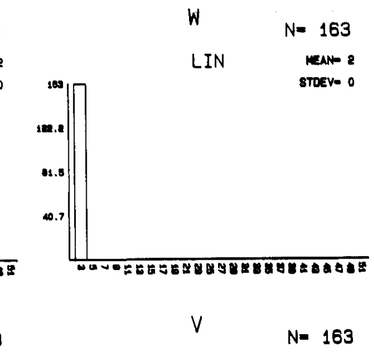


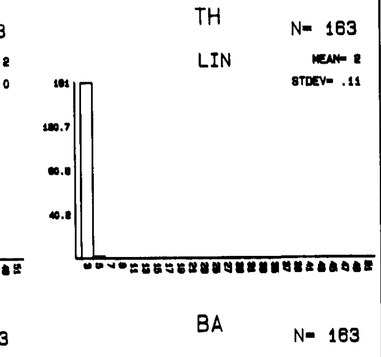


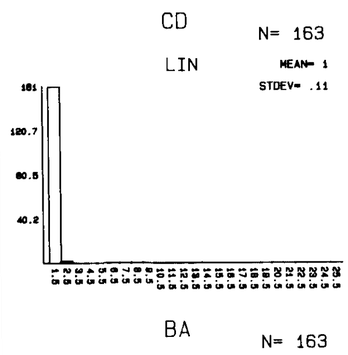


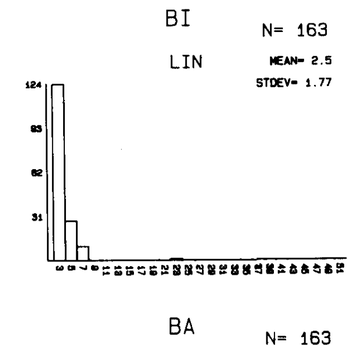


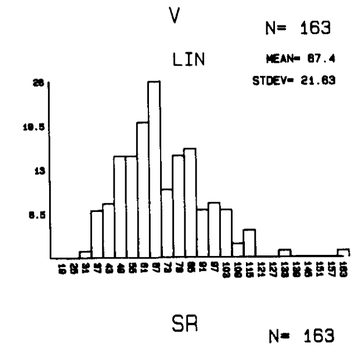


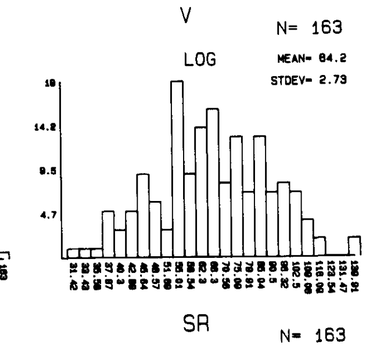


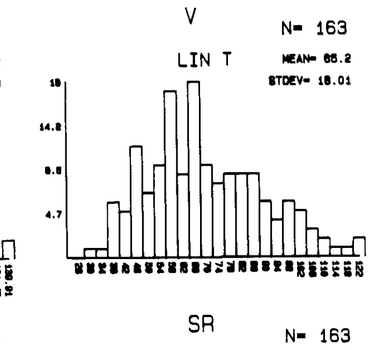


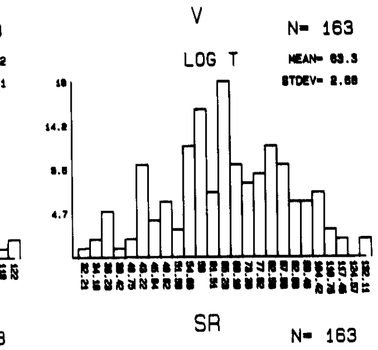


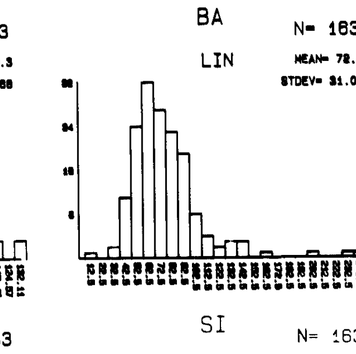


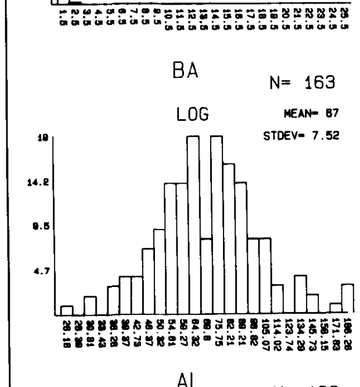


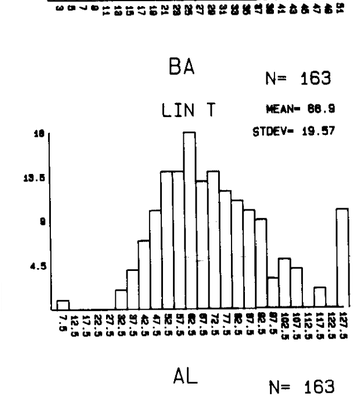


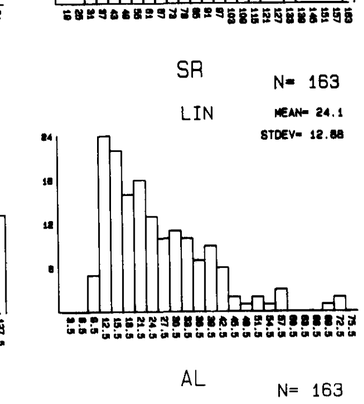


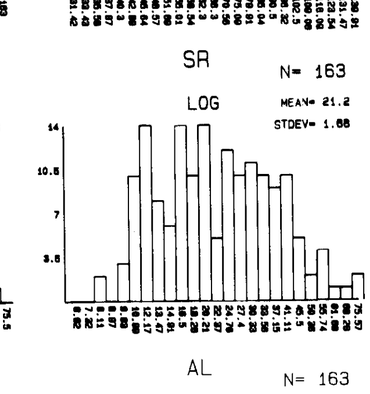


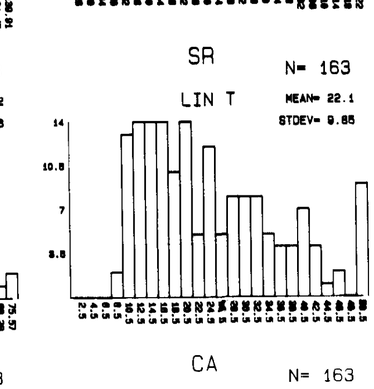












GEOLOGICAL BRANCH ASSESSMENT REPORT

12,032

HORIZONTAL AXIS

- LIN - ARITHMETIC CONCENTRATION SCALE
- LOG - LOGARITHMIC CONCENTRATION SCALE
- LIN T, LOG T - TRUNCATED DISTRIBUTION USED TO CALCULATE CONCENTRATION SCALES (SEE TEXT FOR PROCEDURE)

VERTICAL AXIS

- - NUMBER OF SAMPLES
- N = NUMBER OF SAMPLES
- MEAN - ARITHMETIC (LIN) OF GEOMETRIC MEAN (LOG)
- STDEV - STANDARD DEVIATION OR LOG STANDARD DEVIATION

PPM CONCENTRATIONS FOR: Mo, Cu, Pb, Zn, Ni, U, Mn, Ag, Co, As, Sb, Bi, V, Ba, Sr, La, B, Cr,

% CONCENTRATION FOR : Fe, Si, Al, Ca, Mg, Na, K, Ti, P.

BP Minerals Limited

GRAN 7 CLAIM

CAPOOSE LAKE PROJECT - B.C.

HISTOGRAMS

SOILS

DWG NO.	DATE NOV. 1983	PROJECT 529	PLATE 1
REPORT NO.	NTS 93 F/3	SCALE As Shown	
TO ACCOMPANY REPORT:	BPVR 83-6		

353000 E

354000 E

355000 E

5899000 N

5898000 N

5897000 N

GRAN 7

LCP

ANDESITE TUFF

1

1

1

2

MAGNETITE - EPIDOTE SKARN

2

ARGILLITE EPIDOTE, CHLORITE ALTERATION

1

2

ANDESITE LAPILLI TUFF

1

ANDESITE LAPILLI TUFF MT. RICH (10%)

ANDESITE LAPILLI TUFF -MINOR PO -MODERATELY MAGNETIC

ANDESITE LAPILLI TUFF

ANDESITE LAPILLI TUFF

ANDESITE TUFF - FINELY BEDDED

ARGILLITE, FINELY BEDDED, 10% EPIDOTE

?

?

ANDESITIC TUFF, FELSITE DYKES

ANDESITE ASH TUFF

ANDESITE ASH TUFF
ANDESITE FELD-EP. VEINS
-APLITE VEINS?
-EPIDOTE-GARNET-TOURMALINE
-MINOR SULPHIDES

WEAKLY HORNFELS ANDESITE, FELDSPAR-EPIDOTE VEINING

5705+

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,032

LEGEND

- 2 — MAGNETITE SKARN
- 1 — ANDESITIC TUFF - EPIDOTE ALTERATION
- — — INTERPRETED CONTACT
- ——— CLAIM BOUNDARY
- △ FLOAT
- x SMALL OUTCROP
- ◌ OUTCROP OUTLINE

METRES
0 50 100 150 200 250 300 350 400 450 500

BP Minerals Limited

GRAN 7 CLAIM
CAPOOSE LAKE PROJECT - B.C.
GEOLOGY

DWG. NO.	DATE NOV. 1983	PROJECT 529	FIG. 2
REPORT NO.	NTS 93 F/3	SCALE 1:5000	
TO ACCOMPANY REPORT:	BPVR 83-6		