LOG NO: 1214 RD.

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FILE NO: 87-876-16615

11/88

Operator: **PETROFLAME INTERNATIONAL RESOURCES INC.**

Owner: John A.C. Ross

REPORT
on the

LUCKY JIM CLAIM GROUP

SLOCAN MINING DIVISION
ZINCTON AREA, BRITISH COLUMBIA

N. Latitude: 50° 02' ~~15"~~ 24" W. Longitude: 117° 12'

NTS 82 K/3E

by

Sean P. Butler, B.Sc.
A. E. Hunter, B.A.Sc.

STRATO GEOLOGICAL ENGINEERING LTD.
3566 King George Highway
Surrey, British Columbia
V4A 5B6

August 19, 1987

STRATO GEOLOGICAL ENGINEERING LTD.

SUMMARY

During July, 1987 a four man crew completed a geological, geochemical and geophysical program on the claims around the Lucky Jim Mine for Petroflame International Resources Inc. The property is located in the Slocan Mining Division astride Highway 31A at the old townsite of Zincton, between New Denver and Kaslo, B.C.

The Lucky Jim Mine has a long history of production with about one million tons of approximate 8% zinc having been produced.

The survey program involved geochemical soil sampling and geophysical surveys which included total field magnetics, magnetic gradient, VLF-EM, VLF-EM with apparent resistivity and self - potential (SP) methods.

Several prospecting traverses on the south side of the valley located the hanging wall limestone in several places and the Lucky Jim Limestone up above the Snap workings. An orientation survey line over the Lucky Jim Limestone, above the workings, was completed to determine a response for the limestone unit. The geophysics did not define the Lucky Jim Limestone, however geochemistry did recognize it with higher calcium and decreased iron content. Also the hanging wall limestone outcrops along the west side of the creek and geophysics (SP low and weak VLF-EM) and geochemistry delineated this unit. A possible mineral zone along line 1 is defined by an SP low and a weak VLF-EM response at 3+50 W, and some higher zinc and silver values at 3+75 W and 3+87.5 W.

The survey grid on the north side of Seaton Creek had various geophysical techniques and geochemistry completed. A series of north

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trending Fraser filtered VLF-EM anomalies, SP lows, and apparent resistivity anomalies occur. The most significant of these is a coincident SP and VLF-EM anomaly over the downdip extension of a limestone band approximately 100m west of the limestone outcrop. An apparent resistivity high coincides with the limestone outcrop and scattered high lead and zinc values occur downslope.

Geochemistry in the grid area was separated into two sample populations divided at 2+00W. This was done to separate the higher values, probably related to the creek sediments, from the much lower values over ground to the east. A group of several anomalous samples on the west end of line 4 is considered to be significant.

A fault is interpreted to lead between a breccia on the creek and another breccia in an adit higher upslope. Near this adit a rusty brown-red coloured soil zone occurs and a soil sample returned high copper, zinc, iron, and cadmium This zone is worth follow-up exploration. Four adits on the north side of the valley were located and show evidence of previous interest in this area. Several limestone beds were also found, two in the lower east survey area and one higher and to the west on the Gentle Annie claim. None of these limestone units appear to be mineralized in the locations outcropping on surface.

A program of sampling and testing to determine the zoning in the ore deposit was considered but caved portals caused it to be postponed at this time.

Several areas warrenting follow-up exploration have been defined in the southern and northern claims area. A program of detailed rock and soil sampling, induced polarization/resistivity surveying, and trenching is recommended.

Respectfully submitted,
Strato Geological Engineering Ltd.

A.E. Hunter, B.A.Sc.
Geophysicist

Sean P. Butler, B.Sc.
Geologist

August 19, 1987

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1. INTRODUCTION

Pursuant to a request by the Directors of Petroflame International Resources Inc., an exploration program consisting of geological mapping and geophysical and geochemical surveys was carried out over the Lucky Jim property by Strato Geological Engineering Ltd. Field work was completed during the period July 10 to July 23, 1987 by a four man crew under the direction of S.P. Butler, B.Sc.

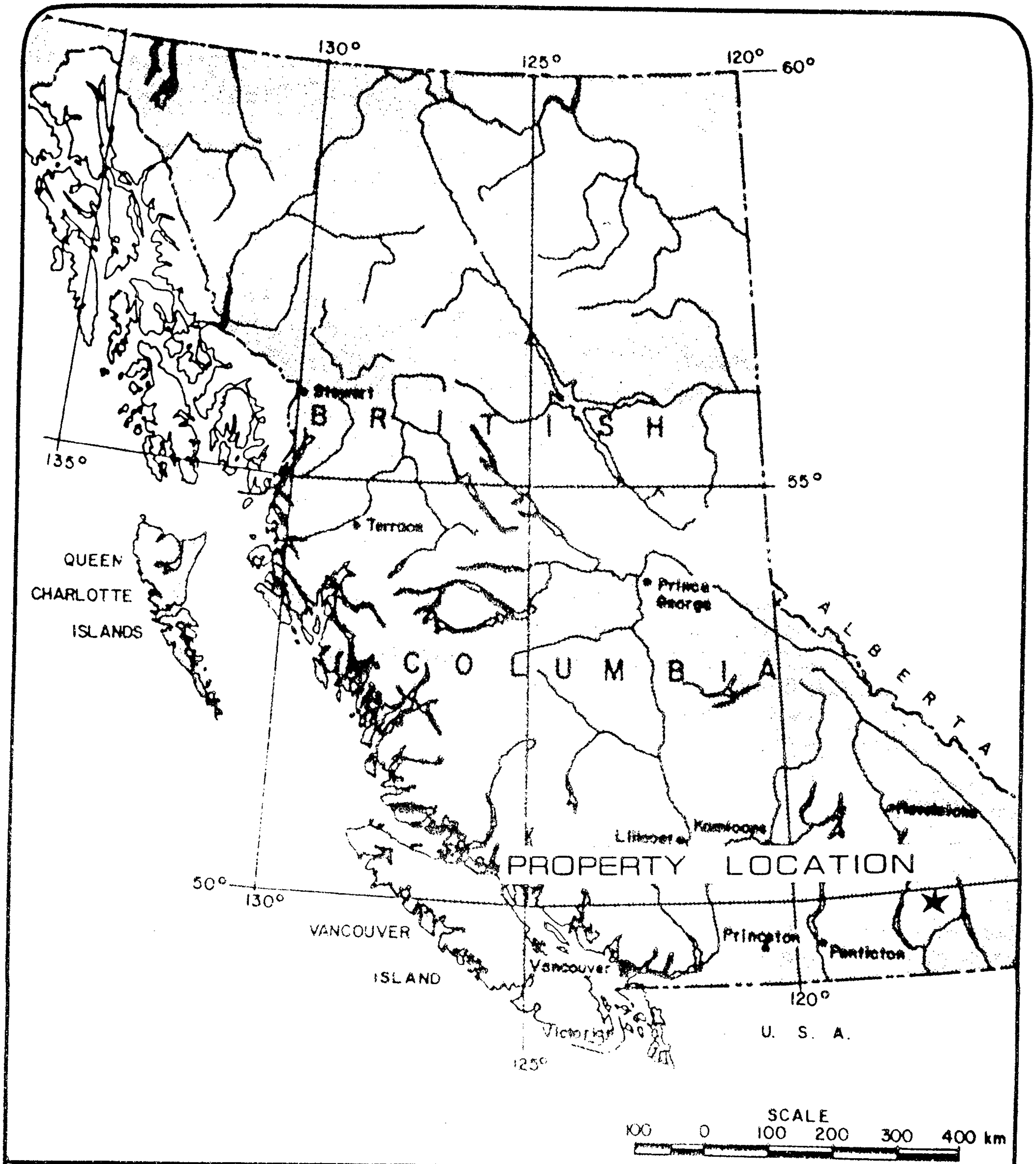
The purpose of the program was to delineate the surface extension of the Lucky Jim Limestone using geophysical and geochemical techniques and to investigate the potential of vertical mineral zoning in the old mine.

This report presents the results of four geophysical survey methods, a geochemical survey, and a geological evaluation of the areas south of and north of the Lucky Jim Mine.

1.1 Location and Access

The Lucky Jim Mine is located in the Slocan Mining Division. It appears on NTS map 82K/3 (Rosebery) at longitude 117 degrees 12' 10" W and latitude 50 degrees 02' 15" N. The former town of Zincton was built around the mine when it operated in the 1940's and is shown on the map.

The property is crossed by Highway 31A, a paved road between the towns Kaslo and New Denver. Accomodation and services are available in both towns with New Denver approximately 16 road kilometers southeast and Kaslo approximately 30 road kilometers north.



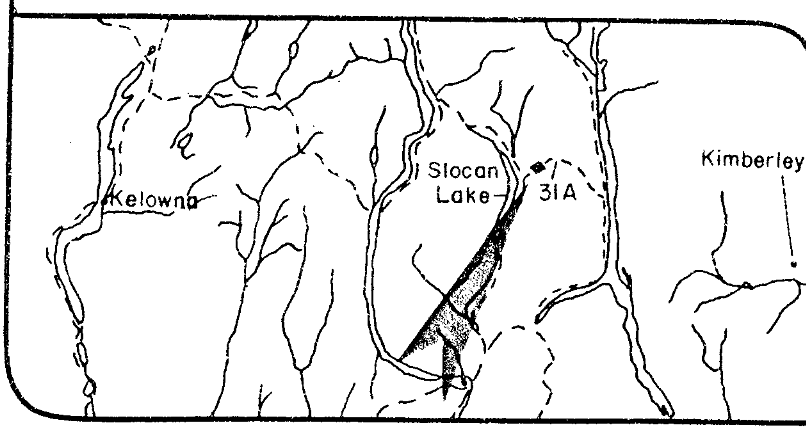


FIGURE I

PETROFLAME INTERNATIONAL RESOURCES INC.

LOCATION MAP

JULY 1987

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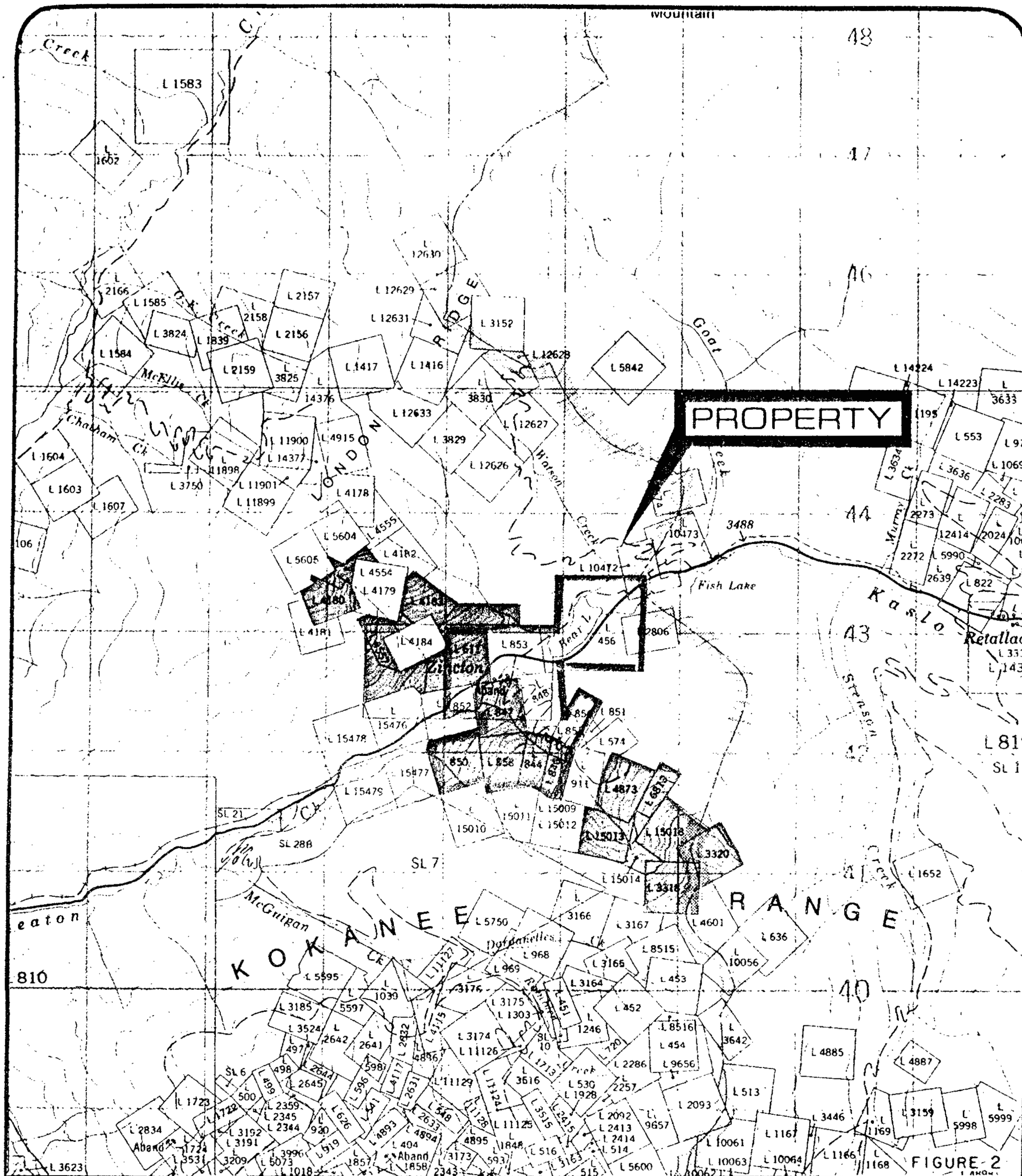


FIGURE 2

ROSEBERY

NTS 82 K/3

Scale 1:50,000

1000 0 1000 2000 Metres

PETROFLAME INTERNATIONAL RESOURCES INC.

LUCKY JIM CLAIM NTS 82 K/3

SLOCAN MINING DIVISION, BRITISH COLUMBIA

TOPOGRAPHIC MAP

JULY 1987

STRATO GEOLOGICAL ENGINEERING LTD.

1.2 Topography and Vegetation

The claims lie within the Slocan and Kokanee Ranges of the Selkirk Mountains, on either side of the narrow valley cut by Seaton Creek. Elevations range from 1065 meters above sea level in the valley to 1950 meters on the north slope and 2250 meters on the south slope of the valley.

The lower claims, below the Snap Crown Grant, cover fairly steep ground but above this claim the topography is moderate up to Chickadee Ridge. The claims are covered primarily by poplar, birch and alder with isolated stands of fir and pine. Numerous southeast and northwest flowing creeks drain the claim area into Seaton Creek.

1.3 Property Status

The properties comprise eleven crown granted claims and eight located claims, all held by J.A.C. Ross. Six reverted crown granted claims are held under option to J.A.C. Ross. The surface rights to approximately 320 acres, which partially overlaps the claim group, are also held by Mr. Ross. Petroflame International Resources Ltd. holds the property under an option agreement. A list of the property holdings is outlined in Appendix IV.

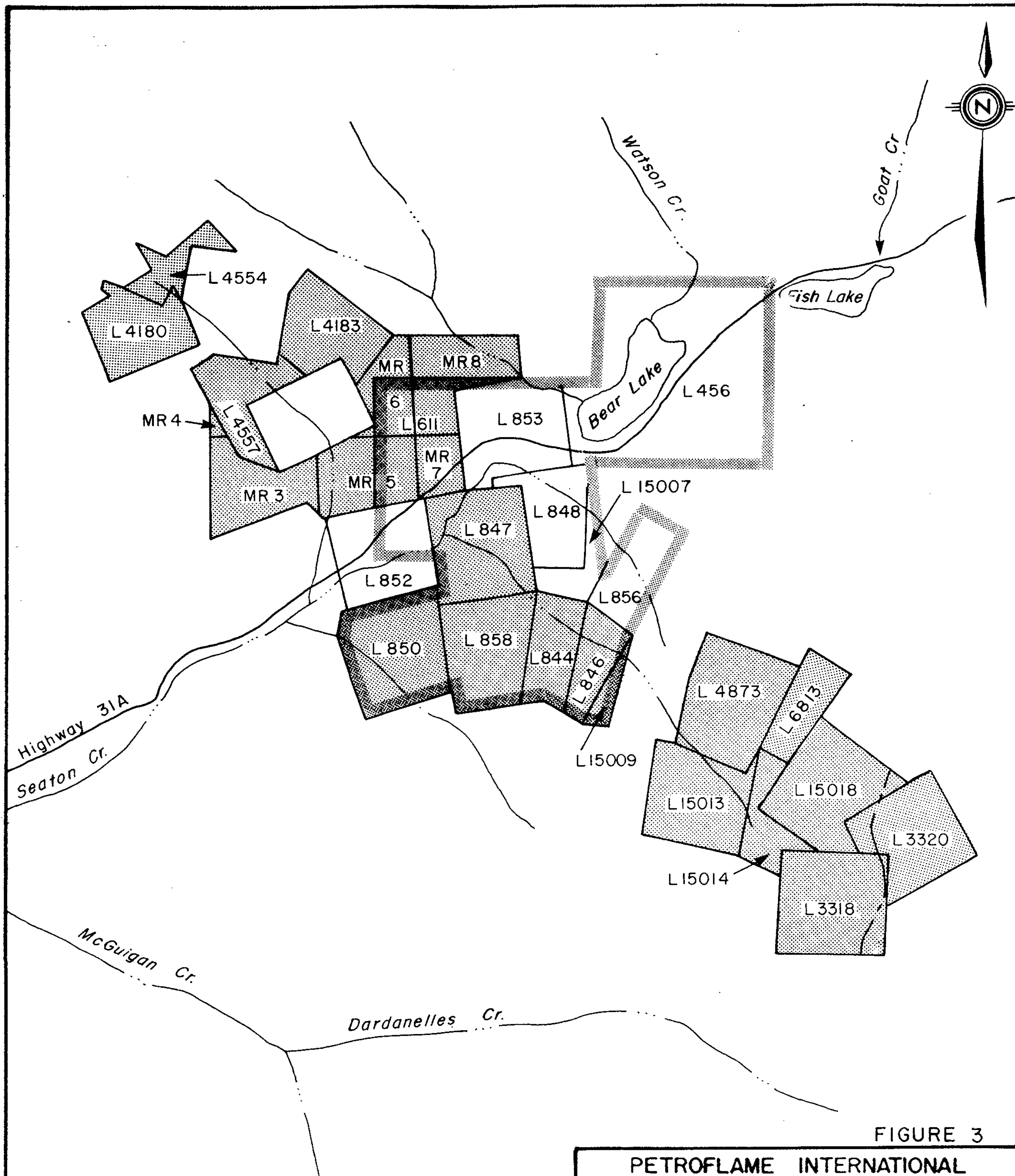


FIGURE 3

··· Enclosed area depicts surface rights held by J.A.C. Ross

··· Shaded area shows crown granted claims, located claims and claims under option held by J.A.C. Ross

PETROFLAME INTERNATIONAL RESOURCES INC.

LUCKY JIM CLAIM NTS 82 K/3
SLOCAN MINING DIVISION, BRITISH COLUMBIA

CLAIM MAP

To accompany a report by S.P. Butler, B.Sc.

Drawn by - SPB / BK
Dated - JULY 1987

STRATO GEOLOGICAL ENGINEERING LTD.

2. HISTORY

The property has a long history of exploration and production. The early history of the Lucky Jim is well described in the report by Hicks (1984) and is as follows:

"The claims are reported to have been staked originally in 1892 and over the next several years hand-sorted shipments of silver - lead ore were made at a grade of 60 oz/ton silver and 60% lead. However the fact that zinc, at that time considered detrimental by the smelters, was the predominant metal militated against the success of the venture and only minor work took place during the first quarter of the present century.

In 1925 a concentrator was erected but proved to be unsuitable and the 30,000 tons of material produced was shipped to the Trail smelter. Grade is unknown.

In 1927 a new concentrator of 200 tons per day capacity was built and treated about 44,000 tons of material grading 10% zinc, 1.5% lead, and 1.5 oz/ton silver. Low metal prices led to closure in 1930.

The major period of production commenced in 1940 with the formation of Zincton Mines Ltd., a wholly-owned subsidiary of Sheep Creek Gold Mines Ltd. A 300 ton per day concentrator was placed in operation in 1941 and with minor interruptions, continued in production until 1953 when again low metal prices forced a suspension. Until that time, the operations had been reported as "continuously profitable".

In total, during the two periods of concentrator operation, approximately one million tons of ore was mined. The average grade of zinc was approximately 8%. Unfortunately, lead and silver content was not recorded on a routine basis but may be estimated at 0.5% and 0.75 oz/ton respectively."

Since the end of production in 1953, surface and underground mapping, soil and rock geochemistry, and diamond drilling have been completed, mostly under the direction of W.M. Sharp. A program of geological mapping, soil sampling and bulldozer trenching (which did not reach bedrock) was completed in the fall of 1971 on the area above the Number 1 level. Detail underground mapping of the Number 9 level was also completed in December of 1971. An extension of the soil sampling was carried out and six diamond drill holes were completed above the Number 1 level. As well two diamond drill holes were drilled into the "hanging wall limestone" that outcrops in upper Lucky Jim Creek. In 1972 a compilation of all data from recent exploration and past production was completed.

There is no record of further work until 1985 when a program of underground sampling, VLF-EM and magnetometer survey tests and surface geological mapping was performed by Strato Geological Engineering Ltd..

3. GEOLOGY

3.1 Regional Geology

The area is underlain by the Triassic age, Slocan series rocks which are principally argillaceous (Hedley, 1945). These rocks discomformably overlie the Triassic Kaslo series greenstones which occur to the north-east. These are intruded by the Nelson batholith and related intrusives.

The fissile lower portion of the Slocan series sediments are referred to as slates but include limestone, calcarious argillites, and quartzitic bands. The slates are overlain to the west of Zincton by thickly bedded argillites with local quartzitic and calcareous bands.

Structurally the slates and associated limestones strike north-westward and dip mostly south-westward. There is no major folding of the series as a whole into anticlines or synclines, but small scale local folding is common. Brecciation and rock flowage, especially evident in the limestone, suggests that considerable differential movement has occurred.

3.2 Local Geology

The Lucky Jim mine is within a package of slatey argillites and calcareous rocks called the Zincton member by Hedley (1945). It consists of thinly bedded hard and soft argillaceous strata, as well as limy agrillites and several distinct bands of limestone.

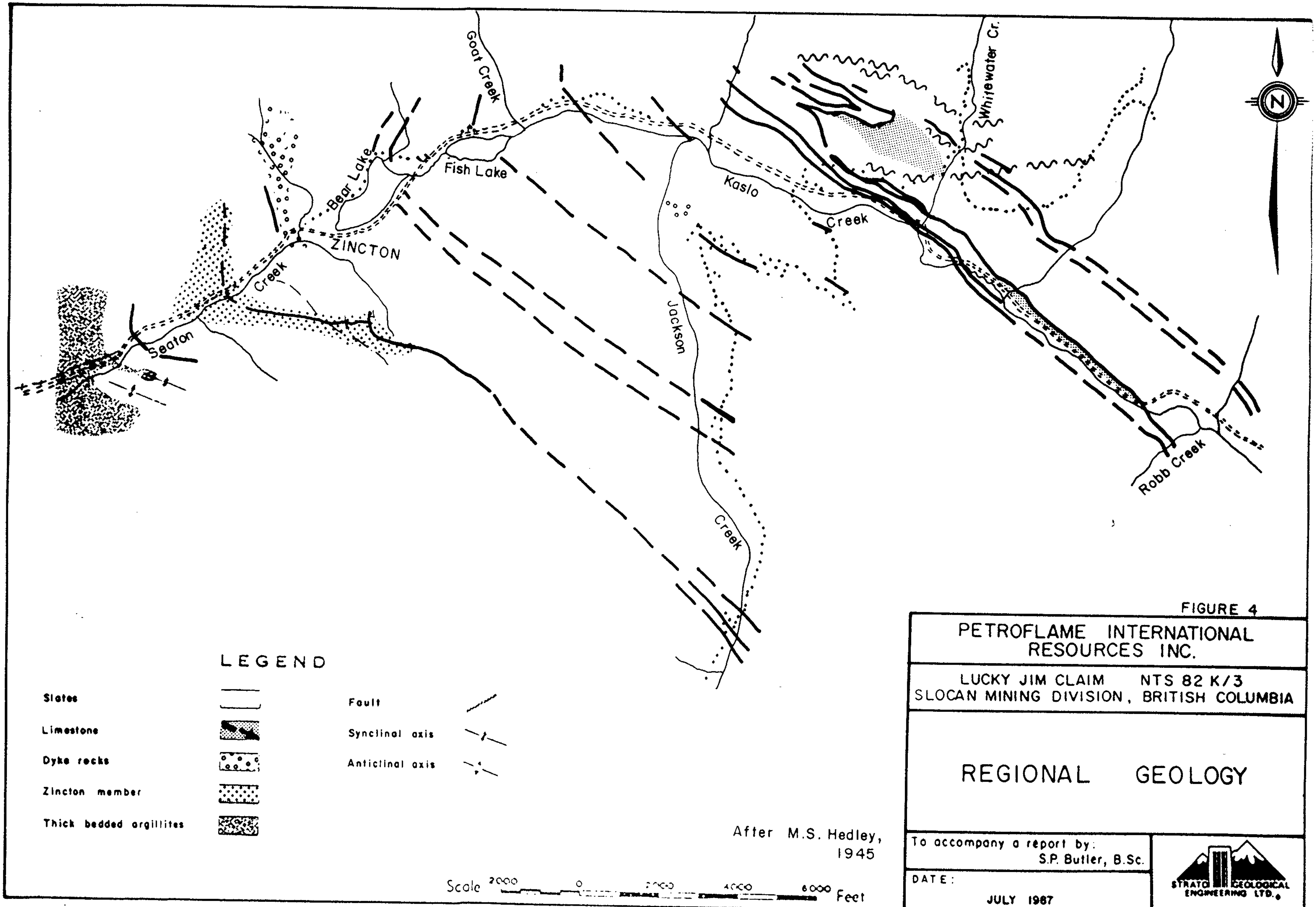


FIGURE 4

PETROFLAME INTERNATIONAL RESOURCES INC.

LUCKY JIM CLAIM NTS 82 K/3
SLOCAN MINING DIVISION, BRITISH COLUMBIA

REGIONAL GEOLOGY

To accompany a report by:
S.P. Butler, B.Sc.

DATE:
JULY 1987

STRATO GEOLOGICAL ENGINEERING LTD.

The most important rock unit of the Zincton member is the Lucky Jim Limestone, since most of the previous production from the mine is within this unit. The unit is described by Crowhurst and Sharp (1974) as follows:

> "Where undeformed, the limestone has an average thickness of about 30 feet, has a faintly banded to massive appearance, a finely crystalline texture, and dark grey to black colour. Where strongly deformed, as it is throughout the productive section of the Lucky Jim mine, it has been greatly thickened by close folding and rock-flowage. As a result, most of the limestone so involved has been brecciated and, locally, fractured.
>
> The general structure controlling the Lucky Jim mineralization is the W.N.W. plunging fold-complex ("Lucky Jim Fold") which can be traced from the highest to lowest levels of the mine. On successive cross-sections, the mine fold varies considerably in size and outline. Within the upper, southeasterly parts of the mine, it is essentially an irregular drag-folded, buckled, and thickened interval of the limestone bed with a general southwesterly dip of about 40 degrees. Within the lower, northwesterly workings, it is a wide, thick, complexly-folded, pinching and swelling mass of limestone relating to a broad, flat wrap in the generally southwesterly-dipping section. The resulting deformation has produced the characteristic breccia structure, and thicknesses ranging from 50 to 150 feet or more.

The most apparent structural controls of the ore mineralization are:

(a) Vertical cross-fractures, or cross-fracture zones. These strike at approximately 90 degrees to the average regional strike of the bedding formations. The fractures themselves are mineralized to varying degrees, as are their limestone walls. Pervasive replacements on zones or cross-fractures produced near-vertical tabular orebodies with widths of up to 40 feet, and lengths related to the local widths of limestone traversed by the cross-fractures. Above No. 5 level, significant amounts of galena occur with the iron and zinc sulphides.

(b) Plunging fold or buckle axes, with the replacement mineralization occurring as streaks, masses, and disseminations within the limestone (breccia).

(c) Vertical longitudinal fractures, or zones of fracturing. These are roughly parallel to the general strike of the limestone within the lower mine workings, and are apparently less important as ore controls than (a) and (b).

(d) Combinations of the above-noted controls. These probably account for the bulk of the mineralization below No. 5 level, and probably comprise the operative control of such mineralization as occurs within unexplored depth-extensions of the Lucky Jim limestone."

Northwest Claim Area

Most of the work in the 1987 program was directed to determining the extension of the Lucky Jim Limestone to the north side of Seaton Creek. The geological mapping and prospecting was intended to find the surface exposure of this unit. Several limestone bands were located but none had the brecciated textures found in the Lucky Jim Limestone as found on the south side of Seaton Creek.

The majority of rocks found were the slatey rocks of the Slocan series. The slatey cleavage is generally striking 130 degrees to 155 degrees and dips moderately between 36 degrees and 52 degrees to the southwest. It forms long, low outcrops that trend downslope. Interbedded in these rocks are thin calcareous and quartzitic bands.

At least two bands of limestone were recognized in the area near claims MR-7 & MR-8. Also found in the creek that crosses the MR-8 claim was a contorted limestone band that was irregularly squeezed in an intrusive body. This unit did not contain any visible sulphide mineralization and is possibly located just north of the claim group. On another unnamed creek, on the Gentle Annie claim (Lot 4184, completely surrounded by, but not part of the Lucky Jim Group) a band of limestone and quartzite in a banded slate was located. Where it was found in the creek the limestone was not brecciated, but did show irregular interbedding with the quartzite. It does not contain any zinc in the locations that were tested with a field chemical kit. The limestone was not traceable to the north-east, and was not recognized in traverses over that area. This unit is located on a small, but prominent bluff that is visible from a distance for approximately 200 meters and trends to the southwest (on the Gentle Annie claim).

Also found on traverses around the north side of Seaton creek were 4 adits. One adit in the valley of the unnamed creek on the MR-8 claim, is short and driven on a breeciated quartzite in an intrusive dyke or sill. No mineralized rock was found and any muck rock must have been dumped in the creek and washed away. Therefore no samples were collected.

On the Bessie claim (Lot 4183) an adit driven on a fault breccia in a slate with abundant iron oxides was found. The adit is caved but is possibly up to 30m long, as estimated from the size of the dump. A rock sample collected here (LJ-SB-9577) returned, 10239 ppm zinc and 408 ppm copper. A similarity between this breccia and another iron oxide coated fault breccia in the creek on the MR-5 claim was recognized.

A topographic depression leads from the faulted zone on the creek towards the adit on the Bessie claim. Also the western edge of the talus slope on the creek lines up with this depression and a zone of iron stained soil extends below the adit. All this evidence suggests the possibility of a fault in this area (See Figure 5).

Approximately 100m east of the faulted zone on the creek is another adit on the MR-5 claim. This adit is driven and partially caved. It is in a small shear in the slates and since no mineralization was found, no samples were collected.

On the Gentle Annie claim (Lot 4184, inside but not part of the Lucky Jim Group) another small group of trenches and short (2-3m) tunnel was found. These appear to be on a shear zone with a small amount of quartz in slates and intrusives. No samples were collected near this site.

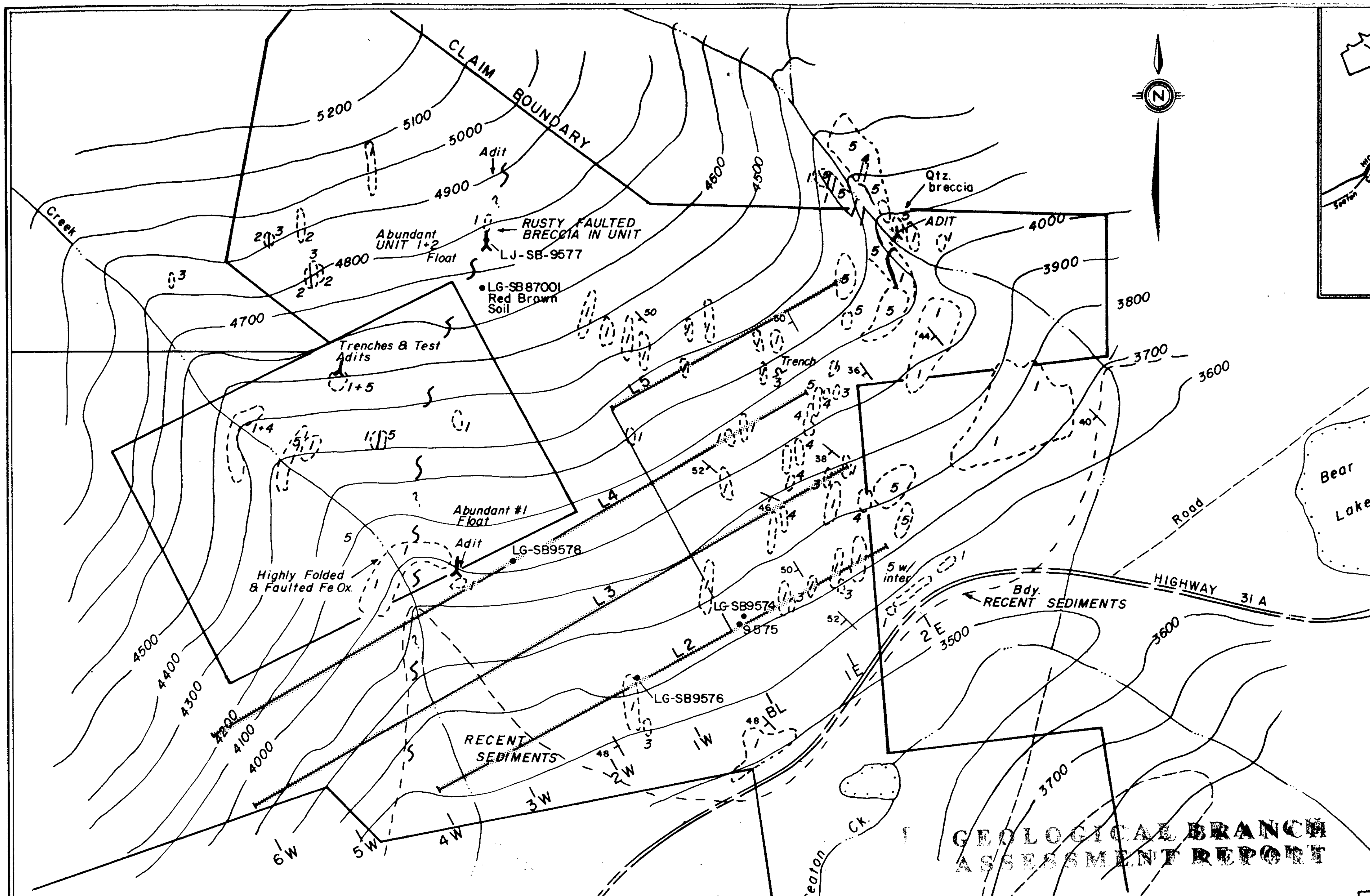
Near Line 2, 0+00 is a quartzite that has almost a complete iron oxide matrix with small quartzite sand grains (sample LJ-SB-9574). This rock is only slightly enhanced in zinc with 620 ppm and is considered insignificant. Sample LJ-SB-9575, near the quartzite, is a piece of quartz with fragments of slate and rusty remnants of a sulfide mineral, possibly pyrite. No significant values were returned from this sample either.

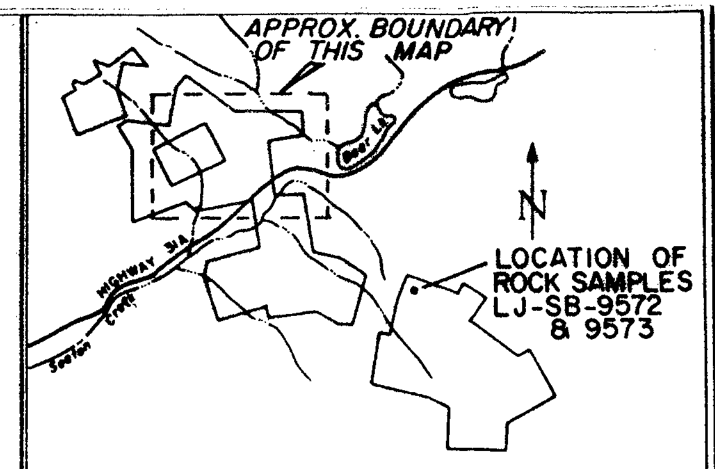
Sample LJ-SB-9576 is from a quartz vein in a rusty quartzite found downslope from line 2, 1+40 W. It returned no interesting geochemical values.

A rusty altered rock (sample LJ-SB-9578) found as float, amongst calcareous float and outcrop at 2+00 W on line 4 also returned no interesting geochemical values.

Southeast Claim Area

Geological traverses were made to determine the location of the creek zone limestone, also known as the hanging wall limestone, (Crowhurst and Sharp, 1974) and the Lucky Jim limestone on the Isis claim (Lot 4873). The creek limestone was not located on the Isis claim but where it outcrops downhill, outside the claims (on the Snap M.C., Lot 911), the unit is not brecciated.





KEY MAP

Geology

Slocan Series

- 4 Limestone
- 3 Quartzite
- 2 Argillite (Banded)
- 1 Slates w/ minor qtzt. beds

Unknown Age

- 5 Intrusives

- Recent Sediments are alluvial and Glacial Sediments Covering.

Legend

- OUTCROP
- ADIT PORTAL
- LG-SB- ROCK SAMPLE SITE
- FAULT
- CLAIM BOUNDARY
- HIGHWAY 31A
- SURVEY LINE

FIGURE 5

STRATCO GEOLOGICAL PROJECT-PETROFLAME FILE # 87-2678

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	CD PPM	AU* PPB
LJSB-F9572	378	8143	21668	11.6	89	7
LJSB-F9573	19	216	656	.2	3	1
LJSB-F9574	32	218	620	.4	5	1
LJSB-F9575	10	91	312	.1	1	1
LJSB-F9576	32	35	147	.2	1	1
LJSB-F9577	408	8	10239	.5	175	3
LJSB-F9578	27	88	189	.1	6	1
STD C/AU-R	61	40	131	7.4	20	520

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
LJ[illegible]-87001	163	24	5636	.9	19.71	20	ND	97	2	.14

SCALE: 1:5000

0 100 200 300 METRES

PETROFLAME INTERNATIONAL RESOURCES INC

LUCKY JIM MINE AREA

SLOCAN M.D. NTS 82 K/3

GEOLOGY AND ROCK SAMPLES

To accompany a report by: A.E. Hunter, Geop. & S.P. Butler, B.Sc.

Drawn by: SB/GT

Date: August 1987

STRATO GEOLOGICAL ENGINEERING LTD.

The Lucky Jim Limestone is extensively trenched on the Isis claim. It is heavily brecciated throughout its exposed length but does not show any appreciable sulphide mineralization. One of the rocks tested positive to zinc with the field chemical test. This sample (LJ-SB-9572) returned 21,668 ppm zinc, 8143 ppm lead and 11.6 ppm silver. This is a very encouraging result. The other rock sampled in the trench (LJ-SB- 9573), did not test positive for zinc in the field and did not return significant assay results.

In the bluff above the No. 3 level of the mine a calcareous argillite, the hanging wall limestone, is located. It has a very irregular distribution, being randomly interbedded with non-calcareous argillite and slate. This unit has 10 - 20m of stratigraphic exposure in the bluff. A traverse from the No. 5 level to the southwest, along slope and upslope, turned up very little outcrop, none of it calcareous. The orientation survey line (line #1) was extended west to try and intersect this hanging wall unit. The self-potential response to the west of the creek may be related to this unit in the creek gulley. No calcareous outcrop in the creek gulley was recognized on this survey line by the geophysical crew.

4. SOIL GEOCHEMISTRY

Soil samples were collected from the "B" soil horizon using a mattock. The samples were collected at depths varying from 5 to 25 cm. and placed in standard gusseted kraft paper soil sampling envelopes. The sample locations are marked with orange marker flagging tied to nearby vegetation. The samples were sent to Acme Analytical Laboratories Ltd. in Vancouver for analysis and results are included as Appendix III.

A ten element ICP analysis was chosen as it was the most efficient method to detect limestones and mineralized zones. Lead, zinc, silver and copper are all elements found in the ore body and iron occurs in pyrite and sphalerite that forms in highgrade zones of the mine. Arsenic and antimony are minor elements in some of the minerals recognized in the mine and cadmium was a by-product metal from the mine in the past. Calcium, the major element in limestone, was used to trace calcareous zones.

The samples were collected along five lines. Line 1 was an orientation survey line to determine what kind of geochemical and geophysical signature is found over the Lucky Jim Limestone. This line was also extended west to find the "hanging-wall limestone" (Crowhurst and Sharp, 1974) on the west side of Lucky Jim Creek. (See Figure 13). This survey was completed above the known workings to lessen the chance of cultural contamination.

Survey lines 2 through 5 were carried out in the northwest claim area to see if the Lucky Jim Limestone extended to the north side of Seaton Creek (See Figure 12).

Southeast Claim Area

The number of samples (35) collected on Line 1 is considered too small to complete a meaningful statistical analysis of this area. From a review of the data a set of values that appear to be significant was arrived at.

The most easterly sample 0+50E shows high values in both lead and silver (174 and 7.9 ppm respectively). The line could be extended to the east. The next significant set of values is at 0+12.5E and 0+00 with increased lead (99 and 145 ppm) and zinc (416 ppm at 0+00) and slightly higher calcium values. The sample 0+50W shows higher calcium (0.29 ppm) and copper (125 ppm) values. Also 0+50W and 0+62.5 W have decreased iron, a result to be expected if an unmineralized limestone with less iron than the surrounding slates underlies the area. This area is where the Lucky Jim Limestone is expected and it appears to be unmineralized near surface in this specific location.

Two unexplained high zinc values occur at 1+00W (509 ppm) and 1+25W (412 ppm).

In a group of three samples at 2+00W, 2+25W and 2+50W, higher values in each of the following elements occur in one or two of the samples: calcium, iron, silver, lead, zinc, copper and arsenic. These results are probably due to the hanging wall limestone which outcrops in the creek on the SNAP claim and is the calcareous argillite from above the number 3 level. This unit is likely weakly and possibly, strongly mineralized here.

Sample 3+75W with 5.2 ppm silver and sample 3+87.5W with 402 ppm zinc are interesting. These samples are near an SP low at 3+50W and follow-up sampling should be carried out.

Northwest Claim Area

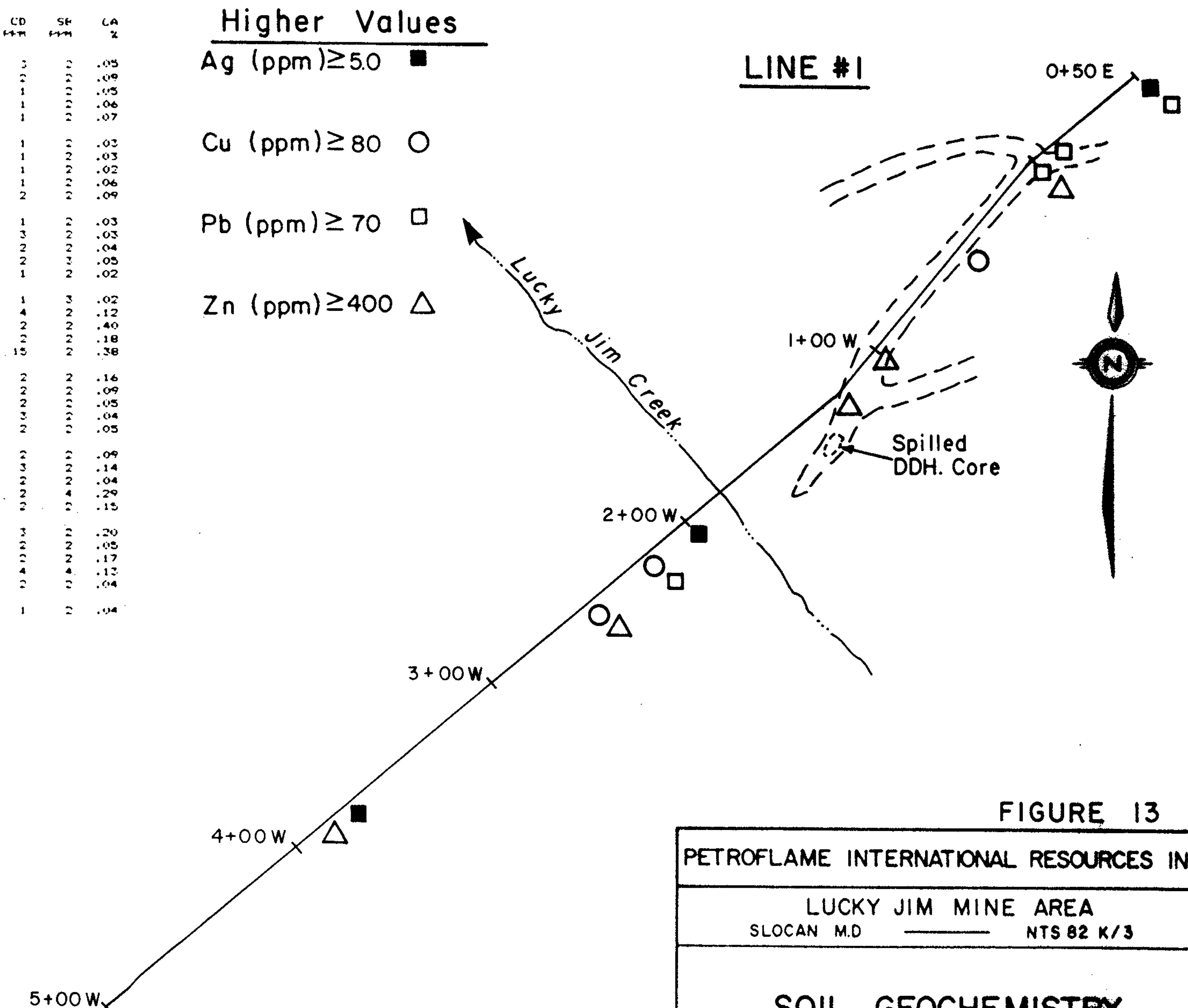
The four lines of soil samples collected on the north side of Seaton Creek, appear to have two separate environments (See Figure 12). The zones were divided at 2+00 W which is the approximate division between the sediments from the creek to the west and the soils derived from underlying limestone and slate on the east.

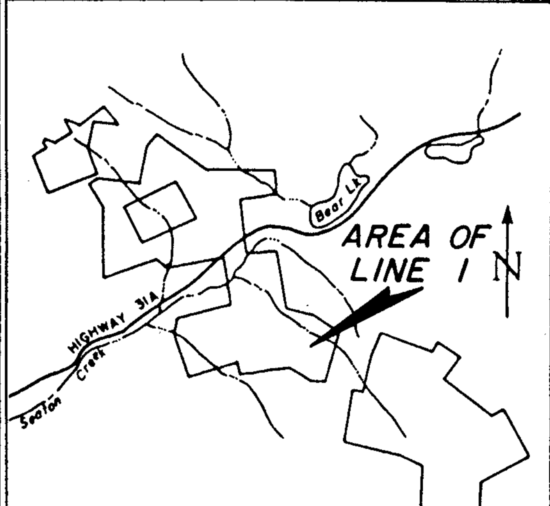
The area to the west of 2+00W shows geochemical values that are generally higher and contain all of what appear to be the anomalous lead, zinc and silver values on the grid (See Figure 12). The reason for this break in background values has two possible explanations. The first involves an enhancement due to creek sediments as they are from an alluvial fan near the base of the slope. Undoubtedly some of the samples, especially the ones next to the creek channel, are due to this. The other possibility is that the faulted and folded zone that outcrops in the creek is locally mineralized and the area soil geochemistry reflects this. More sampling and prospecting is needed to determine if the zone of faulted outcrop (which is on the boundary of the claim block) is mineralized and extends into the MR claims. The most interesting values occur on line 3 from 5+25 to 6+00 W since they are outside the area of talus or alluvium.

To the east of 2+00 W the geochemical values are substantially lower than to the west. Again the sample population is too small to perform a ful statistical analysis with reasonable accuracy. The lead and zinc values on Line 2 appear to reflect a downslope migration from the known limestone bed above. Silver is higher in scattered samples as

STRATO PROJECT-PETROFLAME File # 87-2678

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L1-050E	23	174	229	7.9	4.58	15	ND	3	2	.05
L1-500W	42	34	328	.8	3.80	8	ND	2	2	.09
L1-475W	15	22	128	.8	2.14	5	ND	1	2	.05
L1-450W	14	25	215	1.7	2.92	7	ND	1	2	.06
L1-437.5W	11	21	116	1.9	2.46	5	ND	1	2	.07
L1-425W	22	25	209	4.3	3.02	8	ND	1	2	.03
L1-412.5W	27	27	219	3.1	3.43	11	ND	1	2	.03
L1-400W	21	19	198	.2	2.40	7	ND	1	2	.02
L1-387.5W	51	27	402	1.5	3.49	10	ND	1	2	.06
L1-375W	52	27	266	5.2	3.01	5	ND	2	2	.09
L1-362.5W	58	39	255	2.0	3.93	10	ND	1	2	.03
L1-350W	25	27	157	1.3	2.26	9	ND	3	2	.03
L1-327.5W	35	31	210	.9	2.21	7	ND	2	2	.04
L1-325W	52	69	362	1.7	3.65	17	ND	2	3	.05
L1-300W	32	28	210	3.1	2.74	10	ND	1	2	.02
L1-275W	30	49	209	2.3	2.80	17	ND	1	3	.02
L1-250W	81	43	634	2.9	7.92	80	ND	4	2	.12
L1-225W	119	74	249	1.2	6.10	10	ND	2	2	.40
L1-200W	43	50	165	5.3	3.15	9	ND	2	2	.18
L1-185W(SILT)	87	48	1837	1.1	4.96	12	ND	15	2	.38
L1-175W	50	36	269	.8	4.48	12	ND	2	2	.16
L1-150W	31	33	248	.6	3.33	7	ND	2	2	.09
L1-125W	51	37	412	1.1	4.29	17	ND	2	2	.05
L1-112.5W	41	39	382	1.7	3.92	11	ND	3	2	.04
L1-100W	73	46	509	.9	4.76	17	ND	2	2	.05
L1-087.5W	76	48	353	1.4	4.30	12	ND	2	2	.09
L1-075W	77	31	301	1.3	5.56	7	ND	3	2	.14
L1-062.5W	33	44	251	1.7	3.33	3	ND	2	2	.04
L1-050W	125	23	205	.7	3.38	9	ND	2	4	.29
L1-037.5W	77	50	385	.5	4.46	12	ND	2	2	.15
L1-025W	57	53	316	.9	3.81	11	ND	3	2	.20
L1-012.5W	36	33	265	1.5	3.62	12	ND	2	2	.05
L1-000	57	145	416	2.3	4.80	33	ND	2	2	.17
L1-012.5E	42	99	245	1.2	3.43	24	ND	4	4	.13
L1-025E	42	48	194	2.2	3.65	9	ND	2	2	.04
L1-037.5E	28	64	178	3.5	3.27	16	ND	1	2	.04





KEY MAP

SCALE 1: 2500

0 25 50 100 150 Metres

FIGURE 13

PETROFLAME INTERNATIONAL RESOURCES INC

LUCKY JIM MINE AREA

SLOCAN M.D — NTS 82 K/3

SOIL GEOCHEMISTRY LINE 1

To accompany a report by:
A.E. Hunter, Geop. & S.P. Butler, B.Sc.

Drawn by: SB / GT

Date: August 1987

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well as some individual interesting lead and zinc values on Lines 4 and 5. There is a probable downslope migration from a shear zone or limestone that outcrops above.

Sample LJ-SB-87-001 is an individual sample collected from a very rusty brown-red coloured soil some 200m NW of Line 5, 0+00. This sample is high in copper, zinc, cadmium and iron (163, 5636, 97 ppm and 19.71% respectively). Since this soil zone leads towards the adit on the Bessie claim and is so significant geochemically, further sampling and mapping of the area is required.

5. GEOPHYSICS

The survey grid comprising lines 2, 3, 4, & 5 (Figures 5 & 6) was surveyed using four different geophysical methods. Very low frequency electromagnetic (VLF-EM) and self potential (SP) were employed on the entire grid. Measurements were taken at 12.5m spacing over a total of 2.5km of line. Line 1 on the south side of Highway 3 above the No. 1 adit was also surveyed using VLF-EM and SP for a total distance of 550m.

The VLF-EM (Sabre) technique used the Annapolis, M.D. naval radio transmitter at 21.4 KHz as an energy source. In the area of the survey the electromagnetic waves are considered to be plane polarized and the lines are oriented as close to perpendicular to the direction to the transmitter as possible. Several transmitter stations in North America provide a certain amount of flexibility in survey orientation. The relative scalar strength (field strength, FS) and a component of the attitude of the magnetic field (null or dip angle) are measured. Ideally a conductor perpendicular to the line, and optimally coupled to the electromagnetic field, will generate a secondary field which causes an increase in horizontal field strength and a distinctive reversal in dip angle known as a cross-over.

The Self Potential (SP) technique measures electric potentials caused by natural ground currents using a high input impedance millivoltmetre. Contact with the ground is achieved by using copper-sulphide half cells which eliminate electrochemical contact potentials which can easily mask an anomaly. All measured self-potentials are referred to one base point. A common source of ground currents that cause self-potential anomalies is sulphide mineralization. Vegetation changes and ions (ususally salts) in moving groundwater can also cause significant self-potential anomalies and must be considered in data interpretation.

Survey lines 2, 3, and 4 were surveyed in detail (at a 6.25m interval usually) for a total of 1km with an EM16R (Geonics). The EM16R uses the same transmitting stations as the VLF-EM but measures the magnitude of the inphase and out of phase components of the vertical component of the magnetic field. The inphase response over a conductor perpendicular to the line is the same as that of the dip angle response of a VLF-EM (Sabre) survey. The out of phase (quadrature) response is ideally a weak mirror image of the inphase response. The EM16R also measures apparent resistivity using the Radiohm Technique (Collett and Becker, 1968). Using this technique the apparent ground resistivity is proportional to the square of the ratio of the component of the electric field along a radial line to the transmitter and the component of the magnetic field perpendicular and horizontal to this. The transmitter azimuth is determined by the orientation of the instrument. The radial component of the electric field is determined by inserting two probes in the ground along the direction indicated by the instrument orientation. The major disadvantage of the Radiohm measurements is the lack of penetration through any thickness of conductive overburden.

A total magnetic field survey was also conducted on Line 1 using a Scintrex MP-2 proton precession magnetometer. A magnetic gradient survey was also conducted on line 2 at a spacing of 6.25m. The magnetic gradient survey involves measuring the total magnetic field strength at least twice at each station at fixed vertical positions. Essentially the technique measures the first derivative of the total magnetic field and enhances near surface features. Care must be taken to minimize noise during the survey and avoid cultural features.

5.1 Geophysical Results

Southeast Claim Area

A self-potential (SP) and a VLF-EM (Sabre) survey was carried out in conjunction with geochemistry on Line 1 located above the Lucky Jim mine (Figures 11 and 13). The SP survey employed 12.5m half-cell separations and station spacing and the VLF-EM survey used the transmitter: NLK, Seattle, Washington, 24.8kHz, 125kW.

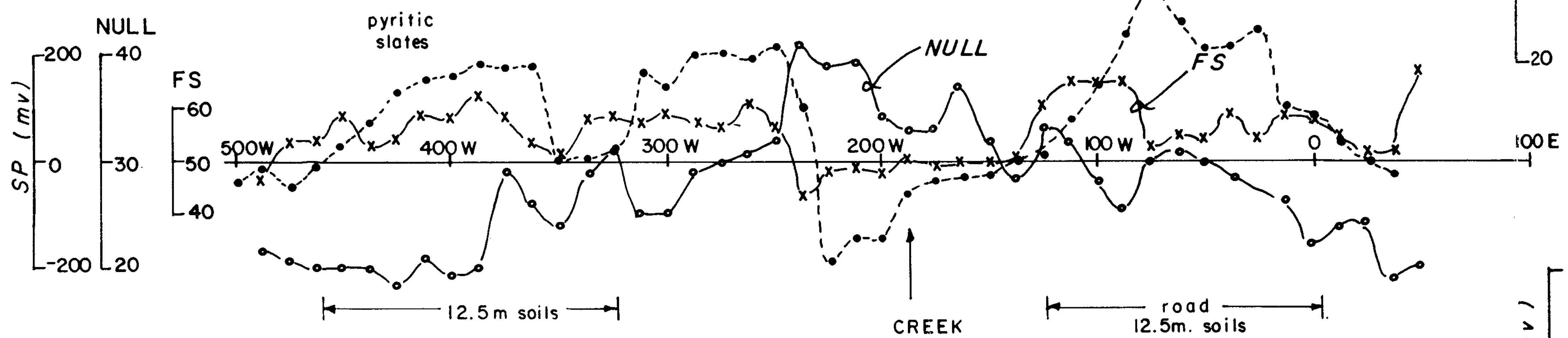
The SP survey shows two major SP lows. One, about 40m in width, is centered at 3+30W and has a magnitude of 200mv. This anomaly is directly east of anomalous values of zinc and silver and may reflect the presence of a limy bed in the slates of the Zincton Member. The second SP low is centered around 2+00W, has a magnitude of about 150mv and a width of about 40m. This anomaly is located in a broad low of around 200mv which is likely associated with the creek located at 1+87W. The "creek" limestone is thought to be located near 2+00W and lead, zinc, and copper anomalies (Figure 13) are found in close proximity. The anomaly at 2+00W likely reflects this limestone unit.

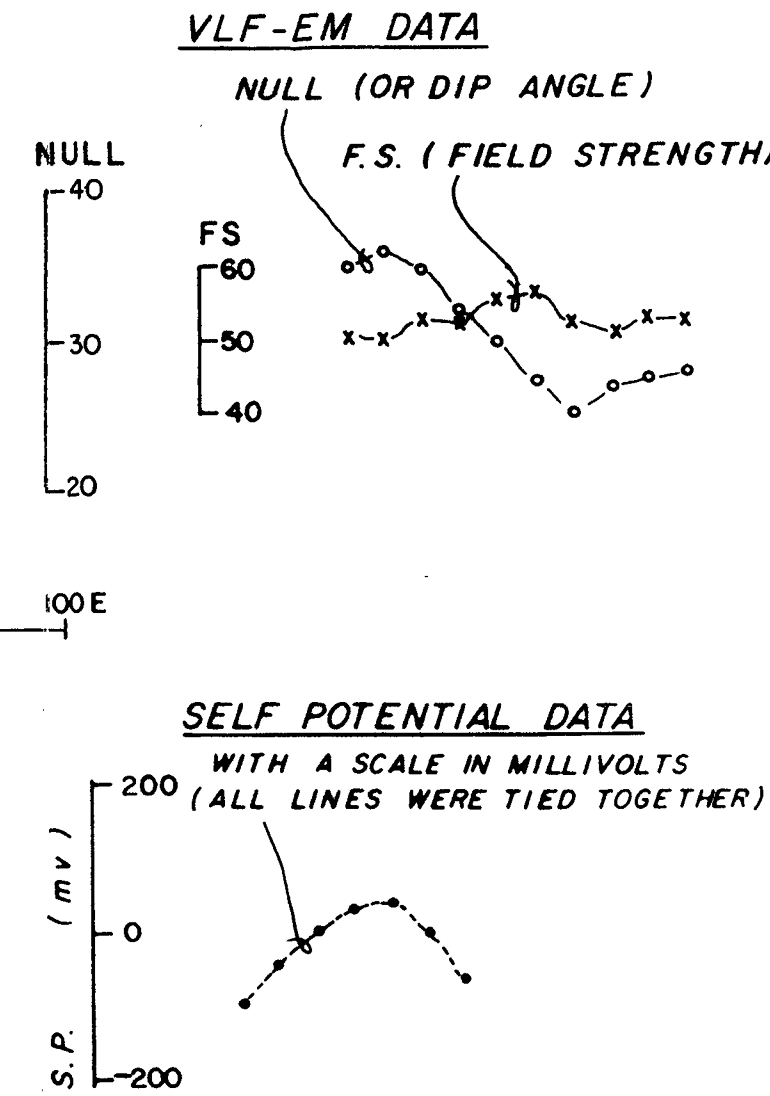
The VLF-EM (Sabre) data on this line is not conclusive and weak EM crossovers at 3+50W and 2+00W are thought to reflect geologic contacts between the slates and the limy bed, and the limestone respectively.

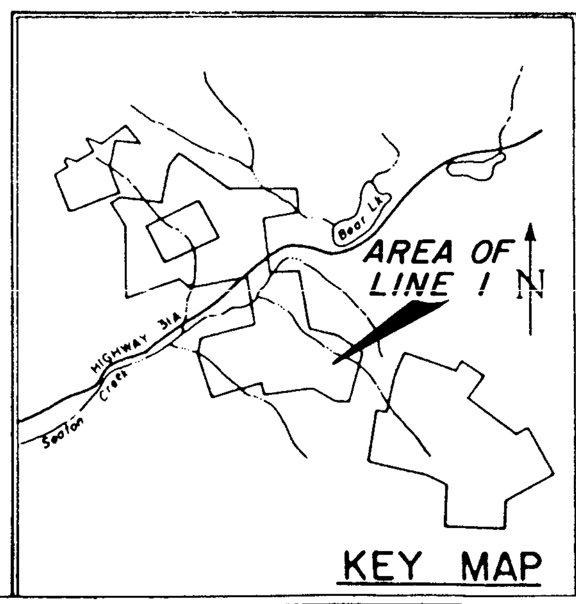
GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,615

LINE I







NOTES:

- Receiver: Sabre Electronics Model 27 VLF-EM receiver.
- Transmitter: NLK Seattle Wa. Frequency 24.8 kHz., Pwr.: 125 kW.

LINE BRG. 050° (Except on road)

SCALE 1: 2500

0 25 50 100 150 Metres

FIGURE II

PETROFLAME INTERNATIONAL RESOURCES INC	
LUCKY JIM MINE AREA SLOCAN M.D. ——— NTS 82 K/3	
VLF-EM and SELF POTENTIAL SURVEY ON LINE I	
To accompany a report by: A.E. Hunter, Geop. & S.P. Butler, B.Sc.	
Drawn by: AH / GT	Date: August 1987

Northwest Claim Area

The bulk of the geophysical work was conducted on 2.5km of grid comprising lines 2, 3, 4, and 5 located north of the highway. The grid location and local geology is shown on Figure 5. The VLF-EM (Sabre) and SP survey is shown on Figure 6 and the Fraser Filter results of the VLF-EM null (or dip angle) data is shown on Figure 8. EM16R resistivity survey results are shown on Figure 7. A compilation of anomalous results of the above surveys is presented as Figure 9.

The Lucky Jim mineralization is largely confined to a brecciated dark limestone with a normal thickness of 30 feet, a few discontinuous slaty beds, and a known extent of 4.6km. Complex drag folding and accompanying squeezing has affected the thickness of this unit in the mine. The purpose of work on this grid was to search for a mineralized limestone that could be an extension of the Lucky Jim limestone. Mapping on the grid revealed a limestone unit trending northerly and crossing lines 3 and 4 at about 1+55E and 2+30E respectively. The limestone is flanked by slates, quartzites and local granitic intrusives (See Figure 9). The outcrop pattern of the limestone strikes close to due north and is in agreement with the relative attitudes of the slope and the local geology. The survey lines were run across a slope of about 25 degrees. All geophysical techniques employed on lines 2, 3, 4, and 5 revealed northerly striking anomaly patterns.

The VLF-EM data on this grid was collected using a Sabre instrument and NSS, Annapolis, Maryland, USA at 21.4 kHz and 400Kw. The Fraser filter treatment of dip angle (or null) data minimizes topographic noise and shows crossovers as positive anomalies (Figure 8). A major, moderate to weak, four line EM anomaly strikes northerly or over 300m and is located about one hundred meters west of the lime-

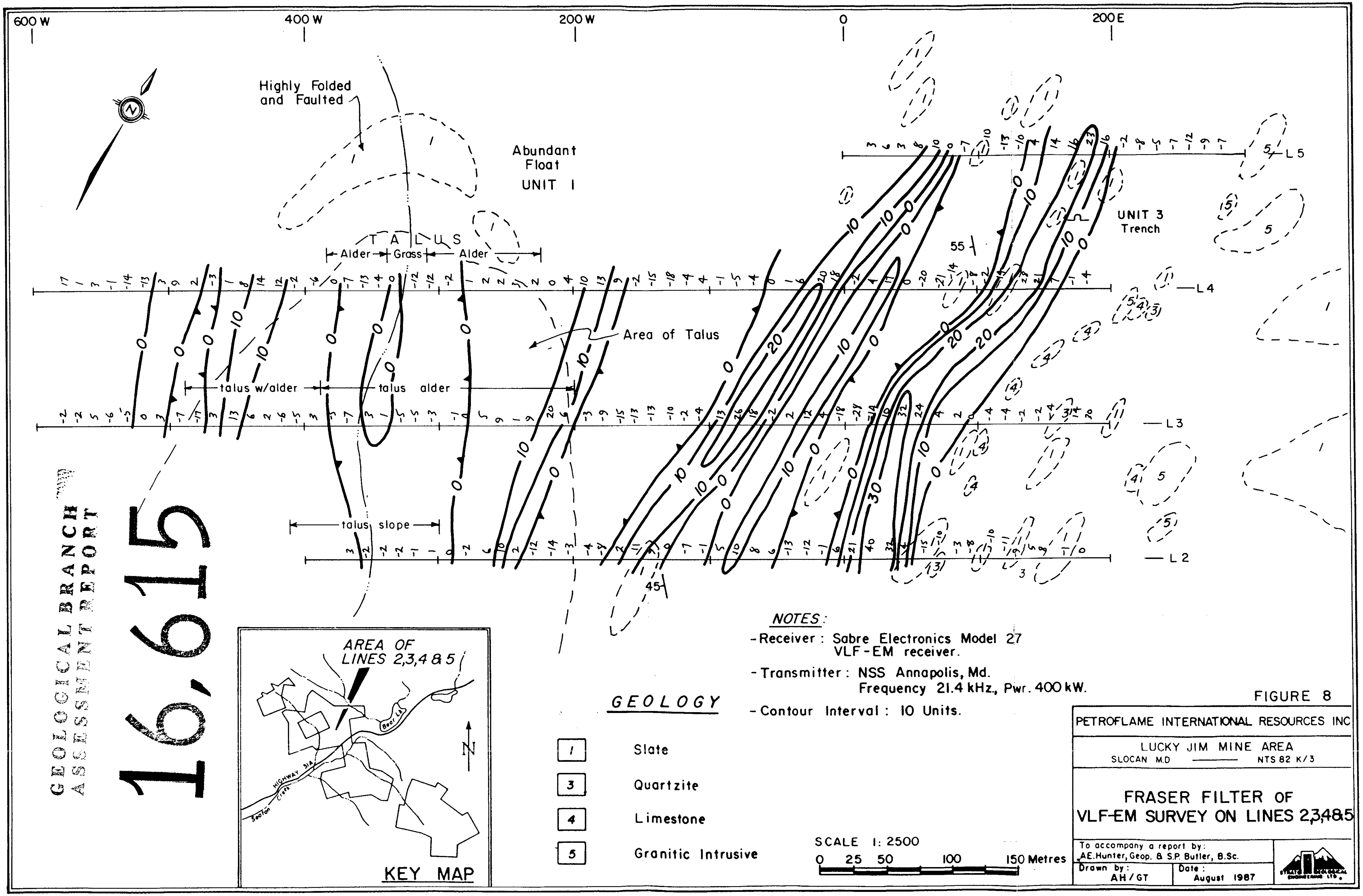

600 W
400 W
200 W
0
200 E
Highly Folded and Faulted
Abundant Float
UNIT 1
TALUS
Alder
Grass
Alder
UNIT 3 Trench
55
L 5
L 4
L 3
L 2
Area of Talus
talus w/alder
talus alder
talus slope
45
GEOLOGICAL BRANCH ASSESSMENT REPORT
16,615
AREA OF LINES 2,3,4 & 5
HIGHWAY 31A
Seaton Creek
Bear Lk.
N
KEY MAP
GEOLOGY
1 Slate
3 Quartzite
4 Limestone
5 Granitic Intrusive
NOTES:
- Receiver : Sabre Electronics Model 27 VLF-EM receiver.
- Transmitter : NSS Annapolis, Md. Frequency 21.4 kHz., Pwr. 400 kW.
- Contour Interval : 10 Units.
SCALE 1: 2500
0 25 50 100 150 Metres
PETROFLAME INTERNATIONAL RESOURCES INC
LUCKY JIM MINE AREA
SLOCAN M.D NTS 82 K/3
FRASER FILTER OF VLF-EM SURVEY ON LINES 2,3,4 & 5
To accompany a report by: A.E. Hunter, Geop. & S.P. Butler, B.Sc.
Drawn by: AH / GT
Date: August 1987

FIGURE 8

stone unit (Figure 9) in the eastern area of the grid. This anomaly is down dip of the limestone outcrop. The anomaly either reflects a near surface conductor (possibly a zone of pyrite enrichment or conformable faulting) or a conductor associated with the limestone. A weak to very weak Fraser filter anomaly (Figures 8 and 9) spans four lines about 120 meters west of the previously discussed anomaly and probably reflects a conductive zone in the slates.

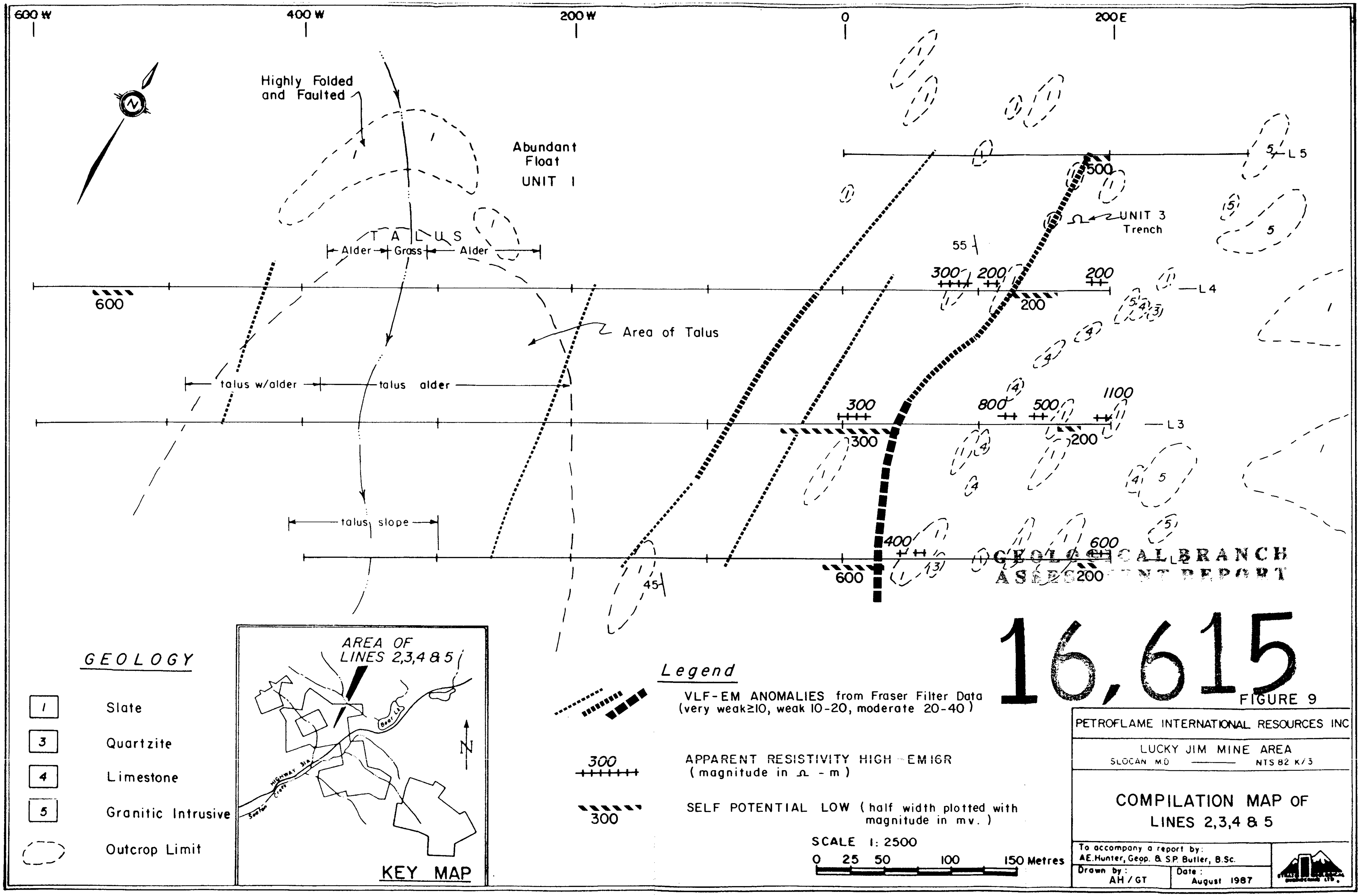
Three additional EM anomalies are found to strike northerly across the central and western grid areas. These anomalies are classified as being weak to very weak and probably reflect conductive or limy beds within the slates underlying this area.

The self potential (SP) survey was conducted in conjunction with the VLF-EM survey using a 12.5m half-cell separation and station spacing. All readings were referenced to a base value and corrected for comparison to each other. The data is presented on Figure 6 and summarized on Figure 9 where the half-widths of SP lows are plotted. SP lows of 600, 300, 200 and 500 millivolts on lines 2 through 5 respectively at 0+12E, 0+05W, 1+30E and 1+90E respectively roughly parallel the major VLF-EM anomaly. These anomalies are significant and cannot be explained by changes in vegetation or topography. The half-width of the SP anomalies indicates a conductive zone at depths of between 10 and 50m. These zones may be caused by sulphide mineralization or possibly conductive beds within the slates.

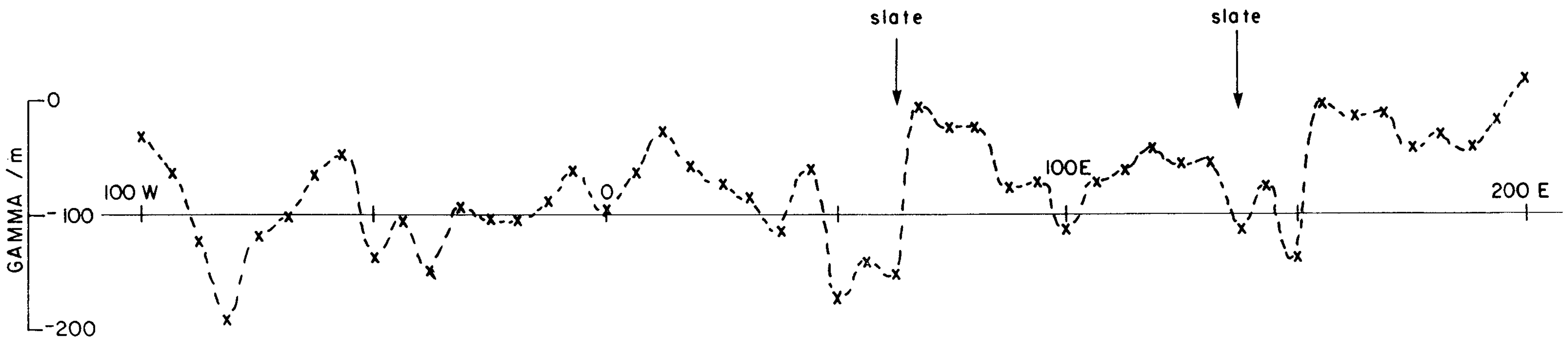
Several other SP lows occur within the survey area. On Line 4 at 5+40W an SP low of 600mv possibly reflects sulphides in a limestone bed. Although no limestones are seen, the area is on strike with a limestone outcrop located around the 4400 foot contour in the creek bed to the east (See Figure 5). Another pair of SP lows occurs on lines 2 and 3 at 1+80E and 1+70E respectively. These lows could reflect alteration associated with the emplacement of an intrusive dike located about 50m to the east. A limestone outcrop is mapped about midway between lines 2 and 3 at about 2+20E. Assuming this outcrop represents a narrow bed of limestone, the two SP lows may reflect sulphides associated with the limestone. Another explanation of the two SP lows is conformable faulting. The half width of the two SP lows places the conductors at a maximum depth of about 10m. Broad, lows, up to 200mv, are roughly associated with talus and alder areas on lines 3 and 4. The SP base levels on each line decreases uniformly up the hillside until line 5 where the trend is reversed. The significance of this change in base level is unknown.

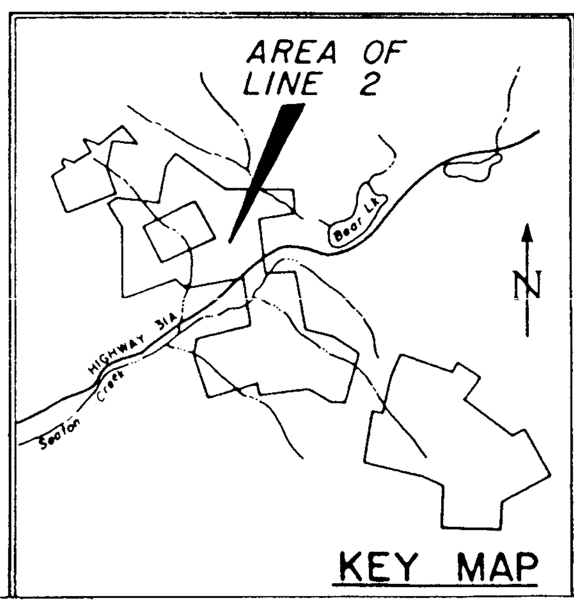
An EM16R survey was conducted east of 1+00W on lines 2 and 3, and east of 2+00W on line 4. Stations were spaced at 6.25m and the resultant data is presented on Figure 7 and summarized on Figure 9. The apparent resistivity was determined using the Radiohm technique (Collet and Becker, 1968). The background apparent resistivity is around 100 ohm-meter and this yields a maximum depth of penetration of around 30m. The EM16R survey revealed apparent resistivity highs trending northerly and confirmed the VLF-EM (Sabre) work done in the area.

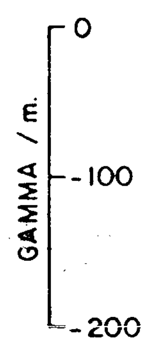
At the eastern end of the grid at 2+00E on lines 2 and 3 apparent resistivity anomalies of 600 and 1100 ohm-meter respectively probably reflect the granitic intrusives to the east. A pair of distinctive, double peaked apparent resisitivity highs are centered at 0+50E and 1+30E on lines 2 and 3 respectively. These apparent resistivity highs have maximums of 400 and 800 ohm-meter on lines 2 and 3 respectively. It is possible that an apparent resistivity high at 2+00E on line 4 (the eastern limit of coverage) reflects the western half of the double peaked signature seen on the other two lines although it may reflect a granitic intrusive mapped at around 2+10E. All three of these ap-


600 W
400 W
200 W
0
200 E
N
Highly Folded and Faulted
Abundant Float
UNIT 1
T A L U S
Alder
Grass
Alder
Area of Talus
talus w/alder
talus alder
talus slope
UNIT 3 Trench
55
45
L 5
L 4
L 3
500
300
200
200
200
600
300
800
500
1100
300
200
400
600
600
200
16,615
GEOLOGY
Slate
Quartzite
Limestone
Granitic Intrusive
Outcrop Limit
AREA OF LINES 2,3,4 & 5
Bear Lk.
HIGHWAY 31A
Sandon Creek
KEY MAP
Legend
VLF-EM ANOMALIES from Fraser Filter Data
(very weak≥10, weak 10-20, moderate 20-40)
APPARENT RESISTIVITY HIGH - EM16R
(magnitude in Ω - m)
SELF POTENTIAL LOW (half width plotted with magnitude in mv.)
SCALE 1: 2500
0 25 50 100 150 Metres
FIGURE 9
PETROFLAME INTERNATIONAL RESOURCES INC
LUCKY JIM MINE AREA
SLOCAN M.D.
NTS 82 K/3
COMPILATION MAP OF LINES 2,3,4 & 5
To accompany a report by:
A.E. Hunter, Geop. & S.P. Butler, B.Sc.
Drawn by: AH / GT
Date: August 1987

LINE 2







Total Magnetic Field Gradient in Gammas / Metre (Y/m.)

Calculated by $\frac{F_2 - F_1}{\Delta Z}$

ΔZ = 0.98 m.

F_2 = Total Field Strength, Upper Reading

F_1 = " " " , Lower "

NOTES:

- INSTRUMENT : SCINTREX MP-2 PROTON MAGNETOMETER, Model No. 767010, Serial No.804343

LINE BRG 060°

SCALE 1: 1250

0 10 20 40 60 80 Metres

FIGURE 10

PETROFLAME INTERNATIONAL RESOURCES INC

LUCKY JIM MINE AREA

SLOCAN M.D. —— NTS 82 K/3

MAGNETIC GRADIENT SURVEY ON LINE 2

To accompany a report by: A.E. Hunter, Geop. & S.P. Butler, B.Sc.

Drawn by: AH / GT

Date: August 1987

parent resistivity highs correlate with the mapped locations of limestone and quartzite and could reflect either or both of these units.

Apparent resistivity highs of 300 ohm-meter are located on lines 3 and 4 at 0+10E and 0+75E respectively. The double peak signature is again distinctive although there is an additional 200 ohm-meter anomaly located at 1+00E on line 4 which is faintly mirrored by the presence of a large and weak shoulder on the line 3 anomaly. The eastern portion of the line 3 anomaly is also mirrored on the last few western estations of line 2. These anomalies probably reflect beds of quartzite or siliceous slate. The fact that an apparent resistivity high coincides with broad SP low at 0+05W on line 4 suggests that this SP low reflects features at a depth of around 30m or greater since that is the maximum depth of penetration of the EM16R. Two other 200 ohm-meter apparent resistivity anomalies occur at 0+75W and 1+25W on line 4. Due to a lack of coverage on the other lines no strike length can be given to these anomalies although they probably reflect siliceous slate or quartzite.

A magnetic gradient survey was carried out on line 2 between 1+00W and 2+00E using a 6.25m station spacing. The data is presented as Figure 10. Two magnetic gradient lows, about 20m wide, flanked to the east by highs of the same width are the dominant features of the results. These anomalies are centered at 0+65E and 1+50E on Line 2. The magnitude of these anomalies is between 50 and 100 gamma/meter and the location roughly corresponds to the location of the in-phase crossovers of EM16R data (See Figure 8). These crossovers probably represent contacts between the slate and quartzite or limestone at 0+30E and the slate and granite intrusive or limestones at 1+50E. Another very similar anomaly is found at 0+75W and coincides with the location of a very weak Fraser filter anomaly shown on Figure 9. The magnetic gradient results are fairly noisy, this is probably the result of a change in position of the sensor relative to the slope due to local variations in topography. The magnetic gradient survey was not continued since results reveal less than the other survey methods.

6. COMMENT ON ZONING

As part of this program a study of zoning within the Lucky Jim Mine was planned. This involved extensive sampling on the various mine levels plus the surface above the #1 portal as was outlined in Arnold's 1985 report.

Several texts on ore deposits were researched to determine what was involved and what to expect in the Lucky Jim type of deposit. A search of the voluminous data available, including previous production shipping data and assays on some of the 668 diamond drill hole logs from the forties and fifties was compiled. The shipping assays values are end of month, represent many mine levels of production, and were generally only assayed for zinc. Where lead and/or silver was included, the production is noted to be from several levels from the three level to the eleven level. Lead was assayed only on diamond drill holes from the No. 3 level and higher with only one exception.

From the history and production of the Lucky Jim as outlined by Hedley (1945) the original production was silver-lead ore from the Lucky Jim claim area. This was due to a penalty applied to zinc by the smelters. Since the majority of the ore body is zinc very little production was completed until a better zinc price was received. Hedley also states that mining from 1937 to 1945 was almost entirely below the Number 5 level and no lead was recovered.

At the end of Hedley's (1945) report he comments on zoning having been recognized. His report states "the occurence of lead in the upper levels but not the lower has been known, and the Lucky Jim has often been cited as an example among Slocan mines of rapid change in metal content with depth." He goes on to say "but the fact that galena is a constituent of cross-fracture ore and not of ore of more general type in the Lucky Jim may mean that factors other than depth governed its distribution. The nature and continuity of the channelways followed by ore-bearing solutions were probably more important in influencing deposition than was the depth at which deposition took place."

From Park and McDiarmid (1970) a reconstructed (theoretical) vein system is outlined that shows the lead zone (galena, with silver, some sphalerite) to occur above the zinc zone (sphalerite, some galena and silver) as is the case in the Lucky Jim Mine. Above the lead zone a silver zone including argentite and silver arsenides and antimonides occurs. Below the zinc zone a zone of copper with tetrahedrite and chalcopyrite is predicted. Also discussed in Park-MacDiarmid is horizontal, as well as vertical zoning. Horizontal zoning is discussed as a regional event and since the lower levels are further north to northwest than the upper levels, and the Sandon silver ore deposits are located only a few kilometers to the southwest the possibility in sampling to determine horizontal zoning can not be overlooked. As well, a combination of the two may occur. The zones, as discussed in Park and MacDiarmid do not consider any relative distances or depths and only predict what is next in the mineral distribution pattern.

At the time of this program a detailed underground sampling, geochemical and petrographic survey was investigated. The number 9 level has a portal in good condition, boarded up and the underground workings were in satisfactory condition when last visited in the fall of 1985 (Arnold).

All other levels were considered unsafe to enter without completing considerable rehabilitation work. The #5 level is in very poor shape at the portal with large loose blocks of limestone overhanging the portal with several already having fallen. The tunnel is driven near the footwall of a limestone, leaving slates dipping into the portal along their cleavage plane. There is also no sizable timber standing nearby to construct a portal structure and approximately 30cm of water is backed-up behind the rock debris.

The #4 level is open for the first 15m visible from the portal before it goes around a corner. The wooden portal structure is in poor shape. The planks to the portal structure appear to be sound but the timbers are seriously dry rotted and are sagging under the weight of only a few tons of rock and gravel.

The #3 level was visited, but the portal was not thoroughly inspected. Several of the stopes come to surface and underground workings may be accessible with the proper climbing equipment.

The #1 level is caved at the portal and is inaccessible without major rehabilitation being completed.

Future studies of zoning will have to involve opening and complete rehabilitation of the portals, and surface backhoe trenching of the area above the #1 level. This would best be done concurrently with a much larger survey of the property involving underground mapping, sampling, dewatering of the #10 and #11 levels to include deeper samples for zoning and underground diamond drilling. A complete zoning survey done on its own will probably not add enough information to the property to justify an independent program.

7. CONCLUSIONS AND RECOMMENDATIONS

Geophysics and geochemistry have given significant responses over zones of possible mineralization and/or limestones. The Lucky Jim Limestone upslope from the No. 1 level was tested with one survey line to define a "signature" for this unit. However, no known mineralized zones could be tested due to the unpredictable effects of underground workings on geophysics and geochemical soil contamination by previous development. Lines 2 through 5 on the north side of Seaton Creek were located to detect the northern extension of the Lucky Jim Limestone and other mineralized zones.

The most useful exploration tools were found to be geology, geochemical soil sampling, self-potential, and EM16R (VLF-EM and apparent resistivity). Magnetic gradient measurements and total field magnetics give a weak, poor quality response.

Several target zones that deserve follow-up exploration have been recognized in this program. The first is the zone on Lucky Jim Creek where Line 1 crosses the creek and a geochemical response deserves follow-up. At the east end of Line 1 at 0+50E and on the west side from 3+50W to 4+00W interesting geochemical values also warrant further investigation. Detailed soil sampling over target zones and an induced polarization/resistivity survey is recommended to test this area.

On the north side of the valley the most significant target is the geophysical response over a limestone unit and geochemical response downslope from the limestone. The geophysical response involves two parallel VLF-EM anomalies and apparent resistivity and self-potential anomalies. Another target area is the extreme western end of line 3. The soil sample LJ-SB-87-001 was highly anomalous in zinc and iron, the major elements of the Lucky Jim Mine ore zones. A survey of these areas including rock and detailsoil sampling over target zones and followed by possible trenching is warranted. An induced polarization /resistivity survey carried out in conjunction with sampling is recommended to further define the anomalies in this area.

If after further detailed surface work, positive results continue to be returned, a program of backhoe trenching and diamond drilling will be warranted.

Respectfully submitted,
Strato Geological Engineering Ltd.

A.E. Hunter, B.A.Sc.
Geophysicist

Sean P. Butler, B.Sc.
Geologist

August 19, 1987

STRATO GEOLOGICAL ENGINEERING LTD.

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9. CERTIFICATE

I, AL E. HUNTER, of Vancouver, British Columbia, Canada do hereby certify the following:

1. I will receive the degree of Bachelor of Applied Science with Specialization in Geophysics from the University of British Columbia, Vancouver, British Columbia in 1987.

2. Since leaving University I have practised my profession in western and northern Canada and the western USA for 6 years.

3. I have no direct, indirect or contingent interest, nor do I expect to receive such interest, in the securities or properties of Petroflame Resources Inc.

DATED at Surrey, British Columbia this 19th day of August, 1987.

A.E. Hunter, Geophysicist

I, SEAN P. BUTLER, of 4525 W. 2nd Avenue, of the City of Vancouver, Province of British Columbia, hereby certify that:

1. I graduated in 1982 from the University of British Columbia with a Bachelor of Science in Geology.

2. I am employed as a Geologist by Strato Geological Engineering Ltd., with offices at 3566 King George Highway, Surrey, B.C., V4A 5B6.

3. I have practised my profession as a Geologist, since 1983 and had been employed in mineral exploration prior to that.

4. I am an associate member of the Geological Association of Canada.

5. I have not received, nor do I expect to receive, any direct, indirect or contingent interest in the properties or securities of Petroflame International Resources Ltd.

6. This report is based on field examinations I performed and supervised on the property during July, 1987.

DATED at Surrey, Province of British Columbia, this 19th day of August, 1987.

Sean P. Butler

Sean P. Butler, B.Sc.
Geologist

APPENDIX I
Geochemical Analysis Procedures

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

GEOCHEMICAL LABORATORY METHODOLOGY

Sample Preparation

1. Soil samples are dried at 60^{o}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
(* denotes 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^{o}C are digested with 30 mls hot dilute aqua regia, and 75 mls of clear solution obtained is extracted with 5 mls Methyl Isobutyl Ketone.

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

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, Pd, Pt, and Rh are determined in the solution by graphite furnace Atomic Absorption. Detections - Au=1 ppb; Pd, Pt, Rh=5 ppt

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).

Geochemical Analysis for Barium

0.25 gram samples are digested with hot NaOH and EDTA solution, and diluted to 20 ml.

Ba is determined in the solution by ICP.

Geochemical Analysis for Tungsten

0.25 gram samples are digested with hot NaOH and EDTA solution, and diluted to 20 ml. W in the solution determined by ICP with a detection of 1 ppm.

Geochemical Analysis for Selenium

0.5 gram samples are digested with hot dilute aqua regia and dilute to 10 ml with H_2O. Se is determined with $NaBH_3$ with Flameless AA. Detection 0.1 ppm.

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Geochemical Analysis for Uranium

0.5 gram samples are digested with hot aqua regia and diluted to 10 ml.

Aliquots of the acid extract are solvent extracted using a salting agent and aliquots of the solvent extract are fused with NaF, K_2CO_3 and Na_2CO_3 flux in a platinum dish.

The fluorescence of the pellet is determined on the Jarrel Ash Fluorometer.

Geochemical Analysis for Fluorine

0.25 gram samples are fused with sodium hydroxide and leached with 10 ml water. The solution is neutralized, buffered, adjusted to pH 7.8 and diluted to 100 ml.

Fluorine is determined by Specific Ion Electrode using an Orion Model 404 meter.

Geochemical Analysis for Tin

1.0 gram samples are fused with ammonium iodide in a test tube. The sublimed iodine is leached with dilute hydrochloric acid.

The solution is extracted with MIBK and tin is determined in the extract by Atomic Absorption.

Geochemical Analysis for Chromium

0.1 gram samples are fused with Na_2O_2. The melt is leached with HCl and analysed by AA or ICP. Detection 1 ppm.

Geochemical Analysis for Hg

0.5 gram samples is digested with aqua regia and diluted with 20% HCl.

Hg in the solution is determined by cold vapour AA using a F & J scientific Hg assembly. An aliquot of the extract is added to a stannous chloride / hydrochloric acid solution. The reduced Hg is swept out of the solution and passed into the Hg cell where it is measured by AA.

Geochemical Analysis for Ga & Ge

0.5 gram samples are digested with hot aqua regia with HF in pressure bombs.

Ga and Ge in the solution are determined by graphite furnace AA. Detection 1 ppm.

Geochemical Analysis for Tl (Thallium)

0.5 gram samples are digested with 1:1 HNO_3. Tl is determined by graphite AA. Detection .1 ppm.

Geochemical Analysis for Te (Tellurium)

0.5 gram samples are digested with hot aqua regia. The Te extracted in MIBK is analysed by AA graphite furnace. Detection .1 ppm.

Geochemical Whole Rock

0.1 gram is fused with .6 gm $LiBO_2$ and dissolved in 50 mls 5% HNO_3. Analysis is by ICP or M.S. ICP gives excellent precision for major components. The M.S. can analyze for up to 50 elements.

APPENDIX II
Soil Sample Data Descriptions

CODE FORMAT FOR RECORDING SOIL SAMPLES DATA

1. Site Topography

HT:	Hill Top
GS:	Gentle Slope (degrees)
SS:	Steep Slope (20 degrees)
L:	Level
T:	Talus

2. Slope Direction

N:	North
NE:	Northeast
E:	East
SE:	Southeast
S:	South
SW:	Southwest
W:	West
NW:	Northwest

3. Site Drainage

D:	Dry
M:	Moist
W:	Wet
S:	Saturated

4. Sample Texture

O:	Organic
VS:	Very sandy
S:	Sandy

SS:	Sand, Silt
SSC:	Sand, silt, clay
SI:	Silt
C:	Clay
G:	Gravel

5. Color

D = Dark M = Medium L = Light

OR:	Orange
RE:	Red
YE:	Yellow
PI:	Pink
BL:	Blue
PU:	Purple
GR:	Green
BR:	Brown
BK:	Black
GY:	Grey
WH:	White
RB:	Red-brown
OB:	Orange Brown
YB:	Yellow Brown
GB:	Grey Brown
GRB:	Green Brown
YB:	Yellow Brown

6. Sample Depth

In Centimeters

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L1 0+50 E	SS	N	M	SSI	BR	20							
		0+37.5 E	SS	N	M	SSI	BR	18							
		0+25 E	SS	N	M	SSI	BK	20							
		0+12.5 E	SS	N	M	SSI	BK	17							
		0+00	SS	N	M	SSIT	BK	18	on the Road						
		0+12.5W	SS	N	M	SSI	BR	16	on the Road.						
		0+25W	SS	N	M	SSIC	G	19	on the Road					Turns	30°
		0+37.5W	SS	N	M	SSIC	G	18	on the Road					"	30°
		0+50 W	SS	N	M	SSIT	BK	25	on the Road Back at 50°						
		0+62.5W	SS	N	M	SSI	BR	22				Road 50°			
		0+75W	SS	N	M	SSIT	GBK	20				Road 50°			
		0+87.5W	SS	NW	M	SSI	GBK	15				Road 30°			
		1+00W	SS	NW	M	SSIC	G	20				Road 20°			
		1+12.5W	SS	NW	M	SSIC	BR	17				Road 20°			
		1+25W	SS	NW	M	SSIC	BR	15		Cut Back To 50°					
		1+50W	SS	NW	M	SSIC	BK	22							
		1+75W	SS	NW	M	SSI	BK	20							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L1 2+00 W	SS	NE	M	SSI	BKBR	20							
		2+25 W	SS	N	M	SSI	BKBR	15							
		2+50 W	SS	N	M	SSI	BR	19							
		2+75 W	SS	NW	M	SSI	GBK	17							
		3+00 W	SS	NW	M	SSI	BR	20							
		3+25 W	SS	NW	M	SSI	BRBK	15							
		3+37.5 W	SS	NW	M	SSI	BK	18							
		3+50 W	SS	NW	M	SSI	BK	17							
		3+62.5 W	SS	N	M	SSI	BK	18							
		3+75 W	SS	N	M	SSI	BR	15							
		3+87.5 W	SS	NW	M	SSI	GBK	21							
		4+00 W	SS	NW	M	SSI	GBK	15							
		4+12.5 W	SS	NW	M	SSI	OBR	22							
		4+25.0 W	SS	NW	M	SSI	GBR	20							
		4+37.5	SS	NW	M	SSI	BR	22							
		4+50 W	SS	NW	M	SSI	BR	20							
		4+62. W	SS	NW	M	SSI	GBR	20							
		5+00 W	SS	NW	M	SSI	GBR	22							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L2 0+00	SS	SE	M	SSi	RB	18							
		0+12.5 W	SS	SE	M	SSi	BR	19							
		0+25 W	GS	SE	M	SSi	BR	15							
		0+37.5 W	GS	SE	M	SSi	BR	17							
		0+50 W	SS	S	M	SSi	BR	18							
		0+62.5 W	SS	S	M	SSi	GBR	15							
		0+75 W	SS	S	M	SSi	RB	18							
		0+87.5 W	SS	S	M	SSi	RB	13							
		1+00 W	SS	SW	M	SSi	BR	18							
		1+12.5 W	SS	S	M	SSi	RB	20							
		1+25 W	SS	S	M	SSi	BR	22							
		1+37.5 W	SS	S	M	SSi	BR	20							
		1+50 W	SS	S	M	SSi	BR	15							
		1+62.5 W	SS	S	M	SSi	BR	17							
		1+75 W	SS	S	M	SSi	BR	15							
		1+87.5 W	SS	S	M	SSi	BR	17							
		2+00 W	SS	S	M	SSi	BR	19							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L2 2+12.5 W	SS	S	M	SSI	BR	17							
		2+25 W	SS	S	M	SSI	BR	15							
		2+37. W	SS	S	M	SSI	BK BK	14							
		2+50 W	SS	S	W	SSI	BK	15							
		2+62.5 W	GS	S	M	SSIG	G BK	18							
		2+75 W	GS	S	M	SSI	GBK	15							
		2+87.5 W	SS	S	M	SSIG	GBK	17							
		3+00 W	SS	S	M	SSIG	GBK	21							
		3+12.5 W	SS	S	M	SSI	BK	20							
		3+25 W	SS	S	M	SSI	BK BR	15							
		L2 0+12 E	SS	S	M	SSI	BR	15							
		0+25 E	SS	S	M	SSI	BR	17							
		0+37.5 E	SS	S	M	SSIG	BR	14							
		0+50 E	SS	S	M	SSIG	BR	18							
		0+62.5 E	SS	S	M	SSI	GBR	17							
		0+75 E	SS	S	M	SSI	BR	14							
		0+87.5 E	SS	S	M	SSI	BR	23							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L2 1+00 E	SS	S	M	SSI	BR	20							
		1+12.5 E	SS	S	M	SSI	BR	18							
		1+25 E	SS	S	M	SSI	BR	15							
		1+37.5 E	SS	S	M	SSI	BR	12							
		1+50 E	SS	S	M	SSI	GBR	23							
		1+62.5 E	SS	S	M	SSI	BR	20							
		1+75 E	SS	S	M	SSI	BKG	20							
		1+87.5 E	SS	S	M	SSI	BR	19							
		2+00 E	SS	S	M	SSI	BR	21							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L3 2+00 E	SS	S	M	SSIG	BR	20							
		1+87.5	SS	S	M	SSIG	BR	18							
		1+75	SS	S	M	SSIG	BR	5							
		1+62.5	SS	S	M	SSIG	BR	22							
		1+50 E	SS	S	M	SSIG	BR	20							
		1+37.5	SS	S	M	SSIG	BR	24							
		1+25	SS	S	M	SSI	BRBK	22							
		1+12.5	SS	SE	M	SSI	BR	20							
		L3 1+00 E	SS	S	M	SSIG	BR	22							
		0+87.5	SS	S	M	SSIG	GBR	19							
		0+75	SS	S	M	SSIG	BR	22							
		0+62.5	SS	S	M	SSI	BRBK	25							
		0+50 E	SS	S	M	SSI	RB	19							
		0+37.5	SS	S	M	SSI	BR	20							
		0+25	SS	S	M	SSI	GBR	18							
		0+12.5	SS	S	M	SSI	BR	18							
		L3 0+00	SS	S	M	SSI	BR	15							

SAMPLE No.	PROPERTY	LOCATION		1	2	3	4	5	6	7	8	9	10	11	12	13
		L3	0+25 W	SS	S	M	SSI	GBR	18							
			0+50	SS	S	M	SSI	BR	21							
			0+75	SS	S	M	SSI	BKBR	23							
			1+00 W	SS	S	M	SSI	BR	20							
			1+25	SS	S	M	SSI	GBR	17							
			1+50	SS	S	M	SSI	BR	20							
			1+75	SS	S	M	SSI	BR	19							
			2+00 W	SS	S	M	SSI	G	18							
		L3	2+25	SS	S	M	SSI	BR	22							
			2+50	SS	S	M	SSI	BR	20							
			2+75	SS	S	M	SSI	BRBK	18							
			3+00 W	SS	S	M	SSI	BRBK	15							
			3+25	SS	S	M	SSI	BK	20							
			3+50	SS	S	M	SSI	BK	17							
			3+75	GS	S	M	SSAG	BK	18							
			4+00	GS	S	M	SSI	BK	20							
		L3	4+25 W	GS	S	M	SSI	BK	22							

SAMPLE No.	PROPERTY	LOCATION		1	2	3	4	5	6	7	8	9	10	11	12	13
		L3	4+50 W	SS	S	M	SSI	BK	27							
			4+75	SS	S	M	SSI	BK	20							
			5+00 W	SS	S	M	SSI	BKBR	15							
			5+25	SS	S	M	SSI	BK	20							
			5+50 W	SS	S	M	SSI	BK	22							
			5+75	SS	S	M	SSI	BK BR	20							
		L3	6+00 W	SS	S	M	SSI	BKBR	18							
			8													
		L4	2+00 E	SS	S	M	SSI	GBK	24							
			1+87.5	SS	S	M	SSI	BR	18							
			1+75	SS	S	M	SSIG	BR	20							
		L4	1+62.5	SS	S	M	SSIG	BR	25							
			1+50 E	SS	S	M	SSI	GBK	18							
			1+37.5	SS	S	M	SSI	GBR	20							
			1+25	SS	S	M	SSI	BR	22							
		L4	1+12.5 E	SS	S	M	SSI	BR	18							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L4 1+00 E	SS	S	m	SSIG	BR	15							
		0+87.5	SS	S	m	SSI	BR	18							
		0+75	SS	S	m	SSI	BR	20							
		0+62.5	SS	S	m	SSI	BR	25							
		0+50 E	SS	S	m	SSIG	BR	22							
		L4 0+37.5	SS	S	m	SSI	BR	18							
		0+25	SS	S	m	SSI	BR	15							
		0+12.5 E	SS	S	m	SSI	BR	18							
		0+00 [illegible]	SS	S	m	SSI	BR	20							
		0+25 W	SS	S	m	SSI	BR	24							
		0+50	SS	S	m	SSIG	BR	18							
		0+75	SS	S	m	SSIG	BR	22							
		L4 1+00 W	SS	S	m	SSI	BR	20							
		1+25 W	SS	S	m	SSI	BR	20							
		1+50 W	SS	S	m	SSIG	GBR	22							
		1+75 W	SS	S	m	SSI	BR	26							
		L4 2+00 W	SS	S	m	SSI	BKBR	20							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L4 2+25 W	SS	S	M	SSI	BKBR	22							
		2+50W	SS	S	M	SSI	GBR	24							
		2+75	SS	S	M	SSIT	GBK	20							
		3+00	SS	S	M	SSIT	GBK	20							
		3+25	SS	S	M	SSIT	GBK	18							
		3+50	TALUS NO SAMPLE												
		3+75 W	SS	S	M	SSI	BKBR	24							
		4+00	SS	S	M	SSI	BR	22							
		4+25	SS	S	M	SSIG	BKBR	24							
		L 4+50	SS	S	M	SSIG	BKBR	26							
		4+75	SS	S	M	SSI	BR	24							
		5+00 W	SS	S	M	SSI	BR	28							
		5+25	SS	S	M	SSIG	BKBR	25							
		5+50	SS	S	M	SSIG	BR	27							
		5+75	SS	S	M	SSIT	BKBR	25							
		6+00 W	SS	S	M	SSIT	BKBR	27							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L5 0+00	SS	S	m	SSIT	BR	18							
		0+12.5 E	SS	S	m	SSIT	BR	20							
		0+25 E	SS	S	m	SSIG	GBR	17							
		0+37.5	SS	S	m	SSIG	BR	18							
		0+50	SS	S	m	SSIT	BR	20							
		0+62.5	SS	S.	m	SSIT	BRBK	22							
		0+75	SS	S	m	SSIT	BR	20							
		0+87.5	SS	S.	m	SSIT	BR	15							
		L5 1+00 E	SS	S	m	SSIT	BR	12							
		1+12.5	SS	S	m	SSIT	BR	12							
		1+25	SS	S	m	SSI	BR	15							
		1+37.5	SS	S	m	SSIG	GBR	15							
		1+50 E	SS	S	m	SSIG	GBK	17							
		1+62.5	SS	S	m	SSIG	GBR	20							
		1+75	SS	S	m	SSIG	BR	22							
		1+87.5	SS	S	m	SSIG	GBR	26							
		L5 2+00 E	SS	S	m	SSI	BR	28							

SAMPLE No.	PROPERTY	LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13
		L S 2+12.5 E	SS	S	M	SSIG	BR	24							
		2+25	SS	S	M	SSI	BR	22							
		2+37.5	SS	S	M	SSI	BR	20							
		2+50 E	SS	S	M	SSIG	BR	20							
		L S 2+62.5	SS	S	M	SSIG	BR	18							
		2+75	SS	S	M	SSIG	BR	24							
		2+87.5	SS	S	M	SSIG	BR	22							
		L S 3+00 E	SS	S	M	SSI	BR	20							

APPENDIX III

Geochemical Analysis Certificates and Statistical Analysis

ACME ANALYTICAL LABORATORIES 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE 253-3158 DATA LINE 251-1011

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG.C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE CA P LA CR MG BA TI B W AND LIMITED FOR NA AND K. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-5 SOILS P6-SOIL/ROCK P7-ROCK

DATE RECEIVED: JUL 24 1987 DATE REPORT MAILED: July 29/87 ASSAYER. D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER

STRATO PROJECT-PETROFLAME File # 87-2678 Page 1

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
LJSB-87001	163	24	5636	.9	19.71	20	ND	97	2	.14
L1-500W	42	34	328	.8	3.80	8	ND	2	2	.09
L1-475W	15	22	128	.8	2.14	5	ND	1	2	.05
L1-450W	14	25	215	1.7	2.92	7	ND	1	2	.06
L1-437.5W	11	21	116	1.9	2.46	5	ND	1	2	.07
L1-425W	22	25	209	4.3	3.02	8	ND	1	2	.03
L1-412.5W	27	27	219	3.1	3.43	11	ND	1	2	.03
L1-400W	21	19	198	.2	2.40	7	ND	1	2	.02
L1-387.5W	51	27	402	1.5	3.49	10	ND	1	2	.06
L1-375W	52	27	266	5.2	3.01	5	ND	2	2	.09
L1-362.5W	58	39	255	2.0	3.93	10	ND	1	2	.03
L1-350W	25	27	157	1.3	2.26	9	ND	3	2	.03
L1-327.5W	35	31	210	.9	2.21	7	ND	2	2	.04
L1-325W	52	69	362	1.7	3.65	17	ND	2	3	.05
L1-300W	32	28	210	3.1	2.74	10	ND	1	2	.02
L1-275W	30	49	209	2.3	2.80	17	ND	1	3	.02
L1-250W	81	43	634	2.9	7.92	80	ND	4	2	.12
L1-225W	119	74	249	1.2	6.10	10	ND	2	2	.40
L1-200W	43	50	165	5.3	3.15	9	ND	2	2	.18
L1-185W(SILT)	87	48	1837	1.1	4.96	12	ND	15	2	.38
L1-175W	50	36	269	.8	4.48	12	ND	2	2	.16
L1-150W	31	33	248	.6	3.33	7	ND	2	2	.09
L1-125W	51	37	412	1.1	4.29	17	ND	2	2	.05
L1-112.5W	41	39	382	1.7	3.92	11	ND	3	2	.04
L1-100W	73	46	509	.9	4.76	17	ND	2	2	.05
L1-087.5W	76	48	353	1.4	4.30	12	ND	2	2	.09
L1-075W	77	31	301	1.3	5.56	7	ND	3	2	.14
L1-062.5W	33	44	251	1.7	3.33	3	ND	2	2	.04
L1-050W	125	23	205	.7	3.38	9	ND	2	4	.29
L1-037.5W	77	50	385	.5	4.46	12	ND	2	2	.15
L1-025W	57	53	316	.9	3.81	11	ND	3	2	.20
L1-012.5W	36	33	265	1.5	3.62	12	ND	2	2	.05
L1-000	57	145	416	2.3	4.80	33	ND	2	2	.17
L1-012.5E	42	99	245	1.2	3.43	24	ND	4	4	.13
L1-025E	42	48	194	2.2	3.65	9	ND	2	2	.04
L1-037.5E	28	64	178	3.5	3.27	16	ND	1	2	.04
STD C	62	39	131	7.1	3.96	41	7	18	10	.49

STRATO PROJECT-PETROFLAME FILE # 87-2678

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L1-050E	23	174	229	7.9	4.58	15	ND	3	2	.05
L2-325W	71	142	933	4.6	3.60	22	ND	43	10	.88
L2-312.5W	82	52	473	2.0	3.55	22	ND	12	3	.46
L2-300W	58	43	626	1.4	4.04	14	ND	14	3	.36
L2-287.5W	58	25	294	1.0	4.30	16	ND	3	2	.23
L2-275W	56	38	304	.9	4.37	19	ND	3	2	.28
L2-262.5W	57	66	359	.7	4.20	22	ND	6	2	.27
L2-250W	31	54	229	.9	2.65	9	ND	3	2	3.77
L2-237.5W	20	43	164	.5	1.96	7	ND	7	2	.98
L2-225W	26	34	250	.7	3.17	6	ND	2	2	.27
STD C	59	38	128	7.2	3.85	42	8	19	19	.47
L2-212.5W	23	38	211	.6	3.28	9	ND	2	2	.29
L2-200W	34	23	241	.6	3.20	11	ND	2	2	.11
L2-187.5W	16	41	367	.3	3.10	12	ND	3	2	.15
L2-175W	27	31	331	1.0	3.19	8	ND	3	2	.12
L2-162.5W	35	33	260	.6	4.16	15	ND	1	2	.12
L2-150W	30	27	241	.9	3.58	12	ND	2	2	.11
L2-137.5W	20	36	226	.4	3.33	17	ND	3	5	.17
L2-125W	37	27	286	.7	4.16	11	ND	2	3	.09
L2-112.5W	18	20	260	1.1	3.22	9	ND	2	4	.11
L2-100W	18	22	221	.4	2.39	9	ND	3	2	.24
L2-087.5W	33	25	277	.6	5.01	14	ND	2	3	.09
L2-075W	28	20	374	1.6	3.74	9	ND	6	2	.15
L2-062.5W	8	18	48	.5	1.76	5	ND	1	2	.07
L2-050W	26	18	346	1.2	3.86	13	ND	4	3	.08
L2-037.5W	15	21	228	1.1	3.25	9	ND	2	2	.09
L2-025W	20	22	242	1.3	3.25	6	ND	2	2	.15
L2-012.5W	37	19	195	.9	3.38	8	ND	1	2	.10
L2-000	14	18	209	1.4	3.80	9	ND	2	2	.07
L2-012.5E	29	20	162	1.2	4.46	9	ND	2	2	.05
L2-025E	25	15	147	.6	3.72	7	ND	1	2	.07
L2-037.5E	33	24	161	.6	4.33	12	ND	2	2	.07
L2-050E	32	18	157	.8	3.97	12	ND	2	4	.09
L2-062.5E	56	37	203	.5	5.20	14	ND	2	4	.13
L2-075E	18	19	162	.2	3.35	6	ND	2	2	.12
L2-087.5E	24	32	185	.9	5.04	17	ND	1	3	.25
L2-100E	21	22	113	.4	3.58	7	ND	1	2	.10
L2-112.5E	21	28	147	.4	3.59	8	ND	2	2	.16

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L2-125E	30	48	225	.3	4.72	4	ND	2	2	.13
L2-137.5E	19	46	160	.2	2.70	7	ND	3	2	.31
L2-150E	44	39	254	.3	5.36	14	ND	1	3	.06
L2-162.5E	13	39	239	.1	2.88	5	ND	5	2	.13
L2-175E	19	22	123	.3	2.76	7	ND	2	2	.14
L2-187.5E	17	35	207	.7	3.05	10	ND	2	2	.18
L2-200E	18	29	364	.7	4.11	8	ND	3	2	.25
L3-600W	149	58	1710	3.5	6.93	11	ND	19	5	.30
L3-575W	68	36	483	1.1	3.97	2	ND	3	2	.25
L3-550W	55	156	754	.5	3.27	10	ND	7	2	.32
L3-525W	126	42	1166	2.7	6.54	8	ND	17	4	.28
L3-500W	75	82	743	1.2	4.66	20	ND	9	4	.22
L3-475W	70	49	1202	.6	4.72	16	ND	9	7	.25
L3-450W	62	102	542	1.4	3.18	12	ND	17	8	.42
L3-425W	77	145	701	2.4	4.16	37	ND	21	4	.56
L3-400W	121	203	1455	5.3	5.33	38	ND	38	12	.63
L3-375W	103	122	1037	3.5	4.98	35	ND	20	9	.47
L3-363W(SILT)	94	56	1695	1.2	3.88	20	ND	26	2	.36
L3-350W	117	87	1305	3.0	4.77	25	ND	31	10	.79
L3-325W	78	91	811	1.6	3.87	16	ND	12	10	.76
L3-300W	61	56	631	1.3	5.03	18	ND	7	2	.42
L3-275W	25	42	301	.4	3.60	15	ND	15	2	.25
L3-250W	38	47	387	1.1	4.27	7	ND	4	7	.15
L3-225W	34	30	186	.6	3.34	10	ND	2	4	.34
L3-200W	52	24	196	.3	4.13	2	ND	1	5	.08
L3-175W	14	44	231	.9	2.98	4	ND	4	2	.16
L3-150W	25	32	219	.8	3.89	6	ND	1	8	.09
L3-125W	51	35	268	.8	4.06	5	ND	2	4	.11
L3-100W	24	26	281	1.9	4.18	22	ND	3	11	.11
L3-075W	18	23	285	.8	4.59	3	ND	6	2	.15
L3-050W	17	30	175	1.1	2.91	2	ND	3	2	.14
L3-025W	55	26	237	.9	5.32	4	ND	1	2	.07
L3-000	12	26	145	.5	2.88	5	ND	1	2	.13
L3-012.5E	28	29	174	.4	4.23	12	ND	2	2	.23
L3-025E	21	32	204	1.0	4.83	12	ND	3	5	.17
L3-037.5E	9	24	122	.5	2.33	2	ND	2	2	.08
STD C	62	40	132	7.6	4.15	42	6	18	18	.51

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L3-050E	17	17	253	1.3	4.01	5	ND	4	2	.11
L3-062.5E	19	27	164	.8	3.77	9	ND	3	3	.16
L3-075E	32	24	246	1.1	4.69	6	ND	2	3	.08
STD C	60	40	129	7.7	4.16	41	8	19	18	.52
L3-087.5E	11	24	97	.4	2.15	9	ND	2	2	.11
L3-100E	15	46	376	.7	5.03	8	ND	5	6	.25
L3-112.5E	16	21	238	.9	4.02	6	ND	3	2	.12
L3-125E	23	42	328	1.1	5.28	10	ND	8	4	.36
L3-137.5E	19	43	334	1.2	4.02	9	ND	3	5	.17
L3-150E	43	29	251	1.1	5.48	10	ND	2	2	.10
L3-162.5E	23	18	164	.7	2.35	11	ND	4	4	.21
L3-175E	37	88	232	.5	3.18	18	ND	7	2	.29
L3-187.5E	38	27	256	.7	4.31	4	ND	3	2	.14
L3-200E	42	34	220	1.0	5.48	15	ND	2	6	.12
L4-600W	64	62	322	1.5	5.26	15	ND	3	2	.60
L4-575W	75	53	353	1.0	4.85	16	ND	3	6	.44
L4-550W	46	25	264	.8	3.70	9	ND	3	2	.74
L4-525W	64	31	312	.5	4.57	7	ND	2	3	.16
L4-500W	21	22	630	1.1	3.21	10	ND	9	5	.44
L4-475W	26	30	615	1.0	3.59	13	ND	9	2	.20
L4-450W	23	37	602	1.2	3.54	14	ND	12	2	.16
L4-425W	45	66	461	1.0	4.16	18	ND	6	3	.14
L4-400W	24	32	554	.8	3.77	12	ND	4	2	.20
L4-375W	48	29	468	3.2	3.62	19	ND	8	2	.14
L4-325W	98	250	929	7.5	4.42	31	ND	17	9	.56
L4-300W	98	77	1065	1.4	6.59	28	ND	11	7	.19
L4-275W	96	67	639	1.6	4.46	13	ND	5	4	.23
L4-250W	47	35	580	.9	5.13	10	ND	5	2	.38
L4-225W	39	36	392	1.1	3.80	12	ND	4	4	.21
L4-200W	24	90	276	.9	3.98	37	ND	5	2	.26
L4-175W	17	24	562	2.5	3.19	8	ND	7	3	.11
L4-150W	46	17	266	1.8	4.34	10	ND	1	2	.08
L4-125W	25	35	260	.5	3.38	10	ND	3	4	.14
L4-100W	30	12	223	.4	3.23	7	ND	2	2	.08
L4-075W	22	26	277	1.1	4.31	14	ND	2	3	.10
L4-050W	21	22	191	1.5	4.37	13	ND	1	2	.10

STRATO PROJECT-PETROFLAME FILE # 87-2678

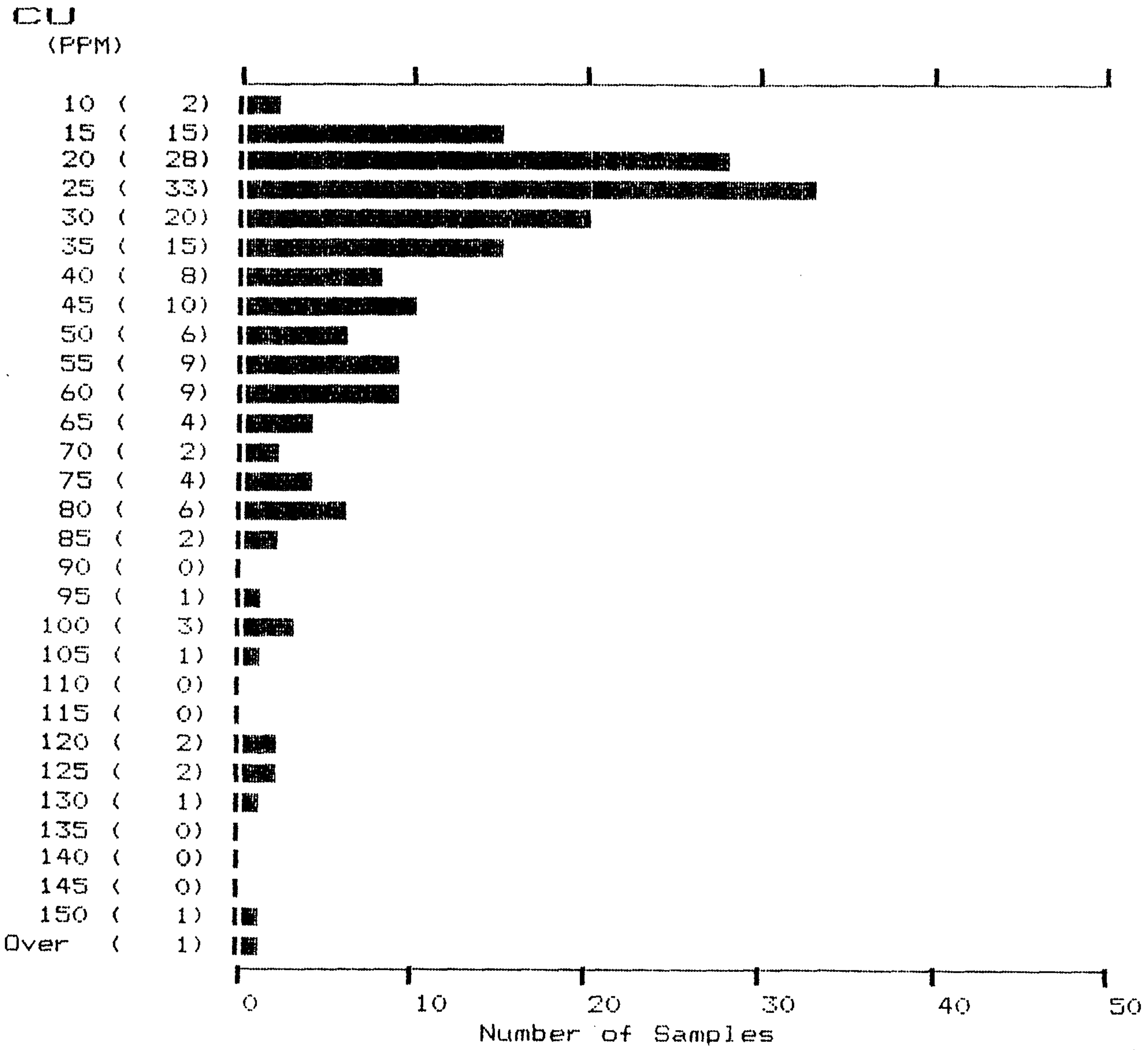
SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L4-025W	25	3	288	2.3	3.62	6	ND	3	2	.14
L4-000	25	21	347	1.8	4.20	8	ND	3	2	.12
L4-012.5E	19	21	278	1.0	4.17	12	ND	5	3	.08
L4-025E	21	9	372	1.4	3.30	15	ND	3	2	.11
L4-037.5E	35	12	354	2.4	4.24	5	ND	4	2	.10
L4-050E	19	17	343	2.1	3.85	6	ND	4	2	.11
L4-062.5E	16	33	125	1.1	2.61	9	ND	2	6	.11
L4-075E	13	8	150	.3	2.07	8	ND	5	8	.10
L4-087.5E	18	66	99	.5	2.10	11	ND	2	2	.19
L4-100E	27	26	249	1.3	4.26	5	ND	1	2	.07
L4-112.5E	21	21	154	1.0	4.26	13	ND	1	2	.10
L4-125E	19	21	219	.9	3.83	11	ND	2	5	.12
L4-137.5E	51	39	211	.7	5.40	7	ND	2	5	.15
L4-150E	46	24	155	.6	4.73	12	ND	2	2	.09
L4-162.5E	23	25	202	1.8	4.13	2	ND	1	2	.13
L4-175E	25	21	231	1.2	4.58	10	ND	1	2	.12
L4-187.5E	21	28	310	.5	4.16	10	ND	3	2	.13
L4-200E	43	33	284	1.3	4.93	4	ND	5	3	.32
L5-000	79	34	228	2.1	5.28	8	ND	1	6	.10
L5-012.5E	36	27	620	.7	6.34	11	ND	3	2	.15
L5-025E	60	29	201	1.1	5.43	13	ND	1	2	.09
L5-037.5E	19	22	166	.7	3.93	9	ND	2	2	.11
L5-050E	28	27	289	2.7	4.70	11	ND	3	2	.20
L5-062.5E	27	37	227	1.0	5.06	3	ND	3	4	.15
L5-075E	20	57	130	.4	2.52	11	ND	4	2	.23
L5-087.5E	21	66	208	.8	3.26	11	ND	7	3	.35
L5-100E	14	24	76	.1	1.89	5	ND	2	7	.12
L5-112.5E	11	28	81	.3	2.29	6	ND	1	2	.11
L5-125E	29	19	145	.4	4.22	11	ND	1	2	.07
L5-137.5E	91	23	178	1.6	6.03	16	ND	1	3	.07
L5-150E	32	20	195	1.0	4.27	14	ND	2	2	.08
L5-162.5E	30	24	204	1.8	4.90	5	ND	2	2	.10
L5-175E	35	21	162	1.0	4.18	18	ND	2	2	.11
L5-187.5E	18	38	244	1.4	4.25	8	ND	3	2	.18
L5-200E	23	41	277	2.2	4.42	12	ND	5	7	.12
L5-212.5E	23	28	223	1.1	4.20	7	ND	2	3	.11
STD C	61	39	131	7.2	4.14	38	8	19	17	.52

STRATO PROJECT-PETROFLAME FILE # 87-2678

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L5-225E	15	14	145	.8	2.64	7	ND	2	2	.08
L5-237.5E	20	33	190	1.5	3.74	10	ND	3	2	.17
L5-250E	23	26	192	1.6	3.99	13	ND	3	2	.10
L5-262.5E	26	77	376	2.7	4.21	13	ND	4	2	.10
L5-275E	15	29	238	.7	2.65	8	ND	4	2	.20
L5-287.5E	17	28	277	.9	3.48	12	ND	4	2	.14
L5-300E	27	32	180	.4	4.14	8	ND	1	2	.10
LJSB-F9579 Rock	34	15	112	.1	5.40	6	ND	1	2	.52
LJSB-F9580 Rock	31	7	74	.1	5.10	4	ND	1	2	.03
STD C	59	39	127	7.2	3.91	38	8	19	17	.49

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	CD PPM	AU* PPB
LJSB-F9572	378	8143	21668	11.6	89	7
LJSB-F9573	19	216	656	.2	3	1
LJSB-F9574	32	218	620	.4	5	1
LJSB-F9575	10	91	312	.1	1	1
LJSB-F9576	32	35	147	.2	1	1
LJSB-F9577	408	8	10239	.5	175	3
LJSB-F9578	27	88	189	.1	6	1
STD C/AU-R	61	40	131	7.4	20	520

STRATO GEOLOGICAL (87-2678)

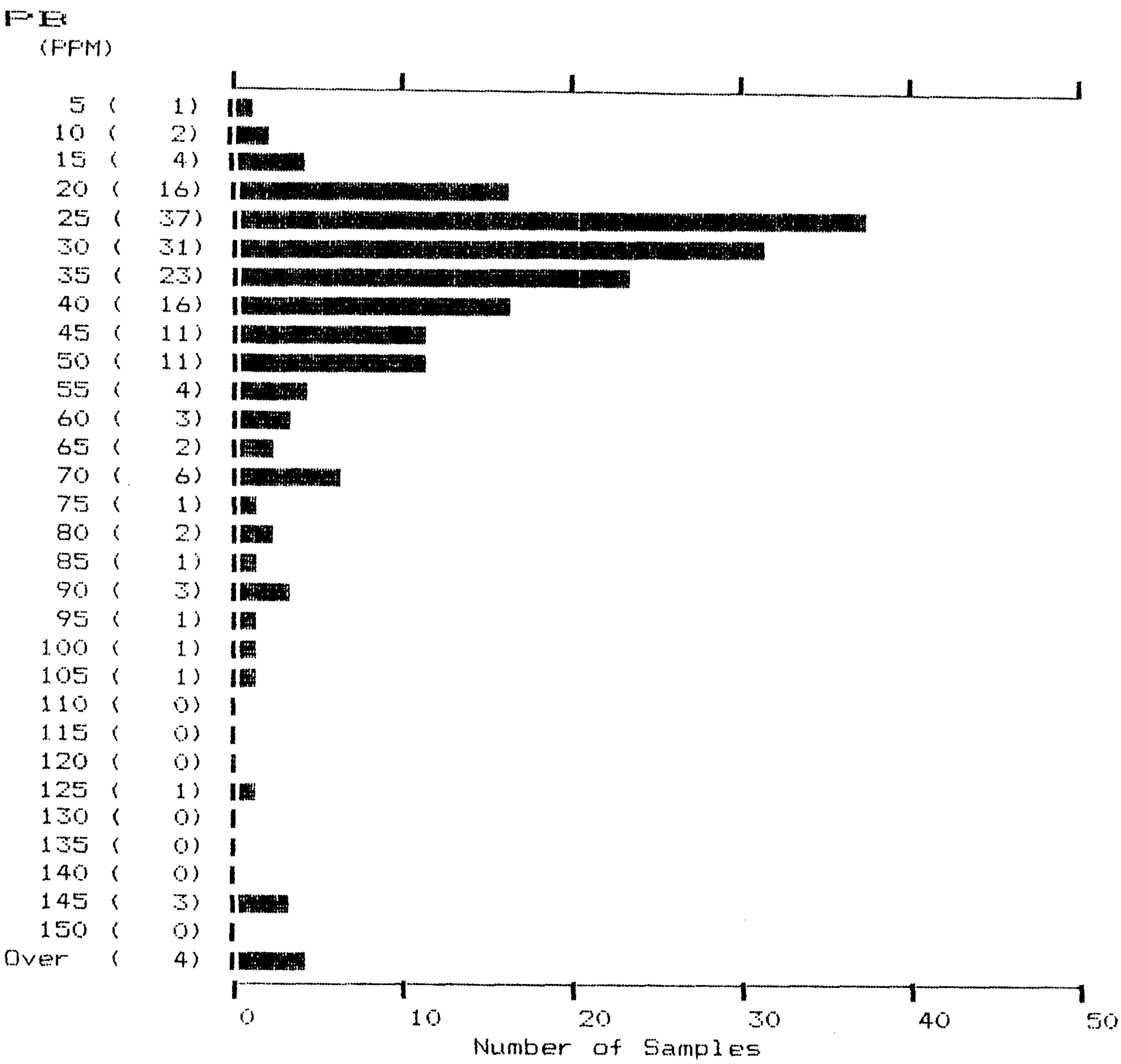


185 Samples

Maximum: 163
Minimum: 8

Mean: 39
Median: 29
Standard Deviation: 28

STRATO GEOLOGICAL (87-2678)

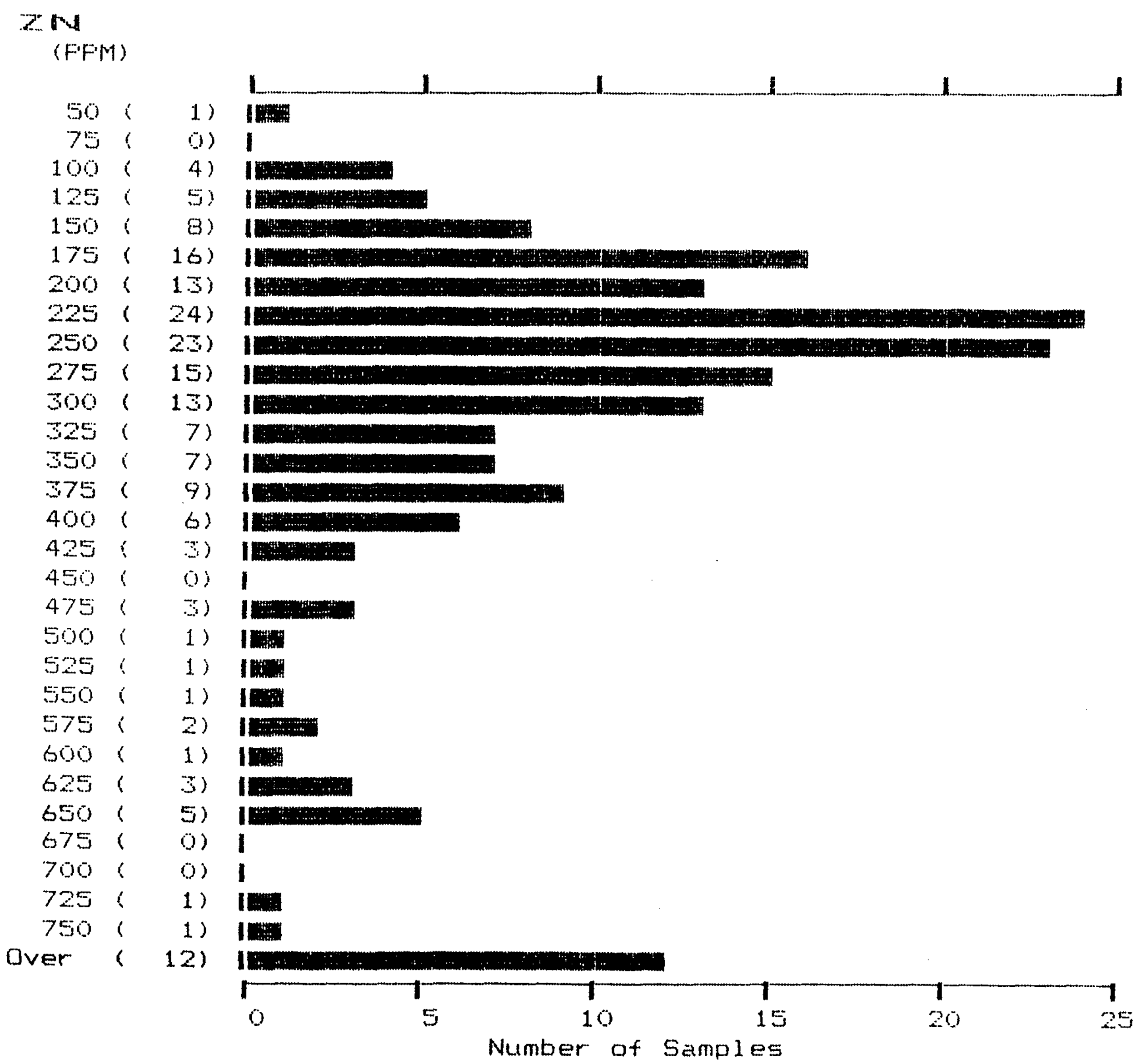


185 Samples

Maximum: 250
Minimum: 3

Mean: 41
Median: 31
Standard Deviation: 33

STRATO GEOLOGICAL (87-2678)

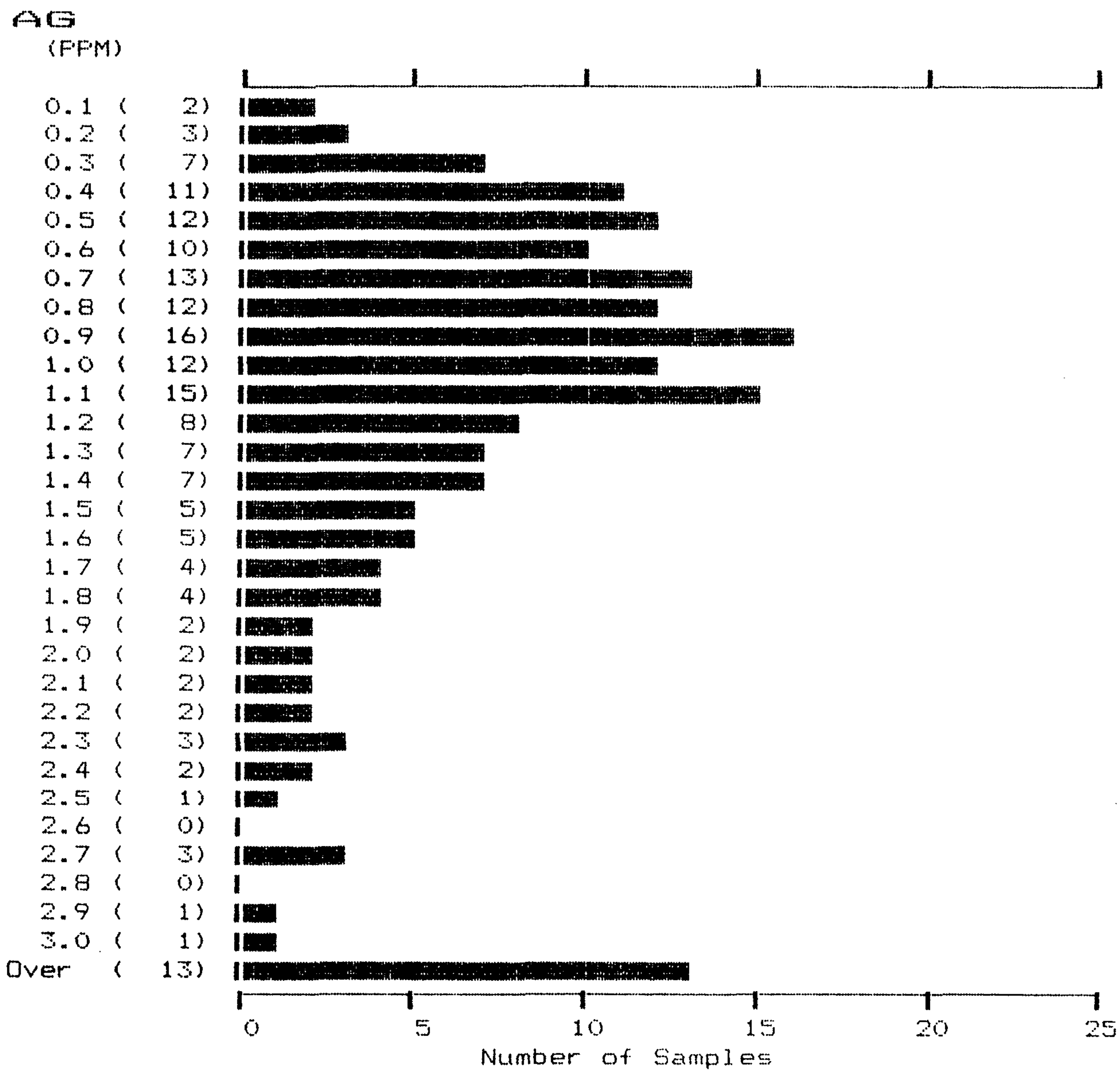


185 Samples

Maximum: 5636
Minimum: 48

Mean: 355
Median: 249
Standard Deviation: 461

STRATO GEOLOGICAL (87-2678)

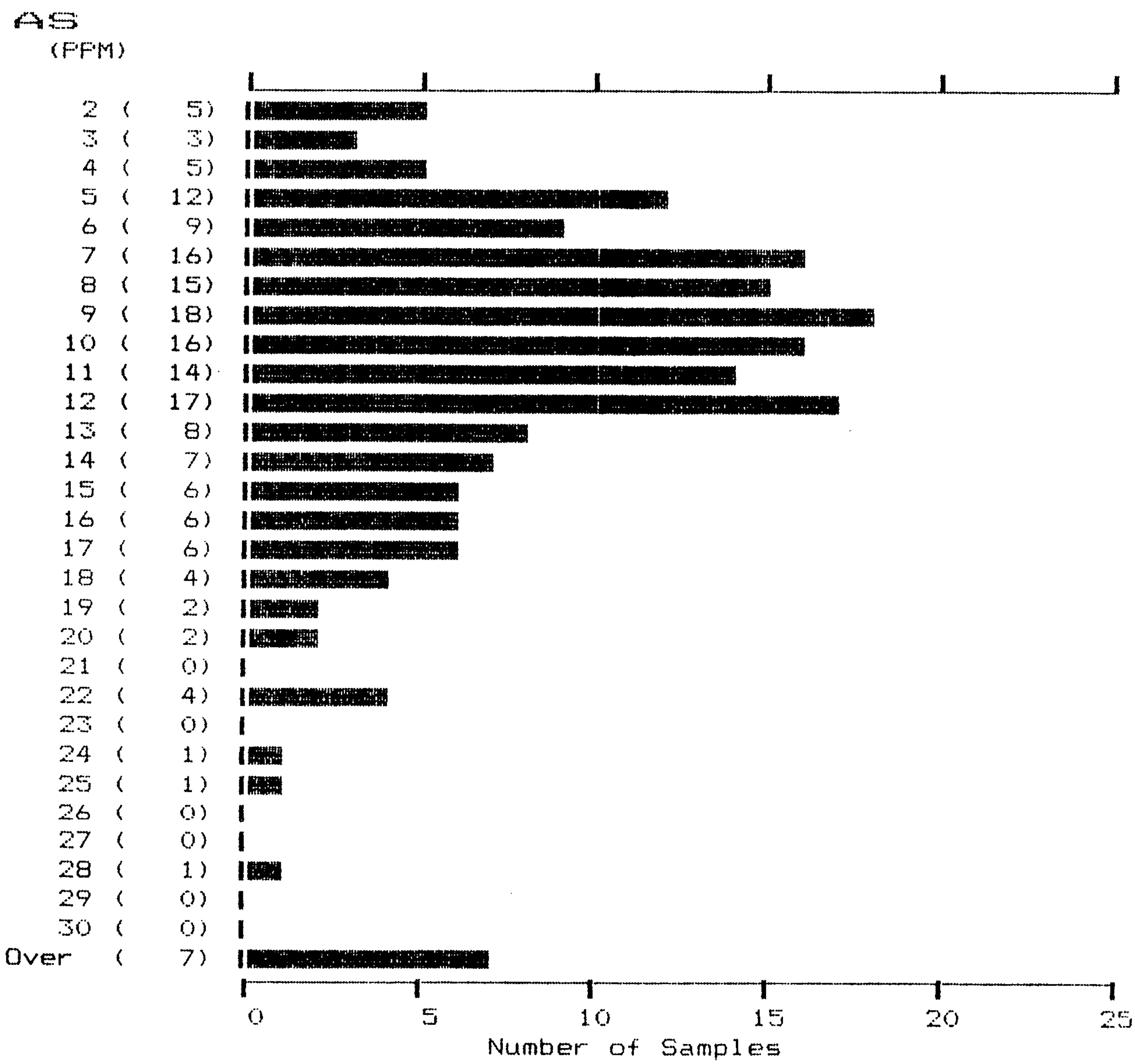


185 Samples

Maximum: 7.9
Minimum: 0.1

Mean: 1.3
Median: 1.0
Standard Deviation: 1.2

STRATO GEOLOGICAL (87-2678)

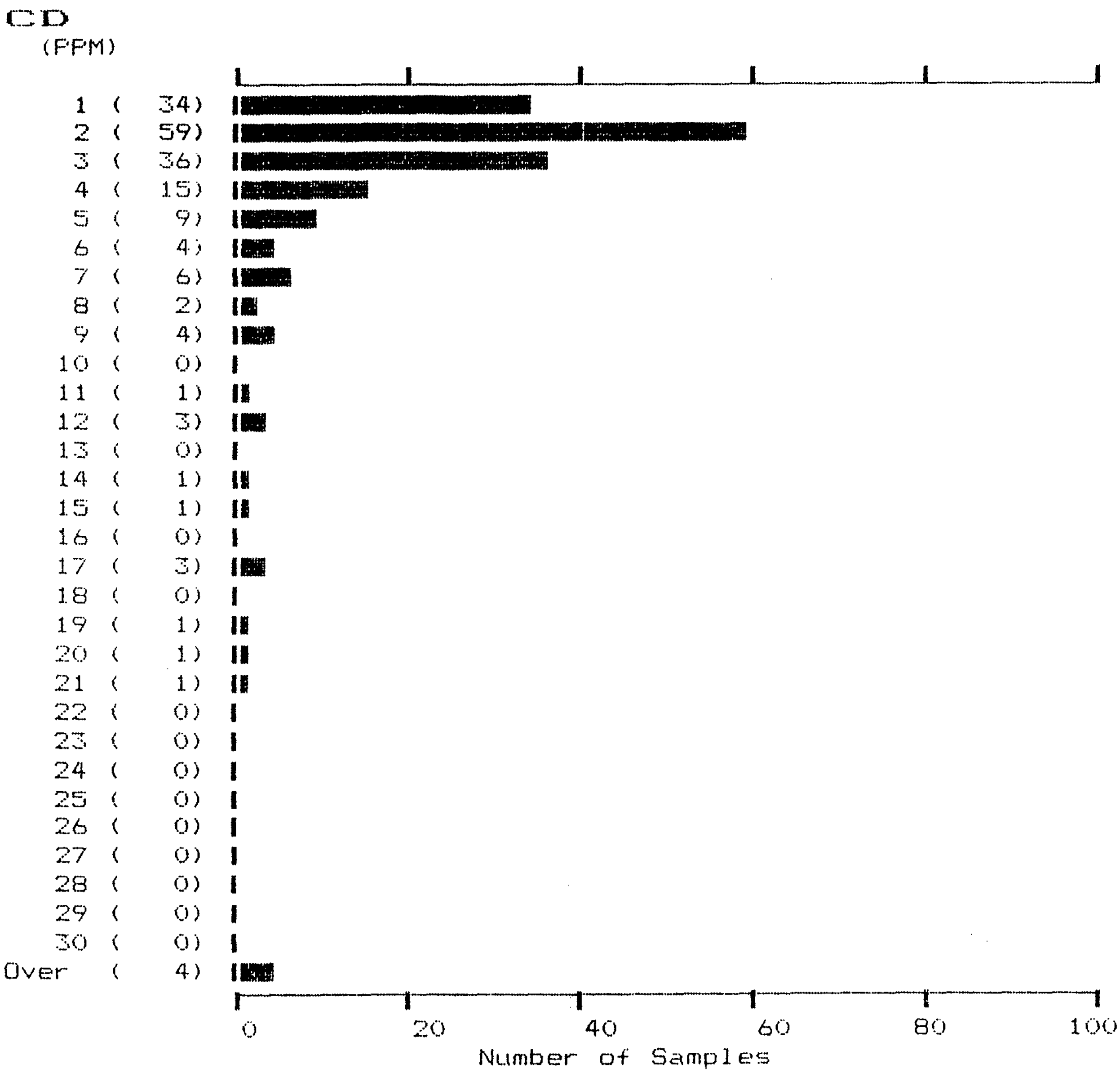


185 Samples

Maximum: 80
Minimum: 2

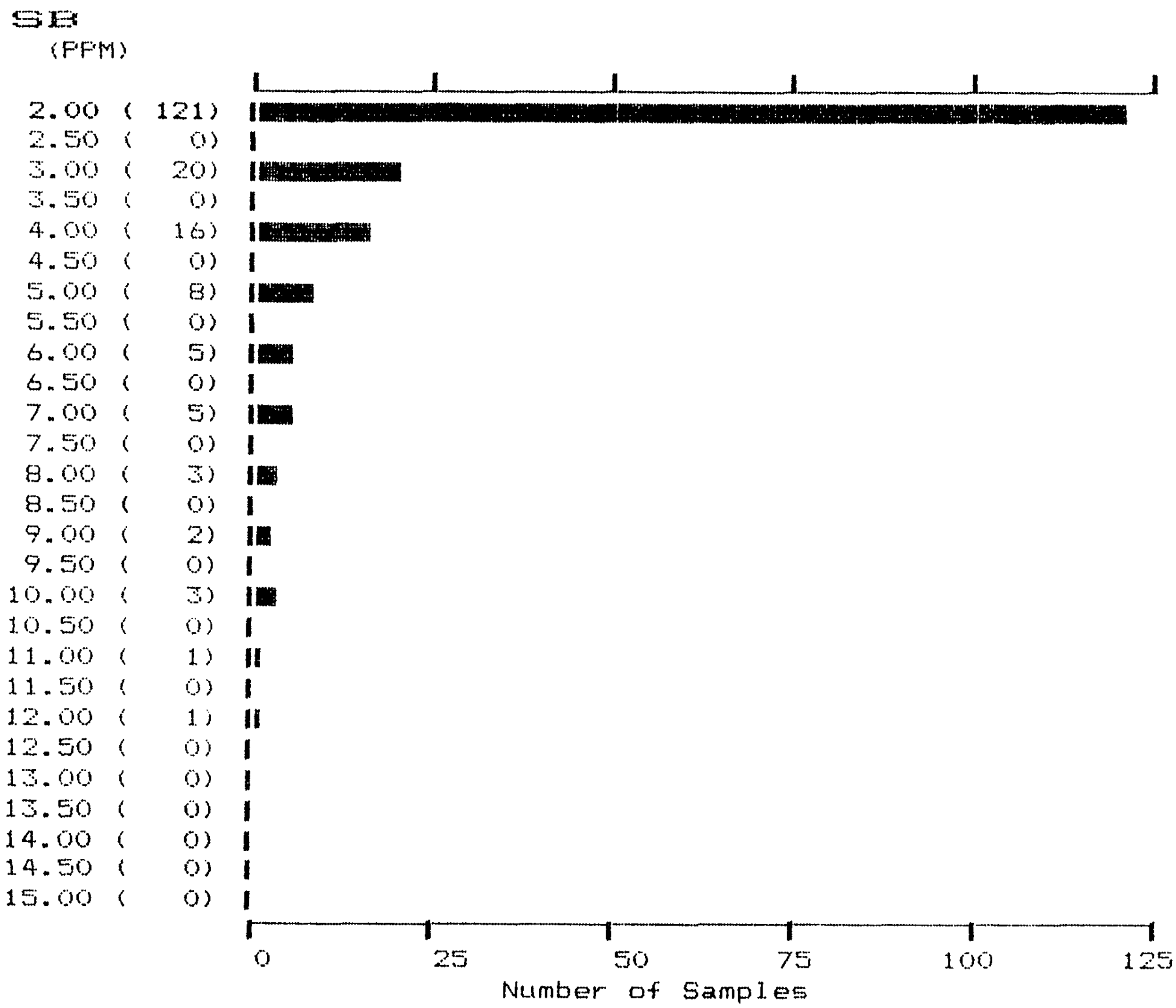
Mean: 12
Median: 10
Standard Deviation: 8

STRATO GEOLOGICAL (87-2678)



185 Samples   Maximum: 97   Mean: 5
Minimum: 1   Median: 2
Standard Deviation: 9

STRATO GEOLOGICAL (87-2678)

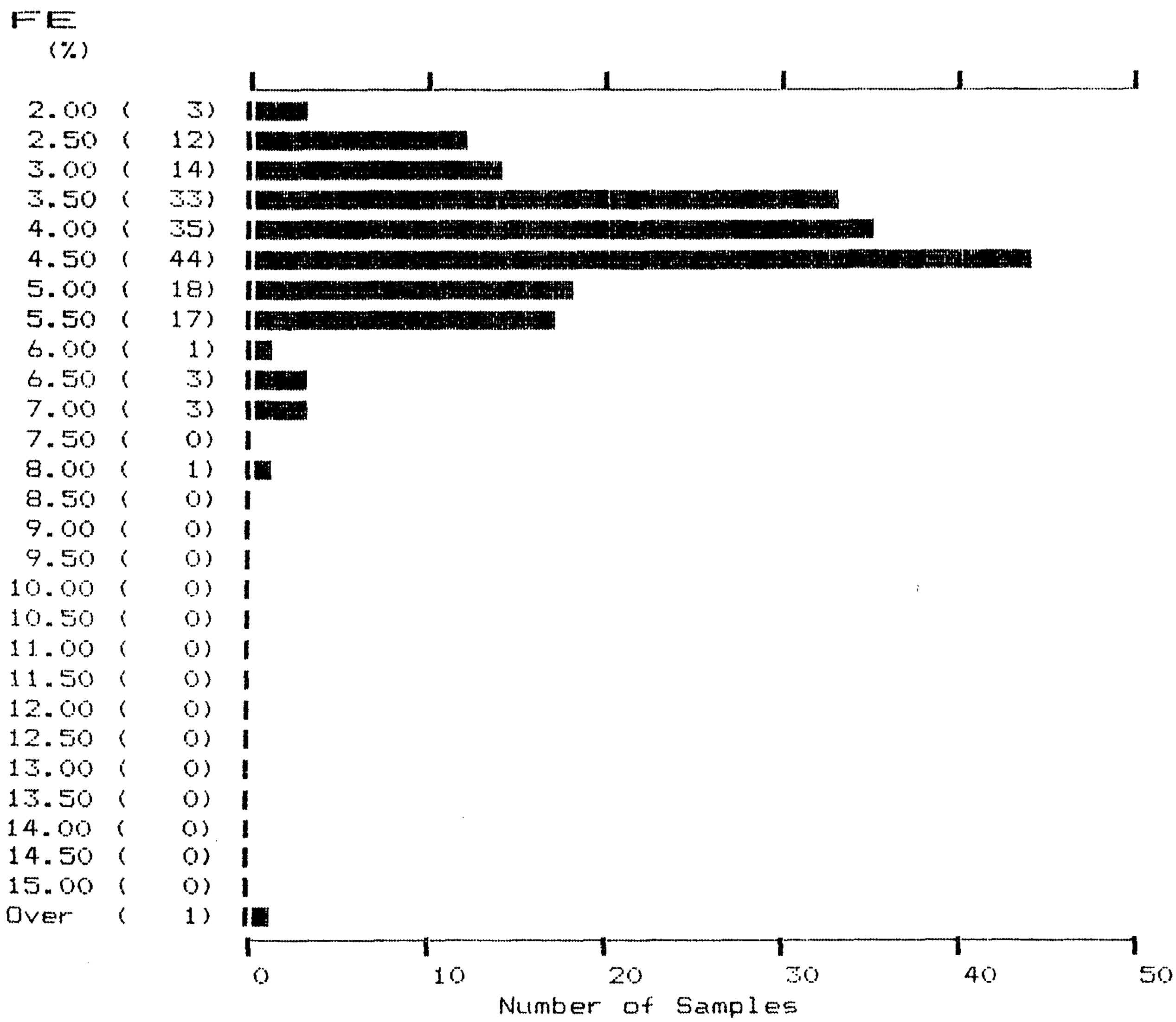


185 Samples

Maximum: 12.00
Minimum: 2.00

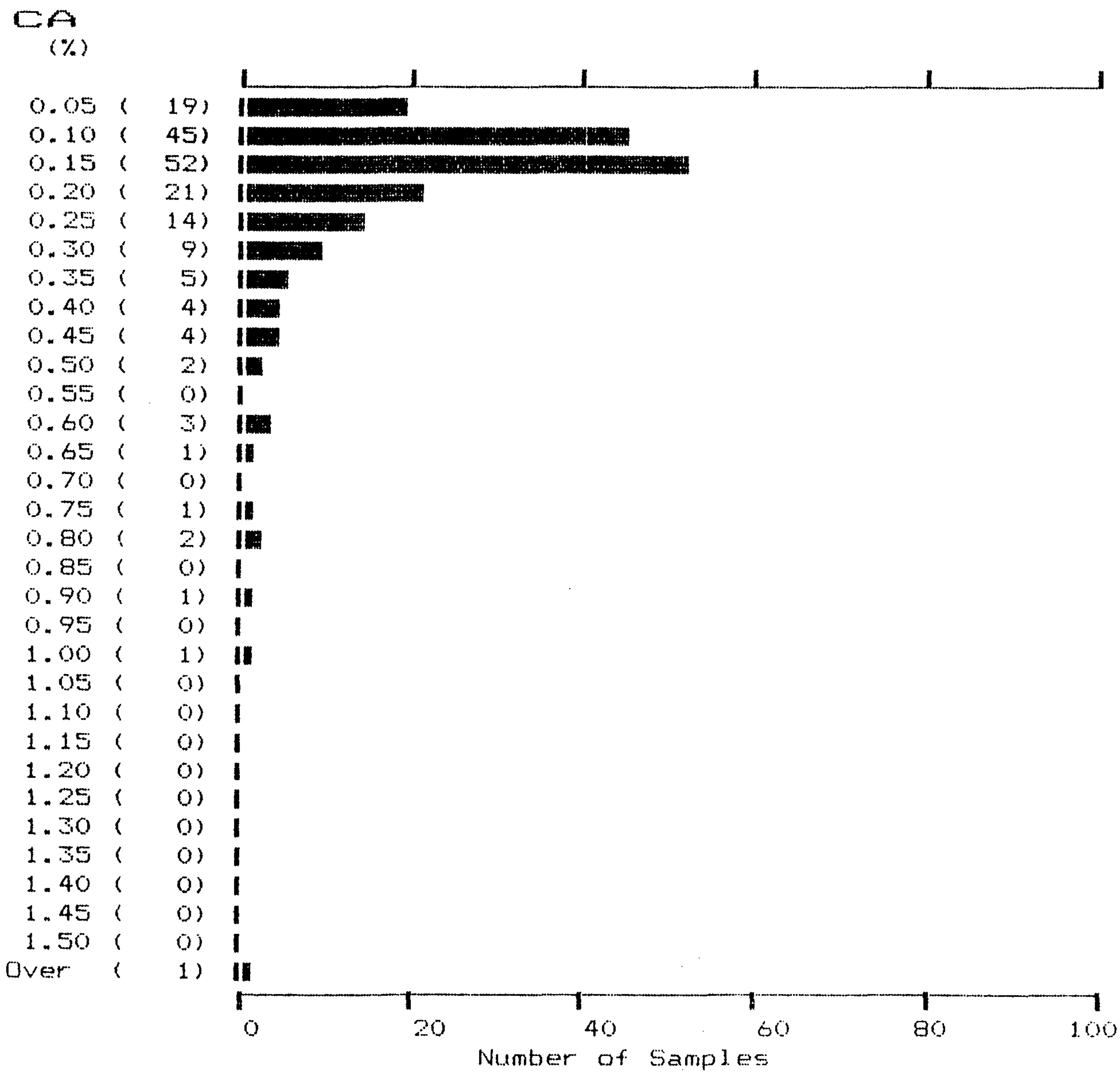
Mean: 3.06
Median: 2.00
Standard Deviation: 1.99

STRATO GEOLOGICAL (87-2678)



185 Samples	Maximum:	19.71	Mean:	4.02
	Minimum:	1.76	Median:	3.93
			Standard Deviation:	1.53

STRATO GEOLOGICAL (87-2678)



185 Samples

Maximum: 3.77
Minimum: 0.02

Mean: 0.20
Median: 0.13
Standard Deviation: 0.31

APPENDIX IV

Listings of the Holdings Held by J.A.C. Ross

PROPERTY HOLDINGS

Properties under option to Petroflame International Resources Ltd.

Crown Granted Claims

Owner - J. A. C. Ross

NAME	LOT NO.
Lucky Jim	844
St. George	846
Shields	847
Shiloh	850
Roadley	858
Snowflake	3320
Isis	4873
Bimbo Fraction	15009
Highlander	15013
Highland	15014
Chickadee	15018

Located Claims

Owner - J. A. C. Ross

DATE OF RECORD	NAME OF CLAIM	RECORD NO.
Aug. 10/84	MR #3	4449
Aug. 10/84	MR #4	4450
Aug. 10/84	MR #5	4451
Aug. 10/84	MR #6	4452

Aug. 10/84	MR #7	4453
Aug. 10/84	MR #8	4454

Reverted Crown Granted Claims
Under Option to J. A. C. Ross

NAME OF CLAIM	LOT NO.	RECORD NO.	REGISTERED OWNER
Peoria	3318	1927 (4)	John A. Hale, Kaslo, B.C.
Gringo	6813	1666 (1)	James Dennis Owen Tyers, Kaslo, B.C.
Blackbird	4180	4435 (6)	Dave Matovich, Montrose, B.C.
Non Pariel Fraction	4554	4435 (6)	Dave Matovich, Montrose, B.C.
Bessie	4183	4436 (6)	Dave Matovich, Montrose, B.C.
Century Fraction	4557	4435 (6)	Dave Matovich, Montrose, B.C.

Surface Land Lots
Owner - J. A. C. Ross

Lot 456, the East Half of Lot 611, and Lots 844, 846, 847, 848, 850 856, and 858, comprising in total about 320 acres.

APPENDIX V

Time - Cost Distribution

TIME-COST DISTRIBUTION

Geological, geochemical, and geophysical surveys were carried out over portions of the Lucky Jim Claim Group by Strato Geological Engineering Ltd., during the period July 10 through July 22, 1987. A listing of personnel and distribution of costs is as follows:

Personnel

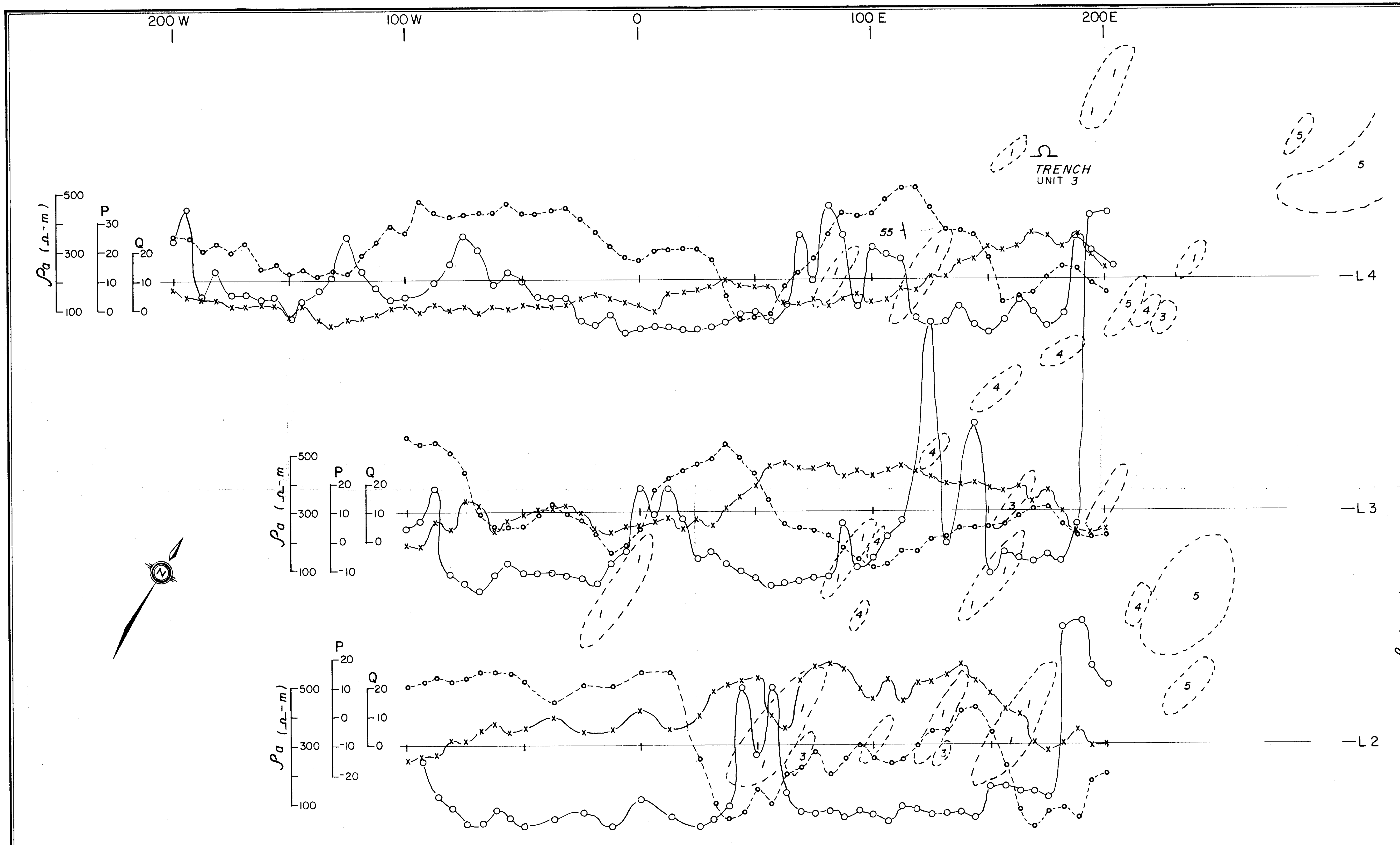
S.P. Butler, B.Sc.	Project Geologist
A. Rojas, B.Sc.	Geologist/Miner
A.E. Hunter, B.A.Sc.	Geophysicist
B. Fishel	Field Assistant

Cost Distribution

- Personnel - 4 man crew July 10-22/87 - 13 days @ 730/d	$ 9,490.00
- Transportation - 4WD Trucks (incl. gas, oil, milage, etc.) 13 d @ 105/d	1,365.00
- Room & Board - 52 mandays @ 60/mandays	3,120.00
- Geophysical Equipment Magnetometer, VLF-EM and SP Meter, Geonics EM-16R, Resistivity meter 13 days @ 135/d	1,755.00
- Geochemical analysis - 196 samples for Cu, Pb, Zn, Ag, Fe, As, Au, Cd, Sb, and Ca @ 7.90/s	1,548.40
- Mob-demobilization - crew & equip.	1,500.00
- Compilation and review of old records - mining, drill, geological and production records for zonation study - 6 days @ 200/d	1,200.00
- Data processing, (geophysical, geochemical), plotting, drafting, reproduction, copying, etc.	1,320.00
- Report - geological, geophysical, geochemical	1,700.00
- Contingencies - L.D. Telephone, shipping, etc.	175.00
TOTAL EXPENDITURES	$23,173.00

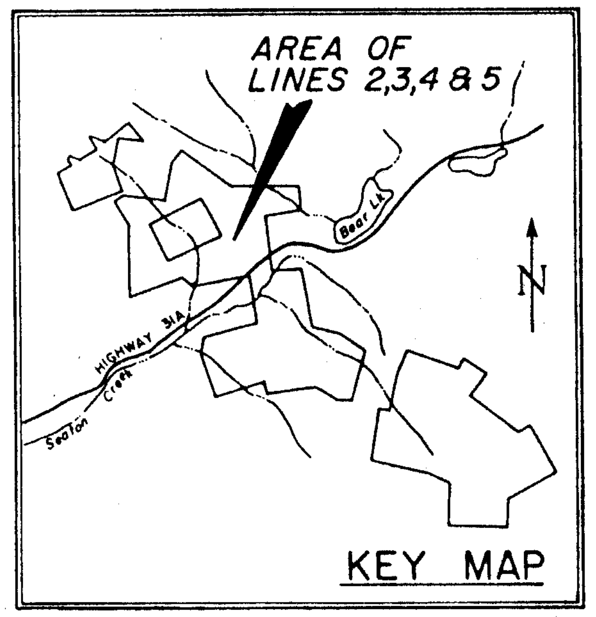
Signed ______________________

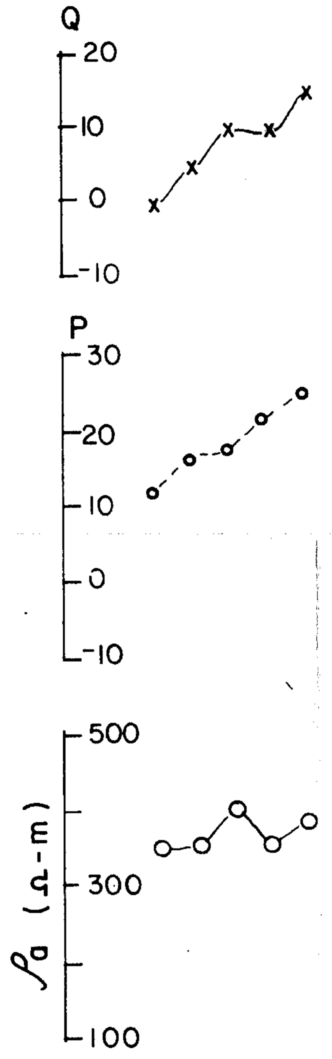
Strato Geological Engineering Ltd.



GEOLOGY

1	Slate
3	Quartzite
4	Limestone
5	Granitic Intrusive





QUADRATURE COMPONENT OF VERTICAL SECONDARY MAGNETIC FIELD AS PERCENTAGE OF HORIZONTAL MAGNETIC FIELD.

IN PHASE COMPONENT OF VERTICAL SECONDARY MAGNETIC FIELD AS PERCENTAGE OF HORIZONTAL MAGNETIC FIELD.

APPARENT RESISTIVITY IN OHM - METRES

HORIZ. SCALE 1:1250

0 10 20 40 60 80 Metres

FIGURE 7

PETROFLAME INTERNATIONAL RESOURCES INC.

LUCKY JIM MINE AREA

SLOCAN M.D —— NTS 82 K/3

EM 16 R SURVEY ON LINES 2 3 & 4

To accompany a report by:
A.E. Hunter, Geop. & S.P. Butler, B.Sc.

Drawn by: AH / GT

Date: August 1987

STRATO GEOLOGICAL ENGINEERING LTD.

LINE BRG 060°

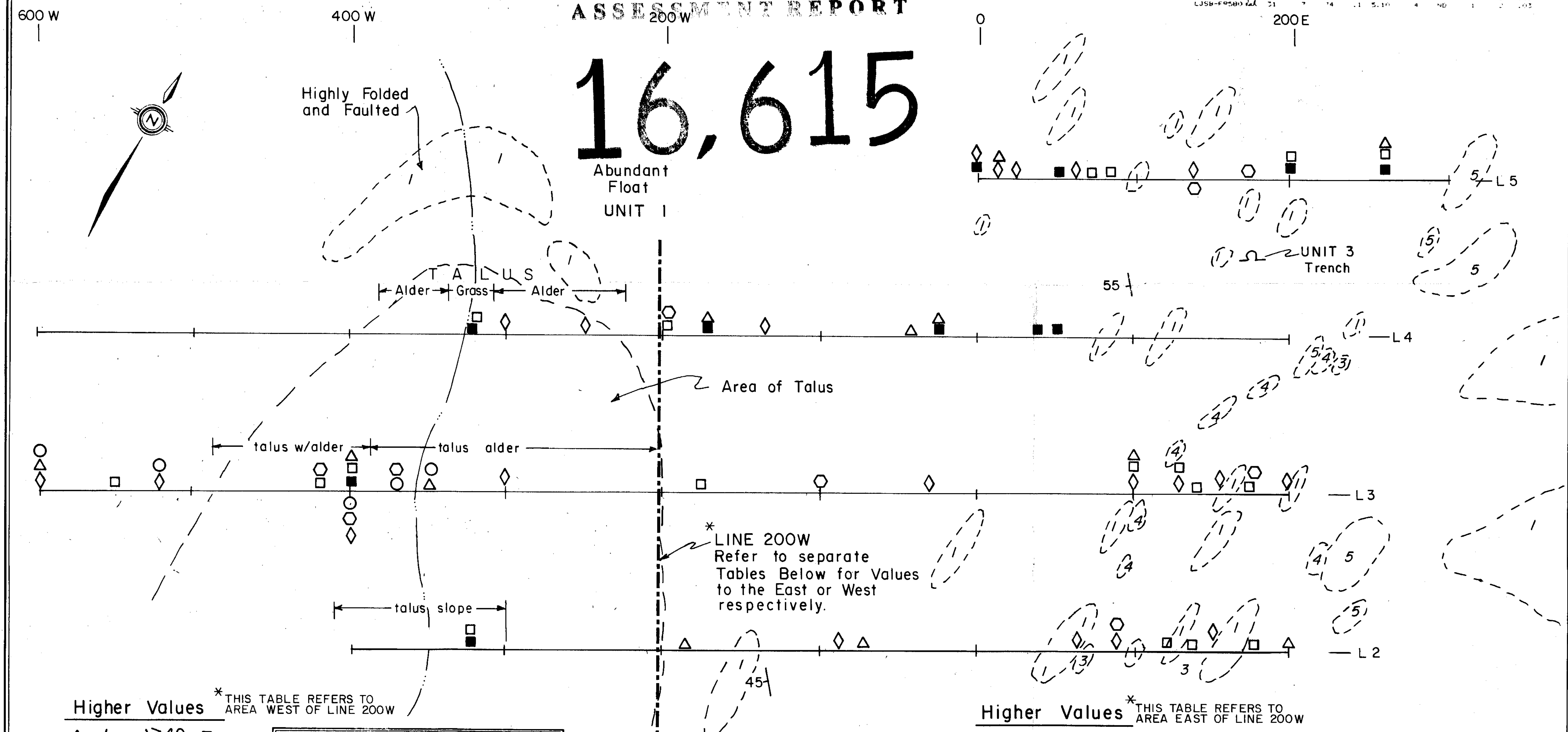
VLF-EM Station used: Annapolis, Maryland
21.4 kHz., 400 kW.

STRATO PROJECT-PETROFLAME FILE # 87-2678

SAMPLE#	CU PPM	PB PPM	ZN PPM	AG PPM	FE %	AS PPM	AU PPM	CD PPM	SB PPM	CA %
L2-325W	71	142	933	4.6	3.60	22	ND	47	10	.88
L2-312.5W	82	52	473	2.0	3.55	22	ND	12	3	.46
L2-300W	58	43	626	1.4	4.04	14	ND	14	3	.36
L2-287.5W	58	25	294	1.0	4.30	16	ND	3	2	.23
L2-275W	56	38	304	.9	4.37	19	ND	3	2	.28
L2-262.5W	57	66	359	.7	4.20	22	ND	6	2	.27
L2-250W	31	54	229	.9	2.65	9	ND	3	2	3.77
L2-237.5W	20	43	164	.5	1.96	7	ND	7	2	.98
L2-225W	26	34	250	.7	3.17	6	ND	2	2	.27
STD C	59	38	128	7.2	3.85	42	8	19	19	.47
L2-212.5W	23	38	211	.6	3.28	9	ND	2	2	.29
L2-200W	34	23	241	.6	3.20	11	ND	2	2	.11
L2-187.5W	16	41	367	.3	3.10	12	ND	3	2	.15
L2-175W	27	31	331	1.0	3.19	8	ND	3	2	.12
L2-162.5W	35	33	260	.6	4.16	15	ND	1	2	.12
L2-150W	30	27	241	.9	3.58	12	ND	2	2	.11
L2-137.5W	20	36	226	.4	3.33	17	ND	3	5	.17
L2-125W	37	27	286	.7	4.16	11	ND	2	3	.09
L2-112.5W	18	20	260	1.1	3.22	9	ND	2	4	.11
L2-100W	18	22	221	.4	2.39	9	ND	3	2	.24
L2-087.5W	33	25	277	.6	5.01	14	ND	2	3	.09
L2-075W	28	20	374	1.6	3.74	9	ND	6	2	.15
L2-062.5W	8	18	48	.5	1.76	5	ND	1	2	.07
L2-050W	26	18	346	1.2	3.86	13	ND	4	3	.08
L2-037.5W	15	21	228	1.1	3.25	9	ND	2	2	.09
L2-025W	20	22	242	1.3	3.25	6	ND	2	2	.15
L2-012.5W	37	19	195	.9	3.38	8	ND	1	2	.10
L2-000	14	18	209	1.4	3.80	9	ND	2	2	.07
L2-012.5E	29	20	162	1.2	4.46	9	ND	2	2	.05
L2-025E	25	15	147	.6	3.72	7	ND	1	2	.07
L2-037.5E	33	24	161	.6	4.33	12	ND	2	2	.07
L2-050E	32	18	157	.8	3.97	12	ND	2	4	.09
L2-062.5E	56	37	203	.5	5.20	14	ND	2	4	.13
L2-075E	18	19	162	.2	3.35	6	ND	2	2	.12
L2-087.5E	24	32	185	.9	5.04	17	ND	1	3	.25
L2-100E	21	22	113	.4	3.58	7	ND	1	2	.10
L2-112.5E	21	28	147	.4	3.59	8	ND	2	2	.16
L2-125E	30	48	225	.3	4.72	4	ND	2	2	.13
L2-137.5E	19	46	160	.2	2.70	7	ND	3	2	.31
L2-150E	44	39	254	.3	5.36	14	ND	1	3	.06
L2-162.5E	13	39	239	.1	2.88	5	ND	5	2	.13
L2-175E	19	22	123	.3	2.76	7	ND	2	2	.14
L2-187.5E	17	35	207	.7	3.05	10	ND	2	2	.18
L2-200E	18	29	364	.7	4.11	8	ND	3	2	.25
L3-600W	149	58	1710	3.5	6.93	11	ND	19	5	.30
L3-575W	68	36	483	1.1	3.97	2	ND	3	2	.25
L3-550W	55	156	754	.5	3.27	10	ND	7	2	.32
L3-525W	126	42	1166	2.7	6.54	8	ND	17	4	.28
L3-500W	75	82	743	1.2	4.66	20	ND	9	4	.22
L3-475W	70	49	1202	.6	4.72	16	ND	9	7	.25
L3-450W	62	102	542	1.4	3.18	12	ND	17	8	.42
L3-425W	77	145	701	2.4	4.16	37	ND	21	4	.56
L3-400W	121	203	1455	5.3	5.33	38	ND	38	12	.63
L3-375W	103	122	1037	3.5	4.98	35	ND	20	9	.47
L3-363W(SILT)	94	56	1695	1.2	3.88	20	ND	26	2	.36
L3-350W	117	87	1305	3.0	4.77	25	ND	31	10	.79
L3-325W	78	91	811	1.6	3.87	16	ND	12	10	.76
L3-300W	61	56	631	1.3	5.03	18	ND	7	2	.42
L3-275W	25	42	301	.4	3.60	15	ND	15	2	.25
L3-250W	38	47	387	1.1	4.27	7	ND	4	7	.15
L3-225W	34	30	186	.6	3.34	10	ND	2	4	.34
L3-200W	52	24	196	.3	4.13	2	ND	1	5	.08
L3-175W	14	44	231	.9	2.98	4	ND	4	2	.16
L3-150W	25	32	219	.8	3.89	6	ND	1	8	.09
L3-125W	51	35	268	.8	4.06	5	ND	2	4	.11
L3-100W	24	26	281	1.9	4.18	22	ND	3	11	.11
L3-075W	18	23	285	.8	4.59	3	ND	6	2	.15
L3-050W	17	30	175	1.1	2.91	2	ND	3	2	.14
L3-025W	55	26	237	.9	5.32	4	ND	1	2	.07
L3-000	12	26	145	.5	2.88	5	ND	1	2	.13
L3-012.5E	28	29	174	.4	4.23	12	ND	2	2	.23
L3-025E	21	32	204	1.0	4.83	12	ND	3	5	.17
L3-037.5E	9	24	122	.5	2.33	2	ND	2	2	.08
STD C	62	40	132	7.6	4.15	42	6	18	18	.51
L3-050E	17	17	253	1.2	4.01	5	ND	4	2	.11
L3-062.5E	19	27	164	.8	3.77	9	ND	3	3	.16
L3-075E	32	24	246	1.1	4.69	6	ND	2	3	.08
STD C	60	40	129	7.7	4.16	41	8	19	18	.52
L3-087.5E	11	24	97	.4	2.15	9	ND	2	2	.11
L3-100E	15	46	376	.7	5.02	8	ND	5	6	.25
L3-112.5E	16	21	238	.9	4.02	6	ND	3	2	.12
L3-125E	23	42	328	1.1	5.28	10	ND	8	4	.26
L3-137.5E	19	43	334	1.2	4.02	9	ND	3	5	.17
L3-150E	43	29	251	1.1	5.48	10	ND	2	2	.10
L3-162.5E	23	18	164	.7	2.35	11	ND	4	4	.21
L3-175E	37	88	[illegible]	.5	3.18	18	ND	7	2	.29
L3-187.5E	38	27	256	.7	4.31	4	ND	3	2	.14
L3-200E	42	34	220	1.0	5.48	15	ND	2	6	.12
L4-600W	64	62	322	1.5	5.26	15	ND	3	2	.60
L4-575W	75	53	353	1.0	4.65	16	ND	3	6	.44
L4-550W	46	25	264	.8	3.70	9	ND	3	2	.74
L4-525W	64	31	312	.5	4.57	7	ND	2	3	.16
L4-500W	21	22	630	1.1	3.21	10	ND	9	5	.44
L4-475W	26	30	615	1.0	3.59	13	ND	9	2	.20
L4-450W	23	37	602	1.2	3.54	14	ND	12	2	.16
L4-425W	45	66	461	1.0	4.16	18	ND	6	3	.14
L4-400W	24	32	554	.8	3.77	12	ND	4	2	.20
L4-375W	48	29	468	3.2	3.62	19	ND	8	2	.14
L4-325W	98	250	929	7.5	4.42	31	ND	17	9	.56
L4-300W	98	77	1065	1.4	6.59	28	ND	11	7	.19
L4-275W	96	67	639	1.6	4.46	13	ND	5	4	.23
L4-250W	47	35	580	.9	5.13	10	ND	5	2	.38
L4-225W	39	36	392	1.1	3.80	12	ND	4	4	.21
L4-200W	24	90	276	.9	2.98	27	ND	5	2	.26
L4-175W	17	24	562	2.5	3.19	8	ND	7	3	.11
L4-150W	46	17	266	1.8	4.34	10	ND	1	2	.08
L4-125W	25	35	260	.5	3.38	10	ND	3	4	.14
L4-100W	30	12	223	.4	3.22	7	ND	2	2	.08
L4-075W	22	26	277	1.1	4.31	14	ND	2	3	.10
L4-050W	21	22	191	1.5	4.77	13	ND	1	2	.10
L4-025W	25	3	288	2.3	3.62	6	ND	3	2	.14
L4-000	25	21	347	1.8	4.20	8	ND	3	2	.12
L4-012.5E	19	21	278	1.0	4.17	12	ND	5	3	.08
L4-025E	21	9	372	1.4	3.30	15	ND	3	2	.11
L4-037.5E	35	12	354	2.4	4.24	5	ND	4	2	.10
L4-050E	19	17	343	2.1	3.85	6	ND	4	2	.11
L4-062.5E	16	33	125	1.1	2.61	9	ND	2	6	.11
L4-075E	13	8	150	.3	2.07	8	ND	5	8	.10
L4-087.5E	18	66	[illegible]	.5	2.10	11	ND	2	2	.19
L4-100E	27	26	249	1.3	4.26	5	ND	1	2	.07
L4-112.5E	21	21	154	1.0	4.26	13	ND	1	2	.10
L4-125E	19	21	219	.9	3.87	11	ND	2	5	.12
L4-137.5E	51	39	211	.7	5.40	7	ND	2	5	.15
L4-150E	46	24	155	.6	4.73	12	ND	2	2	.09
L4-162.5E	23	25	202	1.8	4.13	2	ND	1	2	.13
L4-1[illegible]5E	25	21	231	1.2	4.58	10	ND	1	2	.12
L4-187.5E	21	28	310	.5	4.16	10	ND	3	2	.13
L4-200E	43	33	284	1.3	4.93	4	ND	5	3	.32
L5-000	79	34	228	2.1	5.28	8	ND	1	6	.10
L5-012.5E	36	27	620	.7	6.34	11	ND	3	2	.15
L5-025E	60	29	201	1.1	5.43	13	ND	1	2	.09
L5-037.5E	19	22	166	.7	3.93	9	ND	2	2	.11
L5-050E	28	27	289	2.7	4.70	11	ND	3	2	.20
L5-062.5E	27	37	227	1.0	5.06	3	ND	3	4	.15
L5-075E	20	57	130	.4	2.52	11	ND	4	2	.23
L5-087.5E	21	66	208	.8	3.26	11	ND	7	3	.35
L5-100E	14	24	76	.1	1.89	5	ND	2	7	.12
L5-112.5E	11	28	81	.3	2.29	6	ND	1	2	.11
L5-125E	29	19	145	.4	4.22	11	ND	1	2	.07
L5-137.5E	91	23	178	1.6	6.03	16	ND	1	3	.07
L5-150E	32	20	195	1.0	4.27	14	ND	2	2	.08
L5-162.5E	30	24	204	1.8	4.90	5	ND	2	2	.10
L5-175E	35	21	162	1.0	4.18	18	ND	2	2	.11
L5-187.5E	18	38	244	1.4	4.25	8	ND	3	2	.18
L5-200E	23	41	277	2.2	4.42	12	ND	5	7	.12
L5-212.5E	23	28	223	1.1	4.20	7	ND	2	3	.11
L5-225E	15	14	145	.8	2.64	7	ND	2	2	.08
L5-237.5E	29	33	190	1.5	3.74	10	ND	[illegible]	2	.17
L5-250E	23	26	192	1.6	3.44	13	ND	[illegible]	2	.10
L5-262.5E	26	77	376	2.7	4.21	13	ND	4	2	.10
L5-275E	15	29	238	.7	2.65	8	ND	4	[illegible]	.20
L5-287.5E	17	28	217	.9	3.48	12	ND	4	2	.14
L5-300E	27	32	180	.4	4.14	8	ND	1	2	.10
LJSB-F9579 Rock	34	15	112	.1	5.40	6	ND	1	2	.52
LJSB-F9580 Rock	31	7	74	.1	5.10	4	ND	1	2	.03

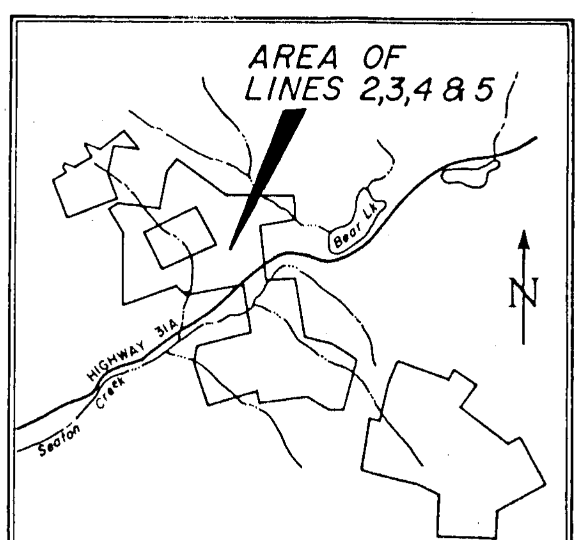
GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,615



Higher Values *THIS TABLE REFERS TO AREA WEST OF LINE 200W

- Ag (ppm) ≥ 4.0 ■
- Cu (ppm) ≥ 100 ○
- Pb (ppm) ≥ 140 □
- Zn (ppm) ≥ 1300 △
- As (ppm) ≥ 35 ⬡
- Fe (ppm) ≥ 5.0 ◇



KEY MAP

GEOLOGY

- 1 Slate
- 3 Quartzite
- 4 Limestone
- 5 Granitic Intrusive

Higher Values *THIS TABLE REFERS TO AREA EAST OF LINE 200W

- Ag (ppm) ≥ 2.0 ■
- Cu (ppm) ≥ 45 ○
- Pb (ppm) ≥ 40 □
- Zn (ppm) ≥ 350 △
- As (ppm) ≥ 16 ⬡
- Fe (ppm) ≥ 5.0 ◇

SCALE 1: 2500

0 25 50 100 150 Metres

FIGURE 12

PETROFLAME INTERNATIONAL RESOURCES INC

LUCKY JIM MINE AREA

SLOCAN M.D. ——— NTS 82 K/3

SOIL GEOCHEMISTRY
LINES 2,3,4 & 5

To accompany a report by: A.E. Hunter, Geop. & S.P. Butler, B.Sc.

Drawn by: SB/GT

Date: August 1987

STRATO GEOLOGICAL ENGINEERING LTD.


600 W
400 W
200 W
0
200 E
HIGHLY FOLDED & FAULTED
060°
SELF POTENTIAL (mv)
NULL
FS
UNIT
ABUNDANT FLOAT UNIT 1
UNIT 3 TRENCH
ALDER
GRASS
AREA OF TALUS
140/55 SW
talus no alder
talus alder
talus slope
pyritic slates
140/45 SW
IRON RICH ROCK (Float)
L 5
L 4
L 3
L 2
GEOLOGY
1 Slate
3 Quartzite
4 Limestone
5 Granitic Intrusive
NULL (OR DIP ANGLE)
F.S. (FIELD STRENGTH)
SELF POTENTIAL DATA WITH A SCALE IN MILLIVOLTS (ALL LINES WERE TIED TOGETHER)
S.P. (mv)
16,615
EAST - WEST SCALE 1:2500
NORTH - SOUTH SCALE 1:1250
0 10 20 40 60 80 Metres
LINE BRG. 060°
VLF-EM Station used: Annapolis, Maryland 21.4 kHz., 400 kW.
AREA OF LINES 2,3,4 & 5
KEY MAP
FIGURE 6
PETROFLAME INTERNATIONAL RESOURCES INC
LUCKY JIM MINE AREA
SLOCAN M.D
NTS 82 K/3
VLF-EM and SELF POTENTIAL SURVEY ON LINES 2,3,4 & 5
To accompany a report by: A.E. Hunter, Geop. & S.P. Butler, B.Sc.
Drawn by: AH / GT
Date: August 1987
STRATO GEOLOGICAL ENGINEERING LTD.