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103-B-6

REPORT ON

LILY CLAIM - IKEDA GROUP

Q.C.I., B.C.

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1968

S.N. Charteris

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REPORT ON
EXPLORATION OF THE
LILY CLAIM - IKEDA GROUP
Q.C.I., B.C.

SKEENA MINING DIVISION

N.T.S. 103-B-6

Vancouver, B.C.
January, 1969

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REPORT ON THE EXPLORATION OF THE
LILY CLAIM - IKEDA GROUP - Q.C.I., B.C.
N.T.S. 103 - B-6

INTRODUCTION

When the Granby Mining Co. announced their decision to close operations at Jedway this year, we decided to complete the exploration of our holdings while access and accommodations were available. A crew of R. McPhee, Andrew Smith, M. Mahon and S. Presunka spent from May 2nd to May 17th doing Self-potential, E.M.-16, Fluxgate magnetometer and soil sampling over the area from the Lily copper deposit to the chalcopyrite-pyrrhotite lens in Carnation Creek.

Granby was most co-operative throughout our stay at their camps.

PROPERTY, LOCATION, ACCESS

J. J. McDougall's reports 1956, 1963 and 1964 on Ikeda.

PURPOSE OF THE EXPLORATION PROGRAM.

On pages 8 to 16 of his 1956 report, J. J. McDougall describes in detail the geology and mineralization of the Lily and Carnation copper occurrences. He suggests on pages 14 and 16 that there could be some connection between them. Individually the deposits are too small to warrant further exploration but if mineralization continues for the 3100 feet between them, there is the potential for a medium sized mine.

The surveys were laid out to detect the possibility of continuity to the mineralization.

GEOLOGY

(a) Lithology

Only two rock types - volcanics and limestone - were noted in the field mapping. The volcanics weather as a felt of white laths, averaging 1 m.m. long in a dark green chloritic matrix. In coarser phases, small stubby pyroxene crystals are developed forming less than 20 per cent of the rock. In a prominent bluff of massive volcanics, south of the Carnation

Creek copper occurrence, there is a three foot thick bedded horizon with 1/2 inch beds suggestive of a tuff. Numerous irregular epidote-filled veinlets thread the volcanics in the drill core that tested the magnetic anomaly.

The limestone is grey to dark grey, massive to crystalline. Where bedding is noted, it is often outlined by argillite laminae. These laminae are broken into angular fragments where flowage folding has occurred.

(b) Mineralization

The main Lily vein is described by J. J. McDougall on pages 8 to 12 of his 1956 report. Essentially, the "vein" is a replacement by sulphide of the sheared contact between diorite or dioritized volcanics and fine-grained volcanics similar to those described above. The sulphides are pyrrhotite, pyrite and chalcopyrite accompanied by minor magnetite. There are no outcrops left of the vein; the adits are now covered.

The Carnation "vein" is a zone of fracturing, one foot to three feet wide, striking N.20^oW. and dipping 70 degrees east. The fractures are hairline to one inch wide filled with chalcopyrite and minor pyrrhotite. Its outcrops are confined to the stream bed.

A one foot wide, six foot long mass of diopside-pyrite skarn outcrops at 3300 S. near the baseline.

STRUCTURE

No attempt was made to decipher the structure of the folded volcanics and sediments.

ANALYSIS OF GEOCHEMICAL AND GEOPHYSICAL RESULTS

(a) Geochemistry

I. L. Elliott's report on the survey results is included with this report.

The following observations could be added.

- (1) The weak lineal copper anomalies south of line 10 S. appear to lie adjacent to projections of volcanic limestone contact where minor skarn fracture may have developed. The broad anomalous area north of line 10 S. is partially due to drainage down the strike of the vein and through the dumps as an outwash onto the flats by the road.
- (2) The ph measurements have been very useful in outlining the limestone volcanic contact.

(b) Geophysics

Of the geophysical surveys, only the E.M.-16 using station 23.4 appears to have detected the Lily vein but no extensions to the known limits were indicated. As would be expected, the Self-potential anomalies correlate with the geochemical results.

The negative results of the Ronka Mark IV survey would confirm that no significant tabular mass of sulphides exists on the property.

CONCLUSIONS

- (1) There is no evidence of any significant extension to the known limits of either the Lily or Carnation veins. Rubble from the grown-over extensive stripping to locate the Lily vein near line 10 S., 750 W. consists of dark green volcanics. Overburden in this area is shallow and copper should have been detected in the soil if the vein continued to the south.
- (2) Random stripping on the hillside from 600 to 900 W. between lines 10 S. and 14 S. failed to locate any sulphides. The thorough stripping of the narrow band of pyrite - diopside skarn near the baseline at 330 S. would indicate that the Japanese combed the hillside thoroughly for signs of sulphides.

- (3) Deeper drilling may locate extensions to the Lily vein but the potential deposit is too small to be economic.
- (4) We should allow the claims to revert to the Crown.

S. N. Charteris
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Vancouver, B. C.

January, 1969.

APPENDIX I

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IKEDA PROJECT

Date of Work: 3rd - 9th May, 1968.

Location: 103-B-6 - Skeena. Adjacent to Jedway Iron Mines, Moresby Island at south end of Queen Charlotte Islands.

Purpose: Detailed follow-up of known mineralization occurring on Lily and Carnation claims of Ikeda group (P.N. 103).

Method: Soil sampling on E.-W. lines 400 feet apart sampled at 100 ft. intervals. 300 samples. R. McPhee.

Other Work: Geology (S.N.C.), Self-potential, E.M.-16, Fluxgate Mag. and Ronka IV (Presunka).

Sampling Conditions: Generally good with B horizon at 8" - 18". Some areas of outcrop+swamp gave poor samples.

Geology: Andesitic greenstone flows with argillites and limestones of Kunga formation enclose small diorite plugs. Skarn type mineralization (Mt. Py., Ch. Py.) has developed on or near limestone intrusive contacts and is strongly localized by faulting.

Analyses: Copper HNO₃ - A.A.
pH 0.5 g. scoop of -80 mesh sample slurried in 10 mls. D.M.W. and left with occasional stirring for 30 minutes. pH measured with meter. No change in values was observed after 60 minutes and 90 minutes standing. Papers gave no indication of variation of pH from range 4.5.

Concentration Levels:

	<u>R.B.</u>	<u>L.B.</u>	<u>A.</u>	<u>Range</u>	<u>Mode</u>
Copper p.p.m.	<75	75-100	>100	10-400	90-100
pH	<5.0	5.0-6.0	>6.0	4.4-8.2	4.7

Results: Anomalous copper values occur throughout the area gridded probably reflecting mineralization in areas of skarnification.

Low pH values correlate fairly well with low copper values as might be expected but there is little suggestion that copper is being immobilized in areas of high pH. pH values correlate well with geology; limestone is indicated by values of >7 units. Areas of pH 6 - 7 may or may not be underlain by limestone and areas of low pH appear mainly to be volcanics.

Both pH and copper values suggest a similar trend a little east of north.

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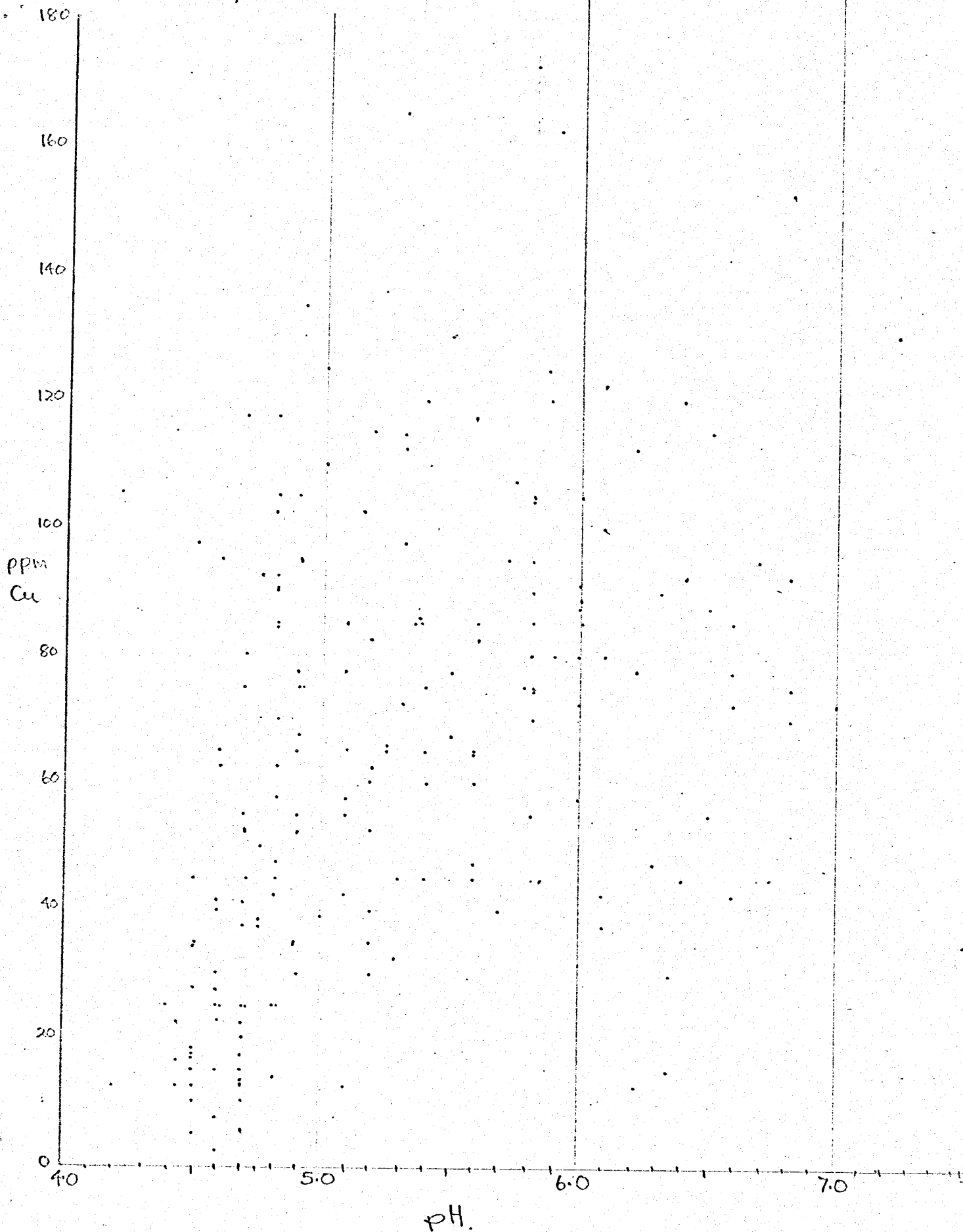
Recommendations:

When the opportunity arises a check of field and laboratory pH measurements will be made to see what differences exists and thus to assess the validity of making pH measurements in the lab. Present experience suggests that the criticisms of lab pH measurements may be over-emphasized. Valid pH measurements would be a valuable aid to geological mapping in overburdened areas in addition to their usefulness in assessing geochemical data.

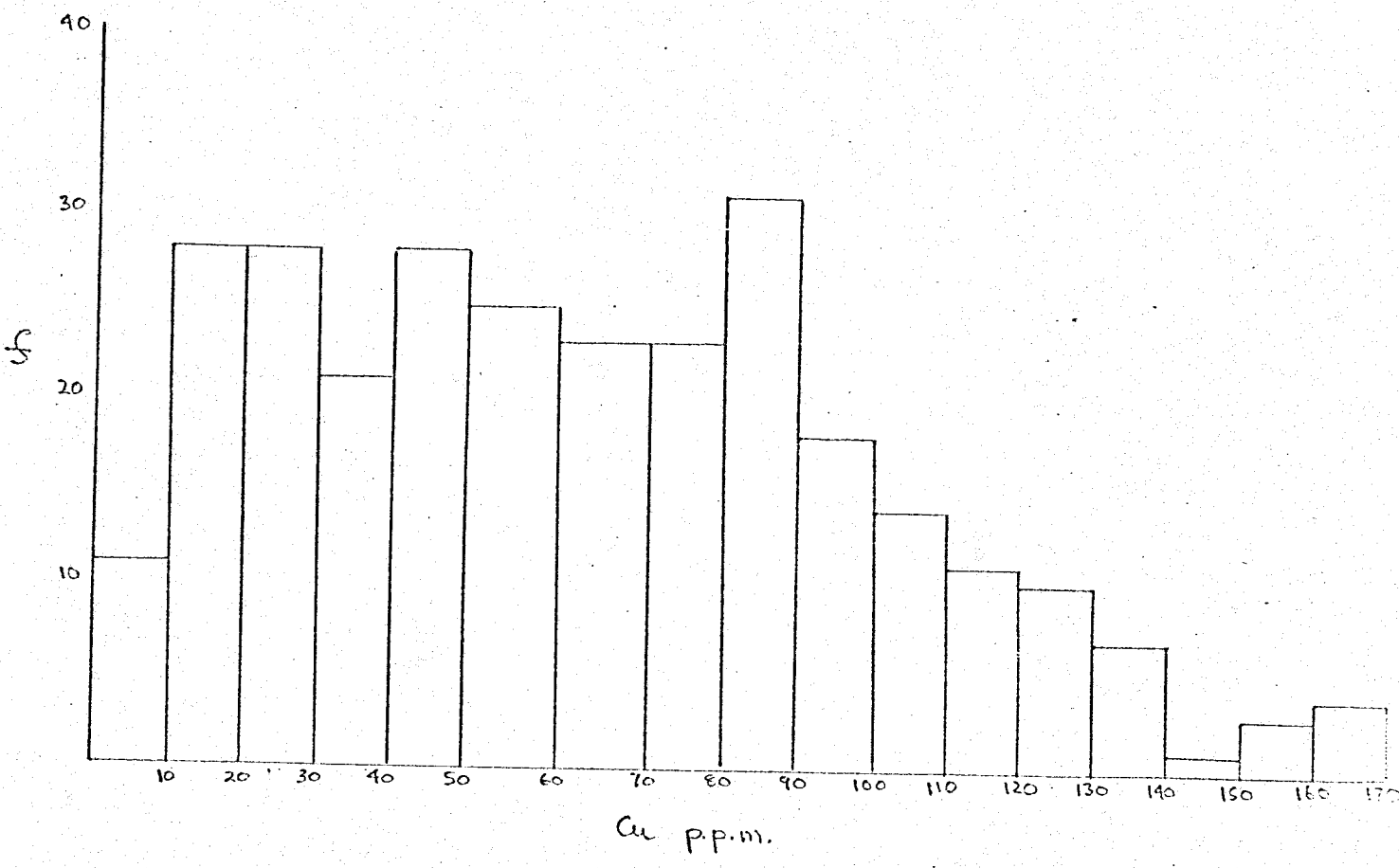
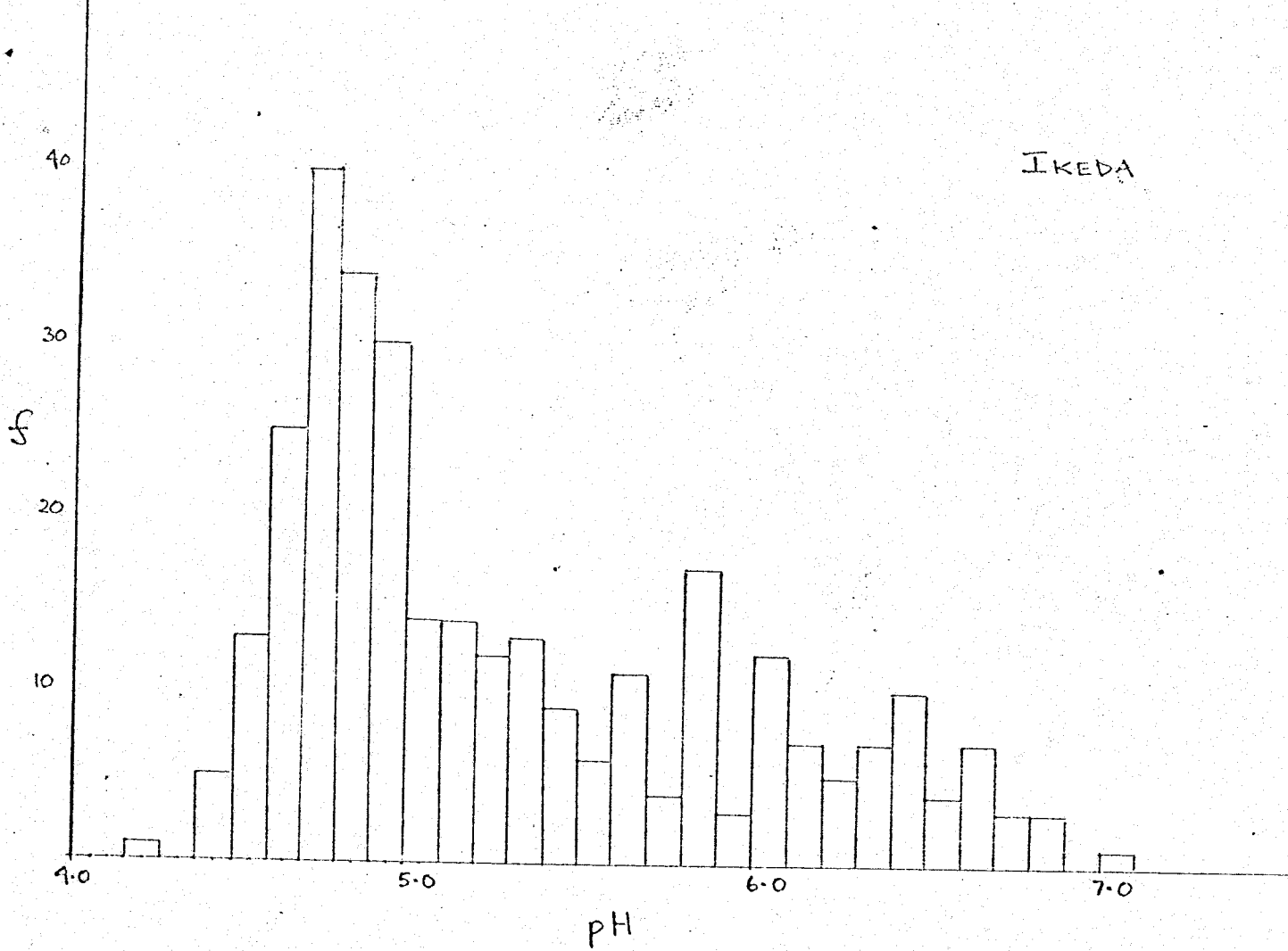


I. L. Elliott

Vancouver, B.C.
June, 1968



IKEDA



APPENDIX II

LILY MINE, IKEDA AREA
Geophysical Survey - 1968

A north-south base line, parallel to and 700 feet east of the Lily vein was extended for a length of 5,000 feet.

Chain and compass east-west cross lines were run every 200 ft. from 3400 south to 4200 south and again from 1000 ft. south to 800 ft. north. The rest of the lines were run every 400 ft.

Soil sampling, E.M.-16 and magnetometer surveys were done in one operation using a three-man crew. Stations were flagged and marked every 100 ft. on the lines.

E.M.-16 (Ronka)

The station located in Hawaii was off the air for the first week of our stay there, so had to use stations 18.6 and 21.4. Their tilt directions nearly parallel the strike of the Lily vein, providing very poor coupling. Station 23.4 (Hawaii) finally went on the air the last three days of our stay there so was not able to finish the grid from 2600 S. to 4700 S.

The E.M.-16 using station 23.4 did pick up the Lily vein on line 2 S. and 4 S. and 6 South at about 700 ft. west of base line. There are numerous other conductors which could be due to topography or contacts with limestone. One conductor standing out alone on line 26 S. at 150 W. is picked out by E.M.-16 using stations 23.4, 18.6 and 21.4 which is non-directional due to oblong nature of this particular conductor. The Self-potential particularly picked this one as an isolated anomaly. The magnetometer anomaly did not show any sign of structure or as an isolated magnetic anomaly.

Self-Potential

The Lily vein was not picked up by the Self-potential survey. Only a slight anomaly was detected on line 4 S. at 800 W. It seems to have a S.E. trend, joining up with a strong Self-potential anomaly from line 6 S. at 4 W. then trend-

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ing S.20 W. to line 14 S. A particularly strong S.20° W. striking Self-potential anomaly, possibly the faulted extension of the one mentioned above, was picked up on line 14 S. at 650 W. The anomaly is interrupted at lines 32 S. about 1200 W. A small anomaly picked up on line 38 S. to 40 S. at 1500 ft. W. The copper showing in the stream between lines 40 S. and 42 S. at 14 W. gave no indication of an anomaly either on S.P. or the E.M. There were no S.P. anomalies north of the Lily vein.

Magnetometer Survey

The numerous magnetic anomalies are due to the topographic relief. The magnetite lens at the top of the hill on line 14 S. gives high positive readings while the base of same hill will give high negative readings. The Lily vein, being topographically lower, gives low magnetic relief.

The magnetic high between line 2 N. to 8 N. and extending beyond to the north is due to the hill. The area to the west of this magnetic high is much lower and so is the magnetic relief. This low ground is heavily overburdened and could possibly be of different rock types.

From lines 14 S. to 22 S., west of the base line, the magnetic high is again on the crest of the hills, while the bottom of the same hill, though rock types are the same, gives high negative magnetic relief.

The N. - 20 W. magnetic trend from line 8 N. to line 2 S. is in flat area. This could be interpreted as a reliable magnetic trend, not influenced by topographical relief.

The Lily vein is on magnetic low which is interrupted on line 6 - S.

Ronka - M-IV

The horizontal loop was tried on lines 4 S., 6 S. and 8 S. extending over the Lily vein. There was no response on the horizontal loop. Apparently the sulphides, though massive in places, certainly are not continuous. Short pods of isolated sulphide in non conductive rock type are a poor conductor.

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There is no evidence of Lily vein using the horizontal loop which has a frequency of 876 c.p.s.

The E.M.-16 did pick up the Lily vein. The conductor was relatively weak and did not go beyond line 6 S. There actually were no conductors found to get excited about. The Self-potential has many anomalies which seem to be associated with the limestone. There is a good chance that the Self-potential anomalies could be due to graphite in the limestone and the contacts. The correlation of the geochemical and the geophysical work would help in selecting anomalies of interest.

S. Presunka

Vancouver, B. C.

July, 1968