

GEOPHYSICAL SURVEY

GP-6438

BANKS ISLAND GOLD PROSPECT  
BRITISH COLUMBIA

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103-G-8

January 11th, 1965.

D.J. Salt

2008

Geophysical Survey

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BRITISH COLUMBIA

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SUMMARY:

The self-potential survey has been successful in finding gold bearing sulphides under shallow cover on the island. In some cases, unfortunately, the sulphides were not gold bearing. This is a useful prospecting tool, but more work needs to be done to evaluate the showings and determine the proper geological relationships.

INTRODUCTION:

A self-potential survey was conducted on Banks Island to locate more of the gold bearing sulphides similar to those first found. Unfortunately, the sulphides will still produce a self-potential anomaly even though they contain no gold.

Several causes for anomalies are expected. The gold bearing sulphides, sulphides containing no gold, and sulphides and graphite associated with sedimentary beds are the common causes.

GEOPHYSICAL INTERPRETATION:

There is little that can be said about the self-potential anomalies except to outline the interpreted sulphides and note any trends.

As the results of this survey have been in the hands of the exploration crew for the summer, many of the self-potential anomalies will have been investigated and many comments made in this report will be redundant.

ENGLISHMAN'S SLOUGH GRID:

There are numerous veins interpreted on this grid, although the self-potential readings are not large. The high values at "A" could be the intersection of two vein structures as shown. The broad area to the north is probably an area underlain with sediments.

QUARTZ LODGE HILL GRID:

There appears to be a trend interpreted on a fault traversing almost east-west. This could be the locus of the gold showings.

There is another zone trending north-south, which ties in with a zone on the India Grid.

Another isolated self-potential anomaly occurs on L-1W to L0 and is worthy of follow-up work.

There is also a self-potential anomaly at the north end of L-6E to L-8E.

LILY PAD GRID:

The west end of this grid shows several weak zones, which could be of interest. One of these is also partly outlined on the India Grid. The rest of the Lily Pad grid is very flat.

WALLER-ARSENO GRID:

The Arseno Grid is intriguing, in that there is a very large anomaly extending for a distance of over 3,000 feet. Unfortunately, this is likely a band of metasediments.

There are many shorter anomalies of lower intensity and it is quite possible that these are gold bearing sulphides. A contact between the long linear anomaly and the other rather irregular ones has been postulated as the metasediment contact.

Further to the southeast in an area marked as "B", there are anomalies which are irregular, suggesting the possibility of gold bearing sulphides rather than metasediments, although the self-potential values are high.

The possibility of cross faults is indicated in the maps.

KIM ZONE GRID:

There appears to be a major southeast trending zone with individual sulphide lenses within this zone. Possibly this zone should be cross-sectioned. Extending from line 250-S to 550-S, there appears to be an extension of this zone.

Possibly the gold values are not associated directly with the sulphides and the sulphides should only be considered as a marker of the structural feature, which controls the gold deposition. With this in mind, probably the best approach is a closely spaced drill program to test the zones indicated.

WALLER BAY GRID:

The map is almost self-explanatory. The maximum values on areas "A" and "B" probably indicate graphite, suggesting that they are metasedimentary bands. The other weaker anomalies may be of greater economic importance.

CROSS GRID:

There is one small self-potential anomaly of importance, which could be an extension of the discovery or Hepjer Lake Zone. A broader weaker zone, adjacent to this, could also be important.

INDIA GRID:

There are two major zones of interest which intersect at the east centre of the grid. There is also an isolated self-potential anomaly in limestone at the north end of the grid.

CROSS-BREAK GRID:

There is an excellent self-potential anomaly striking south-east. This self-potential high is most likely caused by a stockwork of fractures containing sulphides.

MICKEL GRID:

There are a few rather erratic indications of sulphide bearing veins shown on the map. These should be investigated with the hope that the gold values persist beyond the sulphide concentrations.

PENNINSULA GRID:

Although not of high magnitude, there are two zones which show up very well. For this reason have been assigned a priority of 1.

ISLAND GRID:

There is one small zone of second priority.

HEPLER GLADYS GRID:

One rather good self-potential indication has been given as Priority 1. There are several other indications. On rather nebulous evidence a fault has been interpreted.

DISCOVERY GRID:

There are several zones indicated which are worth following up.

CONCLUSIONS:

There are many indicated self-potential anomalies which could be caused by gold bearing sulphides. Unfortunately, it is almost impossible to determine which anomalies are caused by gold bearing sulphides, and which are barren sulphides or graphite. There are some indications of the presence of zinc, lead and copper, in the area and some of these anomalies could be caused by sulphides associated with these base metals.

There could also be gold present in quartz veins without sulphides, and hence would produce no self-potential anomaly.

It must be concluded that the most important anomalies should be drilled. These are marked with a 1 on all the grids. The second priority anomalies should be tested by some other means.

Geochemical work has been tried checking the soil for arsenic. It is proposed that this work continue. Other base metal tests might be applied to check for Cu, Pb, or Zn.

The most satisfactory follow-up work will undoubtedly consist of stripping and trenching self-potential anomalies in areas of shallow overburden.

Deeper overburdened areas might be tested by panning of deep soil samples, and checking these for gold content.

RECOMMENDATIONS:

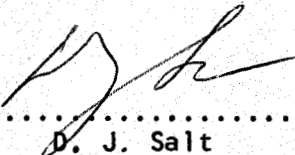
It is recommended that all priority one anomalies be drilled, or trenched, whichever is the most feasible, unless already tested.

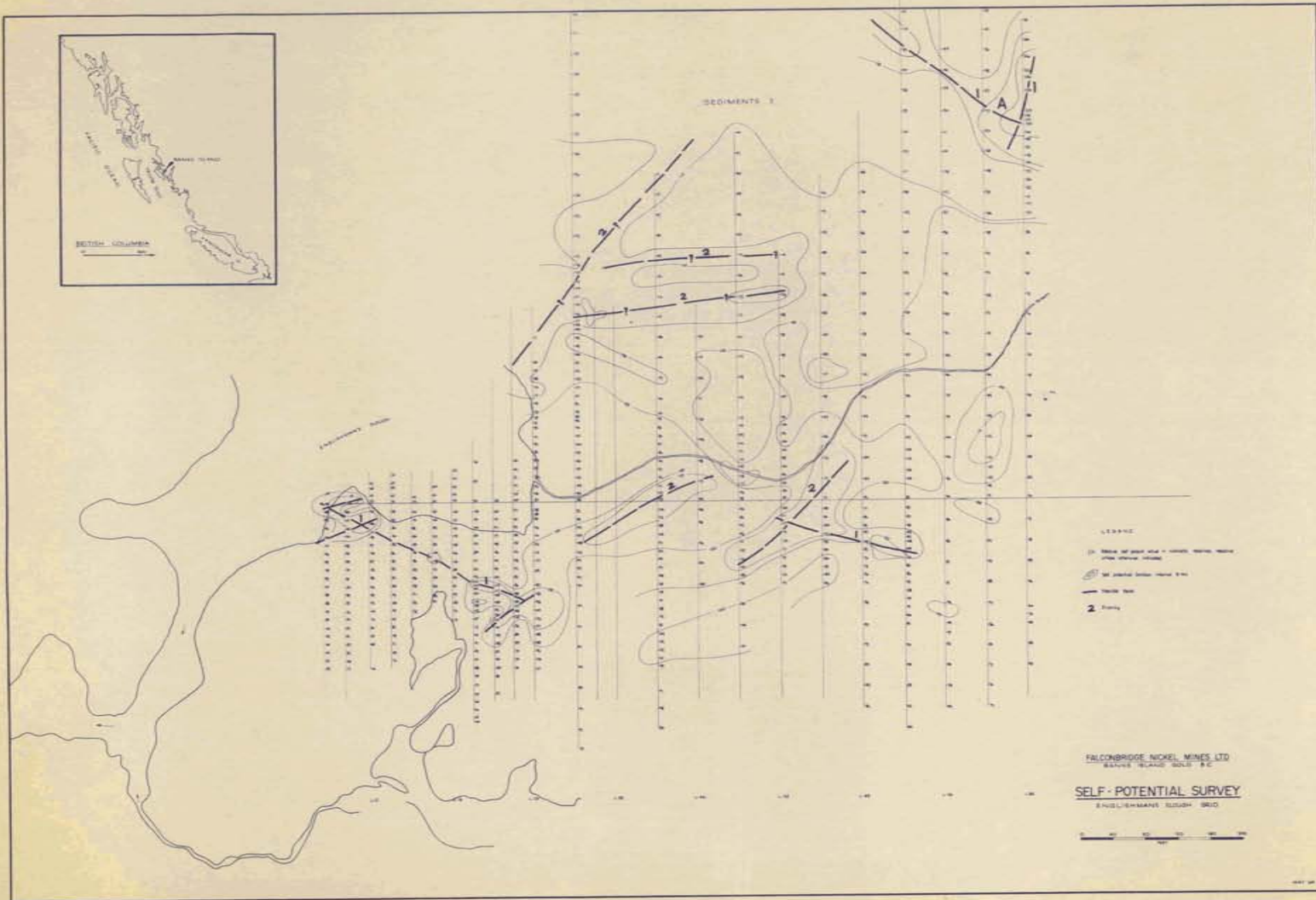
It is recommended that all other anomalies be tested by trenching, soil sampling and soil panning.

Self-potential data should be used only as a prospecting tool to find the gold bearing veins. Once a showing has been uncovered some discretion must be applied in the application of the self-potential data to tracing the vein, as the gold values could follow some other feature rather than the sulphides.

Respectfully submitted,

DJS/jj  
January 11th, 1965.

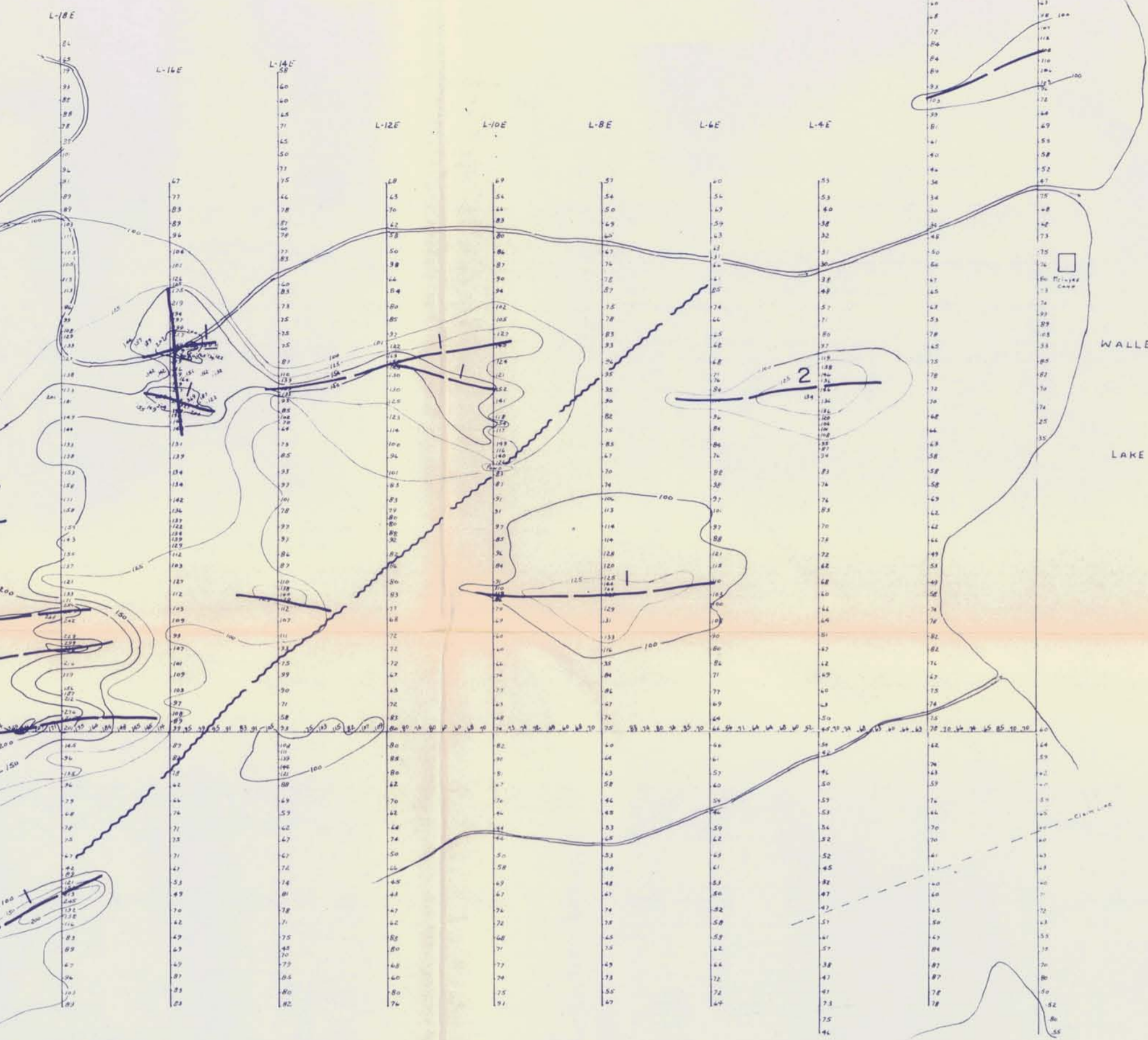
  
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D. J. Salt



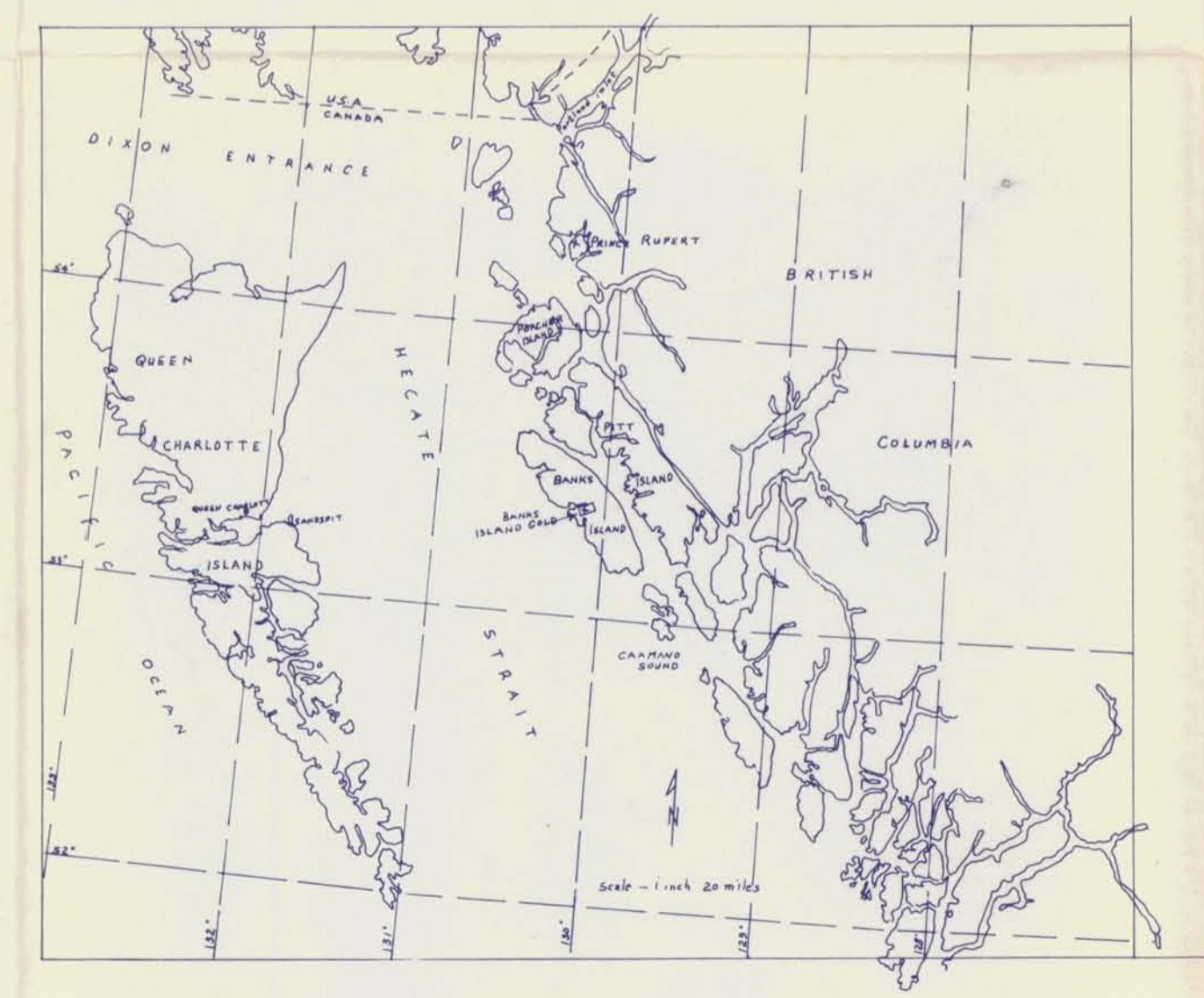
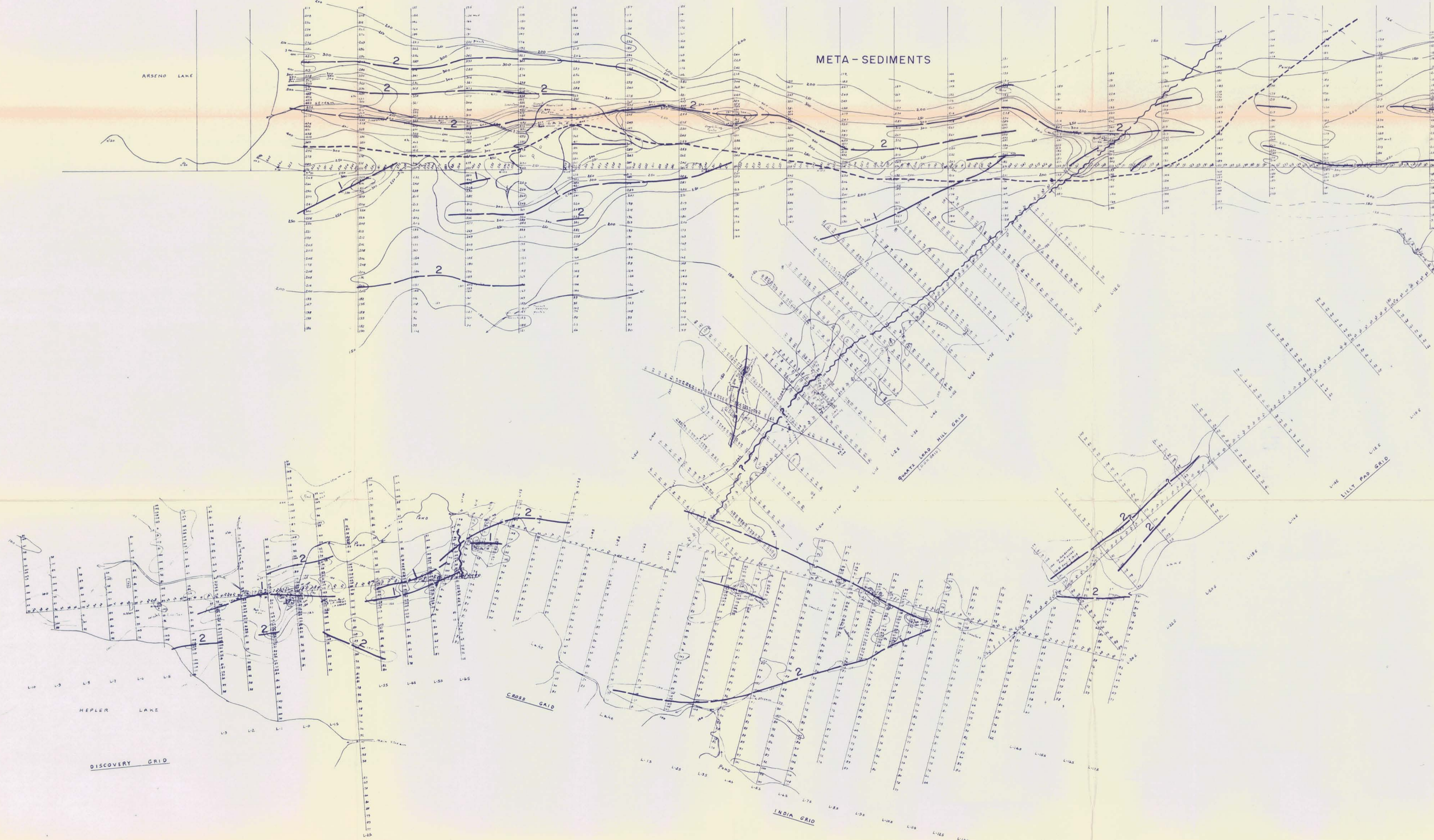


WALLER ARSENO GRID

L-48E L-44E L-40E L-36E L-32E L-28E L-24E L-20E L-16E L-12E L-8E L-4E L-0E L-4W L-8W L-12W L-16W L-20W L-24W L-28W L-32W L-36W L-40W L-44W L-48W

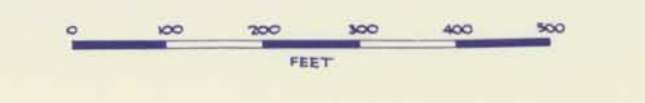


META-SEDIMENTS

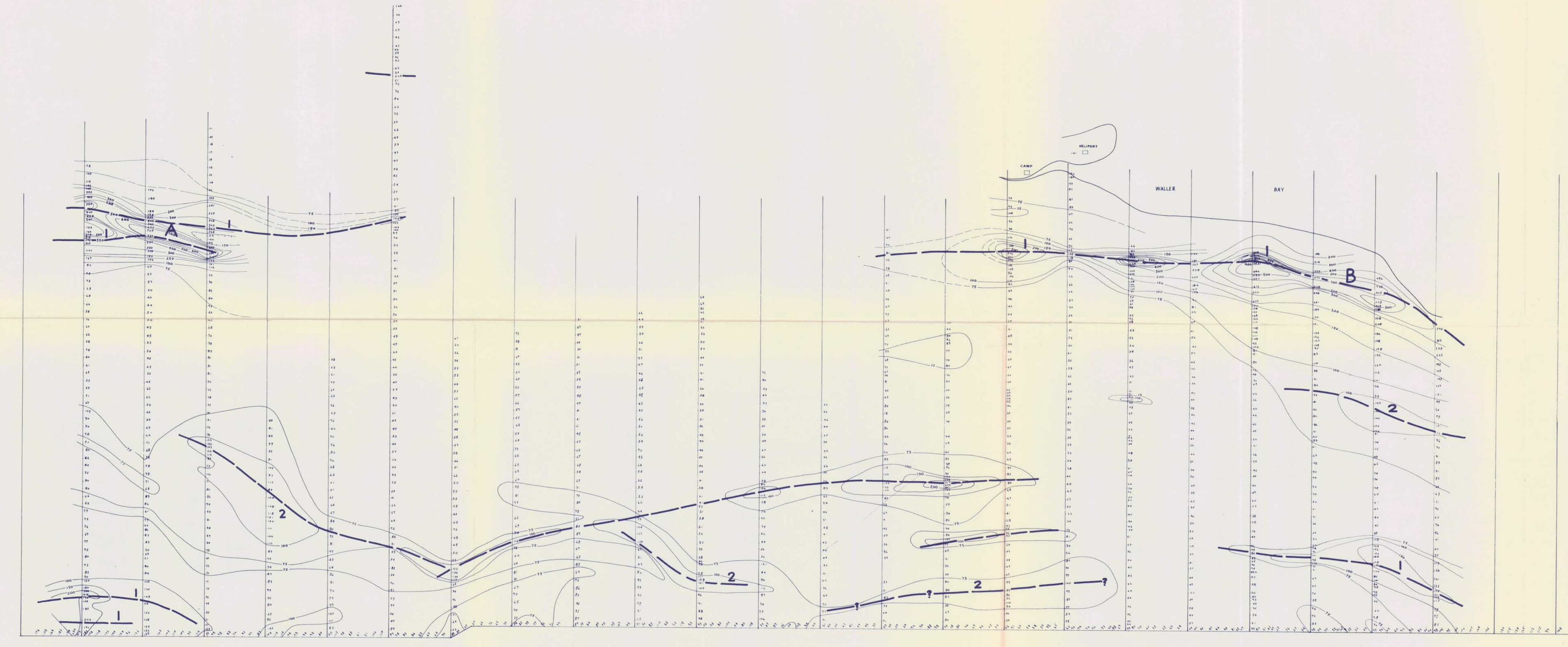


- LEGEND
- Station and potential value or microform readings register area (where not indicated)
  - Soil potential contour
  - Priority line
  - Intersected fault
  - Intersected geological contact

FALCONBRIDGE NICKEL MINES LTD  
BANNIS ISLANDS PROJECT  
SELF-POTENTIAL SURVEY







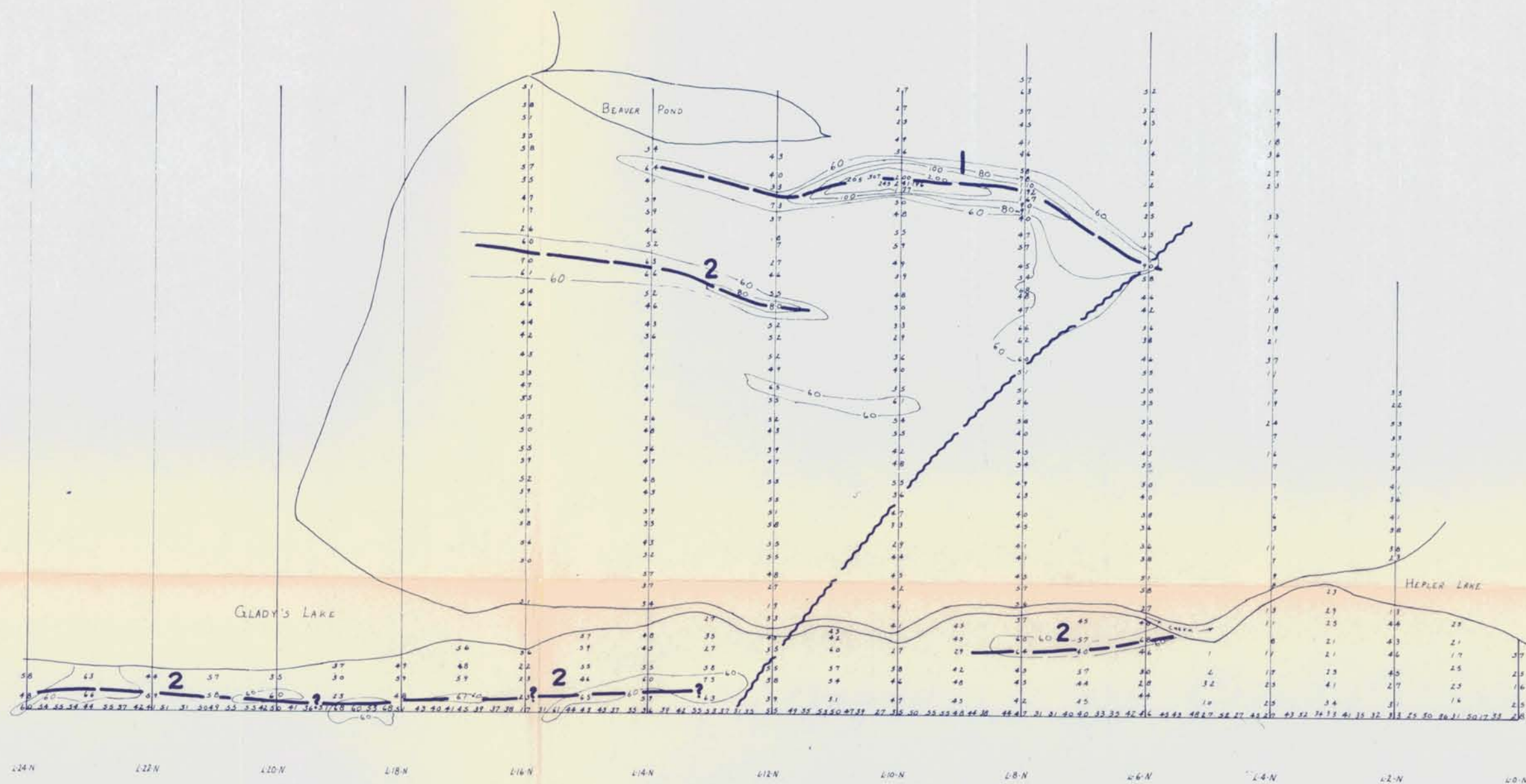
FALCONBRIDGE NICKEL MINES LTD.,  
 BANKS ISLAND GOLD - B.C.  
 WALLER BAY GRID  
 Self Potential Survey in MV  
 Scale - 1 inch to 200 feet v.s.  
 S.P.



LEGEND

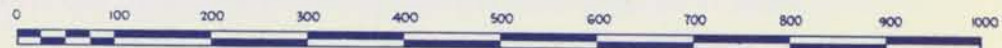
- Relative self potential values in millivolts, readings negative unless otherwise indicated
- Self potential contours
- Possible veins
- 2** Priority





LEGEND

- Relative self-potential value in millivolts, readings negative unless otherwise indicated
- Self-potential contour interval 20mv.
- Possible veins
- Priority
- Interpreted fault

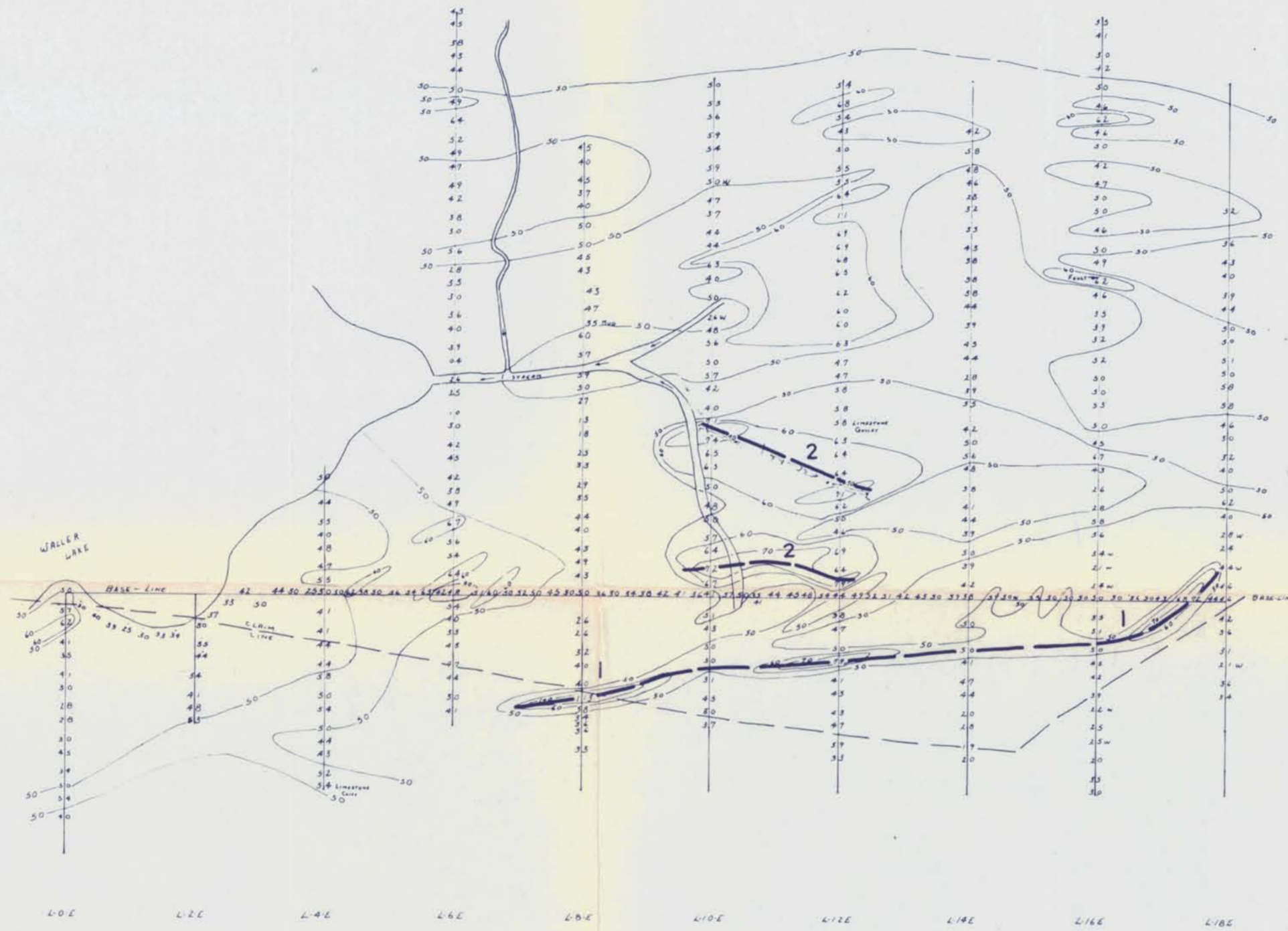


COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY . . . BANKS IS GOLD  
 LOCATION . . . BANKS IS

WORKING PLACE . . . HEPLER-GLADYS GRID  
 TYPE OF MAP . . . BSP  
 BASED ON . . .

DATE . . . DEC 1964  
 DRAWN BY . . . VB  
 DATE OF WORK . . . SEPT 1964





**LEGEND**

35 Relative self potential value in millivolts, readings negative unless otherwise indicated.

Self potential contour interval 20 mV

Possible veins

**1** Priority

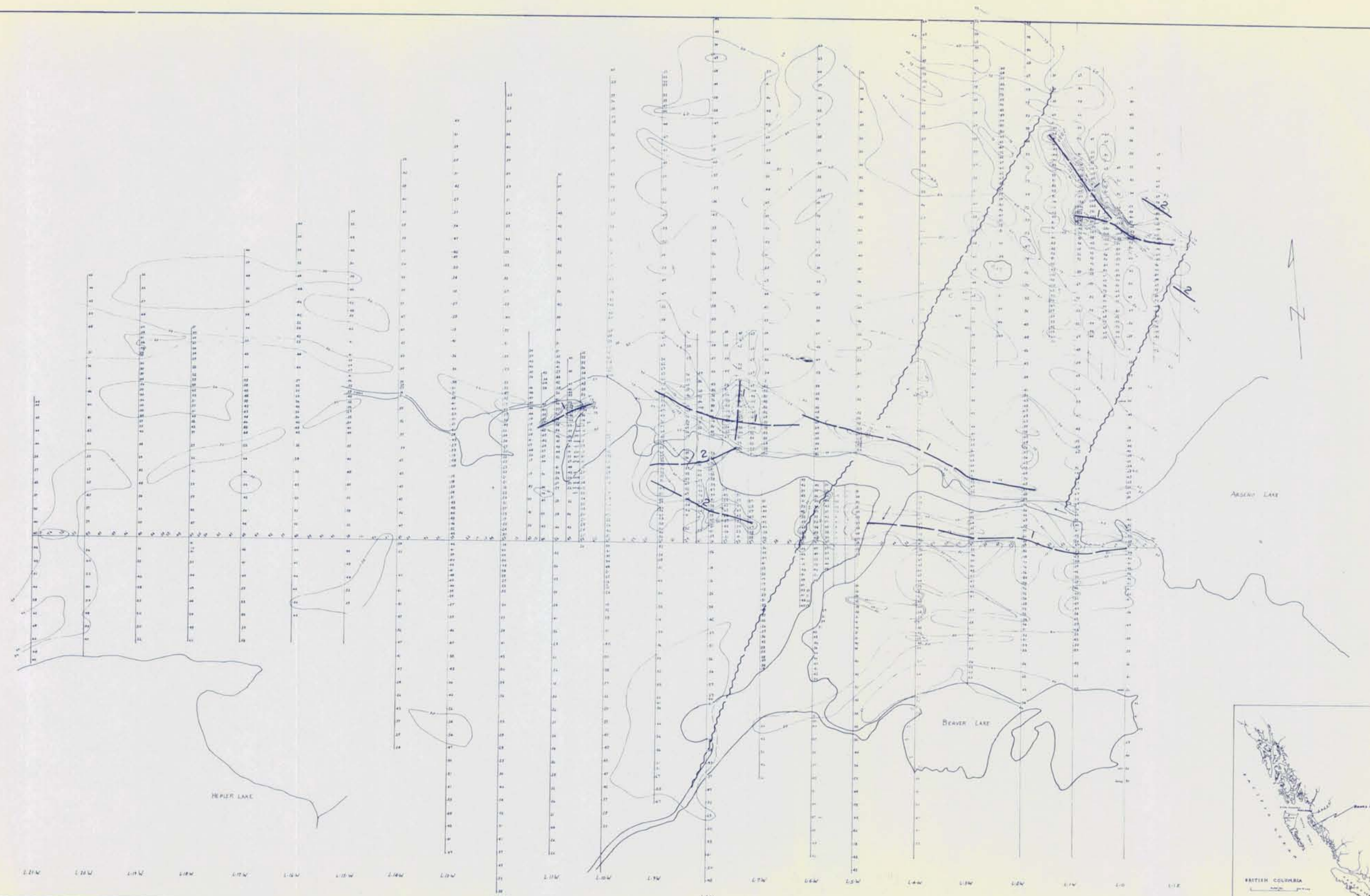


COMPANY .. FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY .. BANKS IS GOLD  
 LOCATION .. BANKS IS

WORKING PLACE .. EAST WALLER LAKE  
 TYPE OF MAP .. BSP  
 BASED ON ..

DATE .. Dec 1964  
 DRAWN BY .. VB  
 DATE OF WORK .. Dec 1964





- Station location
- Self-potential contour
- 2
- Intersected fault

FALCONBRIDGE NICKEL MINES LTD  
 SELF-POTENTIAL SURVEY  
 KIM ZONE

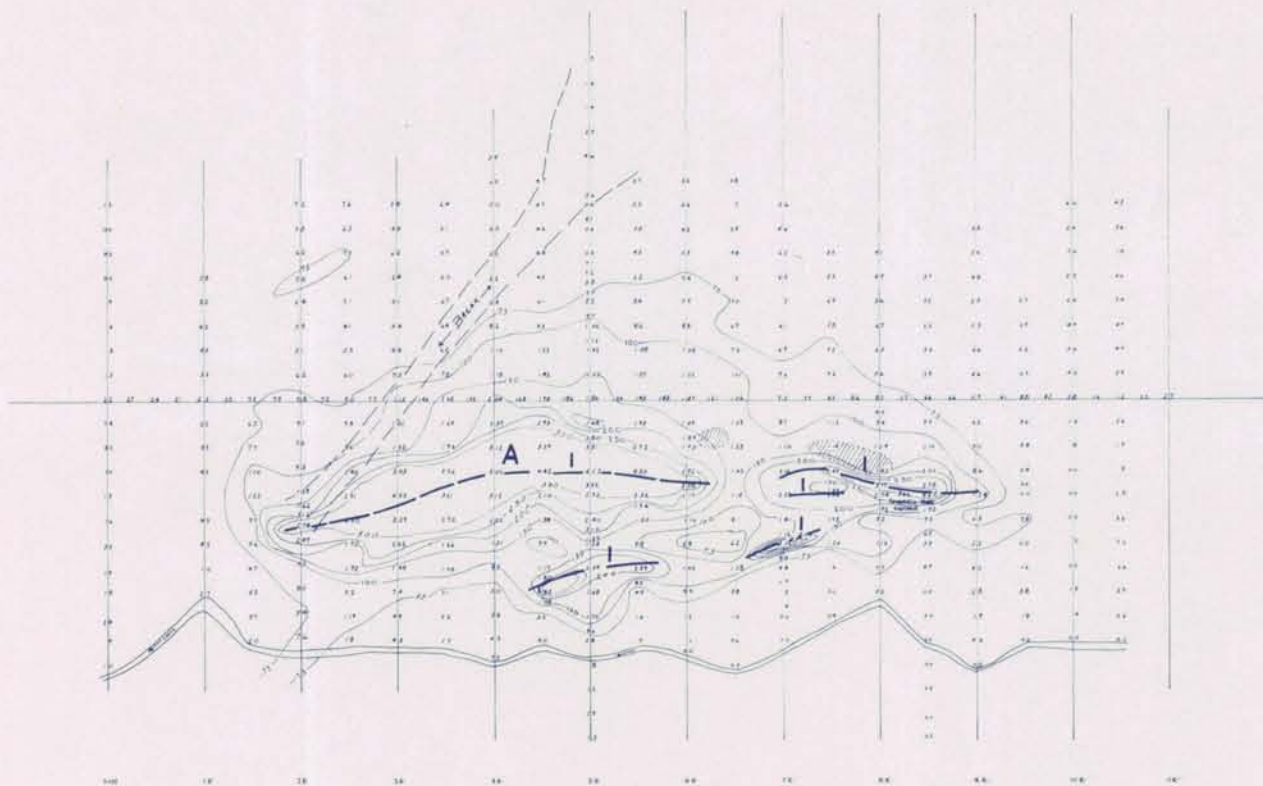




MAP REF. NO.

Cross River Gold Legend

- 1000-1200
- 1200-1400
- 1400-1600
- 1600-1800
- 1800-2000



- 1 2 3 4 5 6 7 8 9 10 11 12 13 14
- ⊕ Station and points where a traverse, bearing, distance, or other information recorded
  - Topographic contour
  - Road
  - 1 Property
  - ⊗ Elevation in feet, height of 2000 ft.

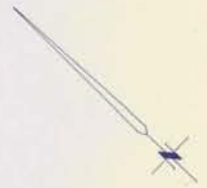
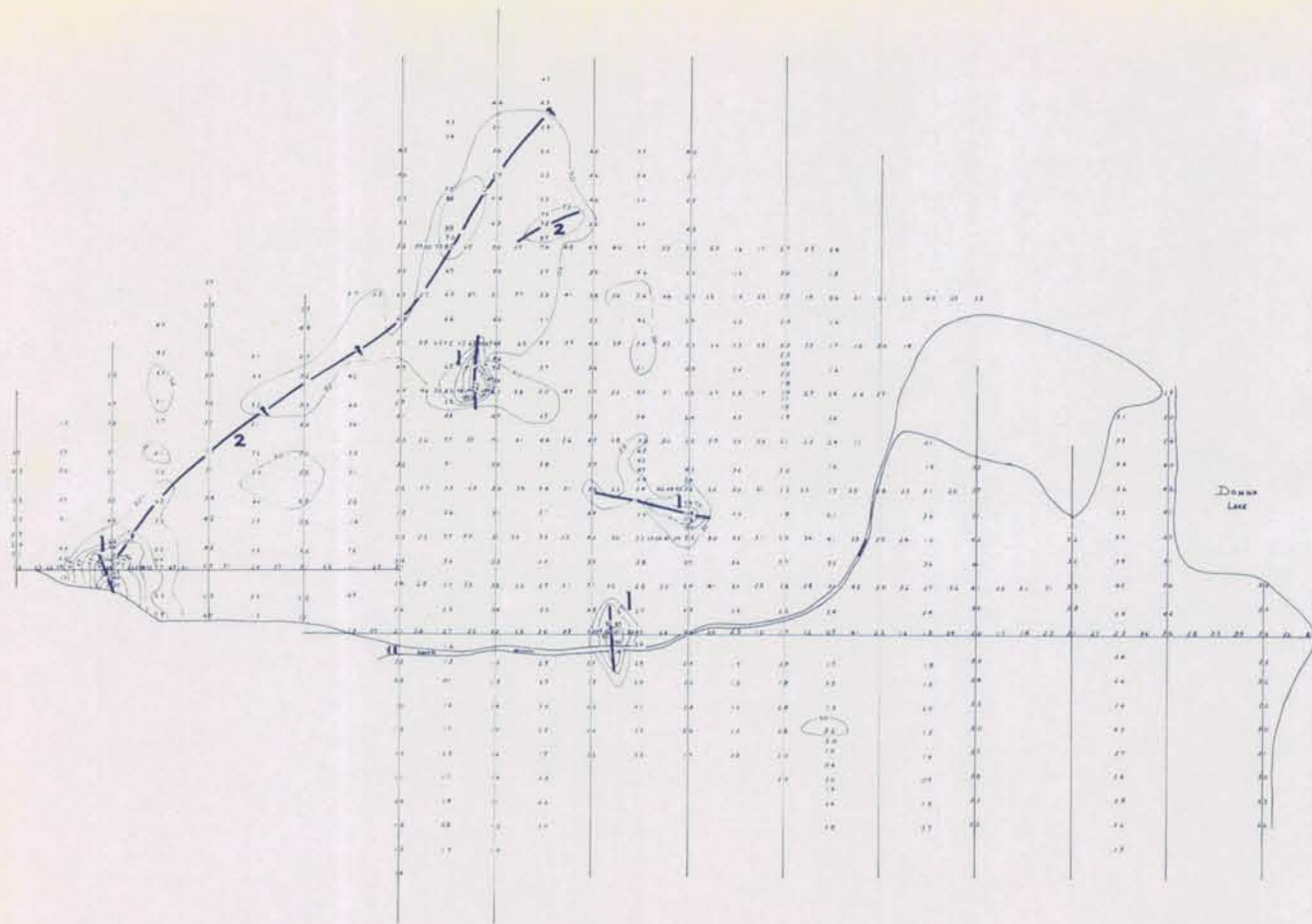
0 50 100 150 200 250 300 350 400 450 500

COMPANY . . . FALCONBERG MINES LTD.  
PROPERTY . . . BAHNDI Gold  
LOCATION . . . Bahndi

WORKING PLACE . . . Cross River  
TYPE OF MAP . . . B.S.P.  
BASED ON . . .

DATE . . . Nov 1964  
DRAWN BY . . . VB  
DATE OF WORK . . . Oct 1964





- 1 2 3 4 5 6
- ⊕ Station and elevation, also in vertical, hanging, or other special situations
  - 3rd order control station
  - Main road
  - 2 Priority

1000 900 800 700 600 500 400 300 200 100 0

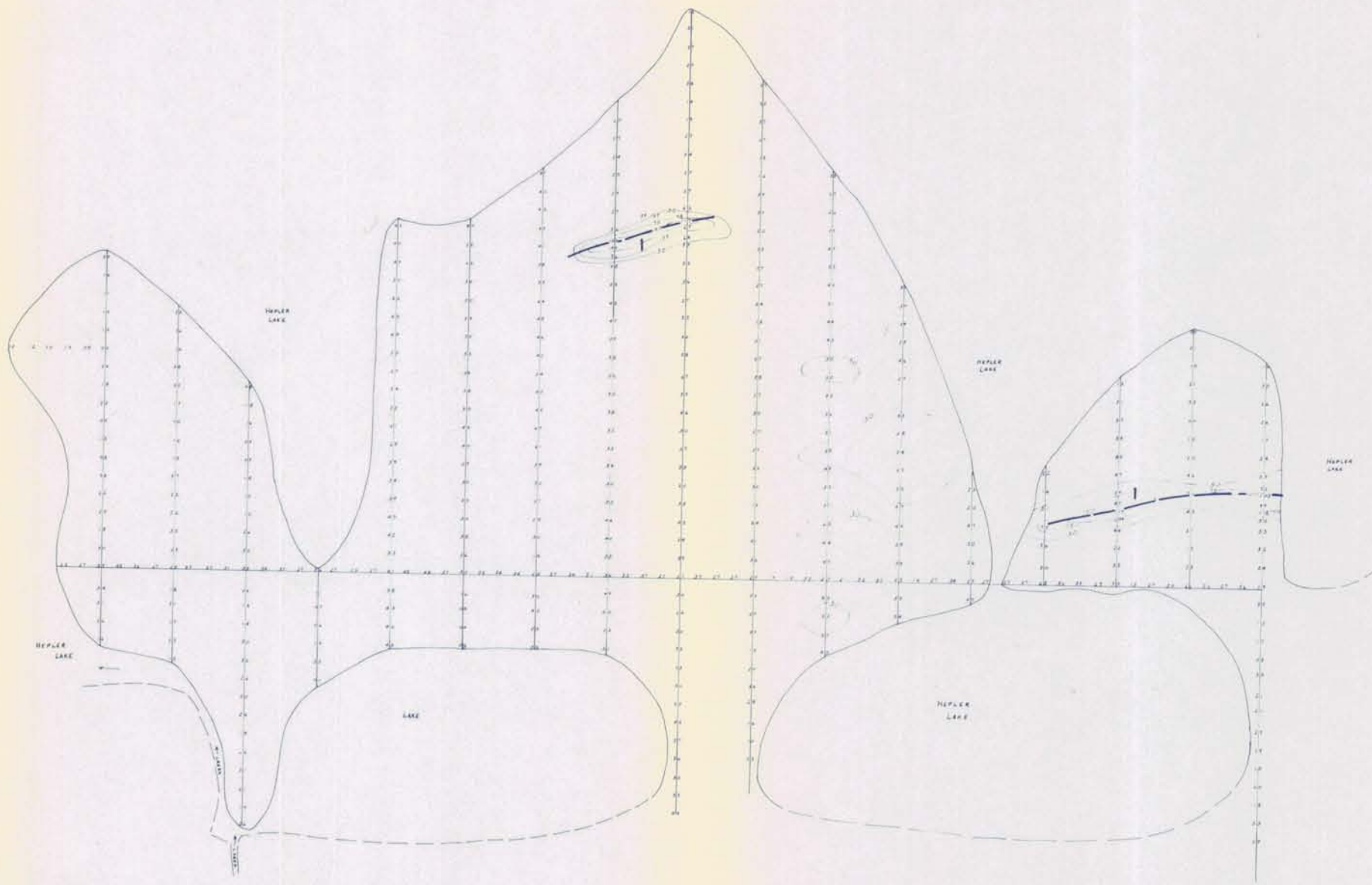


COMPANY - FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY - BARRY II GULF  
 LOCATION - BARRY I.

WORKING PLANE - Tertiary Group  
 TYPE OF MAP - BSP  
 BASED ON -

DATE - Nov. 1954  
 DRAWN BY - V.R.  
 DATE OF WORK - Sept. 1954





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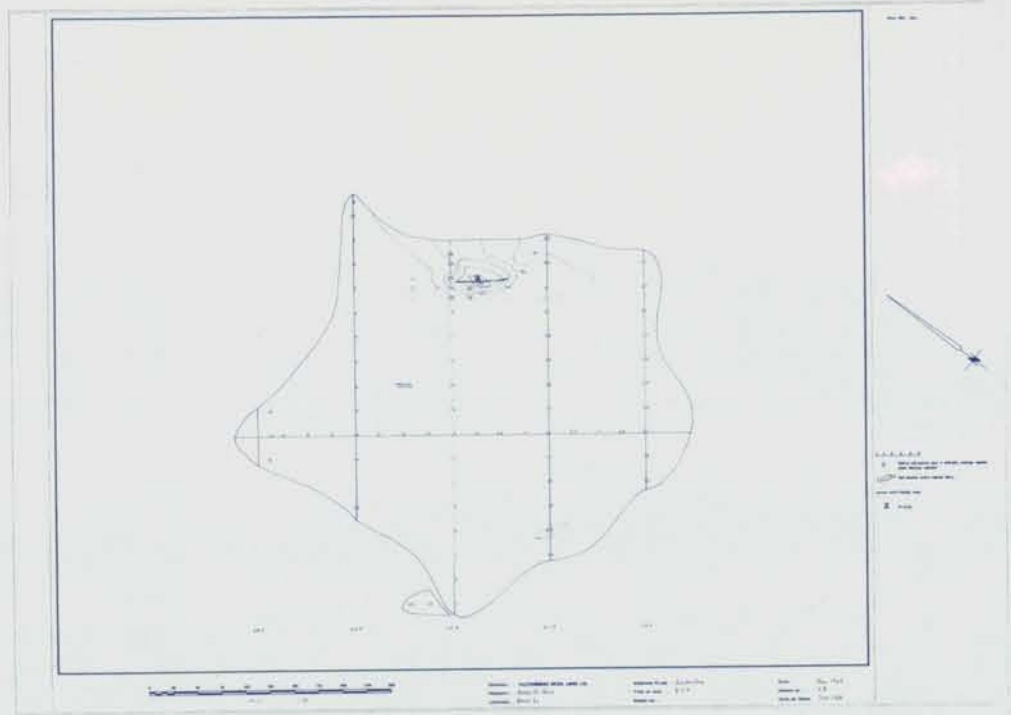


COMPANY: FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY: Depler Is. Group  
 LOCATION: Depler Is.

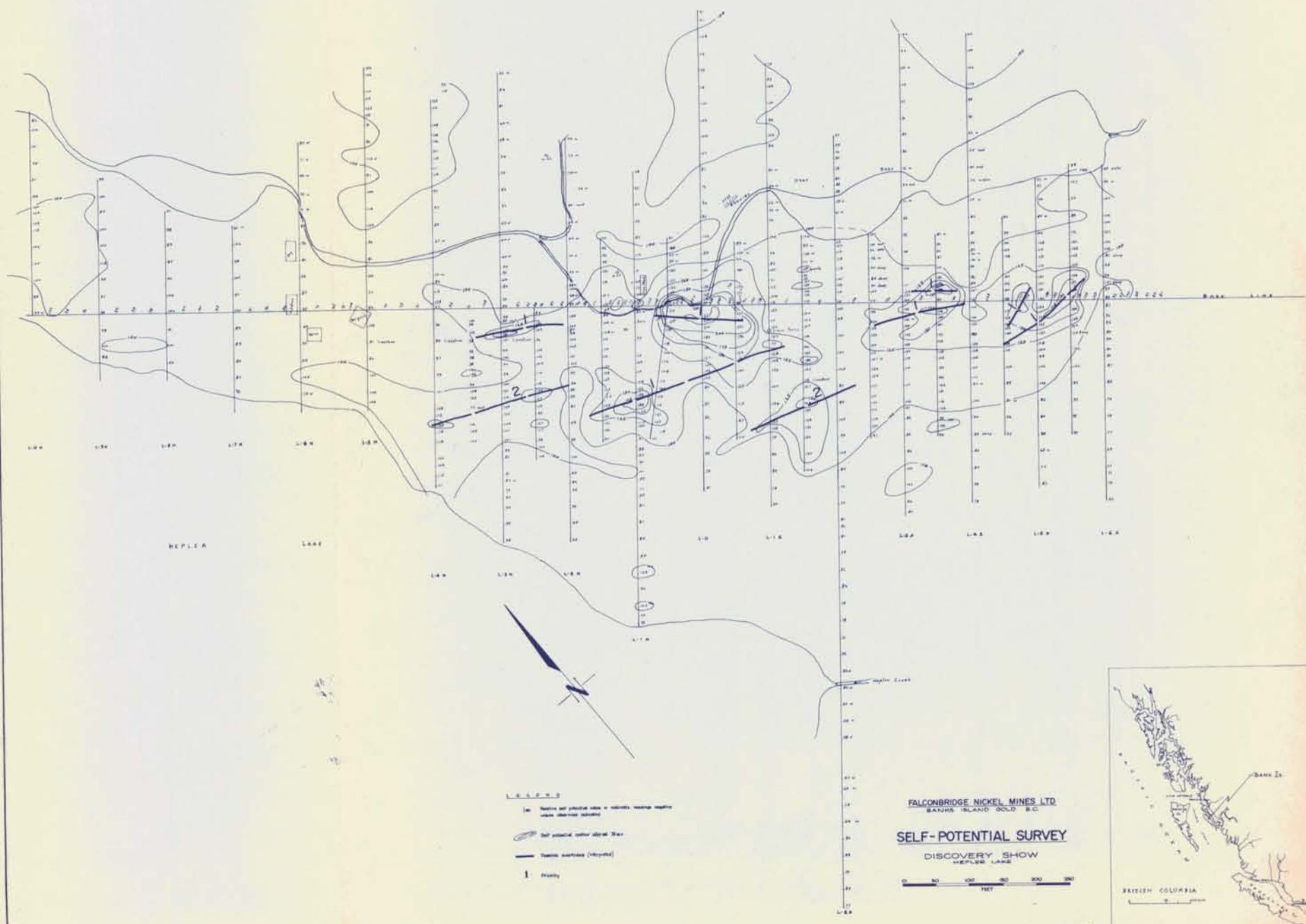
WORKING PLAN: FALCONBRIDGE  
 TYPE OF MAP: D.S.P.  
 SCALE: 1" = 100'

DATE: July 1964  
 DRAWN BY: J.S.  
 DATE OF WORK: Sept. 1964









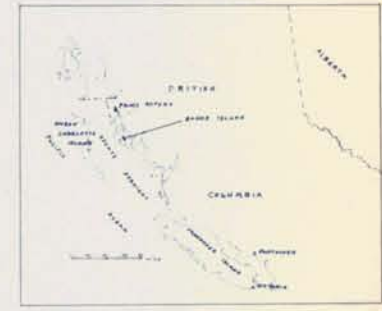
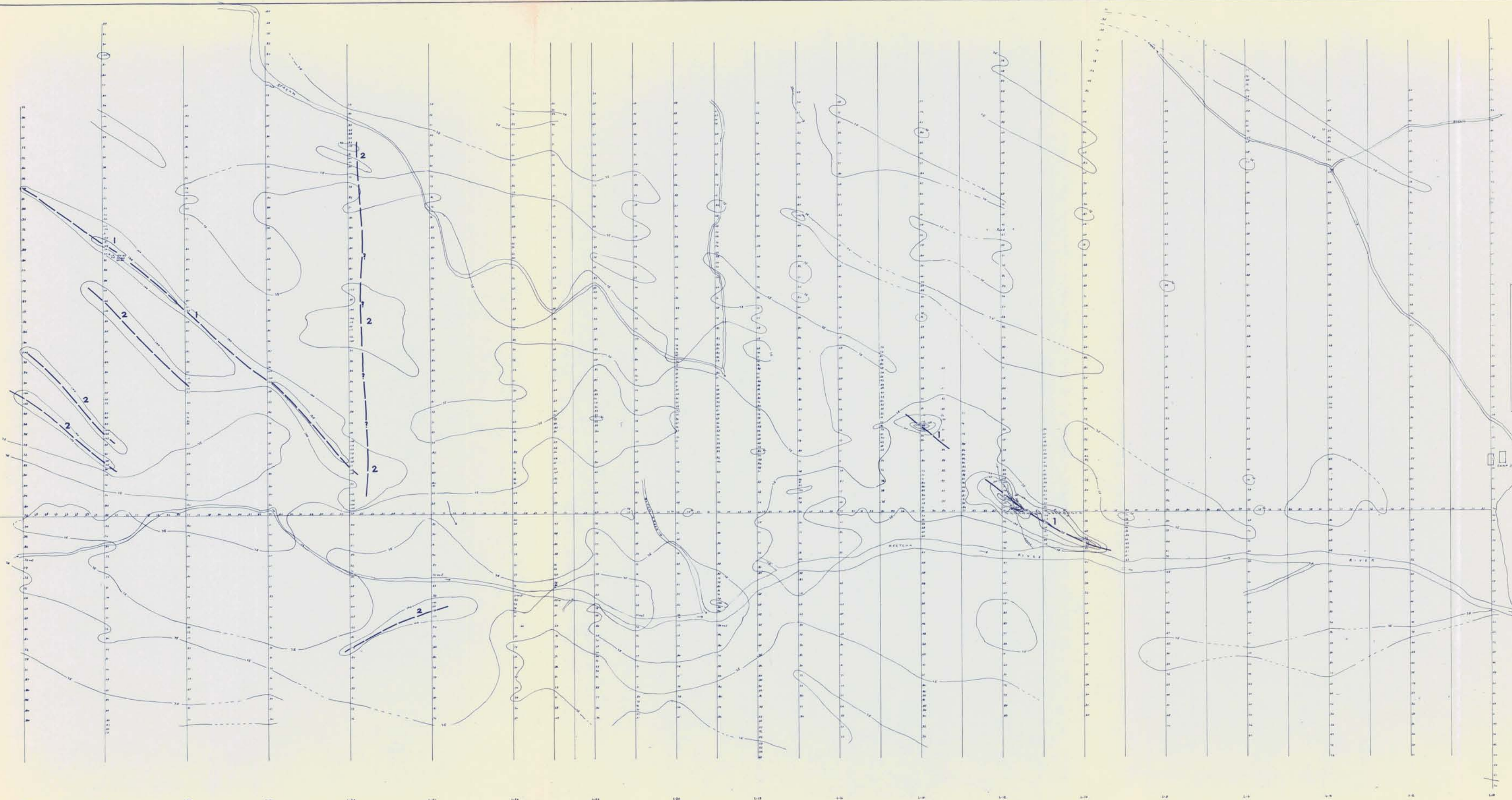
**L.S.P.S.S.**  
 (a) Positive self potential values in millivolts, relative negative values observed (indicated)  
 (b) Self potential, either observed or calculated  
 (c) Station numbers (Alphabetic)  
 (d) Priority

FALCONBRIDGE NICKEL MINES LTD.  
 BANKS ISLAND GOLD B.C.  
**SELF-POTENTIAL SURVEY**  
 DISCOVERY SHOW  
 HEPLER LAKE  
 0 50 100 200 300 400  
 FEET



AUG 64





KEETCHA LAKE

ROAD

KEETCHA RIVER

CAMP

1 - Priority

2 - Dashed line

3 - Contour lines

4 - Self-potential values

FALCONBRIDGE NICKEL MINES LTD  
 BANNOCK BURN GOLD S.C.

**SELF-POTENTIAL SURVEY**  
 KEETCHA GRID

0 50 100 150 200