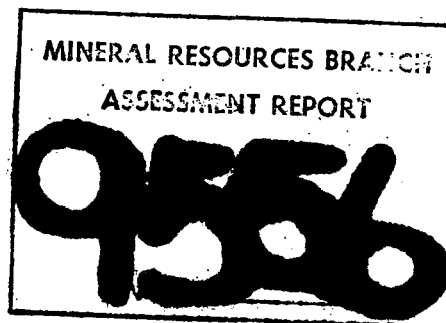


August 1981

KEYSTONE EXPLORATIONS Ltd.

EALUE LAKE PROPERTY

LIARD M.D. NTS 104 H-13
Lat. 57°47' N Long. 129°50' W



**Geological and Geochemical
Assessment Report**

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FIGURE 3	GEOLOGY MAP
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EALUE LAKE PROPERTY

LIARD M. D., B. C.

1. INTRODUCTION

Assessment work, consisting of geological mapping and soil sampling was carried out on the Ealue Lake Property between May 16th and July 12th, 1981. The entire property was mapped at 1:5,000; two small areas 1 km. x 1 km. around Showings #1 and #2 were mapped at 1:500. Both showings were drilled and blasted, although fresh material was not exposed because of problems with the drill. A total of 9 m³ was blasted from cuts #1, #2 and #3. These open cuts were sampled and the adit at Showing #1 was mapped. A soil sampling grid was established and 178 samples taken on it. These were analyzed for gold and copper. Finally, one more claim was staked (Now) to fill an internal fraction in the claim group.

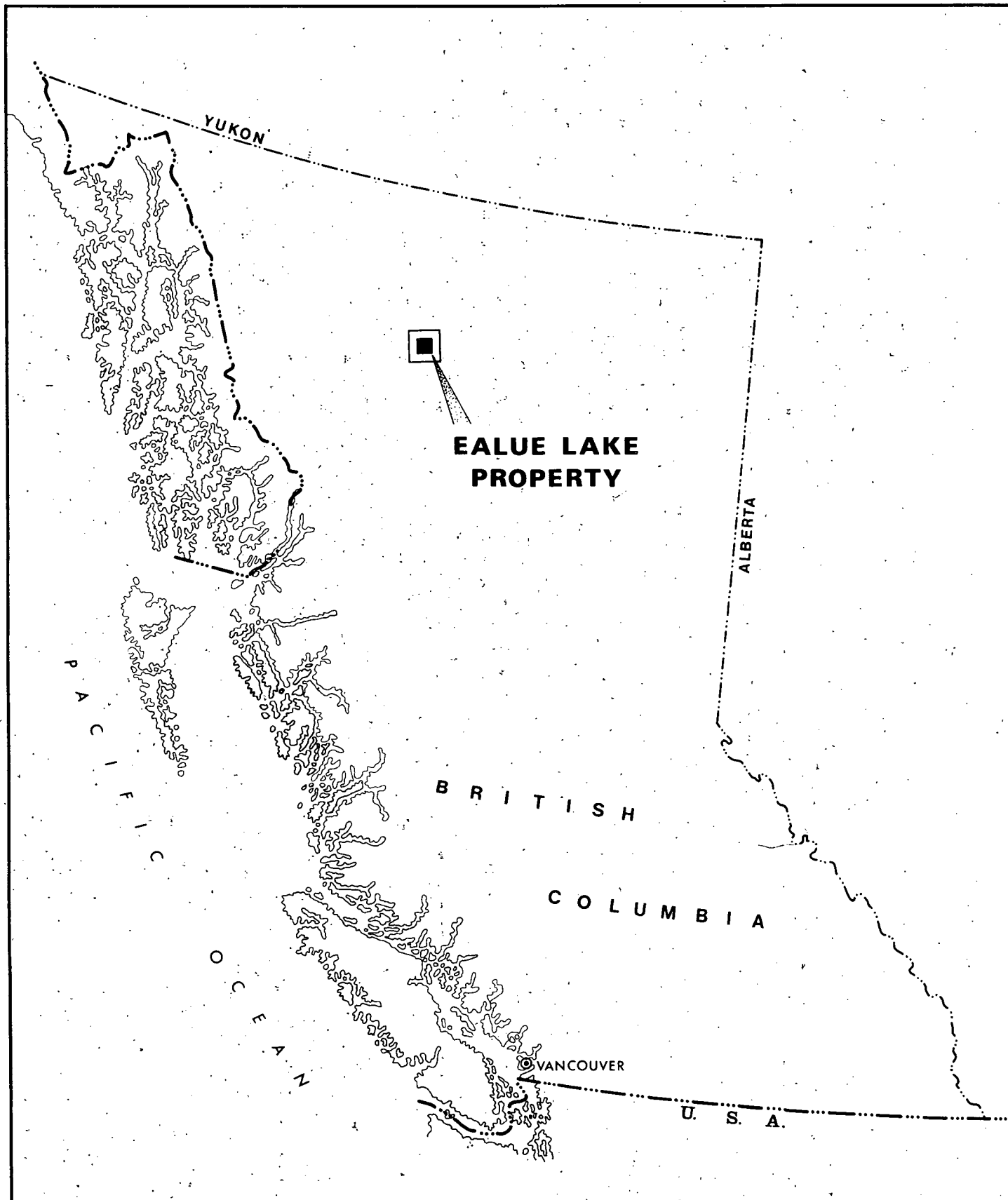
The showings occur as copper-gold-silver mineralization along fractures in the andesites. They lie within the same broad stratigraphic horizon. Showing #1 and possibly #2 should be diamond drilled to test their extent.

2. LOCATION, TOPOGRAPHY, ACCESS

The Ealue Lake property lies on the north shore of Ealue Lake, covering the southeastern flanks of Fhahcezette Mountain between elevations of 860 m. (2,800 ft.) and 1,600 m. (5,300 ft.) above sea level. It is in the Liard Mining Division on N.T.S. 104 H/13 and is centred at Latitude $51^{\circ} 47'$ North and Longitude $129^{\circ} 50'$ West.

Access is readily obtained by float plane to Ealue Lake after June 1st or by the Ealue Lake Road which runs from the Stewart-Cassiar Highway (37) to the Klappan River, passing through the southern part of the claims.

The lower slopes of the property are covered with an open growth of small aspen, poplar and spruce. Above 1,200 m. (4,000 ft.) the terrain is generally steep and rocky with willow brush and grass between outcrops.



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EALUE LAKE PROPERTY

Location Map

LIARD M.D.

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DATE: AUG. 1981

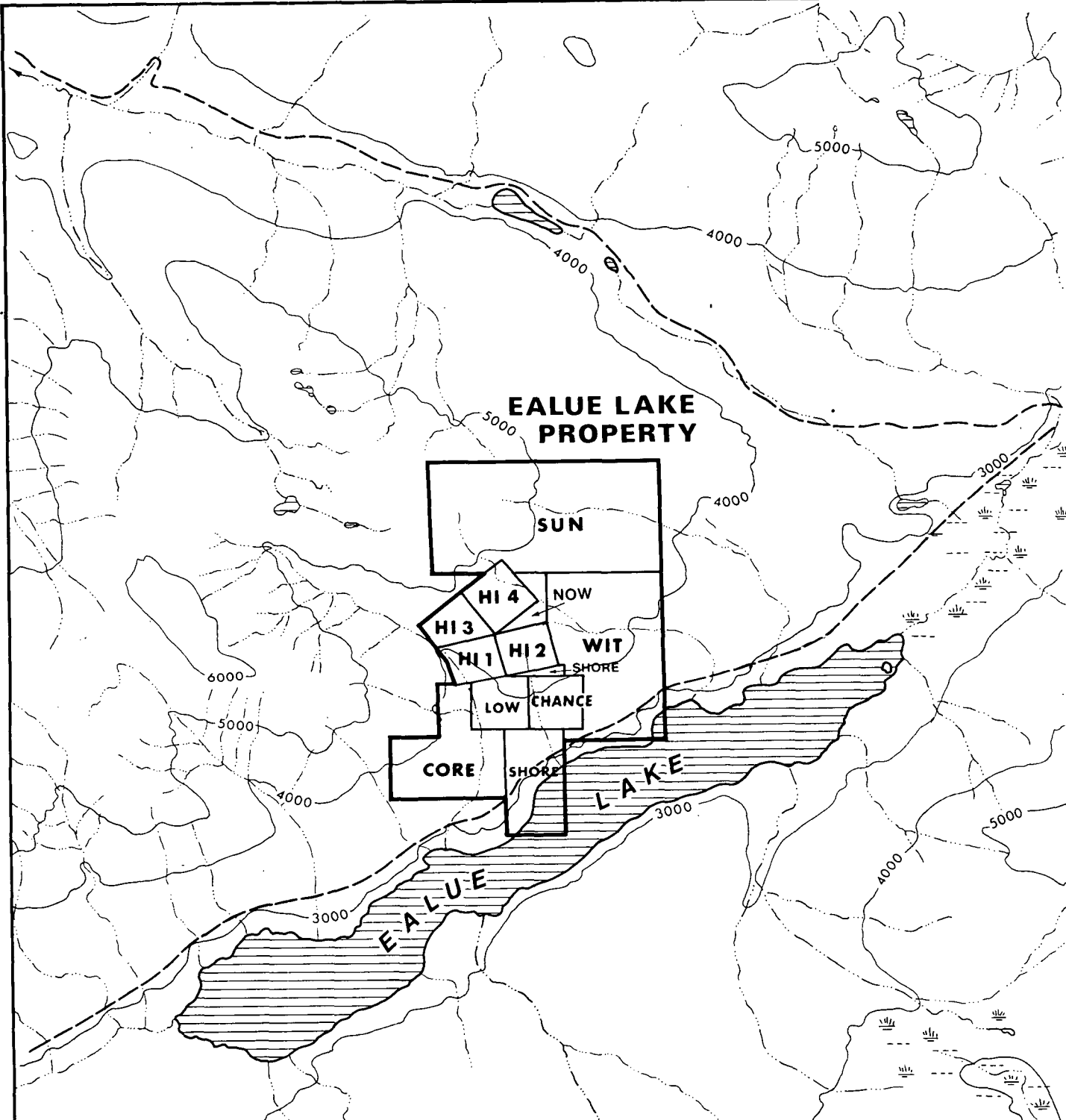
SCALE: 0 100 Miles

FIG. 1

3. PROPERTY, CLAIMS

The Ealue Lake property consists of four two-post mineral claims and seven modified grid claims with 24 units. The claim names and new expiry dates are listed below.

<u>Claim</u>	<u>Record No.</u>	<u>Renewal Date</u>
Low (1 unit)	114 (5)	May 25, 1987
Chance (1 unit)	121 (6)	June 14, 1987
Shore (3 units)	122 (6)	June 14, 1986
Cove (4 units)	123 (6)	June 14, 1987
Sun (8 units)	150 (7)	July 20, 1987
Wit (6 units)	153 (7)	July 21, 1987
Hi 1-4 (2 post claims)	72290-93 P	November 21, 1987
Now (1 unit)		July 12, 1982



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EALUE LAKE PROPERTY

Claim Location Plan

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DATE: AUG. 1981

SCALE: 0 1000 metres

FIG. 2

4. HISTORY

Copper-gold mineralization was discovered in the Ealue Lake area, previously known as "Klappan Rose showing" in the 1920's when exploratory work by J. G. Hope appeared. This work consisted of surface trenching and pitting, as well as underground development on the high grade copper lenses.

Some intermittent work was done in the area on different showings in the area as late as 1960 when the property was acquired by J. Anderson of Prince Rupert, B. C.

In late 1960's Yukonadian Mineral Explorations Ltd. acquired the showing areas and in 1970 they were optioned to Granduc Mines Ltd. who conducted some reconnaissance geological and geochemical surveys.

When the claims lapsed in 1974, the northwest area was staked by Texas Gulf Canada Ltd. as Rose Group and four Hi claims were staked by J. Schussler. During 1975 and 1976 Texas Gulf performed geological, geochemical and geophysical surveys and diamond drilling programs which led to the discovery of a copper porphyry deposit.

Since 1974 different parts of the Ealue Lake property have been held by J. Schussler, S. Bridcot, Zastavmikovich and Christensen, but in 1977 all of the property was acquired by J. Schussler who in turn has now sold 100% interest to Keystone Explorations Ltd. In 1976,

4. HISTORY (Cont'd)

Texas Gulf Corporation Ltd. carried out geochemical surveys over a 200 x 400 metre grid in the main showing area and at the same time Falconbridge Nickel Mines explored the central part of the claims geochemically. During the same year, D. J. Drilling Ltd. completed three drill holes to test the EM 16 anomalies outlined by a reconnaissance by S. Presunka.

In 1979 Bethlehem Copper Ltd. carried out geochemical soil survey over the grid cut in the southern part of the claims.

5. GEOLOGY

The Ealue Lake property is almost entirely underlain by a series of northwesterly striking intermediate volcanic units with only very minor occurrences of sediment.

The map area was divided into five map units on the basis of geomorphological and lithological criteria.

UNIT 1

This unit contains a large variety of colours and volcanic textures, however almost all are andesites with only very minor (grey) dacites, two limestone beds also occur in this unit. The rocks of Unit 1 are almost all fine grained with tuffaceous textures dominating. The rocks vary in colour from medium green to light green, buff, brown and maroon. Feldspar crystals, often poorly preserved, are common. These are usually pink but also come in buff and grey. Ash is common. Quartz crystals are rare. Epidote and chlorite are abundant either in the ground mass or as altered fragments or occasionally after hornblende. Magnetite is often present.

Because this unit is tuffaceous it frequently gives an impression of a bedded appearance, however only in two places was good bedding observed. The rest of the dips and strikes on the map could all be questioned. A strong

5. GEOLOGY (Cont'd)

UNIT 1 (Cont'd)

impression of a northeasterly strike and a moderate northeasterly dip for the unit as a whole is unavoidable. This unit contains both Showings #1 and #2. Showing #1 occurs near the top of the unit and Showing #2 occurs more than 400 meters (1,200 ft.) below the top of the unit.

UNIT 2

This unit is clearly distinguishable from the other volcanic units in the map area as it consists entirely of dacites with minor rhyolites whereas all the other map units are andesite. Moreover the textures are very fine grained and glassy (lavas), usually pale grey but sometimes pale green with some tiny feldspar and quartz phenocrysts. Showing #4 occurs near the top of this unit which is in part laterally equivalent to Unit 1.

UNIT 3

This rock unit is again quite distinctive even though it is andesite because of its absolutely uniform medium green colour and very fine grained texture. It is impossible to tell if the texture is that of a lava or tuff. The only grains that are common are pale feldspars which are very small. Showing #3 occurs close to the base of this unit so that Showings #1, #3 and #4 occur close to the same stratigraphic horizon.

5. GEOLOGY (Cont'd)

UNIT 4

This unit is again clearly identifiable but this time on geomorphological evidence. It forms a very well defined bluff that cuts the entire property at 130° . Moreover the bluff is steep on the southwest side and gentle to the northwest suggesting strongly a dip of about 40° to the northwest, conformable with Unit 1.

The rocks of this unit are again entirely fine grained andesites being maroon or green in colour; both lavas and tuffs are present. The most common mineral present is grey feldspar which is lath shaped in the lavas and poorly preserved in the tuffs. Chlorite and epidote and ash are also common.

UNIT 5

The rocks of this unit are generally brown or buff, fine grained and very difficult to describe in any detail. Buff feldspar is common but aside from this the textures are dominantly tuffaceous and grains are difficult to identify. Chlorite and epidote are present.

5. GEOLOGY (Cont'd)

STRUCTURE

The volcanic rocks of the property appear to have a uniform orientation of a northwesterly strike (130° approx.) with a northeasterly dip ($40^{\circ} \pm 20^{\circ}$). However around Showing #2 the strike in Unit #1 appears to change to $160^{\circ} - 180^{\circ}$ forming an isoclinal fold with the rest of Unit 1 striking at about 130° . The dip near Showing #2 steepens up to $60^{\circ} - 90^{\circ}$.

SHOWING #1

Showing #1 consists of an adit, which is well mineralized around the portal, and two cuts. These three occurrences roughly line up at about 70° , the dip of this zone is uncertain but is probably to the south.

Several fractures occur very close to the area of these occurrences, the strongest fracturing is along $70^{\circ}/60^{\circ}$ south reinforcing the idea that this is the over all dip of the mineralization.

The mineralization consists of calcite, pyrite, chalcopryrite, specularite, hematite and malachite, it occurs as disseminations, replacement along bedding and along fractures, but over all it gives a strong impression of being fault controlled.

5. GEOLOGY (Cont'd)

SHOWING #2

As has been mentioned, in the general area of Showing #2 the volcanic units dip at 160° - 180° east. However at the showing itself where bedding is very well developed, the beds dip at $140^{\circ}/45^{\circ}$ - 75° west. It is difficult to imagine what could cause such a tight fold except a thrust at this orientation; at present this remains unproven. The mineralization at Showing #2 consists as at #1 of calcite, pyrite, chalcopryite, hematite and malachite. It occurs as disseminations and replacement along bedding. Sporadic chalcopryite and malachite occur in the general area of Showing #2, up to 500 meters to the south of it in locations not far above or below the proposed thrust. None of these minor occurrences are of significance in themselves but they do suggest that the showing may be more continuous than its present exposure.

SHOWING #3

Showing #3 consists of pyrite with only very minor chalcopryite along fractures in andesite.

SHOWING #4

Showing #4 is similar to #3 but is associated with a fracture at $80^{\circ}/90^{\circ}$.

TABLE OF ASSAYS

<u>Location</u>	<u>Width</u>	<u>Au.(ppm)</u>	<u>Ag.(ppm)</u>	<u>Cu. %</u>	<u>Sampler</u>	<u>Date</u>
SHOWING #1						
Portal of adit	1.2 m	0.005	2.40	0.15	K. C. McTaggart	1961
	2.0 m	0.014	0.05	1.17	V. Cukor	1981
Cut #1	4.6 m	0.1	0.5	3.9	J. J. McDougall	1955
	3.2 m	0.10	1.35	2.79	K. C. McTaggart	1961
	2.0 m	0.053	0.42	2.51	V. Cukor	1981
Cut #2	1.9 m	0.40	0.88	0.61	K. C. McTaggart	1961
SHOWING #2						
(Mineralized Andesite	1.0 m	0.004	0.28	1.14	G. Keyte	1981
(Barren Andesite	1.5 m.	-	-	-		
(Massive Sulphides	0.3 m	0.058	2.20	14.44	G. Keyte	1981
	0.2 m	0.08	2.30	6.55	K. C. McTaggart	1961
(Carbonate Horizon	1.0 m	0.044	0.97	6.72	G. Keyte	1981
45 m along strike	0.3 m	0.044	0.50	4.88	G. Keyte	1981
SHOWING #3	1-2 m	0.002	0.08	0.33	G. Keyte	1981
SHOWING #4	1-2 m	0.002	0.05	0.24	G. Keyte	1981

Note: The showings are now badly weathered, nevertheless reasonable agreement has been found with earlier samples.

6. GEOCHEMICAL SOIL SURVEY

A soil sampling program was set up to test the existence and continuity of anomalies found by Falconbridge and Bethlehem Copper. The baseline used by these companies was located and used in the present survey. Bethlehem Copper found a copper anomaly on line 200S from 250 - 500 E but did not sample further north. Falconbridge found a copper anomaly from 100S on the baseline trending northwest along the valley below Showings #1 and #2.

METHOD

One hundred seventy-eight soil samples were taken at 50 meter intervals on lines spaced 100 meters apart from 400 N to 300 S. The samples were taken from the top of the B horizon, which was usually red-brown soil, but was occasionally grey. The samples were packed in kraft envelopes, dried and shipped to General Testing Laboratories Ltd.

In the lab samples were dried and sifted to -80 mesh and assayed as follows:

Copper - two grams were dissolved in nitric acid and processed by atomic absorption spectrometry method employing a Jarrell Ash 850 instrument.

Gold - from 15 gram sample, a bead was produced by fire assay and processed by Newton Activation Analysis.

The results were plotted up and contoured at 150 ppm.

6. GEOCHEMICAL SOIL SURVEY (Cont'd)

RESULTS

The Falconbridge work can be dismissed, not only did their results not correspond with the present survey but most of their grid was over rock and skree where soil sampling is pointless, even if it is possible. Good agreement was found with the Bethlehem Copper results; their anomaly is in fact part of a large copper anomaly which lies around and along strike from Showings #1, #3 and #4.

The gold results are completely flat presumably due to the much lower mobility of gold compared with copper.

7. CONCLUSIONS

Showings #1, #3 and #4 form part of a well defined stratigraphic horizon, which is confirmed by the geochemical results. Showing #2 may or may not be part of this horizon. In any case the showings are not stratiform but give a strong impression of being fault controlled. Nevertheless showing #1 and possibly #2 should be drilled to test their extent.

Respectfully submitted,

G. Keyte

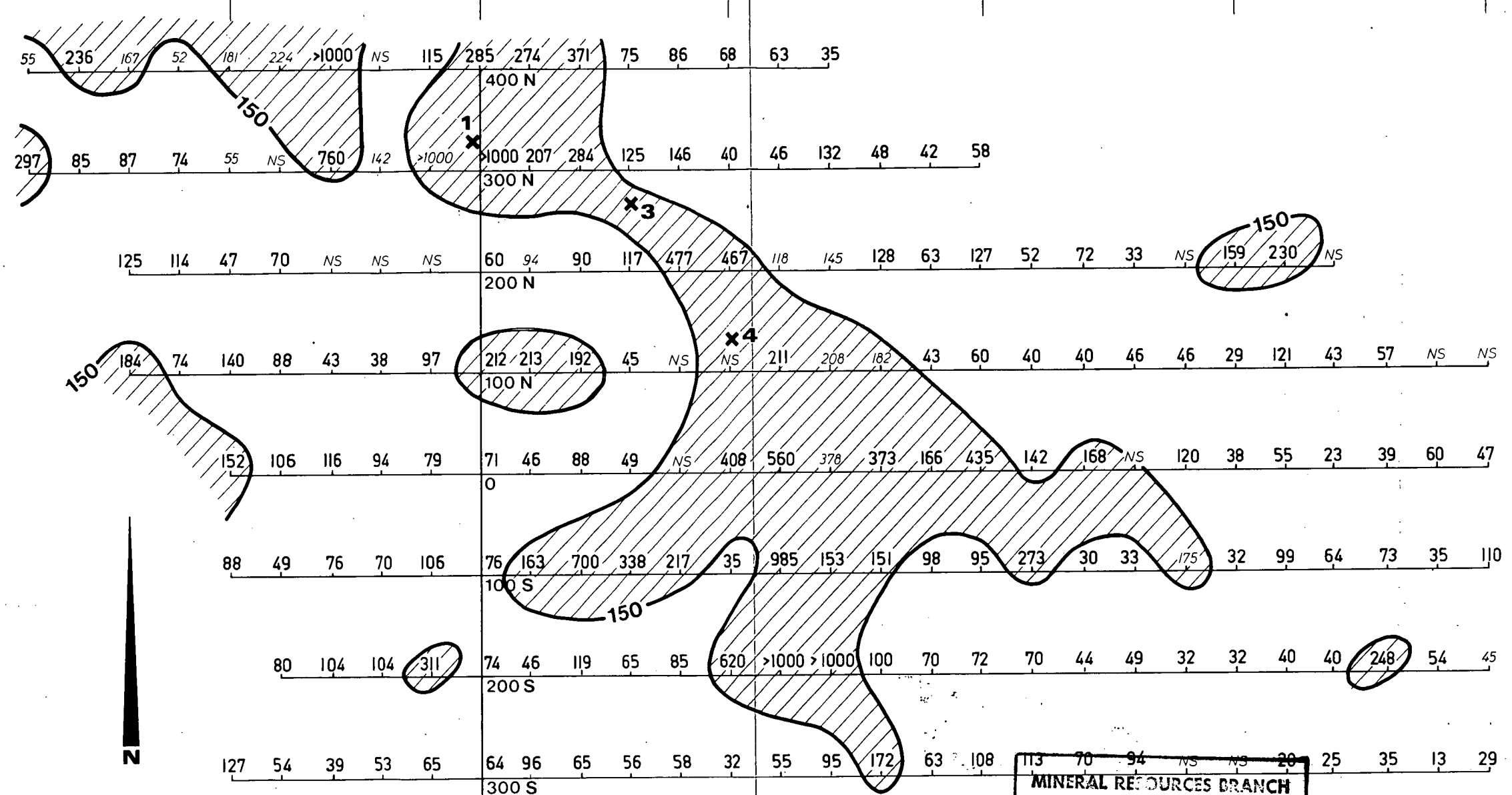
G. Keyte, Geologist

V. Cukor

V. Cukor, P. Eng.

August 15th, 1981

500 W 250 W BL 250 E 500 E 750 E 1000 E



LEGEND

- NS No sample
- 52 Organic
- 150 Contour 150 ppm
- x Showings

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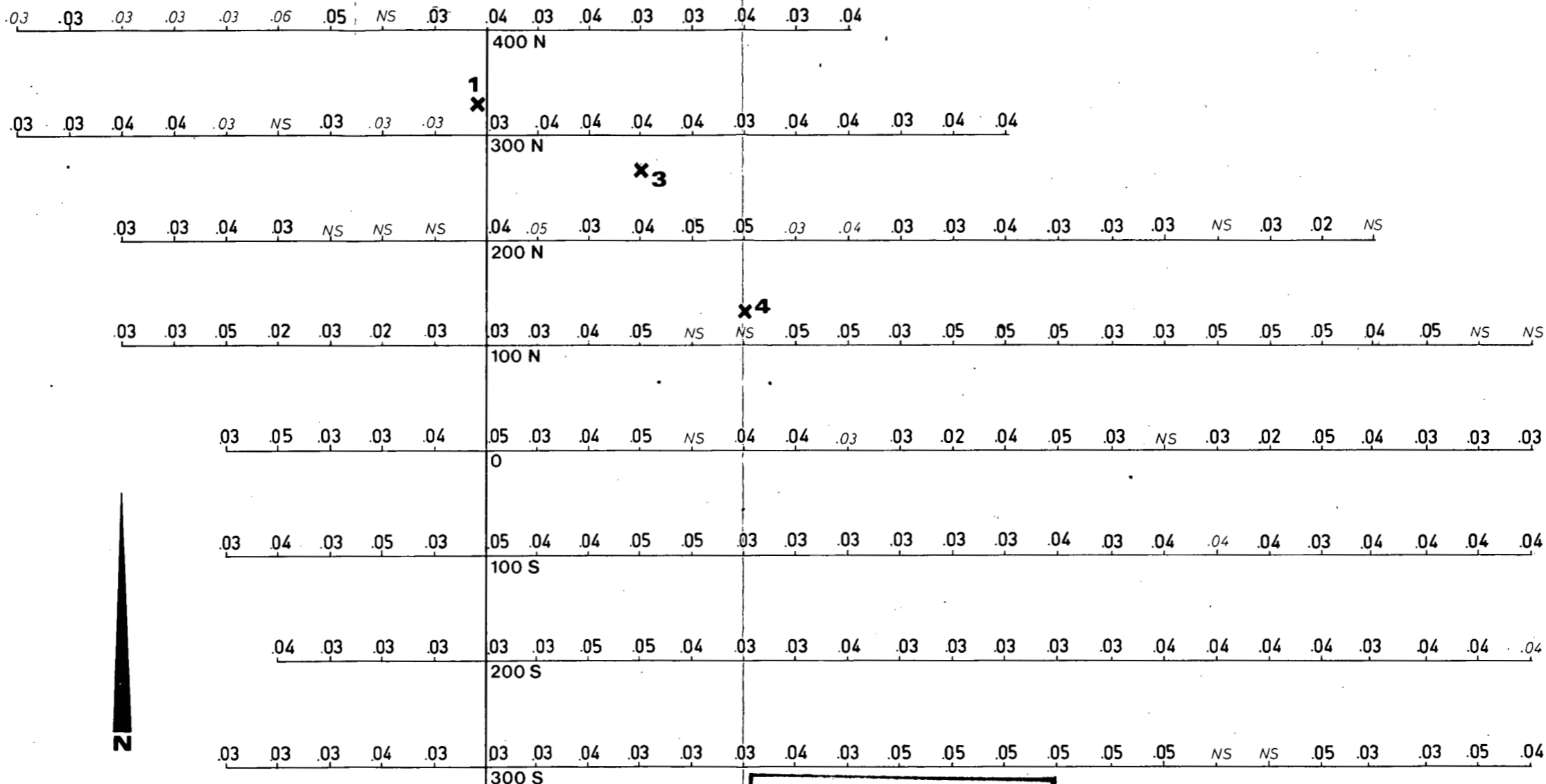
Geochemical Plan - **Cu** ppm

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DATE: Aug. 1981 SCALE: 0 100 meters FIG. **6**

500 W 250 W BL 250 E 500 E 750 E 1000 E



LEGEND

- NS No sample
- .04 Organic
- x Showings

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EALUE LAKE PROPERTY
Geochemical Plan - **Au** ppm

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DATE: Aug. 1981 SCALE: 0 100 meters FIG. 7

STATEMENT OF COSTS

Field Work

Wages:

V. Cukor, P. Eng.	5 days @ \$250/day	\$ 1,250.00
G. Keyte, Geologist	53 days @ \$150/day	7,950.00
P. Geraghty, Helper	53 days @ \$80/day	4,240.00


Expenses:

Field Expenses (food, gas, motel, equipment)	\$ 5,178.04
McElhanev Surveys (enlarging air photos)	684.22
Deakin Equipment (field supplies)	493.58
Frontier Helicopter	2,434.19
Watson Lake Flying Services	476.00
Vehicle Rental 53 days @ \$25/day	1,325.00

Report

G. Keyte, Geologist	4 days @ \$150/day	\$ 600.00
General Testing (assays)		1,882.34
Draughting		500.00
Typing, printing, binding		186.00

\$ 27,199.37


V. Cukor, P. Eng.

CERTIFICATE

I, VLADIMIR CUKOR, of 2830 West 37th Avenue,
Vancouver, British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geological Engineer with business address as above;
2. I graduated from the University of Zagreb, Yugoslavia in 1963;
3. I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia;
4. I have practised my profession as a Geological Engineer for the past 18 years, both in Yugoslavia and Canada;
5. I have personally supervised the programs described in this Report;
6. Mr. G. Keyte, holding a 1969 B. Sc. Geology Degree of the Imperial College, London, is fully qualified and well experienced in geological and geochemical surveys;
7. I have no interest direct or indirect in Keystone Explorations Ltd.



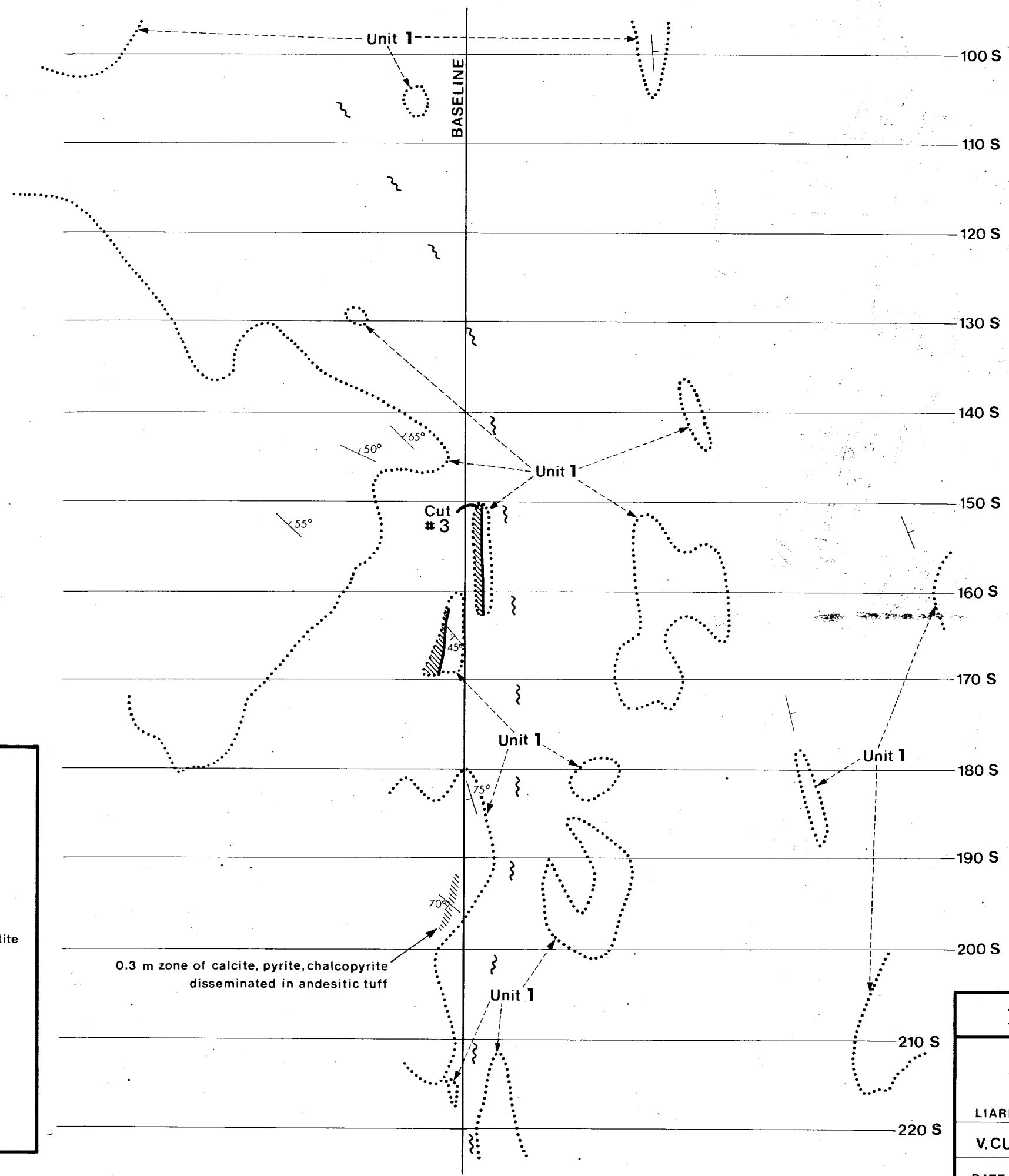
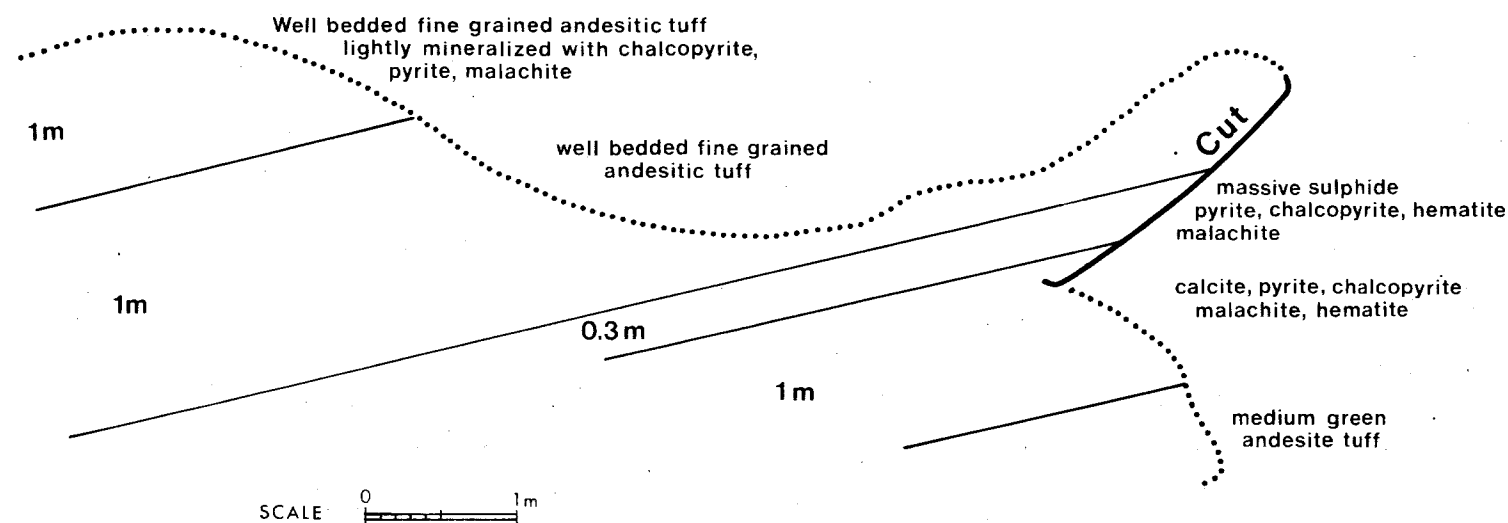
V. Cukor, P. Eng.

August 15th, 1981

LEGEND

- Unit 1 Green, buff and grey andesite tuffs and minor lavas
- 120S Grid (not part of main grid)
- Outcrop
- Attitude of bedding (45°)
- Strike of bedding, dip uncertain
- Possible thrust
- Mineralization
- Open cut

SKETCH OF SHOWING #2 LOOKING WEST



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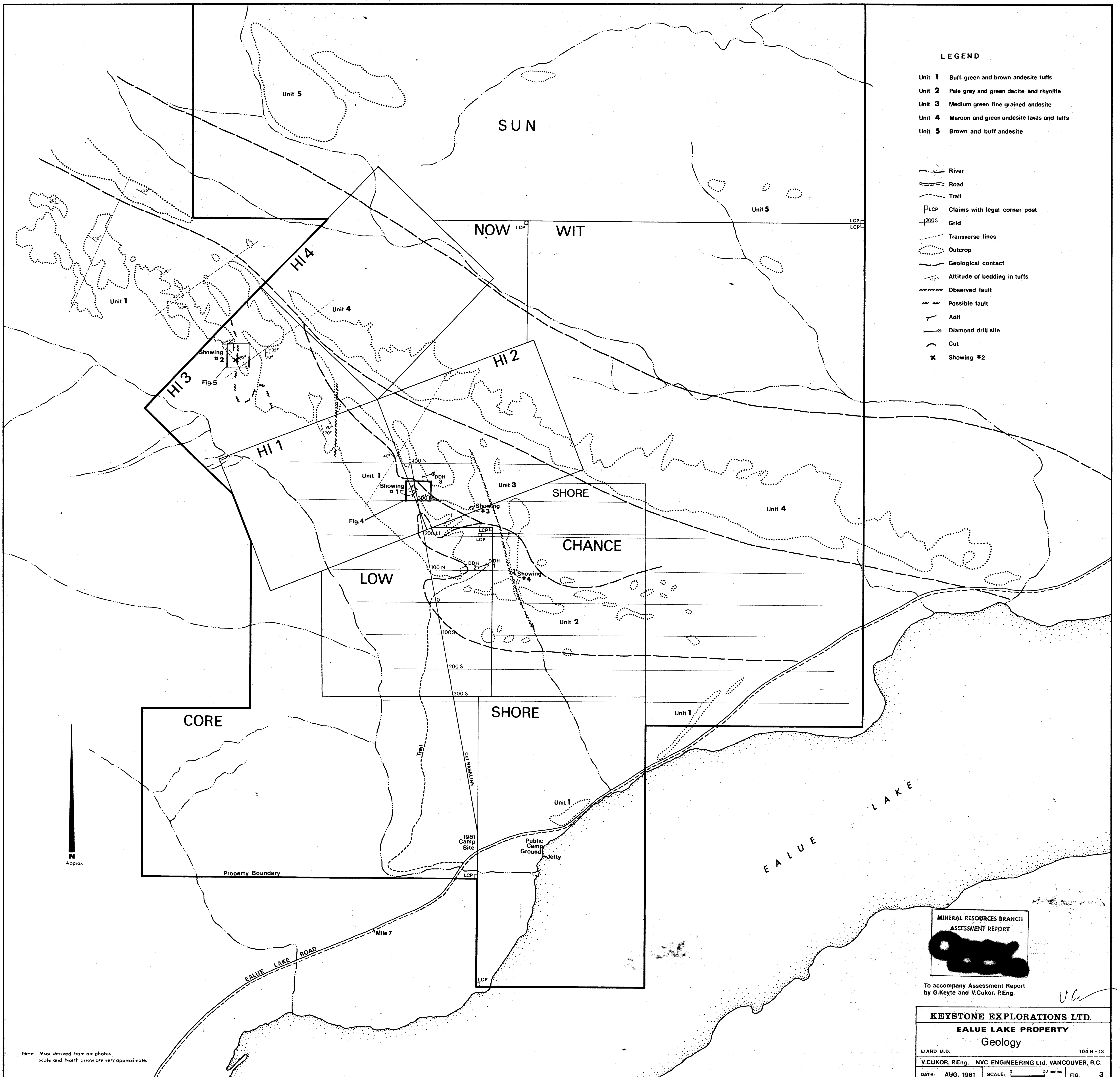
EALUE LAKE PROPERTY

Showing #2

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DATE: Aug. 1981 SCALE: 0 10m FIG. 5



LEGEND

- Unit 1 Buff, green and brown andesite tuffs
 - Unit 2 Pale grey and green dacite and rhyolite
 - Unit 3 Medium green fine grained andesite
 - Unit 4 Maroon and green andesite lavas and tufts
 - Unit 5 Brown and buff andesite
- River
 - Road
 - Trail
 - LCP Claims with legal corner post
 - Grid
 - Transverse lines
 - Outcrop
 - Geological contact
 - Attitude of bedding in tufts
 - Observed fault
 - Possible fault
 - Adit
 - Diamond drill site
 - Cut
 - Showing #2

Note: Map derived from air photos; scale and North arrow are very approximate.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

To accompany Assessment Report
by G. Keyte and V. Cukor, P. Eng.

KEYSTONE EXPLORATIONS LTD.

EALUE LAKE PROPERTY
Geology

LIARD M.D. 104 H - 13
V. CUKOR, P. Eng. NVC ENGINEERING Ltd. VANCOUVER, B.C.
DATE: AUG. 1981 SCALE: 0 100 metres FIG. 3