

PRELIMINARY REPORT

800845

ON THE

MINERAL HILL PROPERTY

PREPARED FOR

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PREPARED BY

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Soil Sampling

Approximately 650 soil samples were collected on a 6,000 by 3,000 foot grid and analyzed for total Cu and total Mo. Almost one half of these were also analyzed for Hg. All analyses were conducted by Barringer Research Limited.

Despite deep, transported overburden and the absence of a well developed "B" horizon, the survey indicated the presence of several mineralized areas.

A persistent linear dispersion pattern suggests structural control of mineralization in the northern extension of the alaskite zone. From this, and evidence from percussion drilling it seems probable that mineralized quartz stringers have been emplaced along a conjugate joint system.

*see map  
contour  
of  
mineralization  
control*

*No slope  
or  
strange  
control  
as  
effective  
& significant*

*N/A*

Remarkable similarities in the dispersion patterns of Cu, Mo and Hg suggests the anomalies are superjacent rather than displaced. Percussion drilling substantiated this interpretation.

Although the highest Mo value from a soil anomaly that was drilled is 55 ppm, an anomaly with Mo values up to 1,100 ppm has been discovered in the extreme southeast corner of the grid. Results from additional samples collected in this area have not yet been received.

*30-40 pending @ Nov. 20  
- Mike W. to forward -*

No dispersion pattern appears to outline the breccia zone as a whole although smaller anomalies appear within it. However, no such anomalies suggest any extension of the breccia zone to the northeast as has been interpreted from magnetic data.

*overburden  
too variable*

*check  
prob. Herterly*

The greater concentration of mineralization along contacts of quartz veins might account for the stronger geochemical expression of the northern alaskite zone as compared to that of the quartz breccia zone.

Figures 1, 2 and 3 show the distribution of Mo, Cu and Hg values from the central part of the grid. The distribution of metal values from other parts of the grid was tabulated as the analytical results became available, and proved to be very similar. *via histogram*

In general, the orange coloured isograds indicate the regional threshold while the red coloured isograds indicate the local threshold. In most cases, interpretation has been based upon the dispersion pattern formed by the red coloured isograds.

#### Rotary Percussion Drilling

*encl 67+68?*  
A total of 9,456 feet of rotary percussion drilling tested several geochemical anomalies and sampled most of the quartz breccia zone, as it is presently known, to a maximum depth of 120 feet from surface. Cuttings from the 102 holes were sampled in 10 foot sections and assayed for Cu and Mo or MoS<sub>2</sub>.

Samples from holes 1 to 39 (except 30) were assayed by Coast Eldridge while those from holes 40 to 102 (and 30) were assayed by T.S.L. Laboratories Ltd. The Coast Eldridge assays were by standard wet chemical methods while the T.S.L. assays were less expensive spectrographic semiquantitative estimates. A total of 670 samples were assayed. *select some of good group for checks*

STREAM SILTS, MINERAL HILL

ANOMALOUS: total Mo 5 ppm

Cx Zn 20 ppm - cold

Cx Cu 10 ppm - cold

total Cu 140 ppm Total

total Zn 250 ppm - total

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VERY HIGH total Mo 10 ppm

Cx Zn 80 ppm - cold

Cx Cu 60 ppm - cold

total Cu 1,000 ppm - total

total Zn 1,000 ppm "





*Siet*  
Stream Sampling

Eighty-four stream sediment samples were collected on and adjacent to the property, and two anomalous areas of interest have been indicated.

One area is high in Mo, and is possibly centered 2,000 feet north of the 1,100 ppm Mo soil anomaly, suggesting an area of interest adjacent to and east of the present grid.

The other samples of interest are high in Cu and Zn, and indicate a new area of interest, apparently unrelated to any known mineral occurrences.

*not  
feasible  
this year  
Nov. 20/67  
recommen  
extend no  
soil & stream  
sampling*

Prospecting

A single day was spent examining and sampling several showings one mile east of the camp. Sphalerite, galena, chalcopryrite, tetrahedrite, pyrite and secondary copper carbonates occur spottily along quartz veins of 6 inches to 2 feet in width that strike roughly north-south and dip 20° to 30° to the east. Outcrop is not extensive but the overburden is believed to be shallow on the fairly steep hillside. One average grab sample <sup>16428</sup> of better mineralization assayed 52 oz Ag per ton and 13% Pb, while an average grab sample <sup>16426</sup> of the better mineralization from another location approximately 1,000 feet to the south assayed 26 oz Ag per ton and 48% Zn.

*frequency*

*poss 6/1000 (new) peak line  
extend prospect by ① - S.S./H.M.  
② - S.P. - make w.  
quartzite  
③ - Ag garden detail  
S.P. anomalies*

## Recommendations and Conclusions

### Soil Sampling

An extension of the geochemical coverage is recommended to investigate an inferred Mo anomaly between the grid and a major lineament to the east. Also, extension of the geochemical coverage to the west and south is suggested in case of further interest in the alaskite zone. An anticipated increase in overburden thickness to the west will probably not rule out soil sampling until the bottom of the hill is reached.

*Based on Bell Y-H*

### Rotary Percussion Drilling

*R.P. vs. Diamond Core P.C.*

It is this writer's opinion that a drilling program of any type should not commence until preliminary surveys to locate suitable targets have been completed.

*✓ O.D. just ahead of geophysical exploration*

#### The following work is planned:

(a) To prepare for display a small quantity of cuttings from each sample for lithologic determination.

(b) To check the reliability of the semiquantitative estimates by assaying several of these samples by another method.

*concur*

*some fair correspondences show up*

#### Treatment of assay results:

Assays from drill holes 48 to 102 on the quartz breccia zone have been prepared in the following two ways:

(a) The distribution of assays of the samples closest to surface was graphed (figs. 4,6,8,10) and contoured in plan (figs. 12,13) in order to check the degree of correlation between the drilling results and the soil geochemistry.



(b) The distribution of the averaged assays of all the samples from holes 48 to 102 was graphed (figs. 5,7,9,11) and contoured in plan (figs. 14,15) to determine the average distribution and to see if any change in metal content with depth is indicated.

*(c) w.k. plan to select best intervals of each hole & average  
from core logs of these - re spatial average & see dip or depth relationship*

Correlation of drilling results with soil geochemistry over the breccia zone ranged from good to poor. this could be due to the spotty nature of the mineralization, and it is possible that where the soil geochemistry did not reflect mineralization in the drill holes, the values did not extend to the surface of the bedrock. *- suggest a flat contour - E dip*

The averaged assays in particular display a strong localization of higher values in plan as shown in figs. 14 and 15.

In fig. 9 the curve displays a new node that was not evident in fig. 8, and in fig. 11 the right hand node of the curve in fig. 10 has become dominant. The shift of values to the right in each case indicates an increase in metal content with greater depth. The mean of all the Cu assays from drill holes 48 to 102 is 1.3 times the mean of the Cu assays of the shallowest samples from the same drill holes. This ratio increases slightly within the .009% isograd of fig. 14. Similar ratios were obtained for the Mo values, and it was noted that the ratios for both metals are higher when erratic high values are discarded from the data.

### Stream Sampling

Soil sampling was recommended (above) for the vicinity of stream sediment samples 32 and 33 because both streams are very limited in extent.

The anomalous samples from locations 1½ and 2 miles east of Fishpan Lake present two new areas of interest since the stream at sample site 60 does not flow into the stream at



sample site 7. The high cxCu and cxZn values (with cxMe/Me ratios in the 10% range and above) suggest that simple, cold extraction analyses (which can be carried out on the property) present a suitable method for tracing the source of anomalous values, at least in the streams.

### Prospecting

The development pits and adits on the property indicate the area has been well covered by prospectors in the past. However, stream sediment analyses suggest the occurrence of rather more extensive mineralization than has apparently been discovered in the past. The shallow overburden as well as the nature of known mineral occurrences presents a suitable application for integrated geochemical and self potential prospecting.

Although the known quartz veins do not themselves suggest an economic situation, the high Ag values obtained practically dictate that the extent of mineralization be determined and its character understood.

FREQUENCY DISTRIBUTION OF Mo, Cu & Hg CONTENT OF THE SOIL FROM CENTRAL PART OF GRID ON THE MINERAL HILL PROPERTY.

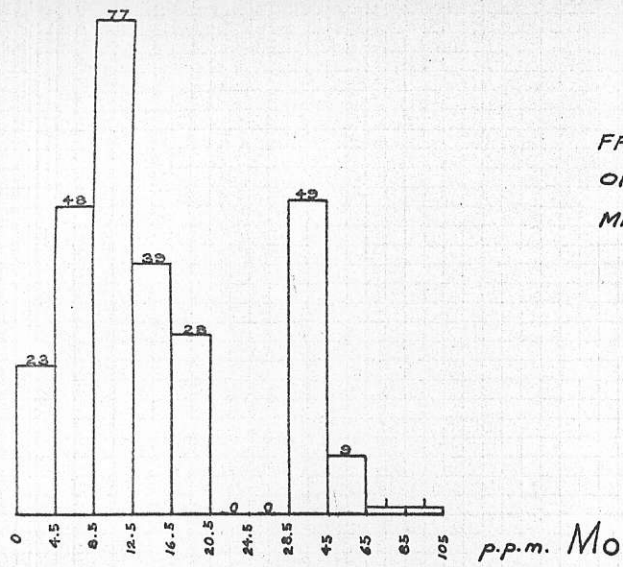


FIG. 1

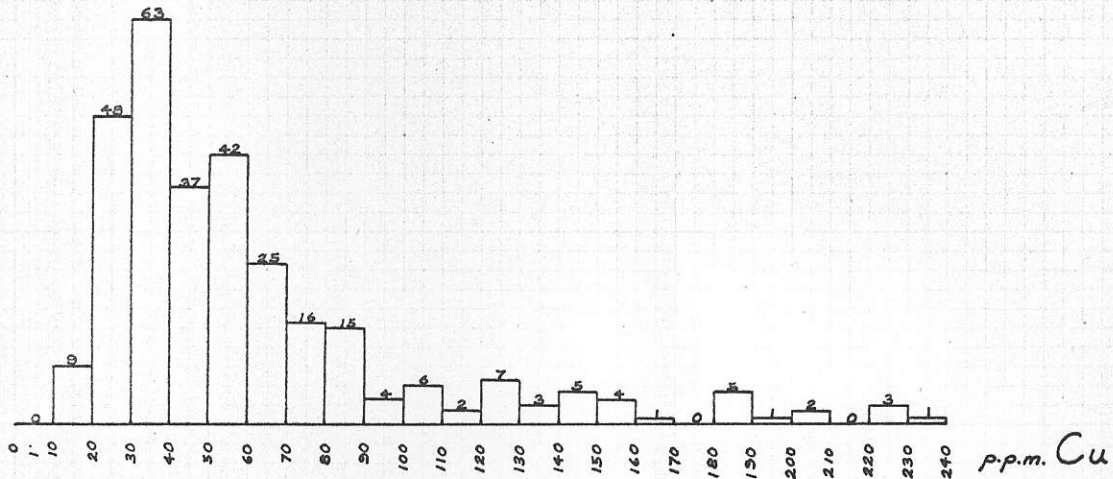


FIG. 2

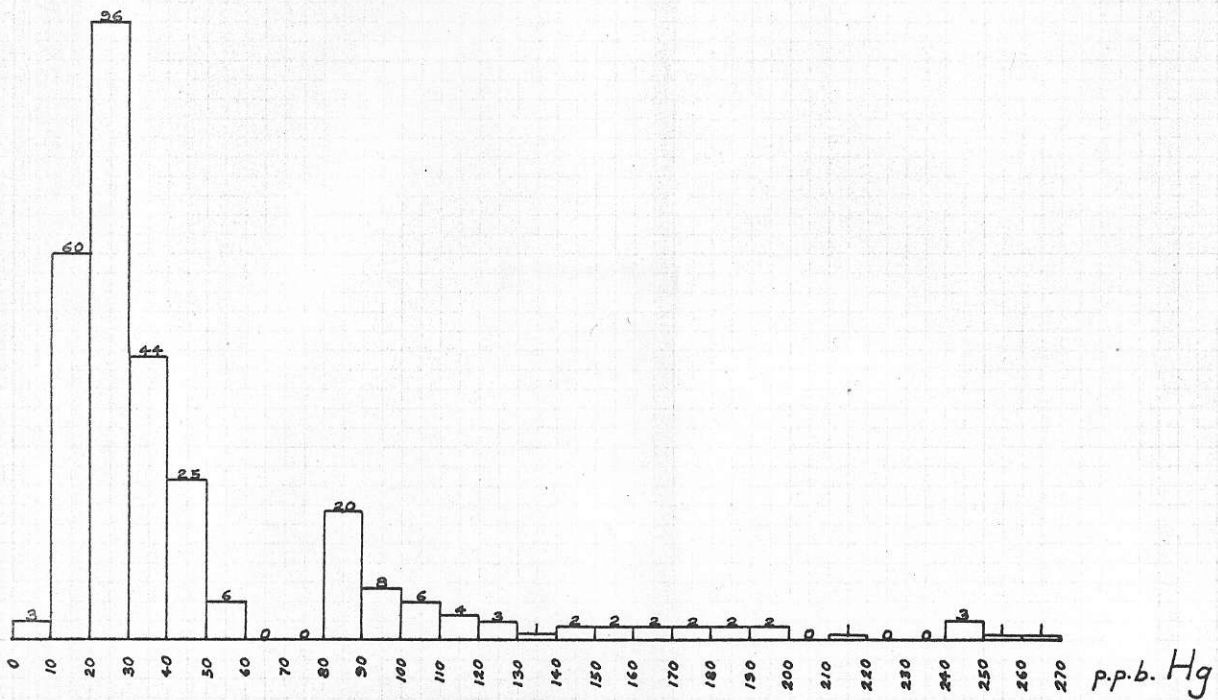


FIG. 3

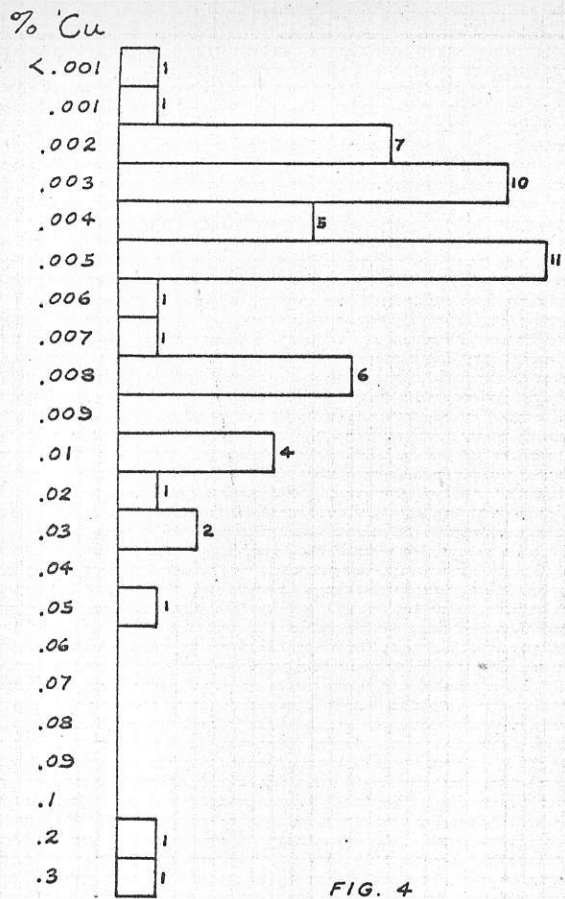


FIG. 4

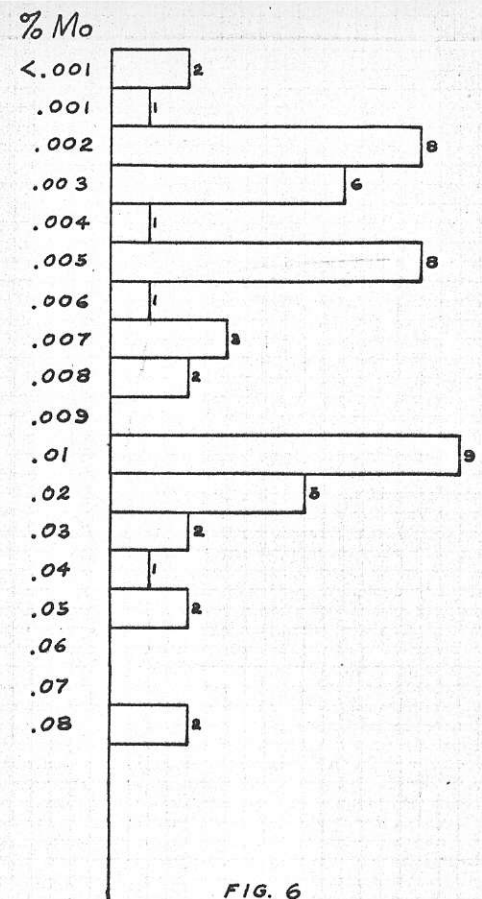


FIG. 6

FREQUENCY DISTRIBUTION OF ASSAYS OF FIRST (TOP) SAMPLES ONLY FROM PERCUSSION DRILL HOLES ON BRECCIA ZONE.

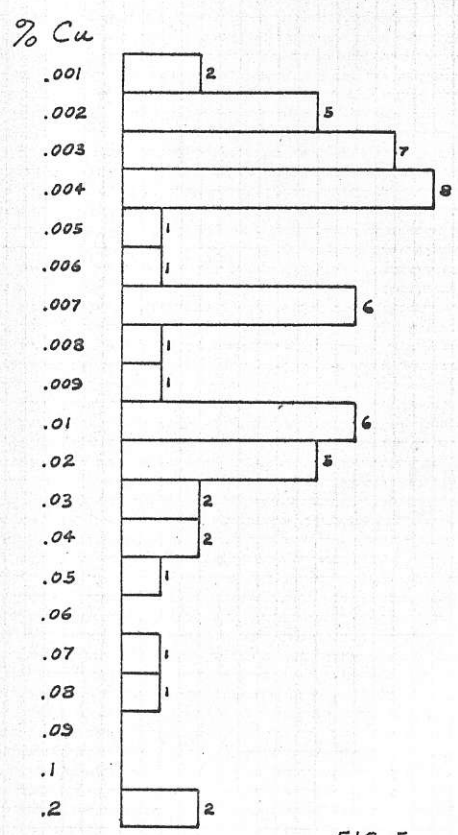


FIG. 5

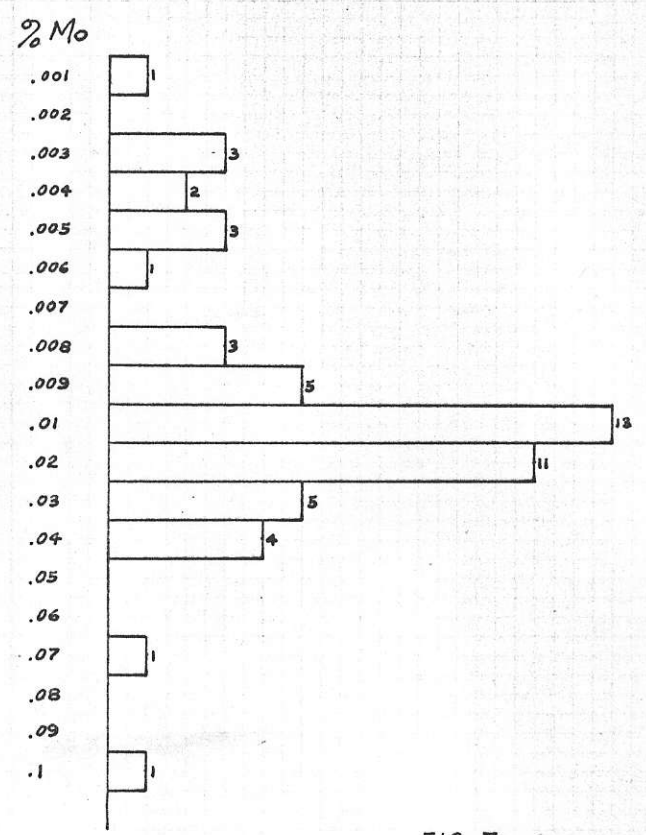
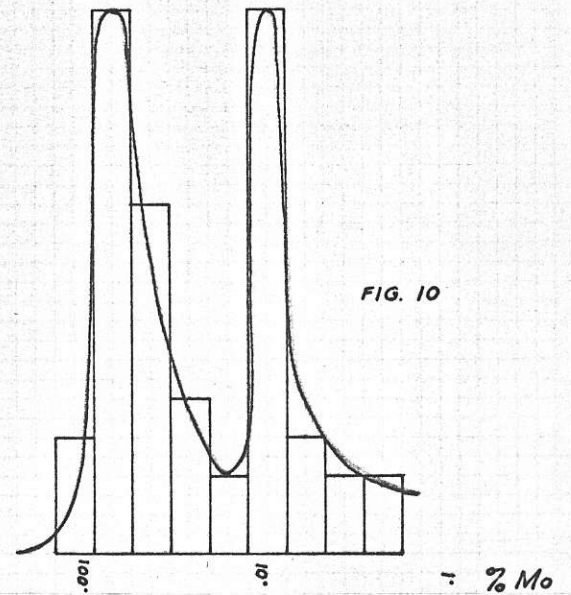
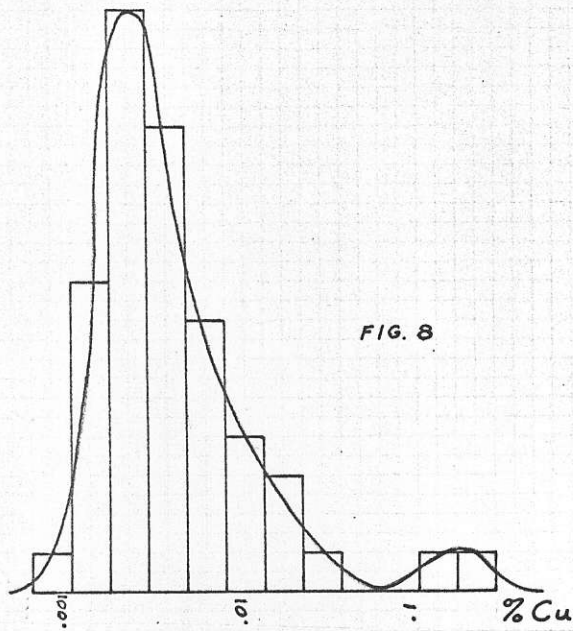


FIG. 7

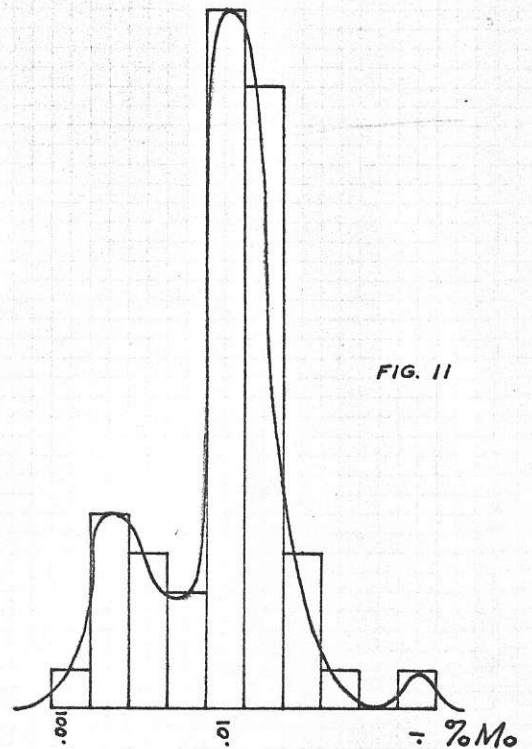
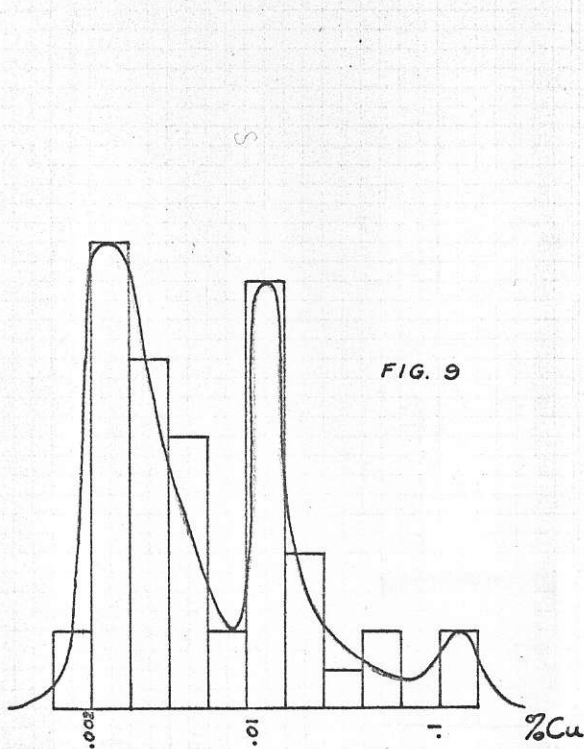
FREQUENCY DISTRIBUTION OF AVERAGED ASSAYS OF ALL SAMPLES FROM PERCUSSION DRILL HOLES ON BRECCIA ZONE.



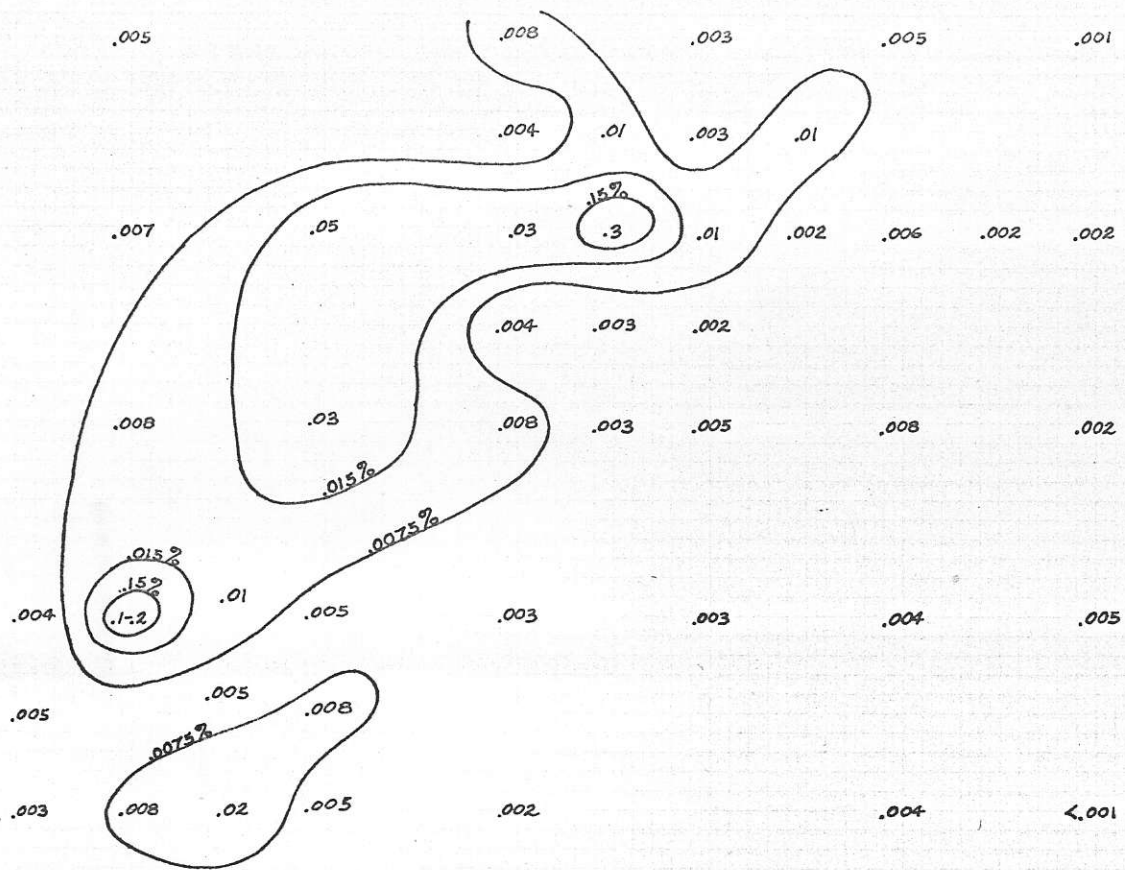
# HISTOGRAMS.



FREQUENCY DISTRIBUTION OF ASSAYS OF FIRST (TOP) SAMPLES ONLY FROM PERCUSSION DRILL HOLES ON BRECCIA ZONE. RAW DATA FROM FIG REGROUPED FOR PRESENTATION.



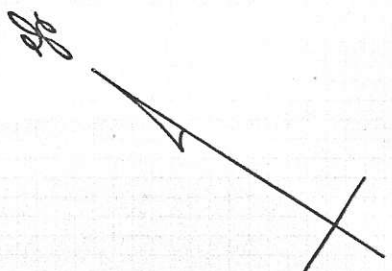
FREQUENCY DISTRIBUTION OF AVERAGED ASSAYS OF ALL SAMPLES FROM PERCUSSION DRILL HOLES ON BRECCIA ZONE. RAW DATA FROM FIG REGROUPED FOR PRESENTATION.



—  $\Phi$  — .003 — .008 .02 .005 — .002 — .004 —  $\Phi$  — .001 —

ISOGRAD VALUES  
 .15 }  
 .015 } % Cu  
 .0075 }

PLAN OF Cu ASSAYS OF FIRST (TOP) SAMPLES ONLY  
 FROM PERCUSSION DRILL HOLES ON BRECCIA ZONE.



0+00' 1/2

SCALE

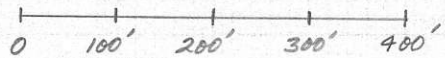


FIG. 12

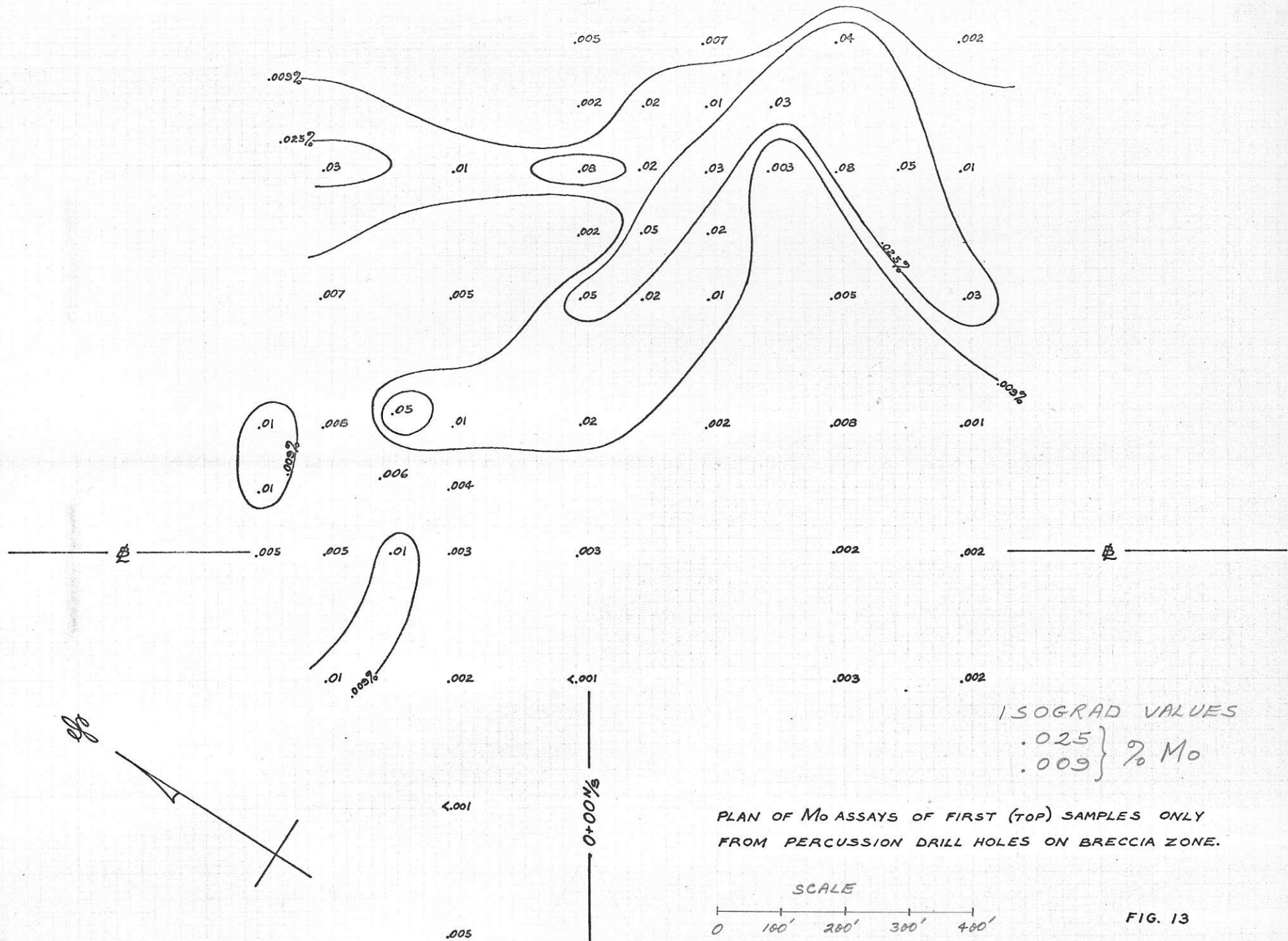


FIG. 13



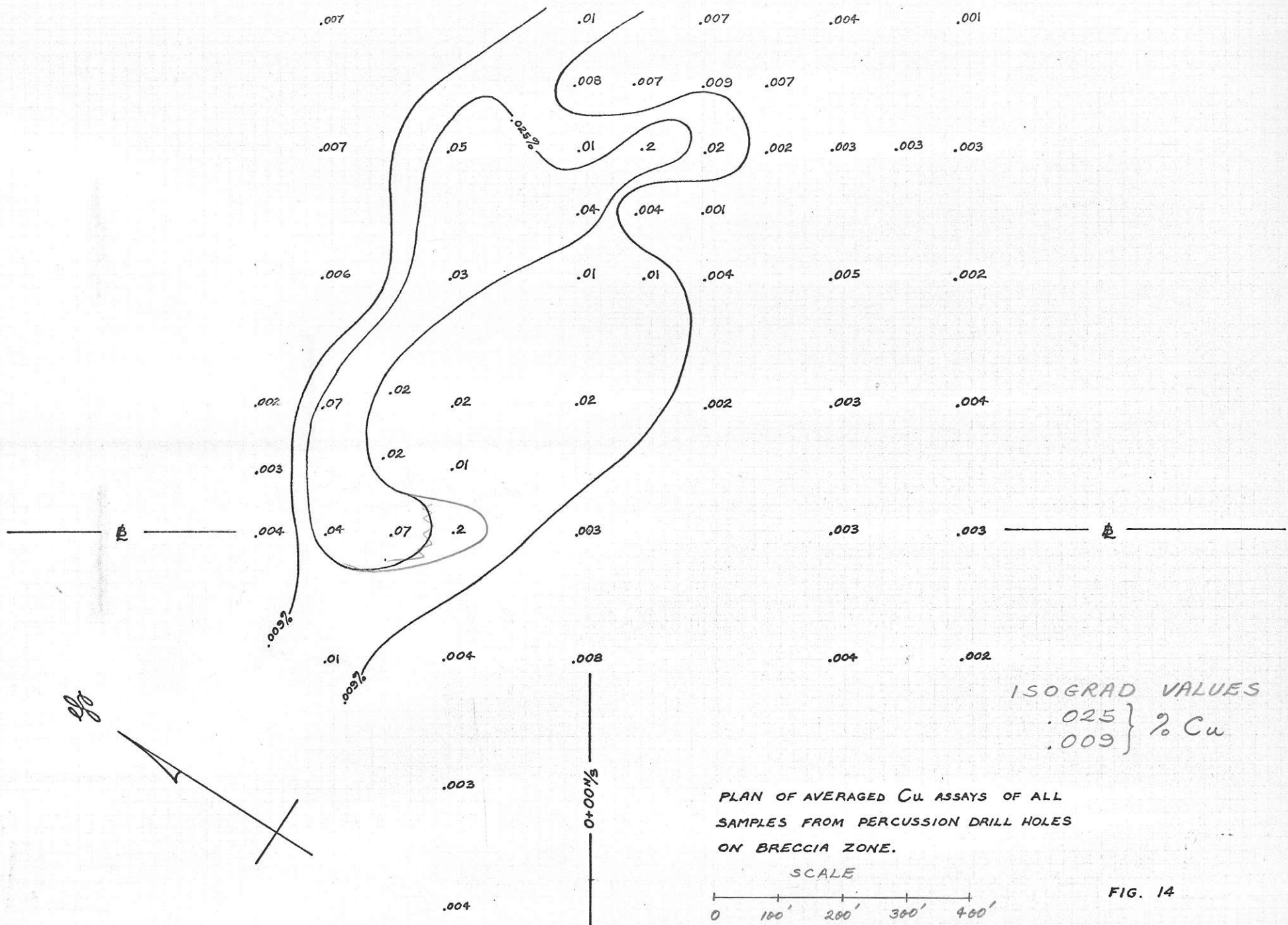


FIG. 14

