Geophysical Work:

013531

Clarke Work

~~Resistivity survey + 3 gravity profiles~~

Resistivity results

(1) Conducting zone extends across surveyed area with low values coincidency with low values obtained in preliminary work 1955

The frozen overburden had effect of lowering all values by at least a factor of 10 as evidenced by values near cliffs at upper end of Cub C. where overburden was shallow. The overburden effect made the actual numerical values of resistivity difficult to evaluate in terms of ore possibilities.

The results showed that a conducting zone extended south from Cub C. The zone itself appeared to be irratic in conductivity. and appeared to be terminating before the Creek showing the rusty o.c. was reached. The rusty o. c. did not exhibit markedly low values. No other conducting zone of interest was encountered anywhere else on the surveyed area.

(2) Gravity:

All gravity profile merely showed a smooth east west gradient. No elevations were taken and hence no corrections could be applied. However profile (G1) was along a relatively constant elevation gradient and failed to show any gravity change over the conducting zone.

The gravity change between profile G1 & G3, in the Creek bed, allowed the difference in elevation between the two profiles to be calculated as 160 feet.

Coupled with the drill results in the creek bed the overburden below profile G', was at least 400 feet deep. At this depth a pyrite or chalcopyrite orebody 10 feet wide & 1,000' long would have produced a change in gravity of 0.1 milligals which would be undetectable without a careful topographic survey. To produce a gravity anomaly of 0.5 milligals an orebody of the same length would need to be at least 100 feet wide.

(c) Overburden tests.

Before it was realized from drilling that overburden was extremely deep, measurements were made near (10+00 oN, 5+00 oW) to test overburden depth to 300 feet with inconclusive result. After bedrock had not been reached in a vertical drill hole 135 feet deep in bed of Cub C., measurements were made in an effort to determine whether the creek was flowing over a deep channel previously gouged in bedrock, by a resistivity profile across the creek valley. The evidence showed that no such gorge exists.

Conclusions:

All evidence seems to indicate that the sulfide float found in the Cr. bed originated in the zone of better conductivity. The absence of a gravity anomaly merely showed that the sulfide body from which the float came was not extremely large. The greater nature of the lowest resistivity values within the anomaly zone also strengthened the possibility.

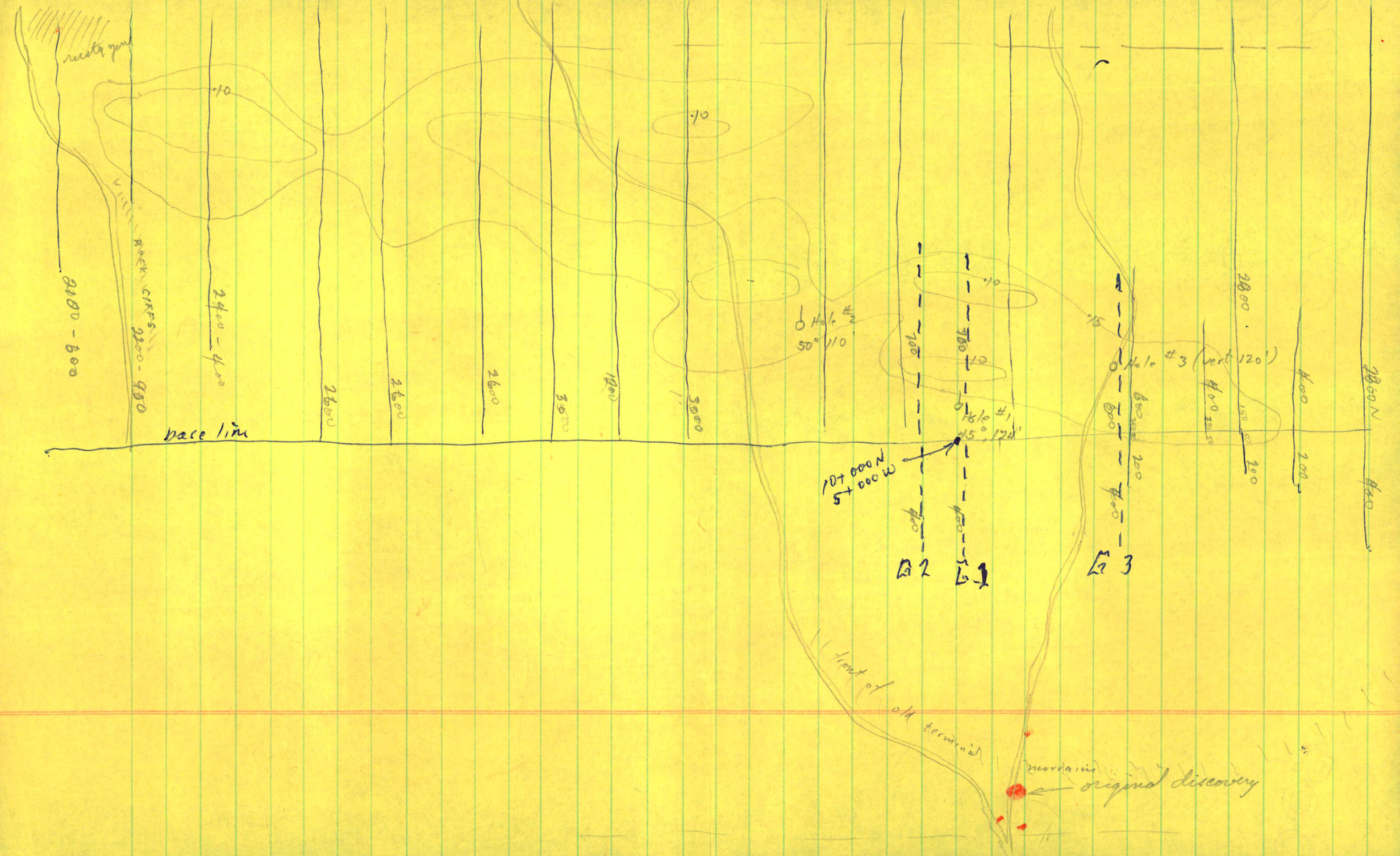
that ore occurrences along the zone would be short in length. Overburden depth may become less toward the most southerly creek. If this assumption is correct the resistivity values should be less than those actually obtained. In view of the results of diamond drilling at Peak Creek the evidence of the presence of massive sulphide - ore body is not definite enough to warrant the large expenditure required to penetrate the deep overburden.

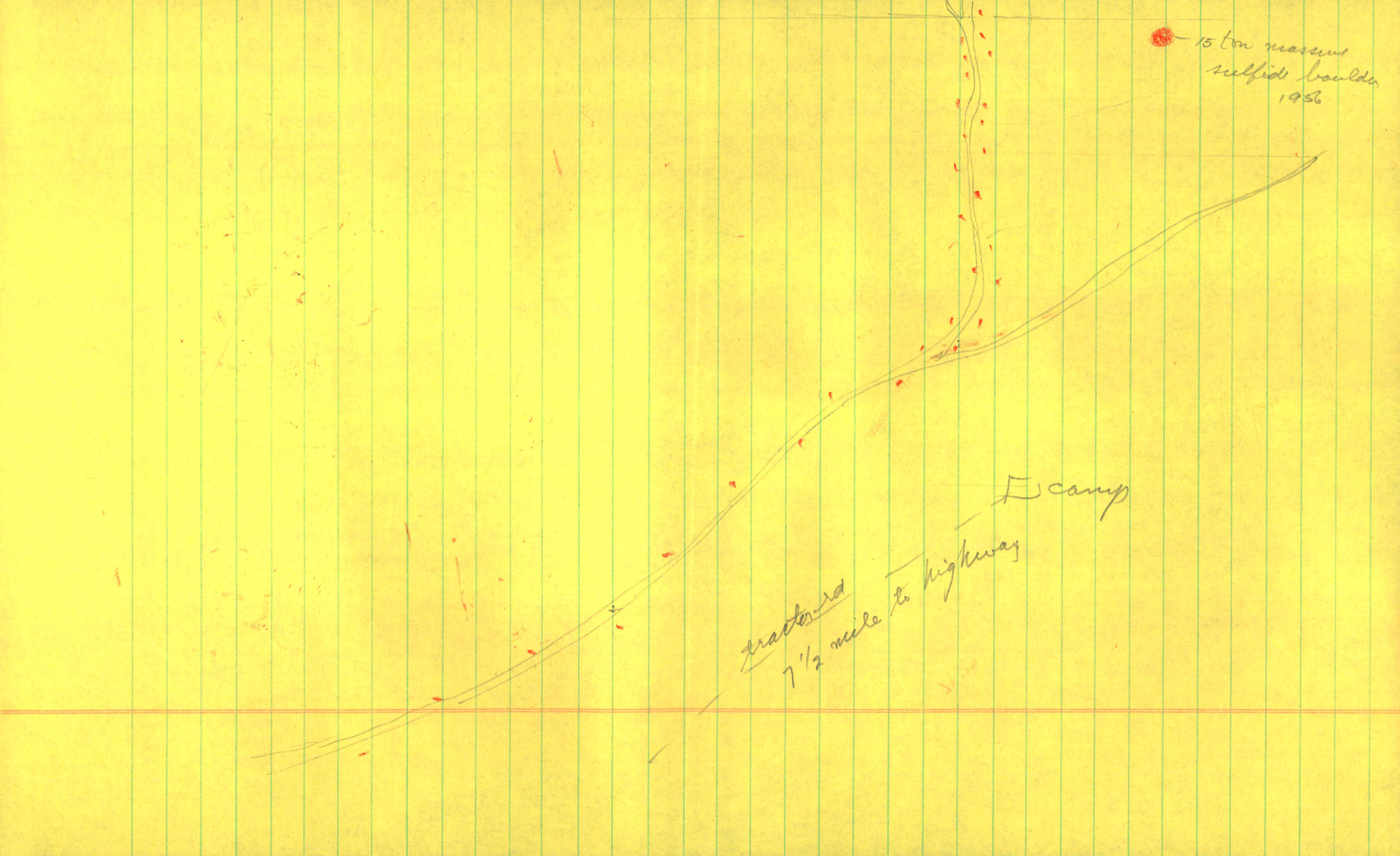
by A R. Clark
Geophysical Consultant
Nov. 1, 1956

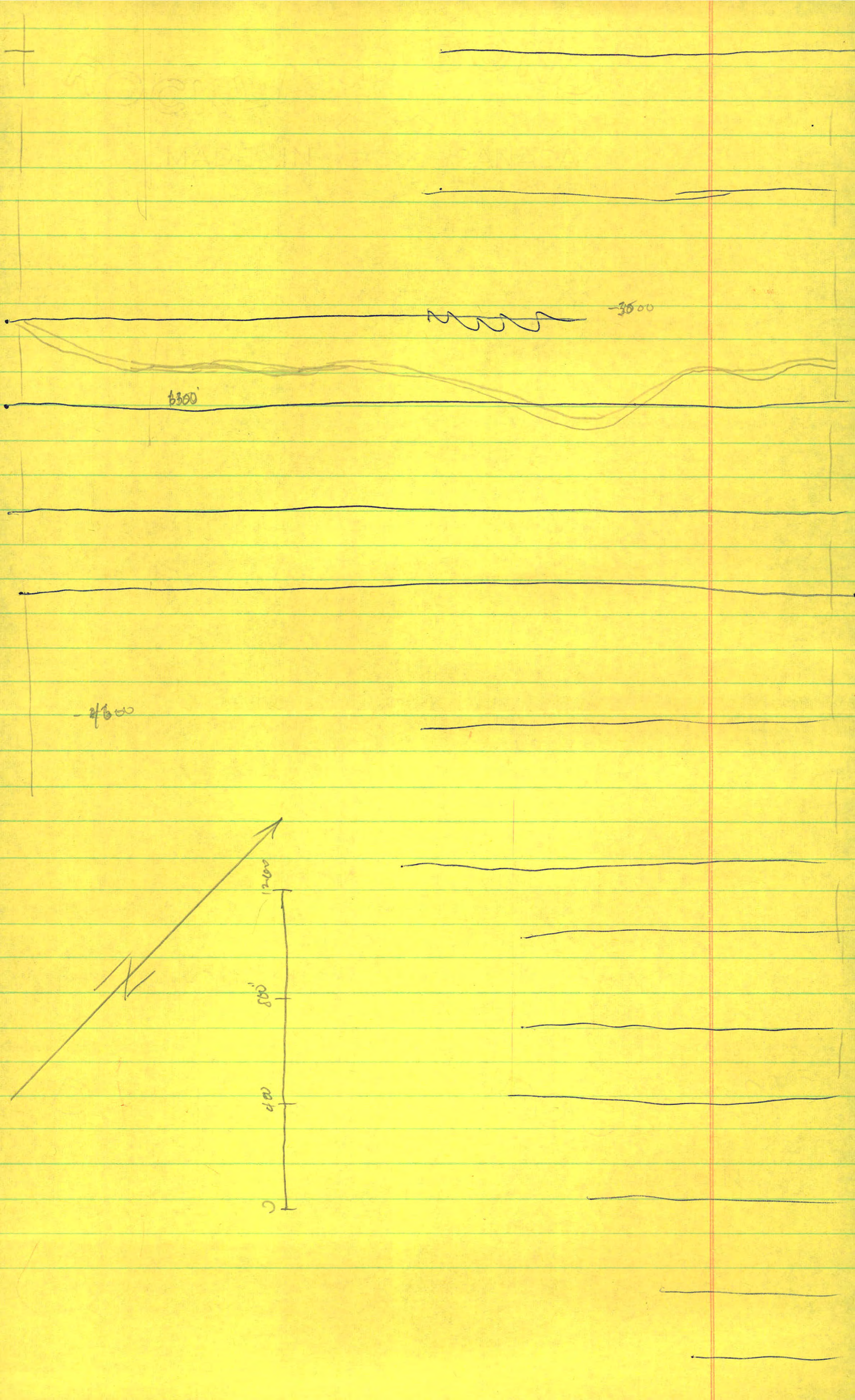
hole #1 0 - 124'
Clay & sand followed by coarse morainic material with very large boulders

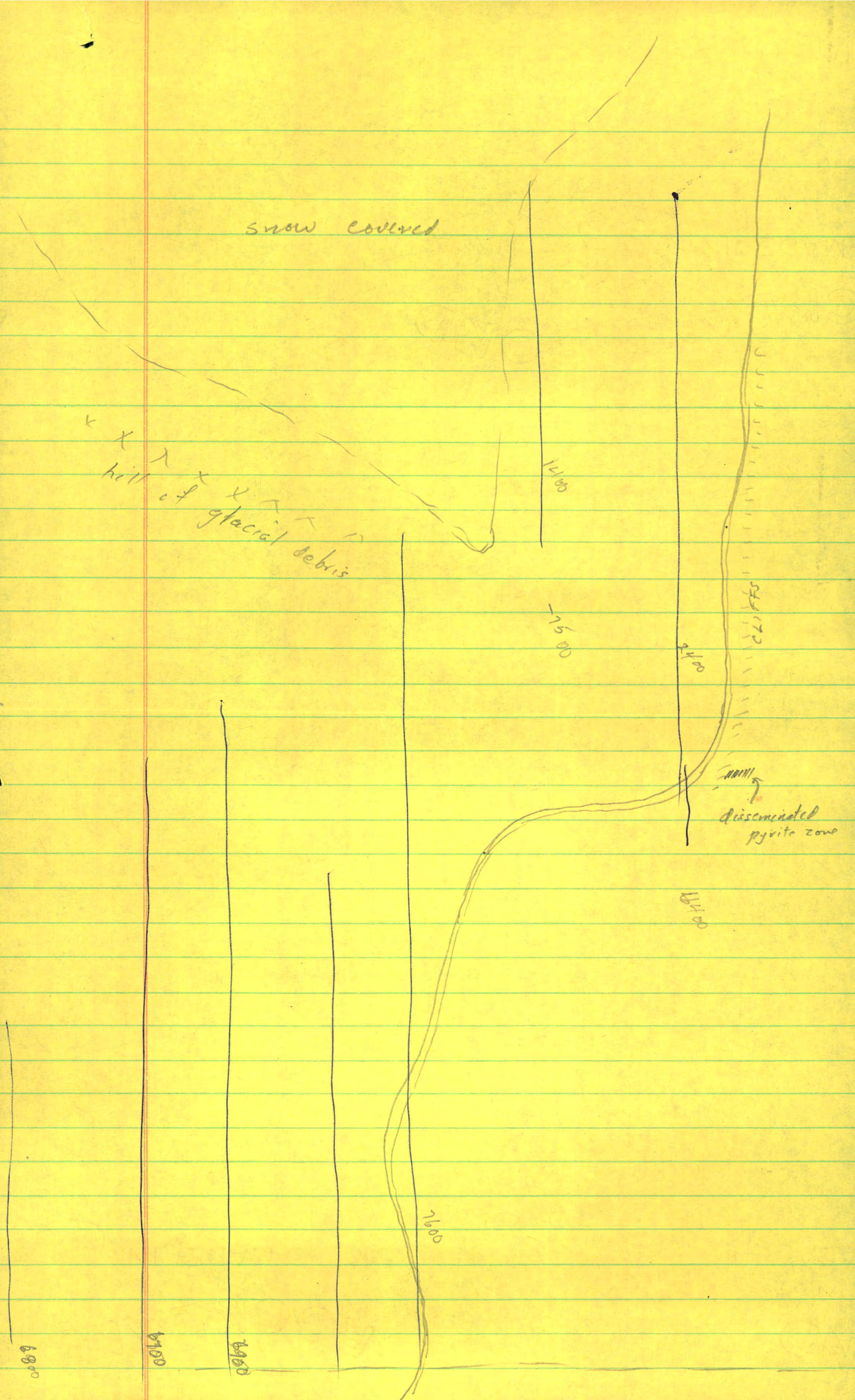
hole #2 0 - 110'
Clay followed by very coarse morain

hole #3 0 - 120'
Sand followed by coarse gravel.


rocky gully
2400 - 600
ROCK CREEK
2200 - 900
2400 - 400
2600
2600
2600
3000
1800
3000
base line
.10
.10
Hole #2
50° 110'
.10
.15
Hole #1
45° 172'
107 000 N
5+000 W
L 2
L 1
L 3
Hole #3 (vert 120')
2800
400
200
200
200
400
front of old dump
mountain
original discovery


15 ton massive sulfide boulder 1956
camp
tractor rd
7 1/2 mile to highway


-3500
-2500
-2500
-1500
-500
C


snow covered
hill of glacial debris
1400
7500
8400
11400
disseminated pyrite zone
7600
6800
6900
6900