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CANADIAN MINE SERVICES LTD.

REPORT ON DIAMOND DRILLING RESULTS

AUGUST - SEPTEMBER, 1968

AT

ALVIJA MINES LTD. (N.P.L.)

R.W. Phendler, P. Eng.
October, 1968

SUMMARY OF REPORT ON DIAMOND
DRILLING RESULTS-AUGUST-SEPTEMBER,
1968, AT ALVIJA MINES LTD. (N.P.L.)
TERRACE, B.C.

The diamond drilling program as carried out on the property in the summer of 1968 attained its objective of exploring the principal mineral zone at depth.

It is evident that supergene enrichment by percolating surface waters has accounted for the high grade copper assayed on surface.

Not one, but four, mineralized fracture zones were encountered. Finely disseminated and blebby bornite was observed throughout the fracture zones. Host rock is fine to medium grained andesite and trachyte with local epidote alternation.

Three intersections on separate zones were interesting, averaging 1.10% Cu and 0.89 oz. Ag across 30.6' with a dollar value of around \$10.00 per ton.

Additional fill-in diamond drilling appears to be warranted with a couple of holes checking for extension immediately to the north.

R.W. Phendler, P. Eng.

INTRODUCTION

During August and September of 1968, diamond drilling was carried out to explore the principal mineral zone. This mineral zone was traceable on surface for 240 feet and measured up to 27.0' in width.

Surface samples taken from the shear zone assaying in the 3% - 8.5% Cu range with up to four ounces of associated silver per ton. One sample taken by the writer on August 10, 1968, from the face of the lower adit samples 1.30% Cu and 0.70 oz. Ag. The great difference in surface and underground sampling assays tells us that an appreciable amount of secondary enrichment of the mineralization has taken place.

Four holes were drilled totalling 1042 feet.

GENERAL GEOLOGY

Host rocks in the vicinity of the mineralization are generally andesitic in nature.

The majority of rocks intersected in the drilling are fine-grained dark green homogeneous andesites with minor local epidotized zones. In lesser amounts are fine-grained slightly acidic andesites (trachyte) coarser grained dioritic andesites with pink feldspars and fine-grained, purplish andesites, probably a result of local hydrothermal alteration.

The strongest zones of mineralization appear to be associated with trachy-andesite and the dioritic medium grained andesite accompanies by moderately strong epidotization.

MINERAL DEPOSITS

The object of the diamond drilling program was to explore the principal mineralized shear zone in depth along a strike length of 300'. The observed dip of the mineral zone in the vicinity of the upper adit and in the face of the lower adit was 60° to the west.

This dip was verified when drill holes 1 and 2 intersected mineralization where expected. Hole 3 also encountered mineralization in the projected location of the principal mineral zone but also encountered three other mineral zones.

It is believed that at least four mineral zones exist in the area and three of these show widths exceeding 25.0'.

Following is a summary of the intersection on all the zones.

<u>ZONES</u>	<u>D.H. No.</u>	<u>Width</u>	<u>%Cu</u>	<u>Oz. Ag</u>	<u>Depth below surface</u>
#1-Principal	A1	9.2'	0.79		280'
	A2	4.3'	0.06	0.29	180'
	A3	27.5'	1.26	0.17	190'
#2 Zone	A2	29.3'	0.85	0.95	240'
	A3	10.0'	0.18		310'
#3 Zone	A2	12.0'	0.48	0.87	300'
	A3	2.0'	1.29	0.96	380'
#4 Zone	A3	35.0'	1.19	0.88	420'

Following is a summary of each hole drilled:

D.H. #1 - 27' overburden - intersected the principal zone or the beginning of the principal zone. Rock types encountered were andesites and trachyte. Lost at 83.5' in cave zone.

D.H. A2 - 7.0' overburden. Continued to 307' and intersected three separate mineral zones. Rock type encountered was dark green andesite and minor medium-grained pink diorite.

D.H. #3 - 5' overburden. Continued to 386' and intersected four separate mineral zones, the deepest of which was 420' down dip from surface.

D.H. #4 - 30' overburden. This hole was drilled one hundred feet past the southernmost limit of mineral as exposed on surface. The hole was drilled to 265' and intersected the traces of both the No. 1 and the No. 2 zones but only as zones of alteration. Copper assays were in the 0.02% range.

ORE

Controls have not as yet made themselves evident. Additional exploratory work will help in determining the cause of the widening and narrowing of the mineral zones. Suffice it to say, at present, that massive unites of homogeneous fine grained andesites are unfavourable for the presence of greater width of mineral. In the vicinity of the wider mineralization it is evident that rock types are generally coarser-grained and/or more siliceous.

It can be seen that three of the four lenses of mineralization attain widths in the 30' range. The zones that are the most interesting are as follows:

<u>Zone</u>	<u>D.H. No.</u>	<u>Width</u>	<u>%Cu</u>	<u>Oz. Ag</u>
1	A3	27.5	1.26	0.17
2	A2	29.3	0.85	0.95
4	A3	35.0	1.19	0.88
Average		30.6'	1.10	0.69

Dollar value of mineral in place grading 1.10% Cu and 0.69 Ag is as follows:

1.10% Cu yields 22lbs. per ton @45¢/lb-90% recovery= \$8.90
 0.69% Oz. Ag yields 0.69 oz. per ton @2.35/ton -
 90% recovery= 1.46

Total \$10.36

A dilution factor of up to 20% may have to be applied, depending on mining methods used. This, of course, would result in a drop in dollar values of mill heads by this amount.

Milling and mining costs with this width of mineralization are estimated to be \$8.00 per ton.

ORE RESERVES AND POSSIBILITIES

With #4 hole intersecting no mineralization of any significance we must look to the north to build up the ore reserve picture.

With three parallel mineral lenses existing with widths in the 30' range, the ore reserve picture is indeed brighter than originally thought with only one mineralized shear zone.

Mineral zones with 30' width require a minimum 100' strike length if the grade of 1.10% is continuous throughout. This is a minimum stopable size and would permit proper stope preparation.

If the three lenses of mineral presently discovered have average lengths of 100' and down dip extensions of 200' there is a potential 200,000 tons of ore on the property.

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A minimum million tons of ore grading 1.10% Cu and 0.69 oz Ag would be required to make this property an economic proposition. There is no reason why this tonnage cannot be proved up with additional development work.

RECOMMENDATIONS

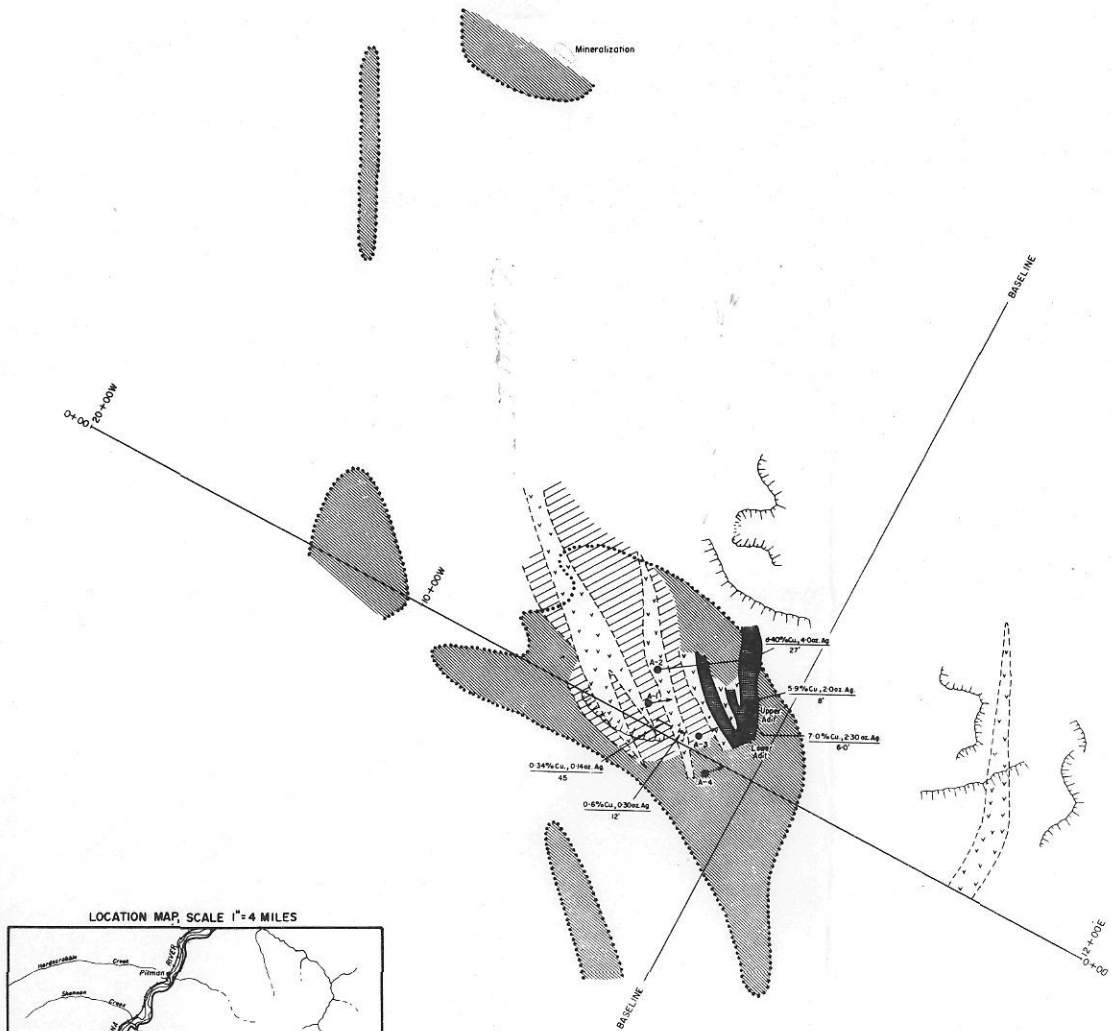
Additional exploratory drilling is warranted. Drill holes should be planned to intersect all mineral zones on 100' centers.

One hole should be drilled a hundred feet above hole A3 to check for continuity of all mineral zones. It is believed that the mineral occurs as a series of southerly-plunging pipe-like zones and a hole that adjoins one that encounters wider mineralization either passes above or below the pipe.

One hole should be drilled between Holes 2 and 3. Two holes should be drilled 100' apart north of the present drilling.

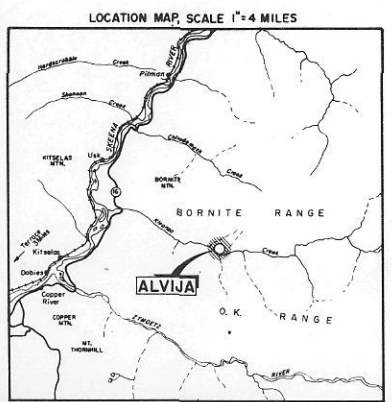
Total - 4 holes at 500' - 2000' at \$10 per foot - \$20,000

R.W. Phendler, P. Eng.



LEGEND

- GEOLOGY**
- Coarse grained partly brecciated intermediate Volcanics
 - Fine grained compact intermediate Volcanics
 - Mineralization
- GEOCHEMICAL**
- Geochemical anomaly (Copper)
 - Diamond Drill Hole
 - Cliffs

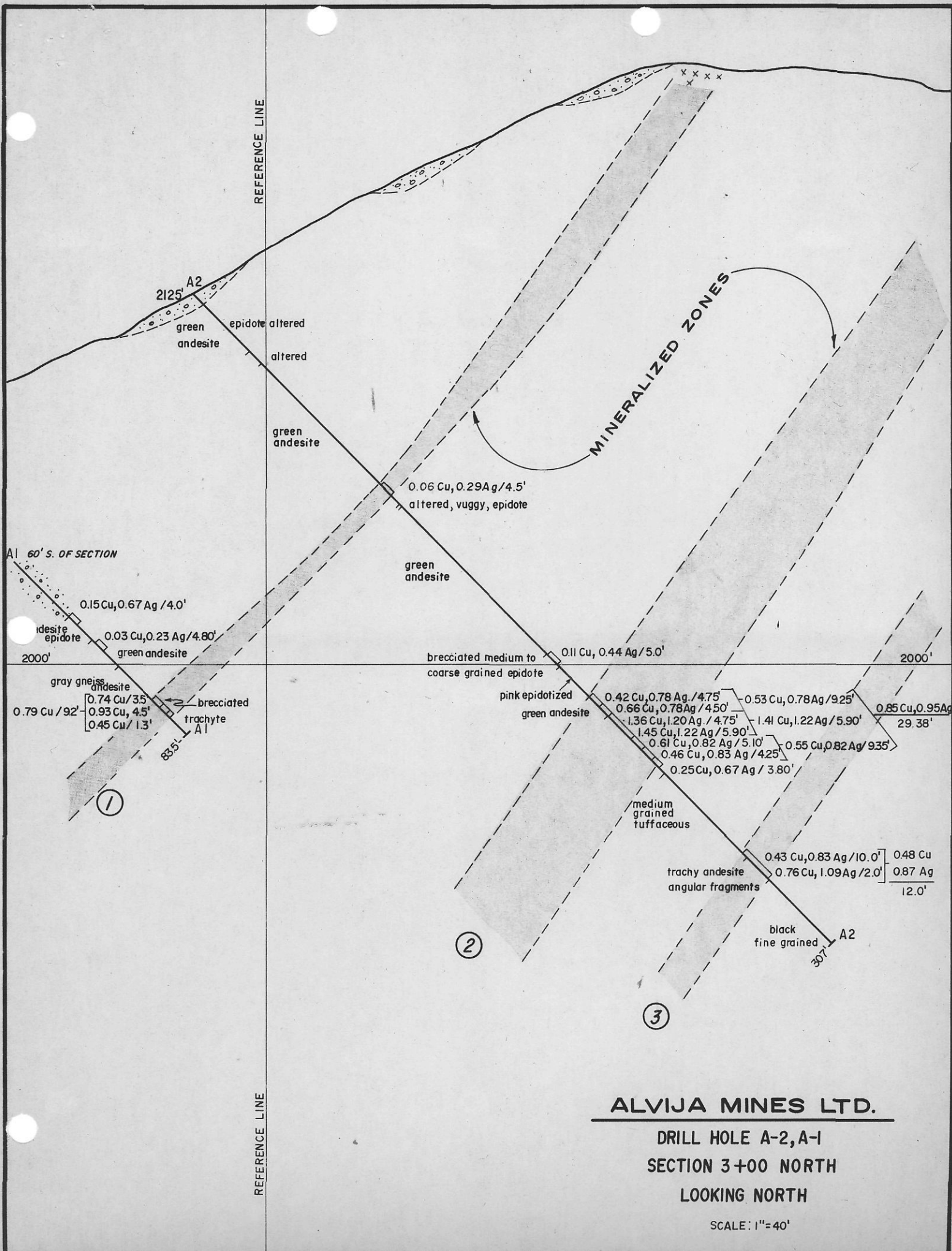


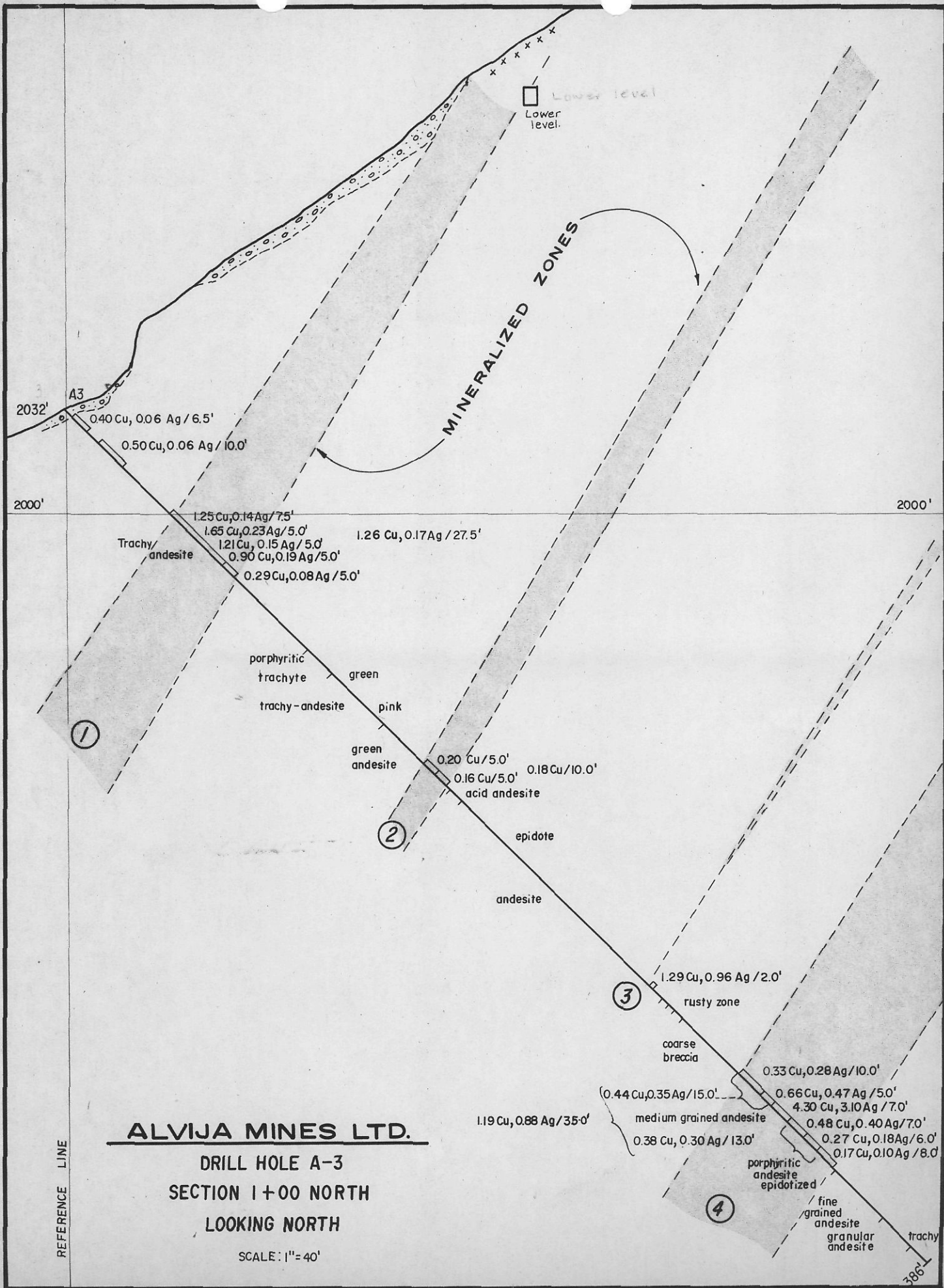
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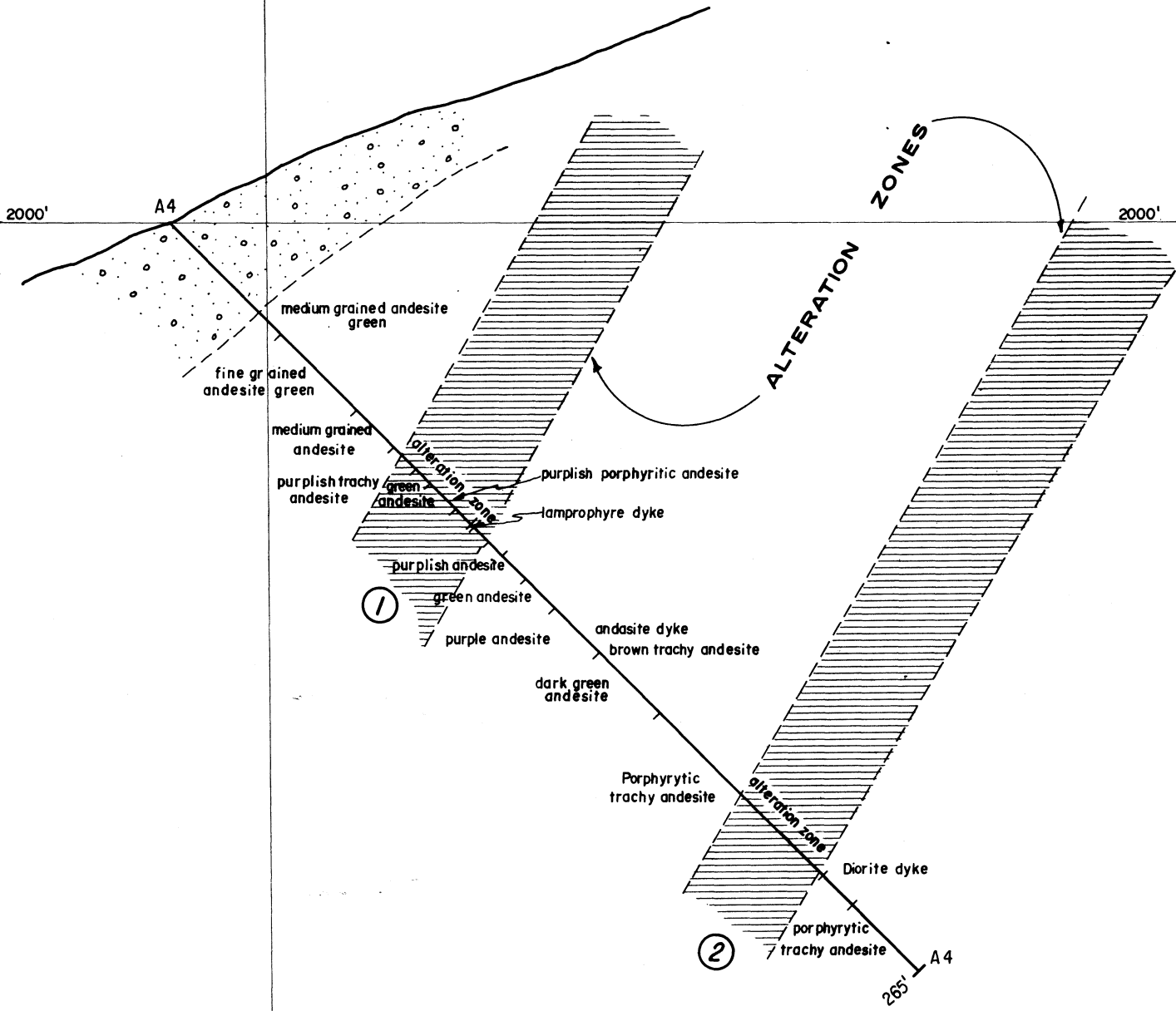
ALVIJA MINES LTD.
TERRACE B.C.

COMPOSITE PLAN
SHOWING
GEOCHEMICAL ANOMALIES, MINERALIZATION
& DIAMOND DRILL HOLES







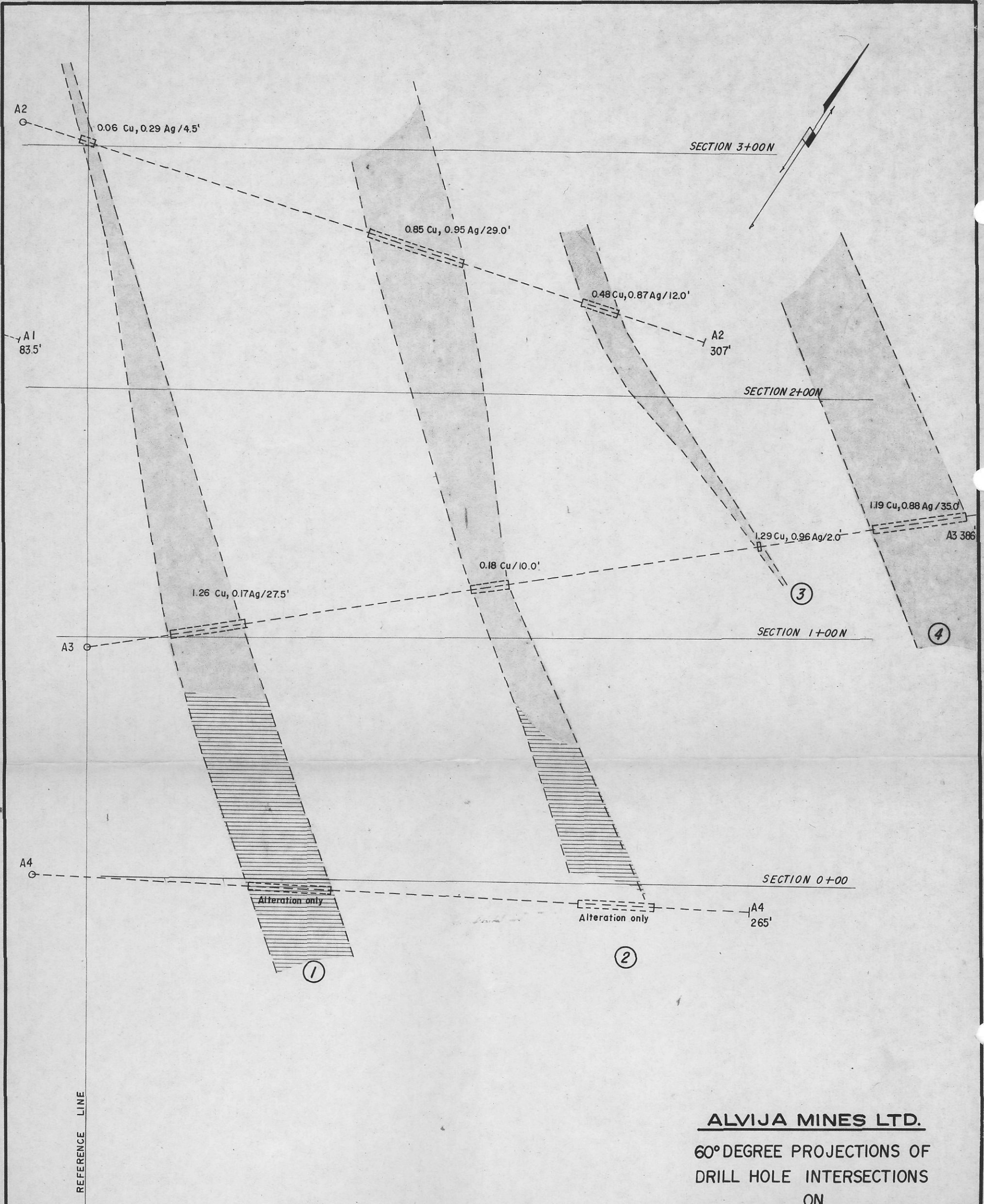


REFERENCE LINE

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DRILL HOLE A-4
SECTION 0+00 NORTH
LOOKING NORTH

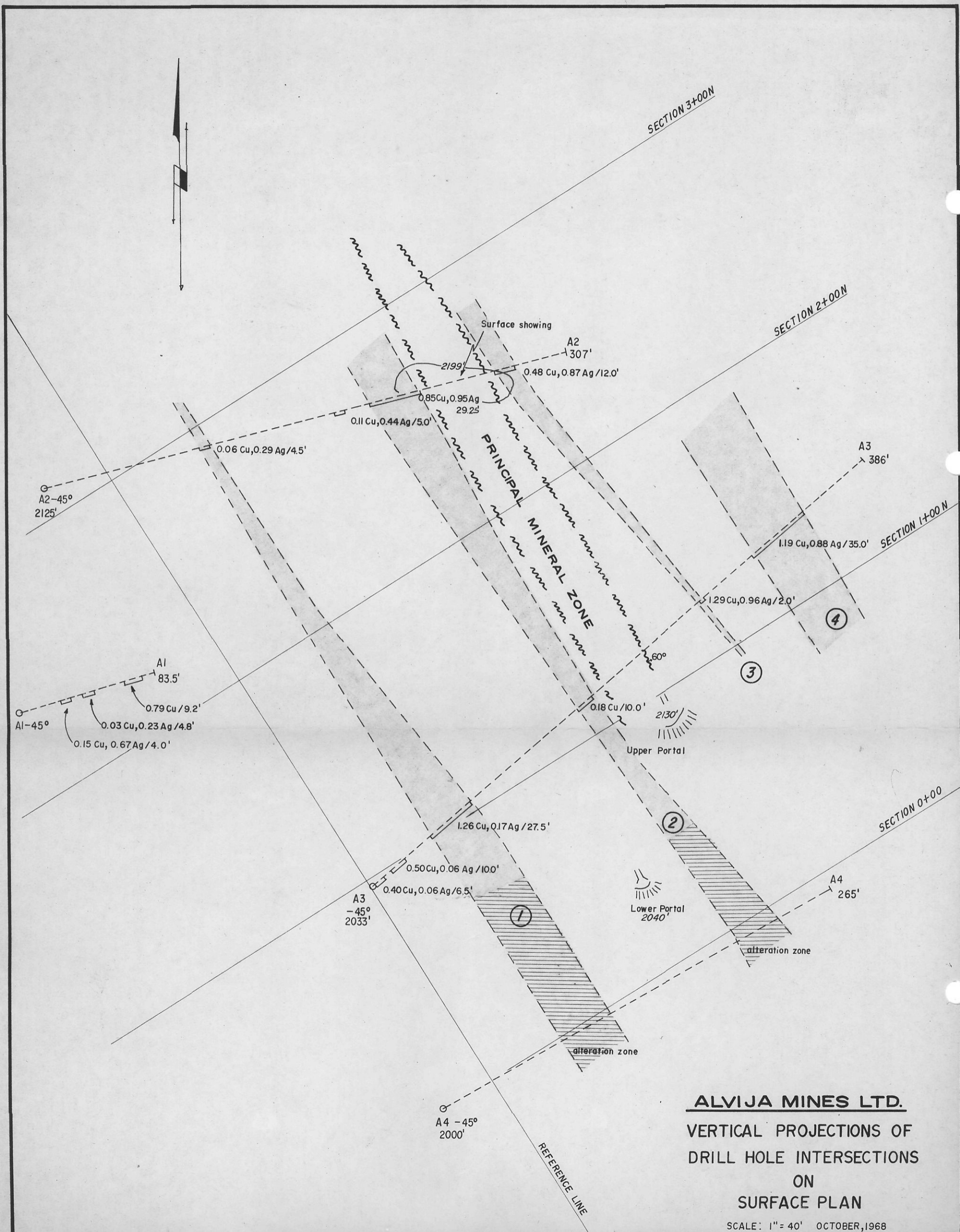
SCALE: 1"=40'



REFERENCE LINE

ALVIJA MINES LTD.
 60° DEGREE PROJECTIONS OF
 DRILL HOLE INTERSECTIONS
 ON
 2000' HORIZON

SCALE: 1" = 40' OCTOBER, 1968



ALVIJA MINES LTD.
VERTICAL PROJECTIONS OF
DRILL HOLE INTERSECTIONS
ON
SURFACE PLAN

SCALE: 1" = 40' OCTOBER, 1968