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Hurley River Mines
Copper Canyon Property
(Merritt Area)

92 I 3

COPPER CANYON ENGINEERING

REPORT DATED JULY 8th, 1963

and SUPPLEMENTARY REPORT DATED

AUGUST 31st, 1963

B.R. Richards

June 29, 1964

Hurley River Mines Ltd.,
535 Howe Street,
Vancouver, B.C.

Dear Sirs:

An examination of properties held by your Company in the Mimenuh Mountain area located at the headwaters of Nuaitch Creek about five miles west of Canford, B.C. was completed on Saturday, June 27th, 1963. My brief report is submitted hereunder:

Purpose and Scope of Examination:

The purpose of the investigation was to make a physical appraisal of the work completed during 1963 under direction of Mr. B. R. Richards, P. Eng., and to substantiate conclusions and recommendations made by him in reports dated July 8th and August 31st, 1963.

Useful reference was made on site to the various geological, geophysical and geochemical plans covering the localized area in which stripping and drilling had been done adjacent to Copper Canyon Creek. All drill sites were examined and results noted from the drill logs. Core had been removed from the property and was not available for inspection.

Road cuts and bulldozed trenches criss-crossing the main porphyry intrusive body were carefully examined for evidence of mineralization and controlling structural features.

The useful help of Mr. Paul Polischuck who had conducted some of the earlier exploratory drilling and surface stripping on the property is gratefully acknowledged.

Details such as property location, access, history, and other general conditions have been recorded by Richards and will not be repeated herein.

Summary of Observations and Comments:

1. The property is favourable located with respect to existing roads and transportation facilities. Access to conduct further exploration or development of the claims presents no problem.

2. The exploratory drilling conducted to date has failed to expose continuous zones of commercial grade copper mineralization within the favourable quartz porphyry host rock. However, the area tested so far has been quite limited in extent with spacing of drill holes directed primarily to obtain geological data rather than outlining possible mineralized sections.

3. The reconnaissance type magnetic and geochemical survey completed to date have indicated that use of these methods to outline approximate extremities of the favourable host-type porphyry and possible mineralization is quite effective. A more systematic grid layout should be established over a larger area for any contemplated further work.

4. Due to the heavy timber cover on the claims, effective use of bulldozer stripping or trenching was limited to making sidehill cuts, which have since sloughed in to obliterate any zones or structural information obtained at the time. Any future trenching done should be closely controlled by engineering supervision on a daily basis with detail mapping and sampling done on a concurrent basis.

5. The preliminary geological information compiled to date indicates a strong Southerly trend to the mineralized quartz porphyry intrusive. Interpretations made concerning the Westerly dip of the porphyry body appear reasonable in view of results from drill hole 13 and the geophysical work. Referring to the log on the hole as recorded by Richards, and confirmed by assay, interesting copper values were received at the termination of the hole to indicate start of a possible mineralized section that should be further investigated.

6. Mineralization exposed to date by surface trenching and

Summary of Observations and Comments: (Cont'd)

as reported in the drill logs appeared to be related to intense shearing with associated alteration and sericization within sections of the main porphyry body. It was disconcerting to note that the copper mineralization seemed to favour deposition along jointing and fracture planes rather than being disseminated throughout the zones of shearing. Only further detailed investigation by cross-sectional drilling will determine the distributional characteristics of the mineralization.

Recommended Programme:

Further work should be initiated on the property under a recommended schedule as outlined below:

1. Rehabilitate the road to the property and set up a tent camp for about six men.

2. Employ a competent Geological Engineer and two assistants to extend the former grid layout at the Southwest end of the property. Tie in all outcrops and geological information as available. Proceed with further systematic geophysical and geochemical surveying along closely spaced grid lines over known mineralized areas South and West of Copper Canyon Creek and along the expanded grid.

3. Use interpretations from the above work to lay out a pattern of cross-sectional drill lines starting on the line already partially probed by drill hole 13. This section should be carried down slope to cut the area of mineralization exposed in the sidehill trench about 150' East of #2 baseline on Section line 00 NS.

4. The drill holes should be logged in close detail to establish any structural trends controlling possible mineralized sections intersected in order to re-orient the sectional lines if necessary.

## Estimated Time and Cost Schedule:

### General Conditions

**Crew:**

1 senior Geologist in charge
2 student assistants
2 general labourers
1 cook

**Equipment Requirements:**

D-7 Bulldozer - rental unit

4-Wheel drive pickup - rental or lease

Chain saw and auxiliary tools, etc.

Usual camp and cookery equipment

**Time Schedule:**

| | | |
|---|---|---|
| 1. | Mobilization, road rehabilitation and camp set-up | 1 week |
| 2. | Preliminary surface survey and expanded grid layout | 2 " |
| 3. | Geophysical and geochemical survey and interpretation of results | 3 " |
| 4. | Diamond drilling - estimate about 5,000' -depending on results | 6 " |
| | Total Exploration Period | 12 weeks |

Cost Estimate:

| | | |
|---|---|---|
| Payrolls - Technical - (600 x 3 x 4) | $ 7,200 | |
| General - (500 x 3 x 3) | 4,500 | |
| | 11,700 | |
| Fringes, etc. @ 12% gross payroll | 1,400 | $ 13,100 |
| Camp Operation - | | |
| Cookery - (600 x 4) - loss | $ 2,400 | |
| General Supplies | 600 | |
| Pickup operating | 400 | 3,400 |
| Equipment Rentals - | | |
| Dozer time (200 x 18) | $ 3,600 | |
| Pickup - lease rental (3½ x 300) | 1,050 | |
| Power Saws, etc. | 400 | 5,050 |
| Diamond Drilling - | | |
| - say - 5000' @ $4.50 | $22,500 | 22,500 |
| General Expenses - | | |
| Tel & tel | $ 250 | |
| Geochemical kits & supplies | 150 | |
| Assaying | 800 | |
| Consulting Fees & reports | 1,000 | |
| Head office administration | 1,200 | 3,400 |
| Total Estimated Costs | | $ 47,450 |

With contingencies - say - $50,000

General Conclusion:

The work conducted on your property during 1963 has provided sufficient preliminary data and results to justify the expanded programme as recommended above.

The cost estimate is based on full completion of the work as suggested and is subject to revision dependant on the success of each phase of the programme.

Respectfully submitted,

L. G. White, P. Eng.,
Consulting Mining Engineer

LGW/sg
June 29, 1964

# C E R T I F I C A T I O N

I, Leonard George White, of the City of West Vancouver, in the Province of British Columbia, hereby certify as follows:

1. That I am a Registered Professional Engineer of the Provinces of British Columbia and Ontario and reside at 704 Parkside Road, West Vancouver, B.C.

2. That I am a graduate of Washington State University with a Bachelor of Science in Mining Engineering having practised my profession for twenty years.

3. That I have no interest either directly or indirectly in the Copper Canyon property.

4. That my report is based on an examination on June 27th, 1964 and reference to previous company and government reports on the property.

L. G. White, P. Eng.

Vancouver, B.C.
June 29, 1964

# SUPPLEMENTARY REPORT

# COPPER CANYON GROUP

## AUGUST 31st, 1963

## GENERAL

Since July 8, 1963, the date of the last report on the property, the work recommended therein, plus the drilling of one hole, has been completed.

This work consisted of:

1) The extension of #2 baseline and crosslines to the south
2) The extension of the magnetic survey to cover the extended grid.
3) The extension of soil sampling to cover the same area.
4) The drilling of Hole #13 to a depth of 350 feet.

Maps accompanying this report show the plotted results of the surveys, also section and plan of drill hole #13. The log and assay report of Hole #13 are included with the data on the previous holes.

## RESULTS OF WORK:

Magnetic Survey: The survey outlines the limits of the quartz porphyry, which has a lower magnetic susceptibility than the enclosing volcanics. The porphyry is extensive on the west side of No. 2 baseline, with a probable width of 100 ft. and a length of at least 1200. It probably extends beyond the surveyed area to the south.

Geochemical Survey: The rubeanic method was used in the field, with samples then chemically analyzed for total copper content. The plan shows the results in parts per million of copper

An anomalous area is indicated from the road to the top of the hill to the west. The area is roughly oval, elongated north-south, the long axis being 1000 feet and the short about 500. This area correlates with the zone of magnetic lows

indicated in the magnetic survey.

It can be concluded that the quartz porphyry carries copper over the length of the anomaly. The width is indeterminate, due to the downward migration of the copper ions from the source uphill. The grade, of course, cannot be determined from the results of the survey.

Diamond Drilling: Hole #13 was collared on the road, dipping at -30 degrees and striking to the west to intersect the quartz porphyry. The hole entered the porphyry at 312 feet. The porphyry here apparently dips to the west at approximately 65 degrees. Other porphyry occurrences on the property are vertical, or dipping slightly to the east. The 38 feet of porphyry cut by the hole averaged 0.16% copper. The last 4 feet ran 0.27%.

Recommendations:

Since Hole #13 did not reach the hanging wall of the porphyry, and since it has now been determined that the dip of the porphyry is to the west rather than to the east, further drilling should be done from west to east.

It is recommended that 3 holes be drilled, totalling about 1000 feet:

#14 drilled to the east on 00 line at 550 feet West, at an angle of -50 degrees, to complete the section started by Hole #13.

#15 similarly drilled from 550 West on line (3S).

#16 similarly drilled from 550 West on line (5S).

B.R. Richards

B. R. Richards,
P. Eng.

Vancouver, Canada.
August 31, 1963.

7-8-63

REPORT ON THE COPPER CANYON, PJH, TENT AND EAGLE GROUPS OF MINERAL CLAIMS IN THE MERRITT AREA OF BRITISH COLUMBIA, By B.R. Richards.

Summary:

Primary copper mineralization, in the form of chalcopyrite, occurs in a quartz porphyry intrusive. The intrusive is emplaced in the nose of sharp, almost vertical fold in the Kingsvale volcanics.

Diamond drilling has indicated several ore grade sections in the porphyry, but no economic body has yet been discovered. Structural and mineralogical conditions, however, are favorable, so that additional drilling and stripping is recommended to more fully investigate the large structure.

Location:

The property is on latitude I20 degrees I2 minutes, and longitude 50 degrees I0 minutes. This is about five miles west of Canford, which is on number 8 highway, between Spences Bridge and Merritt. The distance from Merritt to Canford is I2 miles. An access road following in part the forestry road, suitable for a four wheel drive vehicle, is passable even in inclement weather. The property is at an elevation of 5000 feet above sea level, in a rugged area. However, there is sufficient overburden to make road construction relatively easy, if somewhat expensive.

History:

L. Fournier, prospector of Merritt, held the 8 Copper Canyon Claims until optioned by Amalgamated Resources in I962. At this time additional protective claims were staked. The property now contained 54 claims: 8 Copper Canyon, I7 Eagle, 8 Tent, and 2I PJH, a total area of some 2700 acres.

The property is now controlled by Hurley River Mines, Limited, of 535 Howe Street, Vancouver, B.C.

Ancillary Resources:

Sufficient spruce exists on the property for all construction needs for any sized operation and residential area.

Water is ample for all potential needs, although storage facilities might be necessary to ensure adequate water during the drier part of the year.

Hydro electric power is available from B.C. Hydro and Power Authority.

Road constfuction from the main highway, as mentioned above, is feasible.

Work to date:

The construction of the access road, stripping, and road building on the property.

The drilling of IT recorded holes with A core, with a total footage of 4055. There were three additional holes drilled that are not detailed in this report, being holes 4A, 4B and number 2. The first two were drilled close to, and parallel, hole number 4, to confirm the values obtained in number 4. Hole number 2 was a short hole drilled with an X-Ray drill; most of the core was lost apparently, and there are no records. Hole 4A was I35 feet, and hole 4B was I39. Thus the actual total of A core drilled was 4329 feet. It should be noted here that the better-than-average values obtained in hole number 4 were not confirmed by the two parallel holes 4A and 4B.

The above work was under the supervision of Harvey Cohen and Al Lonergan, both local geologists. The work carried through the period November I962 to May, I963.

During the month of June, I963, certain surveys and other operations were carried on under the supervision of the writer. This work consisted of geological mapping of the two claims uppn which the stripping and drilling had been done, trenching on a copper occurrence on Copper Canyon 2, soil sampling in the area that was geologized, magnetic survey on the same area, reconnaissance soil sampling and prospecting on an area south of the drilling area, a limited electromagnetic survey on parts of Copper Canyon claims I and 2, prospecting, magnetic survey and soil sampling on a long fault area east of the drilled area.

Maps, sections, logs, etc, have been prepared by the writer of all the work performed, and are attached to this report.

Geology:

The volcanics on the property are of the Kingsvale group, Lower Cretaceous in age. Locally they have been intruded by a medium grained quartz porphyry, which is the host to the copper mineralization discussed below.

There are four main rock types. Polished section reports from the Geology Department of University of British Columbia read:

1- ".....quartz porphyry that has been silicified, sericitized and mineralized with finely divided pyrite. A sawn surface shows chalk-white phenocrysts of feldspar in a hard fine grained groundmass. A thin section shows a few large clear phenocrysts of quartz set in a more granular groundmass consisting of quartz, sericitized feldspar, and quartz with seriticite flakes. The rock has been so highly altered that it is not possible to say what the original feldspar was." On the attached map of the geology of part of the property this rock is labelled "quartz diorite porhyry".

2- "This is an altered dacite. In the hand specimen the sample exhibits a greenish-grey groundmass with pinkish-white phenocrysts of feldspar. A thin section shows clear unaltered quartz (phenocrysts) in a groundmass of finely crystalline plagioclase feldspar which is largely altered to sericite and carbonate. Small patches of chlorite and larger areas with good crystal outline suggest formation from hornblende and biotite." On the attached geology map this rock is labelled "green porphyry".

3- "This rock is an altered basalt. A thin section shows a groundmass of plagioclase laths with several large olivine crystals that are almost completely altered to a mixture of chlorite, sericite and and calcite. In the hand specimen there is one large vug or amygdule with chalcedony and calcite." This rock is labelled "andesite" on the attached geology map.

4- A sample was taken from one of the rusty zones shown on the attached geology map. The thin section report reads: "This rock may be the unaletered equivalent of number I. It is a latite. A thin section shows a few large phenocrysts of quartz in a groundmass of plagioclase and quartz that are more or less sericitized. Apatite is preent in accessory amounts. The red color of the rock is due to the weathering of finely divided pyrite." This rock is labelled "fine grained quartz porphyry, pyritized" on the attached map.

Structure.

The claims cover a major structural feature - a large "drag fold". There is a distance of one mile between the flanks of the fold. The structure has been upturned to a vertical attitude with a possible steep dip to the north west. Attached to this report is a sketch of a structural interpretation, taken from ground examinations, magnetic surveys, and aerial photographs. See Aerial photograph BC2867:I5.

There is a major fault running through the property, striking north 37 degrees east. Its dip has not been determined, but is likely about vertical. Fault material was intersected by hole number I2, indicating its presence in the drill area. The north east extension from here is plainly visible for at least two miles, although there are no rock exposures. Magnetics confirm its presence as well. Nowhere is there any evidence of the nature of the movement and displacement.

The quartz porphyry has intruded parts of the fold. A large body of the rock lies on Copper Canyon Claims numbers I and 2, where the drilling has been contentrated. Local mapping, using outcrops and magnetics, indicates that this porphyry is more extensive than surface exposures indicate.

A piece of "float" was found on the road into camp, about one and one half miles east of the drilled area. It was a piece of altered quartz porphyry,

discolored throughout with small patches of malachite. A sample from the float assayed 0.I5% copper. The location of the float would indicate that it comes from the easterly nose of the major fold, about one mile east of the known occurrences

Copper and other sulphide mineralization.

Copper occurs on the property in the form of primary chalcopyrite and secondary malachite and azurite. Drill cores and surface showings indicate that it is associated with pyrite. The association is not an intimate one. It is a case of copper bearing horizons lying adjacent to pyritized zones. This suggests a "halo" relationship between the two minerals. It is noteworthy that the pyrite zones, in which no chalcopyrite or other copper mineral is discernible, always carry low values in copper. For example, the two pyritized zones of fine grained porphyry ran 0.08% and 0.07% copper respectively.

Assays from the drill core indicate that the porphyry carries small amounts of copper throughout. A polished section of a piece of core, in which no chalcopyrite was visible, even with a mineral glass, indicated "small amounts of very finely divided chalcopyrite, pyrite and magnetite."

The copper mineralization is associated with calcite and quartz, introduced into the porphyry during its last stages of cooling. It also occurs in larger amounts as blebs of both in the rock as an original constituent, and as joint and fracture fillings. Small amounts of chalcopyrite was noted in the fault gouge cut by hole number I2. This indicates that copper mineralization post dates the faulting, and indicates the possibility that somewhere along its length the major fault may contain economic amounts of the metal.

A surface sample taken from one of the trenches ran 0.02% molybdenum. No molybdenite has been seen by the writer in the porphyry, but in view of this assay, its presence should not be overlooked.

The best exposure of chalcopyrite, malachite and azurite occurs

on Copper Canyon Number 2, coordinates 25S I50E off baseline 2. It is shown on accompanying maps as a "trench". A representative sample from here ran 2.95% copper. The copper bearing zone has been trenched to a width of I2 feet. The chalcopyrite mineralization is very heavy, composed of large blebs of massive sulphides, coarse grained. Overburden masks its extent. Results of soil sampling given below suggests that the occurrence extends up to I000 feet to the south.

Recent soil sampling, discussed below, indicate the presence of another copper bearing section south west of here. Sampling is to be extended over a wider area, followed by stripping.

Other copper bearing zones, where the drilling has been concentrated, have been very limited and low grade compared with the occurrence described above. Also geochemical results are much better on this area, and to the south west, than thay have been in the area where the drilling has been done.

General

The geology of the area is mapped on the Ashcroft Sheet, Map number IOIOA, scale one inch to four miles. The work was done by S. Duffel and K.C. McTaggart of the Geological Survey of Canada in I945, 46 and 47.

Report of Magnetic Survey:

The work was performed in June, I963, by the writer, assisted by W. McClelland and A.W. McGuire, both of Merritt. The instrument used was an Askania, with a scale constant of 252 gammas. Controls were two baselines, with crosslines at (approximately) every I00 feet. Readings were taken every I00 feet on these crosslines.

The results of the survey are shown on the accompanying contoured map.

The magnetometer proved useful in differentiating the rock types. The quartz porphyry was in part defined in this way, as the magnetic susceptibility of this rock is about I000 gammas lower than the enclosing volcanics. The survey proved useful in augmenting the geological mapping, where overburden made visual methods impossible.

Report of Electromagnetic Survey:

The survey was performed during the month of June, 1963 by the writer, assisted by W. McClelland. The instrument used was a Sharpe SEI00, an intrsument using the vertical loop. The results are shown on the accompanying map. The conductors indicated are very doubtful, and no conclusions can be drawn from the survey, nor can any follow-up be recommended on the basis of it.

Report of Soil Samplings

Reconnaissance survey: Attached to this report is a map showing the results of a reconnaissance survey made south of the drilled area, down and along Copper Canyon Creek, for a distance of about one mile. The survey was started near hole number I2. The anomalous analyses obtained for the first I000 down the creek indicate that the copper bearing horizon exposed in the trench, discussed above, has considerable extent to the south. Whether or not the grade holds up is another question, and can be determined only by additional work, such as stripping and/or drilling.

Detailed survey: Attached to this report is a map showing the results of a detailed geochemical survey over the area that has been mapped geologically and surveyed geophysically. The most interesting section is in the south west corner where no work had been done previously. An extremely high geochemical anomaly is indicated, with values up to 20 times "background". This indicates a prolific copper source nearby.

Considerations:

The quartz porphyry, host rock of the copper mineralization is extensive, evidence of its existence having been noted over a distance of one mile. Wherever it has been seen, it carries copper values.

Structurally the situation is extremely favorable for sulphide deposition.

Geochemical surveys so far have indicated copper occurs in areas where so far no work has been done.

Recommendations:

I- Continuation of soil sampling, magnetic and geologic mapping of the favorable structure to the limits of the property, both east and west.

2- Where the results of the soil sampling is favorable, stripping to determine the nature of the copper source.

3- Drilling , where soil sampling and stripping indicate. One such zone now known should be tested by drilling. This is the area surrounding the copper occurrence south west of hole number I2, and described above, and the extension of this as indicated by soil sampling to the south. It is suggested, however, that this be deferred until the work outlined under I- and 2- above is completed.

Costs:

It is suggested that an estimate can only be made at this time to cover the preliminary work proposed under I- and 2- above. An estimate of drilling costs will depend upon this work and will have to be deferred. An estimate of these preliminary costs are:

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|---|---|
| Salaries, two men for one month | $II00.00 |
| Supplies and transportation | I50.00 |
| Assays and soil analyses | 200.00 |
| Stripping, 20 hours at $20 | 400.00 |
| Contingencies | I50.00 |
| Total | $2000.00 |

Merritt, B.C.,
July 8, I963

B.R. Richards

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: No. I
Claim: Copper Canyon No. 2.
Co-ordinates: 24E I56S (BL #I)
Collar Elevation: 5285 ft.

Azimuth: 313 degrees
Dip: -30 degrees
Depth: 265 feet.
Logged by: B.R. Richards, May 26/63.

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|---|---|
| 0.0 - 35.0 | Casing. |
| 35.0 - 226.5 | Grey quartz diorite porphyry. Scattered minute biotite flakes. Fractured, sometimes carbonate-filled. Erratic and fine dissemination of chalcopyrite. Rare fine grained pyrite. At least some of the chalcopyrite associated with late quartz. stringers, e.g. at 56.7 feet. Calcite bands, perhaps were 4", at 62 feet. Quartz phenocrysts I to 3 millimetres. Fracturing gradually reduced to depth, non-existent at I30 feet, but increasing again from then down hole. Considerable calcite at I49 to I50 feet. Porphyry has mottled appearance from 206 to 208, and then becomes finer grained and darker in color, returning to "normal" again at 2I2. |
| 226.5 - 237.0 | Andesite, fine grained and massive. Jointed. Some joints carbonate filled. Scattered hornblende crystals, giving rock a porhyrits appearance in places. Dark grey to greenish grey in color. |
| 237.0 - 265.0 | Similar to above, but considerable chloritization, fracturing, and carbonatization. |

End of Hole.

Hurley River Mines Limited.
Copper Canyon Diamond Drilling.

Hole: No. 3 — Azimuth: 59 degrees
Claim : Copper Canyon No. 2. — Dip: -30 degrees
Coordinates: 2I4W 367S (BL #I) — Depth: 5I3 feet
Collar Elevation: 5I90 feet — Logged by: B.R. Richards, May 26/63.

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|---|---|---|
| 0.0 * | I0.0 | Casing. |
| I0.0 - | I9.0 | Quartz diorite porphyry, similar to hole number I, but massive and undisturbed. |
| I9.0 - | 50.0 | Andesite, similar to hole number I, becoming finely porphyritc (feldspar phenocrysts I to 2 MMS), this probably tuffaceous origin. Very fine grained crystalline pyrite common. 3" calcite stringer at 42 feet. |
| 50.0 - | 5I.0 | Highly altered quartz diorite porphyry. |
| 5I.0 - | 58.0 | Andesite, severely crushed and carbonatized. |
| 58.0 - | 98.3 | Andesite, some porphyritic (tuff?) sections. "Platy" chalcopyrite on joint face at 79 feet. Increase in disseminated fine grained pyrite after 82 feet. Some very fine grained chalcopyrite. Some quartz diorite porphyry stringers after 85 feet. |
| 98.3 - | I35.0 | Quartz diorite porpheyry, very massive. Intrusive contact with andesite remnant at 98.3 feet. Fresh, unaltered. Small remnants of andesite throughout. No sulphides. |
| I35.0 - | I58.0 | Massive andesite, occasional slip with calcite and rare chalcopyrite. Some narrow quartz stringers. Porphyry influence from I48 feet on. |
| I58.0 - | 450.0 | Massive quartz diorite porphyry. 3" calcite stringer at I68 feet. No sulphides. Some fracturing I73 - I77 and from I80 feet on. Some fine grained chalcopyrite in slip at 209, also at 2I6 and 239. |
| 450.0 - | 5I3.0 | Quartz diorite porphyry, highly fractured and altered. Considerable calcite in fractures. Scattered rare chalcopyrite crystals. Some andesite remnants. |

End of Hole.

Hurley River Mines, Limted.
Copper Canyon Diamond Drilling.

Hole: No. 4. Azimuth: 239 degrees.
Claim: Copper Canyon No. I. Dip: -25 degrees.
Co-ordinates: I80W 380S (BL #I) Depth: 5I4 feet.
Collar Elevation: 5I90 ft. Logged by: B.R. Richards, May 26/63.

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| 0.0 - 28.0 | Casing. |
| 28.0 - 3I.5 | Fresh quartz diorite porphyry. |
| 3I.5 - 69.0 | Andesite, scattered specks of pyrite, mainly in joints. 6" tingue of quartz diorite porphyry at 62 ft. |
| 69.0 - 75.0 | Fresh quartz diorite porphyry; no sulphides. |
| 75.0 - 86.0 | Andesite, with narrow porphyry injections. Some chalcopyrite at 86 feet. |
| 86.0 - II0.0 | Mainly quartz diorite porphyry, with numerous andesite remnants. This hole is running close to an intrusive contact between the porphyry and andesite. Occasional chalcopyrite in joints and fractures. Some narrow quartz veinlets carrying chalcopyrite at I04 feet. |
| II0.0 - I2I.0 | Green color to porphyry, due to alteration, otherwise similar to porphyry above. Some very fine grained chalcopyrite . Calcite stringer at II5 feet. |
| I2I.0 - I42.0 | Quartz diorite porphyry, but much less alteration. Reduced fracturing. |
| I42.0 - I57.0 | Similar above, but increase in pyrite and chalcopyrite. |
| I57.0 - I63.5 | Highly carbonatized, crushed and alstered section of quartz diorite porphyry. Calcite stringers parallel to core axis. |
| I63.5 - 275.0 | Quartz diorite porphyry, low and erratic dissemination of pyrite and chalcopyrite - less than 0.5%. Some alteration, particularly kaolinization of the feldspars. |
| 275.0 - 326.0 | Quartz diorite porphyry, extremely low dissemination of sulphides. Fracturing, especially after 300 feet. |
| 326.0 - 33I.0 | Andesite, some quartz diorite porphyry tongues. |
| 33I.0 - 340.0 | Quartz diorite porphyry. |
| 340.0 - [illegible].0 | Extremely altered porphyry. Some sections very fine grained. Low dissemination of chalcopyrite and chalcopyrite. Alteration and fracturing reduces to depth. |

2 foot remnant of andesite at 385 to 387.

394.0 - 453.0 Quartz diorite porphyry. Some small remnants of andesite. Some fine grained chalcopyrite on fracture faces at 430 feet. Much of the jointing and calcite fillings are at right angles to the core axis.

454.0 - 509.0 Andesite, with numerous porphyry stringers and considerable calcite.

509.0 - 514.0 Highly altered quartz diorite porphyry. Considerable calcite. Dissemination of very fine grained chalcopyrite.

End of Hole.

Hurley River Mines, Limited.

Copper Canyon Diamond Drilling.

Hole: No. 5.
Claim: Copper Canyon No. I.
Co-ordinates: I95W 380S (EL.#I)
Collar Elevation: 5190 ft.

Azimuth: Vertical Hole
Dip: " "
Depth: 455 Feet.
Logged by: B.R. Richards, May 26/63.

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| | | |
|---|---|---|
| 0.0 | I9.0 | Casing. |
| I9.0 - | I57.0 | Quartz porphyry, some fracturing in the upper part. A very fine grained low dissemination of chalcopyrite in some of the fractures, reducing rapidly down hole. Barren, fresh and unfractured after 70 feet. |
| I57.0 - | 455.0 | Massive, undisturbed andesite to dacite. Scattered crystalline pyrite throughout. |

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: No. 6. Azimuth: Vertical Hole.
Claim: Copper Canyon No. I. Dip: " "
Coordinates: 334W 452S (BL. #I) Depth: 515 feet.
Collar Elevation: 5275 ft. Logged by: B.R. Richards, May 26/63.

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| | |
|---|---|
| 0.0 - 48.0 | Casing. |
| 48.0 - I87.0 | Mostly andesite to dacite, considerable chloritization, calcite, some rust. A dissemination of pyrite, perhaps 3% by volume. Considerable movement. Some fine grained chalcopyrite with the pyrite. Evidence of proximity of the porphyry (some tongues, highly altered. |
| I87.0 - 200.0 | Fine grained phase of porphyry. Actually a contact hybrid. Very little sulphides in rock, but some on fracture faces. |
| 200.0 - 259.0 | Andesite to dacite, silicified, probably affected by nearby porphyry. Disseminated pyrite. |
| 259.0 - 309.0 | Mostly quartz porphyry; has been sheared & fractured. Shearing parallel to the core axis. Disseminated pyrite and chalcopyrite to about 3%. Considerable carbonates, mainly parallel to the core axis. Shearing 60 degrees to the core . Some andesite remnants. |
| 309.0 - 322.0 | Mainly andesite to dacite with minor sections of porphyry. Highly altered as above. |
| 322.0 - 455.0 | Porphyry, as 259-359. |
| 455.0 - 474.0 | Andesite to dacite, fairly uniform, massive and undisturbed. |

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: No. 7.
Claim: Copper Canyon No. 2.
Co-ordinates: I93W 380S (BL. #I)
Collar Elevation: 5I90 ft.

Azimuth: 274 degrees.
Dip: -45 degrees.
Depth: 454 feet.
Logged by: B.R. Richards, May26/63.

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| | |
|---|---|
| 0.0 - 30.0 | Casing. |
| 30.0 - 78.0 | Fresh, unaltered quartz porphyry. |
| 78.0 - 98.0 | Andesite to dacite, scattered crystals of fine pyrite. |
| 98.0 - 2I5.0 | Fresh porphyry, especially on fracture faces. The fine chalcopyrite associated with very minor mafic minerals. Evidence of some shearing. Andesite to dacite remnants common. |
| 2I5.0 - 262.0 | Altered porphyry, with mottled appearance. Some fine grained chalcopyrite. Shearing. |
| 262.0 - 320.0 | Andesite to dacite, perhaps 50% porphyry tongues fro the first I5 feet. Some small blebs of chalcopyrite and pyrite. This pretty well a contact hybrid. |
| 320.0 - 408.0 | Highly altered porphyry, mottled appearance. Very few sulphides. |
| 408.0 - 436.0 | Fresh andesite to dacite, some pyrite on fracture faces. |
| 436.0 - 455.0 | Altered, white-grey porphyry. Some flow remnants. |

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: N. 8. Azimuth: Vertical Hole
Claim: Copper Canyon No. 2. Dip: " "
Co-ordinates: 285W 38S (BL #I) Depth: 302 feet.
Collar Elevation: 5300 ft. Logged by: B.R. Richards, May28/63.

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| | |
|---|---|
| 0.0 - 89.0 | Andesite to dacite, some of it proably tuffaceous origin. Some durface weathering and fracturing to 35 feet. Minor very fine grained magnetite, and some finer grained pyrite. Scattered erratic quartz stringers, $\frac{1}{4}$ to $\frac{1}{2}$ inch. Becoming very massive after 60 feet. Speck or so of chalcopyrite at 72 to 73 feet. |
| 89.0 - I00.00 | Altered quartz porphyry tongue. |
| I00.0 - 200.0 | Andesite to dacite, similar to 0-89. In places hybrid with porphyry. Some chalcopyrite and pyrite dissemination, I33 to I4I, associated with porphyry tongues. |
| 200.0 - 262.0 | Andesite to dacite, very massive. |
| 262.0 - 283.0 | Faulted, chloritized and carbonatized andesite to dacite. |
| 283.0 - 302.0 | Massive flow - andesite to dacite. |

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: No. 9. Azimuth: 74 degrees.
Claim: Copper Canyon No. 2. Dip: -34 degrees.
Co-ordinates: II5W I95S (#I BL) Depth: 354 feet.
Collar Elevation: 5300 ft. Logged by: B.R. Richards, May 26/63.

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| | |
|---|---|
| 0.0 - 8.0 | Casing. |
| 8.0 - 319.0 | Fairley fresh quartz porphyry, grey. Some fracturing aroubd 27 feet with malachite stain, associated with quartz stringers. Also 37 to 42 feet. Reduction in stain and sulphides after that. Finer grained with admixture of andesite to dacite, after 106, and returning to "normal" after I25 feet. Chalcopyrite on slip faces at 145 feet. Increased alteration after 264 feet. |
| 319.0 - 336.0 | Very dark, even grained andesite, contact very clean. |
| 336.0 - 342.0 | Green (altered) tongue of porphyry, probably remnant of basaltic flow showing on surface. |
| 342.0 - 354.0 | Andesite to dacite, similar to 319 to 336. Some altered porphyry tongues. |

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: No. IO
Claim: Copper Canyon No. 2.
Co-ordinates: II5W I95S (BL #I)
Collar Elevation: 5300 ft.

Azimuth: 74 degrees.
Dip: -6I degrees.
Depth: 3I9 feet.
Logged by: B.R. Richards, May 28/63

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| | |
|---|---|
| 0.0 - 47.0 | Grey quartz diorite porphyry; well silicified, with associated copper mineralization, now mainly malachite, but considerable residual chalcopyrite Casing - 0 to 20 feet. |
| 47.0 - I06.0 | Grey quartz diorite porphyry, no visible copper mineralization, no quartz and very little fracturing. Fine pyrite and scattered magnetite throughout. Some calcite on fracture faces. Minor dissemination of chalcopyrite over three inches at I0I feet. |
| I06.0 - I57.0 | Similar to above, but mottled - (cloritized mafics appearing as phenocrysts). |
| I57.0 - I78.0 | Quartz porphyry, similar to 47 to I06. Shattered zone at I66 to I68 feet. |
| I78.0 - I88.0 | Faulted and carbonatized zone in the quartz porphyry. |
| I88.0 - L97.0 | Even grained unmottled quartz porphyry. No pyrite or other sulphide. |
| I97.0 - 22I.0 | Mottles phase of above. Shloritized and carbonatized section 22I to next description. Movement quite severe. |
| 22I.0 - 23I.0 | Grades into grey "normal" quartz porphyry. |
| 23I.0 - 256.0 | Mottled quartz porphyry. Considerable chlorite and carbonates. |
| 256.0 - 3I9.0 | Mostly Wmottled" quartz porphyry; considerable alteration at 280 to 290. |

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Diamond Drilling.

Hole: No. II
Claim: Copper Canyon No. 2.
Co-ordinates: 285W 38S (BL #I)
Collar Elevation: 5400 feet.

Azimuth: 243 degrees.
Dip: -45 degrees.
Depth: 64 feet.
Logged by: B.R. Richards, June 19/63

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0.0 - 64.0 Massive andesite, with some sections apparently tuffaceous. Well fractured; some fracture faces with chalcopyrite "smears" on them, along with some pyrite. Rusty fractures as far as 35 feet.

Note: Hole lost and abandoned at 64 feet due to blocky ground.

End of Hole.

Hurley River Mines, Limited.
Copper Canyon Drilling.

Hole: No. I2. Azimuth: 243 degrees.
Claim: Copper Canyon No. 2. Dip: -30 degrees.
Coordinates: I30E 430S (BL #I). Depth: 300 feet.
Collar Elevation: 5I00 feet. Logged by: B.R. Richards, June 19/63

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| | |
|---|---|
| 0.0 - 24.0 | Casing. |
| 24.0 - 67.0 | Medium to coarse grained quartz diorite porphyry. Considerable surface weathering to 62 feet. Some small andesite remnants. |
| 67.0 - 80.0 | Similar to above, but limey, faulted, about 60% of the core here limey mud. |
| 80.0 - I05.0 | Similar to 24 to 67; some fracturing to 90 feet. |
| I05.0 - I09.0 | Similar but very low dissemination of fine chalcopyrite, and narrow stringers of chalcocite(?) Sample I2A. |
| I09.0 - II8.0 | Massive, fresh quartz porphyry. |
| II8.0 - I63.0 | Fractured and recemented zone in the quartz porphyry. Some andesite remnants around II8 feet. Scattered specks of chalcopyrite and pyrite. Considerable calcite. |
| I63.0 - I8I.5 | Massive and relativelt fresh quartz porphyry. Finer grained than "normal". |
| I8I.5 - I90.0 | White to yellow limey fault material, Scattered crystals of cubic pyrite. |
| I90.0 - 300.0 | Regular quartz porphyry. Some fractyring. Specks of pyrite at 215 feet. Rusty from 245 to the end of hole. |

End of Hole.

# HURLEY RIVER -- DIAMOND DRILLING

## Copper Canyon Property

| | | | |
|---|---|---|---|
| Hole: | C. C. No. 13 | Dip: | -30 degrees |
| Claim: | C. C. 6 | Depth: | 350 ft. |
| Co-ordinates: | 00-175W (#2 B. L.) | Started: | Aug. 1, 1963 |
| Coll. Elev: | 5250 ft. | Finished: | Aug. 11, 1963 |

Logged by: B. R. Richards

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| | | |
|---|---|---|
| 0.0 | 41.0 | Casing; clay to 20 ft. Fractured and altered andesite to 41. |
| 41.0 | 51.0 | Andesite, fractured; some thin calcite-filled fractures. Scattered pyrite. |
| 51.0 | 55.0 | Felsite phase of porphyry; fine grained and altered. Low dissemination of fine grained crystalline pyrite. |
| 55.0 | 73.0 | Sim. 41 to 51. |
| 73.0 | 75.0 | Highly sheared, carbonatized phase of above. Some narrow quartz stringers carrying the occasional speck of chalcopyrite. |
| 75.0 | 110.0 | Andesite, similar to 55 to 73. Fine mottled appearance. White phenocrysts from 1 to 3 mms. in diameter. Scattered quartz stringers less than 1/4 inch. |
| 110.0 | 113.0 | Highly altered sheared and silicified section similar to 73 to 75. Occasional speck of chalcopyrite. |
| 113.0 | 137.0 | Andesite, similar to 75 to 110. Lose core 117 to 119 and 125 to 127. |
| 137.0 | 140.0 | Felsite, similar to 51 to 55. |
| 140.0 | 152.0 | Andesite, more competent than above. Disseminated pyrite. |
| 152.0 | 167.0 | Fine grained grey rhyolite. Scattered pyrite. Some evidence of flow banding 50 degrees to the core axis. This might indicate structural dip of 80 degrees to the west. |
| 167.0 | 169.0 | Highly altered zone, now mainly calcite and quartz. Perhaps originally andesite. |
| 169.0 | 173.0 | Quartz, scattered specks of chalcopyrite. |
| 173.0 | 178.0 | Shattered zone, similar to 167 to 169. |
| 178.0 | 179.0 | Andesite |
| 179.0 | 181.0 | Quartz, similar to that above. Specks of pyrite and chalcopyrite. |

| | | |
|---|---|---|
| 181.0 | 183.0 | Andesite; recrystallized. Some very fine grained biotite developed on separation plans. "Blotchy appearance. Some greenish sections from chlorite development. |
| 183.0 | 186.0 | Quartz, similar to 179 to 181. |
| 186.0 | 195.0 | Rhyolite, similar to 152 to 167. |
| 195.0 | 197.0 | Andesite, recrystallized and silicified. Also several quartz veins, up t 1/2 inch across, carrying small specks of chalcopyrite. Chloritized. |
| 197.0 | 202.0 | Similar, but highly fractured. Chalcopyrite associated with quartz veinlets. Some disseminated pyrite. Sample 46051. |
| 202.0 | 204.0 | Similar above; minor chalcopyrite associated with narrow veins of quartz porphyry and quartz in fractures in the andesite. |
| 204.0 | 207.0 | Amygduloidal dacite; disseminated pyrite with occasional speck of chalcopyrite in fractures. |
| 207.0 | 211.0 | Andesite, minor chalcopyrite, similar to section sampled. 2" quartz stringer at 217 feet. |
| 211.0 | 216.0 | Similar above; Sample 46052. |
| 216.0 | 219.0 | Similar above. |
| 219.0 | 231.0 | More competent andesite, more alteration. "Blotchy" appearance due to biotite and chlorite development. |
| 231.0 | 243.0 | Similar, but more fracturing, increased quartz and chalcopyrite. 5 feet of lost core out of this section. Increased calcite. Sample 46053. |
| 243.0 | 254.0 | Similar above. |
| | | but |
| 254.0 | 259.0 | Similar above,/more chloritization. Sample 46054 |
| 259.0 | 266.0 | Similar above. |
| 266.0 | 312.0 | Similar, but less fracturing. Quite heavy dissemination of pyrite. Some calcite and quartz stringers. A 3/4 inch quartz stringer at 278 with specks of pyrite and chalcopyrite. Similar vein at 298 feet. After 298 feet rock more siliceous, more competent. Narrow calcite fillings in joints. Reduced pyrite. Scattered specks of pyrite and chalcopyrite associated with quartz and calcite stringers. |
| 312.0 | 315.0 | Quartz porphyry. Disseminated chalcopyrite associated with a network of fine quartz stringers from one-eight to one-quarter inch wide. Very clean contact with volcanic footwall. Sample 46055. |

| | | |
|---|---|---|
| 315.0 | 319.0 | Similar, but less silification. Sample 46056. |
| 319.0 | 323.0 | Similar above. Sample 46057. |
| 323.0 | 327.0 | Similar above. Noticeable alteration to sericite. Also some hematite associated with the chalcopyrite. Some pyrite. Sample 46058. |
| 327.0 | 328.0 | Similar above. Sample 46059. |
| 328.0 | 333.0 | Similar above, but more hematite, calcite, movement and general alteration. Sample 46060. |
| 333.0 | 336.0 | Similar above. Sample 46061. |
| 336.0 | 341.0 | Similar above, but extreme alteration, to sericite, moscovite, kaolin, calcite. Narrow fault zone of gouge. Sample 46062. |
| 341.0 | 346.0 | Similar above. Sample 46063. |
| 346.0 | 350.0 | Similar above, but less alteration and crushing. Sample 46064. |

END OF HOLE

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number I.

| From (ft) | to | Ta (ft.) | Cu% | From (ft.) | to (ft) | Cu% |
|---|---|---|---|---|---|---|
| 35 | 45 | | 0.20 | I55 | I65 | 0.20 |
| 45 | 55 | | 0.27 | I65 | I75 | 0.20 |
| 55 | 65 | | 0.30 | I75 | I85 | 0.I7 |
| 65 | 75 | | 0.20 | I85 | I95 | 0.22 |
| 75 | 85 | | 0.22 | I95 | 205 | 0.25 |
| 85 | 95 | | 0.25 | 205 | 2I5 | 0.25 |
| 95 | I05 | | 0.20 | 2I5 | 225 | 0.20 |
| I05 | II5 | | 0.20 | 225 | 235 | 0.20 |
| II5 | I25 | | 0.20 | 235 | 245 | 0.05 |
| I25 | I35 | | 0.20 | 245 | 255 | 0.08 |
| I35 | I45 | | 0.I0 | 255 | 265 | 0.I2 |
| I45 | I55 | | 0.25 | | | |

Average for hole, 35 to 265 feet:

0.20% copper over a length of 230 feet.

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number 3.

| From (ft) | to (ft) | Cu% |
|---|---|---|
| 20 | 23 | 0.32 |
| 23 | 28 | I.45 |
| 28 | 33 | 0.55 |
| 33 | 38 | 0.80 |
| 38 | 43 | 0.25 |
| 43 | 48 | 0.20 |
| 48 | 53 | 0.45 |
| 53 | 58 | 0.75 |
| 58 | 63 | 0.75 |
| 63 | 68 | 0.60 |
| 68 | 73 | 0.70 |
| 73 | 78 | 0.45 |
| 78 | 83 | 0.82 |
| 83 | 88 | I.00 |
| 88 | 93 | 0.60 |
| 93 | 98 | 0.27 |
| I98 | I89 | 0.40 |
| I89 | I94 | 0.I8 |
| I94 | I97 | 0.32 |
| I97 | 202 | 0.45 |
| 202 | 207 | 0.40 |
| 207 | 2I2 | 0.25 |
| 2I2 | 220 | 0.27 |
| 220 | 222 | 0.25 |
| 222 | 228 | 0.I5 |
| 228 | 235 | 0.I0 |
| 235 | 245 | 0.I7 |
| 245 | 250 | 0.40 |
| 250 | 255 | 0.27 |
| 255 | 260 | 0.30 |
| 260 | 265 | 0.22 |
| 265 | 270 | o.I5 |
| 270 | 275 | 0.25 |
| 275 | 280 | 0.20 |
| 280 | 285 | 0.30 |
| 285 | 290 | 0.25 |
| 290 | 295 | 0.20 |
| 295 | 300 | 0.30 |
| 300 | 305 | 0.30 |
| 305 | 3I0 | 0.30 |
| 3I0 | 3I5 | 0.25 |
| 3I5 | 320 | 0.35 |
| 320 | 325 | 0.30 |
| 325 | 330 | 0.20 |
| 330 | 335 | 0.27 |
| 335 | 340 | 0.03 |
| 340 | 345 | 0.30 |
| 345 | 350 | 0.20 |
| 350 | 355 | 2.30 |
| 355 | 360 | 2.I0 |
| 360 | 365 | 2.05 |
| 365 | 370 | 2.40 |
| 370 | 375 | 0.50 |
| 375 | 380 | 0.20 |
| 380 | 385 | 0.2I |
| 385 | 390 | 0.20 |
| 390 | 395 | 0.32 |
| 395 | 400 | 0.35 |
| 400 | 405 | I.20 |
| 405 | 4I0 | 0.35 |
| 4I0 | 4I5 | I.I5 |
| 4I5 | 420 | 0.90 |
| 420 | 425 | 0.52 |
| 425 | 430 | 0.35 |
| 430 | 435 | 0.22 |
| 435 | 440 | 0.25 |
| 440 | 445 | 0.20 |
| 445 | 450 | 0.35 |
| 450 | 455 | 0.I5 |
| 455 | 460 | 0.40 |
| 460 | 465 | 0.32 |
| 465 | 470 | 0.40 |
| 470 | 475 | 0.25 |
| 475 | 480 | 0.20 |
| 480 | 485 | 0.20 |
| 485 | 490 | 0.I7 |
| 490 | 495 | 0.20 |
| 495 | 500 | 0.I7 |
| 500 | 505 | 0.I0 |
| 505 | 5I0 | 0.I0 |
| 5I0 | 5I5 | 0.25 |

Average, from 350 to 4I5 feet is I.0% copper over a length of 65 feet.

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number 4.

| From (ft) | to (ft) | Cu% | From (ft) | to (ft) | Cu% |
|---|---|---|---|---|---|
| 28 | 38 | 0.40 | 290 | 295 | 0.I0 |
| 38 | 48 | 0.20 | 295 | 300 | 0.07 |
| 48 | 58 | 0.I2 | 300 | 305 | 0.I8 |
| 58 | 68 | 1.35 | 305 | 3I0 | 0.I8 |
| 68 | 78 | 0.55 | 3I0 | 3I5 | 0.I7 |
| 78 | 88 | 0.85 | 3I5 | 320 | 0.I5 |
| 88 | 98 | I.50 | 320 | 325 | 0.05 |
| 98 | I08 | I.60 | 332 | 335 | 0.05 |
| I08 | II8 | 2.00 | 335 | 340 | 0.II |
| II8 | I28 | 0.35 | 340 | 345 | 0.I0 |
| I28 | I38 | 0.30 | 345 | 350 | 0.I3 |
| I38 | I48 | 0.40 | 350 | 355 | 0.05 |
| I48 | I58 | 0.40 | 355 | 360 | tr |
| I58 | I68 | 0.25 | 360 | 365 | 0.I0 |
| I68 | I78 | 0.70 | 365 | 370 | 0.I0 |
| I78 | I88 | 0.30 | 370 | 375 | 0.05 |
| I88 | I98 | 0.35 | 375 | 380 | 0.I0 |
| I98 | 208 | 0.30 | 380 | 385 | 0.08 |
| 208 | 2I8 | 0.35 | 385 | 390 | 0.I0 |
| 2I8 | 226 | 0.50 | 390 | 395 | 0.I0 |
| 226 | 230 | 0.20 | 395 | 400 | tr |
| 230 | 235 | 0.I7 | 400 | 405 | 0.07 |
| 235 | 240 | 0.I5 | 405 | 4I0 | 0.I3 |
| 240 | 245 | 0.20 | 4I0 | 4I5 | 0.I0 |
| 245 | 250 | 0.II | 4I5 | 420 | 0.02 |
| 250 | 255 | 0.I0 | 420 | 425 | 0.I5 |
| 255 | 260 | 0.05 | 425 | 430 | 0.I7 |
| 260 | 265 | 0.I0 | 430 | 435 | 0.I0 |
| 265 | 270 | 0.I7 | 468 | 478 | 0.I5 |
| 270 | 275 | 0.22 | 478 | 484 | 0.I5 |
| 275 | 280 | 0.03 | 484 | 49I | 0.I2 |
| 280 | 285 | 0.08 | 49I | 500 | 0.07 |
| 285 | 290 | 0.I0 | 500 | 5I0 | 0.I8 |

Average, from 58 to II8 feet is I.3% copper over a length of 60 feet.

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number 5.

| From (ft) | to (ft) | Cu% |
|---|---|---|
| I9 | 24 | 0.09 |
| 24 | 30 | 0.47 |
| 30 | 35 | 0.I7 |
| 35 | 40 | 0.I4 |
| 4I | 47 | 0.45 |
| 47 | 50 | 0.I0 |
| 50 | 55 | 0.20 |
| 55 | 60 | 0.25 |
| 60 | 65 | 0.I5 |
| 65 | 70 | 0.I5 |
| 70 | 75 | 0.I2 |
| 75 | 80 | 0.I0 |
| 80 | 85 | 0.I0 |
| 85 | 90 | 0.08 |
| 90 | 96 | 0.II |
| 96 | I06 | 0.I5 |
| I06 | II6 | 0.I5 |
| II6 | I26 | 0.I0 |
| I26 | I36 | 0.I0 |

| From(ft) | To (ft) | Cu% |
|---|---|---|
| I36 | I46 | 0.07 |
| I46 | I56 | 0.I0 |
| I56 | I66 | 0.I0 |
| I66 | I76 | 0.08 |
| I76 | I86 | 0.05 |
| I86 | I96 | 0.06 |
| I96 | 206 | 0.07 |
| 206 | 2I6 | 0.I0 |
| 2I6 | 226 | I.25 |
| 226 | 236 | 0.20 |
| 236 | 246 | 0.09 |
| 246 | 256 | 0.08 |
| 256 | 266 | 0.08 |
| 266 | 276 | 0.05 |
| 276 | 286 | 0.07 |
| 286 | 296 | 0.07 |
| 296 | 306 | 0.05 |
| 306 | 3I6 | 0.07 |
| 3I6 | 326 | 0.05 |
| 326 | 336 | 0.04 |
| 336 | 346 | 0.I0 |
| 346 | 356 | 0.07 |
| 356 | 366 | 0.07 |
| 366 | 37I | 0.I0 |
| 37I | 376 | 0.I0 |
| 376 | 386 | 0.I3 |
| 386 | 396 | 0.09 |
| 396 | 406 | 0.03 |
| 406 | 4I6 | 0.0I |
| 4I6 | 426 | 0.02 |
| 426 | 436 | 0.07 |
| 436 | 446 | 0.05 |
| 446 | 465 | 0.II |

Average for this hole not calculated.

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number 6.

| From (ft) | To (ft) | Cu% | From (ft) | To (ft) | Cu% |
|---|---|---|---|---|---|
| 48 | 60 | 0.10 | 228 | 238 | 0.08 |
| 60 | 70 | 0.45 | 238 | 248 | 0.12 |
| 70 | 80 | 0.40 | 248 | 258 | 0.03 |
| 80 | 85 | 0.87 | 258 | 268 | 0.12 |
| 85 | 90 | 0.57 | 268 | 278 | 0.10 |
| 90 | 100 | 1.90 | 278 | 283 | 0.07 |
| 100 | 110 | 1.50 | 283 | 293 | 0.05 |
| 110 | 120 | 0.20 | 293 | 303 | 0.09 |
| 120 | 130 | 0.25 | 303 | 313 | 0.09 |
| 130 | 140 | 0.10 | 313 | 323 | 0.10 |
| 140 | 150 | 0.32 | 323 | 333 | 0.06 |
| 150 | 160 | 0.30 | 333 | 343 | 0.12 |
| 160 | 165 | 0.24 | 343 | 353 | 0.06 |
| 165 | 170 | 0.14 | 353 | 363 | 0.07 |
| 170 | 178 | 0.36 | 363 | 373 | 0.12 |
| 178 | 188 | 0.12 | 373 | 383 | 0.10 |
| 188 | 198 | 0.35 | 383 | 393 | 0.07 |
| 198 | 208 | 0.17 | 393 | 403 | 0.09 |
| 208 | 218 | 0.05 | 403 | 415 | 0.10 |
| 218 | 228 | 0.05 | | | |

Average, from 60 to 110 feet is 1 % copper over a length of 50 feet.

Assay Report for Hole Number 7.

| | | | | | |
|---|---|---|---|---|---|
| 30 | 40 | 0.10 | 210 | 220 | 0.08 |
| 40 | 50 | 0.08 | 220 | 230 | 0.11 |
| 50 | 60 | 0.07 | 230 | 240 | 0.10 |
| 60 | 80 | 0.12 | 240 | 250 | 0.07 |
| 70 | 80 | 0.08 | 250 | 260 | 0.09 |
| 80 | 90 | 0.12 | 260 | 270 | 0.12 |
| 90 | 100 | 0.10 | 270 | 280 | 0.09 |
| 100 | 110 | 0.16 | 280 | 290 | 0.10 |
| 110 | 120 | 0.17 | 290 | 300 | 0.07 |
| 120 | 130 | 0.12 | 300 | 310 | 0.07 |
| 130 | 140 | 0.15 | 310 | 320 | 0.20 |
| 140 | 150 | 0.15 | 320 | 330 | 0.10 |
| 150 | 160 | 0.15 | 330 | 340 | 0.08 |
| 160 | 170 | 0.13 | 340 | 350 | 0.10 |
| 170 | 180 | 0.11 | 350 | 360 | 0.12 |
| 180 | 190 | 0.11 | 360 | 370 | 0.12 |
| 190 | 200 | 0.12 | 370 | 375 | 0.11 |
| 200 | 210 | 0.12 | | | |

Average for this hole not calculated.

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number 8.

| From (ft) | To (ft) | Cu% | From (ft) | To (ft) | Cu% |
|---|---|---|---|---|---|
| 73 | 75 | 0.I2 | I34 | I39 | 0.30 |
| 86 | 89 | 0.I0 | I39 | I42 | 0.32 |
| I29 | I34 | 0.50 | | | |

Average not calculated for this hole.

Assay Report Hole Number 9.

| | | | | | |
|---|---|---|---|---|---|
| 8 | I3 | 0.I2 | 63 | 68 | 0.I6 |
| I3 | I8 | 0.I7 | 68 | 73 | 0.I2 |
| I8 | 23 | 0.25 | 73 | 78 | 0.07 |
| 23 | 28 | 0.25 | 78 | 83 | 0.I2 |
| 28 | 33 | 0.I7 | 83 | 88 | 0.09 |
| 33 | 38 | I.05 | 88 | 93 | 0.09 |
| 38 | 43 | 0.45 | 93 | 98 | 0.I0 |
| 43 | 48 | 0.25 | I30 | I43 | 0.I7 |
| 48 | 53 | 0.25 | I43 | I49 | 0.45 |
| 53 | 58 | 0.22 | I60 | I6I | 0.70 |
| 58 | 63 | 0.02 | | | |

Average for this hole not calculated.

Assay Report, Hole Number I0.

| | | | | | |
|---|---|---|---|---|---|
| 8 | I3 | 0.I5 | 4I | 46 | 0.35 |
| I3 | I8 | 0.I5 | 46 | 5I | 0.22 |
| I8 | 23 | 0.35 | 5I | 56 | 0.20 |
| 23 | 28 | 0.38 | 56 | 6I | 0.25 |
| 28 | 33 | 0.22 | 6I | 66 | 0.20 |
| 33 | 38 | 0.47 | 66 | 7I | 0.35 |
| 38 | 4I | 0.70 | 99 | I0I | 0.25 |

Average for this hole not calculated.

HURLEY RIVER MINES, LIMITED.

Assay Report, Hole Number I3.

| From. (ft) | To | Copper, %. | Width, ft. |
|---|---|---|---|
| 197 | 202 | 0.I0 | 5 |
| 2II | 2I6 | 0.I2 | 5 |
| 23I | 243 | 0.I5 | I2 |
| 254 | 259 | 0.I3 | 5 |
| 3I2 | 3I5 | 0.I5 | 3 |
| 3I5 | 3I9 | 0.I8 | 4 |
| 3I9 | 323 | 0.05 | 4 |
| 323 | 327 | 0.I0 | 4 |
| 327 | 328 | 0.I0 | I |
| 328 | 333 | 0.II | 5 |
| 333 | 336 | 0.I7 | 3 |
| 336 | 34I | 0.20 | 5 |
| 34I | 346 | 0.I8 | 5 |
| 346 | 350 | 0.27 | 4 |

Average for hole; from 3I2 to 350 feet:

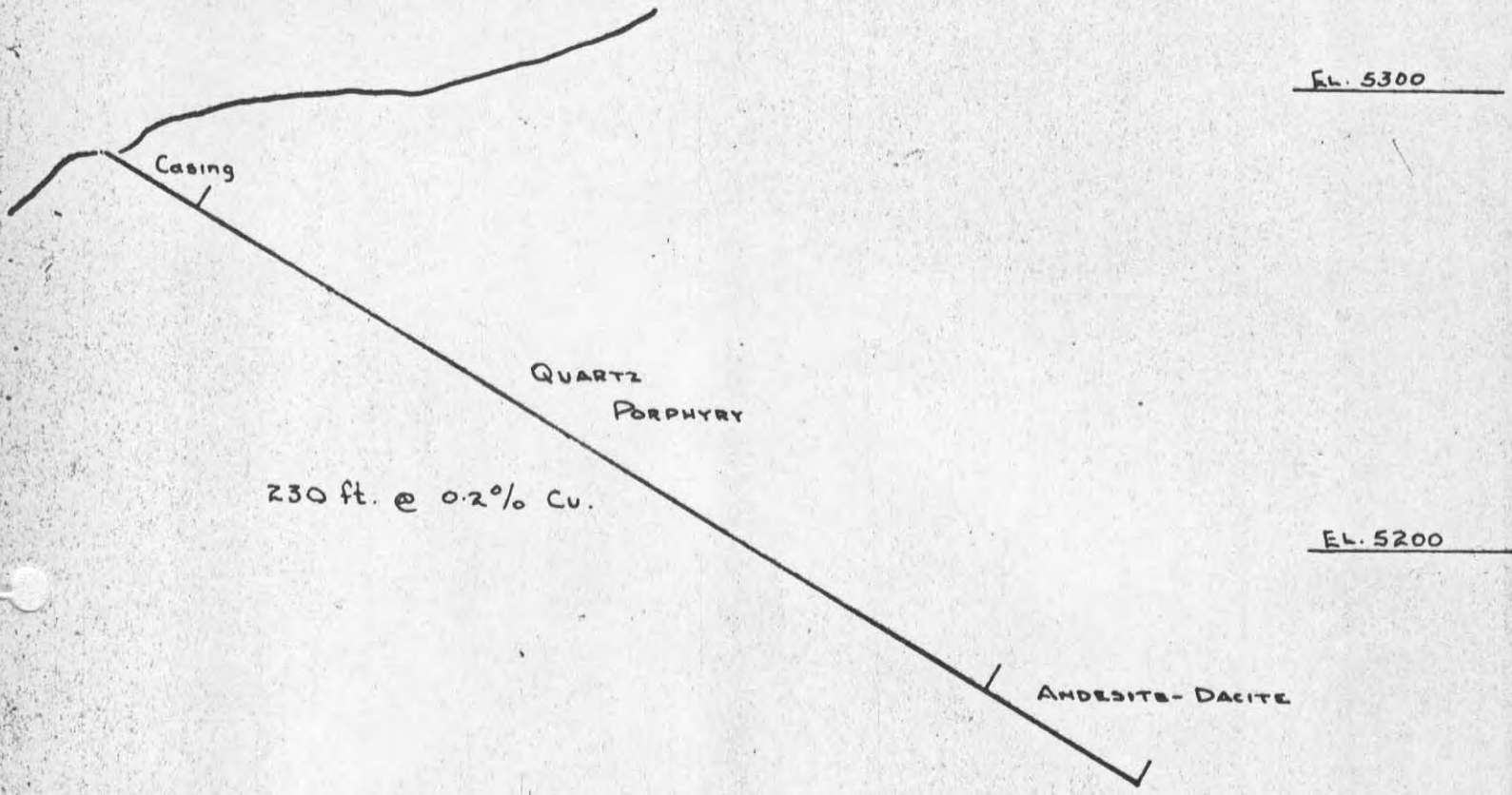
Cu: 0.I6% over 38 feet hole length.

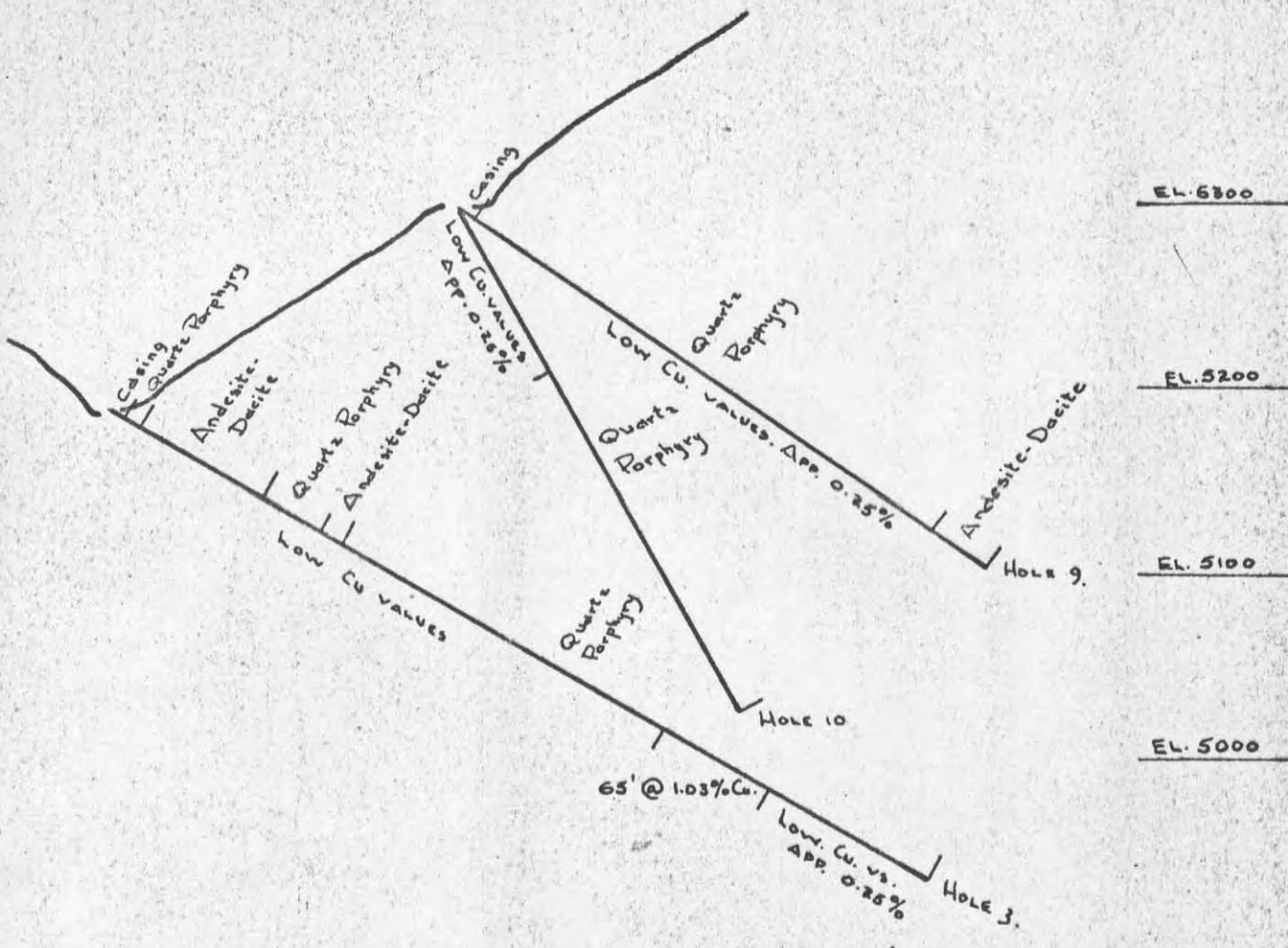
# HURLEY RIVER MINES, LTD.

## DIAMOND DRILLING

## SECTION THROUGH HOLE NO. 1

Scale: 1" = 40'






HURLEY RIVER MINES LTD.

DIAMOND DRILLING

SECTION THROUGH HOLES 3, 9, AND 10

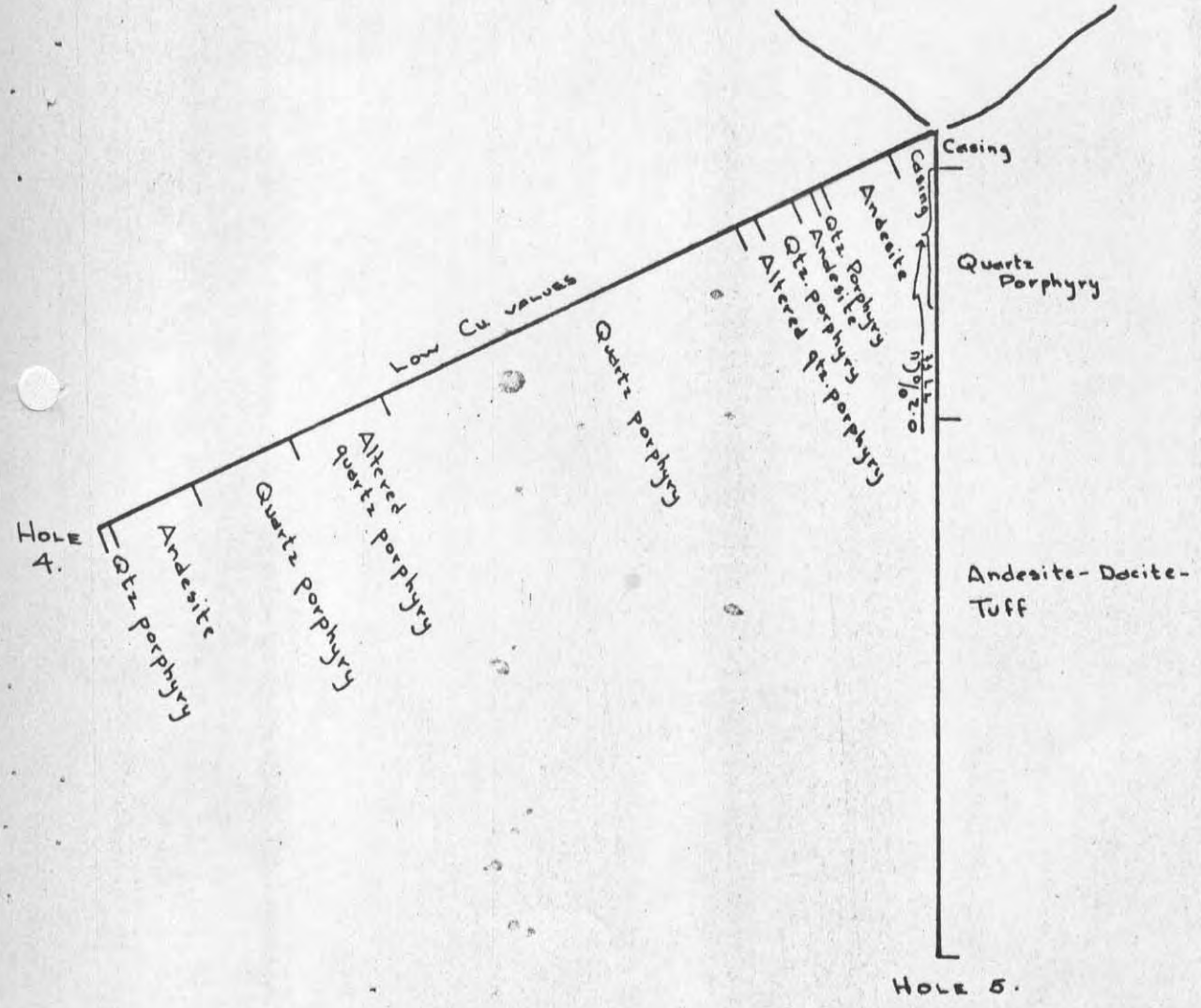
Scale: 1" = 100'

HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLES 4 & 5

Sc: 1" = 100'

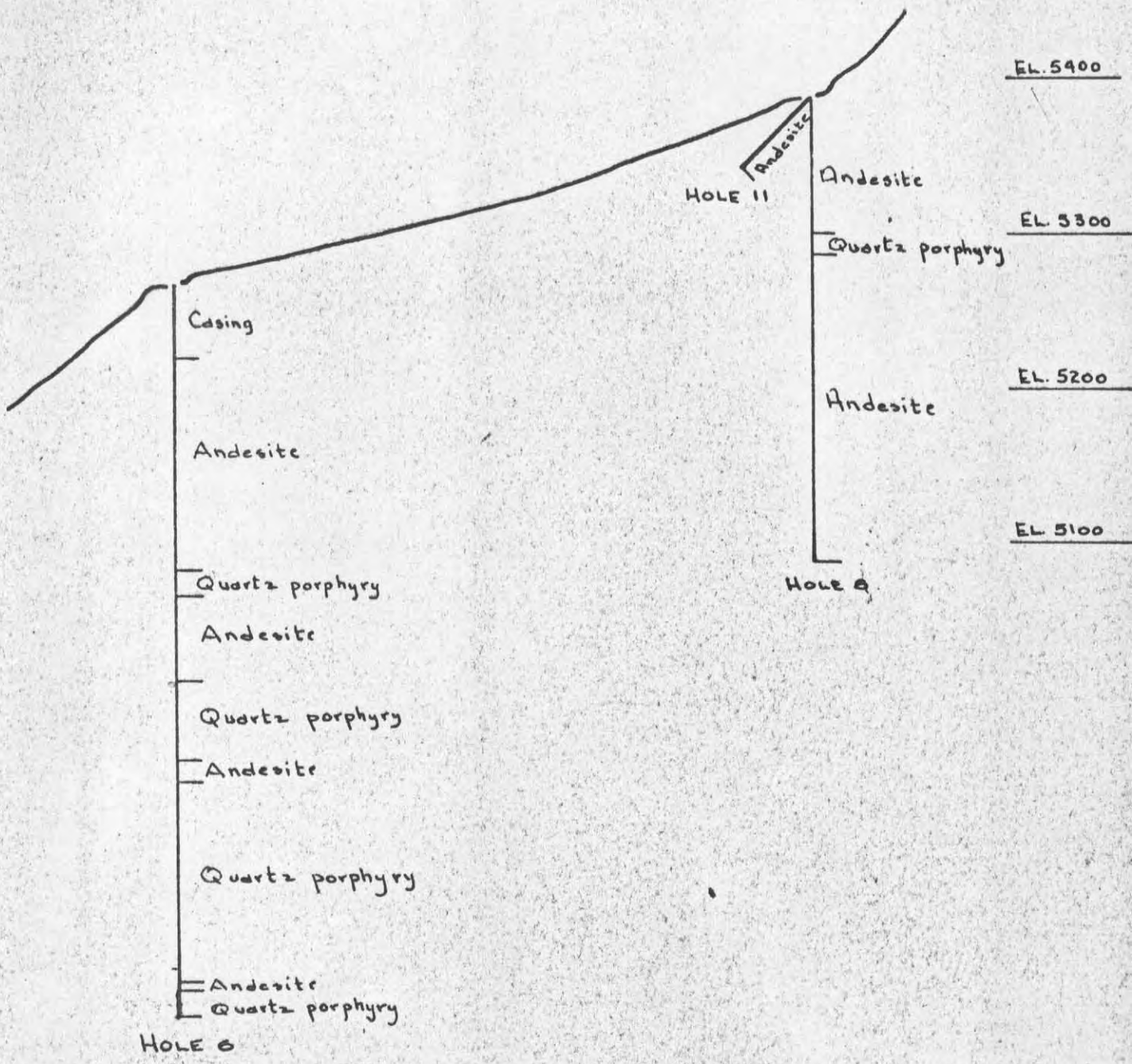


# HURLEY RIVER MINES, LTD.

## DIAMOND DRILLING

## SECTION THROUGH HOLES 6, 8, 11.

Sc: 1" = 100'

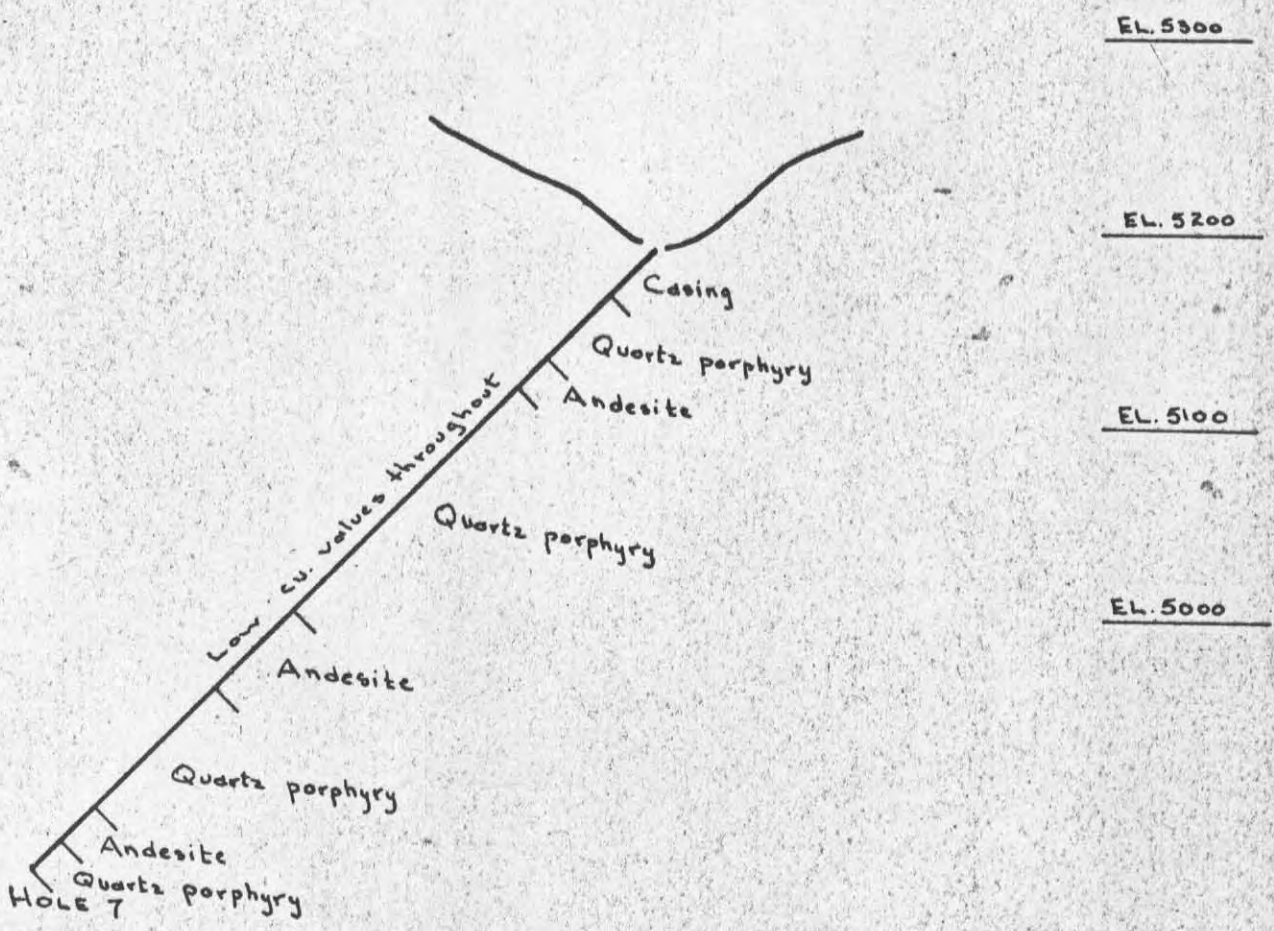


HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLE NO. 7

Scale: 1" = 100'

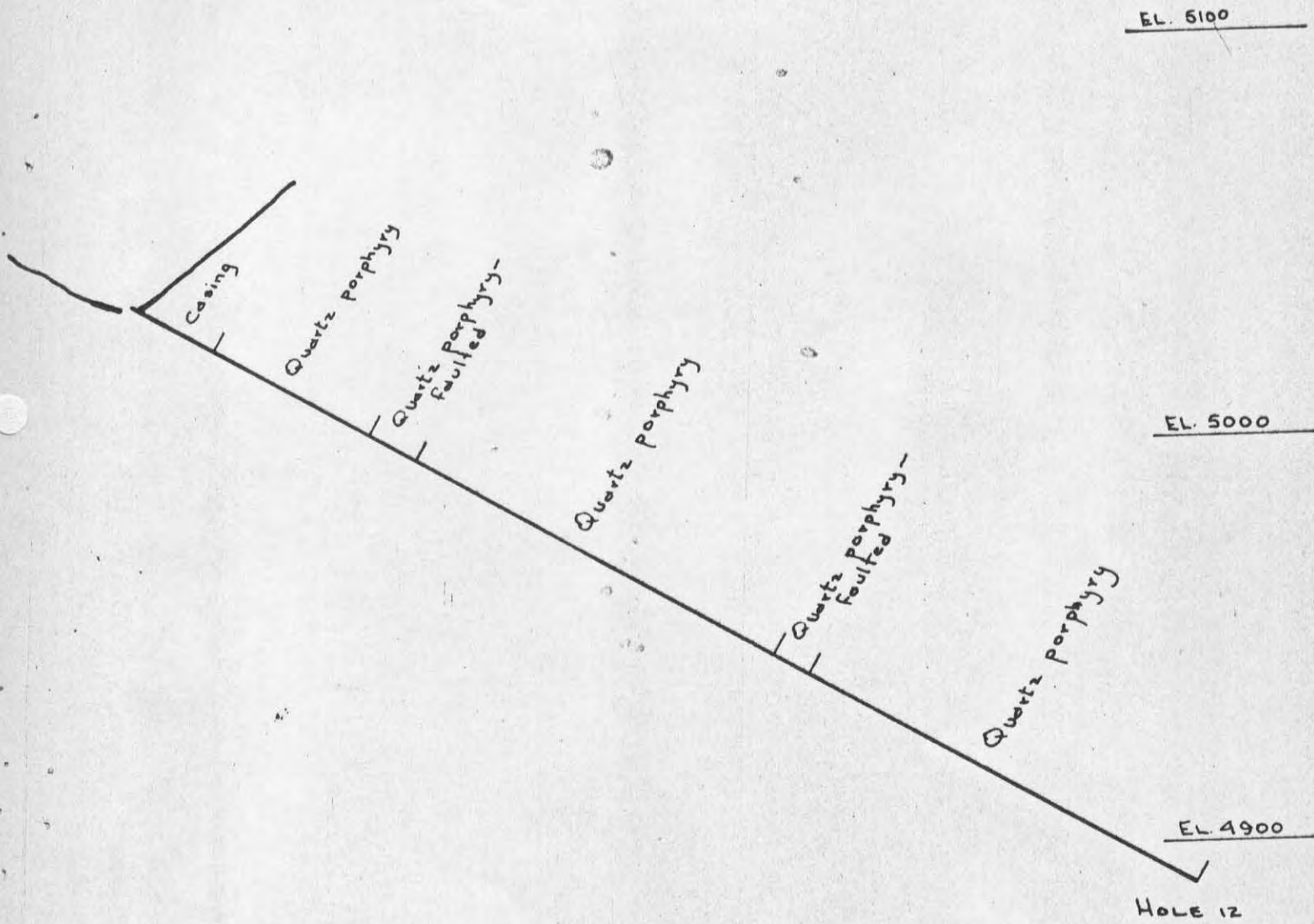


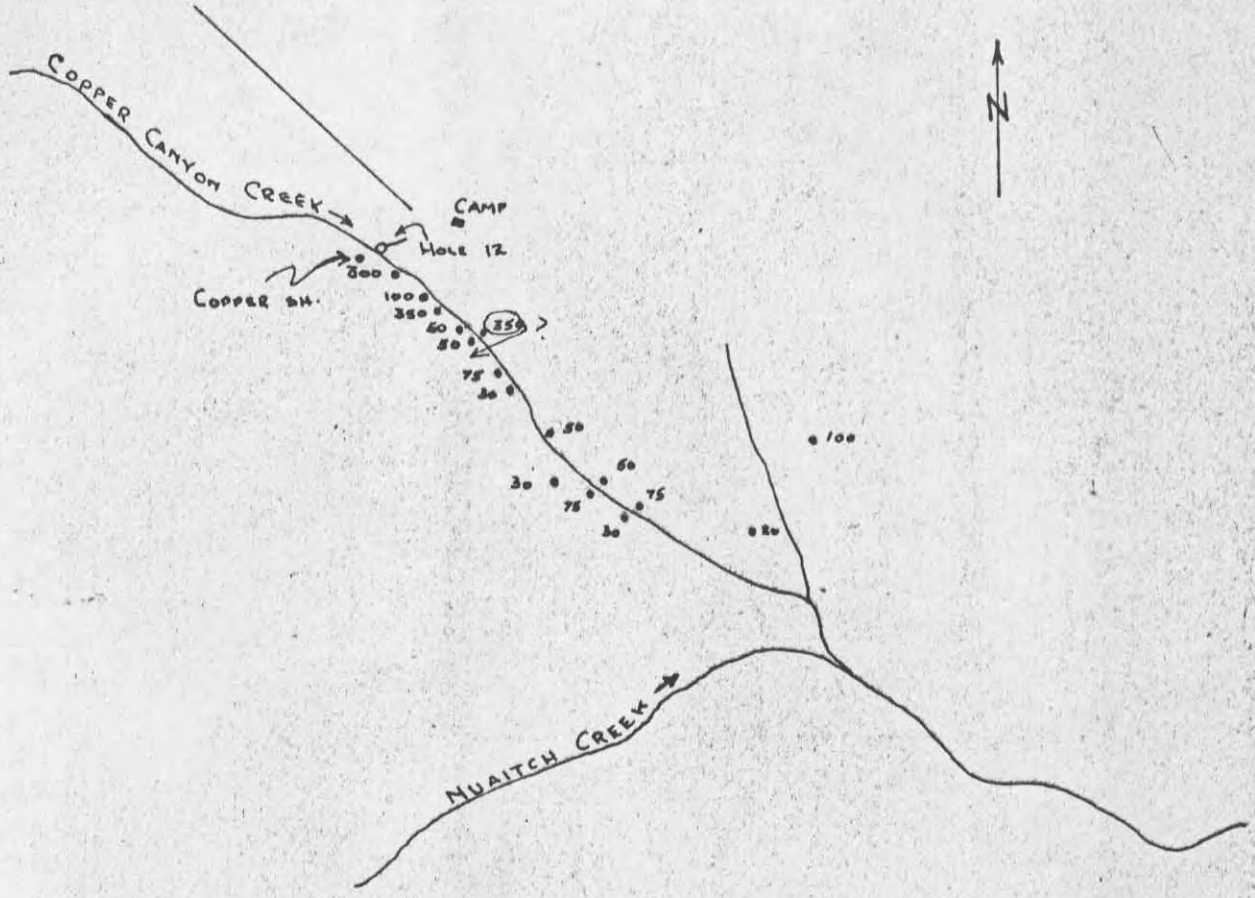
HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLE No. 12

Scale: 1" = 40'



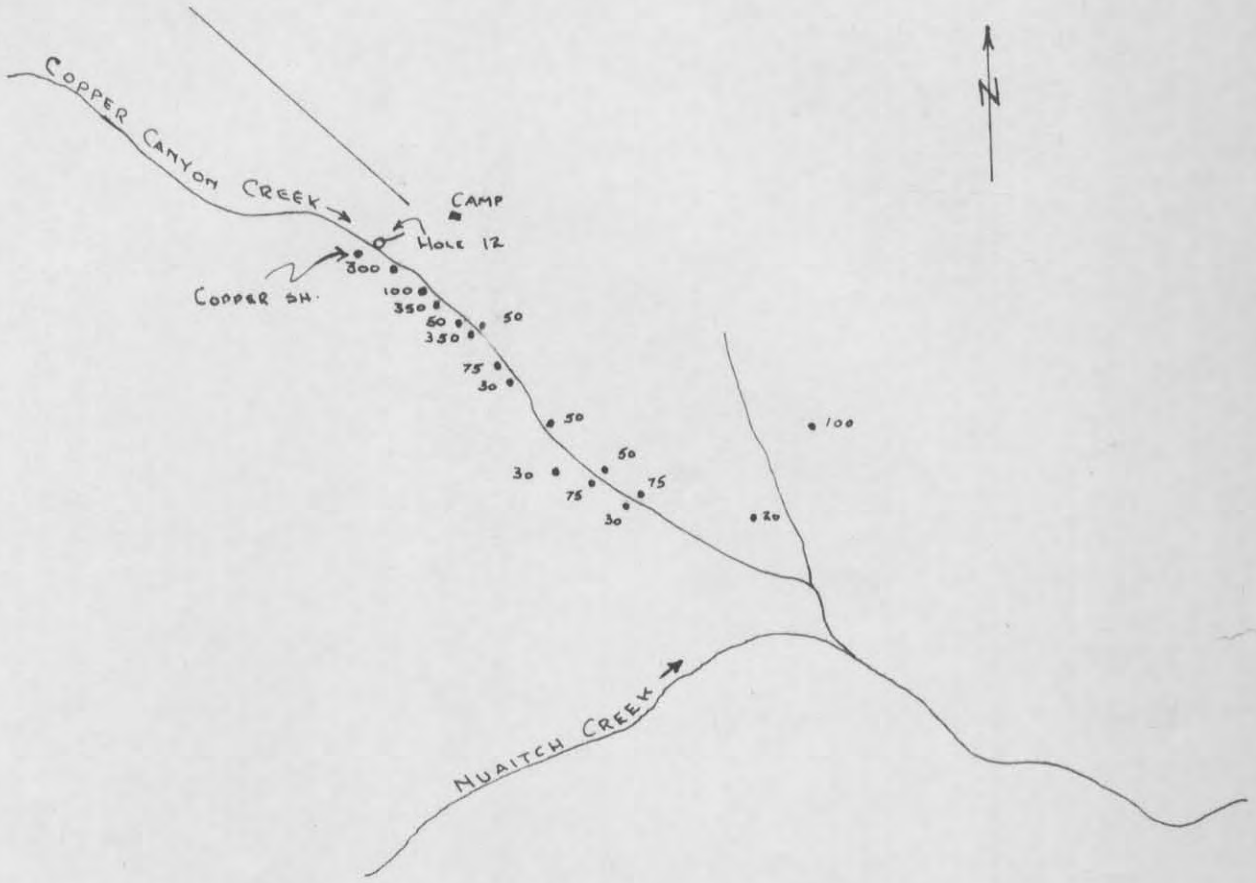



HURLEY RIVER MINES, LTD.
COPPER CANYON PROPERTY,
Merritt Area, B.C.
GEOCHEMICAL SURVEY
PART OF COPPER CANYON CREEK
See Air Photograph B.C. 2867: 16
Sc: 1" = 1320'

SHOWS COPPER: D.P.H.
Soil Samples

June 18, 1963.

BR.




HURLEY RIVER MINES, LTD.

COPPER CANYON PROPERTY,
Merritt Area, B.C.

GEOCHEMICAL SURVEY

PART OF COPPER CANYON CREEK

See Air Photograph B.C. 2867: 15

Sc: 1" = 1320'

SHOWS COPPER: P.P.M.
Soil Samples

June 18, 1963.

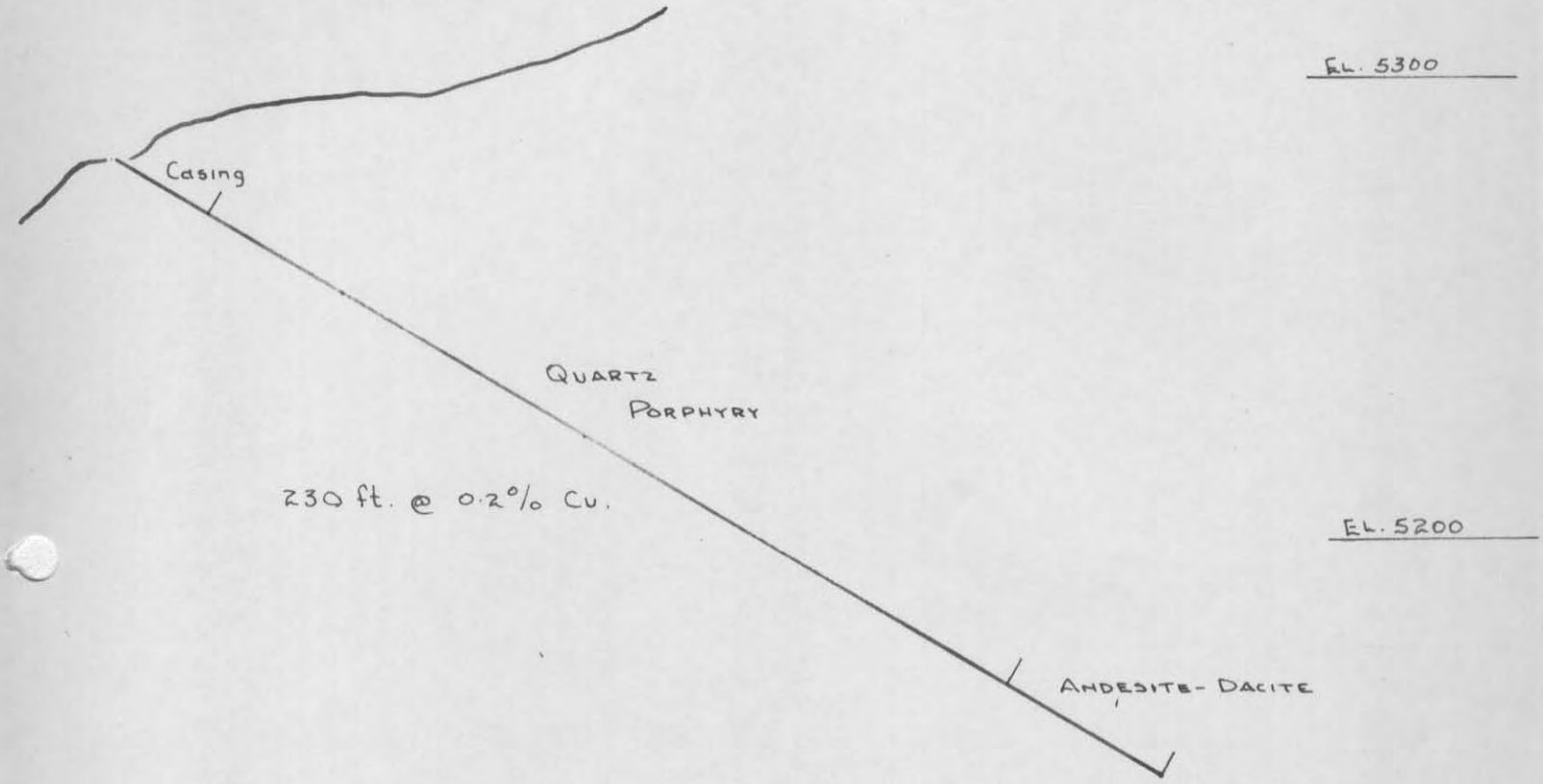
B.

HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLE No. 1

Scale: 1" = 40'

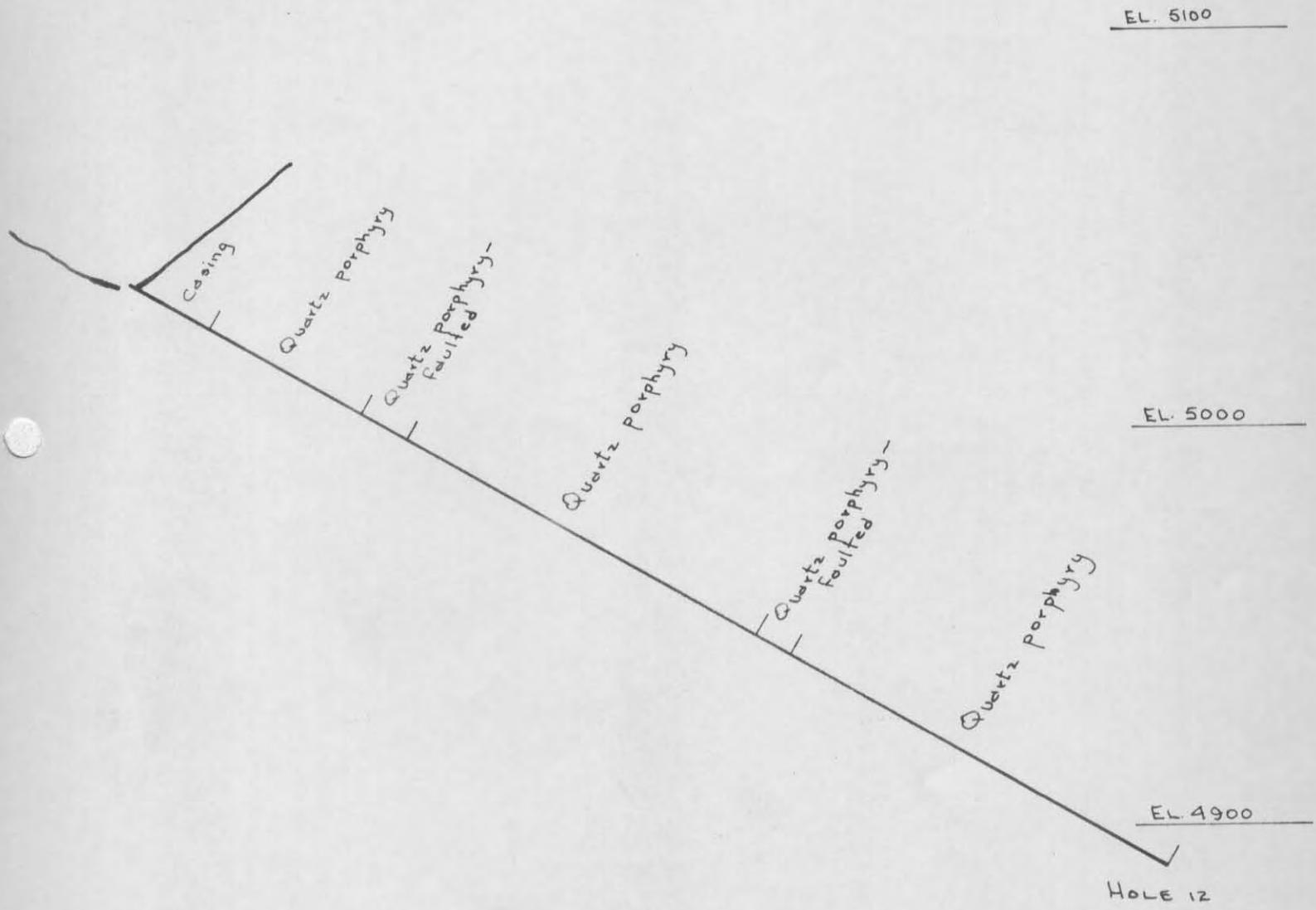


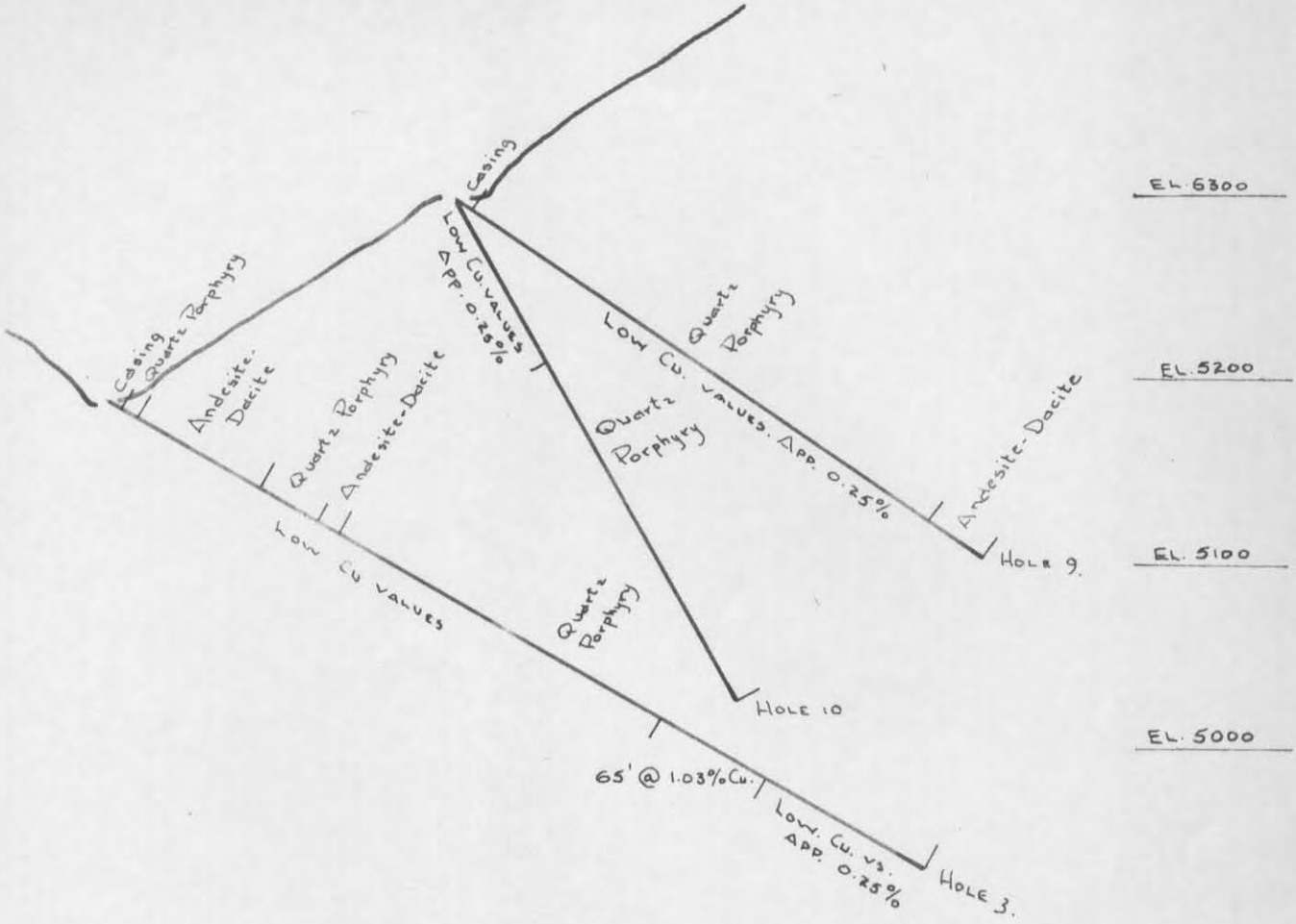
HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLE No. 12

Scale: 1" = 40'






HURLEY RIVER MINES LTD.

DIAMOND DRILLING

SECTION THROUGH HOLES 3, 9, AND 10

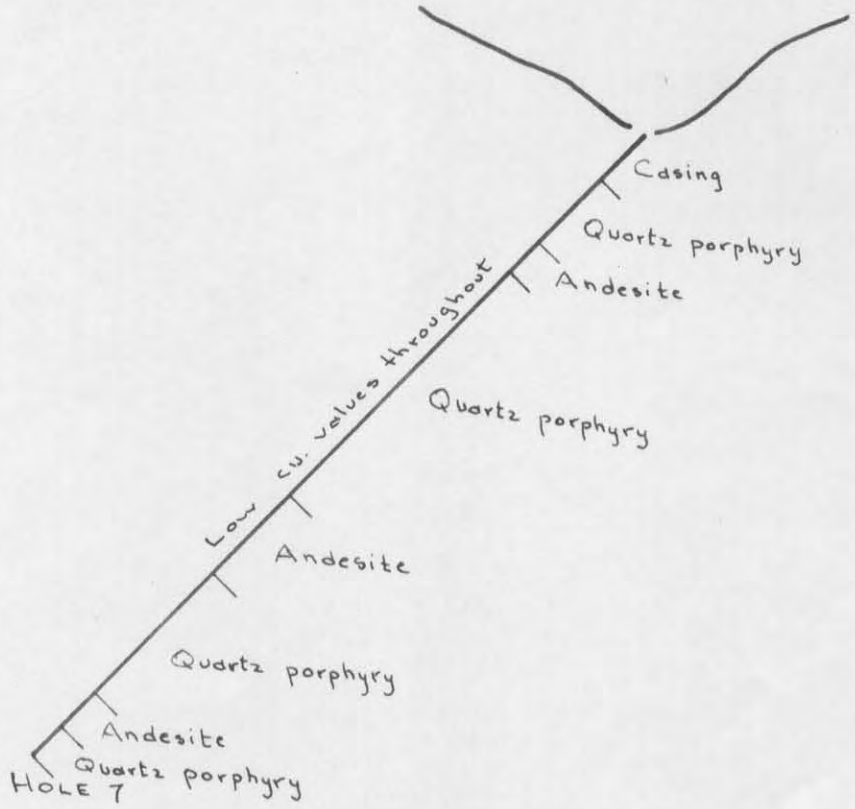
Scale: 1" = 100'

HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLE NO. 7

Scale: 1" = 100'

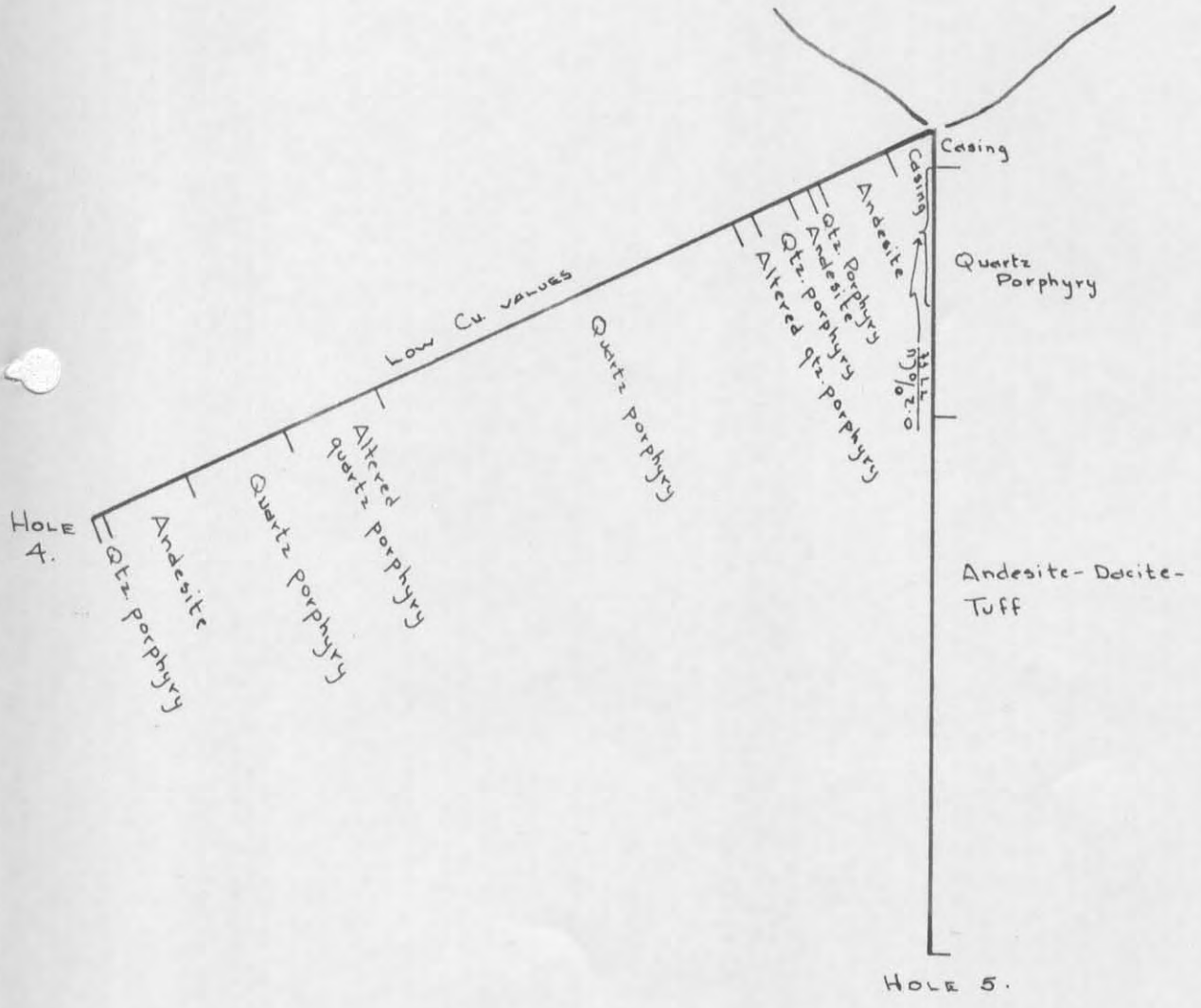


HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLES 4 & 5

Sc: 1" = 100'

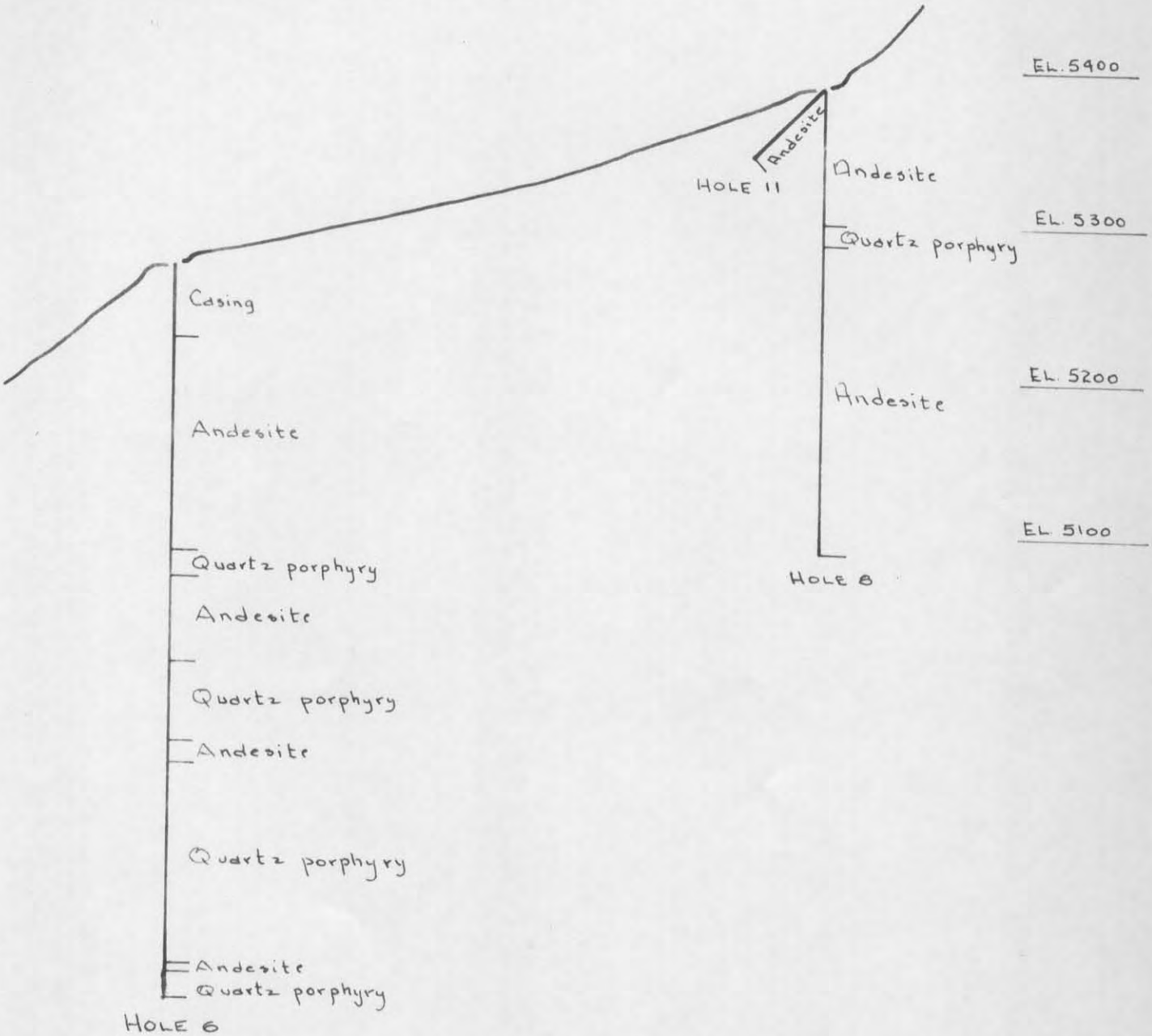


HURLEY RIVER MINES, LTD.

DIAMOND DRILLING

SECTION THROUGH HOLES 6, 8, 11.

Sc: 1" = 100'

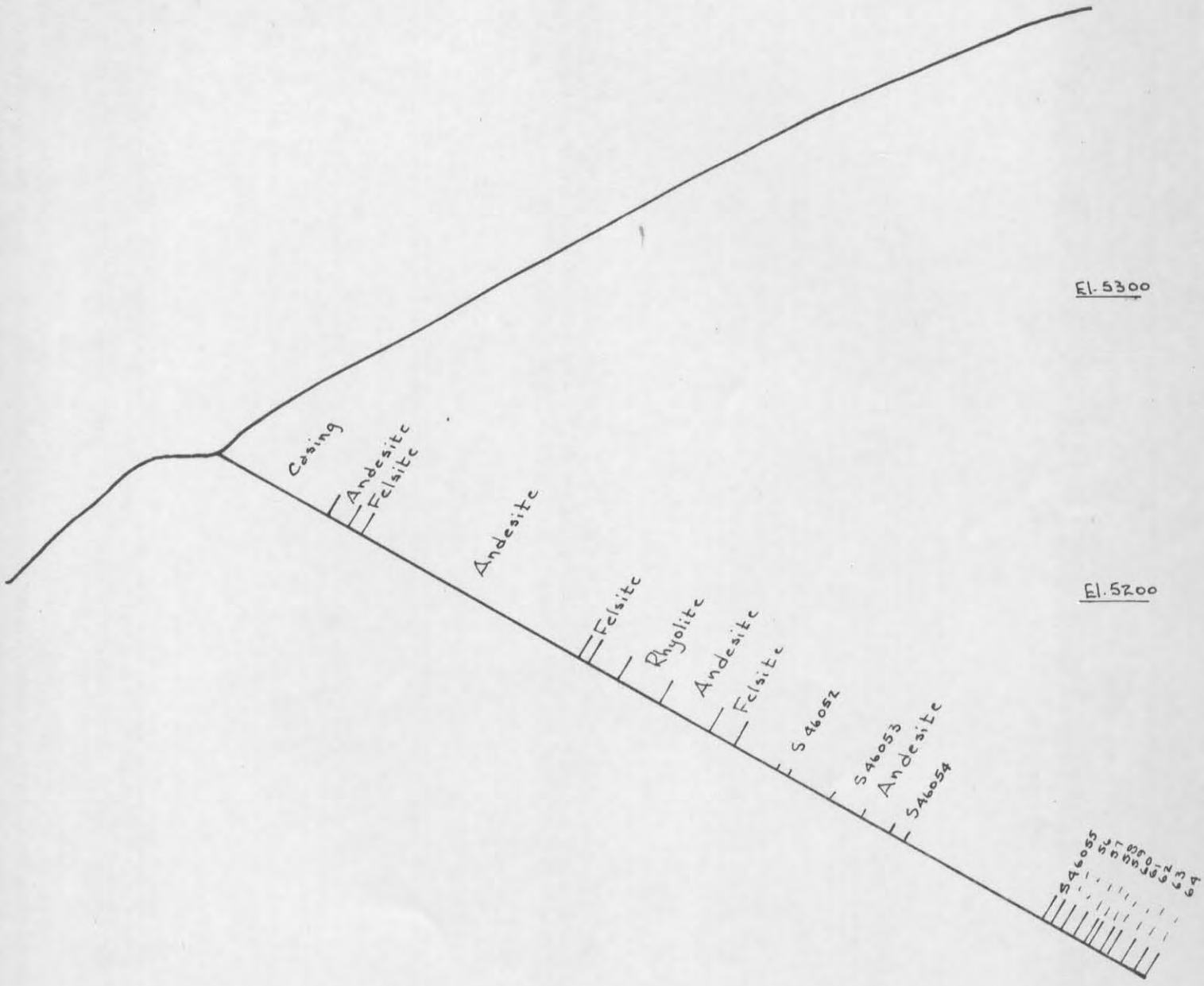


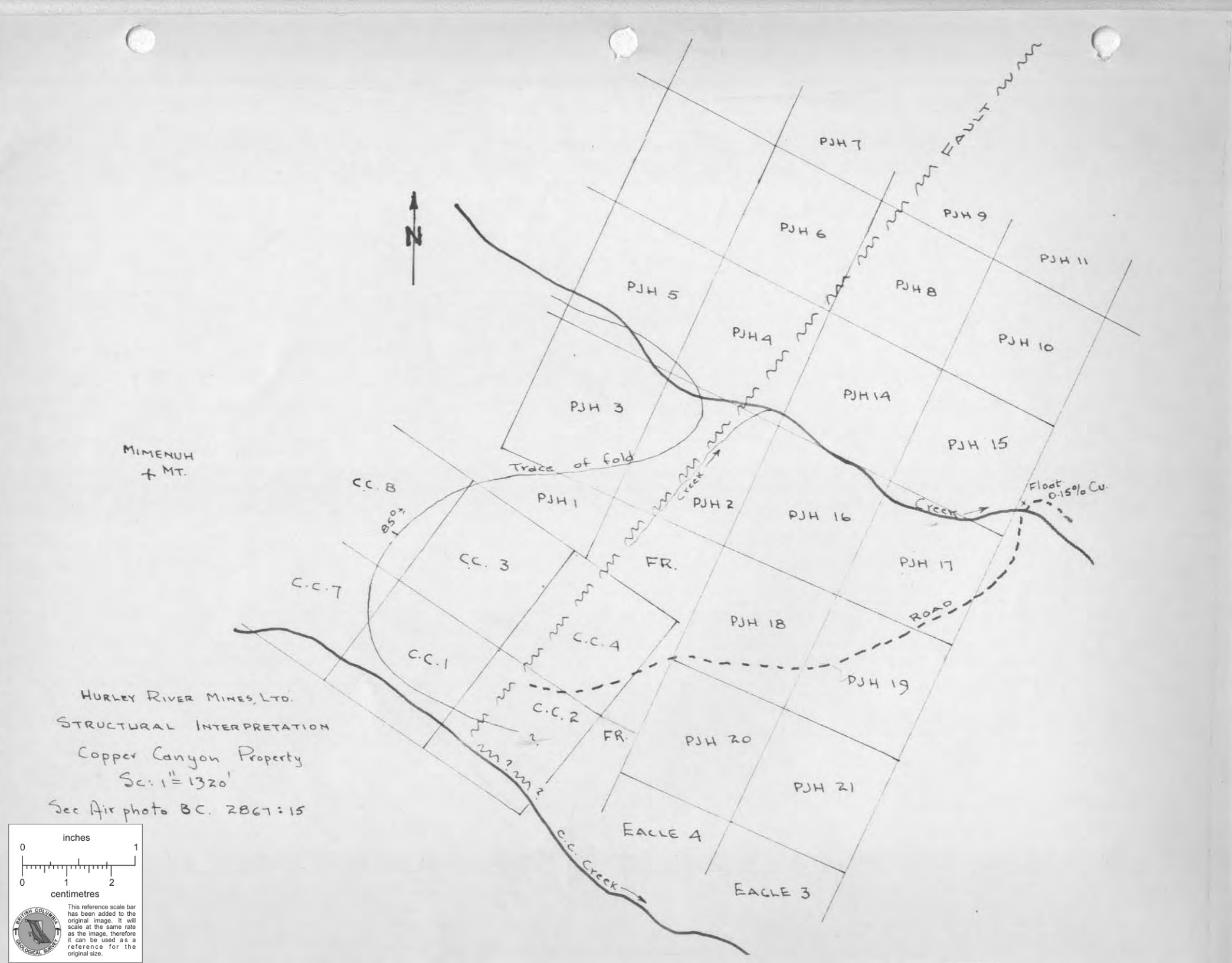
HURLEY RIVER MINES, LTD.

Diamond Drilling

SECTION THROUGH HOLE No. 13.

Sc: 1" = 50'






HURLEY RIVER MINES, LTD.

STRUCTURAL INTERPRETATION

Copper Canyon Property

Sc: 1" = 1320'

See Air photo BC. 2867 : 15

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

BRITISH COLUMBIA GEOLOGICAL SURVEY