PHYSICAL, GEOLOGICAL & GEOCHEMICAL REPORT ON 'A' & 'B' GROUPS OF QUARTZ MOUNTAIN MERCURY PROSPECT

51° 122° SW

JAMES F. V. MILLAR

ROOSEVELT MINES LTD.

JUNE 15th - SEPT 30th 1968

JAMES MILLAR & ASSOCIATES LTD.

1916

REPORT OF 1968 MERCURY PROJECT, QUARTZ MOUNTAIN ROOSEVELT MINES LTD.

920/2E

October 14, 1968.

James Millar and Associates Ltd.

James F. V. Millar

CONTENTS

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REPLY TO:

REPORT OF 1968 PROGRAM
QUARTZ MOUNTAIN MERCURY PROJECT
ROOSEVELT MINES LTD.

INTRODUCTION

This report is prepared for the Board of Directors of Roosevelt Mines Ltd. to record the program carried out during 1968, to review and evaluate the results of the work and to make certain general recommendations for a program for the 1969 season.

This report is prepared from company reports, personal supervision of certain parts of the program and the following publications:

Stevenson, J.S.

1940 Mercury Deposits of British Columbia, Bulletin No. 5, British Columbia Department of Mines, Victoria.

McCann, W.S.

1922a Bridge River Map Area (between Rexmount and Gunn Lake) Lillooet District - Map 1882, Geological Survey of Canada, Ottawa.

1922b Geology and Mineral Deposits of Bridge River Map Area, British Columbia, Memoir 130, Geological Survey of Canada, Ottawa.

Leech, G.B.

1953 Geology and Mineral Deposits of the Shulaps Range, Leech (continued)

British Columbia Department of Mines, Bulletin No. 32, Victoria.

George, J.G.

1966 Mercury in Canada in International Perspective. Mineral Information Bulletin M.R. 84, Mineral Resources Division, Department of Mines and Technical Surveys, Ottawa.

Roed, M.

1967 Roosevelt Mines Ltd. Economic Geology Report No. 1, Report to the Board of Directors of Roosevelt Mines Ltd.

Tipper, H.N.

1963 Geology, Taseko Lakes, British Columbia. Map 29, 1963, Geological Survey of Canada, Ottawa.

PROGRAM

The work schedule for the 1968 season can be summarized as follows:

July 5	Dr. Antal, D. Plante, bulldozer, compressor and crew move to the property following a very late spring.
July 5-24	Rock trenching on North Locality (Coordinates N 4200 E 2750) with an approximate total of 400 cubic yards of rock broken.
July 24-28	Road construction (1.2 miles) from North Locality to Conglomerate Locality, (Coordinates N 500 W 500). Rock trenching on Conglomerate Showing - total of approximately 100 cubic yards of rock trenching.
Aug. 5	Compressor, drills and mining crew released. Move bulldozer and crew to Plante Locality.

Aug. 5-6 Bulldozer trenching of Plante Showing.

Aug. 15 Commence diamond drilling of Plante Showing.

Sept. 3 Termminated diamond drill program.

In addition, the drilled-and-blasted trenches were all bulk sampled and split for submission for assay. Geological mapping of most of the western part of the Roosevelt Mines Ltd. holdings was completed and a "trace-mercury" geochemical survey was run on the same area. The mapping and the geochemical surveys are to be considered "gross" surveys, by means of which certain favourable zones and localities might be identified and given a more intense examination. Detailed mapping was done over the zone between the Reynolds (coordinates N 4750 E5400) and the Plante (coordinates N4800 E3600) Localities. The drilling program was limited in extent and conducted primarily to provide a detailed picture of the geological environment in which the mercury mineralization is found and to test the tenor and extent of the mineralization at a shallow depth.

SAMPLING

The bulk sampling carried out in the blasted rock trenches was done by collecting 20 - 40 -pound samples of bedrock over lengths of 10 feet (or approximately 10 feet), transporting them to a small laboratory-sized crusher set up in the field where they were reduced to minus 1/4 inch. The crushed product was then rolled and split to cut the sample size for laboratory analysis. A total of 140 samples were cut, crushed and split, and 61 samples were submitted for assay. The results of the analysis are given in the appendix and are shown on Maps No. 1 and 2. Thirty of the samples were not submitted for analysis as they were cut from trenches and locations showing no mercury content and cost of assaying was not justified.

The sampling of the three main trenches of the North Locality all returned Nil to Trace mercury content. To save assay expense a large number of samples were bulked in a few groups. Samples from rock cuts on the road both northeast and southwest of the Locality also returned Nil to Trace mercury content.

Sampling of the Conglomerate Locality also returned only Trace mercury content.

Four specimens of the mineralized structure on the Plante Showing were assayed with the following results:

Sample No. 1	Silicified, ankeritized matrix with some disseminated cinnabar.	0.14% Hg
Sample No. 2	Earthy, decomposed bedrock from sheared zone along the main mineralized chalcedony vein in original hand trench	0.02% Hg
Sample No. 3	Chalcedony breccia with ankeritized matrix rock and some streaks and blobs of cinnabar.	0.14% Hg
Sample No. 4	Chalcedony breccia with chloritized patches and streak of cinnabar.	0.10% Hg

These samples represented "specimens" only and were not intended to depict the tenor of any structural dimension.

GEOCHEMICAL SAMPLING

Mercury dispersion halos are commonly found around hydrothermal base metal deposits and quite consistently around deposits of cinnabar. The intensity of the corona varies with the porosity of the host rock, the temperature of deposition, the structural environment and to a large extent, is inversely proportionate to the distance from the hydrothermal metal deposit. Measurement of trace-mercury distribution, considered with the rock type and the other variables can frequently define geological zones or environments that are amenable to mercury mineralization or even mineralized zones.

At Quartz Mountain, such a survey was carried out in conjunction with the geological mapping program. Small specimens of bedrock were collected and treated in a field laboratory where mercury traces as low as .2 parts per million were measured on a LeMaire Mercury Detector. The resulting configuration is shown on Figures 4 and 5 accompanying this report.

The Figure 4 shows the main pattern of geochemical results on the portion of the claim group surveyed. A number of check samples and other intermediate samples were run which conform to the results shown. The survey showed a main area, or zone, of anomalous mercury content and a subsidiary zone of much lower trace mercury content.

The zone extending in a general east-west (magnetic) direction through from 2000 to 5400 E along the 4800 N section gave fairly consistent anomalous trace-mercury content. It has not been traced continuously throughout this distance due to overburden. To the east, the testing was limited due to the adverse ownership of the ground. To the west, the zone is obscured by overburden between 1000 and 2000 E.

No high anomalous readings were obtained in the area of serpentinized and ankeritized volcanics and the sediments cut by diorite-augite porphyry sills and sykes. However, there were several samples returning low trace-mercury content that warrant more detailed prospecting and testing:

1. Coordinates (2700E 3900 N)
2. Coordinates (1700 E 4100 N)

At the Conglomerate Showing, the geochemical data suggests a low anomalous zone at the south end of the main trench and possibly extending into the creek cut, 110 feet south. Since all outcrops were sampled, it would be necessary to put in a bulldozer cut to explore the area more fully.

In the Plante Showing, the geochemical results show a main anomalous zone of very highly anomalous mercury content in the easterly trench, with the area that was trenched and diamond drilled considerably lower and somewhat erratic (Ref. Fig. 5, 6). The isogram in Figure 6 must be considered generalized, but shows the trend and the clustering of high readings.

The detailed mapping and geochemical testing makes this area suitable for investigating the correlation between the geology and the trace-mercury content. The sheared, black serpentine forming the hanging-wall of the zone in which the mineralization appears to be confined, seems to contain practically no trace-mercury. A check of all other tests of the dark or black serpentine shows a similar correlation. The underlying black shale contains a low but anomalous trace-mercury content in the area immediately adjoining the zone containing the mineralization. The shale and greywacke on the south of the Conglomerate Locality is the matrix of the anomalous readings in that area. On the other hand, the shale, greywacke and cherty shale outcropping at the top of the ridge (coordinates E 2500 - 3500, N 1800 - 3500) show no anomalous trace-mercury. It may therefore indicate that more work is warranted in the south part of the Conglomerate Locality, not necessarily on the shale-greywacke, but near its contacts.

Within the mineralized zone at the Plante Locality, the ankeritized zone showed lower anomalous tests than the foliated serpentinized material between the ankeritized zone and the shale. Elsewhere in the explored and mapped region, the areas of heavier ankeritization gave nearly blank tests (with the exception of the two minor anomalies, 1 and 2). The data would suggest that the structural characteristics of the shale-ankeritic/serpentine contact are the most suitable of the region for mercury exploration. Certain structural characteristics that may have favourably contributed to the localization of cinnabar mineralization in certain parts of the zone will be discussed following the geology section.

A statistical analysis of the correlation of trace-mercury with rock-type shows no consistency to a relationship or any apparent preference of one rock type or another except for the apparent absence of trace-mercury in the black or dark serpentine. It seems probable that structural features and relationships will prove to be of more importance in determining "controls" of mineralization. The serpentine may be relatively impervious and therefore may provide one degree of control under certain circumstances.

GEOLOGICAL MAPPING

Mapping was carried out by a series of pace and compass, distance-meter and compass and picket-line traverses, with the overall control contributed by aerial photographs. Most traverses were "closed" and errors corrected.

The regional geology has been described by Roed (1967), who synthesized both the previous work and made a local interpretation based on his mapping. The further stripping, road-building, drilling and mapping has contributed additional data for interpretation.

The claim area covers a zone of mainly volcanic rocks, partly serpentinized and ankeritized, lying between greywacke and shales to the north and the Taylor Group sandstones, conglomerates and shales to the south. Both contacts may be faulted. The volcanics have been intruded by sills, dykes and plugs of basic rocks, ranging from diorite to augite porphyry to a plagioclase-feldspar porphyry. Possibly related to this magmatic activity the volcanics are serpentinized in various degrees from minor foliation with chlorite development to intense sheared, heavily foliated black or very dark green rocks that may be in whole, or in part, serpentine derived from peridotite.

Certain zones in the volcanics in the northern section of the formation have been subsequently ankeritized and cut by a myriad of silicious veins and veinlets. The degree of ankeritization, like the serpentization, varies widely from "bleaching" to complete recrystallization. While the effects of both alterations processes are commonly found in a single area, the serpentization appears to have preceded the ankeritization in all areas examined. In particular, in one outcrop at coordinates (E 2720 - N 3950), a band of serpentinized volcanics has been cut by a series of north-south chalcedony veins, with the "bleaching" alteration extending out from them laterally. The foliation of the serpentinization can be traced from the serpentinized volcanics into the bleached zone.

Higher in the stratigraphic sequence, overlying the volcanic horizons, a series of sedimentary beds consisting of shale, cherty shale and thin conglomerate beds are also intruded by dykes and sills of diorite and augite porphyry (coordinates E 3000 N 3000).

Minor faulting is postulated for the sharp valley immediately north of the Plante Locality. The change in attitude noted in the shale (Fig. 3, 5) suggests either deformation due to flexure or possibly "drag folding". The attitude would parallel the Yalakom River Fault (Roed 1967: 6, 7: Armstrong 1966) and may be genetically related (Leech 1953). The mercury deposits of the lower Yalakom River have been related to this feature in that area. The ankeritization and serpentinization characterizes the volcanics lateral to the fault throughout much of its traverse of the Yalakom River Valley.

Two cross faults (roughly north-south) are postulated, both in the west section of the mapping, but neither are associated with the mineralized area (Figure 3).

In the detailed mapping of the northern section, three types of silica veins were identified, types 1, 2, and 3, with three general attitudes, A, B and C. The type 1 veins are translucent to grey opaque chalcedony, often banded, with differing degrees of translucency. These veins occasionally contain breccia - fragments of ankeritized volcanics. The type 2 veins are blank, white veins of crystalline quartz. The type 3 veins are blank, white, cryptocrystalline quartz veins varying in size from tiny hairline cracks up to 4 and 5 feet in thickness.

The attitudes noted are as follows:

A North south strike with steep to vertical dip.

B East west strike with steep northerly dip.

C N 65 W to N 75 W strike with dip to south at 35 - 60 degrees.

In analysis, the chalcedony (type 1) and the blank white crypto-crystalline veins (type 3) veins are found in all attitudes, while the type 2 veins are found only in the east-west type B attitudes. Cinnabar mineralization is associated with veins only of the type 1 in the Class A and C attitude.

DIAMOND DRILLING

Recovery of core in the drilling was relatively low due to the rock characteristics and the equipment. A Boyles X-ray rig was rented for the work, taking EX core, 29/32" diameter. No casing was available and a standard core barrel was used. Recovery by hole averaged:

D. D. H. #1	58.9%
D. D. H. #2	52.7%
D. D. H. #3	54.9%

As might be noted from the drill logs in Appendix II the poorest recovery is found in the zones of mineralized rock.

The D. D. H.'s #1 and 2 both intersected the mineralized chalcedony-breccia zone prospected in the surface cuts but none of the holes pierced both zones of mineralized serpentinized volcanics overlying the shale where mineralization was found in the lowest bulldozer cuts.

The location and attitude of the three holes are shown in the Figure 6 and the logs are given in the Appendix.

Cinnabar was noted in sparse locations in all three holes, but in no case did the content appear to approach possible "ore" grade. However, the drilling does demonstrate the geological provenience of the cinnabar in this prospect. The mineralization is commonly:

(i) In and along a wall of the grey, translucent chalcedony, where it occurs as fine veinlets, specks, blobs and lenses. The chalcedony is found cutting all of the heavily altered serpentine but not the partly altered or unaltered serpentine.

(ii) Disseminated in and through the heavily altered brown ankeritic rock.

(iii) Disseminated sparsely in the serpentinized volcanics in a zone, or zones, parallel to the underlying shale contact.

Cinnabar is not found in the blank white quartz masses, breccias, and veins that appear to be earlier than the chalcedony breccia zones, veins and tiny veinlets.

The core was sampled according to the format outlined in the logs (Appendix II and Figure 4). The recovered core represents a small percentage of the hole length in many of those sections, as indicated in notes. All samples were submitted for assay and all samples returned trace amounts of mercury.

DISCUSSION OF POSSIBILITIES

The season's work represents a preliminary exploration stage during which a favourable zone for mineralization has been, in part, defined and tested. The evaluation of the economic possibilities must await a complete examination of the zone, advanced exploration of mineralization and at least a preliminary study of the feasibility of the economics of mercury production in this area. For the present, it is possible only to assess the structural possibilities of the property relative to the distribution of the mineralization.

The most favourable structure discovered to date is the Plante-Reynolds zone which is adjacent to the south of a probable fault zone. This fault is thought to be correlative with the Yalakom Fault Zone which is related to explored mercury deposits 30 miles south east on the lower part of the Yalakom River. The exposed parts of the zone itself consist of apparently porous rocks underlying impervious rocks having little structure, except for wide ranges in degree of alteration. At the Plante Showing, the "hanging wall" of the zone is a dense black serpentine, heavily fractured at the surface. The serpentine-volcanic contact may be a fault that is approximately parallel to the Class C veins. The adjoining volcanics are ankeritized, serpentized and heavily sheared. Some areas within the ankeritic zone are very heavily fractured, with a variety of fine breccias cemented by type 1 and 3 silica veins. The main criteria for mercury mineralization appear to be present, but the porosity in the presently explored areas may be insufficient to provide structures of "ore body" size. It therefore remains to completely explore the geology of the zone to localize those conditions that may be more suitable for ore grade and size.

Cinnabar was reported by Leech (1953) in chert cobbles in a conglomerate exposure 150 feet south of the summit of Quartz Mountain. This exposure has not been examined but must be on the claim group belonging to Roosevelt Mines Ltd. The geological mapping to the south indicates the probability that a fault core extends through the south part of the property and is subparallel to the Yalakom Fault. This area offers an attractive exploration zone that has yet to be explored. The program

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The program

The company's property extends east of the Reynolds claim group (Reed 1967: 14). That section has yet to be explored, although cinnabar has been reported in the area by prospectors.

PRODUCT DISCUSSION

More than half of the estimated world production of mercury comes from mines in Spain and Italy, with other producing countries, U.S.S.R., Communist China, Yugoslavia, U.S.A., and Mexico, in order of decreasing output. Ore grade in the Almaden Mine in Spain is thought to average over 2 percent, while the Italian mines run between 1 and 2 percent mercury. The Idria Mine in northwestern Yugoslavia averages 0.4 percent mercury, close to the 0.36 percent average for all of the ore treated in the United States during 1964. The bulk of Canadian production was derived from the southern Omineca district of British Columbia, with a small increment from the Bridge River, Copper Creek near Kamloops, and as a byproduct in the silver mines in Cobalt, Ontario.

Pinchi Lake	53,000 flasks
Takla Lake (Bralorne)	1,631 flasks
Copper Creek	143 flasks
Empire Mercury, Bridge River	16 flasks
Cobalt	12 flasks

(George, 1966)

Of the 25 known minerals containing mercury, cinnabar, the bright vermilion mercury-sulfide, accounts for 95 percent of the world's production. Mercury deposits are generally formed at a shallow depth under conditions of relatively low temperature and rarely extend over a vertical range of greater than 1000 feet. They are practically all primary, hydrothermal deposits, associated with Tertiary or Recent vulcanism and are related to major fracture or fault systems. Supplementary "ore" minerals in mercury deposits are pyrite, realgar and stibnite and accompanying gangue minerals include opal, chalcedony, quartz, calcite and vein-dolomite. Mercury deposits are commonly found in rocks altered by ankeritization and carbonatization. The structural characteristics of mercury-sulfide deposits are predominantly differences in rock porosity. The mercury deposits appear to occur in porous rock structures having access-channels (fracture or fault systems) and capped by impervious, massive rock horizons or fault gouge.

Mining of most mercury deposits is comparable to most other mining operations with the morphology of the deposits governing the extractive method. The U.S. mines vary from 25 to 300 tons per day. The deposits, being characteristically erratic and difficult to adequately explore, are normally not suitable to proving long-term ore reserves.

Mercury "ores" can be up-graded or beneficiated by hand sorting, crushing and screening, jigging, tabling or by flotation. Normally, however, the raw ore is crushed to minus 2 1/2 inches and roasted at 1200 to 1400 degrees F. to volatilize the mercury from the cinnabar and to remove the SO_2 produced by cooling and condensation of the mercury. Mercury can also be extracted by leaching in a solution of sodium sulfide and sodium hydroxide, and subsequent precipitation of the mercury with aluminum or by electrolysis. Choice of method generally depends on economics of fuel, power, grindability, grade, mineral characteristics and grade of ore.

The main use of mercury can be summarized as follows (order of decreasing consumption percentage):

1. Electrical equipment
2. Electrolytic production of chlorine and caustic soda
3 3. Pharmaceuticals
4. Mildew-proofing paints
5. Insecticides and fungicides
6. Dental preparations
7. Laboratory work
8. Instruments
9. Atomic radiation shield.

The long range outlook for mercury is considered good with anticipated continued demand in the electrical products and an expected continued expansion of caustic soda production. In 1966, Italy and Spain increased production in response to the sharp increase in price and drop in supply during that year. The eastern block (U.S.S.R. and China) are reportedly importing mercury which could create a strain on the present world production capacity (George, 1966).

RECOMMENDATIONS

About one-third of the claim group has been explored and one main zone has been identified that should be explored in greater detail for economic mercury deposits. Small amounts of trace-mercury have been found in three other locations that should have some additional testing to check these readings. The southern and eastern claims of the group should be explored, geologically mapped and geochemically sampled to test for any favourable zones.

The program can be phased into two parts with the first part directed toward the advanced testing of the Plante-Reynolds Zone, checking of the other three low anomalies and the gross examinations of the remainder of the property. The second part of the program should carry out the drilling of potentially valuable structures identified with the first part.

In general,, the Plante Zone should be stripped by bulldozer and rock cuts drilled and blasted. Bulk sampling of the trenches containing cinnabar mineralization should be carried out. It is important to do this sampling relative to geological, structural units, however.

The lower anomalies should be further tested by geochemical means and followed by bulldozer trenching as indicated by the results.

The remaining two-thirds of the claim group should be explored by geological mapping traverses accompanied by frequent geochemical rock samples.

The following budget should be considered a guide only and subject to some flexibility as the program proceeds.

Phase I Two months with a crew of eight men, including two geologists, two soil samplers, two helpers, one geochemical operator and a bulldozer operator.

The Phase Two program is difficult to design before the completion of the Phase One work. There are, however, a number of general statements that might be made. The main criteria to be looked for in exploration for mercury are similar to any other mineral deposits but with perhaps more emphasis on structure. Should the right combination of "trap" structures with "amenable" zones be found with some mineralization, they should necessarily be explored in detail. While complete evaluation of the exposed sections must be made first, drilling will undoubtedly be necessary for complete exploration.

On the basis of the data available on the Plante-Reynolds Zone, this zone warrants a minimum of 2000 feet of diamond drilling. Further surface work to the east in the Reynolds property may increase this substantially. If an exploration option were arranged on the Reynolds property, an allowance of an extra 2000 feet might be made. The western exposure of the zone requires more surface exploration before any estimate of footage can be made. In total, a preliminary drilling to the extent of 5000 feet appears warranted. This footage should contract at about $5.00 per foot, using non-rotating core-barrels. Additional expense includes geological supervision, transportation, mobilization and demobilization, camp construction and equipping, assaying and consulting fees and expenses. A rough figure of $10.00 per foot is commonly used in more accessible locations. If the old Copper Giant camp were rehabilitated for 10 or 12 men, the sum of about $55000.00 (or $11.00 per foot) would be needed for this phase of the program.

On completion of the Second Phase and providing potentially economic cinnabar deposits were drill-indicated, it would be advisable to conduct a feasibility study of the economics of production of mercury in this location. The sum of $5000.00 should be available for this purpose.

Subsequent phases would include more advanced drilling and underground work should the property respond to the exploration program.

J. Millar
P. Eng. PhD.

APPENDIX

A Assay Certificates

B Diamond Drill Logs

C Maps

1. Sampling Plan North Locality
2. Sampling Plan Conglomerate Locality
3. Geological Map
4. Geochemical Survey Map
5. Plante Locality - Geochemical Results, Geology and Diamond Drill Locations.
6. Plante Locality - Geochemical Isograms and cross sections.

DIAMOND DRILL HOLE NO. 1

Drilled from center trench of Plante Locality at a bearing of 027 degrees (mag.) at -57 degrees 40 minutes.

Total depth 106 feet.

Footage	Notes
0 - 67	Ankeritized and carbonatized volcanics with foliated sections and heavy development of chlorite. Cut by a number of type 3 quartz veins, some sections laced by tiny lenses, veinlets and 'eyes' of chalcedony. Cinnabar occurs very sparingly, in specks from 2 - 2.2' at 8.8' at 13.7' from 16 - 16.3' at 19' from 28.1 - 28.3' from 30 - 31.5' from 35.3 - 37.0'
67 - 76	Serpentine or very heavily serpentinized volcanics. Dark green in colour with dolomite steaks and veinlets. Several small ribbon veinlets of type 1.
76 - 97 1/2	Ankeritized, carbonatized volcanics with foliation preserved throughout section - chlorite development varies from 10 - 30% of rock. Rock cut by type 1 and 2 quartz veins and be a breccia zone cemented by translucent quartz of type 1. The best streak of cinnabar in the hole occurs in the matrix

	of this breccia at 84.3'. This seems to be the downward extension of the chalcedony breccia carrying cinnabar streaks, explored by the surface trenches. Cinnabar specks noted at 75.7', 78.0' and 90.0'.
97 1/2- 106	Foliated, grey-green, dark serpentine cut by lacework of fine quartz veins (type 2) and chalcedony veinlets (type 1).

DIAMOND DRILL HOLE NO. 2

Drilled from #2 trench on Plante Locality, at a bearing of N 45 degrees E (mag.) at -60 degrees.

Total depth 42.0'

Footage	Notes
0 - 42	Ankeritized, carbonatized volcanics retaining some remnant foliation in some sections. Quite variable in colour from pale brown to bright purple and green. Chlorite development varies through hole with best development in foliated sections. Cinnabar specks noted from 0 - 2.0', from 18.3' to 18.6', and streaks of cinnabar occur in chalcedony matrix of breccias at 20.0' - 20.2'.

DIAMOND DRILL HOLE NO. 3

Drilled from No. 1 trench on Plante Locality at N 40 degrees E at an angle of -60 degrees.

Total depth 38.0'.

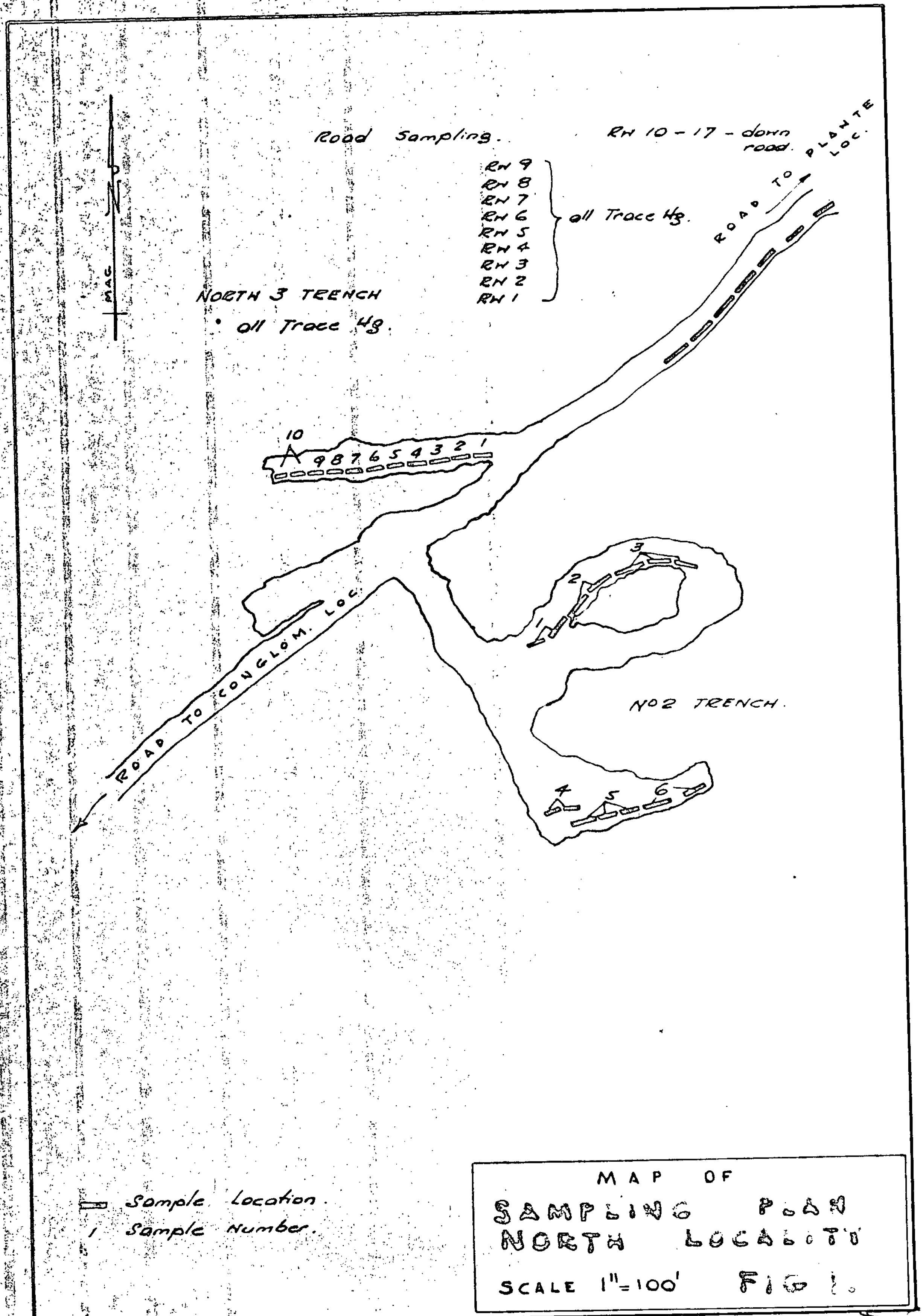
Footage	Notes
0 - 19.5	Ankeritized, dolomitized volcanics with section from 13.3 to 19.5 showing heavy chlorite development and foliation. Cinnabar noted in specks at 4.9'.
19.5 - 24	Serpentine or serpentinized volcanics unreplaced by ankerite and carbonate.
24 - 36.2	Bleached, foliated volcanics cut by numerous fine white quartz veins and quartz breccia (type 3).
36.2 - 38.0	Type 3 quartz breccia.

SUMMARY OF RECOVERY

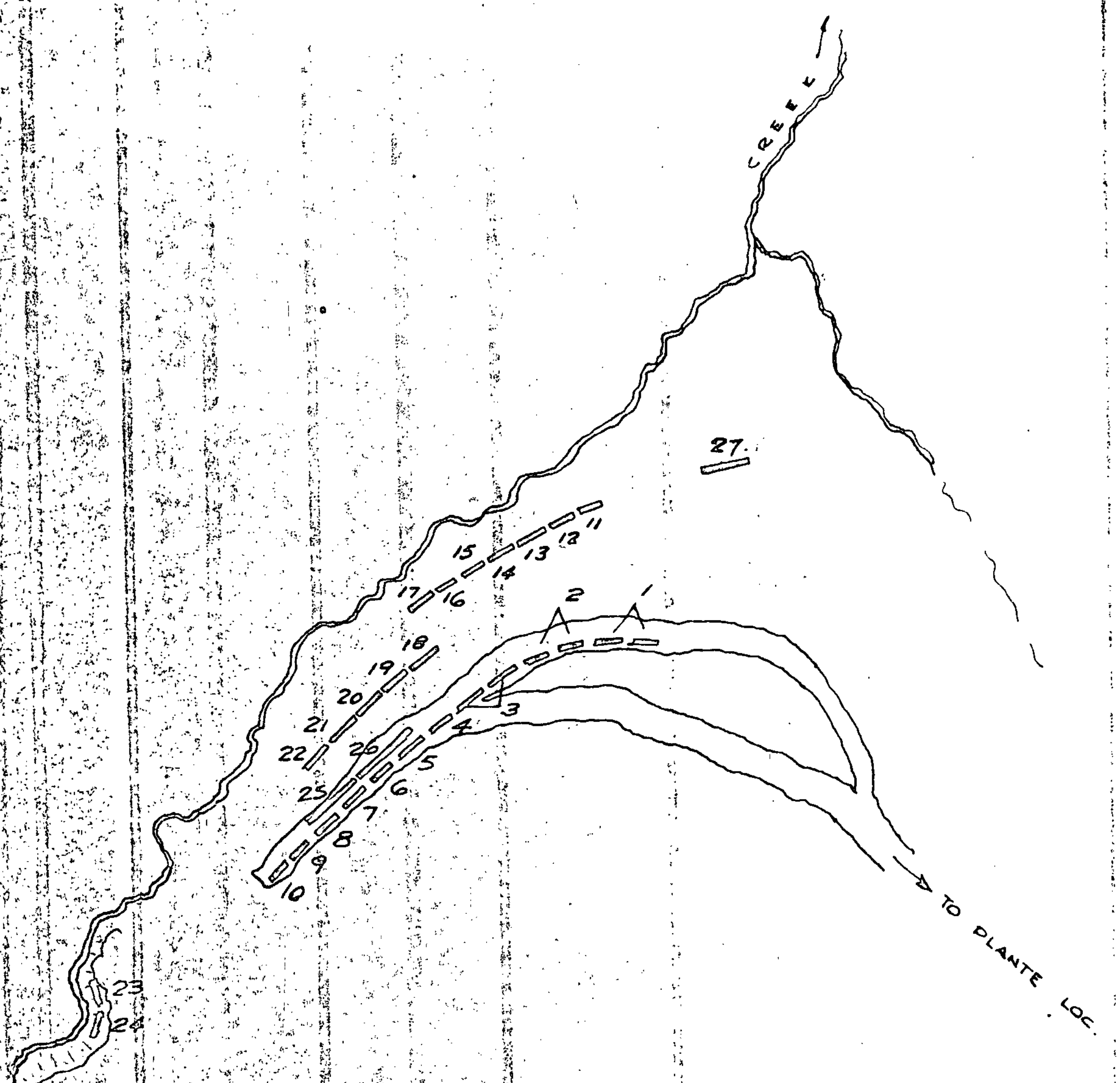
Following is summary of recovery for each drill "run" in the three holes, with the averages. Column A gives the "run", Column B the linear feet and Column C the actual length of core recovered.

RECOVERY

D.D.H. #1			D.D.H. #2			D.D.H. #3		
A	B	C	A	B	C	A	B	C
o - 8'	8	4.7	0 - 2	2	0.3	0 - 2	2	1
8-13.6	5.6	4.0	2-13	11	3.0	2-5	3	1.4
13.6-17.6	4.0	3.25	13-16	3.0	2.5	5-13	8	2.5
17.6-22	4.4	2.0	16-25	9.0	5.7	13-15.5	2.5	1.0
22-28	4.0	1.7	25-30	5.0	3.7	15.5-16.5	1	0.6
28-35.0	7.0	2.1	30-33	3.0	2.6	16.5-19.5	3	1.8
35-40	5.0	3.5	33-42	9.0	4.3	19.5-23	3.5	3
40-45	5.0	4.0				23-24	1	1
45-53.6	8.6	0.2				24-24.5	.5	.5
53.6-58.6	5.0	2.2				24.5-27	2.5	1
58.6-63	4.4	2.0				27-28	1	1
63-65	2.0	2.0				28-32	4	2
65-67	2.0	3.5				32-36	4	2.1
67-72	5.0	3.0				36-38	2	2
72-78	6.0	5.5						
78-83	5.0	4.4						
83-88	5.0	2.4						
88-100	12.2	10						
100-103	3	3						
103-104	1	.5						
104-106	2	2.						
	106	65.95		42	22.1		38	20.9
% Recovered		58.9%	%Recovered		52.7%	% Recovered		54.9%

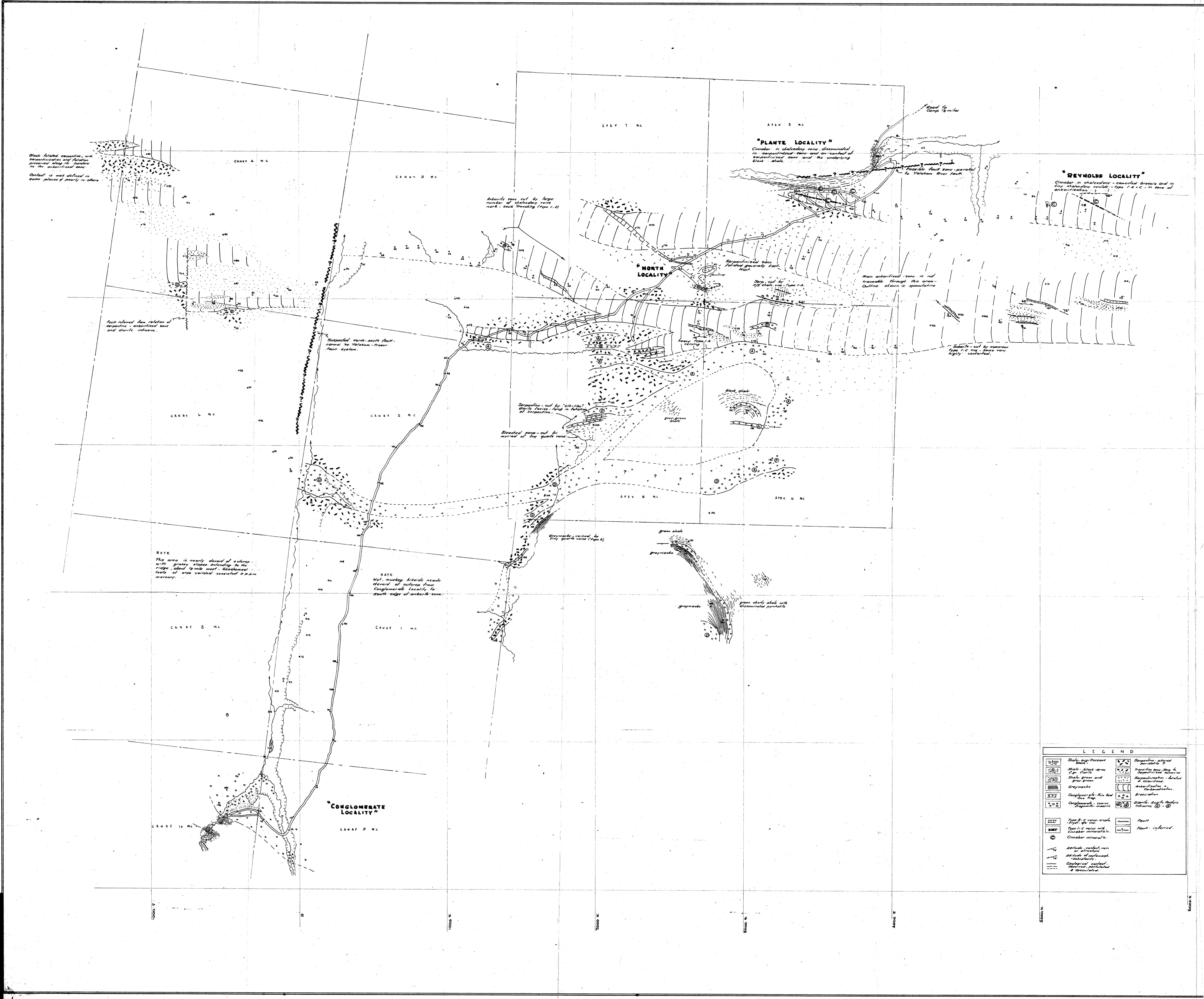

Road Sampling.
RH 10 - 17 - down road.
RH 9
RH 8
RH 7
RH 6
RH 5
RH 4
RH 3
RH 2
RH 1
all Trace Hg.
ROAD TO PLANTE LOC.
MAG. N
NORTH 3 TRENCH
all Trace Hg.
10
9 8 7 6 5 4 3 2 1
3
2
1
ROAD TO CONGLOM. LOC.
NO2 TRENCH.
4
5
6
Sample Location.
1 Sample Number.
MAP OF
SAMPLING PLAN
NORTH LOCALITY
SCALE 1" = 100'
FIG 1.

P. Eng.



MAP OF
SAMPLING PLAN
CONGLOMERATE LOCALITY
SCALE 1" = 100' FIG. 2.

P. Eng.



To accompany geological-geochemical report by J.R.V. Millar dated October 14, 1968, covering the Candy and Apex claims, Clinton Mining Division.

EXPLORATION PROGRAM 1968.
QUARTZ MOUNTAIN MERCURY PROSPECT
ROOSEVELT MINES LTD.

GEOLOGICAL MAP

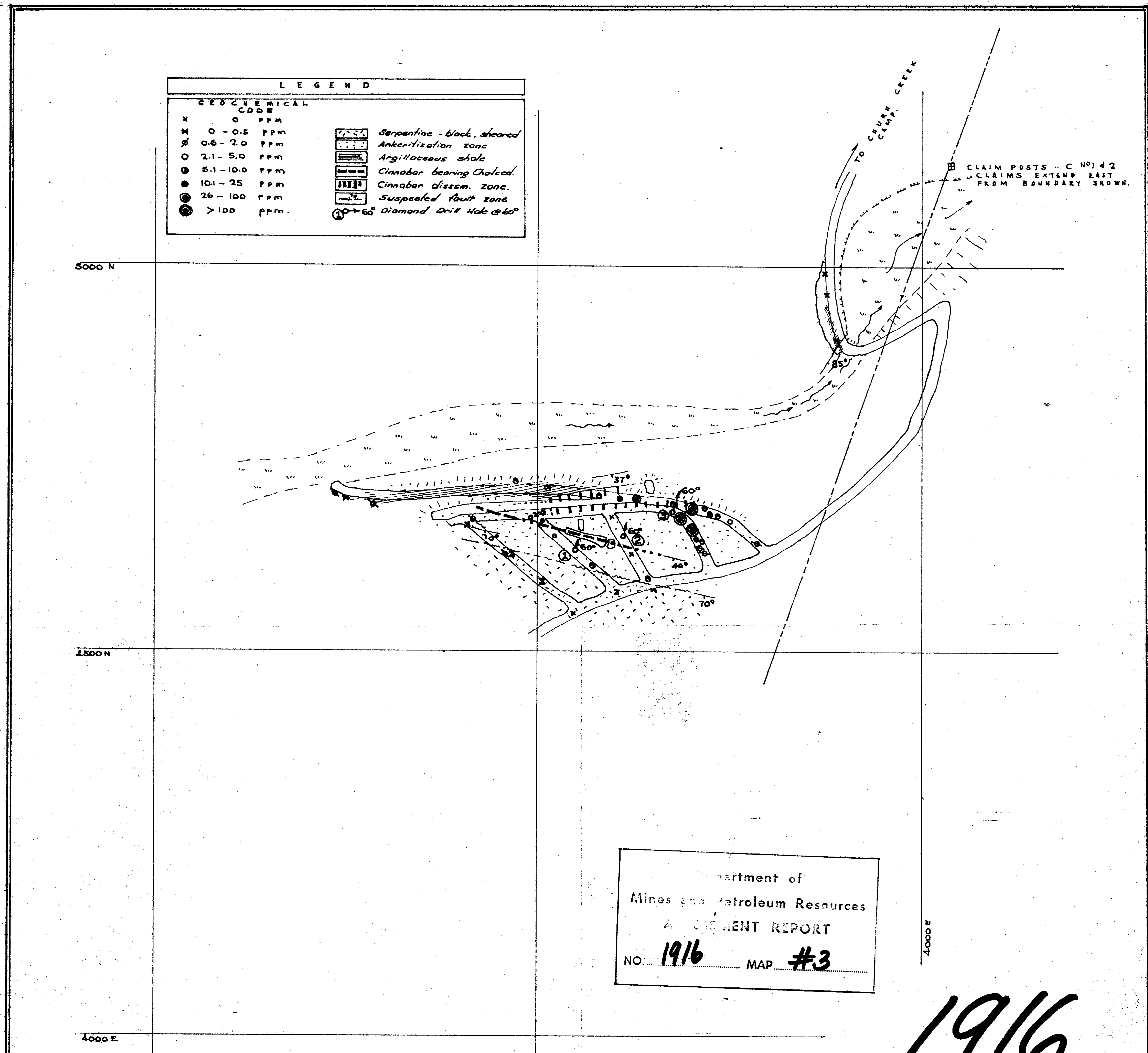
STRUCTURAL INTERPRETATION BASED ON THE MAPPING TO DATE — STRIPPING & FURTHER WORK MAY MATERIALLY ALTER DETAILS OF THIS.

SCALE 1 INCH = 200 FEET

P. ENG.

FIG. 3A

1916



1916

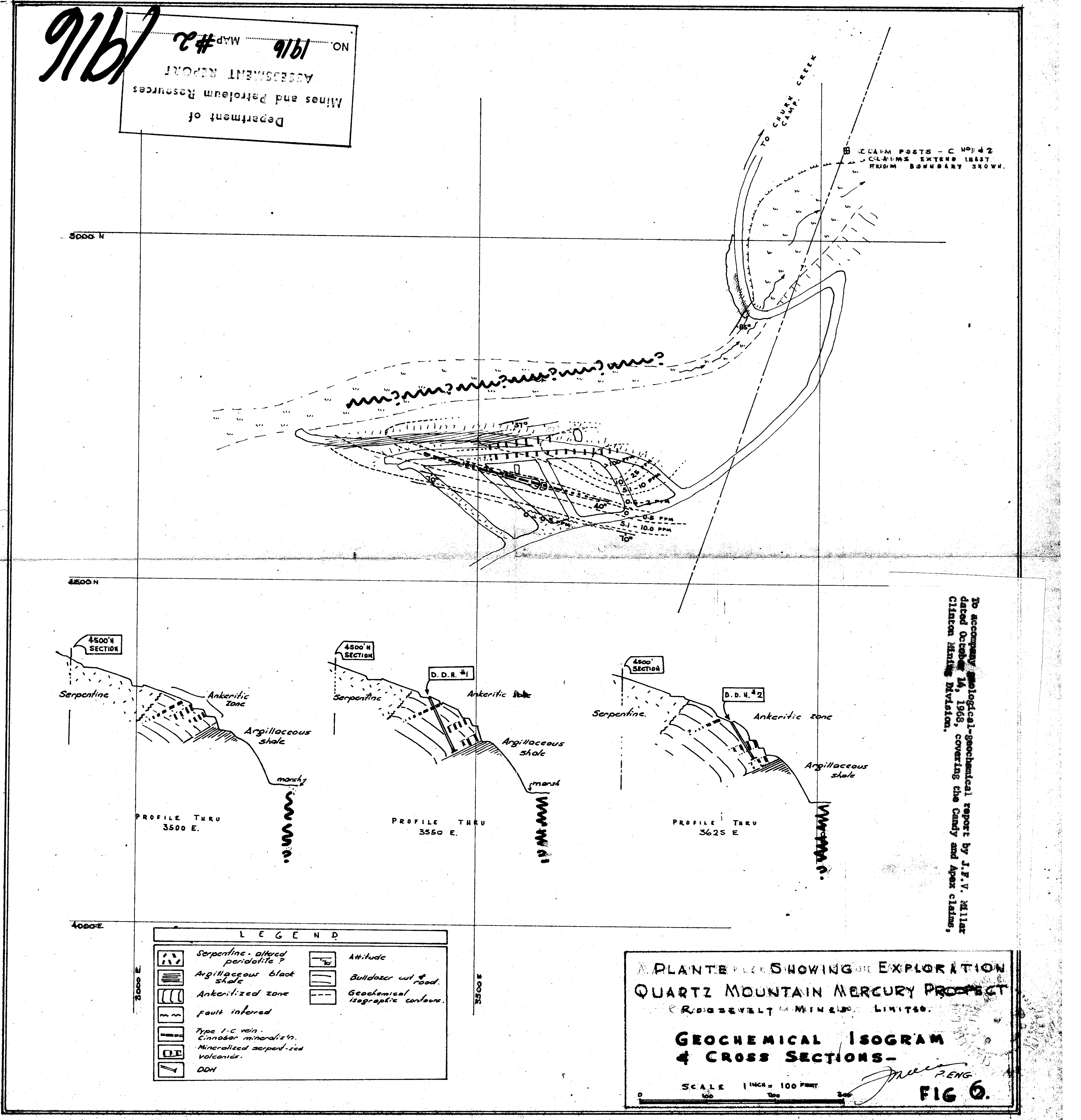
PLANTE SHOWING EXPLORATION
QUARTZ MOUNTAIN MERCURY PROSPECT
ROOSEVELT MINES LIMITED.

GEOCHEMICAL RESULTS, GEOLOGY, + DIAMOND DRILL HOLE LOCATIONS.

SCALE 1 INCH = 100 FEET

FIG 5

To accompany geological-geochemical report by J.F.V. Millar dated October 14, 1968, covering the Candy and Apex claims, Clinton Mining Division.



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PLANTE SHOWING EXPLORATION
QUARTZ MOUNTAIN MERCURY PROSPECT
ROOSEVELT MINES LIMITED.

GEOCHEMICAL ISOGRAM & CROSS SECTIONS

SCALE 1 INCH = 100 FEET

P.ENG.

FIG 6.


CLASS 1 ANOMALY · Fairly consistent anomalous readings – some parts of zone have high content of trace mercury & visible cinnabar. Whole zone should be detailed geologically, trenched and geochemically tested.
CLASS 1 ANOMALOUS ZONE
'PLANTE LOCALITY'
'REYNOLDS LOCALITY'
'NORTH LOCALITY'
CLASS 3 ANOMALY
CLASS 2 ANOMALY
CLASS 3 ANOMALY. Area of very low to nil mercury tests with few very low anomalous tests. Fair exposure and no identified Cinnabar mineralization. NOT considered a prime anomalie.
CLASS 2 ANOMALY Series of anomalous tests at end of bulldozer trench and in outcrop on creek
'CONGLOMERATE LOCALITY'
APEX 7 MC
APEX 5 MC
APEX 8 MC
APEX 6 MC
CANDY 4 MC
CANDY 3 MC
CANDY 6 MC
CANDY 5 MC
CANDY 8 MC
CANDY 7 MC
CANDY 10 MC
CANDY 9 MC
Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 1916 MAP #4
To accompany geological-geochemical report by J.F.V… dated October 14, 1968, covering the Candy and … Clinton Mining Division.
LEGEND
GEOCHEMICAL CODE
0 PPM
0 – 0.5 PPM
0.6 – 2.0 ppm
2.1 – 5.0 ppm
5.1 – 10.0 ppm
10.1 – 25.0 ppm
26 – 100 ppm
101 – 200 ppm
>200 ppm
ANOMALOUS ZONE ALL INDIVIDUAL TESTS NOT SHOWN
ANOMALOUS AREA OR ZONE
EXPLORATION PROGRAM 1968.
QUARTZ MOUNTAIN MERCURY PROSPECT
ROOSEVELT MINES LTD.
GEOCHEMICAL SURVEY
D. ENG.
SCALE 1 INCH = 200 FEET
FIG 4

1916