Report 351 T
N.T.S. 41-I-16



010

REPORT ON

PHILLIP'S BAY PROJECT

FOR

EMPIRE EXPLORATIONS

K.F. O'Flaherty

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Phyllis Township

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Copperfields
2 Jan 73
FJW

LEGEND

KEWEENAWAN

Db. Olivine diabase (dyke)

HURONIAN

Cgl. Conglomerate

ALGOMAN

D_2 Diorite - altered (dykes)

D_{2b} Diorite - unaltered (dykes)

PRE-ALGOMAN

Md Metadiorite (sill or sheet)

KEEWATIN

Ry Rhyolite

RyT Rhyolite tuff

Rf Rhyolite fragmental - highly silicic autoclast

Rbx 1 Rhyolite breccia - dark fragments

Rbx 2 Rhyolite breccia - light and dark fragments

ABBREVIATIONS

alt.	altered
Born.	Bornite
cb., carb.	carbonatized, carbonate
chl.	chloritized
cpy., cp.	chalcopyrite
f.f.	few fragments
Hem.	Hematite
Mag.	Magnetite
Mal.	Malachite
mt.	matrix
m., mass.	massive
o.b.	overburden
py., pyr.	pyrite
sh., sch.	sheared, schist
sil.	silified, siliceous
Tour.	Tourmaline
Va.	Vein

REPORT ON

PHILLIP'S BAY PROJECT

FOR

EMPIRE EXPLORATIONS

The Phillip's Bay Project area lies on and about the south west portion of Temagami Island, Lake Temagami, Phillis Township, District of Nipissing, Ontario. The greater part of the area is water covered, 1,264 acres in 33 full and one part leased claims; the land area consists of 4.8 acres on four small islands and 119 acres of Lease 11446 on Temagami Island held by Temagami Mining Co. Limited. Application has been made for a lease covering the south part of Temagami Island extending from Lease 11446.

Temagami Island is situated at the junction of the North East Arm with the main body of Lake Temagami. The arm is underlain by north dipping acid to intermediate volcanic rocks which have been invaded by granite, granodiorite, diabase and a metamorphosed diorite, called metadiorite in the mine area.

Younger Huronian sediments, primarily conglomerate and greywacke, overlie the older volcanics except for the "window" along the North East Arm. Temagami Island is situated at the south west end of this "window".

The south contact of the metadiorite intrusive is characterized by a zone of variable width which is composed of green chlorite and pyrite with minor chalcopyrite and other metallic minerals. This mineralization varies from almost nil to over fifty percent of the zone.

Attention was first drawn to the area by our group in an aeromagnetic survey carried out in 1947, and repeated in more detail later. Reference to the literature showed that the two outcrops of pyritic material with low values in copper and nickel were actually observed by Government surveys as early as 1890. The first drilling was commenced in 1952, and the program expanded considerably when five properties on and about Temagami Island were optioned to Anaconda in 1953. Variable amounts of copper, nickel and cobalt were found throughout the zone but the overall value was too low in their opinion to support a mining operation. Anomalies south of the zone were not tested.

Temagami Mining Co. Limited then acquired the area by an amalgamation of the various companies in 1954. Diamond drilling of local anomalies located by Geophysical Engineering & Surveys Limited resulted in the discovery of the present high grade orebodies lying in the rhyolites close to the pyritic zone. These bodies of massive chalcopyrite are found in rhyolite fragmental rock or a variety of rhyolite "tuff" which make up the "favourable zone".

The Phillip's Bay Project was established to explore the southwest extension of the "favourable zone" immediately beyond the known limits of the mine proper. Mineralization was encountered in earlier drilling but the present program represents the first detailed systematic approach to exploring this favourable area.

1961 WORK PROGRAM

The 1961 work program on the Phillip's Bay Project consisted of geophysical surveys, diamond drilling, geochemical testing and geological mapping.

The project area has been divided into two parts:

Block I

From the project boundary with Temagami Mining Co. Limited south-west to the late, east-west striking diabase dike. This block contains all the land exposure of the pyritic zone, rhyolite and rhyolite fragmental rocks.

A three part subdivision of this block will be described when the block is discussed in detail.

Block II

From the late diabase dike to the west and south west property limits. This block is mainly water covered. The favourable pyritic zone contact area is entirely water covered and has been followed by geophysics and diamond drilling.

ELECTROMAGNETIC SURVEY

An electromagnetic survey was carried out over the water covered portions of the project area. Three anomalies were found in Block II; subsequent diamond drilling did not give economic results.

One anomaly coincided with an airborne anomaly in the south west portion of Block I. Diamond drilling showed the cause to be a strong north to north east striking fault which cuts the metadiorite contact.

MAGNETOMETER SURVEY

A magnetometer survey was done over a small area to more closely establish the water-covered extensions of the diabase dike between Blocks I and II to guide diamond drilling. Holes W.T. 1, 3, 5 and 7 intersected the dike. The dip was found to be steeply north; the south or footwall contact was marked by a strong fault.

SELF-POTENTIAL AND RESISTIVITY SURVEYS

A self-potential and a resistivity survey were carried out over the project portion of Temagami Island. General line spacing was 100 feet with detail areas, including all the pyritic zone, done at 50 feet. These surveys were of great assistance in detailing local structures.

Resistivity anomalies in the "Shanton" and "Thompson" zones were diamond drilled, the results will be discussed in detail further in this report.

GEOCHEMICAL SURVEY

Soil sampling was done on an experimental basis along the pyrite zone and in the Thompson zone. Two anomalous areas, 10+75N 35+00W and the Thompson zone at 11+00N 10+00W, were drilled. In neither case was sufficient evidence found to account for the anomaly.

A detailed report on this work will be submitted by N.B. Keevil Jr.

DIAMOND DRILLING

Block I

Nineteen holes AxT for 8,143 feet

Eleven holes ExT for 1,091 feet

One diamond drill hole was drilled from the 542 stope area, 551 West Drift, by Temagami Mining Co. Limited through the rhyolite fragmental zone on the project area; the hole reached a depth of 1438 feet, 943 feet were drilled on the project ground.

Block II

Twenty-two holes AxT for 8,113 feet

The results will be discussed under "Appraisal"

GEOLOGICAL MAPPING

The project area south of the Temagami Island Control Line was mapped at a scale of one inch to one hundred feet. The section between the pyritic zone and the rhyolite breccia, covering the entire "favourable zone" was remapped in detail.

APPRAISAL

BLOCK II

Metadiorite and rhyolite breccia underlie most of the block. The favourable zone has been greatly reduced by the general covergance with the metadiorite to the south west. The rhyolite breccia contains numerous showings and drill intersections of chalcopyrite but, to date, this rock has not been host to the highgrade type of orebody required. The east boundary of the block is approximately one mile from the nearest mine working and the potential productive zone is completely water-covered thus increasing costs.

It is proposed to allow Block II to lie dormant until Block I, where the favourable zone crosses the island, has been developed.

BLOCK 1

The favourable zone of rhyolite and rhyolite breccia varies in width from 500 to 1000 feet across the block and is on the island for the most part. The latest find on Temagami Mining Co. ground is 900 feet from the block boundary in a rock type, dark tuff, which occurs on the project ground.

The self-potential and resistivity surveys carried out during the summer of 1961 failed to indicate the presence of a concentration of sulphides at or close to the surface. The pyritic zone was detailed and probable fault movements worked out; this zone lies a short distance, 25 to 200 feet, from all known orebodies on Temagami Mining Co. ground but shields them from surface geophysics since the ore dips beneath it.

The two most favourable host rocks at Temagami Mining Co. are the rhyolite fragmental host to the Number 1, 2, 3, 4, 7 and 8 orebodies, and the black "tuff", host to the Number 6 orebody. These rocks are found across Block I adjacent to the pyritic zone.

Rhyolite Fragmental

A band of varying width of rhyolite fragmental crosses the block and converges with the metadiorite to the southwest. Generally the alteration of this band is much less than that around the orebodies (black chlorite and clusters of black tourmaline) but two locations show an approach to ore type alteration:

1) 9450N 28+00W

A gully runs along the rhyolite fragmental band; the rhyolite fragmental contains considerable black chlorite with an occasional speck of black tourmaline. Hole W.T. 29 intersected "feeder type" veins with moderate chalcopyrite in this band.

2) Holes 376 and 377

A siliceous section in the lower portions of these holes contains abundant fine grained tourmaline.

These two sections are 900 feet apart and at different elevations, with the latter being closer to the pyritic zone.

Rhyolite Tuff

A band of this dark, fine grained, unbedded material lies along the metadiorite contact and extends across the block. One surface showing, a one-quarter inch to one and one-half inch stringer of massive chalcopyrite, was found at 9450N 30+00W. The vein, twenty feet in overall length, was tested by seven short EXT drill holes. The best assay return was 10.29 percent copper over 0.9 feet of core; the chalcopyrite died out into quartz carbonate with minor bornite.

Drill holes 372, 375 and W.T. 35 show interesting occurrences of chalcopyrite in the tuff with W.T. 35 returning one percent copper over 47 feet followed by 3.3 percent copper and 0.9 percent nickel over 10.3 feet.

The latest surface find on Temagami Mining Co. ground is in this rock, 900 feet from the project boundary.

Shanton Zone

An interesting occurrence of chalcopyrite was found in a carbonate vein lying along the major east-west fault at 9400N 46400W by prospecting. This vein dips south with the fault and has been traced by stripping and rock trenching for 325 feet. The original discovery assayed up to 2.25 percent copper over 2.5 feet but further work indicated an en echelon pattern of veins averaging twelve to eighteen inches in width and up to two percent copper. Two EXT holes through the vein failed to show any improvement.

A resistivity anomaly on the same fault 600 feet east of the above was drilled by holes W.T. 36, 37 and 38. Multiple faults and a little chalcopyrite were intersected.

Thompson Zone

Mapping and rock trenching revealed numerous showings of chalcopyrite on both sides of a valley about 11450N 18400W, south of the South Control Line in the rhyolite breccia. Geochemical testing and the resistivity survey both indicated anomalies in the valley. Two AXT holes, W.T. 33 and 34, were drilled beneath the anomalies and two EXT holes, P.B. 10 and 11, were drilled under the best trench. Nothing of economic significance was intersected.

These holes were drilled from south to north; at least two holes should be drilled north to south beneath them to investigate a possible north dip.

Underground Drilling

One diamond drill hole, U-5-394, was drilled by Temagami Mining Co. Limited from the 542 stope area on the 551 West Drift. This hole crossed the project boundary at 495 feet and was stopped at 1438 feet after crossing the entire rhyolite fragmental band. The dikes were cut as expected.

Numerous occurrences of chalcopyrite were found in the fragmental rock with the best assaying 2.09 percent copper over six inches in a feeder type vein.

General

The mapping resulted in the discovery of numerous showings of chalcopyrite. These showings, generally in the form of quartz-carbonate and carbonate veins with chalcopyrite in rhyolite breccia average about two inches wide, and strike across, rather than parallel to, the enclosing rocks. The discovery of chalcopyrite in a weakly developed shear structure at 1400S 5400W was used for the valuable mineral find to apply for a lease south of Lease 11446.

Hole W.T. 35 was drilled to investigate a dissemination of chalcopyrite in hole 372 and a showing of bornite in hole 375. The hole returned 0.91 percent copper over 47.4 feet which included a section of 3.29 percent copper and 0.91 nickel over 10.3 feet in what appears to be a second pyritic zone.

Holes W.T. 31, 32, 39 and 40 were drilled to establish the attitude of a dike where it crossed the favourable tuff zone and to explore the tuff both above and below the dike. Good geology but only minor chalcopyrite were encountered.

Holes W.T. 36 and 41 were drilled to investigate a geochemical anomaly in which the copper content was very high. These holes showed the pyritic zone to be fairly weak with a below normal copper content.

FUTURE WORK

The next work program should be confined to Block I because of the land coverage of a good section of the favourable rocks and the proximity of the present mine workings. The geophysical surveys tend to eliminate the first 250 to 300 feet below surface except for beneath the pyritic zone and the lower limit used is 1000 feet below surface as the practical depth which can be worked using the 800 foot level at the mine as a main haulage way.

Block I has been subdivided as follows:

Area A:
From the boundary with Temagami Mining Co. to the dike 1200 feet south west along the pyritic zone.

Area B:
From the dike to the main east-west fault, 900 feet along the pyritic zone.

Area C:
From the fault to the diabase dike between Blocks I and II.

Area A

The bulk of the diamond drilling done along the pyritic zone has been in this area. The ore found on Temagami Mining Co. ground this summer is only 900 feet from the project boundary, close to the pyritic zone. The favourable rhyolite zone persists strongly across the area

and contains the narrow chalcopyrite vein as well as quartz carbonate strike slips.

The suggested drilling program for Area "A", a total of 8,600 feet, would be distributed as follows:

Pyritic Zone Contact

Seven thousand, two hundred and fifty feet in six holes. This is a deep drilling program to attempt to expand indications in previous drilling and explore the favourable zone at depth.

Rhyolite Fragmental Zone

Three holes for a total of 1,150 feet will investigate the altered rhyolite fragmental zone about 5+00N 28+00W west of the dike in which hole W.T. 29 returned indications of chalcopyrite.

Thompson Zone

Two holes totaling 1,200 feet, drilled from north to south beneath holes W.T. 33 and W.T. 34, will establish whether or not the numerous chalcopyrite showings here could be associated with a north dipping structure below the fault. Previous drilling was based on an assumed south dipping structure in the hanging wall of the fault.

A resistivity survey over the block bounded by 10+00N 28+50W, 15+00N 28+50W, 10+00N 25+00W and 15+00N 25+00W would greatly assist in determining the relationship of the pyritic zone to the heavy faulting along the project boundary. This area is mainly water covered and has never been covered by geophysics.

Area B

The pyritic zone contact has been investigated by one hole only in this area - hole W.T. 27. The rhyolite fragmental band appears to be converging with the pyritic zone across the area; hole W.T. 27 intersected rhyolite fragmental at 130 feet core length from the pyritic zone. Both the tuff and the rhyolite fragmental contain minor chalcopyrite in the hole.

Nine holes for a total of 7,000 feet has been suggested for the exploration of this area. Two complete sections approximating lines 45+00W and 42+00W together with a 700 foot hole beneath W.T. 27 should indicate the potential of this area.

A small resistivity anomaly at 0+25W 42+00W will also be investigated in this program.

Area C

The diamond drilling to date has shown much faulting and a confused picture. The rhyolite fragmental is somewhat farther away from the pyritic zone than in Area B.

Two holes for 1,200 feet will be used to explore this area. One hole will be drilled through the rhyolite fragmental in the hanging wall of the fault between Area B and Area C; the second hole will investigate mineral possibilities in the rhyolite fragmental close to the diabase dike at the west limit of the area.

Detailed mapping should be continued to the limits of the project

area. Portions of the 1961 mapping where the geological pattern is incomplete should be checked.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

K. F. O'Flaherty.

Toronto, Ontario,
November 30, 1961.

BLOCK I

Hole	Dip	Depth	Ax	Purpose	Results
W.T. 1	47°	462'	145°	General Exploration east of diabase dike.	Proved north-east dip to diabase, rhyolite fragmental poor variety.
W.T. 2	46°	801'	145°	To explore fragmental zone	Geological information
W.T. 6	40°	147'	140°	Complete section of W.T. 2	Stopped in fault zone short of proposed depth.
W.T. 27	40°	1200'	141°	General exploration through rhyolite fragmental on island.	Geological information
W.T. 28	40°	1049'	142°	General exploration at metadiorite contact.	Geological information
W.T. 29	40°	753'	142°	General exploration	Geological information
W.T. 30	45°	25'	136°	To test a high geochemical anomaly at pyritic zone.	No explanation for anomaly - weak pyritic zone; showed good black tuff zone.
W.T. 41	90°	49'		Second test of above anomaly	Below average copper values in foot-wall of pyritic zone.
W.T. 31	40°	247'	135°	To test self-potential anomaly	A very little chalcopyrite; good dark tuff.
W.T. 32	30°	100'	135°	To determine dip of dike cut in 31	More chalcopyrite than 31
W.T. 39	66°	302'	135°	To explore dark tuff below dike cut in 31 and 32	Good section of dark tuff
W.T. 40	65°	500'	135°	To explore below 39	Geological information

Hole	Dip	Depth	Az	Purpose	Results
W.T. 33	45°	336'	319°	To explore geochemical and resistivity anomaly in "Thompson Trough"	A little chalcopyrite in carbonate veins along major fault
W.T. 34	45°	297'	319°	As above	Geological information
P.B. 10	45°	63'	325°	To explore under trenching	No economic results
P.B. 11	45°	69'	311°	To explore under trenching	No economic results
W.T. 35	77°	523'	135°	To investigate minor intersection in holes 372 and 375 below meta-diorite contact.	Double pyritic zone; 0.94 % copper over 47.1; good dark tuff zone.
W.T. 36	45°	160'	139°	To investigate a resistivity anomaly on extension of fault at the "Shanton Shoot"	Stopped short in fault zone.
W.T. 37	35°	301'	317°	Drilled on reverse azimuth of above	Short, low grade intersection
W.T. 38	46°	206'	319°	Drilled below 37 to determine attitude of faulting.	Geological information
P.B. 1	45°	51'	139°	To explore a narrow, highgrade surface discovery.	1.59% copper over 2.2 feet 1.90% copper over 4.1 feet
P.B. 2	60°	58'	139°	To extend intersections in P.B.1	0.73% Copper over 2.5 feet 10.22% Copper over 0.9 feet
P.B. 3	40°	118'	137°	Exploration of above	1.93% Copper over 0.7 feet with bornite.
P.B. 4	45°	125'	141°	Exploration of above	3.07% Copper over 0.6 feet with bornite.
P.B. 5	45°	115'	139°	Exploration of above	Geological information.

Hole	Dip	Depth	Az	Purpose	Results
P.B. 6	45°	97'	139°	Exploration of above	Geological information
P.B. 7	45°	125'	140°	Exploration of above	Geological information
P.B. 8	61°	151'	359°	Exploration of carbonate vein with chalcopyrite	Vein weaker at depth
P.B. 9	60°	119	358°	As above	As above
U-5-394	0°	1438'	195°	To explore rhyolite fragmental zone and determine the attitude of the dikes at moderate depth. Drilled from 542 stope, 551 West Drift Temagami Mining Co. Limited 943 feet on Phillip's Bay Project	Geological information

BLOCK II

Hole	Dip	Depth	Az	Purpose	Results
W.T. 3	40°	61'	031°	To locate diabase dike	Dike located
W.T. 5	30°	37'	031°	As Above	Dike located
W.T. 4	45°	544'	140°	To explore west of diabase dike	Geological information
W.T. 7	46°	449'	140°	To explore below and west of diabase dike	Geological information; 0.10% Copper over 3.0 feet 1.02% Copper over 1.3 feet
W.T. 13	45°	337'	140°	To explore west of diabase dike.	Geological information
W.T. 8	45°	40'	353°	To explore about D_2 dike on Island 725 and intersections in 364 and 43	Seventeen foot zone of disseminated chalcopyrite
W.T. 9	45°	43'	328°	Fanned out from above	Twenty-two foot zone as above
W.T. 10	46°	311'	140°	To test electromagnetic anomaly	1.01% Copper over 7.0 feet. Geological information
W.T. 18	45°	432'	140°	Drilled on section behind W.T. 10	Good rhyolite fragmental zone; geological information
W.T. 12	45°	581'	140°	To test westerly extension of electromagnetic anomaly	Good tuff and rhyolite fragmental 3.74% Copper over 0.6 feet in rhyolite breccia-tuff type 9.40% Copper over 0.6 feet in rhyolite tuff
W.T. 19	45°	547'	140°	Drilled behind and below W.T. 12	0.29% Copper over 4.5 feet 0.67% Copper over 1.8 feet 0.40% Copper over 8.3 feet All in rhyolite

Hole	Dip	Depth	Az	Purpose	Results
W.T. 22	45°	548'	140°	To investigate electromagnetic anomaly and values east of W.T. 12 and W.T. 19	1.70% Copper over 1.8 feet 0.59% Copper over 1.9 feet 0.84% Copper over 1.3 feet All in rhyolite but do not line up with previous ones
W.T. 11	45°	125'	230°	To investigate a self-potential anomaly found by Abex on Island 725	Two bornite showings
W.T. 14	30°	81'	230°	Drilled above W.T. 11	Negative
W.T. 16	45°	140'	321°	To investigate electromagnetic anomaly	Geological information
W.T. 17	45°	795'	323°	As above and extend intersection in hole A-4	0.291% Copper over 30 feet in line with 0.40% Copper over 15.2 feet in hole A-4
W.T. 20	48°	407'	140°	Exploration along metadiorite contact and electromagnetic anomaly	Geological information
W.T. 21	45°	803'	140°	As above	Geological information
W.T. 23	44°	404'	070°	Exploration west of diabase dike.	Low values in feeder veins
W.T. 24	45°	570'	152°	Fanned out from above	Geological information
W.T. 26	45°	453'	035°	South west on shore of Island 725 from above; to investigate electromagnetic anomaly	Geological information

Hole	Dip	Depth	Az	Purpose	Results
W.T. 15	45°	390'	150°	To investigate electromagnetic anomaly	Fault zones

DRAWING INDEX

GEOPHYSICAL SURVEYS

Dwg. No.	Scale	Title
2372	1" = 400'	Electromagnetic Survey - Phillip's Bay Project
1819	1" = 100'	Electromagnetic Survey of part of West Temagami Area
1958	1" = 400'	Magnetic Compilation of West Temagami Area
1823A	1" = 100'	Magnetometer Survey of part of West Temagami Area
1957	1" = 400'	Resistivity Compilation of West Temagami Project
1916	1" = 100'	Resistivity Survey of part of Phillip's Bay Project
1917	1" = 100'	Resistivity Survey of part of Phillip's Bay Project
1918	1" = 100'	Resistivity Survey of part of Phillip's Bay Project
1919	1" = 100'	Resistivity Survey of part of Phillip's Bay Project
1916 - 1920	1" = 100'	Self-Potential Survey of part of Phillip's Bay Project
1917 - 1921	1" = 100'	Self-Potential Survey of part of Phillip's Bay Project
1918 - 1922	1" = 100'	Self-Potential Survey of part of Phillip's Bay Project
1919 1923	1" = 100'	Self-Potential Survey of part of Phillip's Bay Project

GEOLOGY AND DIAMOND DRILLING

1347	1" = 400'	Geology and Diamond Drill Plan of Phillip's Bay Project
1924	1" = 100'	Geology of part of Phillip's Bay Project
1925	1" = 100'	Geology of part of Phillip's Bay Project
1926	1" = 100'	Geology of part of Phillip's Bay Project
1927	1" = 100'	Geology of part of Phillip's Bay Project
2225	1" = 100'	Geological Compilation of Drawings 1924 and 1925
2201	1" = 20'	Plan of Diamond Drill Holes P.B. 1 to 7
2203	1" = 20'	Section of Diamond Drill Holes P.B. 1,2,3
2205	1" = 20'	Section of Diamond Drill Holes P.B. 4,5
2207	1" = 20'	Section of Diamond Drill Holes P.B. 6
2209	1" = 20'	Section of Diamond Drill Holes P.B. 7

Dr. No.	Scale	Title
2202	1" = 100'	Section of Diamond Drill Holes W.T. 36,37,38
2204	1" = 100'	Section of Diamond Drill Holes W.T. 31,32,39,40
2206	1" = 100'	Section of Diamond Drill Holes W.T. P.B. 10
2209	1" = 100'	Section of Diamond Drill Holes W.T. 33
2210	1" = 100'	Section of Diamond Drill Holes W.T. 34 and P.B. 11
2211	1" = 100'	Section of Diamond Drill Holes W.T. 30,41
2212	1" = 100'	Section of Diamond Drill Holes 362,363,W.T.29
2215	1" = 100'	Section of Diamond Drill Holes P.B. 8
2216	1" = 100'	Section of Diamond Drill Holes P.B. 9
2217	1" = 100'	Section of Diamond Drill Holes 36,34,356,359
2218	1" = 100'	Section of Diamond Drill Holes 374, 375
2219	1" = 100'	Section of Diamond Drill Holes 371,372,W.T.28, P.B. 6
2390	1" = 100'	Section of Diamond Drill Holes 370,395,84
2391	1" = 100'	Section of Diamond Drill Holes 81,72,77,79
2393	1" = 100'	Section of Diamond Drill Holes W.T. 1
2394	1" = 100'	Section of Diamond Drill Holes W.T. 27
2395	1" = 100'	Section of Diamond Drill Holes W.T. 35
2396	1" = 100'	Section of Diamond Drill Holes W.T. 2 and 6
2223	1" = 100'	Plan and Section Diamond Drill Hole U-5-394

Report 377 T
N.T.S. 41-I-16



020

REPORT ON

PHILLIP'S BAY PROJECT

WORK DONE JANUARY TO MARCH 1962

FOR

EMPIRE EXPLORATIONS

K. F. O'Flaherty

REPORT ON

PHILLIP'S BAY PROJECT

WORK DONE JANUARY TO MARCH 1962

FOR

EMPIRE EXPLORATIONS

The Phillip's Bay Project work programme done from January to March 1962 consisted primarily of diamond drilling with a limited amount of resistivity geophysical coverage to assist the diamond drill layout. Twenty-six holes for a total of 10,138 feet were drilled by Boyles Brothers (Eastern) Limited, Noranda, Quebec.

The diamond drill holes were designed to follow-up favourable geology as shown by surface work and previous drilling, get specific geological information in areas where this information was vague or lacking entirely and to extend mineralized zones as these might be found. The programme was restricted to the area bound by Sections 9+00W and 27+50W and to the favourable rhyolite and rhyolite fragmental rock types along the metadiorite contact zone. This is the environment in which occur the high-grade orebodies at Temagami Mining Co. Limited.

The programme was restricted to this smaller area rather than spread out over the entire project ground because this portion was considered to be the most favourable, was the closest to the present underground workings at Temagami Mining Co. Limited, and the limited amount of diamond drilling available could best be used to thoroughly test only a relatively small area.

The results of the drilling programme and comments on them are as follows:

The rhyolite fragmental horizon apparently is less continuous at depth than at the surface especially from Section 21+00W to Section 27+50W. The rock is generally a less distinct variety of rhyolite fragmental almost completely lacking the characteristic appearance and alteration found about the east high-grade zone.

The dark grey, fine grained, unbedded rhyolite proved to be very persistent along the metadiorite contact and contained most of the chalcopyrite found during the drilling.

(A) The best mineralized zone extended from Section 14+00W to Section 18+00W and reached its best development on Section 15+00W. Holes W.T. 35, W.T. 51 and W.T. 65 showed the zone to occur along a fault, dip about 70° north west and pinch out rapidly at depth. True width decreased from 40 feet to 6 inches in a dip range of 450 feet. The average grade on this section would be about one percent copper. The zone decreased rapidly in size towards Section 14+00W and 18+00W.

The chalcopyrite was found to occupy small fractures and platings on slip faces through the whole zone; there was no single structure along which the mineralization was concentrated. One hole, W.T. 59, on Section 14+00W, was drilled below the dike against which the mineralized zone was terminated but nothing similar to it was noted in the core.

(B) Holes W.T. 62 and W.T. 63 on Section 10+50W intersected a narrow, vein type mineralized zone but holes both along strike and below did not prove any continuity.

FUTURE WORK

A summer drilling programme of a minimum of eight holes totalling 2,550 feet should be done to extend known mineralized sections, test the remaining geophysical anomalies and provide additional information in favourable geological areas. The four target areas with the required drilling are listed below.

(1) The detailed resistivity survey done in the rhyolite fragmental about 6+00S and 12+00W indicated a small but strong anomaly lying along 5+00S, 12+50W, 5+15S and 12+00W. A center point electrode survey indicated the conductor to lie about 100 feet below surface.

Two 200 foot holes should be sufficient to test this anomaly.

4+25S 12+50W; Az. 140°; Dip -50°; Depth 200 feet

4+10S 12+00W; Az. 140°; Dip -45°; Depth 200 feet

(2) The mineralized zone intersected on Section 15+00W is shown to dip much more steeply than the pyritic zone, an interpretation which could be in error. One further hole on this section above W.T. 35 would assist in making the proper interpretation.

1+95N 15+00W; Az. 140°; Dip -65°; Depth 350 feet

The single intersection on Section 16+00W could be extended and the problem of the offset on the pyritic zone could be resolved by one hole.

3+00N 16+50W; Az. 140°; Dip -80°; Depth 500 feet

The good intersection obtained in hole W.T. 57, 15.72% copper over 0.5 feet could possibly be extended and additional information on the

pyritic zone offset obtained by one hole collared 40 feet behind hole 372.

3+00N 14+00W; Az. 140°; Dip -60°; Depth 500 feet

(3) The intersections obtained in holes W.T. 62 and 63 on Section 10+50W should be further investigated. This is in the vicinity of the small, high-grade surface showing at 1+00S 13+00W which returned 10.22 percent copper over 0.9 feet in hole P.B. 2; further work is required.

The dike intersections in the present drilling are open to more than one interpretation, each of which is logical. Two of these interpretations are shown; one on the main geological compilation and one on the enclosed sketch. Because of this, two holes will be needed to investigate the mineralization depending on the position of the dikes.

0+00N 11+50W; Az. 140°; Dip -45°; Depth 250 feet

0+70N 11+00W; Az. 140°; Dip -60°; Depth 175 feet

(4) The Thompson zone was drilled by holes W.T. 33 on Section 17+00W and W.T. 34 on Section 18+00W in expectation of a south dip along the strong east-west fault. This theory did not prove out so the zone should be tested for a normal north dip. One hole should be sufficient for this.

11+75S 18+00W; Az. 140°; Dip -60°; Depth 400 feet.

This is hole 18-2 in the proposal dated December 14, 1961.

This drilling as outlined is a minimum; any intersections obtained would be expended. All drill sites are on the island and the programme can be done during the summer.

The area between 10+50W and 15+00W from the base line north to the shore line should be mapped in as close detail as possible to determine which of the two dike interpretations is correct and also whether or not irregularities occur along the pyritic zone contact.

Consideration should be given to an underground investigation of the eastern portion of the Phillip's Bay Project ground. The most westerly workings at Temagami Mining Co. Limited are at Section 2+00W on the 051 West Drift and Section 4+00W on the 551 West Drift; the most favourable section at present on the project is 15+00W. A drive of approximately 1,500 feet would be required to investigate the favourable metadiorite contact zone as far as Section 15+00W, 700 feet of which would be on Temagami Mining Co. Limited ground. Expected costs would be about $35.00 per foot since the objective is three-quarter miles from the shaft.

The chief advantages to be gained by an underground programme are:

(a) To provide a close look at the favourable contact zone.

(b) To provide drill sites for much less expensive underground drilling.

The chief disadvantages to an underground programme are:

(a) No definite high-grade ore shoot is presently known.

(b) The cost of providing the drill sites could offset any economy in the drilling.

(c) The timing of any underground programme will be dictated by Temagami Mining Co. Limited mining sequence, development priority and ability to handle the waste produced.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

K. F. O'Flaherty.

Toronto, Ontario,
April 26, 1962.

PHILLIP'S BAY PROJECT

DRAWING INDEX

Drawing Number	Scale	Title
2225	1 inch = 100 feet	Geological Compilation
2227	1 inch = 100 feet	Geological Interpretation Elevation 9,550
2212	1 inch = 100 feet	Section 9+00W
2239	1 inch = 100 feet	Section 10+00W
2346	1 inch = 100 feet	Section 10+50W
2387	1 inch = 100 feet	Section 11+00W
2390	1 inch = 100 feet	Section 12+00W
2346	1 inch = 100 feet	Section 13+00W
2389	1 inch = 100 feet	Section 14+00W
2345	1 inch = 100 feet	Section 15+00W
2388	1 inch = 100 feet	Section 16+00W
2211	1 inch = 100 feet	Section 18+00W
2391	1 inch = 100 feet	Section 19+50W
2204	1 inch = 100 feet	Section 20+50W
2242	1 inch = 100 feet	Section 21+00W
2394	1 inch = 100 feet	Section 23+00W
2240	1 inch = 100 feet	Section 24+50W
2202	1 inch = 100 feet	Section 25+00W
2344	1 inch = 100 feet	Section 26+00W
2349	1 inch = 100 feet	Section 27+50W
2396	1 inch = 100 feet	Section 38+00W
2393	1 inch = 100 feet	Section 42+00W
2209	1 inch = 100 feet	Section 17+00W
2210	1 inch = 100 feet	Section 18+00W

COMPANY Empire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 1
Started Oct. 3, 1931
Finished " 6, 1931
Depth 119

Reference Mine Coordinates
Location 45,821.63 N
44,833.03 E
Elevation 9,997.9

HOLE No. P.B. 9
Bearing 359° 14' 30"
Dip: 60 @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0	2.5	Casing					
2.5	12.3	Syt to Ly. dark chl. fragments (tiny) in a somewhat sil. matrix 12.3 sharp contact at 40°					
12.3	119.0	Ly. light cream grey in colour to 89', then med. cream grey. Irregular fractures and zoned with chloritic.					
		12.3 - 12.6 qtz - cb. at 40°, 3 - 5% cpy.					
		14.2 - 14.6 bx zone at 45°, cemented with qtz-cb.					
		15.0 - 20.6 bx'd & fragmented					
		21.5 - 22.8 qtz - cb. cemented bx zone at 70°; minor cpy; probable fault.					
		25.6 - 26.5 vuggy bx at 40°.					
		56.7 - 57.2 qtz - cb. cemented bx at 70°, minor cpy.					
		69.0 - 70.0, 9 narrow bx zone at 60° cemented with qtz - cb.					
		83.3 - 83.6 fracture with gouge at 15°					
		84.5 - 85.1 cb - qtz at 60°, barren					
		91.3 - 91.7 qtz - cb cemented bx zone at 20°, a little Py.					
		94.0 - 94.2 qtz - cb. - chl. at 60°					
		104.0 -119.0 more siliceous					
108.6	112.7	Bike, non-vesicular. Upper contact faulted at 65°, lower contact bx'd at 60.					
		118.3 -119.7 bx'd at moderate angle, cement with qtz - cb.					
		17.1 - 17.4 as above.					
	119.0	End of hole					

Drilled by G.E. & S.L. Core Size E Logged by K O'F. & E.G.T.

COMPANY Dupire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 1
Started Oct. 7/61
Finished Oct. 10/61
Depth 63.0

Reference Mine Coordinates
Location 45,838.37 N
46,233.05 E
Elevation 10,046.5

HOLE No. P B 10
Bearing 322° 58'
Dip: 45 @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS Cu
0	18'	Casing					
18'	63.0	Rock, finely fragmental. A little finely disseminated cpy throughout. 25.5 - 28.9 - irregular, irregular, qtz-cb chl. structure, 1% cpy. 27.3 - 28.3 - indefinite qtz-cb stringer at 60° 28.5 - 30.3 - up to 1.5% cpy in irregular stringers and patches, often confined to inclusions	PB- 10-1	28.5 - 30.3		1.8'	
		38.0 - 1/2" Q.V. with cpy at 30°					
		30.0 - 30.8 - irregular oxidized zone.					
		62.0 - 62.6 - 2% cpy in qtz-cb-chl. stringer irregular.	PB- 10-2	62.0 - 62.6		0.6'	
	63.0	End of hole.					

Drilled by G.E. & S.L. Core Size E Logged by K. O'F. & E.G.T.

COMPANY Empire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 1 Reference Mine Coordinates HOLE No. P.B. 11

Started Oct. 11, 61 Location 45,842.48 N Bearing 311° 12' 30"

Finished Oct. 12, 61 46,265.42 E Dip: 45 @ Collar; @

Depth 69' Elevation 10,046.4

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0 -	5'	Casing					
5' -	69'	Rhx, numerous fine fragments					
		5.0 - 8.2 - vein bx with qtz-cb. and chl. Tr. sulphides					
		58.7 -58.8 - fine stringer of py.					
	69.0	End of hole.					

Drilled by G.E. & S.L. Core Size E Logged by K. O'F. & E.G.T.

COMPANY Empire

PROPERTY Phillips Bay

Township Phyllis

Claim No.

SHEET No. 1
Started Sept. 27, 1961
Finished Oct. 3/61
Depth 151'

Reference Mine Coordinates
Location 45,007.81 N
44,649.73 E
Elevation 9,934.6

HOLE No. P.B. 8
Bearing 359° 25'
Dip: 61° @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	FROM	TO	WIDTH	ASSAYS % Cu
0	0.8	Casing					
0.8	133.3	Py. poor variety, somewhat contaminated by Tuff.					
		0.8 - 7.6 lx'd, cemented with qtz - cb.					
		Parallels fault at 25°					
		12.8 - 13.2 Qtz - cb. chl. bx zone, irregular,					
		about 25°					
		14.5 - 1" wavily zoned qtz - cb. at 50°					
		18.0 - 19.0 cb. vein at 70°, light py with	PB - 8-1	18.0 -	19.0	1.0'	0.84
		some cpy.					
		22.4 - 22.5 Vuggy cb. & chl., minor py. & cpy.					
		at 40°					
		31.5 - 35 Rock is light green grey in colour					
		to white chl. tuff.					
		33.2 - 33.4 cb. vein at 60°					
		43.0 - 43.8 cb. qtz - chl. at 65°					
		45.6 - 49 [illegible], trace disc. sulphide					
		69.8 - 70.3 cb. - qtz stringer, irregular at 40°					
		71.0 - 71.4 [illegible] of recd cb.					
		73.8 - 74.2 qtz - cb - chl. bx zone at 75°					
		87.4 - 87.8 qtz - cb bx at 60°					
		93.0 - 93.7 1" cb - qtz with cpy & py. at 60°.					
		& [illegible] cpy.					
		100.1 - 102.6 cb - qtz bx at 25°. Cpy & py. in	PB - 8-2	100.1 -	102.6	2.5	0.76
		[illegible]					
		105.4 - 1" cb. cpy & py. at 45°					
		111.2 - 112.5 cb. vein at 55°					
		115.8 - 116.3 [illegible] bx zone, scattered					
		[illegible] py & cpy patches.					
		118.0 - 121.5 good bx zone					

Drilled by O. E. & S.V.

Core Size Ext.

Logged by K. O'F. E.G.T.

COMPANY _____ PROPERTY _____

Township _____ Claim No. _____

SHEET No. 2 Reference _____ HOLE No. P.B. 8

Started _____ Location _____ Bearing _____

Finished _____ _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		125 - 128.6 seams & patches of zoned ch.								
128.6 -	133.3	Pcb dike, sharp contacts at 45°								
133.3 -	151	Ky. as above, numerous stringers & patches of zoned ch. from 35° - 75°.								
	151	End of hole.								

Drilled by _____ Core Size Ext. Logged by K. O'F. E.G.T.

COMPANY Empire Explorations PROPERTY Phillips Bay Project

Township Phyllis Claim No.

SHEET No. 1
Started January 20, 1932
Finished 21, 1932
Depth 100.0

Reference Mine Coordinates
Location 40,134.04 N
41,079.97 E
Elevation 2,233.8?

HOLE No. B.T. 46
Bearing 137° 42'
Dip: 60° @ Collar 52°3423 @ 320';
51° S 43E at 600'

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
0.0	12.5	Casing; core at 12.5								
12.5	64.6	Porphyrite; pyritic zone; 10% pyrite; no chalcopyrite; formation at 30°								
		23.5 - 25.8 - 12 - 1% magnetite								
		26.7 - 28.8 - open seam								
		51.0 - 61.0 - up to 1% cpy								
64.6	100.0	Rhyolite; light grey; moderately silicified; resembles tuff in part.								
		72.5 - 76.0 - 7.5' lost core								
		79.0 - end of pyritic zone								
		83.4 - 84.0 - quartz carbonate in sheer at 45°								
		100.0 - sulphide contact								
100.0	270.0	Rhyolite tuff; numerous chlorite specks in a fine matrix; core broken with cubes of pyrite								
		110.4 - 110.7 - 1" quartz carbonate at 35°								
		116.8 - 117.3 - 1/2" quartz carbonate & chlorite								

Drilled by Boyles Bros Core Size Axt Logged by K.O.F.

COMPANY Empire Explorations PROPERTY Phyllips Bay Project

Township Phyllis Claim No.

SHEET No. 2 Reference HOLE No. W.T. 46

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		with pyrite at 15°								
		132.3 - 134.5 - quartz carbonate at low angle								
		138.8 - 139.2 - 1" quartz carbonate at 20°; ½" quartz carbonate at 10°; 1" at 30°; a little pyrite								
		142.2 - 144.0 - quartz carbonate at low angle								
		147.0 - 148.1 - quartz carbonate at 25°; a little chalcopyrite in wall-rock								
		149.7 - ½" quartz carbonate in shear at 45°								
		153.0 - 170.0 - scattered pyrite & chalcopyrite in patches, seams and stringers up to ¼" at 60°.								
		152.6 - 153.7 - grey quartz carbonate at 20°; a very little pyrite.								
		154.5 - patch of zoned carbonate								
		154.9 - 159.2 - grey quartz carbonate at 20°; a very little pyrite.								

Drilled by Core Size Logged by

COMPANY Empire Explorations PROPERTY Phillips Bay Project

Township Phyllis Claim No.

SHEET No. 3 Reference HOLE No. P.T. 46

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		168.0 - oxidized core about 70°; a little pink carbonate.								
		168.2 - 1' quartz carbonate at 50°								
		170.0 - fractured with a little [illegible] at 50°; fault								
		170.6 - fault at 50°; oxidized open [illegible]								
		174.3 - 175.1 - white quartz carbonate in a shattered zone about 50°								
		179.0 - 179.5 - shreds of sound carbonate								
		183.0 - 210.6 - fault zone at low angle; quartz carbonate in heavy shear; some of cylindrite; slickensides								
		222.0 - 231.6 - numerous fractures about 50° filled with quartz carbonate; [illegible] at 231.6; [illegible] fracture zone cylindritic in places.								
		313.3 - 313.6 - two fractures with slickensides at 50°								

Drilled by Core Size Logged by

COMPANY Empire Explorations PROPERTY Phillips Bay Project

Township Phyllis Claim No.

SHEET No. 4 Reference HOLE No. M.T. 46

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		255.3 - 255.6 - one fracture as above								
		257.2 - 257.6 - 1" quartz carbonate with pyrite & 1-1" quartz carbonate stringer at 60°								
		272.2 - 272.6 - nodular pyrite								
		1[illegible].0 - ½" quartz carbonate at 60°								
		290.0 - 290.3 - quartz carbonate & chlorite at 20°								
		297.2 - 297.3 - 3/4 quartz carbonate & chlorite at 60°								
		312.7 - 313.5 - quartz carbonate with 15% pyrite at 35°								
		317.0 - 332.0 - rock carbonated and altered at the fault.								
		321.0 - 331.5 - fault parallel to core; quartz carbonate, shearing & silicious rock.								
		343.0 - 345.0 - [illegible] fracture coated with crystalline quartz & carbonate								

Drilled by Core Size Logged by

COMPANY — Empire Explorations

PROPERTY — Phillips Bay Project

Township — Phyllis

Claim No. —

SHEET No. — 5

Started —

Finished —

Depth —

Reference —

Location —

Elevation —

HOLE No. W.T. 43

Bearing —

Dip: — @ Collar; — @ —

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		360.0 - 369.2 - [illegible] with quartz carbonate & chlorite at 60°								
		371.3 - 371.6 - quartz carbonate at 50°								
		370.0 - [illegible]								
370.0	419.7	Rhyolite breccia, type 1; dark fragments in a [illegible] matrix.								
		385.1 - 387.3 - [illegible] chlorite [illegible] at 50°								
		400.1 - 400.8 - quartz carbonate in fracturing at 50°								
		402.8 - 405.5 - [illegible] at 50°; [illegible] chlorite								
		417.7 - 419.7 - [illegible] breccia cemented by quartz carbonate; a little pyrite & chlorite.								
419.7	461.0	Rhyolite breccia, type 2; light fragments in a [illegible] matrix.								
		429.6 - 431.0 - [illegible] quartz carbonate; irregular								
461.0	[illegible]1.0	type 1 Rhyolite breccia; dark fragments in siliceous								

Drilled by — Core Size — Logged by —

COMPANY Empire Explorations PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 8 Reference HOLE No.

Started Location Bearing W.I. 40

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		matrix somewhat darker than above								
		487.0 - 487.3 - chlorite & quartz carbonate at 30°								
		493.0 - 493.3 - quartz at 10°								
492.3	493.0	10% Dike; very fine grained, [illegible]								
		514.4 - 516.6 - low angle quartz carbonate chlorite veining (15°) in chloritized rhyolite breccia trace chalcopyrite								
		567.7 - 568.1 - ½" quartz carbonate in strong shear at 30°								
		571.7 - 572.1 - quartz carbonate at 25°								
		620.0 - 620.2 - quartz carbonate at 30°								
		633.0 - 633.3 - ¼" quartz carbonate & chlorite at 15°; a little chalcopyrite								
		637.7 - 638.7 - 2 - 1" quartz carbonate stringers at 30°								
		643.0 - 645.0 - very low angle quartz carbonate								

Drilled by Core Size Logged by

COMPANY Empire Explorations PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 7 Reference HOLE No. W.T. 46

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		C02.2 - C.C.3 - slip with gouge at 102								
	C21.0	End of hole								

Drilled by Core Size Logged by

COMPANY COPPERFIELDS MINING CORP. LTD. **PROPERTY** Temagami Mine

Purpose
~~Township~~ Testing horizon south of drift
Stopped due to heavy water pressure

Claim No.

SHEET No. 1 of 2
Started Nov. 26, 1970
Finished Dec. 9, 1970
Depth 460.0'

Reference P.B. base line
Location Sect. 30+00W
Elevation

HOLE No. 4-562
Bearing ~~xxxxxx~~ Az. 133-55°
Dip: Flat @ **Collar;** @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0.0	139	Md med-green, chloritic, soft, feldspathic, carbonate blebs and stringers t.o., tr bleby py, leucoxene.					
		19 - irreg. pink vuggy ch.					
		34 - 2" irreg. pink vuggy ch.					
		57 - 12" 80% qtz-cb approx. 45° to c.a					
		77 - 1" pink cb stringer approx. 80° to c.a.				150 - 175 - Lost Core	
		88 - 3" pink cb stringer approx. 80° to c.a.					
		95 - 139 - Weak py zone, approx. 1% to 2% bleby py in a chloritic matrix.					
139.0	175	Ry - (poor) dark grey, siliceous, hard, uniform, fragmental similar to Rbxt - could be correlated with Rbxt.					
		* 181 - 2" of grey bx qtz-cb with approx diss. cpy.					
175.0	304	Rbxt light grey, med-grain, sericitized, carbonitized fragmental texture - numerous irregular qtz-cb stringers and patches.					
		237.0-304 - highly bleached, altered, very sil, numerous chl. strs. with occasional narrow qtz-cb brecciated stringers. Could be correlated with R.F. minor Py-Cpy blebs.					

Drilled by J.V. #2 **Core Size** **Logged by** J.D.

COMPANY COPPERFIELDS MINING CORP. LTD. PROPERTY _____

Township _____ Claim No. _____

SHEET No. 2 of 2 Reference _____ HOLE No. _____

Started _____ Location _____ Bearing _____

Finished _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
304.0	349.0	R.F. Highly bleached, very sil. crushed frag. appearance.					
349.0	383.0	Rbxt As before					
		372.7 - 374.1 - lost core					
383.0	460.0	Rbx Occasional dark mafic subangular frags. up to 1/2" diam. Also tiny chl. Rbxt type frags in a lighter siliceous fine gr. matrix with minor ser. chl.-carb. alteration.					
		403.9 - 404.5 - Approx 2% diss. cpy., minor py. in a grey qtz-cb-chl matrix at 45° to c.a.					
		425.0 - 450.0 - Rbxt?					
460.0		END OF HOLE					
		N.B. DRILLING SLOW DUE TO HEAVY WATER PRESSURE DRILLING STOPPED					

Drilled by _____ Core Size _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. PROPERTY Temagami Mine

Purpose

Township Test Hole 13, South Drift - Hit water stopped Claim No.

SHEET No. 1 of 2 Reference P.B. base line HOLE No. 4-566

Started Dec. 10, 1970 Location Sect. 28+00W Bearing Az 140°

Finished Dec. 21, 1970 Dip: flat @ Collar; @

Depth 456' Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0.0	51.3	Md - med green, fine gr. abundant leucogene, 10% irreg bleby cpy; occasional qtz-cb stringers @ 60°-75° to c.a. Local patches dissem magnetite. 30.0 - two only 3" vuggy pink carb strs. approx 50° c.a. with 1/4" cpy blebs.					
51.3	95.0	Ry Typical fine gr. uniform, mass. fairly siliceous with local narrow qtz-cb stringers. 90.0-91.5 cross structure - qtz-cb-chl strs. @ 200 with diss magnetite, minor py-cpy					
95.0	122.0	Rbxt (poor) Light grey sil. fine gr. matrix, numerous tiny chl. frags.					
122.0	149.0	Ry Poor, faintly fragmental 143.0 - 2" qtz-cb stringer @ 45° to c.a.					
149.0	270.0	Rbxt Light grey, locally bleached, typically frag. numerous tiny qtz-cb strs. Sericite alteration. 235.0 - 270.0 highly bleached, very sil, locally brecciated strong sericite alteration 270.0 possible change to R.F.					
270.0	407.0	R.F. Light colored, locally bleached, siliceous, ser-ch/alt. numerous qtz-cb str & patches, occasional cream colored alt. frags. 311-312 tourmaline? 326-328 breccia zone - qtz-cb. * 354-407 sudden appearance of tiny chl. frags. may be change to Rbxt. 362-365 Lost core					

Drilled by J. V. #2 Core Size Logged by J. D. & W. F.

COMPANY Copperfields Mining Crop. Ltd. PROPERTY Temagami Mine

Township _____ Claim No. _____

SHEET No. 2 of 2 Reference _____ HOLE No. 4-566

Started _____ Location _____ Bearing _____

Finished _____ _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____ _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
407	456.0	Rbx Numerous sub ang mafic frag in light colored silicic matrix. Occas light colored frags. rock could be called R.F. bx								
	456.0	END OF HOLE								
		N. B. Hit water @ 454' - hole abandoned @ 456'								

Drilled by _____ Core Size _____ Logged by _____

COMPANY COPPERFIELDS MINING CORP. LTD. PROPERTY Temagami Mine

Purpose ~~Township~~ Testing horizon south of drift Claim No. _____

SHEET No. 1 of 3 Reference P.B. base line HOLE No. 4-585

Started Jan. 27, 1971 Location Sect. 32+00W ~~Bearing~~ Az. 140°

Finished Feb. 2, 1971 Dip: flat @ Collar; _____ @ _____

Depth 444' Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0	17.0	D2 dike? highly altered, chloritized med grained matrix with or md. sporadic leucoxene aggregates, accoasional qtz-cb patches. Cut contact chl. slip @ 50° c.a					
		* 5.8-6.5 few blebs cpy in fine qtz-cb threads					
		15-17.1 - irreg. qtz-cb-chl vein, pyrite at both broken contacts					
17.0	38.5	Rf (Rbxt) very siliceous, fine grained grey white matrix with sparse tiny dk frags, plus light colored good Rf. frags from 23.5-26.0. Occasional minor py patches or bands of fine Py up to 1/4"					
38.5	83.5	Rbxt Siliceous fine gr., light colored matrix with fairly abundant tine dk green frags.					
		53 - 2" highly sil material, possible minor tourmaline					
		* 78.3-78.6 2%-4% cpy, finely dissem with py in qtz-cb veinlet @ approx 20° to c.a.					
83.5	149.4	Rf with Rf (Rbxt) sections to 120° very few light colored frags to 120.					
		92.8-93.5 heavy mag, minor cpy in qtz-cb str zones @ approx 65° c.a.					
		97.0-110 few frags, minor ser. Alteration lt					

Drilled by J.V.#2 Core Size _____ Logged by W.F.

COMPANY Copperfields Mining Corp. Ltd. PROPERTY _____

Township _____ Claim No. _____

SHEET No. 2 of 3 Reference _____ HOLE No. 4-585

Started _____ Location _____ Bearing _____

Finished _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
		110-120.5 Rbxt type					
		120-129 Frags well sericitized					
		130-134 Large dk frags - Rbx type					
		134 Good Rf - lt med to lg frags sericitized					
		149-149.4 Fine gr dike? D2 type @ 70° to c.a.					
149.4	175.5	Rbx Large dark frags with smaller (tiny) frags in a highly siliceous ground mass					
		159-162 - Rf light colored frags					
175.5	339.0	Rf (Rbxt) Sporadic distinct light colored to carmel frags in light siliceous matrix, numerous tiny dark green frags.					
		198-198.8 D1 dike light green, tiny dark green spots contacts @ 45° to c.a.					
		* 201.2 tr cpy in qtz-cb broken stringer zone					
		210.5-210.8 zoned qtz-cb vein @ 70° to c.a.					
		* 204 $\frac{1}{2}$" zoned qtz-cb veinlet @ 15° to c.a. tr cpy.					
		250-280 Darker, chloritized					
		280-302 Lighter lightly sericitized, more frags.					
		302-312 Many lg dk frags					
		312-339 Lighter colored matrix both dark & light frags lightly sericitic					
		339 Darker chloritized matrix, both larger dk frags & light frags.					
339.0	444	Rby Predominately sporadic med sized dk frags plus smaller dk frags in an aphanitic, siliceous matrix very occas. a partly silicitized lighter colored frag.					

Drilled by _____ Core Size _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. PROPERTY _____

Township _____ Claim No. _____

SHEET No. 3 of 3 Reference _____ HOLE No. 4-585

Started _____ Location _____ Bearing _____

Finished _____ _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS % Cu
		339-419 very occasionally serc magnetite in qtz-cb veinlets .					
		357.5°357.8 D2b dike contacts broken, appears to be high angle					
		355.2-357.2 lightly brecciated					
		360-366 Rf (bx) lightly sericitized occasional light frags small dk frags Alt 1					
		386-394 Rf (bx) lightly sericitized occasional light frags dk frags, Alt 1					
		394-423 Occasional narrow sericitized section					
		410.2 - 1" qtz-cb veinlet @ 15° Tr cpy					
		418.5 - 419.5 brecciated					
		419.5 - 422.6 80% + Q-Cb vein zone @ approx 70° to c.a. no vis mineral.					
		419.5 - more typical Rbx					
		* 426.6 - 428.6 - 60°% irreg Qtz°cb vein structure . approx parallel core, sporadic good fine cpy.					
			69601	426.6	428.6	2.0'	1.09
444		END OF HOLE					

Drilled by _____ Core Size _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. PROPERTY Temagami Mine

Purpose Testing Ry/Rbxt & Rf horizon Claim No.

SHEET No. 1 of 1 Reference P.B. base line HOLE No. 4-605

Started Mar. 12, 1971 Location Sect. 25+00W Bearing Az. 140°

Finished Mar. 24, 1971 Dip: @ Collar; flat @

Depth 558' (no air to continue thru Rf) Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	FROM	TO	WIDTH	ASSAYS % Cu
0.0	54	Md. Med green, f.g. leucoxene aggregates, t.o. bleby pyrite, numerous qtz-cb stringers					
		0.0-1.5 grey f.g. dike (D_2?)					
		1.5-4.5 strong qtz-cb vein					
		25-55 Weak py zone (~2% py)					
54	260	Ry F.g., med-grey, mass, uniform, qtz-cb veinlets t.o.					
		103-112 lost core					
		158 1" qtz-cb stringers ~ 60° c.a.					
		243-251 strong qtz-cb-chl structure					
260	417	Rf (bx) light grey, bleached, siliceous, sericitized fragmental. Both dark & light colored fragments.					
		323.5-324.5 D_1 dike ~45° c.a.					
		373-418 Rbx - siliceous, fragmental					
		* 374 tr cpy					
417	440	Rbxt - Siliceous, fragmental - could be correlated with poor Rf					
440	558	Rf (bxt) - very siliceous, sericitized, fragmental texture					
		468-470 - ground core					
		483.3-483.8 10% cpy in Qtz-cb-chl veinlet ~ 80° to c.a.	69625	483.3	483.8	0.5'	4.42
		547-552.5 - F.Z.					
	558	END OF HOLE					

Drilled by J.V. #2 Core Size Logged by J.D.

Abandoned due to heavy water

COMPANY Copperfields Mining Corp. Ltd. **PROPERTY** Temagami Mine

Township _____ **Claim No.** _____

SHEET No. 1 of 1 **HOLE No.** 4-610
Started Mar. 25, 1971 **Reference** P.B. base line
Finished Apr. 2, 1971 **Location** Sect. 27+00W
Depth 461' **Elevation** _____
Bearing Az. 140°
Dip: 0° @ **Collar;** _____ @ _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0.0	103	Md - grey-green, med-grain, leucoxene aggregates bleby, py, tr. cpy.					
		100-103 - Weak py/chl zone (est ± 2% py)					
103	175	Ry Light to med-grey, locally siliceous, mottled with narrow intercalated Rbxt sections					
		103.5-107 - strng qtz-cb vein					
		* 164 - fine-gr, metallic - probably bornite					
175	250	Rbxt - Siliceous, mottled, fragmental - could probably be correlated with Ry above.					
		184- 6" qtz-cb veinlet ~ 80° to c.a.					
250	461	Rf - Siliceous, bleached, fragmental, typical					
	461	END OF HOLE (Abandoned)					

Drilled by J. V. #2 **Core Size** _____ **Logged by** J.D.

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started May 27, 1971 | Purpose Test F.W. R.F. Horizon - TOHP Hole | Hole No. 4-635

Completed June 7, 1971 | Depth 592' | Core Size | Sheet No. 1 of 4

Twp. | Claim | Group | Zone 33+00W (P.B. Base Line)

Lat. | Dep. | Az. 140° | Elev. | Dips Flat

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	EST'D. % CU.	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU.	ASSAYS GROUPING
0	10.3	Rbxt - fairly typical, chloritized							
		6.7 - 10.3 - brecciated							
10.3	456.0	R.F. - Siliceous, fine gr., sporadic narrow qtz - cb strs.							
		10.3 - 42 - predominately light yellowish tan coloured, showing small caramel coloured frags to 40'; Occasional narrow steel blue grey sections with bxt type frags. ALT 0-1+							100 scale plan 100 scale sect.
		42.0 - Minor mud over 1"							
		42.0 - 145.8 - becoming mostly blue grey with numerous tiny chl. frags, intermited with occasional lighter coloured sections showing local minor sericite to ALT 1+							
		54.4 - 55.9 - Dike - f.g., uniform chl; in contact @ 50° to C.A; out cast broken							
		120-128 - Minor sericite ALT 1+							
		* 135.6-137.2 - 3/4" Qtz.-Cb. veinlet @ 10°-15° to C.A.; minor blebs cpy.							
		* 139.7-1" Qtz.-Cb-Chl veinlet @20° to C.A.; Good Py and minor Cpy.							
		145.0-145.8 - Dike - med gr., @ 70° to C.A.							
		145.8-153 - RF bx - a few med sized dk. chl. frags							
		153.0 - As before from 42-145.8							
		155.0 - 155.6 - Qtz.-Cb-Chl. vein @ 60° to C.A.							

CP-1571B-68

Drilled by BBH #2 - AXT Core Morissette | Date Logged | Logged by W. G. F.

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started _____ Purpose _____ Hole No. 4-635

Completed _____ Depth _____ Core Size _____ Sheet No. 2 of 4

Twp. _____ Claim _____ Group _____ Zone _____

Lat. _____ Dep. _____ Az. _____ Elev. _____ Dips _____

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	EST'D. % CU.	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU.	ASSAYS GROUPING
		161-172 - Sericite alteration 1-2							
		175-193 - Locally light sericite alteration up to 1							
		201.5 - 205 - a few caramel coloured frags							
		221.6 - 225.0 - Qtz-cb-chl. vein over full core width @ approx. 30° to C. A.							
		225 - 292 - becoming darker, mainly bxt type chloritzed, with a few narrow lighter coloured sections							
		227.8 - 228.6 - Low angle to 20° Qtz-Cb veinlets							
		233-234.5 - broken core, minor Qtz-cb-Prob. Fault with 2.0' lost core from 235 - 237							
		253.5 - 254.5 - broken core							
		270-271.3 - 60% Qtz-Cb-chl. veining, some broken core							
		285-290 - Broken core, 2.0' lost core overall							
		292 Becoming mod Siliceous, lighter coloured blue grey fragments more obvious; locally Sericite ALT 1 to < 2							
		* 317.5 - 4" Mass Qtz. -Cb vein @35°, Tr. Cpy & Ry							
		327-329 - Sericite, ALT 2-3							
		333-337 - Sericite ALT 2-3							
		350.5 - 352.5 - Pole, light frags							
		* 356.5-1 1/2" Qtz-Cb veinlet @ 60°, few blebs Cpy							
		375.5 - 421.0 - RFbx ? - Sporadic larger dk chl frags in mod chloritized R. F.							

CP-1571(6-60)

Drilled by _____ Date Logged _____ Logged by _____

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started _____ Purpose _____ Hole No. 4-635

Completed _____ Depth _____ Core Size _____ Sheet No. 3 of 4

Twp. _____ Claim _____ Group _____ Zone _____

Lat. _____ Dep. _____ Az. _____ Elev. _____ Dips _____

FOOTAGE FROM	FOOTAGE TO		DESCRIPTION	EST'D % CU.	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU.	ASSAYS GROUPING
			*392. 8 - 393. 1 - 1" Qtz. -Cb veinlete 25°, streaks Py & Minor Cpy patches before in contact							
			*397. 2-397. 7 - 4 1/2 " mass Qtz-Cb vein @ 20°-25° Minor Py, tr. CPY, before in contact							
			400. 2-400. 7 - Broken Core; 2 broken 1"=1 1/2" Qtz. -Cb veinlets							
			410-421 - becoming lighter coloured, very few dk. frags.							
			421-451- dense, f. g. med grey, very little fragmentation possibly sil. Rbxt							
			445. - 446. 7 - 1. 2' lost core							
			*451 - 451. 5 - low angle 1" Qtz. -Cb veinlet, Tr. Cpy-Prob. Fault							
			451. 5 - 453. 0 - Low angle light shearing @ 10°-20° to C. A.							
			453 - 455 - Resembles Rbxt							
			455 - 456 - 1. 0' lost core							
451. 0	511. 2		Rbx - Not typical - both the large dk frags plus lighter, semi-bleached frags. sil matrix; med green grey becoming lighter coloured from 492.							
			480-3" Qtz. -Cb-Chl. vein @ 60°, no vis mineral							
			487. 3-4" zoned Qtz-Cb vein @ 30°, " " "							
			511. 2 - Contact @ 60°							
511. 2	521. 5	Rbxt	-Siliceous, f. g. tiny dk chl. frags.							
			519. 0 -1" Chl @60°, good sericite, minor Qtz-Cb-Fault?							
521. 5	523. 4	Rbx	-Not typical - as before. Traces sericite							

CP-15710-68

Drilled by _____ Date Logged _____ Logged by _____

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started _____ Purpose _____ Hole No. 4-635

Completed _____ Depth _____ Core Size _____ Sheet No. 4 of 4

Twp. _____ Claim _____ Group _____ Zone _____

Lat. _____ Dep. _____ Az. _____ Elev. _____ Dips _____

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	EST'D. % CU.	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU.	ASSAYS GROUPING
523.4	552.6	Rbxt - Sil - tiny dk chl frags							
552.6	574.5	Rbx - As before- not typical - numerous light bleached frags with dk green frags							
		in contact is a 1/2" Qtz-Cb veinlet @ 50° to C. A.							
		558-562 - broken core							
574.5	581.5	Rbxt - Sil as before							
581.5	592	Rbx, frag as before							
	592.0	End of hole.							

CP-1571-66

Drilled by _____ Date Logged _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. PROPERTY Temagami Mine

~~Township~~ Purpose Testing Horizon east of D.I.F. Claim No.

SHEET No. 1 of 1 Reference P. B. baseline HOLE No. 8-623

Started Nov. 2, 1970 Location 53+00E ~~Bearing~~ Az. 140°

Finished Nov. 9, 1970 Dip: @ Collar; -30° @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	FROM	TO	WIDTH	ASSAYS % Cu
0.0	171.2	Md - grey green, med grain, chloritic, soft, leucoxene aggregates					
		t.o. with traces of bleby py. occ qtz-cb-stringers & blebs					
		165-171.2 weak py/chl zone	69518	165.0	171.2	6.2	0.50
171.2	280	Ry light grey, f.g. massive, uniform, typical					
		171.2 - 172 - tr. bleby pyrite					
		41 - 43 - lost core					
		72- 73 - lost core					
		87 - 88 - lost core					
		143 - 145 - lost core					
		176 - 178 - bleby py to 2% similar to py fine type					
		234 - 1" qtz-cb str. approx 70° to c.a.					
		261.5-273 - D_2b dike approx 45° to c.a.					
		273 - 276 - vuggy pink cb vein approx 60° to c.a.					
280	453	Rbxt - f.g., light grey, silicic matrix, fragmental					
		307 - 1" vuggy pink cb approx 20° to c.a.					
		324-355 - numerous qtz-cb threads 45° to c.a.					
		362-364 - pink vuggy cb vein approx 50° to c.a.					
		372 - irregular pink cb strs.					
		375 - 2" vuggy cb st. approx 80° to c.a.					
		400 - 452 - Rbxt siliceous CORE DUMPED					
		440 - 442 - lost core					
	453	END OF HOLE					

Drilled by J. V. #1 Core Size Logged by J. D.

COMPANY COPPERFIELDS MINING CORP. LTD. **PROPERTY** Temagami Mine

Purpose
~~Township~~ Testing ry/rhxt contact and Rf horizon **Claim No.**

SHEET No. 1 of 2 **Reference** P.B. base line **HOLE No.** 8-624
Started Nov 5, 1970 **Location** Sect. 26+00W ~~Bearing~~ Az. 141°
Finished Nov 17, 1970 **Dip:** -45° @ **Collar;** Flat @
Depth **Elevation** Tropari @ 600

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0	107	Ry Dark grey, f.g. massive, very uniform, hard, silic. texture, occasional qtz-ch threads and stringers.					
		42.5 - 49 - irregular vuggy pink qtz-cb stringers					
		66 - 1" qtz-cb stringer approx 85° to c.a.					
107	219	Rhxt light-grey, hard, silicic, carbonitized matrix - fragmental					
		170.5 - atz-ch-chl structure approx 70° to c.z.					
219	274	D_2a dike Dark green, f.g., chloritic, porphyritic (ch metacrysts) approx 60° to c.a.					
		274 - qtz-cb bx - fault (?)					
274	332	Rf light grey, bleached, fine sericite and chlorite, coarse grained highly siliceous texture.					
		325 - 332 - highly brecciated - f.z. (?)					
332	368	Rbx (poor) Small mafic subrounded fragments in a light grey f.g. silicic matrix.					
		* 335 - Several sulps blebs (to 1/4") in a qtz-cb-chl matrix.					
368	375	Rf (bxt) light grey, bleached, brecciated matrix with rbxt type fragments.					

Drilled by BBU 2 (#1) **Core Size** AXT **Logged by** J.D.

COMPANY COPPERFIELDS MINING CORP, LTD. PROPERTY _____

Township _____ Claim No. _____

SHEET No. 2 of 2 Reference _____ HOLE No. _____

Started _____ Location _____ Bearing _____

Finished _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
375	531	Rf light-grey, silicic, coarse-crushed matrix, partly bleached, occ light-colored bleached fragments - narrow Rfbxt sections to 0 405 - 475 - Rf (bxt) - typical 451 - tr sulps.								
531	576	Rf bx Both dark and light colored fragments in a light grey, silicic, med-grained texture. 544 - approx. 1% diss sulps in a 1 1/2" zoned qtz-cb stringer approx 80° to c.a.								
576	678	Rbx large (to 6") sub-rounded mafic fragments in a light silicic uniform, f.g. matrix. Also numerous rounded and subrounded pink or flesh-colored fragments to 2" in diameter.								
678	689	Rf (bxt) As before - sharp contact with rbx above (approx. 30° to c.a.)								
689		END OF HOLE								

Drilled by _____ Core Size _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. PROPERTY Temagami Mine

Purpose
Township Testing Ry/Rbxt horizon & Rf horizon (T.O.H.P.) Claim No.

SHEET No. 1 of 3 Reference P.B. baseline HOLE No. 8-626
Started Nov. 17, 1970 Location 30+00W Bearing Az. 140°
Finished Dec. , 1970 Dip: +4° @ Collar; @
Depth 842 Elevation

Collar flat Tropuri @ 600' Dip +4°, Az. 144°

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0.0	139	Md typical, med to dark green, chloritic, med grain, numerous qtz-cb stringers and patches, leucoxene aggregate, throughout, tr. bleby py, cpy, contact approx 35° to c.a. 115-139 weak to moderate pyrite zone, approx 2% to 5% pyrite blebs & clusters 138 6" of approx 30% magnetite					
139	249	Ry typical - v.f.g. massive, uniform, carbonatized 157 - 30% (1") diss py, cpy approx 40° to c.a. 175-185 fine diss leucoxene t.o. 183 - ½" qtz-cb str. approx 60° to c.a. 193-195 - 30% irreg qtz-cb stringer & patches 217 - corey x-structure approx 05° to c.a. traces of magnetite blebs.					
243	391	Rbx - small & larger type fragments (mafic & silicic) in a light bleached silica matrix - some brecciation 252 - grey x-structure approx 05° to c.a. with abundant magnetite (f.g.) qtz-cb tr. sulps. 270 - 273 strong qtz-cb-chl bx.					
291	325	Rbxt - light grey, f.g. fragmental - contact with Rb fairly sharp approx 70° to c.a. several narrow intercalated Ry sections - numerous narrow qtz-cb threads					
325	444	Rbx (t) - similar texture as above but increase in fragment size & some highly bleached sericitic sections.					

Drilled by B.B.U. #2 (AXT) (#1) Core Size Logged by J.D.

COMPANY Copperfields Mining Corp. Ltd. PROPERTY Temagami Mine

Township _____ Claim No. _____

SHEET No. 2 of 3 Reference _____ HOLE No. 8-626

Started _____ Location _____ Bearing _____

Finished _____ _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
		327 - ½" x-structure,to sulps, magnetite approx 75° to c.a.					
		328-343 bleached mod schistose, sections of felsitic (sericite) material tr. magnetite, chl, qtz-cb					
		429 - bleached, altered felsitic section, poss flow material approx 60° to c.a.					
		440-443 felsitic material as above					
444	624	Rf (bxt) pale bluish med grain crushed, siliceous (degree of alt about 2) minor sericite-chl alteration - Rbxt-type fragments abundant - occ qtz-cb stringers					
		501 - 2" massive qtz-cb approx 10° to c.a.					
		503-505 - heavily brecciated					
		518-520.1 - irregular qtz-cb stringers					
		527.8-529.8 - massive qtz-cb vein approx 65° to c.a.					
		540-542.8 - heavily brecciated					
		542.7 - 2" of ½% diss py, tr cpy.					
		550-575 - gradual appearance of completely assimilated fragments (caramel colored)					
		* 563.8 - 1/4" bleb cpy in qtz-cb-chl structure approx 60° to c.a.					
		576.5 - 1½" qtz-cb stringer approx 75° to c.a.					
		587 - irregular 2½" qtz-cb-chl stringer					
		624 - core broken - fault					
624	645	Rbx - numerous mafic subrounded fragments in a lighter silicic matrix					
645	665	RFbx (?) has both light colored and dark colored fragments but matrix not typical of either Rf or Rbxt More like tuffaceous rhyolite.					

Drilled by _____ Core Size _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. PROPERTY Temagami Mine

Township _____ Claim No. _____

SHEET No. 3 of 3 Reference _____ HOLE No. 8-626

Started _____ Location _____ Bearing _____

Finished _____ _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
665	730	Rbx - more typical - dark silicic, sericitized matrix					
		700-725 Increase in sericite - chlorite - numerous qtz-cb stringers - patches - some partially assimilated subangular fragments to 1" in diam.		Alt --→+2 --→3			
730	792	(F.W.) Ry - v.f.g. to aphanitic, very uniform & massive, some mauve colored sections numerous tiny qtz-cb threads					
		786-791.5 - lost core					
792	842	Rbx - as before					
		* 800 - fine diss cpy (approx 2%) bornite blebs approx 1%) in a vuggy grey qtz-cb-chl structure approx 20° to c.a.					
		820-827 - irregular massive qtz-cb vein					
	842	END OF HOLE					

Drilled by _____ Core Size _____ Logged by _____

COMPANY Copperfields Mining Corp. Ltd. **PROPERTY** Temagami Mine

Purpose ~~Township~~ Testing horizon south of drift **Claim No.**

SHEET No. 1 of 1 **Reference** P. B. baseline **HOLE No.** 8-629

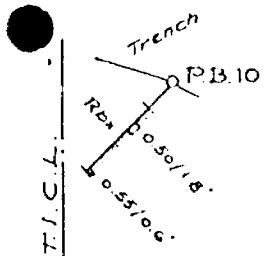
Started Dec. 2, 1970 **Location** Sect. 34+25W ~~Bearing~~ Az. 140°

Finished Dec. 9, 1970 **Dip:** flat @ **Collar;** @

Depth 428' **Elevation**

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0.0	190.5	Rbx (poor) light grey, f.g. siliceous matrix, carbonitized with numerous qtz-cb stringers and blebs.					
		8.0 - 2" qtz-cb stringer about 80° to c.a.					
		43 - ½" sheared qtz-cb stringer approx 70° to c.a.					
		49.5 - 2" sheared qtz-cb structure approx 30° to c.a.					
		73 - 1" qtz-cb-chl structure approx 20° to c.a.					
		105-107 mud, qtz-cb, fault approx 02° to c.a.					
		121-122 lost core					
		127.5 - 2" irreg qtz-cb with f.g. magnetite					
		152 - tr. py					
		166-171 - core ground - fault					
190.5	215	Rf Bluish-grey, high siliceous, crushed brecciated appearance, chlorite-sericite alteration - sharp contact with preceding @ approx 65° to c.a.					
		200-203 strong breccia zone					
		210-213 strong sericite alteration					
215	428	Rf (bxt) same texture as Rf above except for small chl'ized fragments and occas. completely assimilated fragments.					
		350-428 increase in sericite and chlorite alteration more siliceous					
	428	END OF HOLE Abandoned - Heavy Water			See Core:		Rack: 6 Section G

Drilled by B.B.U. #1 **Core Size** **Logged by** J.D.



324° - 56'

10,000

Cross Section

OF

D.D.H P.B. 10

FOR

EMPIRE EXPLORATIONS

BY

Geophysical Engineering & Surveys Limited

SCALE
1 INCH = 100 FEET

9,800

9,600

9,400

9,200

DWG. 2206

4.1 - 1 - 16

COMPANY EMPIRE PROPERTY Phillips Bay

Township PHYLLIS Claim No.

SHEET No. 1 Reference Mine Coordinates HOLE No. M33

Started September 25, 1961 Location 45,750.23N Bearing 338° 42'

Finished October 7, 1961 46,479.79E Dip: 45 @ Collar; 42° @ 260'

Depth 386 Elevation 10,039.2

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS %
0	5'	Casing					
5	10.4	Rbx, many dark fragments in a med. grey matrix 8.5 - 10.4 Minor diss. cpy. and py.	MT 33-1	8.5	10.4	1.9'	0.32
		Numerous fine stringers containing combinations of tour. qtz. cb. py. and cpy. at 55° - 90°					
10.4	15.0	RyT, light grey green matrix with small dark chloritic fragments					
15.0	386.0	Rbx, as 5-10.4 above. In places numerous fine Fa with py. and cpy. and tourmaline					
		18.9 - 23.9 Numerous fine V2 with py. cpy. and tourmaline	2	18.9	23.9	5.0	0.10
		23.9 - 27.6 Fairly heavy tour. py and cpy. in small Va (60° mainly) and disseminated	3	23.9	27.6	3.7	0.72
		32.3 - 33.5 Irregular qtz. carb. tour. (Va) stringers, minor py. cpy.					
		61.6 .3' Iron-carb. stringers - tr. py.					
		62.0 .1' Qtz.-carb. stringers - tr. Cpy.					
		62.2 .1' Qtz. stringer					
		79.0 - 85.3 In part altered and minor leaching. Rust in places. Fe - cb.					

Drilled by G.E. & S.I. Core Size AXT Logged by E. G. Thompson

COMPANY EMPIRE

Township PHYLLIS

PROPERTY Phillips Bay Project

Claim No.

SHEET No. 2
Started
Finished
Depth

Reference
Location

Elevation

HOLE No. WT33
Bearing
Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
		97.0 - 98.7 rock is carbonatized.					
		136.5 - 141.0 1/16" - ½" qtz. carb. tour. stringer running down core length					
		142.0 - 143.0 cb. to some extent. Lost water here					
		143 - 151 Rock is getting lighter in colour. Alteration - development of sericite					
		151 - 157 Light green, highly altered rock. From 154 - 156.4 ½ - 1" irregular cb.-qtz. stringer running along core length. Trace of py., tour.					
		165.7 - 106.5 carbonated core at 40°					
		178 - 180 Core is broken, a little lost					
		180 - 180.6 .6" Qtz.-carb. vein at 20°					
		187 - 188 Core broken					
		188 - 228.5 Rock is somewhat altered. Numerous and irregular fine qtz.-carb. stringers and patches. Fair amount of tour.					
		225 - 225.4 .1' qtz. cb. str. at 30°, tour.					
		228.5 - 386.0 Roughly equal amounts of light and dark fragments					
		228.4 - 228.8, irregular tour.					
		249.5 - 250.5 qtz.-cb.-chl. bx. zone with some cpy. at 25°					

Drilled by

Core Size

Logged by

COMPANY EMPIRE PROPERTY Phillips Bay Project

Township PHYLLIS Claim No.

SHEET No. 3 Reference HOLE No. WT33

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		269 - 269.7 fault zone at 30°; qtz.-chl. cb. zone, leached, stained with limonite								
		280.7 - 280.8 qtz. cb. at 70°								
		282.0 - 282.1 qtz. cb. and tour. at 45°								
		283.1, 283.3, 283.4; patches of tour.								
		290.7 - 291.0 qtz-cb. - chl. at 20°								
		339.2 - 339.5 qtz.-cb.-chl. str. at 60°								
		Minor diss. cpy.								
	396.0	END OF HOLE								

Drilled by Core Size Logged by

COMPANY [illegible]

PROPERTY Phillips Bay

Township Phyllis

Claim No.

SHEET No. 1
Started Oct 9/61
Finished " 12/61
Depth [illegible]'

Reference Mine Coordinates
Location 49,781.63 N
[illegible] E
Elevation 10,[illegible]

HOLE No. PP 31
Bearing 315° 50' 30"
Dip: 43 @ Collar; 42° @ 715'

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0	7'	Casing					
7	207.0	[illegible]					
		10.0 - 33.5 - [illegible]					
		21.0 - 30.0 - [illegible]					
		30.5 - 32.0 - [illegible]					
		32.5 - 33.0 - [illegible]					
		40.0 - 40.6 - [illegible]					
		50.0 - 51.0 - [illegible]					
		62.0 - 62.5 - [illegible]					
		63.0 - 63.8 - [illegible]					
		67.1 - 67.3 - [illegible]					
		103.8 - 107.1 - [illegible]					
		141.4 - 141.8 - [illegible]					
		155.3 - 155.0 - [illegible]					
		191.5 - 192.0 - [illegible]					

Drilled by O.E. & E.L.

Core Size A

Logged by K O'Y. & E.G.Y.

COMPANY Empire

PROPERTY Phillips Bay

Township Phyllis

Claim No.

SHEET No. 2

Started

Finished

Depth

Reference

Location

Elevation

HOLE No. WT 31

Bearing

Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
	6	221 - 225.5 - a little cpy. diss. throughout					
		229 - 230.7 - qtz-ch in lx zone at 65°					
		233 - 237 - a little diss. cpy.					
		237.3 - 237.0 - qtz-ch at 40°					
		251 - 331.5 - [illegible] fine tour.					
	297	End of hole.					

Drilled by G.E. & S.L.

Core Size A

Logged by K O'F. & E.G.T.

COMPANY Empire

PROPERTY Phyllips Bay

Township Phyllis

Claim No.

SHEET No. 1
Started Sept. 25/61
Finished Sept. 27/61
Depth 160

Reference Mine Coordinates
Location 45,922.85 N
45,300.70 E
Elevation 9,993.5

HOLE No. WT 36
Bearing 130° 44'
Dip: 45 @ Collar; 40° @ 150'

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0	11.0	Casing					
11.0	25.1	RyT Numerous small chlorite fragments in a medium grey somewhat siliceous background					
		25.1 Low angle contact					
25.1 -	51.7	Rbx Dark and light fragments in a light grey siliceous matrix. Local small chloritic fragments					
26.7 -	27.1	Dike, irregular, low angle, probably D1					
		27.0 - 28.0 Fault zone, moderate to high angle. Oxidized and brecciated					
51.7 -	160.0	RyT Considerable brecciation; rock type obscure					
		53.6 - 53.9 Heavy bx at 30°					
		59.3 - 60 ¼" cb. clt. in fracture at 15°					
		63.7 - 64.2 ½ cb. qtz stringer at about 20°					
		76.3 - 76.7 Bx zone at 15°					
		78.4 - 78.6 Irregular bx zone					
		80.3 - 80.6 Shear and bx at 25°					
		82.5 - 83.0 Coarse bx along fracture parallel to core					
		82.5 - 84.5 Fault zone at 25°. Oxidized, heavy bxd.					
		94.5 - 131 Rock, medium grey, more closely resembles normal tuff.					
		112.5 - 113.1; 115.7 - 116.0; 120.0 - 120.5; 122.4 - 123.0; breccia and qtz - cb. zones at about 40°					
		123.0 - 123.5 0.8' Lost core					
		131					
		131.0 - 160 matrix more siliceous					

Drilled by Morissette

Core Size Axt

Logged by K.O.F. & E.G.T.

COMPANY Explo

PROPERTY Phillips Bay

Township Phyllis

Claim No.

SHEET No. 2

Started

Finished

Depth

Reference

Location

Elevation

HOLE No. WT 35

Bearing

Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
		135.6 - 160.0 Fault zone, core completely broken					
		141.0 - 145.0 3' lost core					
		145.0 - 148.0 3' lost core					
		148.0 - 151.0 3' lost core					
	160.0	End of hole					

Drilled by

Core Size

Logged by

COMPANY Empire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 1 Reference Mine Coordinates HOLE No. WT 37

Started Oct 2/61 Location 45,737.77 N Bearing 317° 19' 30"

Finished Oct 3/61 45,470.77 E Dip: 35 @ Collar; 31° @ 150

Depth 301' Elevation 9032.9 31° @ 300

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS % Cu
0	- 6.5	Casing					
6.5	- 21.0	Medium green black, massive Ry 8.1 - 8.4 .3' diss. cpy (1% Cu)					
21.0	- 28.7	RyT medium grey green with dark chlorite spots 26.3 - 28.7 altered contact zone, carbonated and sericitic.					
28.7	- 56.0	Rbx					
56.0	- 61.1	RyT as 21.0 - 28.7 above					
61.1	- 109.5	Rbx 61.9 - 62.4 about 15% cpy between 62.3 to 62.4	WT 37-1	61.9 -	62.4	0.5'	2.10
		64.3 - 67.0 From 64.3 - 65.5, silicified and carbonated zone at 55° with diss. cpy py. and magnetite. 66.5 - 67.0 another qtz - carb. zone at 60° with diss. cpy.	WT 37-2	64.3 -	67.0	2.7'	0.18
		69.3 - 70.3 Altered zone, some leaching some qtz and iron cb. 72.2 - 72.8 qtz. - cb. zone 77.8 - small seam 1" qtz - cb. stringer around 77.7 - 77.8 91.2 - 105.4 1' lost core					
109.5	- 112.2	RyT chloritized, bluish black. Between 105.4 - 110 1' lost core At 110.6 ½" qtz - cb. stringer at 50°					
112.2	- 121.8	Rbx 2 fragments are smaller and lighter in colour than above. Tuffaceous matrix. At 112.3 ½" qtz - cb. stringer at 50°. At 121.7, 1" qtz-cb. stringer at 70°					
121.8	- 123.1	Dike. Contact at 55°. Med. grey green and fine grained.					

Drilled by N. Morissette Core Size AXT Logged by E.G.T.

COMPANY Empire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 2 Reference HOLE No. WT 37

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
125.1 -	173.2	Rbx 2 as above. From 126 - 126.4 diko as above at 50°. From 123.5 - 126.7 qtz - cb stringer at 55 - 65°. 139.3 - 139.6 10% diss. py. 149.6 - 149.2 qtz - carb. mineralization 156.3 - 159.0 Qtz - carb. zone with about 15% chalco and some magnetite	WT 37-3	158.3 -	159.0	0.7'	1.93
		160.2 - 160.6 ½" qtz - cb str. at 30°					
		162.5 - 163.2 qtz - cb. min. along core					
		164 - 164.5 " " "					
		166.2 - 166.6 " " "					
		168.0 - 172.5 the rock is fairly well broken up. Lost 6" between 170' - 171.6					
173.2 -	185.8	PyT chloritized. Diss. and local small masses of pyrite. From 174 - 177.6 rock is broken up. 1' of lost core in this section.					
		178.1 - 178.4 qtz - carb with minor py and cpy.					
		184.8 - 185.8 qtz - carb mineralization at 60°, minor py.					
185.8 -	275	Rbx, (Rbxt), fairly numerous light and dark fragments of various sizes in light grey green mt.					
		193.0 - 193.2 sil. zone with py and cpy. Est. 2% Cu.					
		219 - 1" qtz - cb. str. at 55° Tr. py. & cpy.					
		221.5 - 222 qtz - cb. mineralization					
		215 - 222 1' lost core					
		229 - 229.5 .5' qtz - carb at 55°					

Drilled by Core Size Logged by E.G.T.

COMPANY Empire

PROPERTY Phillips Bay

Township Phyllis

Claim No.

SHEET No. 3

Started

Finished

Depth

Reference

Location

Elevation

HOLE No. WT 37

Bearing

Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
		230.8 - 231.1 .5' qtz - carb at 55°					
275 -	283	Pyt chloritized. From 279 - 281 rock is rusty due to Fe carb.(oxidized.) Between 277.6 - 285 1.7' lost core					
283 -	301	Dx 285 - 291 .7' lost core 293.5 - 292 rusty carbonated ry. 291 - 294 2' lost core					
	301	End of hole					

Drilled by

Core Size

Logged by E.G.T.

COMPANY Empire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 1
Started Oct. 2/61
Finished Oct. 3/61
Depth 206

Reference Mine Coordinates
Location 45,739.25 N
45,471.89 E
Elevation 9,993.1

HOLE No. WT 38
Bearing 318° 48' 30"
Dip: -46 @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
0	7'	Casing					
7'	31.5	Lbx to ky. sil., red. grey in colour vague frags.					
		28.1 - 28.5 - ch-qtz at 65°					
31.5	206.0	Mbx, distinct dark fragments in a light grey sil. matrix.					
		31.5 - 32.5 - heavily ch. at 65°					
		40.5 - 40.8 - ch. at 35°, fg. cpy. & mag.					
		50.6 - oxidized section, possible open seam.					
		61.2 - 61.3 - ch. stringer at 35°					
		63.4 - 63.6 - 2 - 6" ch stringers at 60° some qtz in second str.					
		76.6 - 76.8 - ch. in shear zone at 60°					
		78.0 - 78.6 - ch. zone, indef. contact at 60°					
		107.7 - 110, - minor cpy & py.					
		109 - 110 - calcited fracture parallel to core.					
		111.9 - 112.1 - 1½" ch at 40°; 1/8" zoned qtz & ch containing minor cpy normal to shear.					
		116.5 - 3/4" ch. at 55° in a 6" carbonated zone little cpy & py.					
		124.6 - 124.9 - ch. sil. zone at 55°					
		125.7 - 126 - ch-qtz zone around 45°, irreg. with about 8% cpy.					
		129.8 - 130.5 - irregular qtz-ch at moderate angle.					
		131.6 - 135.1 - minor dis. py. and cpy.					

Drilled by N. Morissette Core Size Axt Logged by K.O.F' & D.G.T.

COMPANY Empire PROPERTY Phillips Bay

Township Phyllis Claim No.

SHEET No. 2 Reference HOLE No. WT 38

Started Location Bearing

Finished Dip: @ Collar; @

Depth Elevation

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS % Cu
		150.3 - 152.3 - cb-qtz & chl. at 45°. Low angle qtz-cb stringer cross-cutting, 10% py and cpy. Cpy seems correlated with greyer intrusion	WT 38-1	150.3 - 152.3	2.0	0.68
		152.3 - 154.0 - heavily cb'd with irregular stringers and patches.	WT 38-2	152.3 - 154.0	1.7	0.22
		159.7 - 159.3 - fracture parallel to core				
		163 - 164 - 1' lost core				
	*	169.3 - 181.7 - fine grained, md. grey resembles N.P				
		189 - 193 - 2.0' lost core				
		193.2 - 193.5 - mixed qtz-cb, irreg. at 45°				
		195 - 198.5 - heavily fxd.				
		202.6 " - ½" cb. qtz at 70°; 40% py.				
		205.1 - 205.5 - fracture parallel to core, plated with cpy & py.				
	206.0	End of Hole				

Drilled by M. Mordasette Core Size Axt Logged by K.O.P' & E.G.T.

COMPANY Empire Explorations PROPERTY Phillips Bay Project

Township Phyllis Claim No.

SHEET No. 1 Reference Mine Coordinates HOLE No. W.T. 44

Started Jan. 2 1952 Location 45,030.72E

Finished Jan. 25, 1952 44,870.35S

Depth 407.0 Elevation 9950.34

Bearing 60° (0° 200'

Dip: 47° @ Collar; 54° 30' at 600'

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
0.0	9.0	Casing								
9.0	122.5	Metarhyolite; chloritized; occasional patch of pyrite								
		29.4 - 29.7 - ¼" quartz carbonate at 45°; a little chalcopyrite in the pyrite								
		37.0 - pyrite increasing to 5%								
		46.2 - 46.4 - ¼" quartz carbonate at 65°								
		56.0 - 56.5 - ½" quartz carbonate at 50°								
		63.0 - 66.2 - ¾" quartz carbonate almost parallel to core								
		68.5 - 123.0 - pyritic zone, up to 20% pyrite in patches; very little chalcopyrite.								
		89.0; 98.8; 107.4; 117.3 - ¼" to ½" quartz carbonate stringers about 50°.								
		122.5 - apparent contact at 35°								
122.5	207.0	Rhyolite; medium grained unbedded; medium grey; sericitic & silicified.								

Drilled by Boyles Bros. Core Size AXT Logged by K. O'Flaherty

COMPANY Empire Explorations

PROPERTY Phillip's Bay Project

Township Phyllis

Claim No.

SHEET No. 2

Started

Finished

Depth

Reference

Location

Elevation

HOLE No. W. T. 44

Bearing

Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		Rapid decrease in pyrite								
		166.2 - 166.8 - ½" quartz carbonate and chlorite at 20°, a few specks chalcopyrite								
		172.0 - 172.1 - 1" quartz at 70°								
		175.5 - 176.0 - quartz carbonate and chlorite in shear at 50°								
		188.0 - 204.0 - box spilled; contains one 1" quartz carbonate at low angle; 6' carbonate chlorite zone with purple tint at 25° plus a little chalcopyrite; one low angle quartz carbonate cemented breccia zone.								
212.0	327.7	Rhyolite breccia, tuff type; dark irregular fragments throughout a tuff matrix								
		233.0 - 234.7 - carbonate- quartz at low angle								
		237.0 - 239.8 - carbonate quartz at 15°; minor pyrite								
		243.0 - 246.3 - quartz carbonate in shear at 30°.								
		245.5 - 247.7 - carbonate with chlorite at contacts; 20°								

Drilled by

Core Size

Logged by

COMPANY Hydro Explorations

PROPERTY Phillips Bay Project

Township Phyllis

Claim No.

SHEET No. 3
Started
Finished
Depth

Reference
Location
Elevation

HOLE No. W.T. 44
Bearing
Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS			
		265.9 - 266.4 - carbonate quartz at 20°; in a 3 feet core brecciated section; probable fault								
		269.0 - 269.2 - quartz carbonate in breccia zone at 30°								
		271.5 - 272.0 - breccia zone at 25°								
		282.5 - 284.0 - silicified and carbonatized breccia zone about 20°								
		285.7 - 286.5 - quartz carbonate in breccia zone at 30°								
		289.0 - 292.0 - a little scattered pyrite								
		292.2 - 292.7 - ½" breccia with quartz carbonate and pyrite at 20°								
		293.7 - 297.5 - brecciated; variable from 75° to 0° very pink carbonate and quartz carbonate at various angles; probable fault zone.								
		302.8 - 328.3 - box spilled								
		327.7 - contact approximate; appears to be at 45°.								

Drilled by

Core Size

Logged by

COMPANY Empire Explorations PROPERTY Phillips Bay Project

Township _____ Claim No. _____

SHEET No. 4 Reference _____ HOLE No. P.T. 44

Started _____ Location _____ Bearing _____

Finished _____ Dip: _____ @ Collar; _____ @ _____

Depth _____ Elevation _____

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
327.7	607.0	Rhyolite [illegible]; fine varieties; heavily carbonated; numerous chlorite [illegible]; light green [illegible]					
345.0	350.3	- over textured, cream color; chloritic shears; eleven [illegible] veins varying from 30° to 70° through section					
304.5	305.5	- ¼" feeder type vein at very low angle (10°); 2% chalcopyrite					
338.5	339.0	- dark grey; chloritized; numerous quartz carbonate stringers at 40°; brecciated; possible fault zone					
411.0	417.0	- occasional small speck of blackish blue					
419.0		- ½" quartz carbonate at 60°					
435.0	470.0	- numerous quartz fragments within matrix					
470.0		- better variety of 44; veins to dark dark grey with some white carbonate					
495.1	495.3	- quartz carbonate in slight shear at 60°					

Drilled by _____ Core Size _____ Logged by _____

COMPANY Noranda Explorations PROPERTY Phillips Bay Project

Township Phillips Claim No.

SHEET No. 5 Reference
Started Location
Finished
Depth Elevation

HOLE No. N.T. 11
Bearing
Dip: @ Collar; @

FROM	TO	DESCRIPTION	SAMPLES NO	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	ASSAYS
		532.5 – 533.7 – ½" carbonate quartz at 15°					
		533.7 – 534.2 – ½ grade andesite at 25° chloritized					
		530.0 – 532.3 – Feldspar type vein with 1½% sulphides at 35°					
		534.5 – 534.5 – 1 – ½" mild – ½" chloritized & 30% carbonate stringers at 25°					
		551.8 – 554.5 – quartz carbonate with breccia at 25°					
		555.3 – 555.8 – quartz carbonate and breccia at 45°					
		561.5 – 5 ft of carbonated vein & silica fragments					
		562.7 – 565.3 – ½" iron oxide chloritic stringers with breccia fragments					
570.0		End of Hole					

Drilled by Core Size Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. T.T. # 27

Sheet No. 4 of 8

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
		397.3 - 399.8 80° cmcr q.c. & minor chl. injct. at mod. angle.							
		399.4 - 399.8 contt. small patches of pink cb.							
		399.8 - 401.0 Cgl. white and pink fuzzy cb., v small crystals of qzy. in matrix, at mod. angle							
		401.5 - 405.0 chl. cem. bx. z. w minor patchy pink cb.							
		407.3 - 409.8 core broken up; numerous of 1/10" oxidized cb. v. nearly parallel to core.							
		409.8 - 411.0 several ½" grey q.c. v. at low angle							
		410.8 - 442.6 intensely bxd, chl. cemented, minor amt of patchy q.c.							
		441.7 - 1" chl. zoned q.c. 45°							
442.6	442.3	441.6 - 442. chld, blended: massive, fine gr.; chld. contact at 442.3 at 45°							
		442.3 - blended, chilled contact at 25°							
		442.1 - Tr. cpy.							
443.0	522.6	Tr - as above fm chl; rem acntitic fgt.: massive							
		453.4 - 454.3 2½ dueg. q.c. at low angle							
		454.3 - 455.0 core badly broken up							
		455.0 - 459.0 bxd. chl. cem.; minor cor. and patchy q.c. Tr. cpy 456.1 - 456.6							
		459.0 - 465.0 widely scattered chlc. and grey angular fgs up to 3" in diam.							
		465.0 - 510.0 increasing number of dark grey & chlc. fgs. matrix becoming finer gr. Tr, and from 503.0 - 510.0 is close to fine gr. Dy.							
510.0	522.3	Dy - med. grey, f. gr., massive, compact, ill defined darker grey rhyolitic fgs (up to 1") or clusters of small ½" - 1/8" chl. fgs.; mildly schisty, mass. Dy.							
		521.4 - 522.4 blue tint							
		510.5 - 1/8" chl. q.c. & slip 45°							
522.3	551.3	Dy - light grey, fine gr., very uniform color & text., massive							
		522.3 - 540.4 grey q.c. v. 70°							
551.3	555.5	Cbx - mod. angular chlc. frs (av. ½") in med. grey rhyolitic matrix; fgs ranging to 552.3							
		552.3 - 1/8" bleb of Dy. w minor cpy.							
		551.8 - 552.5 ½" chl bx followed by intensely chld. z. at 49°; at 552.1 - ½" chl. containing angular fgs. v. 45° w small blebs of Pyrrhotite							
555.5	559.3	Cbx - dark green and cream, light chl. angular fgs set in very fine grained rhyolitic matrix contacts [illegible], mod massive.							
559.3	560.7	Cbx - massive - 560.0 grey and light grey fgs (up to 2") in light col. matrix;							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. W.T. # 27

Sheet No. 5 of 9

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% Ni	% CO
		~~coarse, chlo. fgs.~~							
		~~- 807.0 fgs numr; matrix v. light col. and siliceous~~							
		~~* 5" , 7 - 803.2 ½" c.c. 30° w heavy blebs of spy and few specks of Pyrite.~~							
		~~- 811.0 very numerous dark grey to chlo. granular fgs; matrix siliceous & granular texture.~~							
		~~811.1 - 811.3 2½" grey c.c. w 1/2" bleb of spy. at 40°~~							
		~~- 818.0 angular pale grey to yellowish white fgs numerous; matrix clear, chlo. contact gradational~~							
~~818.0~~	~~822.2~~	~~Dy - grey greenish, fine gr., chlo., uniform, massive~~							
		~~821.5 - 821.7 ½" c.c. 30° followed by chld bx. z.~~							
		~~822.2 - 822.3 lighter grey granular text.~~							
		~~822.3 - 822.5 c.c. bx. 30°~~							
~~822.2~~	~~730.1~~	~~Rbx - matrix pale grey, f. gr.; fgs numerous, av. 1", angular to sub-rounded and vary from light grey to dark green in color, the former being more abundant, mod massive~~							
		~~822.3 - 822.8 increase pale apple green altn.~~							
		~~822.8 - 730.1 707 dark grey to chlo. fgs.~~							
~~730.1~~	~~737.0~~	~~Dy - pale greenish grey, v. f. gr., fine banding (light & dkr grey) at 70° chang. contacts at 70°~~							
~~737.0~~	~~744.0~~	~~Dy - grey, coarse granular text. mass., uniform~~							
		~~730.0 - 730.7 bleach & silicified~~							
~~744.0~~	~~757.0~~	~~Dy - as above w num. tiny chl. spots unevenly distributed massive; distinct change at 757.0 to~~							
~~757.0~~	~~767.0~~	~~Dy - v. f. gr., dense, bluish grey, very uniform, massive; mildly chld.~~							
		~~745.0 - 745.2 c.c. v. 45°~~							
		~~749.4 - 749.2 irreg. c.c. injections~~							
~~767.0~~	~~810.0~~	~~Rbx - widely scattered light grey to greenish grey fgs, up to 3", in fine gr., greenish uniform Dy matrix fgs generally ill defined.~~							
		~~From 803.0 - matrix more siliceous, lighter coloured, grey fgs more numerous and better developed. Mod massive~~							
~~810.0~~	~~840.0~~	~~Rbx - very light grey, siliceous matrix w widely scattered light coloured, often bleached, ill defined fgs up to 2½" in diameter. Few scattered angular grey fgs. Massive~~							
		816.0 - 820.0 weak ser. altn.							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. T.T. # 27

Sheet No. 6 of 8

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
		810.0 - 810.8 q.c. & 1" chl. cpy							
		821.2 - 1/10" wavy reathered q.c. at low angle							
		827.0 - 827.2 q.c. v. cpy							
		827.2 - 840.0 highly silicified							
		840.0 - 842.5 10% irreg., patchy q.c.; 183.0 - 187.4 1½" wavy pink q.c. & cpy crystals & veins							
		844.5 - 845.5 irreg. patches and stringers of grey q.c., in part by injection Ashlaw-Mc contact.							
845.5	883.0	Mx - very light grey, siliceous f. gr., mainly - numerous light coloured to grey fine up to 30% f. grey fgs schistoid and generally more silicified than (1) lighter col. fgs. widely scattered, angular silic. fgs from ¼" to 1½" in diameter. Rock very massive							
		880.0 - 887.1 1" q.c. v. at 40°							
		888.4 - 888.9 ½" zone of 70% patchy q.c. at low angle to core							
		889.2 - 891.6 ½" q.c. v. chl. parallel to core - specks of cpy in chl.							
		892.6 - 893.5 1/8" q.c. chl. parallel to core							
		898.8 - 901.5 core broken up - seams of q.c. at mod. angle							
		902.0 - 902.8 1/10" mod. seam nearly parallel to core							
		880.8 - 910.5 highly silicified, bleached, sericitized; scatt. whisps and small angle fgs.							
		910.2 - 911.2 1" q.c. parallel to core							
		909.8 - 910.3 1½" q.c. 30°							
		910.5 - 910.6 silicified, rock bar, 1% fine patchy q.c., fgs v. rare. Few widely scatt. specks of cpy. 910.2 - 1" wavy pink ch. 20° & ½" blob of cpy.							
		920.5 - 920.8 1/8" irreg. q.c. parallel to core							
		924.5 - 924.7 angular zoned q.c. inject.							
		933.0 - ½" q.c. 80°							
		934.6 - 1" zoned q.c. bx. 60°							
		937.0 - 2" gouy q.c. 50°							
		939.0 - 939.8 30% irreg. zoned q.c.							
		940.1 - 940.7 80% mostly zoned q.c.							
		943.8 - ½" q.c. patchy & one 1/10" cpy blebs							
		945.5 - 945.6 ½" - 1" q.c. 45° & small blebs of Py. and Tr. cpy.							
		948.0 - 1/10" q.c. at 70° & Tr. cpy.							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. T.T. # 27

Sheet No. 7 of 8

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
		971.3 - 971.8 grey c.g. stage of fgs							
		971.8 - 972.5 alteration due to cor. stands, at 60°							
		972.5 - 989.5 mainly small cor. fgs on ridges							
		989.5 - 999.3 bleach., silic., grnlr. zone: cor. alts decreasing after 973.4; 971.5 - 973.4 2/3" q.c. parallel to core w few specks of cpy.							
		Sharp change at 999.3							
999.3	1041.0	Fbx - coarse black matrix; scattered light col. angular fgs up to 1½" fgs are spotted w chl., or blue cr., clear Qy. Rare dark green chlc. fgs. Rock very massive, uniform							
		994.5 - 995.1 ½" zone of patchy q.c. 30°							
		999.3 - 1/2" purplish-grey q.c. 45° w specks of cpy.							
		999.7 - ½" chl q.c. 60° w specks of magnetite and cpy.							
		1002.0 -1012.7 chl bx. z. w. minor patchy q.c.							
		1002.6 -1012.7 fine dmgy. q.c. fabric, parallel to core At 1010.7 - two ½" blobs of cpy. 1012.5 - 1012.7 coarse q.c.							
		Sharp change at 1041.0							
1041.0	1072.0	Fbx - highly silicious matrix - numerous light col., f. gr., Qy fgs, angular to ill defined, occas. milky-green or dark grey-greenish fgt.							
		1054.0 -1061.0 weakly bnd, strongly silicified, bleach., occ. z. 1059.0 - 1061.1 strong bleach, occ. alts 1059.3 - 1059.4 chl. occ. bx. z. 1059.9 - 1060.0 1cm dmgy. q.c., some weakly zoned							
1072.0	1081.0	Fbx - as from 999.3 - 1041.0							
1081.0	1177.8	Fbx - pale grey, f. gr. uniformly, mainly; numerous light grey to dark grey, angular to subrounded, fgs from ¼" - 3" av. 1" in diameter Mineral.							
		1093.7 - 1094.1 f. gr., v. light grey, silicious, banded zone at 75°							
		1120.5 - 1140.2 greenish to chlc. angular fgs numerous							
		1140.2 - 1150.5 greenish chlc f. gr. fgs: few scatt. small chl. fgs 1150.5 - 1151.1 oxid. 1/16" fract. at low angle to core 1151.7 - 1152.0 ½" q.c. at low angle to core; weak bxn fr. 1150' 1152.6 - 1152.1 ½" q.c. at low angle to core; at 1152.9 blebs of cpy in vein.							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. T.T. # 27

Sheet No. 6 of 8

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
		1173.4 - 1173.2 1" zone of c.c. stringers & chl. at low angle to core:							
		at 1173.7 several small white veins of qtz.							
		1173.1 - 1" c.c. cc° w blebs of Py.							
		1174.6 - 1" c.c. cc°							
1177.	1203.0	Fw - numerous highly chlc. angular fgs, ex. 1", in light col. matrix;							
		1184.0 - 1202.0 prominent light col. silic. fgs.							
		massive.							
		1188.6 - 1" c.c. cc°							
		1189.0 - 2" patch of c.c. w blebs of Py.							
	1203.0	End of hole.							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started June 3/61 | Purpose | Hole No. W.T. # 27

Completed June 14/61 | Depth 1200' | Sheet No. 1 of 3

Twp. Phyllis | Claim | Group | Zone Line 23-00W; 2+00S

Lat. 42,252.26 | Dep. 43,102.00 | Az. 1412 12' | Elev. | Dips -40°;100'-40°Az 142°;200'-[illegible] 142°;500'-31°Az150°; 700'-[illegible]

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
0	10.0	Casing							
10.0	41.5	Intermediate - dark green, highly chl., md. - crs. g. v., abundant leucoxene, md. cb. alt'n; 5 - 15% blebby and disc. Py.; massive							
		Increasing Py min. after 20' up to 25% Py.							
		Increasing chl. alt'n after 33.0'							
		11.0 - 1" q.c. 60°							
		13.8 - ½" q.c. 60°							
		15.8 - 1½" q.c. chl. 60°							
		28.0 - 28.0 crystal chips and small blebs of cpy assoc. w. patchy cb.							
		32.3 - 32.7 green q.c. w heavy Py. and Tr. cpy.							
41.5	43.2	Chl. v. - up to 5% disc. and bleby Py; minor scatt. leucoxene to 44.0 - possibly chloritic cb. alt'n decreasing w depth - gradual change to grey Py							
		41.5 - 43.2 45% Py.							
43.2	116.5	Py - grey, fine gr., very mass. and uniform							
		54.3 - 54.6 blebby and disc. Py.							
		63.2 - 63.7 chl cb. 60°; ½" pink cb. at 63.6 at 60°; - possible flt.							
		69.6 - 69.8 bleached s.; 10% pink weathered cb. at 60°;							
		All 69.8 to ½" grey q.c. v. 5% v sprkle of cpy.							
		* 77.2 - 81.2 coarse chl. con. bx. zone; 10% angular zoned q.c.							
		injections in past bx. cement							
		82.0 - ½" zoned q.c. chl. con. bx 40°							
		82.6 - 83.0 2/3" zoned q.c. chl. con. bx. nearly parallel to core.							
		83.2 - 105.3 discrete cb. alt'n and veining due to chl. alt'n.							
		110.5 - 111.2 ½" q.c. and chl. clip 5°							
		111.4 - 112.0 weak chl. con. bx. z.							
116.5	122.0	Py - as above only slightly lighter grey, containing prominent small (1-2 m.) distinct chl. spots throughout, very massive and uniform. Possibly v. f. gr. cpy.							
		118.6 - 118.8 heavily chl bx. z. 5°							
		119.7 - 120.4 ind. chl. con. bx. z. at approx. 25°							
		121.2 - ½" wispy q.c. chl. 30° w fine gr. Py.							
122.0	155.3	Diabase dike - black, dense, extremely fine gr., criss-crossed w irreg. pale							

TPC

Drilled by Boriscotto D.D. Co.

Logged by R. Sutherland June 20/61

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. T.T. # 27

Sheet No. 2 of 3

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
		green (bleached) assay; chilled bleach contact at 133.3 at 25°; upper contact obscured by bleached core - but has apparently similar dip.							
133.3	136.0	Ry - light grey, f. gr., siliceous, minor amt of chl. filled fractures and spotty chl. alts.; very massive; uniform							
		137.0 - 139.0 10% angular zoned q.c. injections							
		140.0 - 144.5 5% angular zoned q.c. & minor chl. injections							
		144.6 - ½" - 1/8" q.c. chl. 40°							
		146.2 - 146.7 chld. and chl. com. bx. 40°							
		147.6 - 147.9 80% angular zoned q. c. in chld bx. z.							
		149.0 - ½" q.c. 60°							
		149.5 - 150.0 several patches and thin veinlets of grey q.c. at low angle to core							
150.0	172.0	Ry - as above but containing also distinct tiny chl. spots - similar to Ry from 119.5 - 132.0 gradational change to							
172.0	173.5	Highly bleached, silicified and mod. sericitized Ry - very light yellowish grey in color, dense; slight resemblance to RP near the end of the section; gradational change to							
173.5	186.0	RP - highly silicified, sericitized, yellowish grey in color; v.f. gr. dense, good fgl texture; cor. alts decreasing after 189.0 - rock becoming more typical RP							
		182.5 - 183.0 zoned q.c. bx. inject.							
183.0	245.4	RP - typical, good fgl texture, siliceous, light grey, num. chl. bits; very massive, uniform, fresh							
		185.8 - 2/3" pink cb. v. 25°							
		188.0 - Thin chl. slips 20° plated w. cpy.							
		213.3 - 214.3 ½" irreg. zoned q.c. v. parallel to core							
		217.1 - 217.6 ½" chl. q.c. w. fair cpy at low angle to core							
		218.2 - 231.7 v. little chl., sericitized							
		231.8 - 232.3 vuggy pink cb. v. 45°							
		240.4 - 240.7 80% irreg. vuggy pink, (minor white cb.) cb. veinlets at mod. angle to core: core broken up in part - possibly fault.							
		241.3 - 242.9 2½" q.c. 20° followed by chl. & q.c. veined work bx. z.							
		243.0 - ½" chld q.c. 45°							
		243.5 - ½" bleached RP dikelet 45°							
		244.2 - 245.4 q.c. v. 20°							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. T.T. # 27

Sheet No. 3 of 8

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
240.4	240.1	DI dike - highly bleached, yellowish grey, v.f. gr.; bleach. contacts at 30°;							
		at 240.3 - 1½" fract. of DF and ¼" chl. q.c. 30°							
240.1	253.0	DF - as above the dike.							
		250.2 - ¼" scar rock, Py, T chl. 25°							
		250.2 - 253.0 hydro carb - network of ½" q.c. at low angle							
		251.2 - ½" q.c. chl. 75°							
		253.3 - 272.0 normal, up to 2½", grey to greenish fgs.							
		272.8 - tr. ¼" wispy pink cb. v. 70°							
		274.0 - 291.0 highly silicified, sericitized, conse, f. gr.							
		278.2 - 1½" grey q.c. chl. 80°							
		291.0 - 303.0 dense glassy matrix w num. ½" - 1½" scr. fgs.							
		291.5 - 292.0 several granular cb. stringers							
		293.5 - 297.7 ditto							
		297.7 - 298.1 2/3" granular chld cb. v.							
		299.8 - 2/3" grey q.c. 60°							
		303.2 - 321.5 intensely chld., chl, confused narrow cb. veinlets sparse							
		fr. of diss. cpy.							
		321.5 - 321.8 grey q.c. & cb. impregnation z. - heavy diss'd and bleby cpy.,	15081	321.5	323.2	1.7	2.64		
		minor amt of diss. magnetite - feeder vein type							
		322.2 - 324.0 2/3" intense chl. z. in the F.W. at 15°							
		324.0 - 324.8 intensely chld.							
		324.8 - 326.6 feeder vein as above, at 25° and 45°; weak cpy and Tr. of	15082	324.8	326.6	1.8	3.70		
		magnetite							
		Felsic cpy 324.8 - 326.6							
		Intense chln at 326.6							
		326.8 - 328.2 highly siliceous & weakly sericitized							
		327.0 - 2/3" bleached FI dike at 20°							
		328.0 - 1" grey q.c. & dike contact at 45°							
328.2	343.2	FI dike - altered, yellowish grey, massive, v.f. gr.							
		341.6 - 343.2 chilled contact & 1/3" chl. q.c. nearly parallel to core							
343.2	397.5	DF - f. gr., highly siliceous, sericitized, variable fgl. texture, very light							
		yellowish grey in color; massive							
		353.5 - 357.5 ¼" wispy pink cb. v. at low angle to core							
		393.2 - ½" q.c. chl. 45°							
397.5	442.5	DF - bluish grey, num. chl. bits, coe. fgl. text., massive							
		396.0 - 397.2 ½" q.c. chl. parallel to core							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started October 28th, 1968. Purpose To test new tailings area Hole No. 751

Completed November 1st, 1968 Depth 652'.6 Sheet No. 1 of 2

Twp. Claim Group Zone

Lat. 14 + 08S of P.B.L. Dep. 2 + 84 E. Az. Elev. Dips Collar 45° - at 650' - 27°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
0	16	Casing							
16	95.2	Dpb dyke - calcareous veinlets and stringers abundant, some hematite and limonite, specks of pyrite. 62 - 62.7') Porphyritic, phenocrysts (small laths) of 72 - 82.5') feldspar (?). 94 - 95' Calcite vein portions dolomitic with strong limonitic porous structures.							
95.2	[illegible]	Rbx - Rhyolite breccia, matrix slightly chloritic, mainly siliceous, fragments large (½ - 1") and small (0.1") are chloritic and dark in color. [illegible].8' - pyrite in a large inclusion or fragment. 96 - 97 veinlets of calcite, dolomite, hematite and limonite (barren). [illegible].5 - 101.7 - calcareous veins, thicker but fewer in number, little or no ferrous material, few fragments of calcite also present.							
[illegible]	[illegible]	Dx - Probable contact zone (transition) between the Rbx and							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 2 of

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
103.1	107.0	CONTINUED:- underlying dyke, appears fine grained, quite impregnated with calcareous material. A few of the dark "veinlets" are probably feeder veins and a few are just intrusions from the dyke(?) being quite mafic.							
107.0	135.6	D_2b dyke: Quite similar to portion between 16' -95.2', perhaps a little finer grained. About 5% pyrite. A few patches (3") of dolomite with hematite. 135.2'-135.8' - Calcite vein similar to 94'-95'.							
135.6	137.1	Ry or Contact Zone: - Very similar to 103.1' - 107.0'.							
137.1	143.6	Ryt: Rhyolite fragmental, possibly Rbxt, fine grained, quite chloritic, very small fragments of dark chloritic material scattered more or less evenly throughout the chloritic matrix. $<5\%$ pyrite. A few calcite veins ($\frac{1}{2}$") and veinlets. A few stains of limonite.							
143.7	145.7	Ry Probably Contact Zone: - Idential with 103.1'- 107.0' portion.							
145.7	164.3	D_2b Dyke (?): More chloritic and finer grain size than in 16' - 95.2' portion, but richer in sulphides. Pyrite ≈ 30%							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 3 of 8

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
154.3	155.5	Rv Probably Contact Zone: - idential with 103.1' - 107.0' portion.							
155.5	172.8	Rbxt : Rhyolite fragmental, chloritic fragments in a dense chloritic matrix. In some portions it is almost a rhyolite breccia. No distirct contact with underlying Rbx. Few calcite veins but numerous calcite fragments.							
172.8	175.0	Rbx : Rhyolite breccia. Variable, some portions contain more fragments than others (the latter can be classified under Rbxt).							
175.0	225.2	Rbx : Distinct, no gradation with Rbxt, fragments generally large (½" or more). Very few calcite veins or fragments, and hematite or/and limonite, except at 219 - 219.6' where there is some limonite staining and an inch thick calcite vein. Where fragments are large (> 1"), their number is small. Contact Zone at about 45° to core axis.							
225.2	228.4	Rvt : Grey massive rhyolite with very few scattered fragments, quite chloritic matrix, and relatively							

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DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 4 of

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
225.7	228.4	CC (Ch.Cb): - free from carbonate. Contact Zone perpendicular to core axis.							
228.4	267.0	Rb x : Rhyolite breccia, some dark fragments surrounded by relatively light-colored contact aureoles. Not very much carbonate. Contact faulted extensively, by minor faults, probably it is perpendicular to the core axis.							
267.0	267.5	Rbxt : Dense grey fragmental rhyolite, fragments evenly scattered through slightly chloritic matrix. Contact irregular, tongueing common.							
267.5	280.0	Rbx : Greyish-green rhyolite breccia, fragments large and numerous, criss-crossed by numerous mafic stringers and carbonate veins, no hematite or limonitic stains.							
280.0	280.8	Ry or Contact Zone: - Similar to 103.1'- 107.0' portion.							
280.8	352.6	D_2bdyke : Same as 145.7' - 164.3' portion except there is $<$ 5% pyrite present. In general the dyke is porphyritic, phenocrysts are lath shaped feldspar(?).							
352.6	353.6	Ry or Contact Zone: - Same as 103.1' - 107.0' portion. Lower							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 5 of 9

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
362.6	363.6	CONTINUED: contact very sharp at about 45° to the core axis.							
363.6	377.2	Rbxt : Same as 267.0' - 267.5' portion. Some portions (2-3" thick) are relatively free of fragments and perhaps less chloritic. At 376.8' a hematite-stained patch contains a few pyrite crystals.							
377.2	409.6	Rbx : Rhyolite breccia, dense grey-green, chloritic fragments generally large ($\frac{1}{2}$ - 2"). Pyrite <30% is scattered through this portion, concentration of pyrite (>30%) in calcite vein (0.3" thick) at 393.0'. Contact perhaps marked by carbonate dyke at about 45° to the core axis.							
409.6	410.5	Rbxt : Rhyolite fragmental, same as 267'-267.5' portion.							
410.5	422.2	Ryt : Rhyolite, massive, greyish, abundant mafics, pyrite abundant in calcareous veins. Contact gradational perhaps marked by carbonate dyke.							
422.2	431.3	Rbxt : Same as 267.0' - 267.5' portion. Contact gradational.							
431.3	432.3	Rbx : Similar to 267.5' - 280.0' portion. Contact gradational.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 6 of [illegible]

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
432.3	441.5	Rbxt : Same as 267.0' - 267.5' portion.							
441.5	460.[illegible]	Rbx : Same as 267.5' - 280.0' portion except fewer mafic stringers and more calcareous veins. Contact gradational.							
460.0	463.4	Rbxt : Same as 267.0' - 267.5' portion. Contact gradational.							
463.4	463.6	Rbx : Same as 267.5' - 280.0' portion. Contact gradational.							
463.6	469.5	Rbxt : Rhyolite fragmental, quite calcareous) Pyrite relatively fewer fragments than in) crystals any portion encountered.) and							
469.5	477.1	Rxt : Same as 410.5' -422.9' portion in) patches in part, some portions are lighter colored) calcareous (2-3" thick) and are fragmental rather) portions than massive. Contact gradational.) and veins.							
477.1	482.4	Rbxt : Same as 267.0' - 267.5' portion. Contact irregular, not distinct or sharp.							
482.4	509.3	Rbx : Rhyolite breccia, fragments generally large ($\frac{1}{2}$ - 2"), matrix generally greenish grey and chloritic, patches of lighter color probably are more silisic							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 7 of 9

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
482.4	509.3	[illegible]: portions. Contact very sharp, almost perpendicular to core axis.							
509.3	510.4	Ry : Massive, grey, abundant mafics. Contact very sharp, and at about 45° to the core axis.							
510.4	513.7	Rbxt : Same as 267.0' - 267.5' portion. Contact not very sharp, and at about 45° to the core axis.							
513.7	572.8	Rbx : Same as 175.0' - 225.2' portion. 537.2' - 537.9': D_2bdyke - fragments or mafic phenocrysts in silisic groundmass (no lineation). 544.6' - 545.2': Massive rhyolite dyke with mafic veinlets, lower contact sharp and at about 45° to the core axis. Contact quite gradational, probably about 45° to the core axis.							
572.8	573.5	Rbxt : Same as 267.0' - 267.5' portion. Contact quite sharp and at about 45° to the core axis.							
573.5	576.8	Rbxt : Matrix same as 572.8' - 573.5' portion. Contact gradational.							
576.8	580.0	Rbx : Same as 175.0' - 225.2' portion.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 751

Sheet No. 8 of 9

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
576.8	590.0	CORE USED: 585.4' - 586.6' : Dyke - massive rhyolite, same as 544.6' - 545.2' portion, 10 - 30% pyrite.							
590.0	595.0	Rv or Contact Zone: - Same as 103.1' - 107.0' portion.							
595.0	620.0	D_2b dyke: Same as 16.0' - 95.2' portion, no sulphides.							
620.0	623.0	More calcareous zone in dyke, a few scattered pyritohedrons (?) and cubes of pyrite.							
623.0	652.6	D_2b dyke: Same as 16.0' - 95.2', a few scattered specks of pyrite and chalcopyrite.							
652.6		END OF HOLE.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started October 16th, 1968. Purpose "a test new tailings area Hole No. 752

Completed October 18th, 1968. Depth 322' Sheet No. 1 of 2

Twp. Claim Group Zone

Lat. 18 + 80 S of P.B.I. Dep. 0 + 00 Az. 140° Elev. Dips Collar -45° at 300' - 39°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
0	32	Casing (24' of overburden).							
32	287	D_2b dyke - dark grey, with tiny leucoxene flecks throughout occasional quartz stringers to 1" at 45 - 60° to core axis. Local rare specks of cpy.							
		at 215 - 1" ankerite stringer, 85° to core axis and 2" of shattered core, probable fault.							
		at 224 - 1" ankerite stringer, 40° to core axis, linoritic, probably fault zone.							
		at 231 - 6" ankerite stringer 70° to core axis.							
		249 - 249.7 ankerite breccia, 70° to core axis, probable fault.							
		At 276 - hematitic, then the dyke becomes markedly chilled, but fine leucoxene is still visible.							
		285 - 287 - ankeritic, with brecciation and limorite, 70° to core axis - a fault zone.							
287	295.4	Rbxt - typical - ankeritic and brecciated 290 - 291' 90° to C.A.							
295.4	296.4	Rbxt - typical, opposing faulted contacts at 80° and 40° to core axis.							

TPC

Drilled by Morissette Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 752

Sheet No. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
293.4	322	D_2b - holocrystalline as before.							
		END OF HOLE 322'							
		Hole stopped because there was no tendency for the dyke to change dip.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started November 1st 1968 Purpose Test new tailings area Hole No. 753

Completed November 6th 1968 Depth 352.0' Sheet No. 1 of 2

Twp. Claim Group Zone

Lat. 21 + 80S offP.B.L. Dep. 3 + 00 W Az. 140° Elev. Dips Collar -45°, 350' -41°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
0.0	20.0	CASING :							
20.0	352.0	Rfbx : Creamy - green colored, rhyolite breccia or/and tuff; small (< ¼") to large (> ¼") dark chloritic fragments in a siliceous to chloritic matrix. In some portions - altered zone of hematite and limonite, these zones tend to be vuggy (i.e. 91.5' 93.0'). In some portions:- there is a carbonated more brecciated and more mafic zone. In portions where the mafic contact is higher either the amount of carbonate veins and fragments is greater (i.e. 55.0 - 74.5) or the mafic fragments are small but more numerous and show a lineation of about 45 - 75° to the core axis. (i.e. 105.0' -107.2' 141.2' - 143.7', 180.5' - flow contact between slightly darker and normal creamy Rfbx, contact quite sharp and perpendicular to core axis.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 753

Sheet No. 2 of 6

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
20.0	352.0	CONTINUED: 192.6' - 193.1' - sand or/and cement probable fault.							
		332.5' - 350.0' - Portion is quite chloritic but distinguished as Rfbx by a few caramel colored fragments.							
		350.0' - 352.0' - Highly carbonated zone, crumbly.							
352.0		END OF HOLE.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started October 18, 1968. Purpose Testing new Tailings area for copper. Hole No. 754

Completed October 24, 1968. Depth 96.8' (abandoned - broken rods). Sheet No. 1 of

Twp. Claim Group Zone

Lat. 18 + 80S of P.B.L Dep. 0 + 75 E. Az. Elev. Dips Collar -45°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
0	40	CASING:							
40	96.8	Rbxt : Typical, occasional rare tiny specks of pyrite.							
		54' - 54.5' - highly limonitic - fault zone.							
		56' - 57' - highly limonitic - fault zone.							
		59' - 60' - highly limonitic - fault zone.							
		61.5' - 62.5' - Highly limonitic - fault zone.							
		63' - 66' - core lost - bad fault.							
		at 81.5', ½" ankerite stringer, local black							
		tourmaline, 40° to core axis.							
		at 96' core is badly shattered and limonitic.							
		Rods jammed.							
		BX casing put down - sanded to rods. Two days							
		work finally broke the rods leaving 30 of rods and							
		coreberrel etc. in hole.							
96.8		HOLE ABANDONED.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started November 8th, 1968 | Purpose Testing S.P. anomaly | Hole No. 759

Completed November 9th, 1968. | Depth 145.0' | Sheet No. 1 of 3

Twp. | Claim | Group | Zone

Lat. 17 + 30S of P.B.I. Dep. 4 + 24 W. | Az. 70° | Elev. | Dips Collar -45°, 145' -49°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% Ni	% CO
0.0	24.0	CASING:							
24.0	35.8	Ry : Greyish green rhyolite, massive, 1 - 5% disseminated chalcopyrite, a few hematite - limonite rich seams (0.1") thick. Contact gradational not discernable.							
35.8	43.6	Rbx : Partly brecciated greyish - green rhyolite, richer in carbonate veinlets and hematite then the overlying Ry, tends to be crumbly. A few scattered specks of chalcopyrite.							
43.6	45.0	Lost core - seam.							
45.0	46.7	Rbx (?) Very vuggy, very rich in hematite, probably part of the seam. Originally maybe Ry.							
46.7	50.0	Lost core.							
50.0	53.7	Rbxt : greyish-green rhyolite fragmental gets very vuggy and highly altered to Kaolin (?) in last foot							
53.7	55.0	Lost core.							
55.0	58.0	Rbxt : Greyish-green rhyolite fragmental. A patch 1"							

TPC

Drilled by | Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 759

Sheet No. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
55.0	58.0	CONTINUED: of chalcopyrite at 57.2'.							
58.0	60.6	Core lost.							
60.6	69.0	Rbxt : Same as 55.0' - 58.0'.							
69.0	71.6	Core lost.							
71.6	78.6	Rbxt : Same as 55.0' - 58.0'. Contact gradational (?) not distinct.							
78.6	93.0	DYKE : D_2b - dark colored, quite chloritic, fine grained, massive. Crumbly closed to portions of lost core. 81.5' - 82.0' lost core.							
93.0	95.0	Lost core.							
95.0	118.7	DYKE : Same as 78.6' - 93.0' portion except for a few green crystals of epidote (?). And a minute speck of chalcopyrite at 100.0'.							
118.7	119.8	Ry or Contact Zone: - lighter color more indurated and richer in carbonate.							
119.8	128.0	Rbxt : Similar to 55.0' - 58.0' portion, crumbly close to core portia.							
128.0	129.4	Lost core.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 759

Sheet No. 3 **of** 3

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
129.4	131.6	Rbxt : Similar to 119.8' - 128.0'							
131.6	134.2	Lost core.							
134.2	145.0	Rbx : Greyish green, rhyolite breccia, fragments generally large ($\frac{1}{2}$" - 2") relatively free of carbonates and hematite and limonite. Also portion has no tendency to be crumbly.							
145.0		END OF HOLE.							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started November 8th, 1968. Purpose Testing S.P. Anomaly. Hole No. 763

Completed November 9th, 1968. Depth 203.0' Sheet No. 1 of

Twp. Claim Group Zone

Lat. 46.008.49 N 4 + 00 S. of P.B.I Dep. 45.087.32 E 25 + 80 W. Az. 140° Elev. Dips Collar -45° at 203' 45° corrected.

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
0.0	7.0	CASING: - No core							
7.0	19.3	Ry : - Greyish to creamy rhyolite, massive, abundant mafic stringers/ Contact not very sharp, probably at about 60° to core axis.							
19.3	20.5	Dyke: Grey-green quite mafic rhyolite, massive, dyke (?) a few carbonate veins, minor-specks of chalcopyrite (disseminated). Contact not very sharp, at about 60° to core axis.							
20.5	66.0	Ry : - Same as 7.0' - 19.3' except for presence of sulphides. Sulphides occur either - as 10-30% chalcopyrite and pyrite associated with 0.5" wide white carbonate veinlet at 40.2') or as 1-5% disseminated chalcopyrite in mafic stringers or portions of Ry distinctly more mafic (color darker too). (e.g. 37.6'). The portion between 25.0' - 45.6' can be considered to have about 5% disseminated chalcopyrite.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started ..... Purpose ..... Hole No. 763

Completed ..... Depth ..... Sheet No. 2 of 11

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
20.5	66.0	CONTINUED:							
		45.0' - 45.4' : - Fault seam, carbonated <5% pyrite							
		upper contact and lower contact at 45° to core axis.							
		60.4' - 61.0' : - Fault zone, upper contact sharp at							
		45° to core axis and rich in limonite lower contact of							
		breccia zone is not distinct.							
		56.4' - 56.6' : - Fault zone, limonite rich, upper and	63001	55.0	57.5	2.5'	.02	)	
			63002	57.5	60.0	2.5'	.02	)	
		lower contacts at about 45° to core axis.	63003	60.0	62.5	2.5'	.38	) 0.10	
			63004	62.5	65.0	2.5'	.01	)	
		56.6' - 66.0' : - Mafics and mafic seams increase in	63005	65.0	66.0	1.0'	.04	)	
		Py., so does chalcopyrite content (10%). Contact							
		not distinct at about 70° to core axis.							
66.0	68.8	Rbx?: - Greyish-green, chloritic fragmental to brecciated	63006	66.0	67.0	1.0'	3.61	)	
			63007	67.0	68.1	1.1'	11.04	) 7.6 %	2.1
		rhyolite. Chalcopyrite 10% to massive.	63008	68.1	70.0	1.9'	.12	)	
		66.4 - 66.6' and 67.5' - 68.0' massive chalcopyrite							
		with specks of millerite. Contact 0.1" thick limonite							
		rich seam, perpendicular to core axis.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started ..... Purpose ..... Hole No. 763

Completed ..... Depth ..... Sheet No. 3 of .....

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
68.8	125.3	Ry : - Same as 7.0 - 19.3' portion, carbonate stringer at	63009	70.0	72.5	2.5'	.03		
		71.2' contains about 5% pyrite, 101.0' - 119.2' ;-	63010	72.5	75.0	2.5'	.03		
		more chloritic. 75 - 76.0, 83.4 - 85.0', 103.6 - 104.5'							
		carbonate veins : - 45° to core axis with minor chalco-							
		pyrite.							
		119.2 - 121.5' :- Carbonated brecciated zone, upper							
		contact at about 45° to core axis, lower contact							
		indistinct crumbly. Contact not very sharp at							
		about 70° to core axis.							
125.3	184.3	Rf : - Creamy massive rhyolite, mafic amygdules (?) from							
		125.3 - 131.7, some pyrite in and near carbonates							
		and tourmaline clots.							
		137.7 : - hematite rich seam or shear at about 45°							
		to core axis.							
		318.7 : - Same type of seam parallel to core axis.							
		Contact indistinct.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started ..... Purpose ..... Hole No. 763

Completed ..... Depth ..... Sheet No. 4 of .....

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
184.3	188.4	Ry : - Grey-green, more chloritic rhyolite. Contact indistinct.							
188.4	203.0	Rf : - Same as 125.3 - 203.0.							
203.0		END OF HOLE.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started December 4th, 1968. Purpose To Test Shanton Shoot. Hole No. 764

Completed December 6th, 1968. Depth 175' Sheet No. 1 of 2

Twp. Claim Group Zone

45,895.01 N 44,992.57 E

Lat. 4 + 20S of P.B.L. Dep. 27 + 50 W. Az. 190° Elev. Dips Collar -45°. Test ?

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
0.0	8.0	CASING:							
8.0	9.5	DYKE : Massive dark grey-green rhyolite, disseminated chalcopyrite (Cu: 1% / 1.0'). Contact limonite seam at 45° to the core axis.	7262	8.5	9.5	1.0	0.04		
9.5	10.5	Chlorite - carbonate breccia. Contact very sharp, at about 20° to the core axis.							
10.5	52.3	Ry : Light colored grey-green massive rhyolite. 13.0 - 13.6, 18.0 - 19.0, 23.5 - 24.3 : - carbonate - chlorite seam (45° to the core axis.)							
		38.8 - 40.0 - Carbonate-chlorite seam (70° to the core axis) disseminated chalcopyrite & pyrite (Cu: 2% / 1.2').	7263	38.8	40.0	1.2	0.85		
		46.9 - 47.4 : - carbonate-chlorite breccia (45° to the core axis), disseminated chalcopyrite and (Cu: 1% / 0.5'). Contact carbonate-limonite seams, 45° to the core axis.	7264	46.9	47.4	0.5	0.37		

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 764

Sheet No. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
52.3	61.8	Rf : Creamy, grey-green massive rhyolite, slightly fragmental. 59.3 - 60.5 :- carbonate seam (20° to the core axis) Contact limonite seam (1/2") at 45° to the core axis.							
61.8	65.8	LIMONITE - carbonate rhyolite breccia, trace of chalcopyrite from 65.7 - 65.8. Contact not very sharp at about 45° to the core axis.							
65.8	84.0	Rf : Same as 52.3 - 61.8' portion. Contact 45° to the core axis.							
84.0	149.5	Rfbx : Creamy, grey-green rhyolite, carbonate-chlorite rich portion, chlorite seams at 45° to the core axis. 129.0 - 138.8 ; 141.5 - 143.7 :- carbonate chlorite breccia, light colored fragments in a dark chloritic matrix, upper contact always gradational, lower contact sharp at about 45° to the core axis.							
149.5	175.0	Rbxt : Dark, grey-green, rhyolite fragmental, rich in carbonate. 163.0 - 163.5 - carbonate-chlorite seam, disseminated and pyrite (Cu: 1% / 0.5').	7265	163.	163.5	0.5	0.69		
175.0		END OF HOLE.							

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started December 20, 1968 | Purpose To test "Shanton Shoot" | Hole No. 767

Completed January 6, 1969 | Depth 150' (EMPIRE) | Sheet No. 1 of 2

Twp. | Claim | Group | Zone

Lat. 45,854.24 N 26+85W | Dep. 45,110.51 E 5+40S | Az. 175° | Elev. 2,976.58 | Dips collar - 45° 150' - 45°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
0	8	Casing							
8	51	Rf typical, with clots of black tourmaline throughout							
		(8-25 dumped, specimen kept at 20' only)							
		at 26' limonitic breccia, minor fine cpy < 0.2% cu							
		From 35 - 36.2 strong ankeritic breccia 10° to core							
		axis consid dissem cpy, trpy, minor magnetite	7438	35.0	36.2	1.2	0.10		
51	150	RfBX, dark chloritic.							
		52-56 fault breccia, local blebby cpy	7443	52.0	56.0	4.0	0.07		
		56 - 58 barren							
		58 - 60 local heavy py, Trcpy & severe 40° shear	7444	58.0	60.0	2.0	0.87		
		78.5 - 83.0 strongly brecciated with consid.							
		black tourmaline, local minor fine cpy.							
		105-107 local finely dissem cpy	7439	105.0	107.0	2.0	0.26		
		107-110 local finely dissem cpy	7440	107.0	110.0	3.0	0.01		
									0.31/11.0'
		110-115 local finely dissem cpy	7441	110.0	115.0	5.0	0.51		
		115-116 local finely dissem cpy	7442	115.0	116.0	1.0	0.28		

TPC

Drilled by | Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 767

Sheet No. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
		135-138 strong ankerite BX, 30° to core axis							
		est 2½% cu	7445	135.0	138.0	3.0	0.97		
		End of hole 150'							

TPC

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started November 14th, 1968. Purpose To investigate Thomson Trough Showings. Hole No. 771

Completed November 16th, 1968. Depth 402.0'. Sheet No. 1 of 3

Twp. Claim Group Zone

Lat. 12+00 S of P.B.L. Dep. 18 + 10 W. Az. 140° Elev. Dips Collar -60°, 200' -55°, 400' -52°.

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
0.0	4.0	CASING:							
4.0	65.0	Rbx :- Greyish-green rhyolite breccia with small (< 1/2") and large (1/2 - 2") dark fragments. 18.0' - 23.5' - Minute amounts of chalcopyrite (Cu: < 0.25%). Fault seams with limonite staining 5.8 - 6.8', 34.4 - 34.6', Contact indistinguishable.							
65.0	75.4	Ry :- Greyish-green, quite chloritic, massive rhyolite. Presence of a few dark fragments suggests that that this is probably a phase of Rbx. Contact indistinguishable.							
75.4	401.0	Rbx :- Same as above. Carbonate rich portion : - 76.6 - 78.2'. 124.7 - 125.0' : Lost core. 132.2 - 132.5' : Hematite-rich seam, quite vuggy. 142.5 - 142.8' : carbonate rich portion. 158.5 - 174.0' : Specks of chalcopyrite (Cu.<0.25%).							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 771

Completed ..... Depth ..... Sheet No. 2 of 3

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
75.4	401.0	CONTINUED:							
		188.0 - 190.0' : less chloritic, light colored flow							
		breccia. Contacts very sharp and about 45° to core axis.							
		192.0 - 192.2' : Limonite rich seam (?).							
		221.0 - 221.5' : Chalcopyrite specks (0.25 - 0.50% Cu.)							
		248.6 - 249.0' : Chalcopyrite specks (0.25% Cu.)							
		252.0 - 253.5' : Less chloritic, lighter in color) Contacts							
		) not very							
		273.7 - 275.0' : Less chloritic, lighter in color) distinct.							
		310.0 - 312.1' : Disseminated chalcopyrite (0.50% Cu.)							
		in a carbonated and chloritic zone.							
		321.5 - 322.2' : Hematite rich seam.							
		366.8 - 368.0' : Chalcopyrite, (Cu. 0.25 - 0.5%)	63082	366.8	367.9	1.0'	0.19		
		specks in carbonate, tourmaline.							
		378.4 - 378.8' : Chalcopyrite specks (<0.25% Cu.)							
		384.5 - 385.5' : Chalcopyrite disseminated in carbon-	63083	384.5	385.5	1.0'	0.42		
		ate zone with mafic stringers, no magnetite,							
		(Cu. 0.25 - 0.5%).							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 771

Completed ..... Depth ..... Sheet No. 3 of 3

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
75.4	401.0	CONTINUED:							
		386.2 - 386.7' : Chalcopyrite disseminated	63084	386	387	1.0	0.11		
		(Cu. 0.25% - 0.5 %) in carbonate rich portion.							
		400.5 - 401.0' : Chalcopyrite disseminated							
		(Cu. <0.25%) in carbonate zone.							
402.0		END OF HOLE.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started November 6th, 1968. Purpose To investigate S.P. Hole No. 772

Completed November 7th 1968 Depth 67.0' Sheet No. 1 of 1

Twp. Claim Group Zone

Lot. 21 + 86 S of P.B.L. Dep. 3 + 00 W. Az. 140° Elev. Dips Collar -60°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
0	14.0	CASING:							
14.0	67.0	Rfbx : Creamy, grey-green rhyolite, generally fragmental brecciated only in scattered portions (ore or two frags over ½" in 2 = 3" of core). Hematite limonite stains every 5 to 10'. A few portions highly carbonated and more mafic also. In general this is not exactly a typical Rf, because of its darker dolor, however some portions are distinctly Rf. Specks of very minute grains of pyrite scattered through the section.							
67.0		END OF HOLE.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started November 18th, 1968. Purpose To investigate Intersection in D.D.H. #763 Hole No. 774

Completed November 20th, 1968. Depth 193' Sheet No. 1 of 4

Twp. Claim Group Zone

45,977.56 N 45,047.50 E

Lot. 4+00 S. of P.B.L. Dep. -25 +80 W. Az. 140° Elev. Dips Collar -45°, 193' -42°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
0.0	8.0	CASING:							
8.0	40.7	Ry : - Dark greyish-green, massive rhyolite, very rich in chlorite (in groundmass and as stringers), and rich in carbonates. Limonite hematite seam at 45° to core axis, at 8.0 - 8.6', 10.0 - 11.5', 13.0 - 13.6', 15.7 - 15.8', 16.7' - 17.0', 19.2 - 19.3'. Minor chalcopyrite through this portion (Cu. 0.05 % /5', increasing to 0.1 - 0.3% / 5' in carbonate rich portions at 22.0 - 22.5, 38.0 - 38.6'. Contact not very sharp, at about 45° to core axis.							
40.7	54.6	Ry : - Creamy-green, massive rhyolite, less chloritic than normal Ry, probably Rf (?). 40.7 - 44.0 - more chloritic, less massive and probably a contact zone (?). 50.0 - 53.0 - same as 40.7 - 44.0'.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started ..... Purpose ..... Hole No. 774

Completed ..... Depth ..... Sheet No. 2 of 4

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
54.0	75.0	Ry : - Same as 8.0 - 40.7'.							
		55.5 - 56.0 - Limonite stained seam, contacts probably at 90° to core axis.							
		57.5 - 58.5 - Some chalcopyrite (Cu: 0.50 - 0.80 % across 10').	66001	57.5	58.5	1.0	.44	.30	
		58.5 - 60.5 - 5" and 3" of massive chalcopyrite, 8" disseminated chalcopyrite est. 1% Cu., 8" considered disseminated chalcopyrite est. 0.5% Cu. (58.5 - 60.5 est. 8% Cu.).	66002	58.5	60.5	2.0	13.74	.15	
		60.5 - 61.3': - Some disseminated chalcopyrite (Cu.: 1-2% / 1.0')	66003	60.5	61.3	0.8	.55	.18	
		66.5 - 67.5': - Some disseminated chalcopyrite (Cu.: 1% / 1.0').	66005	66.5	67.5	1.0	5.45	.25	
		67.5 - 69.0': - Two 1" sections very heavily disseminated chalcopyrite, (Cu: 6% / 1.5').	66004	67.5	69.0	1.5	.15		
		69.0 - 70.0': - Minor disseminated chalcopyrite,	66006	69.0	70.0	1.0	.04		

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started ..... Purpose ..... Hole No. 774

Completed ..... Depth ..... Sheet No. 3 of 4

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
54.6	75.0	CONTINUED: (Cu: 0.5% / 1.0'). All the above mineralized sections are in relatively more chloritic and carbonated zones. Contact gradational.							
75.0	80.0	Ry : - Same type of creamy-green portion as 40.7 - 54.6'. Contact gradational.							
80.0	81.0	Ry : - Dark greyish-green massive rich in chlorite. Contact gradational.							
81.0	92.3	Ryt: - Dark greyish-green rhyolite with small (0.25") dark chloritic fragments, smaller fragments have an indistinct lineation at about 45° to core axis.							
		83.2 - 84.2' : Clots of chalcopyrite (1" wide) and disseminated chalcopyrite (Cu: 3% / 1.0')	63007	83.1	84.1	1.0	1.06		
		88.3 - 88.4' : Limonite rich seam, at about 70° to core axis; 106.0 - 107.5' - very rich in carbonate (calcite) Contact gradational.							

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Started ..... Purpose ..... Hole No. 774

Completed ..... Depth ..... Sheet No. 4 of 4

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
92.3	103.0	Ry : - Greyish black, intermediate in color between the dark Ry and the light Ry, massive							
103.0	113.0	Ryt :- The same color as the 92.3 - 103.0' portion, lineation of small dark fragments at about 70° to core axis. Contact not very sharp, at about 45° to core axis.							
113.0	193.0	Ry :- Light colored massive, probably same as the 40.7' - 54.6' portion. 137.0 - 137.3 : Limonite-rich seam, about 60° to the core axis. 142.2 - 144.0 : Pyrite streaks (10% of total area) in a carbonate-chlorite seam. 170.0 - 179.0 : Carbonate-chlorite breccia, disseminated pyrite and a little chalcopyrite (Cu: 0.50% across 5.0').							
193.0		END OF HOLE.							

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started November 18th, 1968. Purpose To investigate Cu showings in Thompson Trough. Hole No. 777

Completed November 23rd, 1968. Depth 790' Sheet No. 1 of 2

Twp. Claim Group Zone

Lat. 10 + 30 Sof P.B.L. Dep. 19 + 80 W. Az. 140° Elev. Dips Collar -45°, 400' -33°, 780' - 29°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% Ni	% CO
0.0	8.0	CASING:							
8.0	10.4	Rbx : Dark grey-green rhyolite breccia. Contact not very sharp, about 45° to the core axis.							
10.4	15.2	Ry : Dark grey-green massive rhyolite, rich in chlorite. Contact marked by calcite veinlet (0.5" thick) at about 45° to core axis.							
15.2	18.1	Ry : Relatively light chlorite-poor, grey-green massive rhyolite. Contact marked by chlorite seam (stringer))0.5" wide) at about 20° to core axis.							
18.1	26.0	RyT : Dark grey-green, chloritic fragmental rhyolite no lineation. 23.0 - 23.1 - hematite rich seam. Contact gradational.							
26.0	30.0	Rbx : Same as the 8.0 - 10.4' portion. Contact gradational.							
30.0	36.1	RyT : Same as the 18.1 - 26.0' portion. Contact not very sharp, at about 45° to the core axis.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 777

Sheet No. 2 of 6

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
36.1	48.5	Ry : Light colored like the 15.2 - 18.1' portion. 36.3 - 37.5 - limonite stained seam at about 0-20° to core axis, also one at 43.8 - 43.9'. Contact gradational.							
38.5	52.3	Rbxt : Dark grey-green rhyolite fragmental, no lineation contact not very sharp at about 45° to core axis.							
52.3	53.4	Ry : Same as 10.4 - 15.2' portion, contact not very sharp at about 20° to core axis.							
53.4	158.1	Rbxt : Same as ~~73.5 - 5~~ 48.5 - 52.3' 56.5 - 60.0' - full of chloritic seams and stringers at about 20° to core axis. 80.8 - 90.8 - fragments fewer and larger (up to 0.25") and less chloritic. 107.3 - 109.2 - Breccia zone, rich in carbonate and disseminated chalcopyrite (Cu: 0.25% / 2.0') lower boundary marked by a 1/4" thick limonitic seam. 109.2 - 118.4 - richer in chlorite (a few chlorite stringers) darker in color and a few larger fragments, a few specks of chalcopyrite (Cu: <0.1% / 10')							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 777

Sheet No. 3 of

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
53.4	158.1	CONTINUED:							
		124.1 - 127.3', 146.4 - 148.1' - same as 109.2 - 118.4'							
		portion.							
		140.0 - 141.0 - numerous specks of tourmaline aggregates.							
		150.9 - 153.7 - same as 109.2 - 118.4' with more calcite.							
		156.5 - 156.8 - limonite seam at about 45° to core axis.							
		Contact limonite fault seam, 0.2', 45° to core axis.							
158.1	183.1	Rbx : Dark, grey-green rhyolite breccia.							
		183.0 - 183.1 - carbonate-chlorite breccia.							
		182.0 - 182.6 - Disseminated chalcopyrite in calcite							
		and chlorite veinlets (Cu: 2% / 6"). Contact not							
		very sharp at about 45° to core axis.							
183.1	228.0	Rbxt : Same as 48.5 - 52.3.							
		224.3 - 227.0 - Carbonate-chlorite breccia. Contact							
		gradational.							
228.0	285.3	Rb x: dark, grey-green rhyolite breccia. Contact gradational.							
285.3	302.8	Rbxt : Same as 48.5 - 52.3' portion. Contact not very sharp							
		at about 70° to core axis.							

TPC

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 777

Completed ..... Depth ..... Sheet No. 4 of 6

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
302.8	375.0	Rbx : Dark, grey-green rhyolite breccia with subtle variations in chloritisation.	7213	341.7	342.7	1.0	.03		
		342.7 - 345.0 - chalcopyrite (Cu: 2-3% /2.3'), as clots in relatively more chloritic portion.	7214	342.7	345.0	2.3	0.40		
		345.0 - 347.0 - chalcopyrite specks (very small and scattered) in chloritic seams (Cu: 0.1% / 2.0')	7215	345.0	346.0	1.0	0.04		
		353.4 - 356.0 - chalcopyrite disseminated in a carbonate-chlorite breccia (Cu: 0.5% /2.5').							
		360.0 - 365.0 - chalcopyrite disseminated in carbonate seams in Rbx (Cu: 0.1% / 5'). Contact gradational.							
375.0	377.7	Ry : Greyish, not very chloritic, highly carbonaceous, massive rhyolite. Contact not very sharp at about 60° to core axis.							
377.7	413.3	Rbx : Dark, grey-green rhyolite-breccia.							
		380.0 - 385.0 - carbonate-chlorite breccia.							
		426.0 - 443.3 - disseminated chalcopyrite (Cu: 0.25-0.5% / 5.0').							

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 777

Completed ..... Depth ..... Sheet No. 5 of 6

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
377.7	413.3	CONTINUED:							
		438.0 - 438.3 - bleb of chalcopyrite - in chlorite seam (Cu: 5-10% / 3"). Contact not very sharp, at about 45° to core axis.							
413.3	505.0	Rbxt : Dark, grey-green fragmental rhyolite disseminated chalcopyrite (Cu: < 0.1% / 5.0'), except a carbonate rich portion from							
		445.5 - 446.5 - with chalcopyrite specks and chlorite seams (Cu: 0.5-0.8% / 1').							
		474.5 - 475.0 - specks of chalcopyrite in a chlorite-carbonate seam (Cu: 1% / 6").							
		480.3 - 482.3 - limonite-carbonate seam at about 20° to core axis. Contact gradational.							
505.0	520.3	Rbx : Dark, grey-green rhyolite breccia, quite chloritic contact not very sharp at about 45° to core axis.							
520.3	548.3	Rbxt (?): Dark, extremely chloritic rhyolite with few scattered fragments distinctly observable. Disseminated chalco-							

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 777

Completed ..... Depth ..... Sheet No. 6 of 6

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
520.3	548.3	CONTINUED: pyrite in or near chlorite-carbonate seams (Cu: 0.25% / 5.0'). These seams are probably (some at least) breccia zones. Contact not very sharp, at about 45° to core axis.							
548.3	790.0	Rbx : Generally a dark grey-green rhyolite breccia with scattered portions of carbonate-chlorite breccia (Cu: < 0.1% / 5.0'), rhyolite fragmental (size or fragments smaller) and portions with very few and widely scattered fragments. Chalcopyrite and pyrite are very thinly disseminated, being slightly more concentrated in carbonate-chlorite breccia (Cu: 1% / 6"))600.0 - 601.0', 615.0 - 616.0'	7216	600.	601.	1.0	0.45		
			7217	615	616	1.0	1.05		
		691.8 - 693.8, 702.5 - 703.4, 712.0 - 712.5')	7218	691.8	693.8	2.0	1.04		
		Limonite- hematite-stained seam (638.0 - 640.0').	7219	702.5	703.5	1.0	0.50		
			7220	712.	713.	1.0	0.56		
790.0		END OF HOLE.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started November 26th, 1968. Purpose X-section across low grade area Thompson Through Hole No. 778

Completed December 4th, 1968. Depth 800' Sheet No. 1 of 5

Twp. ..... Claim ..... Group ..... Zone .....

Lat 12 + 45 S of P.B.L Dep. 13 + 70 W Az. 140° Elev. ..... Dips Collar -45°, at 400' -41°, at 790' -33°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
0.0	7.0	CASING:							
7.0	259.3	Rbx : Dark grey-green rhyolite breccia. Carbonate-chlorite seam at : 13.3 - 13.7, (45° to the core axis) 42.4 - 43.0' (45° to the core axis). 66.0 - 66.2 (45° to the core axis), 88.0 - 88.8' (20° to the core axis) 141.3 - 141.5 (45° to the core axis). Limonite-stained seams at 40.5 - 41.0' (80° to the core axis), 119.5' (80° to the core axis). 180.5 - 182.0' - carbonate vein (20° to the core axis) vuggy, abundant tourmaline (?), disseminated chalcopyrite traces of pyrite (Cu: 0.80% / 1.5'). 238.8 - 239.4 - chlorite carbonate breccia, contacts gradational. 246.0 - Tourmaline-carbonate seam (1/2" thick) and about 45° to the core axis. Contact not very sharp at about 45° to the core axis.	7231	180.5	182.0	1.5	0.18		

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 778

Completed ..... Depth ..... Sheet No. 2 of 5

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
259.3	259.8	DYKE : Andesite (?) dark in color, ~~XXXX~~ very chloritic vesicles filled with dark chloritic material.							
259.8	373.0	Rbx : Dark grey-green rhyolite breccia, fragments are generally fewer than the Rbx above the dyke. 288.0 - 291.5 - abundant hematite-limonite, yet a lot of unaltered material (Rbx). 311.0 - 320.4 - quite fragmental, half way between Rbx and Rbxt. Also a lot of carbonate and tourmaline dispersed rather than in seams. Some of this portion shows indistinct broken laminae, mainly of chloritic particles surrounding lens-shaped fragments of carbonate. Lamination is about 65° to the core axis. Contact not very sharp at about 45° to the core axis.							
373.0	377.4	DYKE : Rhyolite fragmental, very fine fragments, closely packed in a grey-green chloritic matrix. Contact not very sharp at about 45° to the core axis.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 778

Completed ..... Depth ..... Sheet No. 3 of 5

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
377.4	442.5	Rbx : Dark, grey-green rhyolite breccia.							
		389.5 - 397.8 - contains a 1/4" thick chloritic seam parallel to the core axis.							
		416.8 - 417.8 - 1/4" thick tourmaline-carbonate seam parallel to or at 20° to the core axis. Speck of chalcopyrite (1/2" wide) (Cu: 0.25% / 1').							
		Contact not very sharp, about 30° to the core axis.							
442.5	450.0	DYKE: Dark to medium grey-green rhyolite, slightly fragmental generally massive. Possibly a multiple injection,							
		these being a contact at 445.7' (50° to the core axis).							
		between a darker portion (442.5 - 445.7') and							
		a lighter portion (445.7 - 450.0'). Contact							
		gradational.							
450.0	493.5	Rbx : Dark, grey-green rhyolite breccia.							
		478.0 - 478.1 - limonite-stained seam, 80° to the							
		core axis. Contact not very sharp, at about 80° to the core axis.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 778

Completed ..... Depth ..... Sheet No. 4 of 5

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	% NI	% CO
493.5	498.3	Rbxt : Dark, grey-green rhyolite fragmental. Contact not very sharp at about 90° to the core axis.							
498.3	509.5	DYKE : Same as 442.5 - 450.0' portion. Contact gradational.							
509.5	516.5	Rbx : Dark, grey-green rhyolite breccia, with numerous carbonate-chlorite veinlets (at about 45° to the core axis) and tourmaline. Contact gradational.							
516.5	524.7	DYKE : Same as 442.5 - 450.0' portion. Contact gradational.							
524.7	749.2	Rbx : Many light (caramel) fragments (1/4 = 1/2" in size) along with dark chloritic fragments (<1/4"). Matrix quite dark and chloritic. 597.3 - 597.8 - carbonate veinlet (1/4" thick) at about 20° to the core axis. 605.5 - 606.0 - hematite-rich seam at 45° to the core axis. 608.2 - 609.2 - carbonate-hematite seam at 30° to the core axis.							

TPC

Drilled by .....

Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started ..... Purpose ..... Hole No. 778

Completed ..... Depth ..... Sheet No. 5 of 5

Twp. ..... Claim ..... Group ..... Zone .....

Lat. ..... Dep. ..... Az. ..... Elev. ..... Dips .....

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
524.7	749.2	CONTINUED: 610.0 - 611.5 - hematite-magnetite-carbonate seam. Contacts indistinct, 610.7 - 611.3 portion is very rich in carbonate and chalcopyrite (Cu: 5% /0.5')	7244	610.5	611.5	1.0	2.69		
		685.0 - 687.5, 690.4 - 695.0, - more carbonate, more dark fragments and coaser grained. Contact not very sharp, at about 80° to the core axis.							
749.2	751.6	Limonite-hematite seam. Contact at about 80° to the core axis.							
751.6	771.5	Rbx : Light, grey-green rhyolite breccia. Contact not very sharp at about 45° to the core axis.							
771.5	773.7	Carbonate-chlorite-rhyolite-breccia. Contact not very sharp at about 45° to the core axis.							
773.7	800.0	Rbx : Same as 751.6 - 771.5'-portion, with hematite staining 783.4 - 784.4 - hematite rich seam, contacts not very sharp at about 45° to the core axis.							
800.0		END OF HOLE.							

TPC

Drilled by ..... Logged by .....

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started November 29th, 1968. Purpose To check Empire #4 Hole No. 783

Completed December 2nd, 1968. Depth 175' Sheet No. 1 of 2

Twp. Claim Group Zone

Lat. 45,945.78 N 4 + 00 S of P.B.L. Dep. 45,009.17 E 27 + 00 W. Az. 140° Elev. Dips Collar -45° Test ?

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % Ni	ASSAYS % CO
0.0	8.0	CASING:							
8.0	48.0	Ry : Dark, grey-green massive rhyolite, numerous carbonate-limonite-hematite seams, major seam at (20° to the core axis) at 40.0 - 41.5'.							
48.0	141.5	Ry : Lighter colored massive chloritic (less than above), slightly fragmental rhyolite.							
		56.3 - 61.0' - carbonate rich zone, disseminated chalco-pyrite (Cu: 0. % /4.6').	7235	56.3	60.9	4.6	0.15		
		61.0 - 61.7 - specks of chalcopyrite increase in number (Cu: 2.5% /0.7').	7236	60.9	61.7	0.8	0.80		
			7237	61.7	62.5	0.8	0.14		
		61.7 - 62.5, 63.1 - 63.4 - disseminated chalcopyrite (Cu: 0.25% / 1.6').	7238	62.5	63.4	0.9	0.22		
		62.5 - 63.1 - specks of chalcopyrite (Cu: 0.5% /0.6').							
		63.4 - 63.5 - massive chalcopyrite vein (ground core) (Cu: 2.5% / 1').	7239	63.4	63.9	0.5	0.66		
		(probably thicker) at about 60° to the core axis.	7240	63.9	65.0	1.1	0.03		

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 783

Sheet No. 2 of [illegible]

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
48.0	141.5	CONTINUED:							
		73.7 - 73.9 - speck of pyrite and trace of chalcopyrite							
		75.2 - 76.2 - carbonate-breccia zone, contacts	7241	75.0	76.2	1.2	0.17		
		indistinct disseminated chalcopyrite (Cu: 1% / 1'),							
		abundant magnetite.							
		78.0 - 102.5 - carbonate-chlorite breccia, (20° to the							
		core axis on top and 45° to the core axis at bottom).							
		106.1 - One tiny speck of chalcopyrite (Cu: 0.25%/1')							
		109.0 - 113.2 - breccia zone, chloritic fragments	7242	109.0	113.2	4.2	0.29		
		generally large (1/4 - 1/2") in a white carbonate							
		matrix. Upper contact at 45° lower contact a seam							
		rich in chlorite at about 20° to the core axis.							
		abundant magnetite, disseminated chalcopyrite (Cu:							
		0.8% / 4.2'). Contact indistinct.							
141.5	175.0	Rf : Light colored, greenish tint, massive rhyolite with a							
		few dark fragmentals, abundant thin chloritic veinlets							
		criss cross the portion							
		143.0 - 144.0 - carbonate-chlorite seam at about 20°	7243	143.	144.	1.0	0.37		
		to the core axis, disseminated chalcopyrite and pyrite							
		(Cu: 0.5% / 1').							
175.0		END OF HOLE.							

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started December 2nd, 1968. Purpose To check below value in 783, Empire No. 4 Zone. Hole No. 784

Completed December 4th, 1968. Depth 208' Sheet No. 1 of 3

Twp. Claim Group Zone

Lat. 45,947.12 N 4 + 00S. of P.B.L. Dep. 47,008.18 E 27 + 00 W. Az. 140° Elev. Dips Collar -70°, at 200' -60°

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
0.0	6.0	CASING:							
6.0	45.7	Ryt : Dark, grey-green rhyolite, generally massive, slightly fragmental (fragments very small), quite rich in carbonate. Contact gradational.							
45.7	54.6	Rbxt : Light, grey-green rhyolite fragmental, quite chloritic but chloritic matter concentrated in veinlets. Contact gradational.							
54.6	55.9	Carbonate-chlorite breccia, barren. Contact gradational.							
55.9	60.0	Ry : Dark, grey-green massive rhyolite, chloritic. Contact gradational.							
60.0	83.5	Ry : Light (not as light as Rf) colored, grey-green massive rhyolite, quite chloritic.							
83.5	90.0	Ry : Dark, grey-green, massive rhyolite-							
		83.5 - 84.5 :- carbonate-hematite-magnetite seam,	7248	83.5	84.5	1.0'	1.08		
		disseminated chalcopyrite (Cu: 1.0% /1').	7249	85.5	86.5	1.0	0.08		
		86.5 - 87.5 :- disseminated chalcopyrite and specks of chalcopyrite (Cu: 3% / 1')/	7250	86.5	87.5	1.0	0.71		

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 784

Sheet No. 2 of 3

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
83.5	90.0	CONTINUED: 87.5 - 89.5 :- seams of chalcopyrite (1/4 - 1/2" at 45°	7251	87.5	89.5	2.0	3.71		
		to the core axis), specks of chalcopyrite and pyrite	7252	89.5	90.5	1.0	0.18		
		(Cpy:py = 60:40), in a carbonate chlorite rich zone							
		(Est. 5%/ 2'). Contact gradational,							
90.0	98.8	Ry : Light colored massive, same as 60.0 - 83.5' portion.							
		Contact gradational.							
98.8	124.0	Ry : Dark, 112.6 - 112.8 - carbonate-magnetite seam (at 45°							
		to the core axis), disseminated chalcopyrite (Cu: 0.5%							
		across 0.2').							
		117.4 - 118.5 - carbonate-chlorite seam, disseminated							
		chalcopyrite (Cu: 0.25% / 1.1').							
		120.4 - 123.2 - carbonate-chlorite seam (1/4-1/2" thick)	7253	120.4	123.2	2.8	1.19		
		at about 20° to the core axis, disseminated and patches							
		of chalcopyrite (Cu: 1% / 2.8'). Contact not very							
		sharp at about 45° to the core axis, part of the contact							
		zone occupied by carbonate.							
124.0	153.5	RyT : Light colored, grey-green rhyolite, slightly fragmental							
		numerous chlorite-filled cracks (no regular pattern).							

TPC

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 784

Sheet No. 3 **of** 3

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
124.0	153.5	CONTINUED: 142.5 - 145.5 - carbonate-chlorite seam, parallel to the core axis, disseminated and patches of chalcopyrite and pyrite (1:1) (Cu: 1%/3'). 150.2 - 151.7 - carbonate-chlorite seam (at about 20° to the core axis, disseminated chalcopyrite and some pyrite (Cu: 0.5% / 1.5'). Contact not very sharp at about 45° to the core axis.	7254	142.5	145.5	3.0	0.88		
153.5	208.0	Rf : Creamy, greenish massive to slightly fragmental rhyolite. 185.5 - 188.5 - carbonate-chlorite seam, disseminated chalcopyrite and pyrite (Cu: 0.5% / 3'). 192.3 - 193.5 - 1/4" thick, chlorite seam (at about 20° to the core axis, disseminated pyrite.							
208.0		END OF HOLE.							

TPC

DIAMOND DRILL RECORD — COPPERFIELDS MINING CORP. LTD.

Started December 6th, 1968. Purpose To check Empire #4 Zone. Hole No. 786

Completed December 7th, 1968. Depth 249.5' Sheet No. 1 of 2

Twp. Claim Group Zone

Lat. 45,917.95 N 3 + 85S of P.B.L. Dep. 44,972.45 E 27 + 50 W. Az. 140° Elev. 2255.84 Dips Collar -45°, at 243' -44°.

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
0.0	10.0	CASING:							
10.0	82.5	Ry: Locally chlorite, unmineralized.							
		31.0 - 32.0 - fault breccia, 80° (?) to core axis,							
		ankerite, local minor chalcopyrite < 0.2% Cu. at 38'							
		strong fault, parallel to core axis, calcite and slicken-							
		sides.							
		at 38.5, 4" wedge of mineralized breccia, est. 1% Cu.							
		43.0 - 51.5 - strong ankerite breccia zone, locally well	7266	43.0	45.0	2.0	0.31		
		mineralized with chalcopyrite; est. 1% Cu. / 8.5'	7267	45.0	47.0	2.0	5.28	) 4.71 / 3.0'	
			7268	47.0	48.0	1.0	3.58	)	
			7269	48.0	50.0	2.0	0.56	) 0.80 / 3.5'	
			7270	50.0	51.5	1.5	0.99	)	
82.5	120.7	Rf : Typical, with strong open fault and calcite, 40° to the							
		core axis.							
		90.0 - 92.0 - blebby ankerite veining, 10% Pyrite							
		at 120.5 strong ankerite fault, 40° to the core axis.							

TPC

Drilled by Logged by

DIAMOND DRILL RECORD — TEMAGAMI MINING CO. LTD.

Hole No. 786

Sheet No. 2 of 2

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FOOTAGE FROM	FOOTAGE TO	WIDTH	ASSAYS % CU	ASSAYS % NI	ASSAYS % CO
120.7	122.0	DYKE : D, type - pale buff, finely fragmental appearance, 70° to core axis.							
122.0	150.0	Rf : Same as 82.5 - 120.7 143.2 - 148.4 - carbonate seam, discontinuous (1/4" thick) parallel to core axis. Contact gradational.							
150.0	155.0	Rfbxt : Dark grey-green, rhyolite fragmental, but matrix generally lighter grey-green than normal Rbxt. Contact gradational.							
155.0	189.0	Rfbx : Grey-green, rhyolite breccia, dark fragments in a light grey-green groundmass. 171.0 - 171.5 - disseminated chalcopyrite (Cu: 0.25% / 6") Contact sharp but irregular.							
189.0	192.0	Carbonate-chlorite breccia, trace of chalcopyrite and pyrite.							
192.0	218.0	Rfbxt : Light grey-green, rhyolite fragmental. 208.4 - 208.5 - carbonate seam (solid carbonate-siderite) at 80° to the core axis. 212.5 - 212.8 - pyrite in chlorite veinlet (at 20° to the core axis). Contact gradational.							
218.0	249.5	Rbx : Dark, grey-green rhyolite breccia, trace of chalcopyrite in chlorite seam associated with carbonate seams at 247.5-248.5.							
249.5		END OF HOLE.							

COPPERFIELDS MINING CORPORATION LIMITED

PLAN OF 400-FOOT LEVEL

Showing location of diamond drill holes
Re. Mining Lease 14712, Twp. of Phyllis

Scale: 1 inch = 100 feet

Dec. 28, 1972

Mining Lease 11446
Mining Lease 14712

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CORPORATE MINING INFORMATION LIMITED

PLAN OF 825-FOOT LEVEL

Showing location of diamond drill holes
Re. Mining Lease [illegible], Twp. of [illegible]

Scale: 1 in. = 100 feet

Dec. 28, 1970

Mining Lease 11846
Mining Act, 1971

Section 23+00 W

D.D.H. W.T. 27

FOR

EVO'RE EXPLORATIONS

BY

Geophysical Engineering & Surveys Limited

SCALE

1 INCH = 100 FEET

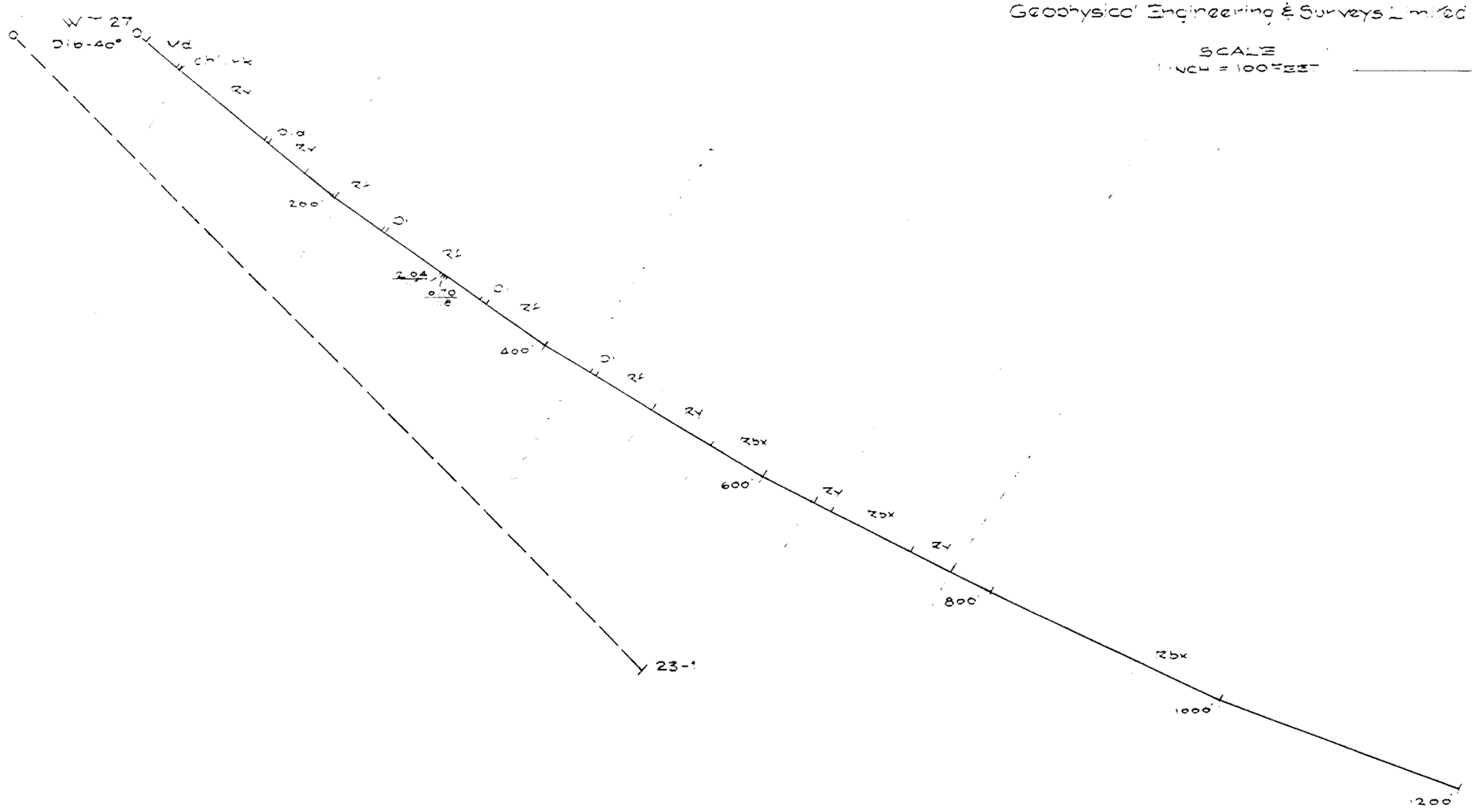
P.B.L.

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DWG. 2394

4'-1-16

Cross Section

OF

D.D.H. P.B. 9

FOR

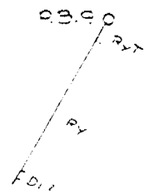
EMPIRE EXPLORATIONS

BY

Geophysical Engineering & Surveys Limited

SCALE

1 INCH = 100 FEET



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DWG. 2386

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Cross Section

OF

D.D.H. P.B. 8

FOR

EMPIRE EXPLORATIONS

BY

Geophysical Engineering & Surveys Limited

SCALE

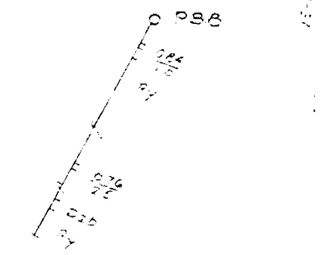
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D.WG. 2385

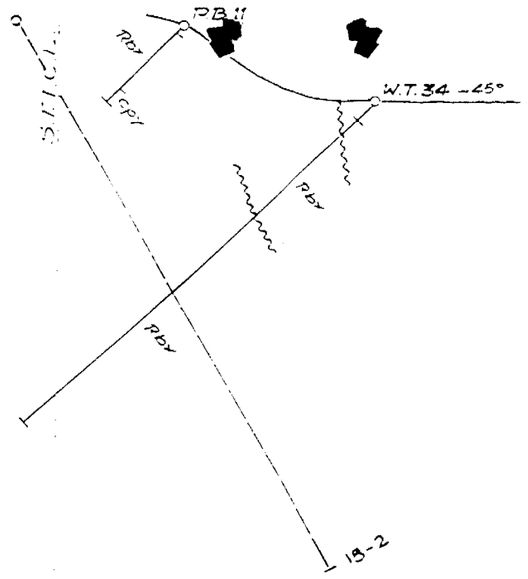
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Section 18+00 W

D.D.H's W.T. 34 & P.B.11

FOR

EMPIRE EXPLORATIONS

BY

Geophysical Engineering & Surveys Limited

SCALE

1 INCH = 100 FEET

DWG. 2210

4-1-16

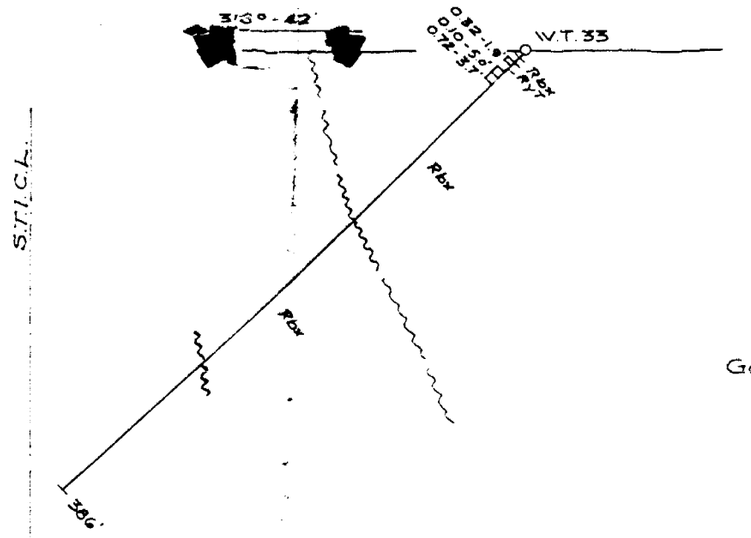
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Section 17+00 W

D.D.H. W.T. 33

FOR

EMPIRE EXPLORATIONS

BY

Geophysical Engineering & Surveys Limited

SCALE

1 INCH = 100 FEET

DWG. 2209

41-1-16

DWG. 1916 63.2999

RESISTIVITY SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE 1 INCH = 100 FEET

0 100 200 300

Phillips Bay

717 716 718 715 714 725 332 329 331 330

TEMAGAMI ISLAND

Phillips Bay Base Line

Note:

Values shown thus: 600 are apparent average resistivities in 100 log $_{10}$ ohm-cms.

Reference Dwgs:
Dwgs 1852 to 1858 incl. - Grid Perimeter Survey
Dwgs 1911 to 1919 incl. - Resistivity Survey
Dwgs 1854 to 1857 incl. - Geology
For Geology and D.D.H. plan see Dwg 1934

Drawn by [illegible] DATE Jan 31st 1964 JOB 911 DWG 1916

200

63.2999

RESISTIVITY SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 100 FEET

0 100 200 300

Note:
Values shown thus: 560 are apparent
average resistivities in 100 log ohm-cms.

Reference Dwgs
Dwgs. 1142 to 1173 incl. - Self-Potential Survey.
Dwgs. 1210, 1218, 1219 - Resistivity Survey.
Dwgs. 1224 to 1227 incl. - Geology.
For Geology and Plan plan see Dwg. 1247.

803

804

805

806

Phillips Bay

BOUNDARY BETWEEN PHILLIPS BAY PROJECT AND TEMAGAMI MINES CO. LTD.

Base Line

Electrode

TEMAGAMI ISLAND

Note.
See insert on Dwg. 1251
for continuation of Grid.

Drawn by
Checked

Dwg. No. 1250

DWG 1918 * 63.2999

RESISTIVITY SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS

PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 100 FEET

0 100 200 300

Temagami Lake

TEMAGAMI ISLAND

Phillips Bay Base Line

Note:
Values shown thus: $\log_{10}$ are apparent average resistivities in 100 $\log_{10}$ ohm-cms.

Reference Dwgs.
Dwgs. 1910 to 1913 incl. - Self-potential Survey
Dwgs. 1914, 1917, 1919 - Resistivity Survey
Dwgs. 1915 to 1917 incl. - Geology
For Geology and D.D.H. plan see Dwg. 1947

220

TEMAGAMI ISLAND

Temagami Lake

Insert
See Dwg 1917

Note:
Values shown thus: $\frac{G64}{20^{\circ}}$ are apparent average resistivities in 100 log$_{10}$ ohm-cms

Reference Dwgs.
Dwgs 1110 to 1123 incl. - Self Potential
Dwgs 1010 to 1018 incl. - Resistivity Survey
Dwgs 1124 to 1127 incl. - Geology
For Geology and D.D.H. plans see Dwg 1349

RESISTIVITY SURVEY
OF PART OF
PHILLIPS BAY PROJECT
TEMAGAMI ISLAND
TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO
FOR
EMPIRE EXPLORATIONS
BY
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 100 FEET

DATE	REVISION	BY
June 1966	Addition DD11's 608, 610 & 611	W.D.

Drawn by: GLW
Checked: W.D.
N.T.S. 41 1/16 | JULY 1964 | JOB 511 | DWG. 1919

63 2999

41116NE9644 63.2999 PHILLIS

SELF-POTENTIAL SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 100 FEET

0 100 200 300

Phillips Bay

Phillips Bay Base Line

TEMAGAMI ISLAND

717 716 718 715 714 332 329 330 331 725

L 18+1248
Phillips Bay Base Line

Notes:
Values shown thus: 1⁰⁰ are negative self-potentials in millivolts.

Contours shown thus: —100— at 25 millivolt interval.

Reference Dwgs:
Dwgs. 1916-1919 incl. Resistivity Survey
Dwgs. 1921-1923 incl. Self-Potential Survey
Dwgs. 1924-1927 incl. Geology
For Geology and DDH plan see Dwg. 1247.

41119080944 03.2999 PHILLIS
240

DATE	REVISION	BY
July 1962	Addition of Detail Self-Potential Survey Lines 18+00W to 24+00W 6400 N.	RLM

SELF-POTENTIAL SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 100 FEET

0 100' 200' 300'

Note:
Values shown thus: +100 / -100 are negative self-potentials in millivolts.

Contours shown thus: ——100—— at 25 millivolt interval.

Reference Dwgs.
Dwgs. 1916 - 1919 incl. Resistivity Survey.
Dwgs. 1920, 1922, 1923 - Self-Potential Survey
Dwgs. 1924 - 1927 incl. - Geology
For Geology and D.D.H. plan see Dwg. 1947

DETAIL
See below
Scale: 1 inch = 10 feet

804

805

806

Phillips

Bay

Base Line

TEMAGAMI ISLAND

7+00N Phillips Bay Base Line

411156E844 63.2959 PHYLL/8
250

DWG 1922 63.2999

SELF-POTENTIAL SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS

PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 100 FEET

0 100 200 400

L 24+22.70 N
Phillips Bay Base Line

Temagami

Lake

TEMAGAMI

ISLAND

Note:
(-) sign shown thus: -100 are negative Self-Potentials in millivolts.
Contours shown thus: ——100—— at 25 millivolt interval.

References (Dwgs):
Dwgs 1916-1918 incl.-Resistivity Survey
Dwgs 1920,-1921,1928-Self-Potential Survey
Dwgs 1924-1927 incl.-Geology
For Geology and DDH plan see Dwg 1924.

Drawn by MLH | Checked HC | H.T.S. 41 1/6 | JULY 1961 | JOB 511 | DWG. 1922

41116NE0044 63.2999 PHYLLIS

TEMAGAMI ISLAND

Temagami Lake

W B 35

Phillips Bay Base Line

Insert
See Dwg. 1921

Note:
Values shown thus: |100| are negative self-potentials in millivolts.

Contours shown thus: —100— at 25 millivolt intervals.

Reference Dwgs.
Dwg. 1916 - Resistivity Survey
Dwg. 1917 - Resistivity Survey
Dwg. 1918 - Resistivity Survey
Dwg. 1919 - Resistivity Survey
Dwg. 1920 - VLF and Self-Potential survey
Dwg. 1924 - VLF and Geology
For vicinity and DDH plan see
Dwg. 1749

SELF-POTENTIAL SURVEY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 100 FEET

0 100 200 300

DATE	REVISION	BY
June 1962	Addition D.D.H.'s 609, 610 & 611	

Drawn by: M.M.
Checked: H.G.

H.T.S.	J.A.Y. Proj.	Job File	Dwg. No.
41 I/6			1922

41I1NE0044 63.2999 PHYLLIS

010 1124 63 2999

GEOLOGY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 100 FEET

0 100 200 300

LEGEND

KEWEENAWAN

Db. Olivine diabase (dyke)

HURONIAN

Cgl. Conglomerate

ALGOMAN

D_2 Diorite - altered (dykes)

D_{2b} Diorite - unaltered (dykes)

PRE-ALGOMAN

Md Metadiorite (sill or sheet)

KEEWATIN

Ry Rhyolite

RyT Rhyolite tuff

Rf Rhyolite fragmental - highly silicic autoclast

Rbx 1 Rhyolite breccia - dark fragments

Rbx 2 Rhyolite breccia - light and dark fragments

ABBREVIATIONS

alt.	altered
Born.	Bornite
cb., carb.	carbonatized, carbonate
chl.	chloritized
cpy., cp.	chalcopyrite
f.f.	few fragments
Hem.	Hematite
Mag.	Magnetite
Mal.	Malachite
mt.	matrix
m., mass.	massive
o.b.	overburden
py., pyr.	pyrite
sh., sch.	sheared, schist
sil.	silified, siliceous
Tour.	Tourmaline
Va.	Vein

Phillips Bay Base Line

717 716 718 725 715 714 331 329 330

LEASE 14712

280

GEOLOGY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS

PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 100 FEET

0 100 200 300

Phillips Bay

805

806

Phillips Bay

Base Line

BOUNDARY RELATIONS BAY PROJECT AND TEMAGAMI ISLAND PROJECT

LEASE 11446

LEASE 14712

D2

D2b

Db

Rbx 1

Rbx T

Rf

Rhy

Md

LEGEND

KEWEENAWAN

Db. Olivine diabase (dyke)

HURONIAN

Cgl. Conglomerate

ALGOMAN

D_2 Diorite - altered (dykes)

D_{2b} Diorite - unaltered (dykes)

PRE-ALGOMAN

Md Metadiorite (sill or sheet)

KEEWATIN

Ry Rhyolite

RyT Rhyolite tuff

Rf Rhyolite fragmental - highly silicic autoclast

Rbx 1 Rhyolite breccia - dark fragments

Rbx 2 Rhyolite breccia - light and dark fragments

ABBREVIATIONS

alt.	altered
Born.	Bornite
cb., carb.	carbonatized, carbonate
chl.	chloritized
cpy., cp.	chalcopyrite
f.f.	few fragments
Hem.	Hematite
Mag.	Magnetite
Mal.	Malachite
mt.	matrix
m., mass.	massive
o.b.	overburden
py., pyr.	pyrite
sh., sch.	sheared, schist
sil.	silified, siliceous
Tour.	Tourmaline
Va.	Vein

290

S.R. 2999

GEOLOGY

OF PART OF

PHILLIPS BAY PROJECT

TEMAGAMI ISLAND

TOWNSHIP OF PHYLLIS

PROVINCE OF ONTARIO

FOR

EMPIRE EXPLORATIONS

BY

GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 100 FEET

0 100 200 300

LEGEND

KEWEENAWAN

Db. Olivine diabase (dyke)

HURONIAN

Cgl. Conglomerate

ALGOMAN

D_2 Diorite - altered (dykes)

D_{2b} Diorite - unaltered (dykes)

PRE-ALGOMAN

Md Metadiorite (sill or sheet)

KEEWATIN

Ry Rhyolite

RyT Rhyolite tuff

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ABBREVIATIONS

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Born.	Bornite
cb., carb.	carbonatized, carbonate
chl.	chloritized
cpy., cp.	chalcopyrite
f.f.	few fragments
Hem.	Hematite
Mag.	Magnetite
Mal.	Malachite
mt.	matrix
m., mass.	massive
o.b.	overburden
py., pyr.	pyrite
sh., sch.	sheared, schist
sil.	silified, siliceous
Tour.	Tourmaline
Va.	Vein

Phillips Bay Base Line

Gently rolling Country - Medium Elevation

Very Low Slope

Low Slope

Flat

Flat & High

Steep Slope

Low Hill

Rainy flat - Heavy overburden

41115NE0044 63.2999 PHYLLIS 1 300



LEGEND
KEWEENAWAN
Db. Olivine diabase (dyke)
HURONIAN
Cgl. Conglomerate
ALGOMAN
D2 Diorite - altered (dykes)
D2b Diorite - unaltered (dykes)
PRE-ALGOMAN
Md Metadiorite (sill or sheet)
KEEWATIN
Ry Rhyolite
RyT Rhyolite tuff
Rf Rhyolite fragmental - highly silicic autoclast
Rbx 1 Rhyolite breccia - dark fragments
Rbx 2 Rhyolite breccia - light and dark fragments
ABBREVIATIONS
alt. altered
Born. Bornite
cb., carb. carbonatized, carbonate
chl. chloritized
cpy., cp. chalcopyrite
f.f. few fragments
Hem. Hematite
Mag. Magnetite
Mal. Malachite
mt. matrix
m., mass. massive
o.b. overburden
py., pyr. pyrite
sh., sch. sheared, schist
sil. silified, siliceous
Tour. Tourmaline
Va. Vein
GEOLOGY
PHILLIP BAY PROJECT
ISLAND
OF PHYLLIS
OF ONTARIO
EXPLORATIONS
A1
Med. green, f - med. gr rx
Sm. qtz. eyes, sil. Leucoxene
scattered through out. No
visible mafic minerals
Acid intrusive rx
Flat Heavy Overburden
Flat - Fairly Low
Heavy Overburden
Fairly High & Flat
High & Flat
Fairly Low
Heavy Overburden
Medium Elevation
Low
Low Slope
Steep Slope
Gulley
Flat

DWG. 2225 63.2999

GEOLOGICAL COMPILATION
OF PART OF
PHILLIPS BAY PROJECT
TEMAGAMI ISLAND
TOWNSHIP OF PHYLLIS
PROVINCE OF ONTARIO
FOR
EMPIRE EXPLORATIONS
BY
GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE: 1 INCH = 100 FEET
0 100' 200' 300'

Note:
This map is a compilation of maps Nº's 1924 & 1925

Phillips Bay

LEGEND

KEWEENAWAN
- Db. Olivine diabase (dyke)

HURONIAN
- Cgl. Conglomerate

ALGOMAN
- D_2 Diorite - altered (dykes)
- D_2b Diorite - unaltered (dykes)

PRE-ALGOMAN
- Md Metadiorite (sill or sheet)

KEEWATIN
- Ry Rhyolite
- RyT Rhyolite tuff
- Rf Rhyolite fragmental - highly silicic autoclast
- Rbx 1 Rhyolite breccia - dark fragments
- Rbx 2 Rhyolite breccia - light and dark fragments

805
804
715
714
332
331
330
329
Phillips Bay Base Line
LEASE 14712
LEASE 11448
BETWEEN PHILLIPS BAY PROJECT AND TEMAGAMI MINING CO. LTD.
Boulders
Low ground
High ground
Very Light Overburden
Light Overburden
Heavy Overburden
Outcrop
Creek
Swamp
Trench
Pit
Old Mine Workings
Elevation 1,359 feet above sea level
Elevation 1,005.304 feet below lake level

NTS 41 h/6 NOV. 1961 JOB 511 DWG. 2225

41116NE0044 63.2999 PHYLLIS 320