GEOLOGY OF THE O'CONNOR PROPERTY of COPPERFIELDS MINING CORPORATION LIMITED Township of Strathcona

INTRODUCTION

The O'Connor Property is a group of eleven claims located adjacent to the northeast arm of Lake Temagami, on the eastern shore thereof, in the Township of Strathcona. The Town of Temagami, located on Highway No. 11, lies approximately one mile to the northeast of the property.

Access to the property can be gained by either of two means: a) by water, the property can be reached by boat from the Town of Temagami, by going southwest approximately a mile and a quarter, and b) by land, the property can be reached via the "Temagami Timber Road" which leads directly to the northernmost claims of the group, the "Timber Road" turnoff from Highway No. 11 being situated about 1/2 mile south of the Town of Temagami.

The property is owned by Copperfields Mining Corporation Limited, 11 Adelaide Street West, Toronto 1, Ontario, which organization is submitting this survey as assessment work.

Previous mapping and geological work was done by A. Betmanis and Susan Fostor, whose work was tied into the present survey. The claims upon which the majority of this previous mapping was done are T47113, T47114 and T46998.

The present survey concentrated on the following claims: T53553, T53554, T53555, T55820, T55821 and T54899. Assessment work is being claimed for these claims. The covering dates are from July 20, 1966 to September 5, 1966.

Mr. Louis M. Shaff, who conducted the present survey, is a graduate of the City College of New York, from which institution he received a Bachelor of Science degree in Geology in 1961. Since his graduation, he has been employed as a geologist in various places in Canada.

PREVIOUS WORK

Diamond drilling has been done on the property by:

a) Candela, in 1952, one hole of 155-foot depth
b) Diadem, in 1956, thirteen holes of a total footage of 4,475 feet
c) Geo-Scientific Prospectors, in 1960, four holes of a total footage of 1,317 feet, and
d) Copperfields Mining Corporation Limited, in 1965, one hole, 306 feet deep.

Self-potential and long-wire electro-magnetometer surveys were carried out in 1960 by Geophysical Engineering & Surveys Limited.

Pits and trenches have been excavated in various places and at various times on the property, but no record of names or dates is available.

OVERBURDEN AND FOREST COVER

Overburden consists of humus with little or no sand, gravel, or clay. In many places, the outcrops are covered by moss and a thick mat of intertwined roots.

The forest consists of spruce and pine, with scattered poplar, birch and maple. Of the smaller trees, alder is most prevalent. "Scrub" maple, ferns and hazel make up most of the foliage which masks much of the outcrop, attaining a height of 2 to 3 feet.

PRINCIPAL ROCK TYPES

There are several important rock types on the property. They are:

a) Acid volcanics, rhyolite
b) Metadiorite
c) Basic intrusives: Amphibolite, "Basaltic" dykes
d) Granodiorite
e) Hybrid rocks, associated with intrusion of magma

The first three named rock types are in chronological order. The Hybrid rocks are of various ages, being associated with various ages of intrusion. The granodiorite, however, is of unknown age, relationships could not be determined.

a) Acid volcanics: Fine to medium-grained, with a very low percentage of mafic material. R_1 is predominantly siliceous, fine-grained, and massive. R_2 is sericitic and schistose. R_3 is feldspathic, and is more accurately described as a rhyolite porphyry, the phenocrysts being predominantly feldspathic.

b) Metadiorite: Fine to medium-grained, basic rock, containing leucoxene. M_L is as above, but with an abundance of leucoxene. M_f is metadiorite with a higher percentage of feldspar, and is least common of the three types. Associated with the metadiorite is a chloritic rock; the main importance of this rock is the fact that within it is a concentration of pyrite and other sulphides, formed by the gravimetric separation of heavy minerals within the melt.

c) Basic intrusives: Fine-grained, dark in colour, heavy. Amphibolite: Very massive, heavy, dark greenish grey to black, mostly fine-grained. Ab is a dark, massive, fine-grained rock which is mostly distinguished by the way it weathers to a light grey, rounded outcrop. Where it contains sulphides, much rust is in evidence.

d) Granodiorite: Medium-grained texture overall, it is similar to a porphyry in that it contains large grains of quartz or feldspar in a fine-grained greyish-green groundmass. It is found in the extreme southeast corner of Claim T54899 and its age is unknown.

e) Hybrid rocks: Very fine-grained, occur at contact zone and are either altered rhyolite or chilled metadiorite.

STRUCTURAL GEOLOGY

Little information can be gained from the outcrops, as much of the structure is masked by glaciation. On the north side of the granodiorite, faulting is in evidence by the fact of the extreme changes in relief that cross the linearity of the outcrops. To the south of the metadiorite, this faulting coincides with the lineation and is masked.

Shearing in the rocks along the shoreline in Claims T55820 and T55821 suggest a fault along the bay at N.70°E, but no further evidence exists to substantiate this.

MINERALIZED ZONES

The "pyritic zone" at the base of the metadiorite is the only zone of major importance. In places, over 50 feet wide, it crosses the property for a strike length of about 1/2 mile and continues into adjacent properties.

Small concentrations of pyrite occur in the acid volcanics, but are of little or no economic importance.

Respectfully submitted,

COPPERFIELDS MINING CORPORATION LIMITED

D. McVanh
for Louis M. Shaff

Louis M. Shaff

Toronto, Ontario
October 28, 1966

Strathy Twp. M.596

Briggs Twp. M.428

Riddell Twp. M.578

Law Twp. M.529

THE TOWNSHIP OF

STRATHCONA

DISTRICT OF NIPISSING

TIMISKAMING MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C

NOTES

400' Surface Rights Reservation around all Lakes and Rivers

Sand and gravel in this township reserved until further notice

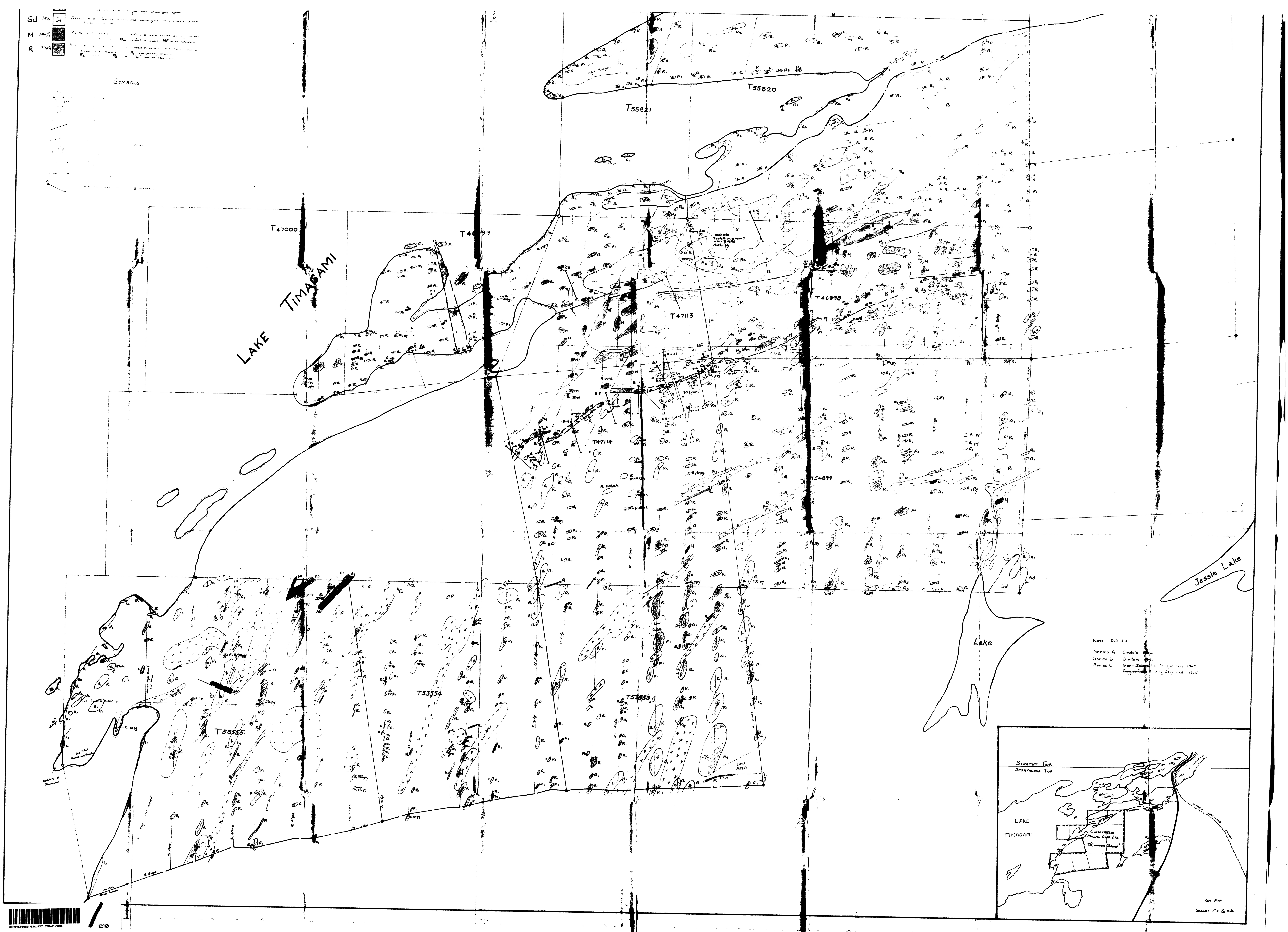
For status of Island in this Twp and summer resort locations shown thus [redacted] please contact Dept of Lands & Forests

Islands In Lake Timagami Not Open for Staking

PLAN NO. M.595

DEPARTMENT OF MINES

— ONTARIO —


Gd 743
M 740½
R 738½
Symbols
LAKE TIMAGAMI
T47000
T46999
T55821
T55820
T47113
T46998
T47114
T54899
T53555
T53554
T53553
Jessie Lake
Lake
Note D.D.H.s
Series A Candela
Series B Diadem
Series C Geo-Scientific Prospectors 1960
Copperfields Mining Corp Ltd 1965
Strathy Twp
Strathcona Twp
LAKE
TIMAGAMI
Copperfields Mining Corp Ltd
"O'Connor Group"
Key Map

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GEOLOGY
of
O'CONNOR PROPERTY
TOWNSHIP of STRATHCONA
PROVINCE of ONTARIO
for
COPPERFIELDS MINING CORPORATION, LTD.
SCALE: 1 INCH = 200 FEET
0
100
200
300
JULY 20, 1966 - SEPT 12, 1966
LEGEND
A 741 AMPHIBOLITE DYKE
Ab: BASIC DYKE, fine to medium-grained
H 737½ HYBRID CONTACT ZONE
C 750 CHLORITIC ROCK,
Cp pyrite zone, concentration of pyrite at base