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REPORT

ON

DIAMOND DRILLING OPAPIMISKAN LAKE PROPERTY KENORA MINING DIVISION (PATRICIA PORTION) ONTARIO FOR

ORACLE RESOURCES LTD.

VOLUME I

PATRICIA MINING DIV GEIVE MIG & 1007 A.M. P.M. 7 8 9 10 11 12 1 2 3 4 5 À

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D.J. Corkery, B.Sc.



TABLE OF CO

Page

1.0	SUMMARY	1
2.0	INTRODUCTION	3
	Figure No. 1 - Property Location and Regional Geology	4
3.0	PROPERTY DESCRIPTION	5
	Figure No. 2 - Claim Sketch	6
4.0	LOCATION, ACCESS AND SERVICES	7
5.0	PHYSIOGRAPHY AND VEGETATION	7
6.0	PREVIOUS WORK	8
7.0	REGIONAL GEOLOGY AND ECONOMIC MINERALIZATION	10
8.0	PROPERTY GEOLOGY	12
	Table 1 - Generalized Stratigraphic Column	14
9.0	SUMMARY OF PROPERTY GEOPHYSICS	18
10.0	DIAMOND DRILLING PROGRAM	19
	10.1 Description of Program	19
	10.2 Discussion of Results	20
11.0	GEOCHEMICAL SOIL SAMPLING	24
	11.1 Description of Program	24
	Table 2 - Assay Highlights	25
	Table 3 - Hole Summaries	27
	11.2 Discussion of Results.	39
12.0	CONCLUSIONS	40
13.0	RECOMMENDATIONS	41
14.0	ESTIMATED COST OF RECOMMENDED PROGRAM	41
15.0	REFERENCES	42

010C

APPENDICES

A	CERTIFICATE OF QUALIFICATIONS	Volume	1
В	REPORT OF WORK	Volume	1
С	DRILL SECTIONS, SURFACE PLAN AND SOIL SURVEY MAPS	Volume	1
D	ASSAY CERTIFICATES	Volume	1
E	SOIL SAMPLE ANALYTICAL CERTIFICATES	Volume	1
F	STATISTICAL ANALYSIS OF SOIL SAMPLES	Volume	1
G	DIAMOND DRILL LOGS	Volume	2

APPENDIX C CONTENTS

DRAWING NO. 1 - SURFACE PLAN - ANTICLINE AREA SHOWING DRILL HOLE LOCATIONS, MAGNETIC CONTOURS AND ASSAY HIGHLIGHTS

DRAWING NO. 2 - DDH SECTION - 8+00NW, DDH NO. OP-86-15DRAWING NO. 3 - DDH SECTION - 9+00NW, DDH NO. OP-86-14,15DRAWING NO. 4 - DDH SECTION - 10+00NW, DDH NO. OP-86-13,21DRAWING NO. 5 - DDH SECTION - 11+00NW, DDH NO. OP-86-11,12DRAWING NO. 6 - DDH SECTION - 12+00NW, DDH NO. OP-86-1,2,8,9,10DRAWING NO. 7 - DDH SECTION - 13+00NW, DDH NO. OP-86-3,4,7DRAWING NO. 8 - DDH SECTION - 14+00NW, DDH NO. OP-86-5,6,17,18,19DRAWING NO. 9 - DDH SECTION - 15+00NW, DDH NO. OP-86-20,22,24OP-87-1DRAWING NO. 10- DDH SECTION - 16+00NW, DDH NO. OP-86-23,25OP-87-2DRAWING NO. 11- DDH SECTION - 17+00NW, DDH NO. OP-86-26,27DRAWING NO. 12- DDH SECTION - 18+00NW, DDH NO. OP-86-26,27DRAWING NO. 13- GEOCHEMICAL SOIL SURVEY (GOLD) DRAWING NO. 14- GEOCHEMICAL SOIL SURVEY (ARSENIC)

.0 SUMMARY

A recently completed 10,467 foot diamond drilling program on the Opapimiskan Lake property of Oracle Resources Ltd. has intersected new significant gold mineralization and tested extensions and continuity of mineralized zones discovered in the 1985 diamond drill program.

The 138 claim property lies in the North Caribou Lake sedimentary-volcano belt 75 miles north-northwest of Pickle Lake, Ontario. It adjoins the Musselwhite property to the south on which reserves of 2.2 millions tons grading 0.24 ounces gold/ton (Snoppy Lake deposit) and 3.2 million tons grading 0.17 ounces gold/ton (original Musselwhite deposit) have been reported.

The property straddles the axis and much of the west limb of a major north-northwesterly trending synform. The core of the synform is occupied by felsic to intermediate volcanics with minor mafic to ultramatic volcanics and clastic and chemical sediments. The flanks are comprised mainly of mafic volcanics. A major iron formation band which hosts the Musselwhite deposits extends onto the Opapimiskan Lake property where it forms a north-northwesterly plunging antiform.

In 1985, a 5,000 foot diamond drilling program intersected excellent gold values in the hinge area and west limb of the main band of the iron formation. In the 1986-87 diamond drill program, twenty holes were drilled to test extensions and the continuity of these mineralized zones. Several gold intersections were encountered. The shape and orientation of the mineralized zones is not fully understood; further drilling is required to delineate the zones. An additional ten (10) holes were drilled into the hinge area of the antiform down-plunge from previous drilling. Numerous significant intersections of gold mineralization were encountered in both the banded iron formation and the overlying garnetiferous sediments on the hinge area and west limb near the hinge area. The best 1986-87 gold intercepts of 1.01 ounces per ton over 4.4 feet and 0.21 ounces per ton over 4.5 feet were encountered in the northwesternmost holes drilled in the northwesterly plunging structure.

Further work (including prospecting) is warranted over anomalous gold and arsenic zones encountered in the humus survey which was carried out concurrently with drilling.

A 5,000 foot diamond drill program is recommended to test down-plunge extensions of mineralization on the hinge area and down-dip extensions of the west limb. The recommended program also includes detailed mapping and prospecting on the original 46 claims; and line cutting, geophysical surveys, geological mapping and prospecting on the 92 unsurveyed claims. The estimated cost of the recommended program is \$386,088.

2.0 INTRODUCTION

Oracle Resources Ltd. has completed a 10,467 foot (3175 m) diamond drilling program, involving thirty (30) boreholes, on its Opapimiskan Lake Property 75 miles (120 km) northnorthwest of Pickle Lake in northwestern Ontario (Fig. No. 1).

This report is a description of the results of the program. Drilling was carried out between September 18, 1986 and January 15, 1987 and was based on the 1985 diamond drilling program described in a separate report (Adams, 1985).

A humus sampling program was conducted over two sections of the property from October 12 to October 19, 1986 to cover geophysical anomalies in potentially favourable areas not tested by diamond drilling.

The property, consisting of a block of 138 unpatented claims, adjoins the Musselwhite property to the south which is owned by a consortium comprised of Dome Explorations, Canadian Nickel Co., Esso Minerals and Lacana Mining Corp. The Musselwhite deposit has reported reserves of 2.2 million tons grading 0.24 ounces of gold/ton (Snoppy Lake) and 3.2 million tons grading 0.17 ounces gold/ton (West Anticline Zone).

Drilling was supervised by Geocanex Ltd. of Toronto and carried out by Langley Drilling Limited of Brampton, Ontario. Personnel involved in the program were:



D.	Corkery	Project Geologist
в.	Elliott	Geologist
L.	Jones	Geologist
s.	Gilbert	Core Splitter
s.	Shikaze	Core Splitter
Ρ.	Davie	Soil Sampler
R.	Koch	Soil Sampler
R.	Lindsey	Soil Sampler
G.	Zuiderveen	Soil Sampler

Cobourg, Ont. Oshawa, Ont. Collingwood, Ont. Pickering, Ont. Scarborough, Ont. Milton, Ont. Barrie, Ont. Thunder Bay, Ont. Windsor, Ont.

3.0 PROPERTY DESCRIPTION

The Opapimiskan Lake property is comprised of 138 contiguous mining claims in the Patricia Mining District of Northwestern Ontario (Fig. No. 2). The claims are recorded on the Ministry of Natural Resources Plan No. M2707, Skinner Lake Area. Claim numbers and dates of record are as follows:

Claim Nos.	No. of Claims	Date of Record
PA 844226 to 844229 PA 844230 to 844261 incl. PA 818016 to 818035 incl. PA 857560 to 857604 incl. PA 836483 to 836500 incl. PA 910797 to 910800 incl. PA 910734 to 910743 incl.	4 32 20 45 18 4 10	July 16, 1985 August 22, 1985 August 27, 1985 August 27, 1985 July 16, 1985 November 27, 1986 November 27, 1986
PA 910719 to 910723 TOTAL	<u> </u>	November 27, 1986

The property is presently subject to a joint venture agreement between Van Horne Gold Exploration Inc. and Oracle Resources Ltd.



- 6 -

4.0 LOCATION, ACCESS AND SERVICES

The property is located in northwestern Ontario (Lat. 52° 41'N, Long. 90° 26'W), 75 miles (120 km) north-northwest of Pickle Lake.

Summer access is best gained by float equipped aircraft to Opapimiskan Lake from air bases at Pickle Lake or Windigo Lake. Winter access is possible via approximately 30 miles of winter road to the Musselwhite deposit on Opapimiskan Lake. The winter road connects with Highway 98, an all-weather gravel road which runs north from Pickle Lake to Highway 599, a paved Windigo Lake. all-weather road, connects Pickle Lake Canadian to the National transcontinental railway line at Savant Lake, 90 miles (145 km) to the south and the Trans-Canada Highway at Ignace, 180 miles (290 km) to the south.

Pickle Lake, a mining and transportation centre with a population of approximately 350, can provide most services and supplies.

5.0 PHYSIOGRAPHY AND VEGETATION

Most of the area is relatively flat woodland with abundant swampy areas. Much of the east half of the property is lowlying and slightly wet. There is a small increase in elevation in the west half, resulting in drier ground. Bedrock exposure is sparse in the east half of the property but moderate in the west. Much of the property is covered by spruce with a mixture of jackpine, poplar and birch in areas of higher ground and alders, tamarack and balsam in low-lying wet sections.

6.0 PREVIOUS WORK

Gold was discovered on the adjacent Dome-Inco-Esso-Lacana property by the Musselwhite brothers in 1962.

Kenpat Mines Ltd. conducted an exploration program over the property in 1962-1963. The survey consisted of a magnetometer survey, geological mapping, trenching and diamond drilling.

In 1973, the Musselwhite brothers formed a grubstake funded by joint venture partners Dome, Inco, Esso and Lacana. Since that time an intermittent program of geophysical and geochemical surveying, prospecting, geological mapping, trenching and diamond drilling led to the discovery of the "West Anticline Zone" in 1980 (R.S. Hall and D.M. Rigg, 1986).

In 1981, 493217 Ontario Ltd. staked a group of 46 claims to cover aeromagnetic anomalies extending northward above the northern boundary of the Musselwhite property. These claims covered the southern third of the current Oracle Resources Opapmiskan property.

- 8 -

In 1982, electromagnetic and magnetic surveys, geological mapping, soil sampling, prospecting and trenching were completed over the 493217 Ontario Ltd. property. A gold value of .09 ounces per ton over 11 feet was returned from a trench in contorted iron formation in the southeastern section of the property. An assay of .06 ounces per ton gold was obtained from a 2 foot wide sulfide zone near the northwestern boundary of the property.

In 1984 Dome et al developed an exploration decline and crosscut into the West Anticline Zone (Hall and Rigg, 1986). This resulted in the delineation of gold deposits containing 3.2 million tons grading 0.17 ounces/ton (Adams, 1985). Since then, surface drilling has located the Snoppy Lake deposit to the east which has reported reserves of 2.2 million tons grading 0.24 ounces of gold per ton.

In 1984, Koala Resources Ltd. optioned the 493217 Ontario Ltd. property and conducted magnetic surveys on lines 200 feet apart (original lines were 400 feet apart) to refine the structure of the iron formation in the southeastern section of the property.

From 1984 to 1986 the Ontario Geological Survey (O.G.S.) conducted a three year integrated geoscience survey of the North Caribou Lake Belt. In 1985 the O.G.S. released maps on electromagnetic and total field magnetic surveys of the North Caribou Lake Belt.

In 1985, Van Horne Gold Exploration Ltd. acquired the 493217 Ontario Ltd. property and completed a 5,000 foot (12 hole) drilling program. Excellent gold values were encountered in the main iron formation including 42.1 ounces/ton over 0.5 feet, 1.64 ounces/ton over 2.8 feet, 0.312 ounces/ton over 2.6 feet and 0.263 ounces/ton over 1.6 feet.

The discovery of discrepancies in the original staking led to the restaking of the entire block in July and August 1985. The positive results of the drilling program led to the acquisition of additional claims to the north and west bringing the total number of claims to 138.

In 1986, Oracle Resources entered a joint venture with Van Horne Gold Exploration Inc. and conducted the current drill program.

7.0 REGIONAL GEOLOGY AND ECONOMIC MINERALIZATION

The Opapimiskan Lake property lies within the North Caribou Lake volcano-sedimentary belt situated within the Sachigo Subprovince. The property straddles a 2.5-mile wide neck in the belt near its southern end. The belt extends approximatley 50 miles to the north and west. Immediately south of the property the belt bifurcates and extends southerly through Libert Lake for 10 miles and east-southeasterly through Neawagank Lake for 30 miles (Fig. No. 1). In the area of the property the belt is comprised of a central band of clastic metasediments and felsic to intermediate volcanics enclosed on the east and west by mafic volcanics with interbedded oxide and silicate facies iron formation. This entire sequence is bounded on the west by granitic intrusives and on the east by migmatite and granite.

Metasediments are mainly quartzites, greywackes and chemical sediments. Chemical sediments are comprised of interbanded magnetite, chert and mafic tuff, and range from 10 to 100 meters in width. Sulphides occur in sparce concentrations and consist of pyrite, pyrrhotite and arsenopyrite. Gold is associated with the sulphides (Andrews et al, 1981).

Metamorphic grades in the belt range from upper greenschist to middle amphibolite facies.

Structurally the metavolcanic-metasedimentary sequence appears to have been folded into an isoclinal syncline which strikes slightly west of north. The axis of the syncline apparently coincides with the central metasedimentary band. South of the property where the belt bifurcates, minor but intense parasitic folding is evident in the iron formation, indicating a north-northwesterly plunge at 30° to 50° (Thurston et al, 1979).

Economically, gold is the most important metal in the Weagamow-North Caribou belt. Gold mineralization at the Musselwhite deposit is stratabound and occurs on the crest and one limb of a complexly folded band of oxide facies iron formation. The iron formation is structurally overlain by a thick unit of pelitic metasedimentary rocks and underlain by ultramafic rocks. Gold is believed to have been introduced during the second of three phases of deformation. Best gold mineralization is reported to occur in areas of intense magnetite-destructive alteration to grunerite. Gold mineralization occurs as a) "subvertically dipping, auriferous quartz-pyrrhotite veinlets and lenses" and b) "stratabound zones of disseminated qold mineralization" (Hall and Rigg, 1986).

8.0 PROPERTY GEOLOGY

The property is underlain mainly by mafic volcanics with local ultramafics, sediments, felsic volcanics and oxide facies iron formation. Minor lamprophyre dikes, subconcordant to concordant quartz-feldspar porphyry dikes and at least one large diabase dike intrude these units. All units have been metamorphosed to grades from upper green schist to lower amphibolite facies.

Structurally, the property is dominated by a large northnorthwesterly trending synform, the core of which is occupied by felsic to intermediate volcanics with minor mafic and ultramafic volcanics as well as clastic and chemical sediments. The core is flanked to the east and west by mafic volanics with minor felsic interbeds. At least two bands of banded oxide facies iron formation occur in the central core area. The synform is complicated by the presence of a smaller north-northwesterly plunging antiform on the western limb of the synform. The antiform is expressed on the property as the nose of a large open fold, the west limb of which has been traced south of the property to the Snoppy Lake and Musselwhite deposits. The northwesterly plunge of this structure has resulted in the iron formation marker beds being thrown into a large tight Z fold.

The antiform contains two bands of iron formation. The thicker outer band has been thrown into a series of parasitic folds on both limbs. Drilling indicates a fold axis which plunges shallowly to the north (20-25°) and a north-northwesterly trending axial plane that dips to the west.

A generalized stratigraphy of the central part of the belt is shown in Table 1. The antiform is cored by mafic volcanics that are cut by a series of quartz, calcite and quartz-calcite veins. The mafics are overlain by the thinner lower band of iron formation. This is overlain by ultramafic volcanics with some mafic to ultramafic zones. The ultramafics are in turn overlain by the main band of iron formation that grades into a pelitic sedimentary unit. This is overlain by mixed felsic volcanoclastics, and mafic volcanics which form the core of the synform.

Rock types on the property are described as follows:

TABLE 1

GENERALIZED STRATIGRAPHIC COLUMN

Proterozoic

Diabase Dikes Lamprophyre Dikes

Archean

Clastic Sediments and Volcanics

- 1) Arkosic quartzite, rhyolite to dacite flows and tuffs
- 2) Mafic volcanics

Garnetiferous Sediments with Chert-Magnetite Interbeds

Chemical Sediments - upper or main band iron formation

Ultramafic-Mafic Volcanics (and Intrusives?)

Mafic Volcanics

MAFIC VOLCANICS

The mafic volcanics that core the antiform are predominantly basaltic but contain minor andesitic beds. They are medium to dark green to black, generally massive flows with few tuffaceous units. Rocks are comprised of actinolitetremolite and chlorite with occasional biotite, particularly in tuffaceous horizons.

The mafic volcanic unit above the pelitic sediments is dark green, fine grained, massive and consists essentially of hornblende, actinolite and plagioclase with minor quartz.

LOWER IRON FORMATION

This unit has only been observed in drill core. The iron formation is predominantly oxide facies with some minor sulphide-rich zones. Oxide facies sections are composed of iron-rich bands from a few tenths to one inch thick, interbedded with bands of recrystallized chert. The dark grey iron-rich bands consist of magnetite and grunerite cores with grunerite rims. The unit is interbedded with chlorite schist and narrow bands of mafic volcanics.

ULTRAMAFIC VOLCANICS

These rocks have been identified on the property only in drill core. The main ultramafic unit lies below the upper or main band of iron formation. There are a number of the ultramafic units, however, that occur within both the main iron formation and the pelitic sediments. The rocks are fine to very fine grained, weakly foliated and pale grey-green with few intervals of dark green mottling. The mineralogy is dominated by tremolite-serpentine with local zones of talc-serpentine schist <u>+</u> carbonate <u>+</u> phlogopite and up to 5% very fine grained disseminated magnetite. Near the contact with the upper or main iron formation band the ultramafic unit generally becomes strongly foliated due to the development of abundant oriented phlogopite crystals. The unit is generally uniform in colour but a few intervals contain abundant dark green ovoid clots of serpentine.

UPPER IRON FORMATION

This unit is exposed in three outcrops on surface and was intersected numerous times in drilling. The band is variable in composition but is generally similar to the lower band. The significant difference between this and the lower unit is the common occurrence of thin interbeds of pelitic sediments in the upper unit. In several drill holes, upper intervals of the main band display weak alteration to grunerite and consist dominantly of magnetite and chert laminae. Pyrrhotite, averaging between trace and 1.0% with locally higher concentrations, occurs as disseminations and blebs within magnetite bands and as fracture fillings with quartz and calcite. Trace pyrite with local higher concentrations occur as fracture fillings and in veinlets. Several zones contain trace arsenopyrite with a few narrow intervals containing up to 0.5%. Drilling has intersected intervals interpreted as sulphide facies iron formation comprised of laminated chert and pyrrhotite. Although interpreted as an original sedimentary feature, the pyrrhotite laminae are possibly the result of sulphidation.

PELITIC SEDIMENTS

The upper or main iron formation band grades into a unit of pelitic sediments. The unit is comprised dominantly of biotite and pink garnet poikiloblasts with varying amounts of quartz and grunerite. Thin interbeds of recrystallized chert and chert-magnetite comprising up to 50% of the rock occur particularly near the contact with the upper or main iron formation. Locally, the unit has abundant relict staurolite and hornblende-rich, garnet-deficient bands.

ARKOSIC QUARTZITES

These rocks have not been intersected in drill holes. This unit does, however, appear to be younger than the garnet biotite schist unit and has been mapped in bedrock in the core area of the syncline (Hodge, 1982). They are fine grained, strongly foliated, brownish grey with equal amounts of guartz and grey feldspar, and minor brown biotite.

FELSIC VOLCANICS

These are found to occur in minor amounts both in mafic volcanics throughout the property and in the pelitic sediments near the synclinal axis. Occasional narrow bands of siliceous, cherty tuff occur as interbeds within the mafic flows. White weathering rhyolitic rocks with the mafic volcanics have been interpreted as tuffaceous bands and/or dikes. These are most common in the western half of the property. Bands of felsic tuff comprised of quartzsericite <u>+</u> biotite <u>+</u> feldspar <u>+</u> hornblende were encountered stratigraphically above the pelitic sediments and as interbeds near the top of the sedimentary unit.

LAMPROPHYRE DIKES

Several fine to very fine grained black porphyritic lamprophyre dikes were encountered in drilling.

DIABASE

A large medium to coarse grained diabase dike outcrops south of the small pond immediately north of the antiform. The magnetic signature of the dike indicates it is subconcordant and trends slightly west of the north-northwest trend of the synclinal axis.

9.0 SUMMARY OF PROPERTY GEOPHYSICS

Electromagnetic and magnetic surveys have been conducted over the property (Gillick, 1982 and Burton, 1984). On the western portion of the property is a system of coincident, north-south trending electromagnetic and magnetic anomalies. A broad zone of iron formation which appears to have an en echelon form, suggest possible fracturing, faulting and drag folding. In the southeastern portion of the property, anomalies represent the northern continuation of the main, highly contorted iron formation which hosts the Musselwhite and Snoppy Lake deposits. The iron formation is actually two complexly folded bands of iron formation with a west dipping axial plane and gentle north-northwest plunge.

The magnetic survey was conducted concurrently with the drilling program on a small grid (100 foot spacings) cut for the drill project. No significant changes were indicated from the earlier surveys.

10.0 DIAMOND DRILLING PROGRAM

10.1 Description of Program

The drilling program was carried out by Langley Drilling Ltd. under the supervision of Geocanex Ltd. A total of 10,467 feet was drilled in thirty (30) holes (B.Q. size). Drilling was carried out from September 18, 1986 to December 15, 1986 and from January 10, 1987 to January 15, 1987. Casing was left in all holes.

Drill core was logged, split and stored on site. All iron formation and clastic sediments were sampled. In all other units, zones and features considered favourable for gold mineralization were sampled. These include quartz, calcite and sulphide mineralization, shearing and alteration. Samples were shipped to Couchenour Fire Assaying Ltd. in Couchenour, Ontario where they were fire assayed for gold. The base line established for the 1985 drill program was extended to 19+00NW at a bearing of N41°W. Two point seven miles of line were cut over the iron formation in the southeast section of the property at a bearing of N49°E with 100 foot spacings. Bore holes were drilled at azimuths of 049° or 129°.

All holes were drilled to intersect the iron formation in the southeast section of the property. Twenty (20) holes were drilled on the east and west limbs to test for extensions and continuity of mineralized zones encountered during the 1985 drilling. Ten (10) holes were drilled to intersect the iron formation at the axial plane of the antiform.

10.2 Discussion of Results

Drawing No. 1 (scale 1" = 100 feet) is a compilation showing assay highlights, surface projections of drill holes and magnetic contours for the 1985 and 1986-87 drill programs in the area of the antiform in the southeast corner of the property (Appendix C). Table II is a summary of assay highlights for the 1986-87 program. Table III contains a short summary for each hole. Diamond drill logs are compiled in Appendix ^G and drill sections may be found in Appendix C. Twenty (20) holes were drilled to test zones of significant gold mineralization in the apex and west limb zone encountered in holes drilled in the 1985 diamond drill program.

Hole OP-85-7 tested the eastern half of the fold apex (13+25NW). Three significantly mineralized zones were encountered yielding high gold assays of 42.1 ounce/ton over 0.5 feet, 0.08 ounces/ton over 3.3 feet, 0.043 ounces/ton over 15.0 feet and 0.046 ounces/ton over 5.0 feet. Holes OP-86-1, 2, 3, 4, 17 and 19 were drilled to test these Hole OP-86-2 yielded two gold assays of 0.08 zones. ounces/ton over 5.0 feet and 5 assays of 0.06 ounces/ton over 5.4, 5.0, 4.0 and 1.0 feet. Hole OP-86-3 yielded high gold assays of 0.06 ounces/ton over 5.0 feet and 0.05 ounces/ton over 5.0 feet. Hole OP-86-19 yielded an assay of 0.07 ounces/ton gold over 5.0 feet. Numerous intersections assayed over 0.01 ounces of gold per ton.

In 1985, hole OP-85-8 was drilled in the west limb and intersected gold values of 1.64 ounces/ton over 2.8 feet and 0.072 ounces/ton over 4.4 feet. Holes OP-86-5, 6, 7, 8, 9 were drilled to test this anomalous mineralization. Hole OP-86-6 encountered gold intersections assayed at 0.09 ounces/ton over 3.2 feet and 0.14 ounces/ton over 4.5 feet. Hole OP-86-7 intersected mineralization assayed at 0.16 ounces/ton gold over 3.0 feet. Hole OP-85-9 was also drilled to test the west limb of the antiform through a probable parasitic fold. Abundant gold mineralization was encountered including intersections assayed at 0.263 ounces/ton over 1.6 feet, 0.086 ounces/ton over 1.5 feet and 0.312 ounces/ton over 2.6 feet. Holes OP-86-10, 11, 12, 13, 14 were drilled to test this mineralization. OP-86-11 yielded a zone assayed at 0.06 ounces/ton gold over 5.0 feet.

Hole OP-85-6 was drilled to test the east limb in a zone of parasitic folding. It yielded numerous intercepts of significant gold mineralization including 0.102 ounces/ton over 3.9 feet and 0.105 ounces/ton over 3.9 feet. Holes OP-86-15, 16 and 21 were drilled to test this mineralization. OP-86-21 intersected a zone assayed at 0.16 ounces/ton over 5.0 feet.

Hole OP-86-18 was drilled to complete a fence between OP-86-5 and OP-86-19 as well as to further test high gold intersections encountered near the apex in holes OP-85-5, 7 and 8. No significant gold zones were encountered.

Ten (10) holes were drilled into the hinge zone to intersect the main iron formation at the axial plane of the antiform. The holes were OP-86-20, 22 to 28 and OP-87-1 and 2. Nineteen (19) samples yielded gold values equal to or above 0.05 ounces/ton, while 9 samples yielded assays equal to or above 0.10 ounces/ton. The highest gold intersections were 1.01 ounces/ton over 4.4 feet (OP-87-2) and 0.21 ounces/ton over 2.7 feet (OP-87-28). Of those samples yielding values of 0.10 ounces/ton gold or better, seven were in banded iron formation. Although the shape and orientation of the mineralized zones is not fully understood, three possible zones are indicated. The first is roughly parallel to the axial plane in the west limb. The zone includes gold assays of 1.01 ounces/ton over 5.0 feet (OP-87-2) and 0.21 ounces/ton over 4.5 feet and (OP-86-28).

The second zone is subparallel to the axial plane within the apex of the antiform. In this zone, hole OP-86-23 yielded intersections which assayed 0.21 ounces of gold/ton across 2.7 feet and 0.17 ounces of gold/ton across 5.0 feet. Hole OP-86-20 encountered a gold intersection which assayed 0.17 ounces/ton across 2.0 feet. OP-86-26 yielded an intersection of 0.11 ounces/ton gold across 5.0 feet.

The third zone appears as a cluster in the west limb near the apex. The cluster includes gold intersections assayed at 0.16 ounces/ton across 1.0 feet (OP-87-2), 0.14 ounces/ ton across 1.6 feet (OP-86-22), 0.12 ounces/ton across 2.7 feet (OP-87-2). It also includes intersections in hole OP-87-24 assayed at 0.96 ounces/ton gold over 3.6 feet and 0.45 ounces/ton gold over 1.4 feet (both rechecked at trace).

As mentioned, the shape and orientation of mineralized zones is not fully understood. However, computer modelling may help to clarify this. Two samples in Hole OP-86-24 which initially yielded gold assays of 0.96 ounces per ton and 0.46 ounces per ton were reassayed (pulps) and returned assays of trace. Possible explanations for this are the occurrence of gold in discrete grains or laboratory error.

In the 1986-87 drill program, 69% of gold intersections of 0.05 ounces per ton gold or greater were encountered in banded iron formation, 23% in garnetiferous sediments and 8% ultramafic or ultramafic to mafic volcanics.

The higher gold intersections in the banded iron formation generally had low sulphide content (typically 0.5-2% pyrrhotite and trace to 1% pyrite.). Sulphides most commonly occurred as wisps, veinlets or stringers with iron-rich bands or in quartz-calcite veins. Grunerite is a common alteration product of the mineralized banded iron formation.

11.0 GEOCHEMICAL SOIL SAMPLING

11.1 Description of Program

A humus sampling program was conducted over 2 sections of the Opapimiskan Lake property concurrent with the drilling program. Sampling was carried out over geophysical anomalies in both the west and east sections of the property and included the antiform containing the main iron formation in the southeast corner.

TABLE II

SUMMARY	OF	SIGNIFICANT	1986-19	87 I	DIAMOND	DRILLING	RESULTS	
		OPAPIN	ISKAN L	AKE	PROPERI	Y		

Hole No.	From	To	Interval	Au(oz./ton)	Rock Type
OP-86-1 OP-86-2	NSV 102.1 521.1 639.8 622.2 700.0	103.1 525.5 645.2 672.2 705.0	1.0 4.0 5.4 10.0 5.0	0.06 0.06 0.06 0.07 0.08	UMM UMM BIF BIF BIF
OP-86-3 OP-86-4 OP-86-5	795.5 125.0 252.6 NSV	800.5 130.0 257.6	5.0 5.0 5.0	0.06 0.05 0.06	BIF BIF BIF
OP-86-7 OP-86-8-10	33.1 51.9 126.7 NSV	36.3 56.4 129.7	3.2 4.5 3.0	0.09 0.14 0.16	GM GM BIF
OP-86-11 OP-86-12	56.8 NSV	61.8	5.0	0.06	GM
OP-86-13-18 OP-86-19 OP-86-20 OP-86-21 OP-86-22	NSV 47.3 77.5 117.4 254.0 80.8 229.0	52.3 82.0 119.4 259.0 83.4 234.0	5.0 4.5 2.0 5.0 2.6 5.0	$\begin{array}{r} 0.07 \\ 0.06 \\ 0.17 \\ \hline 0.16 \\ \hline 0.15 \\ \hline 0.06 \\ 0.07 \end{array}$	BIF BIF GM BIF BIF BIF
OP-86-23 Including Including	244.0 308.0 (308.0 (318.0 337.1	249.0 320.7 313.0 320.7 338.6	12.7 5.0 2.7 1.5	$ \begin{array}{r} 0.07 \\ 0.11 \\ \overline{0.17} \\ 0.21 \\ \overline{0.06} \end{array} $	BIF BIF) BIF) BIF) BIF
OP-86-24	43.0 237.0 244.8	47.0 240.6 246.2	4.0 3.6 1.4	0.08 0.96 (check tr <u>0.46</u> (check tr	BIF BIF cace) UM cace)
OP-86-25 OP-86-26	194.0 NSV	199.0	5.0	0.09	BIF

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TABLE II (Continued)

SUMMARY OF SIGNIFICANT 1986-1987 DIAMOND DRILLING RESULTS -OPAPIMISKAN LAKE PROPERTY

Hole No.	From	To	Interval	Au(oz./ton)	Rock Type
OP-86-27 OP-86-29	247.0 78.5 127.0	352.0 83.0 129.0	5.0 4.5 2.0	$\frac{0.11}{0.21}$ 0.05	BIF GM GM
OP-87-1 OP-87-2	66.0 63.6 167.0 172.7 214.3 320.3	71.0 68.0 169.7 173.7 215.3 324.3	5.0 4.4 2.7 1.0 1.0 4.0	$ \begin{array}{r} 0.06 \\ 1.01 \\ 0.06 \\ 0.12 \\ \hline 0.16 \\ 0.08 \\ \end{array} $	GM GM BIF BIF BIF BIF

UMM = ultramafic to mafic volcanics BIF = banded oxide facies iron formation GM = garnetiferous metasediments
UM = ultramafic volcanics
NSV = no significant values

Gold values underlined are greater than 0.10 oz. Au/ton.

TABLE III HOLE SUMMARIES

	1	1	1	As	say High	lights	1
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
OP-86-1	12+10NW, 1+00SW	428	Banded iron formation (65%) and ultramafic volcanic with two lamprophyre dikes and garnet- biotite schist near end of hole. Iron formation is weak to highly contorted with sulphides concentrated in contortions. Minor brecciation and shearing.				
OP-86-2	12+10NW 2+00SW	818	Ultramafic to mafic volcanics (57%), banded iron formation (38%), pelitic sediments (5%)	102.1 to 103.1	1.0	•06	calcite filled fractures in volcanics.
			and one lamprophyre dike. Volcanics dominate the upper half of hole while iron formation dominates the lower	521.2 to 525.2	4.0	•06	quartz veins in iron formation, 5-7% sulphides.
			is often contorted and contains sulphides. Abundant quartz and calcite <u>+</u> sulphides veinlets.	639.8 to 645.2	5.4	•06	iron formation with .05-1.0% sulphides.
				662.2 to 667.2	5.0	•08	contorted iron formation, 2-5% sulphides.
				667.2 to 672.2	5.0	•06	same as above.
				700.0 to 705.0	5.0	•08	contorted iron formation, 3-5% pyrrhotite.
				795.5 to 800.5	5.0	•05	pelitic sedi- ments, trace - 0.5% sulphides.

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	, ,			As	say High	lights		
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description	<u> </u>
0P-86-3	13+00NW, 2+48NE	378	Banded iron formation (66%), mafic to ultramafic volcanics (30%) and garnetiferous sedi- ments (13%) and two lamprophyre dikes. Common contorted banding in iron formation with increased sulphides. Minor brecciation and shearing	125.0 to 257.6 252.6 to 257.6	5.0 5.0	•06 •06	iron formation 0.5-1.0% pyrrhotite. iron formation 0.5-1.0% pyrrhotite.	
0P-86-4	13+04NW, 2+00SW	526	Ultramafic to mafic volcanics (67%) and banded iron formation (32%) with minor greywacke and one lamprophyre dike. Weak to minor band contortions in iron formations. Minor brecciation					- 28 -
0P-86-5	14+00NW, 5+00SW	259	Banded iron formation (40%), ultramafic volcanics (35%) and garnetiferous sediments (25%). Iron formation often contorted with few zones of pyrrhotite and pyrite as wisps and blebs.					

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	1 1		1	As	say High	lights	1	
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description	
OP-86-6	14+00NW, 6+01SW	305	Interbedded banded iron formation and clastic sediments with ultra- mafics volcanics (15%). Few zones of increased sulphides.	33.1 to 36.3	3.2	•09	garnetiferous sediment, trace pyrite.	
			veinlets.	51.9 TO 56.4	4.5	•14	garnetiferous sediment, trace - 0.5% pyrrhotite.	
OP-86-7	13+04NW, 6+00SW	339	Banded iron formation, garnet- iferous sediments, mafic and ultramafic volcanics and one lamprophyre dike. Low to moderately contorted bands. Common boudinaging. Many quartz, calcite <u>+</u> sulphide sediments.	126.7 to 129.7	3.0	.16	iron formation 0.5-1.0% pyrrhotite trace pyrite.	- 29 -
OP-86-8	12+00NW, 4+98SW	297	Ultramafic volcanics (66%) with banded iron formation (31.1%) and 1/2 - 1 foot interbeds of siltstone and mudstone. Iron formation banding often contorted with increased sulphide. Minor brecciation and abundant quartz and calcite veinlets.					

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Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description	
0P-86-9	12+01NW, 4+98SW	199	Dominated by ultramafic volcanics (78%) with banded iron formation. 4.1 foot zone of silicified volcanics with 7-10% pyrrhotite. One iron formation contains 6-7% sulphide in fractures and veinlets.					
0P-86-10	12+00NW, 9+00SW	339	Garnetiferous metasediment (35%), banded iron formation (30%) with mafic and ultramafic and felsic volcanics, argillaceous quartzite, and one lamprophyre dike.					
0P-86-11	11+03NW, 8+98SW	289	Banded iron formation (40%) and garnetiferous sediment (40%) with ultramafic to felsic volcanics and one lamprophyre dike.	56.8 to 61.8	5.0	.06	garnetiferous sediment 10-15% stauro- lite, trace pyrite.	
0P-86-12	11+00NW, 10+00SW	335	Band iron formation (40%), garnetiferous sediment (40%) with ultramafic to intermediate volcanics.					

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Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
0P-86-13	10+00NW, 9+95SW	299	Banded iron formation (45%), garnetiferous sediment (25%) with ultramafic, mafic to intermediate and felsic volcanics.				
0P-86-14	9+00NW. 8+99SW	269	Ultramafic to mafic volcanics (55%), banded iron formation (32%), garnetiferous sediments, mafic to intermediate volcanics, two lamprophyre dikes and a shear zone in mafic to ultramafic volcanic with 5% pyrite and 1% pyrrhotite.				- 31 -
0P-86-15	8+00NW, 1+00NE	309	Ultramafic volcanics (70%), banded iron formation (12%) and garnetiferous sediments (18%). Few highly contorted zones with increased sulphides. Quartz- calcite veining, some with minor tourmaline.				
OP-86-16	9+03NW, 0+97NE	297	Garnetiferous sediments (42%), banded iron formation (21%), ultramafic to mafic volcanics (37%). Contorted banding, abundant quartz, calcite veinlets, minor brecciation.				

	1	Length (feet)	1	Assay Highlights			
Drill Hole Number	Grid Location		Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
0P-86-17	13+99NW, 2+00NE	249	Banded iron formation (72%), garnetiferous sediments (19%), ultramafic to mafic volcanics (9%) and one lamprophyre dike. Folding and banding contortions with increased sulphides, minor shearing and brecciations. Quartz, calcite and sulphide veinlets.				
OP-86-18	14+00NW, 2+99SW	298	Ultramafic volcanics (56%), banded iron formation (38%), with minor garnetiferous sediments and mafic to inter- mediate tuff. Contorted banding, folding, abundant quartz-calcite + feldspar + sulphide. Several veinlets have alteration haloes.				- 32 -
0P-86-19	14+00NW, 0+98SW	249	Dominantly banded iron formation (93%) with minor ultramafic to mafic volcanics and garnetiferous sediments, one lamprophyre dike. Minor shearing, contorted banding and abundant quartz, calcite <u>+</u> sulphide veinlets.	47.3 to 52.3	5.0	.07	iron formation minor shearing, quartz sulphide veinlets.

	1 1		1	Assay Highlights			1
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
0P-86-20	15+00NW, 1+98NE	248	Banded iron formation (60%), garnetiferous sediments (27%), mafic volcanics (12%) with one lamprophyre dike. Abundant quartz veinlets. Folding and minor brecciation.	117.4 to 119.4	2.0	.17	irregular quartz veining with 0.5 - 1% pyrrho- tite in iron formation.
0P-86-21	10+03NW, 0+97NE	298	Garnetiferous sediments (47%), banded iron formation (29%) with ultramafic to mafic and mafic to intermediate volcanics. Folding, contorted banding, many quartz and calcite veinlets.	254.0 to 259.0	5.0	.16	garnetiferous sediment abundant chert bands, trace ເ sulphides. ຜູ
0P-86-22	15+02NW, 1+04SW	279	Banded iron formation (76%), garnetiferous sediment (22%) with minor mafic flow and one lampro- phyre dike. Folded, contorted bands. Boudinaged chert bands. Sulphides occur as stringers and disseminations.	80.8 to 83.4	2.6	.14	narrow bands with 1-2% pyrite in iron formation.
				229.0 to 234.0	5.0	•06	iron formation with trace - 0.5% pyrite as stringers and disseminations.
				244.0 to 249.0	5.0	.07	same as above.
		1	Assay Highlights				1
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Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
0P-86-23	16+03NW, 1+53SW	348	Banded iron formation (57%), garnetiferous sediments (38%) and minor ultramafic and mafic volcanics. Minor folding and brecciation. Many quartz, calcite <u>+</u> sulphide veinlets. Trace disseminated arsenopyrite.	308.0 to 313.0 318.0 to 320.7	5.0 2.7	.17	iron formation with narrow pyrrhotite stringers. iron formation with quartz veinlets with trace - 0.5% pyrrhotite.
				337.1 to 338.6	1.5	•06	quartz vein in ၊ iron formation. မူ
OP-86-24	14+99NW, 3+00SW278Banded iron formation (65%), ultramafic volcanics (27%) with minor garnetiferous sediments. Folding, contorted bands, minor brecciation. Abundant calcited quartz + sulphide veinlets. Sulphide also as stringers.	H+99NW, 278 Banded iron formation (65%), Ultramafic volcanics (27%) with minor garnetiferous sediments. Folding, contorted bands, minor brecciation. Abundant calcite, quartz + sulphide veinlets. Sulphide also as stringers	43.0 to 47.0	4 . N	.08	calcite vein- lets, trace pyrite, epi- dotic fracture in lean iron formation.	
		Surpride anso as scringers.	237.0 to 240.6	3.6	.96 (rerun trace)	iron formation, 0.5 - 1% sulphide, few quartz veinlets.	
				244.8 to 246.2	1.4	.46 (rerun trace)	1/4" calcite- hematite vein- let in ultra- mafic volcanics.

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	1	1	1	Assay Highlights			
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
0P - 86 - 25	15+93NW, 2+98NE	347	Banded iron formation (45%), garnetiferous sediments (32%) with ultramafic volcanics and minor argillite and one lampro- phyre dike. Folding, quartz veins. Many pyrrhotite wisps and stringers in iron formation. Few zones of increased pyrite in iron formation.	194.0 to 199.0	5.0	.09	iron formation contorted banding, .5-3% pyrite.
0P-86-26	17+00NW, 1+02SW	298	Garnetiferous sediments (38%), banded iron formation (32%), ultramafic volcanics (22%) with minor mafic volcanics and argillite. Shearing, weak to moderately contorted banding, many fine pyrrhotite stringers.				
OP-86-27	17+00NW, 2+98NE	397	Banded iron formation (47%), garnetiferous sediments (38%) with minor mafic and ultramafic volcanics and one lamprophyre dike. Contorted band, minor brecciation, many fine pyrrhotite and pyrite wisps.	347.0 to 352.0	5.0	.11	trace pyrite and pyrrhotite in iron formation.

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	1	I	Assay Highlights					
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description	
0P-86-28	18+00NW, 2+39SW	496	Banded iron formation (40%), garnetiferous sediment (44%), mafic volcanics, minor ultramafic volcanics and one lamprophyre. Moderately contorted, minor shearing. Many quartz, calcite + pyrrhotite veinlets. Sulphide (dominantly pyrrhotite) as wisps and stringers and narrow bands.	78.5 to 83.0 127.0 to 129.0	4.5 2.0	.21	garnetiferous sediment, 0.5 - 1% sulphide, quartz-calcite veinlets with alteration. garnetiferous	
							sediment, quartz, quartz- calcite vein- lets with 2 - 4% pyrite.	- 36 -
0P-87-1	15+00NW, 3+97SW	498	Ultramafic to mafic volcanics (55%), banded iron formation (20%), garnetiferous sediment (15%), a possible ultramafic intrusive. 6.0 feet possible sulphide facies iron formation (or replacement). 3.5 feet of brecciated, calcite infilled, and chloritized iron formation. Many quartz, calcite <u>+</u> sulphide veinlets.	66.0 to 71.0	5.0	.06	garnetiferous sediments, trace sulphide, few calcite filled fractures.	

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	1		Assay Highlights				ł
Drill Hole Number	Grid Location	Length (feet)	Summary Description	Intersection (feet)	Width (feet)	oz. Au/ ton	Description
0P-87-2	15+99NW, 2+50SW	498	Banded iron formation (36%), garnetiferous sediment (24%) <u>+</u> units of possible sulphide facies iron formation, chert beds (or replacement), 45 feet of possible ultramatic intrusive.	63.6 to 68.0	4.4	1.01	garnetiferous sediment, well banded, 20-25% quartz bands, trace sulphides.
		minor mafic volcanics and one lamprophyre dike. Brecciation, contorted zones with increased sulphides, many quartz <u>+</u> calcite <u>+</u> sulphide facies.	167.0 to 169.7	2.7	•06	iron formation, 0.5-1% pyrrho- tite and pyrite.	
			172.7 to 173.7	1.0	.12	7-10% pyrrho- tite and pyrite in contorted zone in iron formation.	
				214.3 to 215.3	1.0	.16	quartz vein with 3-5% pyrite and pyrrhotite at contacts in iron formation.
				320.3 to 324.3	4.0	•08	iron formation with 0.5-1.0% pyrrhotite.

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The sampling in the west end covered magnetic anomalies which indicate possible fracturing, faulting and drag folding of an iron formation. The second section sampled straddled the synclinal axis. The sampling here covered the antiformal structure containing the gold bearing iron formation.

of 753 samples were analyzed. A total Samples were collected at 100 foot intervals along picket lines. Mull samples were taken in areas where it was not possible to Samples were collected with a grub hoe at obtain humus. depths ranging up to 0.6 m and placed in gussetted wetstrength kraft sample bags. Soil sample cards were used to record sample type, depth, colour, relief, drainage, slope direction, sample composition, vegetation and contamination. Samples were dried and sent to Bondar-Clegg & Co. Ltd. of Ottawa, where they were sieved to minus 100 mesh, briquetted and shrink-wrapped, then analyzed for gold (1 ppb detection instrumental neutron activation limit) by analysis (I.N.A.A.).

The results are shown on the Geochemical Soil Survey Maps (Drawings No. 1, 2). Laboratory reports listing the analytical results are compiled in Appendix E. Frequency histograms and statistical determinations, including standard deviation, mean, median and kurtosis for both arithmetic and logarithmic distributions were prepared by Bondar-Clegg & Co. Ltd. for all 753 samples. These data are shown in Appendix F.

The highest I.N.A.A. determination for gold from the humus samples was 21 ppb (Line 12N/37+00W) and for arsenic, 173.0 ppm (Line 24N/49+00E).

11.2 Discussion of Results

Drawings No. 13 and 14 are contoured maps of gold and arsenic values obtained from the geochemical soil survey. The gold values from humus sampling were generally low with no distinctive pattern of high values despite the known presence of gold mineralization in bedrock. A spot high of 21 ppb occurs at Ll2N,37+00W. A low but well defined zone occurs in the northwest corner of the western segment (including 7 ppb at L40N,37+00W and 5 ppb at L44N,36+00W) which parallels the geology and is 400 down ice of a known gold showing (1,852 ppb over 2.0 feet). OP-85-12 encountered anomalous gold values below the showing. A minor zone of slightly elevated values (3 to 5 ppb) occurs 50-150 feet west of multiple magnetic highs which possibly represent bands of iron formation (L16N,10W and L24N,31W). In 1982, soil sampling encountered an anomaly of 80 ppb between these magnetic highs.

Anomalous arsenic values were obtained from several localities. Although these typically were in swampy areas, not all swampy areas yielded anomalous arsenic. A zone of slightly elevated arsenic values occurs between the trench in the northwest corner and the low but well defined gold zone previously described. As with the gold, the zone is parallel to the geology and is down ice from the trench (16 ppm at L40N,35+00W; 18 ppm at L44W,34+00W.

An anomalous zone yielding 71.6 ppm at L4N,39+00W, and 105 ppm at L8N,38+00W is not associated with anomalous gold.

Anomalous gold and arsenic values from the humus surveys merit further investigation to determine the source of the metals.

12.0 CONCLUSIONS

Drilling to test several significant gold intersections from holes drilled in the 1985 program has yielded numerous new gold intercepts. The structure of the antiform is now fairly well understood, however, the controls on the distribution of gold mineralization in the structure is not and will require further drilling.

Several areas of gold mineralization occur in the hinge area and adjacent west limb of the antiform, down plunge from the 1985 drilling. The best 1986-87 gold intercepts of 1.01 ounces per ton over 4.4 feet and 0.21 ounces per ton over 4.5 feet were encountered in the northwesternmost holes drilled in the northwesterly plunging structure.

In addition to diamond drilling in the antiform area further work including prospecting is warranted over anomalous gold and arsenic zones encountered in the humus sampling survey.

13.0 RECOMMENDATIONS

A 5,000 foot diamond drill program is recommended to test down-plunge extensions in the hinge area as well as down-dip extensions of intersections on the west limb near the hinge area. Linecutting, geophysical surveys, geological mapping and prospecting on the 92 claims in the northern part of the property, not covered by previous surveys, are also recommended. Detailed mapping and prospecting is also recommended on the original 46 claims.

14.0 ESTIMATED COST OF RECOMMENDED PROGRAM

Linecutting: 92 claims @ \$320/claim	\$	29,440
Geophysics: VLF-EM and magnetometer surveys, 92 claims @ \$375/claim		34,500
Geological mapping and prospecting: 92 claims @ \$350/claim		32,200
Detail mapping and prospecting on original claims: 46 claims @ \$350/claim		16,100
Diamond drilling: B.Q., 5,000 feet @ \$35/foot]	L75,000
Contingencies 20%		57,460
Total	<u>\$</u> 3	344,700

Respectfully submitted,

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Daniel J. Corkery, B.Sc. Geocanex Ltd.

15.0 REFERENCES

- Adams, J.H., 1985. Report of Drilling on the Opapimiskan Lake Property of Van Horne Gold Exploration Inc., O.G.S. Assessment Files, O.M.N.R. Sioux Lookout, Ontario.
- Andrews, A.J., Sharpe, D.R. and Jones, D.A., 1981. Preliminary Reconnaissance of the Weagamow-North Caribou Lake Metavolcanic-Metasedimentary Belt Including the Opapimiskan Lake (Musselwhite) Gold Occurrence, Summary of Field Work, 1981, Ontario Geological Survey, Miscellaneous Paper 132, 435 p.
- Breaks, F.W., Osmani, I.A. and DeKemp, E.A., 1986. Opapimiskan Lake Project: Precambrian Geology of the Opapimiskan-Forester Lakes Area, District of Kenora, Patricia Portion, p. 368-378 in Summary of Field Activities, 1986, Ontario Geological Survey, Miscellaneous Paper 132, 435 p.
- Burton, G., 1984. Report on a Detailed Magnetic Survey, Opapimiskan Property, Pickle Lake Area for Koala Resources Ltd., O.G.S. Assessment Files, O.M.N.R., Sioux Lookout, Ontario.
- Gillick, R., 1982. Report on VLF-EM and Magnetic Surveys, Opapimiskan Lake Area Properties of 493217 Ontario Ltd., O.G.S. Assessment Files, O.M.N.R., Sioux Lookout, Ontario.
 - Hall, R.S. and Rigg, D.M., 1986. Geology of the West Anticline Zone, Musselwhite Prospect, Opapimiskan Lake, Ontario, Canada, in MacDonald, J.M. (ed.), Proceedings of Gold '86 Symposium, Toronto, 1986, p. 124-136.
 - Hodge, H.J., 1982. Report on Geological Mapping, Geological Sampling and Prospecting, Opapimiskan Lake Property of 493217 Ontario Ltd.
 - Thurston, D.C., Sage, R.P. and Siragusa, G.M., 1979. Geology of the Winisk Lake Area, District of Kenora, Patricia Portion, Ontario Geological Survey Report 193.

APPENDIX A

CERTIFICATE OF QUALIFICATIONS

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CERTIFICATE OF QUALIFICATIONS

THIS IS TO CERTIFY THAT:

I am a resident of Cobourg, Ontario.

I am a graduate of Brock University, St. Catharines, Ontario with a Bachelor of Science degree (Geology).

I have worked continuously as an exploration geologist since 1984, in gold exploration in Northwestern Ontario.

I supervised the drilling program on the Opapimiskan Lake property, from September 8, 1986 to January 15, 1987.

The statements contained in this report, and conclusions reached, are based upon the study of all relevant assessment work records of the Ontario Geological Survey, and geological reports and maps published by the Ontario Ministry of Natural Resources.

In this report, I have disclosed all relevant descriptive and interpretive material, which is, to the best of my knowledge, necessary to gain a complete understanding of the viability of the project and the recommendations.

DATED THIS 29 DAY OF June, 1987 Danuel Morhey

D. J. Corkery, B.Sc. Geologist

REPORT OF WORK

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APPENDIX B

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APPENDIX C

DRILL SECTIONS, SURFACE PLAN, SOIL SURVEY MAPS

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ASSAY CERTIFICATES

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APPENDIX D



Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo Or q cle	"Assaying for over 30 Years" Orgcle Resources Ltd. H. J. Hodge.		Date:		
Sample No.	Description	oz/ton Au	oz/ton Ag		
5001	D.D.	Trace			
02		Tr			
03		Tr			
04		Tr			
05		Tr			
06		Tr			
07		Tr			
08		Tr			
09		Tr			
10		Tr			
11		Tr			
12		Tr			
13		Tr			
14		Tr			
15		.01			
16		Trace			
17		.01			
18		.01			
19		Trace			
20		.01			
21		.01			
22		.01			
23		Trace			
24		.01			

Jurbeck. Assayer: _

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ALEX WILSON COLDSTREAM LTD @ 1985



Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

Sample No. Description oziton Au oziton Ag 5025 D.D. Trace	"Assaying f	or over 30 Years" ASSAY CERTIFICATE	Date: <u>0ct.10-86</u>		
5025 D.D. Trace 26 Tr Tr 27 Tr Tr 28 Tr Tr 29 Tr Tr 30 Tr Tr 31 Tr Tr 32 Tr Tr 33 Tr Tr 34 Tr Tr 35 Tr Tr 36 Tr Tr 37 Tr Tr 38 Tr Tr 39 Tr Tr 40 Tr Tr 41 Tr Tr 42 Tr Tr 43 Tr Tr 44 Tr Tr 45 Tr Tr 46 Tr Tr 48 Tr Tr	Sample No.	Description	oz/ton Au	oz/ton Ag	
26 Tr 27 Tr 28 Tr 29 Tr 30 Tr 31 Tr 32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 48 Tr	5025	D.D.	Trace		
27 Tr 28 Tr 29 Tr 30 Tr 31 Tr 32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr	26		Tr		
28 Tr 29 Tr 30 Tr 31 Tr 32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	27		Tr		
29 Tr 30 Tr 31 Tr 32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	28		Tr		
30 Tr 31 Tr 32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	29		Tr		
31 Tr 32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr	30		Tr		
32 Tr 33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	31		Tr		
33 Tr 34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	32		Tr		
34 Tr 35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	33		Tr		
35 Tr 36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	34		Tr		
36 Tr 37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	35		Tr		
37 Tr 38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	36		Tr		
38 Tr 39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	37		Tr		
39 Tr 40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	38		Tr		
40 Tr 41 Tr 42 Tr 43 Tr 44 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	39		Tr		
41 Tr 42 Tr 43 Tr 44 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	40		Tr		
42 Tr 43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	41		Tr		
43 Tr 44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	42		Tr		
44 Tr 45 Tr 46 Tr 47 Tr 48 Tr	43		Tr		
45 Tr 46 Tr 47 Tr 48 Tr	44		Tr		
46 Tr 47 Tr 48 Tr	45		Tr		
47 48 Tr Tr	46		Tr		
48 Tr	47		Tr	·····	
	48		Tr		

Assayer: ______

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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo	Resources Ltd. H. J. Hodge. ASSAY CERTIFICATE	Date: 0ct.10-86		
Sample No.	Description	oz/ton Au	oz/ton Ag	
5049	D.D.	Trace		
50		Tr		
51		Tr		
52		Tr		
53		Tr		
54		Tr		
55		Tr		
56		.01		
57		Trace		
58		Tr		
59		Tr		
60		Tr		
61		Tr		
62		Tr		
63		Tr		
64		Tr		
65		Tr		
66		Tr		
67		Tr		
68		Tr		
69		.01		
70		Trace		
71		Tr		
72		fr		

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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo	Assaying for over 30 Years'' racle Resources Ltd. H. J. Hodge.		Date:			
Sample No.	Description	oz/ton Au	oz/ton Ag			
5073	D.D.	.01				
74		Trace				
75		.02				
76		Trace				
77		.01				
78		Trace				
79		Tr				
80		Tr				
	·					
			······			
<u> </u>						
	Assaver: Lubeck					

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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: ______ 17, 1986

01401			
Sample No.	Description	oz/ton Au	oz/ton Ag
5081	D. D.	Trace	
82		Tr	
83		Tr	
84		.02	
85		Tr	
86		.06	
87		Tr	
88		Tr	
89		T ^K	
90		Tr	
91		Tr	
92		.04	
93		Tr	
94		Tr	
95		Tr	
96		Tr	
97		Tr	
98		Tr	
99		Tr	
5100		Tr	
01		Tr	
02		Tr	
03		.04	
04		.02	

Assayer: _____

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Phone: Bus. 727-222(Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: October 17, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
510C			
	D. D.		
<u> </u>		Tr	
		Tr	
09		Tr	
10		Tr	
11		.02	
12		.06	
13		Tr	
14		Tr	
15		.04	
16		.02	
17		Tr	
18		.02	
19		.02	
20		Tr	
21		.02	
22		Tr	
23		.04	
24		Tr	
25		.02	
26		.02	
27		.02	
28		.02	

Assayer: ___

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: <u>October 17, 1986</u>

Sample No.	Description	oz/ton Au	oz/ton Ag
5129	D. D.	Trace	
30		.02	
31		Tr	
32		.02	
33		Tr	
34		Tr	
35		.06	
3 6		Tr	
37		Tr	
38		.02	
39		.02	
40		.08	
41		.06	-
42		.02	
43		Tr	
44		Tr'	
45		.02	
46		.02	
47		.02	
48		.02	
49		.08	
50		.02	
51		Tr	
52		04	

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COCHENOUR FIRE ASSAYING LTD. Phone: Bus. 727-222(Res. 662-334

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for	over 30 Years''
Oracle	Resources

ASSAY CERTIFICATE

Date: <u>October 17, 1986</u>

Sample No.	Description	oz/ton Au	oz/ton Ag
5153	D. ð.	.02	
54		Trace	
55		.02	
56		Tr	
57		.02	
58		.02	
59		.02	
60		.02	
61		.02	
<u>`</u> 62		.04	
63		.02	
64		.02	
65		.04	
66		.04	
67		Tr	
68		.02	
69		.02	
70		.04	
71		.04	
72		.06	
73		Tr	
74		Tr	
75		Tr	
76		Tr	

Total Assays for October 17, 1986 - 96

Assayer: _____



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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

'Assaying'	for over 3	0 Years''
Oracl	e Reso	urces

ASSAY CERTIFICATE

Date: <u>October 21, 1986</u>

018010			
Sample No.	Description	oz/ton Au	oz/ton Ag
5177	D. D.	Trace	
78		.02	
79		Tr	
80		Tr	
81		.04	
82	•	TR	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		Tr	
90		.03	
91		.02	
92		.05	
93		Tr	
94		Tr	
95		.02	
96		Tr	
97		Tr	
98		.02	
99		Tr	
5200	·	.Tr	

Assayer:

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

Oracle Resources	"Assaying f	or over 30 Years''
	Oracle	Resources

ASSAY CERTIFICATE

Date: <u>October 21, 1986</u>

Sample No.	Description	oz/ton Au	oz/ton Ag
5201	D. D.	Trace	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
80		.02	
09		Tr	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		Tr	
15		Tr	
16		.04	
17		.02	·
18		Tr	
19		Tr	
20		.04	:
21		.06	
22		.04	
23		.04	
24		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: October 21, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5225	D. D.	Trace	
26		Tr	
27		Tr	
28		Tr	
29		. 04	
30	· · · · · · · · · · · · · · · · · · ·	Tr	
31		Tr	
32		Tr	
33		Tr	
34		Tr	
35		Tr	
36		Tr	
37		Tr	
38		Tr	
39		Tr	
40		Tr	
41		Tr	
42		Tr	

Assayer:

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for Oracle 1	over 30 Years" Resources Ltd.	ASSAY CERTIFICATE	Date: <u>Octol</u>	ber 17, 1986
Sample No.		Description	oz/ton Au	oz/ton Ag
5081	D. D.	,,,,,,,,_,,,,,,,,,,,,,,,,	Trace	
82			Tr	
83			Tr	
84			.02	
85			Tr	
86			.06	
87	······································		Tr	
88			Tr	
89			Tr	
90			Tr	
91			Tr	
92			.04	
93			Tr	
94			Tr	
95			Tr	
96			Tr	
97			Tr	
98			Tr	
99			Tr	
5100			Tr	
01			Tr	
02			Tr	
03			. 04	······································
04	•	·	.02	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"As	saying for Oracle	over 30 Years' esource	, S	Ltd.	
			·		

ASSAY CERTIFICATE

Date: <u>0ct. 17, 1986</u>

		<u> </u>	
Sample No.	Description	oz/ton Au	oz/ton Ag
5105	D. D.	Trace	
066		Tr	
07		Tr	
08		Tr	
09		Tr	
10		Tr	
11		.02	
12		.06	
13		Tr	
14		Tr	
15		. 04	
16		.02	
17		Tr	
18		.02	
19		.02	
20		Tr	
21		.02	
22		Tr	
23		. 04	
24		Tr	
25		.02	<u> </u>
26		.02	
27		.02	
28		.02	

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COCHENOUR FIRE ASSAYING LTD.

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for Oracle	over 30 Years" Resources Ltd.	ASSAY CERTIFICATE	Date:0c	tober 17, 1986
Sample No.	Description		oz/ton Au	oz/ton Ag
5129	D. D.		Trace	
30			.02	
31			Tr	
32		<u></u>	.02	
33			TR	
34			TR	
35			.06	
36			Tr	
37			Tr	
38			.02.	
39			.02	
40		· · · · · · · · · · · · · · · · · · ·	.08	
41			.06	
42			.02	
43			Tr	
44			Tr	
45			.02	
465			.02	
47			.02	
48			.02	
49			.08	
50			.02	
51			Tr	
52			. 04	

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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo Oracle	r over 30 Years" Resources Ltd.	ASSAY CERTIFICATE	Date: <u>Octob</u>	er 17, 1986
Sample No.		Description	oz/ton Au	oz/ton Ag
5153	D. D.		. 02	
54			Trace	
55			.02	
56			Tr	
57			.02	
58			.02	
59			.02	
60			.02	
61			.02	
62			.04	
63			.02	
64			.02	
65			.04	
66			.04	
67			Tr	
68			.02	
69			.02	
70			.04	
71			.04	. <u></u>
72			.06	
73			Tr	
74			Tr	
75			Tr	
76			Tr	<u></u>

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Phone: Bus. 727-222(Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources.

ASSAY CERTIFICATE

Date: 0ct.24-86

Sample No.	Description	oz/ton Au	oz/ton Ag
5243	D.D.	Trace	
44		Tr	
45		Tr	
46		Tr	
47		T r	
48		Thr	
49		Tr	
50		Tr	
51	· · · · · · · · · · · · · · · · · · ·	Tr	
52		Tr	
53		Tr	
54		Tr	
55		.01	
56		Trace	
57		Tr	······
58		Tr	
59		Tr	
60		Tr	
61		.02	
62		Trace	
63		Tr	
64		Tr	
65		Tr	
66		Tr	

furbeck. Assayer: _

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle <u>Resources</u>.

ASSAY CERTIFICATE

			·····
Sample No.	Description	oz/ton Au	oz/ton Ag
5267	D.D.	Trace	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		.03	
76		.01	
77		Trace	
78		Tr	
79		Tr	
80		Tr	
81		.02	
82		Trace	
9 3		Tr	
9 4		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		Tr	
90		Tr	

fursick. Assayer: _

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources. **ASSAY CERTIFICATE**

Date: _0ct.24-86

Sample No.	Description	oz/ton Au	oz/ton Ag
5291	D.D.	Trace	
92		Tr	
93		Tr	
94		Tr	
95		Tr	
96		Tr	
97		Tr	
98		.01	
99		Trace	
5300		Tr	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		<u> </u>	
10		Tr	
11		.02	
12		.01	
13		Trace	
14		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources.

ASSAY CERTIFICATE

Date: 0ct.24-86

UIACIE	nesources.		
Sample No.	Description	oz/ton Au	oz/ton Ag
5316	D.D.	Trace	
17		Tr	
18		.01	
19		Trace	
20		Tr	
21		Tr	
22		Tr	
23		Tr	
24		Tr	
25		Tr	
26		Tr	
27		.02	
28		Trace	
29		Tr	
		Tr	
31		Tr	
32		Tr	
33		Tr	
34		<u> </u>	
35		Tr	· · · · · · · · · · · · · · · · · · ·
36		Tr	
37		Tr	
38		Tr	
39		Tr	
40		Trace	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5341	D. D.	Trace	
42		Tr	
43		Tr	
44		.09	
45		Tr	
46		.01	
47		.01	
48		Tr	
49		Tr	
50		Er	
51		. 14	
52		.01	
53		Tr	
54		Tr	
55		Tr	
56		Tr	
57		.01	
58		Tr	
59		Tr	
60		Tr	
61		Tr	
62		Tr	
63		Tr	
64		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

'Assaying for over 30 Years'' Oracle Resources

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5365	D. D.	Trace	
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		TR	
74		Tr	
75		Tr	
76		Tr	
77		Tr	
78		Tr	
79		Tr	
80		Tr	
81		Tr	
82		Tr	······
83		Tr	
84		Tr	
85		Tr	
86		Tr	
, 87		Ψr	
88		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5389	D. D.	Trace	
90		Tr	
91		Tr	
92		Tr	
93		Tr	
94		Tr	
95		Tr	
96		Tr	
97		Tr	
98		Tr	
99		Tr	
5400		Tr	
01		Tr	
02		Tr	
03		.02	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		Tr .	
10		Tr	
11		Tr	
12	·	Tr	

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Phone: Bus. 727-222(Res. 662-334

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5413	D. D.	Trage	
14		Tr	
15		Tr	
16		Tr	
17		Tr	
18		Tr	
19		.02	
20		Tr	
21		Tr	
22		Tr	
23		Tr	
24		.16	
25		.01	
26		Tr	
27		Tr	
28		Tr	
29		Tr	
30		Tr	
31		Tr	
32		Tr	
33		Tr	
34		Tr	
35		Tr	
36		Tr	

wheel Assayer:



Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying	for over	30 Yea	ars"
Oracl	e Res	ourc	es

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5437	D. D.	Trace	
38		Tr	
39		Tr	
40		Tr	
41		Tr	
42		Tr	
43		Tr	
44		Tr	
45		Tr	
46		Tr	
47		Tr	
48		Tr	
49		Tr	
50		Tr	
51		Tr	
52		Tr	
53		Tr	
54		Tr	
55		Tr	
56		Tr	
57		Tr	
58		Tr	
59		Tr	
60		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
5461	D. D.	Trace	
62		Tr	
63		.01	
64		Tr ·	
65		Tr	
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		.01	
75		Tr	
76		Tr	
77		Tr	
78		Tr	
79		Tr	
80		Tr	
81		Tr	
82		Tr	
83		Tr	
84		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 5, 1986

Sample No.	Description	oz/ton Au	
5485	. U.	Trace	
86		Tr	
87		Tr	
88		Tr	
89		Tr	
90		Tr	
91		Tr	
92		Tr	
		Tr	
94		Tr	
95		Tr	
96		Tr	
97		Tr	
98		Tr	
99		Tr	
5500		Tr	
6601		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
	Total assays for November 5, 1986 - 166		

ek. Assayer:



Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources Ltd.

ASSAY CERTIFICATE

Sample No.	Description	oz/ton Au	oz/ton Ag
6607	D. D.	Trace	
08		Tr	
09		Tr	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		Tr	
15		Tr	
16		Tr	
17		Tr	
18		Tr	
19		Tr	·
20		Tr	
21		Tr	
	Total assays for Nov. 13th, 86 15		

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Phone: Bus. 727-222(Res. 662-334

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources		r over 30 Years'' ASSAY CERTIFICATE lesources		Date: <u>November 18, 1986</u>	
Sample No.	D	escription	oz/ton Au	oz/ton Ag	
6622	D. D.		Trace		
23			Tr		
24	<u></u>		Tr		
25			Tr		
26	******		Tr		
27			Tr		
28			Tr		
29			Tr		
30			Tr		
31	·····		Tr		
32			Tr		
33			Tr		
34			Tr		
35		· · · · · · · · · · · · · · · · · · ·	Tr		
36			Tr		
37			Tr		
38			Tr		
39			Tr		
40			Tr		
41			Tr		
42	·		Tr		
43			Tr		
44			Tr		
45			Tr		

bick Assayer:



J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying	for over 30 Years"
Oracle	Resources

ASSAY CERTIFICATE

Date: November 18, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6646	D. D.	Trace	
47		Tr	
48		Tr	
49		Tr	
50		Tr	
51		Tr	
52		Tr	
53		Tr	
54		. 02	
55		Trace	
56		. 02	
57		Trace	
58		Tr	
59		Tr	
60		Tr	
61		. 02	
62		Trace	
63		Tr	
64		Tr	
65		Tr	
66		Tr	
67		.01	
68		. 04	
69		Trace	

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"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 18, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6670	D. D.	Trace	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		Tr	
76		. 04	
77		Tr	
78		Tr	
7 9		Tr	
80		Tr	
81		T r	
82		Tr	
83		Tr	
84		Tr	
85		Tr	
8 6		Tr	
87		Tr	
8 8		Tr	
8 9		Tr	
90		Tr	
91		Tr	
92		Tr	
93		Tr	

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ASSAY CERTIFICATE

Date: November 18, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6694	D. D.	Trace	
95		Tr	
96		.06	
97		Trace	
9 8		Tr	
		Tr	
6700		Tr	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		Tr	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		.03	
15		.03	
16		Trace	
17		. 02	

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ASSAY CERTIFICATE

Date: <u>Nov. 19-86</u>

Sample No.	Description	oz/ton Au	oz/ton Ag
6718	D. D.	. 02	
19		Trace	
20		. 01	
21		Trace	
22		. 02	
23		Trace	
24		. 01	
25		Trace	
26		Tr	
27		Tr	
28		Tr	
29		Tr	
		Tr	
31		Tr	
32		Tr	
33		. 02	
34		Trace	
35		Tr	
36		Tr	
37		Tr	
3 8		Tr	
39		Tr	
40		Tr	
41		Tr	

Total assays for

Jobeck. Assayer:

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo	or over 30 Years' ASSAY CERTIFICATE Resources Ltd.	Dāte: Nov	20th :86
Sample No.	Description	oz/ton Au	oz/ton Ag
6801	D.D.	Trace	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		Tr	
10		Tr	
11		Tr	
12		TR	
13		Tr	
14		Tr	
15		Tr	
16		<u> </u>	
17		Tr	
. 18		Tr	
19		Tr	·
6823		Tr	
6829		Tr	
30		Tr	
31		.02	
32		Trace	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying	for over 30 Yea	rs''
Oracle	Resources	Ltd.

ASSAY CERTIFICATE

Date: <u>Nov.20-86</u>

CIACIC REBUILLES DUA.				
Sample No.	Description	oz/ton Au	oz/ton Ag	
6833	D.D.	Trace		
34		Tr		
35		Tr		
36		Tr		
37		Tr		
38		Tr		
39		Tr		
40		Tr		
41		Tr		
42		Tr		
43		Tr		
44		Tr		
45		Tr		
		Tr		
47		Tr		
48		Tr		
49		Tr		
50		Tr		
51		Tr		
52		Tr		
53		Tr		
54		Tr		
55		Tr		
56		Tr		

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources Ltd. ASSAY CERTIFICATE

Sample No.	Description	oz/ton Au	oz/ton Ag
6857	D.D.	Trace	
58		Tr	١
59		Tr	
60		Tr	
61		Tr	
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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: November 21, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6820	D. D.	Trace	
21		Ťr	
22		Ťr	
1.7 24		Tr	
25		Tr	
26		Tr	
27		Tr	
28		Tr	
6862		.01	
63		.03	
664		.02	
65		Tr	
66		Tr	
67		.01	
68		.01	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		Tr	
76		Tr	
77		X .01	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources **ASSAY CERTIFICATE**

Date: November 21, 1986

		1 .	
	Description		oz/ton Ag
6878	D. D.	Trace	
79		Tr	
80		¶r	
81		Tr	
82		Tr	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		Tr	
90		Tr	
91		Tr	
92		Tr	
	Total assays for November 21, 1986 - 39		
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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

**ASSAY CERTIFICATE** 

Date: November 27, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6742	D. D.	Trace	
43		Ťr	
44		Tr	
45		Tr	
46		Tr	
46		Ťr	
48		Tr	
49		Tr	
50		Tr	
51		Tr	
52		Tr	
53		.01	
54		Tr	
55		.04	
56		.02	
57		Tr	
58		Tr	
59		.01	
60		Tr	
661		.02	
62		Tr	
63		Tr	
64		Tr	
65		Tr	

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ASSAY CERTIFICATE

Date: November 27, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6766	D. D.	Trace	
67		.03	
68		Tr	
69		.02	
70		Tr	
71		Ťr	
72		.01	
73		.01	
74		Tr	-
75		Ťr	
76		.02	
77		.02	
78		Tr	
79		Tr	
80		Tr	
81		Tr	
82		Tr	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		Tr .	

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"Assaying for over 30 Years" Oracle Resources **ASSAY CERTIFICATE** 

Date: November 27, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6790	D. D.	Trace	
91		.01	
92		Tr	
93		.02	
94		Tr	
95		.01	
96		Tr	
97		Tr	
98		Tr	
99		Tr	
6800		Tr	
16601		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		<b>XX</b> .01	
10		Tr	
11		Tr	
12		Tr	
13		ጥ 1	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

**ASSAY CERTIFICATE** 

Date: November 27, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16614	D. D.	Trace	
15		Tr	
16		Tr	
17		.04	
18		Tr	
19		Tr	
20		Tr	
21		Tr	
22		Tr	
23		Tr	
24		Tr	
25		Tr	
26		Tr	
27		.01	
28		.03	
29		Tr	
30		Tr	
31		Tr	
32		.02	
33		Tr	
34		Tr	
35		Tr	
36		Tr	
37		Tr	

Assayer: Jw Beck.

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle <u>Resources</u>

ASSAY CERTIFICATE

Date: November 27, 1986

<u>Uracle R</u>	esources		
Sample No.	Description	oz/ton Au	oz/ton Ag
16638	D. D.	.01	
39		.01	
40		Trace	
41		Tr	
42		Tr	
43		Tr	
44		Tr	
45		Tr	
46		Ťr	
47		Tr	
48		Tr	
49		Tr	-
50		Tr	
51		.01	
		Tr	
53		Tr	
54		Tr	
55		Tr	
56		Tr	
57		Tr	
		Tr	
59		Tr	
60		Tr	
61		Tr	

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**ASSAY CERTIFICATE** 

Date:November 27, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16662	D. D.	Trace	
63		Tr	
64		Tr	
65	NO SAMPLE		
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		.03	
72		.01	
73		Tr	
74		Tr	
75		.01	
76		Tr	
77		Tr	
78		Tr	
79		.01	
	Total assays for November 27, 1986 - 137		
		-	
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**ASSAY CERTIFICATE** 

Date: December 3, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6893	D. D.	Trace	······································
94		Tr .	
95		Tr	<u></u>
96		Tr	
97		Tr	
98		.07	
99	· · · · · · · · · · · · · · · · · · ·	.03	
6900		Tr	
01		Tr	
02		Tr	
03		.01	
04		Tr	
05		.02	
06		Tr	
07		Tr	<u>-</u>
08		Tr	
09		Tr	
10		Tr	
11		.02	
12		Tr	
13		.01	
14		.01	
15		Tr	
16		.01	

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**ASSAY CERTIFICATE** 

Date: December 3, 1986

UIUUUU	ACDOULDED		
Sample No.	Description	oz/ton Au	oz/ton Ag
6917	D. D.	.01	
18		Trace	
19		Tr	
20		.02	
21		Tr	
22		.01	
23		Tr	
24		Tr	
25		Tr	
26		.01	
27		.01	
28		.02	
29		Tr	
30		Tr	
31		Tr	
32		Tr	
33		.01	
34		.02	
35		Tr	
36		Tr	
37		.03	
38		.02	
39		.01	
40		Tr .	

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"Assaying for over 30 Years" Oracle Resources **ASSAY CERTIFICATE** 

Date: December 3, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6941	D. D.	Trace	
42		Tr	
43		Tr	
	Total assays for December 3, 1986 - 51		
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			<b>_</b> _
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"Assaying for over 30 Years" Oracle Resources

**ASSAY CERTIFICATE** 

Date: December 9, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6968	D. D.	Trace	
69		Tr	
70		.01	
71		.01	
72		Tr	
73		Tr	
74		Tr	
75		.01	
76		Tr	
77		Tr	
78		Tr	
79		Tr	
80		.01	
81		.02	
82		Tr	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		.01	<u></u>
89		Tr	
90		Tr	
91		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" ASSAY CERTIFICATE Oracle Resources		Date: <u>Dece</u>	mber 9, 1986	
Sample No.	Description		oz/ton Au	oz/ton Ag
6992	D. D.		.02	
	Total assays for December 9	9, 1986 - 49		
		· · · · · · · · · · · · · · · · · · ·		
			· · · · · · · · · · · · · · · · · · ·	
	· · · · · · · · · · · · · · · · · · ·	<u> </u>		
		······································		

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

**ASSAY CERTIFICATE** 

Date: December 9, 1986

		1	1
Sample No.	Description	oz/ton Au	oz/ton Ag
6944	D. D.	Trace	
45		Tr	
46		Tr	
47		Tr	
48		Tr	
49		Tr	
50		.02	
51		.01	
52		Tr	
53		.01	
54		Tr	
55		Tr	
56		Tr	
57		.01	· · · · · · · · · · · · · · · · · · ·
58		Tr	
59		Tr	
60		Tr	
61		Tr	
62		Tr	
63		Tr	
64		Tr	
65		.01	
66		Tr	
67		Tr	

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"Assaying for over 30 Years" Oracle Resources

**ASSAY CERTIFICATE** 

Date: December 12, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16448	D. D.	Trace	
49		.01	
50		Tr	
51		Tr	
52		Tr	
53		Tr	
54		Tr	
55		Tr	
56		Tr	
57		Tr	
58		Tr	
59		Tr	
60		Tr	
61		Tr	
62		Tr	
63		Tr	
64		Tr	
65		Tr	
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

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ASSAY CERTIFICATE

Date: December 12, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16472	D. D.	Trace	
73		Tr	
74		Tr	
75		Tr	
76		Tr	
77		Tr	
78		Tr	
79		Tr	
80		Tr	
81		Tr	
82		Tr	
83		Tr	
84		Tr	
§5		Tr	
86		.01	
87		Tr	
88		Tr	
89		Tr	
90		Tr	
91		Tr	
92		Tr	
93		Tr	
94		Tr	
95		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for Oracle	"Assaying for over 30 Years" ASSAY CERTIFICATE		"Assaying for over 30 Years"     ASSAY CERTIFICATE     Date: D       Oracle Resources     Date: D		Date: <u>Decer</u>	mber 12, 1986
Sample No.		Description	oz/ton Au	oz/ton Ag		
16496	D. D.		Trace			
97		· · · · · · · · · · · · · · · · · · ·	Tr			
98			Tr			
99			.02			
16500			.02			
01			.02			
02			.02			
03			Tr			
04			Tr			
05			Tr			
06			Tr			
07			Tr			
08			Tr			
09			.02			
10			.02			
			.17			
12			Tr			
13			.21			
14			.01			
15			Tr			
16			Tr			
17			Tr			
18	-	· · · · · · · · · · · · · · · · · · ·	.01			
19			.06	<u> </u>		

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: December 12, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16520	D. D.	Trace	
21		Tr	
16746		Tr	
47		Tr	
48		Tr	
49		Tr	
50		Tr	
51		Tr	
52		Tr	
53		tr	
54		Tr	
55		Tr	
56		Tr	
57		Tr	
58		Tr	
59		Tr	
60		Tr	·
61		Tr	
62		Tr	
63		Tr	
64		Tr	
65		Tr	<u> </u>
66		Tr	
67		TR	

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"Assaying for over 30 Years" Oracle Resources

**ASSAY CERTIFICATE** 

Date: December 12, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16768	D. D.	Trace	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		Tr	
76		Tr	
77		Tr	
78		.01	
79		.02	
80		Tr	
81		Tr	
82		.02	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		.02	
90		.16	
91		Tr	

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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

Date: December 12, 1986 "Assaying for over 30 Years" Oracle Resources **ASSAY CERTIFICATE** Sample No. Description oz/ton Au oz/ton Ag 16792 D. D. Trace 93 Tr 94  $\operatorname{Tr}$ 95 Tr 96  $\mathtt{Tr}$ 97  $\operatorname{Tr}$ 98 TrBotal assays for December 12, 1986 - 127

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"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: Dec 13, 1986.

Sample No.	Description	oz/ton Au	oz/ton Ag
16680	D.D.	Trace	
81		.01	
82		.01	
83		Trace	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		Tr	
90		Tr	·
91		Tr	
92		Tr	
93		Tr	
94		Tr	
95		Tr	
96		Tr	
97		Tr	
98		Tr	
99		Tr	
16700		Tr	
01		Tr	
02		<u></u>	
<u> </u>			

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Phone: Bus. 727-222( Res. 662-334

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Y Oracle Resource	'ears'' 25	ASSAY CERTIFICATE		Date:	
Sample No.	Description		oz/ton Au	oz/ton Ag	
16704 D.	.D.		Trace		
05	<u></u>		Tr		
06			Tr		
07			Tr		
<b>7</b> 08			Tr		
09			Tr		
10			Tr		
11			Tr		
12			Tr		
13			Tr		
14			Tr		
15			.01		
16			Tr		
17			Tr		
18			.02		
19			.01		
20			Trace		
21			Tr		
22			Tr		
23			Tr		
24			Tr		
25			Ψr		
26			ці		
27			1		
		Assayer:	Juls	eel.	
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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

**ASSAY CERTIFICATE** 

"Assaying for over 30 Years" Oracle_Resources Date: _________, 1986.

<u> </u>	Resources		
Sample No.	Description	oz/ton Au	oz/ton Ag
16728	D.D.	Trace	
29		.01	
30		Trace	
31		.01	
32		Trace	
33		Tr	
34		Tr	
35		Tr	
36		Tr	
37		Tr	
38		Tr	
39		Tr	
40		Tr	
41		Tr	
42		Tr	
43		Tr	
44		.03	
45		Trace	
69 <b>93</b>		Tr	
94		Tr	
95		Tr	
96		Tr	
97		Tr	
9 <b>8</b>		Tr	

Jubeck Assayer: _


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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: December 13, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
6999	D. D.	Trace	
7000		Tr	
16401		Tr	
02		Tr	
03		Tr	
04		Tr	
05		.14	
06		.01	
07		.01	
08		Tr	
09		Tr	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		Tr	
15		Tr	
16		Tr	
17		Tr	
18		Tr	
19		Tr	
20		Tr	
21		Tr	
22		Tr	

Assayer: JuBick.

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Phone: Bus. 727-2220 Res. 662-3341

oz/ton Ag

Date: December 13, 1986

oz/ton Au

Trace

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

**ASSAY CERTIFICATE** 

"Assaying for	rover 30 Years'' Resources	
Sample No.		Description
16423	D. D.	
24		
25		

24	Tr	
25	Tr	
26	Tr	
27	Tr	
28	Tr	
29	Tr	
30	Tr	
31	Tr	
32	Tr	
33	Tr	
34	Tr	
35	Tr	
36	.01	
37	.06	
38	.01	
39	Tr	
40	.07	
41	.04	
42	.02	
43	.01	
44455	Tr	
45 <b>5 406x</b>	Tr	
46	Tr	

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"Assaying for over 30 Years" Oracle Resources ASSAY CERTIFICATE

Date: December 13, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16447	D. D.	.02	
15622		Trace	
23		Tr	
24		Tr	
25		Tr	
16779		Tr	
16800		Tr	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		.06	
09		.01	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		Tr	
15		Tr	
16		Tr	
17		.17	

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ASSAY CERTIFICATE

Date: December 13, 1986

<u> </u>	Resources		
Sample No.	Description	oz/ton Au	oz/ton Ag
16818	D. D.	.01	
19		Trace	
20		.02	
21		.01	
22		.02	
23		Tr	
24		Tr	
25		.03	
26		Tr	
27		Tr	
28		Tr	
29		Tr	
30		Tr	
31		Tr	
32		^{'l} r	
33		Tr	
34		Tr	
35		Tr	· · ·
36		ŕr	
37		Tr	
<b>3</b> 8		Tr	
39		Tr	
40	•	Tr	
41		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

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ASSAY CERTIFICATE

Date: December 13, 1986

<u>    Oracle  </u>	Resources	1	11
Sample No.	Description	oz/ton Au	oz/ton Ag
16842	D. D.	Trace	
43		.02	
44		Tr	
45		Tr	
46		Tr	
47		Tr	
48		Tr	
49		.01	
50		Tr	
51		Tr	
52		Tr	
53		.08	
54		Tr	
55		Tr	
56		Tr	
57		Tr	
58		.01	······································
59		Tr	
60		Tr	
61		Tr	
62		Tr	
63		Tr	
64		Tr	
65		Tr	

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**ASSAY CERTIFICATE** 

"Assaying for over 30 Years" Oracle Resources Date: December 13, 1986

		1	I
Sample No.	Description	oz/ton Au	oz/ton Ag
16866	D. D.	Trace	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		.02	
76		.01	
77		Tr	
78		Tr	
79		Tr	
80		Tr	
81		Tr	
82		Tr	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
89		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years"

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Date: December 13. 1986

Uracie	<u>Resources</u>		
Sample No.	Description	oz/ton Au	oz/ton Ag
16890	D. D.	Trace	
91		Tr	
92		Tr	
93		Tr	
94		Tr	
95		•94	
96		.46	
97		Tr	
98		Tr	
99		Tr	
16900		,01	
	Total assays for December 13, 1986 - 226		
165 <b>13</b>	Rerun from December 12, 1986	.23	
94. 			
			_
	Assa	ver: Jose	ch.
		<i>J</i>	······································

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Date: December 17, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16526	D. D.	.01	
27		.01	
28		Trace	
29		Tr	
30		Tr	
31		.02	
32		Tr	
33		Tr	
34		.01	
35		Tr	
36		Tr	
37		.03	
38		Tr	
39		Tr	
40	``````````````````````````````````````	Tr	
41		Tr	
42		Tr	
16552	16543 - 51 One day delay in transport.	Tr	
53		Tr	
54		Tr	
55		Tr	
56		.03	
57		Tr	
58		Tr	

Assayer: Jukeck.



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ASSAY CERTIFICATE

Date: December 17, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16559	D. D.	Trace	
60		Tr	<u></u>
61		Tr	
62		.09	
63		.01	
64		Tr	
65		Tr	
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		.02	
73		Tr	
74		Tr	
75		Tr	
76		.02	
77		Tr	
78		Tr	
79		Tr	
80		.02	
81	•	Tr	
82		Tr	

Assayer: Jou Beck

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ASSAY CERTIFICATE

Date: December 17, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16583	D. D.	Trace	
84		Tr	
85		Tr	
86		Tr	
87		.01	
88		Tr	
8 <b>9</b>		.01	
90		Tr	
91		.01	
92		Tr	
93		Tr	
94		Tr	
95		Tr	
96		Tr	
	Total assays for December 17, 1986 - 62		
	Assaver:	Aurbeen	ļ

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources Date: December 18, 1986 **ASSAY CERTIFICATE** Sample No. Description oz/ton Au oz/ton Ag 16543 D. D. Trace 44 Tr 45  $\operatorname{Tr}$ 46 Tr 47 Tr 48  $\mathbf{Tr}$ 49 Tr50 Tr 51 TrTotal assays for December 18, 1986 - 9 GwBeck. Assayer: _



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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Oracle Resources ASSAY CERTIFICATE

Date: December 24, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
16597	D. D.	Trace	
98		Tr	
99		Tr	
16600		Tr	
19001		.02	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		Tr	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		Tr	
15		Tr	
16		Tr	
17		Tr	
18		Tr	
19		Tr	
20		.02	

Jubeck Assayer: _



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ASSAY CERTIFICATE

Date: December 24, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
19021	D. D.	.01	
22		.02	
23		Trace	
24		Tr	
25		Tr	
26		Tr	
27		Tr	
28		Tr	
29		Tr	
30		.01	
31		.02	
32		,01	
33		Tr	·
34		.01	
35		.01	
36		.02	
37		.02	
38		Tr	
39		Tr	
40		.01	
41		.03	
42		.02	
43		Tr	
44		Tr	

Assayer: ______

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**ASSAY CERTIFICATE** 

Date: <u>December 24, 1986</u>

Sample No.	Description	oz/ton Au	oz/ton Ag
1 <b>9</b> 045	D. D.	Trace	
19046		Tr	
47		Tr	
48		Tr	
49		.03	
50		Tr	
51		Tr	
19079		Tr	
80		Tr	
81		Tr	
82		Tr	
83		.04	
84		Tr	
85		.03	
19134		.04	
35		.04	
36		.03	
37		Tr	
38		Tr	
39		Tr	
40		Tr	
4 <b>1</b>		Tr	
42		Tr	
43		Tr	

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ASSAY CERTIFICATE

Date: December 24, 1986

		i	II
Sample No.	Description	oz/ton Au	oz/ton Ag
19144	D. D.	Trace	
45		Tr	
46		Tr	
47		Tr	
48		Tr	
19182		Tr	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		.21	
89		Tr	
90		Tr	
91		.02	
19200		Tr	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		.04	
07		Tr	
08		Tr	

Assayer: Jubeck

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Oracle Resources	

**ASSAY CERTIFICATE** 

Date: December 24, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
19209	D. D.	Trace	
10		.04	
11		Tr	
12'		Tr	
13		Tr	
14		Tr	
15		.01	
16		.01	
17		Tr	
18		Tr	
19		Tr	· · · · · · · · · · · · · · · · · · ·
20		.01	
21		Tr	
22		Tr	
23		.01	
24		.02	
25		Tr	
26		Tr	
27		.01	
28		.02	
29		Tr	
30		.02	
31		.01	
32		Tr	

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**ASSAY CERTIFICATE** 

Date: December 24, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
19233	D. D.	.01	
34		Trace	
	Total assays for December 24, 1986 - 122		
		_	
-		_	
		_	
		_	
		-	
		_	
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		-	
		-	
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ASSAY CERTIFICATE

Date: December 29, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
19052	D. D.	Trace	
53		Tr	
54		.01	
55		Tr	
56		.01	
57		.01	
58		Tr	
59		Tr	
60		Tr	
61		Tr	
62		Tr	
63		Tr	
64		.01	
65		Tr	
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		Tr	

Assayer: John w Beck.

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"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: December 29, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
19076	D. D.	Trace	
77		Tr	
78		Tr	
19086		Tr	
87		Tr	
88		.01	
89		Tr	
90		Tr	
91		Tr	
92		Tr	
93		Tr	
94		Tr	
95		<u> </u>	
96		Tr	
97		Tr	
98		.01	
99		.01	
19100		Tr	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05	-	.01	
06		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo	r over 30 Years''	ASSAY CERTIFICATE	Date: <u>Dec</u>	ember 29, 1986
Sample No.		Description	oz/ton Au	oz/ton Ag
19107	D. D.		.01	
08			.01	
09			Trace	
10			Tr	
11			Tr	
12			.02	
13			.01	
14			Tr	
15			Tr	
16			.01	
17			Tr	
18			.01	
19			Tr	
20			Tr	
21			Tr	
22			Tr	
23			Tr	
24			Tr	
25			Tr	
26			Tr	
27			Tr	
28			Tr	
29			Tr	
30			Tr	

Assayer: John w Beck



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"Assaying for over 30 Years" **ASSAY CERTIFICATE** Date: December 29, 1986 Oracle Resources Sample No. Description oz/ton Au oz/ton Ag 19131 D.D. Trace .02 32 .01 33 19149 .02 50 .01 51 Tr52 Tr 53 .01 54 Tr 55 Tr  $\mathtt{Tr}$ 56 57 Tr 58  $\operatorname{Tr}$ 59 Tr 60 Tr Tr61 Tr 62 63 Tr 64 .01 65 Tr 66 Tr Tr67 68  $\operatorname{Tr}$ 69 Tr

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"Assaying for over 30 Years" Oracle Resources

ASSAY CERTIFICATE

Date: December 29, 1986

Sample No.	Description	oz/ton Au	oz/ton Ag
19170	D. D.	.01	
71		.11	
72		.01	
73		.02	
74		.03	
75		Trace	
76		Tr	
77		Tr	
78		Tr	
79		Tr	
80		Tr	
81		Tr	
19192		Tr	
93		.02	
94		.02	
95		.01	
96		.02	
97		.02	
98		Tr	
99		.05	
	Total assays for December 29, 1986 - 116		

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for over 30 Years" Geocanex - Oracle Resources - OPAP		Date: <u>Janua</u>	ary 21, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19235	D. D.	Trace	
36		Tr	
37		Tr	
38		Tr	
39		Tr	
40		.01	
41		Tr	
42		.01	
43		.01	
44		.03	
45		.06	
46		.01	
47		.01	
48		Tr	
49		Tr	
50		Tr	
51		.01	
52		Tr	
53		Tr	
54		Tr	
55		Tr	
56		Tr	
57		Tr	
58		Tr	

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"Assaying fo Geocanex	r over 30 Years" ASSAY CERTIFICATE	Date: Janua	ary 21, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19259	D. D.	Trace	
60		Tr	
61		Tr	
62		Tr	
63		Tr	
64		Tr	
65		Tr	
66		Tr	
67		Tr	
68		Tr	
69		Tr	
70		Tr	
71		Tr	
72		Tr	
73		Tr	
74		Tr	
75		Tr	
76		Tr	
77		Tr	
78		Tr	
79		Tr	
80		Tr	
81	•	Tr	
82 XXX		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo Geocanes	or over 30 Years" ASSAY CERTIFICATE C - Oracle Resources - OPAP	Date: _Janu	ary 21, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19283	D. D.	Trace	
84		Tr	
85		Tr	
86		Tr	
87		Tr	
88		Tr	
8 <b>9</b>		Tr	
90		Tr	
91		Tr	
92		Tr	
93		Tr	
94		Tr	
95		Tr	
96		.02	
97		Tr	
98		Tr	
99		Tr	
19300		.03	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	

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"Assaying for Geographic	over 30 Years" - Oracle Resources - OPAP	Date: <u>Janua</u>	ry 21, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19307	D. D.	Trace	
08		Tr	
09		Tr	
10		Tr	
11		Tr	
12		Tr	
13		Tr	
14		Tr	
15		Tr	
16		Tr	
17		Tr	
18		Tr	
19		Tr	
20		Tr	
21	TO FOLLON		
22		.02	
23		Tr	
24		Tr	
25		.01	
26		Tr	
27		Tr	
28		Tr	
29		.04	
30		Tr	

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo Geocanex	r over 30 Years" ASSAY ( <u>- Oracle Resources - OPAP</u>	CERTIFICATE Date: Janua	ry 21, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19331	D. D.	.02	
32		Trace	
33		Tr	
34		Tr	
35		Tr	
36		Tr	
37		.06	
38		.03	
39		.12	
40		Tr	
41		. 04	
42		Tr	
43		Tr	. <u></u>
44		Tr	
45		Tr	
46		Tr	
47		Tr	
48		Tr	
49		Tr	
50		Tr	
51		Tr	
52		.16	
53		.02	
54		Tr	

Assayer: ht Beck

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"Assaying for over 30 Years" Geocanex - Oracle Resources - OPA		ASSAY CERTIFICATE	Date: Janua	Date: <u>January 21, 1987</u>		
Sample No.	Descript	ion	oz/ton Au	oz/ton Ag		
19355	D. D.		Trace			
56			Tr			
57			Tr			
58			.01			
59			Tr			
60			Tr			
61			Tr			
62			Tr			
63			Tr			
64			.02			
65			Tr			
66			Tr			
67			Tr			
68	· · · · · · · · · · · · · · · · · · ·	······································	Tr			
69			Tr			
70			Tr			
71			.02			
72			.08			
73			Tr			
74			Tr			
75			Tr			
76			Tr			
77		···	Tr			
78			Tr			

10 Beck Assayer: _

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J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying for Geocanex	r over 30 Years" ASSAY CERTIFICATE	Date: Janua	ry 21, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19379	D. D.	Trace	
80		Tr	
81		Tr	<u> </u>
82		Tr	
83		Tr	
84		Tr	
85		Tr	
86		Tr	
87		.01	
		.02	
89		.02	
90		.01	
91		.01	
92		.01	
93		.01	
94		Tr	
95		.01	
96		.01	
97		.03	
98		.02	
	Total assays for January 21, 1987 - 163		
	- · · ·		

Assayer: JurBeck

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Phone: Bus. 727-2220 Res. 662-3341

J.W. Beck, Assayer, Box 43, Cochenour, Ont.

"Assaying fo	nex - Oracle Resources - OPAP	Date: ^{Ja}	nuary 22, 1987
Sample No.	Description	oz/ton Au	oz/ton Ag
19399	D. D.	Trace	
19400		Tr	
01		Tr	
02		Tr	
03		Tr	
04		Tr	
05		Tr	
06		Tr	
07		Tr	
08		Tr	
09		Tr	
10		.01	
11		Tr	
		Tr	
13		Tr	
14		Tr	
15		Tr	
16		Tr	
17		Tr	
18		.01	
19		Tr	
19321	Reported as'to follow'on January 21, 1987	1.01	(rerun = .96)
<u> </u>	Total assays for January 22, 1987 - 22		

Beck, Assayer:

.EX WILSON COLDSTREAM LTD C 1985

## APPENDIX E

## SOIL SAMPLE ANALYTICAL CERTIFICATES

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Geochemical Lab Report

REPORT: 016-4786		[	PROJECT: OPAP		
SAMPLE NUMBER	elenent As Units PPM	Au PPB	Sample Number	elenent as units ppm	Au PPB
L40N-26W	3.4	(1	L20N	-331 2.5	5
1.40N-25W	2.1	<1	L20N	-324 8.6	(1
L40N-24W	3.1	<1	L20N	-319 2.1	(1
L40N-23W	2.2	1	L20	1-30¥ 0.7	
L40N-22W	3.1	4	L20M	-290 2.0	4
L40N-21W	2.9	a	L20	-284 1.2	(1
L40N-20W	1.9	$\alpha$	L20N	-274 1.5	2
L36N-22W	2.0	<1	L20N	1.7	
L36N-21W	1.7	1	L2ON	-259 2.5	
L36N-20W	2.1	4	L20N	-249 2.8	
L28N-56N	1.8	4	L20	-238 2.6	· · · · · · · · · · · · · · · · · · ·
L28N-55W	2.0	2	L20N	-224 2.1	
L28N-54W	2.6	4	L20N	-214 2.3	4
L28N-53W	48.0	a	L20N	1.2 l.2	
1.288-528	2.3	4	LIGN	-19E 12.0	(1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1997) (1
1.28N-51W	2.6	4	L16N	10.0	<1
L28N-50W	4.9	a a	LIGN	-21E 35.0	<2
L28N-49W	1.9	2	LIGN	-22E 42.0	2
L28N-48W	3.8	<1	LIGN	-23E 14.0	<2
L20N-56W	5.7	3	L16N	⊢24E 1.7	<1
L20N-55W	3.0	4	LIGN	-25E 0.6	<1
L20N-54W	2.0	a	LIGN	-26E 1.2	2
L20N-53W	4.1	<1	LIGN	-27E 2.6	(1
L20N-52W	3.1		LIGN	-30E 1.7	a .
L20N-51W	3.4		L16M	-31E 1.7	<li><li></li></li>
L20N-50N	17.0	(1	L16N	-32E 1.1	(1
L20N-49W	57.2		LIGN	-33E 0.7	a
L20N-48N	5.5	1	LIGN	-34E 1.0	
L20N-47W	8,1	<2	L16N	H-35E 1.1	
L20N-46N	0.9		L16M	H-36E 1.0	
L20H-45W	19.0		L16	-37E 0.6	4
L20N-44W	10.0	$\Box$	LIGN	-38E 1.4	<li>41</li>
L20N-43W	4.2	2	L16N	-39E 1.9	< <u>1</u>
L20N-42W	0.8	4	LIGN	-40E 5.7	<b>.</b>
L20N-41W	2.5	<2	L164	-41E 17.0	<b>a</b>
L20N-38W	1.7	$\mathbf{Q}_{\ell}$	L16N	⊢42E 1.4	4
L20N-37W	1.7	<li>(1)</li>	L16N	H-43E 1.4	2
L20N-36W	1.2	(1	L16N	I-44E 1.6	3
L20N-35W	2.2	2	LIGN	I-45E 11.0	D D
L20N-34W	2.0	4	L16N	I-46E 6.9	Ω.

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REPORT: 016-4786				PROJECT: OPAP		PAGI	PAGE 2	
<u>-</u>	Sample Number	<b>element</b> As UNITS PPM	Au PPB	Sample Number	ELEMENT UNITS	As PPM	Au PPB	
	L16N-47E	3.3	<1	LSN-	-29¥	1.4	1	
	L16N-48E	5.5	3	L8N-	-28₩	1.8	<1	
	L16N-49E	6.1	<1	L8N-	-27V	2.6	<1	
	L16N-50E	7.6	<1	LSN-	-264	1.7	<2	
ч. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	L16N-51E	20.0	4	L8N-	-254	2.0	4	
	L16N-52E	62.7	<2	Lan-	-244	1.7	<3	444
	L16N-53E	2.4	a	LBN	-23₩	1.4	2	
	L16N-54E	1.5		LBN-	-224	3.4		
	L16N-55E	6.5	0	LEN	-218	1.7	4	
- 1 <del></del>	L16N-56E	1.2			-200	1.2	<b></b>	
	L16N-57E	1.5	2	LAN	-430	4.1	a	
	L16N-58E	1.4	(1	L4N-	-42₩	7.5	a	
***	L16N-58+50E	1.3	4	L4N-	-410	4.3	4	
	L8N-56W	4.2	4	L4N-	-40W	5.3	a	
	L8N-55W	1.3	<1	L4H-	-394	71.6	<u>a</u>	
N	L8N-54W	<0.5	<1	L4N-	-381	3.6	2	
	L8N-53W	1.8	$\langle 1 \rangle$	L4N-	-37W	2.4	<1	
	L8H-52N	2.7	<1	LAN	-36₩	3.0	4	
	L8N-51W	0.8	<li>A</li>	L4N-	-350	2.1	<1	
	L8N-50W	<0.5	<1	LAN	-341	1.9	4	
	L8N-49W	2.1	<1	L4N-	-330	1.7	4	* <u> </u>
	L8N-48U	3.0	4	LAN	-320	1.3	<1	
	L8N-47W	0.9	4	LAN	-310	1.6	a	
	L8N-46W	3.1	2	L4N	-298	2.1		
	L8N-45W	51.6	4	LAN	-28N	3.0	<u> </u>	
·	L8H-44W	18.0	<u>(</u>	L4H	-27¥	2.4	0	
	L8N-434	2.3	4	L4N-	-264	2.0	<1	
	L8N-42W	4.2	2 ( <b>2</b> )	LAN	-251	2.4	<1	
	L8N-41W	5,9	(1	L4N-	-24W	3.1	<1	
	L8N-40W	24.0	(1	LAH	-23₩	1.5		
	L8N-394	13.0	1	L4H	-22₩	2.5	<1	
	L8N-38W	105.0	<2	L4N	-218	2.3	( <b>1</b>	
	L8N-37W	5.4	4	LAN	-204	2.0	4	
	L8N-36W	0.8	<1					
•.•	L8N-35W	3.1	(1					·
	L8N-34U	1.2	<1					
	L8N-33W	1.7	4					
	L8N-32W	1.1	4					
	L8N-31W	5.2	<1					
	L8N-30W	1.5	4					

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*****	REPORT: 016-4	788			P	ROJECT: OPAP		PAGE 1
	SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	SAMPLE NUMBER	ELEMENT AS UNITS PPM	AU PPB	
	L44N-20E		2.9	<1	L24N-46W	17.0	<1	
	L44N-21E		2.3	1	L24N-45W	13.0	$\langle 1 \rangle$	
	L44N-22E		1.3	1	L24N-44W	18.0	a	
	L44N-23E		1.7		L24N-43W	2.0	2	
··	L44N-24E	1	3.9	0	L24N-42W	2.5	4	
	L44N-25E		1.9	a	L24N-41W	3.5	11	
	L44N-26E		3.4		L24N-40W	2.6		
	L44N-27E		9.3		L24N-39W	1.2	1	
	L44N-28E		9.0		니콜릭했는 가위 1 - 2 - 2011	10.0		
	L44N-29E		3.0	<u> </u>	L24N-3/W	3.8		
	L44N-31E		6.2	<1	L24N-36W	2.6	3	
	L44N-32E		19.0		L24N-35W	2.4	4	
	L44N-33E		13.0		니 · · · · · · · · · · · · · · · · · · ·	4.4	1	
	L44N-34E L44N-35E		12.0		L24N-33W	2.0		
	1 Arm		• •	/1	1116 164 01	2.1	/1	
	L44N-36E		4.8			4.4		
	L44N-3/E		5.4	3	L24R*3V# 1 3 AN_30H	· 1.0	/1	
	144N-38E		2.1 10 A		L24R-27# 1.7AN-2013	. L.C 2 Q		
	L44N-40E		18.0		L24R-20W L24N-27W	2.5	2	
	* * * *			/3			/)	
	L44N-41E		4.9		L29(1-25) 1.7.41-751	4./	21	
	L44N-446 1 AAN		3.0		1.24N-24U	2.4	à	
	L 44N-44F		2.3	(1	L24N-23U	2.0	4	
	L44N-45E		2.7	à	L24N-22W	2.1	ā	
	I AAN-AGE		1.1	<u>(1</u>	1.24N-21W	2_4	1	
	1.44N-47E		1.2	ä	L24N-20W	2.1	a	
	L44N-48E		1.3	(1	L24N-20E	0.8	a	
	L44N-49E		2.6	a	L24N-21E	1.5	4	
	L44N-50E		1.0	1	L24N-22E	2.4	$\langle 1$	
	L24N-56H		1.4	2	L24N-23E	1.9	1	
	L24N-554		3.3	<1	L24N-24E	2.0	(1	
	L24N-544		7.5	a	L24N-25E	1.2	<1	
	L24N-53W		2.0	à	L24N-26E	1.3	a	
	L24N-52W		1.4	4	L24N-49E	173.0	<2	
	L24N-51W	*****	2.8	4	L24N-50E	2.5	<1	
	L24N-50W		3.4	2	L24N-51E	1.3	2	
	L24N-49W		16.0	4	L24N-52E	6.3	$\langle 1 \rangle$	
	L24N-48W		6.6	<1	L24N-53E	5.2	2	
	L24N-47W		5.2	1	L24N-54E	0.7	<1	

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	SAMPLE NUMBER L24N-55E L24N-56E L24N-56+58E L16N-56W	element Uniis	As PPM	Au PPB	SAMPLE	ELEMENT As	Au	annan an a
- max	L24N-55E L24N-56E L24N-56+58E L16N-56W				NUTBER	UNITS PPM	PPB	www.com.com.com.com.com.com.com.com.com.com
	L24N-56E L24N-56+58E L16N-56W		2.1	<1	LON-48E	<0.5	1	
s c c c c c c c c c c c c c c c c c c c	L24N-56+58E L16N-56W		2.6	4	LON-49E	2.3	$\langle 1 \rangle$	
te deserved	L16N-56W		1.8	1	LON-50E	1.7	$\langle 1$	
E - and			2.7	$\langle 1 \rangle$	LON-52E	2.1	$\langle 1 \rangle$	
	L16N-55W		2.5	4	LON-53E	3.1	1	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
~	L16N-54W		2.2	4	· LON-54E	1.9	<1	
	L16N-53W	2	20.0	$\langle 1 \rangle$	LON-55E	2.6	$\langle 1 \rangle$	
	L16N-52W		2.2	<1	LON-56E	1.5	2	
1 1	L16N-51W		0.6	$\langle 1 \rangle$	LON-57E	1.3	1	
····	L16N-50W		2.1	<1	LON-58E	1.5	(1	
	L16N-49W		2.3	D	LON-59E	1.6	(1	
	L16N-48W		1.2	$\langle 1 \rangle$				
Ta Ma	L16N-47W		2.0	<1				
	L16N-46W		2.2	$\langle 1 \rangle$				
	LON-20E		2.1	0			مەرەبىرىكى بىرىمۇرىيى بىرىمىيىرى بىرىكى ئىلىرىدىنى بىرىكى بىرىكى بىرىكى بىرىكى بىرىكى بىرىكى بىرىكى بىرىكى بىر	
т-ш	LON-21E		1.6	4				
	LON-22E		1.7	$\sim$ 1				
	LON-23E		1.6	$\langle 1$				
- 11.000	LON-24E		2.1	$\langle 1 \rangle$				
******	LON-25E		7.5	<2	nte frankriker i sammen v semer meter menerasi a zerosezzera zerosezen ar tazzente in starmas gazo, ispace apizganegaze	1999 (1997), and a start of the		nanan kanan menanggalakan kanan k
	LON-26E		1.2	<1				
~ -	LON-27E		2.5	<1				
	LON-30E		1.9	$\langle 1 \rangle$				
	LON-31E		2.6	$\langle 1 \rangle$				
	LON-32E		1.8	1				
	LON-33E		2.1	<1		· · · · · · · · · · · · · · · · · · ·		
	LON-34E		2.3	2 (d. <b>1</b>				
	LON-35E		(0.5	<1				
	LON-36E		2.4	$\langle 1 \rangle$				
	LON-37E		2.1	0				
	LON-38E		1.5					
	LON-39E		1.5	$\langle 1$				
	LON-40E		1.3	(1				
	LON-41E		1.2	<1				
	LON-42E		1.5	1				
	LON-43E		1.5	1				
	LON-44E		1.2	4				
	LON-45E		2.3	<1				
	LON-46E		0.9	$\langle 1 \rangle$				
	LON-47E		1.5	$\langle 1 \rangle$				

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REPORT: 016-4	912		P	PROJECT: OPAP		PAGE 1	
SAMPLE NUMBER	ELEMENT AS UNITS PPM	Au PPB	Sample Number	element As Units PPM	Au PPB		
L52N-20E	3.4	<1	L48N-25E	1.6	<1		
L52N-21E	6.9	$\langle 1$	L48N-26E	2.9	$\langle 1 \rangle$		
L52N-22E	37.0	$\langle 1 \rangle$	L48N~27E	1.8	$\langle 1 \rangle$		
L52N-23E	5.9	$\langle 1 \rangle$	L48N~28E	3.9	<1		
L52N-24E	2.8	(1	L48N-29E	9.0	1	and the group and the state of	
L52N- <b>25E</b>	2.0	<1	L48N-30E	38.0	<1	and any course can chan in a support many	
L52N-26E	1.8	$\langle 1 \rangle$	L48N-31E	5.9	<1		
L52N-27E	71.1	$\langle 1 \rangle$	L48N-32E	4.5	$\langle 1$		
L52N-28E	6.7	$\langle 1$	L48N~33E	27.0	$\langle 1$		
L52N-29E	49.0	(1	L48N-34E	13.0	<1	NY PERSONAL AND A CONTRACT AND A CONTRACT OF A CONTRACT AND A	
L52N-30E	10.0	<1	L48N-35E	5.1	<1		
L52N-31E	34.0	$\langle 1 \rangle$	L48N-36E	27.0	<2		
L52N-32E	14.0	<1	L48N-37E	4.9	$\langle 1 \rangle$		
L52N-33E	85.8	<2	L48N-38E	3.9	$\langle 1 \rangle$		
L52N-34E	22.0	1	L48N-39E	3.2	(1		
L52N-35E	12.0	1	L48N-40E	5.6	<1		
L52N-36E	10.0	$\langle 1$	L48N-41E	5.0	$\langle 1 \rangle$		
L52N-37E	11.0	<1	L48N-42E	4.0	$\langle 1 \rangle$		
L52N-38E	2.1	<1	L48N-43E	3.6	Cl.		
L52N-39E	2.5	2	L48N-44E	4.0	2	1999) ayyan sana kalanda kalan 1969 da sa	
L52N-40E	1.6	2	L48N-45E	1.5	1		
L52N-41E	5.1	$\langle 1 \rangle$	L4BN-46E	11.0	$\langle 1 \rangle$		
L52N-42E	4.9	$\langle 1 \rangle$	L48N-47E	3.2	1		
L52N-43E	6.4	(1)	L48N-48E	2.4	$\langle 1 \rangle$		
L52N-44E	4.4	2	L48N-49E	14.0	<1	MP5 Parauna ana amin'ny fisia mana amin'ny fisia	
L52N-45E	3.8	1	L48N-50E	5.5	<1		
L52N-46E	2.3	1	L48N-52E	8.8	$\langle 1 \rangle$		
L52N-47E	2.5	<1	L48N-53E	2.1	1		
L52N-48E	4.5	$\langle 1 \rangle$	L48N-54E	5.6	2		
L52N-49E	5.0		L44N-56W	0.8	<1	annen figer serr sammenskeppensamt i for peda travers dør anna dør	
L52N-50E	3.8	1	L44N-55W	1.6			
L52N-51E	24.0	$\langle 1$	L44N-54W	1.5	$\langle 1 \rangle$		
L52N-52E	1.2	C	L44N-53W	0.8	<1		
L52N-53E	1.0	(1)	L44N-52W	5.6	0		
L52N-53+70	E 1.3	<1	L44N-51W	1.4	4	MANNA STORE - MANA - FROM - FROM - MANNA - MANNA - MANA - MANNA	
L48N-20E	2.5	<1	L44N-50N	1.8	<1		
L48N-21E	8.1	$\langle 1 \rangle$	L44N-49W	1.4	$\langle 1 \rangle$		
L48N-22E	35.0	(1	L44N-48W	2.3	(1		
L48N-23E	12.0	<1	L44N-47W	3.1	<1		
L48N-24E	3.5	(1	L44N-46W	2.1	<1		

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L40N-30E

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Geochemical Lab Report

	REPORT: 016-49	12				PROJECT: OPAP		Pag	)E 2
· ·	SAMPLE NUMBER	ELEMENT UNIIS	As PP <del>M</del>	Au PPB	sample Number	ELEMENT UNITS	As PPM	Au PPB	
	L44N-45W		8.6	<1	L401	I-31E	6.5	<1	
	L44N-44W		4.1	$\langle 1$	L401	I-32E	47.0	$\langle 1 \rangle$	
	L44N-43W		2.8	2	L401	I-33E	51.5	<2	
	L44N-42W		2.4	$\langle 1 \rangle$	L401	1-34E	26.0	<1	
	L44N-41W		2.6	0	L40	I-35E	54.6	<2	
	L44N-40W		2.2	<1	L401	I-36E	26.0	<1	nan an
	L44N-39W		3.1	1	L40)	I-37E	4.2	$\langle 1 \rangle$	
	L44N-38W		2.8	$\langle 1 \rangle$	L401	-38 <b>E</b>	4.7	$\langle 1 \rangle$	
	L44N-37W		1.2	$\langle 1 \rangle$	L40)	I-39E	10.0	$\langle 1 \rangle$	
·	L44N-36W		2.6	5	L40)	I-40E	7.6	<1	na se a fan fan fan fan fan fan fan fan fan f
······································	L44N-35W		1.5	<1	L40)	{-41E	3.4	<1	
	L44N-34W		18.0	2	L401	I-42E	9.3	1	
	144N-33W		5.7	2	L40)	I-43E	2.6	1	
	L44N-32W		1.8	<2	L40	I-44E	34.0	2	
	L44N-31W		2.0	<1	L401	I-45E	1.2	<1	
	L44N-30W		0.9	<1	L40)	1-46E	1.3	2	
	L44N-29W		1.2	2	L40)	1-47E	1.3	(1	
	L44N-28W		5.7	6	L40)	I-48E	0.8	$\langle 1 \rangle$	
	L44N-27W		3.1	(1	L40)	I-49E	1.5	<1	
******	L44N-26W		3.1	<1	L40)	1-50E	3.1	1	
**********	L44N-25W		1.2	<1	L401	I-51E	0.7	<1	
	L44N-24W		2.2	$\langle 1 \rangle$	L401	I-52E	2.7	3	
	L44N-23W		2.3	$\langle 1 \rangle$	L401	I-53E	1.8	$\langle 1$	
	L44N-22W		3.2	1	L401	I-53+57E	2.4	$\langle 1 \rangle$	
	L44N-21W		8.0	<1	L321	1-20E	73.6	<2	
*****	L44N-20W		2.8	<1	L321	I-21E	19.0	<1	ан андараанаан на
	L44N-51E		1.3	(1	L321	I-22E	7.6	$\langle 1 \rangle$	
	L44N-52E	~	2.9	<2	L32i	I-23E	19.0	$\langle 1 \rangle$	
	L44N-53E		6.5	2	L32	I-24E	10.0	$\langle 1$	
	L44N-54E		2.6	(1	L32ł	I-25E	7.3	<1	
*****	L40N-20E		4.3		L32	I-26E	5.9	1	
	L40N-21E		7.9	$\langle 1 \rangle$	L321	I-27E	12.0	$\langle 1 \rangle$	
	L40N-23E		6.2	<1	L32)	I-28E	16.0	2	
	L40N-24E		5.5	<1	L321	I-29E	10.0	$\langle 1$	
·····	L40N-25E		2.8	4	L32)	I-30E	14.0		
·····	L40N-26+25E		2.4	<1	L.32)	-31E	32.0	<1	
	L40N-27E		2.0	2	L32)	I-33E	5.4	4	
	L40N-28E		3.2	$\mathbf{a}$	L32M	I-34E	6.3	(1	
	L40N-29E		8.5	1	L32M	I-41E	19.0	$\langle 1$	

L32N-42E

41.0

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# Geochemical Lab Report

REPORT: 016-49	12	· · · · · · · · · · · · · · · · · · ·	PR	OJECT: OPAP	PAGE 3	6 5 16 - 5 Maraqueria
Sample Number	element As Units PPM	Au PPB	Sample Number	ELEMENT As UNITS PPM	Au PPB	
L32N-43E	3.0	<1	L16N-39W	1.2	<1	
L32N-44E	1.9	2	L16N-38W	2.1	3	
1.32N-45E	2.5	2	L16N-37W	2.8	2	
L32N-46E	2.5	$\langle \mathbf{I} \rangle$	L1GN-36W	1.0	1	
L32N-47E	2.8	4	L16N-35W	3.3	0	No. 10 10 10 10 10 10 10 10 10 10 10 10 10
L32N-48E	2.6	1	L16N-34W	2.3	<1	يىلە ھەرىپەيلە ^{رىرىم} ەر <del>بەر</del> بەر
L32N-49E	1.9	$\langle 1 \rangle$	L16N-33W	2.4	< <u>1</u>	
L32N-50E	2.0	2	L16N-32W	2.7	3	
L32N-51E	2.1	$\langle 1 \rangle$	L16N-31W	1.6	4	
L32N-52E	2.3	1	L16N-30W	1.8	1	
L32N-53E	1.4	<1	L16N-29W	1.3	<1	
L32N-54E	1.4	1	L16N-28W	1.7	4	
L32N-55E	1.5	<1	L16N-27W	3.2	(1	
L32N-56E	2.3	$\langle 1 \rangle$	L16N-26W	1.1	4	
L20N-20E	2.4	1	L16N-25U	1.6	<1	
L20N-21E	2.2	4	L16N-24W	2.3	Q	
L20N-22E	1.4	<1	L16N-23W	2.3	4	
L20N-23E	1.6	(1	L16N-22W	2.0	$\langle 1$	
L20N-24E	2.1	$\langle 1 \rangle$	L16N-21W	2.5	<1	
L20N-25E	1.7	0	L16N-20W	2.1	<1	No Montana and a summer
L20N-26E	1.9	<1	L12N-56W	1.4	<1	
L20N-27E	1.8	$\langle 1 \rangle$	L12N-55W	0.9	$\langle 1 \rangle$	
L20N-33E	2.8	1	L12N-54W	2.2	$\langle 1 \rangle$	
L20N-34E	2.6	$\langle 1 \rangle$	L12N-53W	2.8	4	
	2.7	2	L12N-52W	2.4	1	
L20N-36E	2.6	2	L12N-51W	2.0	4	
L20N-37E	1.7	1	L12N-50W	2.0	$\langle 1 \rangle$	
L20N-38E	2.0	1	L12N-49₩	3.0	4	
L20N- <b>39E</b>	1.1	<1	L12N-48W	3.0	1	
L20N-40E	0.6	<1	L12N-47V	3.5	<1	
L20N-51+20E	8.5	(1	L12N-46W	1.8	2	
L20N-52E	11.0	$\langle 1 \rangle$	L12N-40W	1.4	<1	
L20N-53E	1.3	$\langle 1 \rangle$	L12N-39W	4.1	$\langle 1 \rangle$	
L20N-54E	0.8	$\langle 1 \rangle$	L12N-38W	2.0	1	
L20N-55E	1.3	<1	L12N-37W	1.9	21	Marie 11. decembrary ongo anger
L20N-56E	0.9	1	L12N-36W	2.7	1	
L20N-57E	1.0	0	L12N-35W	2.7	1	
L20N-58E	2.8	$\langle 1 \rangle$	L12N-34W	2.0	$\langle 1$	
L16N-45W	6.7	<1	L12N-33W	2.2	<1	
L16N-44W	11.0	2	L12N~32U	2.1	<1	

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#### Geochemical Lab Report

REPORT: 016-49	12				PROJECT: OP	AP	PAGE 4
SAMPLE NUMBER	ELEMENT UN IIS	As PPM	Au PPB	SAMPLE Number	ELEMENT UNITS	As PPM	Au PPB
L12N-31N		3.3	а а				
LIZN-SVW		25	1				
1.12N-28W		1.8	a				
L12N-27W		2.7	2	、			
L12N-26W		2.1	1				
L12N-25W		2.1	(1				
L12N-244		2.8					a think when a
L12N-239		3.5					
L12N-22W		4.9	<1		·		
L12N-21W		2.3	4				
L12N-20W		2.8	$\langle 1 \rangle$				
L8N-54+70E		0.7	4				
L8N-55+70E		2.2					
L8N-36+705		1.0					
L8N-57+70E		<0.5	<1				
L8N-58+70E		<0.5	$\langle 1 \rangle$				
L8N-59+70E		<0.5	0		•		
L8N-60+70E		2.7	1				
L4N-36W		1.3	(1				
L4N-55W		1.7	2				
L4N-54W		1.5			,		
L4N-53W		2.4					
		1.0 7 A	ن ۲۲				
- Paulan		4.7	4				
L4N-SON		2.2	1				
L4N- <b>49</b>		1.7	1				
L4N-48W		6.4	1				
L4N-4/W		4.1	1				
L4 <b>N-40W</b>		4.4	17	n managan ang managang nga sa			and many particular states and the second states of the second states of the second states and the second states
L4N-44W		47.0	1				

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# Geochemical Lab Report

REPORT: 016-	4787		Ĺ	PROJECT: OPAP	PAGE 1
SAMPLE NUMBER	ELEMENT AS UNITS PPM	Au PPB	Sample Number	ELEMENT As UNITS PPM	Au PPB
L40 <del>N</del> -55W	2.0	<1	L36N-45W	3.3	1
L40N-54W	2.9	$\langle 1 \rangle$	L3GN-44W	2.0	$\langle 1 \rangle$
L40N-53W	2.7	<1	L36N-43W	2.8	$\langle 1$
L40N-52W	2.1	2	L36N-42W	2.8	1
L40N-51W	2.5	<u>a</u>	L36N-41W	2.1	
140N-50W	2.7	$\langle 1$	L36N-40W	1.4	(1
L40N-49W	1.1	<1	L36N-39W	1.6	$\langle 1$
L40N-48W	1.5	$\langle 1 \rangle$	L36N-38W	1.7	1
L40N-47W	1.3	2	L36N-37W	2.4	2
L40N-46W	2.1	<1	L36N-36W	1.3	1
L40N-45W	2.7	<1	L36N-35W	1.0	1
L40N-44W	2.9	2	L36N-34W	2.6	<1
L40N-43W	1.8	$\langle 1 \rangle$	L36N-33W	1.4	
L40N-42W	2.7	D	L36N-32W	1.2	<1
L40N-41W	1.9	1	L36N-31W	1.6	1
L40N-40W	2.9	1	L36N-30W	1.1	<2
L40N-39W	1.6	(1	L36N-29W	1.7	2
L40N-38W	2.5	3	L36N-28W	2.3	$\langle 1 \rangle$
L40N-37W	2.3	7	L36N-27W	2.4	ā
L40N-36W	2.0	1>	L36N-26W	2.0	<1
1.40N-35W	16.0	1>	1.36N-25U	1.2	<1
1.40N-34N	1.7	a	L36N-244	2.1	1
1.40N-33W	3.1	a	L36N-23N	2.4	(1
L40N-32W	2.4	$\overline{2}$	L32N-56W	2.4	(1
L40N-31W	2.1	<1	L32N-55W	0.7	<u>(1</u>
1.40N-30U	2 Å		1 37N-54U	3_1	(1
1.40N-29H	2.4	a la	1.32N-53U	3.7	(1
1.40N-28	2.1	a	1.32N-52U	2.4	
1.40N-27H	2.0	(i	L32N-51W	2.0	ā
L36N-56W	2.6	2	L32N-50W	7.6	<2
1 92M-FFH	n n		נוסג_גופני ז	30	<i>/</i> 1
	3:4 3 0	1	LJ2R-47W 7 JUN-40U	3.8	
1001-049	2.0		1.33K-40第 1.33N-47H	₩./ 1 7	1
1000-038	4.4 7 0	×1 21	しつムパーゼ/ W 1 つつり」 ACU	1./ 2 B	1
100R-02#	4•2 ንለ	21	LJJN 400 1 228-450	4.7 7 7	
<b></b>	4.9	<u>\</u>	LJ2R-4J#	616	
L3GN-50W	2.3	4	L32N-44W	1.8	(1
L36N-49W	2.9	$\langle 1 \rangle$	L32N-43W	2.1	4
L36N-48W	1.7	2	L32N-42W	. 2.2	4
L36N-47W	1.7	<1	L32N-41W	2.6	1
L36N-46W	2.4	1	L32N-40W	2.0	<1

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REPORT: 016-4787

L32N-39W L32N-38W L32N-37W L32N-36W L32N-35W

L32N-34W L32N-33W L32N-32W L32N-31W L32N-30W

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PROJECT: OPAP

ELEMENT

נואט	IS PPM	PPB	NUMBER	UNITS	PPM	PPB	
	2.7	1	L28N-27W		2.1	<1	
	3.1	a	L28N-26W		1.6	$\langle 1$	
	2.2	a	L28N-25W		2.4	<1	
	2.7	3	L28N-24W		2.5	<1	
The set of the second set of the second	2.2	<u> </u>	L28N-23W	an all an	2.0	<u>&lt;1</u>	
a - Juli	2.2	(1	L28N-22V		2.4	3	
	2.1	ä	L28N-21W		3.0	1	
	2.8	a	L28N-20W		1.9	$\sim$	
	1.6	1	L28N-20E		34.0	<1	
	2.7	(1	L28N-21E		2.5	1	
	2.9	(1	L28N-22E		4.8	<1	
	11.0	ā	L28N-23E		3.0	1	
	25.0	ā	L28N-24E		1.7	<1	
	2.5	a	L28N-25E		3.3	<1	
	2.5	2	L28N-26E	a ha an an an an Ara Anna an Anna an Anna an An An	4.9	0	
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L32N-29W	2.9	a	L28N-22E	4.8	4	
L32N-28W	11.0	$\langle 1 \rangle$	L28N-23E	3.0	1	
L32N-27W	25.0	4	L28N-24E	1.7	<1	
1.32N-26W	2.5	0	L28N-25E	3.3	<1	
1.32N-251	2.5	2	L28N-26E	4.9	0	
		•••••••••••••••••••••••••••••••••••••••				
L32N-24W	3.1	2	L28N-27E	12.0	$\langle 1$	
L32N-23W	2.6	$\langle 1 \rangle$	L28N-28E	2.5	$\langle 1$	
L32N-22W	4.0	$\langle 2$	L28N-29E	2.6	2	
L32N-21W	2.4	1	L28N-30E	5.3	2	
L32N-20W	3.1	a	L28N-31E	11.0	$\langle 2$	
L28N-47W	2.7	D	L28N-32E	6.3	1	
L28N-46W	2.2	0	L28N-33E	22.0	<2	
L28N-45W	3.2	<1	L28N-34E	13.0	<1	
L28N-44W	2.9	4	L28N-35E	21.0	<1	
1.28N-43W	3.7	ā	L28N-36E	6.3	0	
			***************************************			
L28N-42W	1.9 - 1.	(1	1.29N-42E	1.6	0	
L28N-41W	1.7	(1	L28N-43E	8.6	$\langle 1 \rangle$	
L28N-40W	2.1	(1	L28N-44E	11.0	0	
L28N-39W	8.2	<1	128N-45E	2.3	2	
L28N-38W	4.8	4	L28N-46E	23.0	3	
L28N-37W	1.1	<2	L28N-47E	6.3	<1	
128N-36W	2.2	$\langle 1 \rangle$	L28N-48E	4.2	<1	
L28N-35W	2.1	$\langle 1 \rangle$	L28N-49E	1.5	$\langle 1 \rangle$	
L28N-34W	1.9	4	L28N-50E	1.0	1	
L28N-33W	1.6	1	L28N-51E	2.3	2	
L28N-32W	1.5	<1	L28N-52E	1.4	a	
L28N-31W	1.2	$\langle 1 \rangle$	L28N-53E	1.4	<1	
L28N-30W	1.8	4	L28N-54E	2.0	1	
L28N-29W	2.3	1	L28N-55E	1.4	2	
1.28N-28M	3.1	a	1.28N-56E	0.7	1	

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REPO	RT: 016-4	787				PROJECT: OPAP		PAGE	3
SAMP Numb	LE Er	ELEMENT	As PPM	Au PPB	 SAMPLE Number	ELEMENT UNITS	As PPM	Au PPB	
L L L	28N-57E ON-60E ON-61E ON-62E ON-63F		4.7 0.5 2.6 1.7	3 (1 (1 (1 (1					
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			additioned by some surgers						
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									ang ta social <b>de maya</b> care forma
			an manan sakata kata kata kata kata kata kata ka	~					
							* <u>.</u>		
			n- VA strand the subset of subsets are		 			999 ga a a a canada a da canada a da da canada a da da canada a da da canada a da	
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## Geochemical Lab Report

	REPORT: 016-4	913			PROJECT: OPAP		PAGE	
	SAMPLE NUMBER	ELEMENT As UNITS PPM	Au PPB	SAMPLE NUMBER	ELEMENT UNITS	As P <b>PM</b>	Au PPB	
	136N-22F	12 0	/1	[12]	1-26F	67	1	
	L36N-23E	17.0	a	1.12)	-27E	1.9	(1	
	L36N-24E	49.0	2	L12)	-28E	2.7	ä	
	L36N-25E	5.1	ā	L12	-29E	2.3	0	
	L36N-26E	3.6	4	L12	1-30E	0.6	4	
	L36N-27E	3.2	<1	L12	<del> </del> -31E	0.7	(1	
	L36N-28E	5.4	$\langle 1 \rangle$	L12)	I-32E	0.9	2	
	L36N-29E	4.7	4	L12)	1-33E	0.8	<1	
	L36N-30E	4.3	1	L12)	1-34E	8.0	<1	
	1.36N-31E	4.7		L12	1-35E <	0.5	<u>a</u>	
	L36N-32E	38.0	α	L12)	1-36E	3.4	1	
	L36N-33E	25.0	$\Delta$	L12	-37E	1.6	<2	
	L36N-34E	7.5	<1	L121	-38E	0.8	<1	
	L36N-35E	25.0	$\langle 1 \rangle$	L12)	I-39E	0.6	<1	
	L36N-36E	20.0	1	L12)	I-40E 1	2.0	(]	
	L36N-37E	4.4	$\langle \mathbf{l} \rangle$	L12M	I-41E	1.5	(1	
	L36N-38E	3.0	$\langle 1$	L12	1-42E	1.8	1	
	L36N-39E	3.7	$\langle 1$	L12M	I-43E	2.0	$\langle 1 \rangle$	
	L36N-40E	5.2	$\langle 1$	L12)	1-44E	3.2	$\langle 1 \rangle$	
	L36N-41E	4.9	<1	L12)	<u>-45E</u>	2.2	(1	
	L36N-42E	12.0	<1	L12)	I-46E	1.9	a	
	L36N-43E	21.0	2	L12)	(-47E	1.1	$\langle 1 \rangle$	
	L36N-44E	12.0	<1	L12)	I-48E	0.8	$\langle 1 \rangle$	
	L36N-45E	6.7	2	L121	1-49E	0.8	$\langle 1$	
	L36N-46E	18.0	<u>[]</u>	L12)	1-50E	0.9	(1	
	L36N-47E	25.0	a	L12	I-51E	1.2	<1	
	L36N-48E	22.0	1	L12	I-52E <	0.5	$\langle 1 \rangle$	
	L36N-49E	2.2	4	L12M	(-53E <	0.5	<1	
	L36N-50E	1.6	4	L12)	I-54E	2.0	<1	
, disease association par	L36N-51E	1.0	<1	L12)	H-55E	0.9	<1	-
	L36N-52E	1.4	a	L12)	1-56E	3.0	1	
	L36N-53E	2.9	4	L12	₹-57E	2.0	$\langle 1$	
	L36N-54E	3.1	$\langle 1$	L12)	1-58E	0.6	<1	
	L36N-55E	2.6	1	L12)	(-59E	1.3	<1	
	L12N-20E	- 2.2	(1	L12	I-60E	1.7	<u> </u>	
	L12N-21E	1.8	4	LSN-	-19 <b>+70E</b>	1.7	<1	
	L12N-22E	6.0	$\langle 1 \rangle$	L8N-	-20+70E	2.1	<1	
	L12N-23E	8.0	0	L8N-	-21+70E	2.1	$\langle 1 \rangle$	
	L12N-24E	47.0	<2	L8N-	-22+70E	1.9	<1	
	L12N-25E	26.0	<2	L8N-	-23+70E 1	7.0	<2	

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Bondar-Clegg & Company Ltd. 5420 Canotek Rd., Ottawa, Ontario, Canada KIJ 8X5 Phone: 749-2220 Telex: 33



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# Geochemical Lab Report

REPORT: 016	5-4913			PROJECT: OPAP				PAGE 2		
SAMPLE NUMBER	ELEMENT UN ITS	As PPM	AU PPB	SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	Andre and a construction of the		
L8N-24+7	70E	22.0	<1	L4N	-31+50E	2.1	(1			
L8N-25+7	70E	3.2	$\langle 1 \rangle$	L4N-	-32+50E	2.0	$\langle 1$			
L8N-26+7	70E	2.0	4	L4N-	-33+50E	0.9	<1			
LBN-27+7	70E	1.6	1	L4N-	-34+50E	4.1	<1			
L8N-28+7	70E	0.6	4	L4N	-35+50E	6.6		-		
L8N-29+7	70E	<0.5	<1	LAN	-36+50E	1.7	Ω			
L8N-30+7	70E	0.8	$\langle 1 \rangle$	L4N-	-37+5 <b>0E</b>	2.1	<1			
L8N-31+7	70E	0.7	$\langle 1 \rangle$	L4N-	-38+50E	3.7	$\langle 1 \rangle$			
L8N-32+7	70E	<0.5	$\langle 1 \rangle$	L4N-	-39+50E	1.9	<1			
L8N-33+7	70 <u>E</u>	1.0	(1	L41-	-40+50E	1.7	(1	••••••••••••••••••••••••••••••••••••••		
L8N-34+7	70E	0.9	1	L4N	-41+50E	1.5	(1			
L8N-35+7	70E	1.2	$\langle 1$	L4N	-42+50E	2.2	1			
L8N-36+7	70E	2.2	<1	L4N-	-43+50E	1.8	D			
L8N-37+7	70E	1.2	$\sim$	L4N-	-44+50E	1.0	<1			
L8N-38+7	70E	1.8	(1	L4N	-45+50E	1.8	<1			
L8N-39+7	70E	2.7	1	L4N	-46+50E	1.1	<1			
L8N-40+7	70E	1.7	2	L4N-	-47+50E	2.1	<1			
L8N-41+7	70E	0.9	$\langle 1 \rangle$	L4N-	-49E	2.7	2			
L8N-42+7	70E	0.8	<1	L4N	-50E	2.9	(1			
L8N-43+7	70E	0.9	2	Lan	-50+50E	2.2	2	AMM a system concerns where additional and the		
L8N-44+7	70E	1.1	<1	LAN	-51E	2.0	3			
L8N-45+7	70E	1.1	$\langle 1 \rangle$	L4N	-52+50E	2.4	<1			
L8N-46+7	70E	1.0	$\langle 1 \rangle$	L4N-	-53E	1.3	$\langle 1 \rangle$			
L8N-47+7	70E	0.8	1	L4N	-53+50E	0.8	<1			
L8N-48+7	70 <u>E</u>	<0.5	4	L4H	-54E	2.2	<u>(1</u>			
L8N-49+7	70E	0.9	1	LAN	-54+50E	2.1	<1			
L8N-50+7	70E	<0.5	4	L4N	-55 <b>+50E</b>	<0.5	<1			
L8N-51+7	70E	<0.5	0	L4N	-56+50 <b>E</b>	3.4	4			
L8N-52+7	70E	0.7	$\langle 1 \rangle$	L4N	-57+50E	1.4	$\langle 1 \rangle$			
L4N-20+5	50 <b>e</b>	1.9	<1	Lan	-58+50E	0.8	(1			
L4N-21+5	50E	2.4	(1	LAN	-59 <b>+50E</b>	<0.5	4			
L4N-22+5	50E	1.3	2	L4N	-60+50E	2.8	2			
L4N-23+	50E	2.8	ā	L4N	-61+50E	2.7	<1			
L4N-24+5	50E	1.7	2	LAN	-62E	2.4	4			
L4N-25+5	50E	17.0	<2	LO-:	51W	1.7	<u>a</u>			
L4N-26+5	50E	7.1	1	1.0-1	501	1.3	<1			
L4N-27+5	50E	1.7	a	1.0-4	194	1.0	2			
L4N-28+5	50E	1.7	<1	L0	184	1.6	ā			
L4N-29+5	50E	2.4	1	LO-4	474	1.0	ā			
L4N-30+5	50E	2.4	a	LO-4	16W	3.4	<1			
								Talan - Jangaran Parti adalah di Parti di San		

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Geochemical Lab Report

REPORT: 016-	4913				P	ROJECT: OPAP		PAGE	3
Sample Number	ELEMENT UNITS	As PPM	Au PPB	Sampl Numbe	.E R	ELEMENT UNITS	As PPM	Au PPB	ana an
L0-45W		2.0	<1						
L0-44W		2.0	$\langle 1 \rangle$						
L0-43W		3.0	1						
L0-42W		3.9	$\langle 1 \rangle$						
<u>LO-414</u>		3.4	<u> </u>	n en				·····	
L0-40W		3.1	<1						
LO-39W		3.6	$\Box$						
L0-38W		2.0	0						
L0-37W		0.7	2						
L0-36W		1.0	(1		lip 1.11 Marcaller - May I Associates		1999 (1997) - San		and and an
L0-35W		1.8	<1						
L0-34W		2.0	a						
L0-33W		3.0	0						
L0-32W		3.5	$\langle 1 \rangle$						
L0-31V		1.5	(1		ورود وروانه المحافظ والمحافظ	a e e constante de la constante	an ang ang ang ang ang ang ang ang ang a		and the track of the state of the
I.0-30W		2.0	1	na an a				* ************************************	
10-294		3.5	ā						
L0-28		2.0	a						
1.0-274		6.4	a						
L0-26¥		2.7						******	
1.0-254		2.8	()					*** ****	
L0-244		13.0	ä						
10-234		3.6	ā						
L0-224		4.7	1						
L0-21W		6.7	<1						
L0-20₩	NATE O IN A LANGUN JANUN JANUN JANUN MANTANA ANA ANG ANG ANG ANG ANG ANG ANG ANG	6.3	2					······································	

APPENDIX F

STATISTICAL ANALYSIS OF SOIL SAMPLES

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EBEBB	BBB										
BB	BB						ρD				
BB	RBB						Π				
BB	BB	DD									
BEREBERE		00(	000	NANNINN		DD	ODIO	1	AAA	RR RRRR	BBBBBBB
BP	<b>BB</b>	00	00	NH	NN	ÐÐ	DD		A	rrrr	0000000
BB	FBR	<b>C</b> 0	DI)	NN	NN	DI	BD	AA	AAAA	RR	
BB	BB	00	00	NIL	NN	DÐ	DD	ÂÂ	AA	RK	
BBBBB	BEE	000	DO0	NN	NK	[1]]	0000	AAi	AAAA	RR	

000000	LLL						
0000	LLL						
CCC	LLL						
000	LLL						
CCC	LLL	EEE	Ε	666	566G	6G(	366G
000	LLL	EE	EE	GG	GG	66	GG
CCC	LLL	EEEEE	EE	65	66	66	66
CCCC	LLL	EE		GG	66	GG	66
000000	LLL	EEE	ΈE	066	6666	6G(	3666
					GG		GG
					GG		66
				(	GGG	(	6GG

BBBBBB	BE	000 <b>000</b>		\$\$\$\$\$				
8E	BB	0000		SSS	TTT		TTT	
BB	BBH	000		SSS	TTT		TTT	
BB	BE	000		SSS	TITTTT		TTTTTTT	
BSBBBB	BE	000		5555	111	AAA	TTT	SSSS
65	BB	CCC		555	TTT	A	TTT	SSS
HH .	BBF	CCC		<b>SS</b> 3	TTT	AAAAAA	TTT	SSS
8 <b>8</b>	88	CCC	BBBBBBBB	SSS	TTT	AA AA	III	SSS
BBBBBB	BB	000000	00000000	555555	111	AAAAAA	TTT	SSSS

Bondar-Cless Geochemical Statistics Package

Bondar-Cless and Company Ltd., Ottawa

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#### PROJECT: OPAP GEDCANEX LIMITED

Histogram for Gold ( AU ) Values in PPB

	o 10	20	2 of total 30	40	50	in inte	rval
		.     -		-	-	<b>*</b>	;
	  **********	*****	******	k# // ####	******	590	78
1.0	  ************	***				125	16
2.0						24	7
3.0	### 						5
4.0	1*					/	0
	11					1	0
5.0	1					0	0
6.0	}					2	0
7+0	1					0	٥
8.0	1					v	v
9.0	1					0	0
10.0	1					0	0
10+0	1					0	0
11.0	1					1	0
12.0	1					0	G
13.0	1						-
14.0	1					0	0
15 7	1					0	0
19+0						1	0
	     0 10	-11- 20	 30 Z of tota	 40 31	11 50	1	
<b></b>			Sur	mary Stat	istics		
Numb Numb Mini Maxi Maxi Medi	er of samples er of intervals mum value mum value an value	* * * * *	753 16 0.5 21 0.5			Mean value Standard Deviation : Skewness Kurto≲is	: 0.8 1.02 : 12.34 : 213.842

Bondar-Cless & Company Ltd., Ottawa

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PROJECT: OPAP GEOCANEX LIMITED

Histogram for Arsenic ( AS ) Values in PFM

	ť:	10	20	t of tota	1	50	in inte	
	1ł·	1V 	20 	یں 	40 		-1 <b>f</b>	LAQT
	  *****	*******	******	******			246	32
.00	}						2.0	
.55	***** 	********	(******	*****	******	******	375	49
	*****						45	6
).00	   <b>                                  </b>						27	3
1.00							10	1
8.00	14						10	1
2 00	**						14	1
2+90	; ;*						11	1
\$+00	 130						5	٥
0.00	1							-
4.00	 						1	v
	1*						5	0
5+00	1						3	0
2.00	1						•	٥
5.00	1						U	v
).00	1 <b>*</b>						5	0
							1	0
4.00	1						1	. 0
8.00	l F#						٨	•
	1						7	v
	0	10	20		-11 40 1	-11 50	-1	
				Sua	mary Stati	stics		***
Nubbe	er of s	angles	:	753			Mean value :	5.21
Numbe Mini∎	er of in Num valu	ntervals Je	:	16 0.2			Standard Deviation : Skewness :	10.511 7.862
Maxis	eum valo	le	: 1	73.0			Kurtosis :	95.1839
ried14	an valu	2	:	Z+40	AA 4. 1			

Bondar-Cless & Company Ltd., Ottawa

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PROJECT: OPAP GEOCANEX LINITED

Histogram for Los Au ( LOGAU )

			% of total				
	0 10	20 -+	30 	40 	50 -	-1 10 1016	lsva: Ž
	 			· · ·			
0.2249	<b>***********</b> }	********	********	* // ****1	********	<b>X</b> 483	64.1
2t.c+	<b>  ****</b> *********					87	11.6
Hin)	, ! <b>*</b> *					18	2.4
0049	 ! <b>* * * * * * *</b>					53	7.0
051	 ! *****					50	7.8
150	********					J/	7.0
250	****					27	3.6
78.4	**					14	1.9
330	<b>*</b>					4	0.5
450						3	0.4
549	1					-	0.1
549	1					I	0.1
749	1					2	0.3
040	1					0	0.0
чг 	11					1	0,1
47	1					0	0.0
)48	1					٥	0.0
48	3					v	0.0
	11 1					1	0+1
	0 10	-11 20	-11 30 % of total	40	50	1	
			Summ	ary Statis	tics		
Nusbe	er of samples	:	753			Mean value	-0.1699
wape Sinia	er of intervals Hum value	; -0,	.301			Standard Neviation a	2.0642
Maxim	um value	: 1.	322			Kurtosis :	3.1282
necia Nocal	sn value Ranse	; -0. : less	301 than -0,224	9			
/alue	s in model ren	se : 483	( 64.1 % ))	f total )			

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PROJECT: OPAP GEOCANEX LIMITED

Histogram for Log As ( LOGAS )

0 10 20 30 40 50	in inte	erval
	\$	2
1**	15	2.
26 1 1	0	0.
0    ****	31	4.
3 1	77	10
3	//	104
*************************************	199	26.
}*************************************	233	30.
********	63	8.
1   1*****	46	6,
77    ****	32	4.
53 I	28	7.
9	25	
5 1	17	20
# 1	8	1.
	3	0.
	0	0.
24   	1	0.
! !!!!!!!!		
0 10 20 30 40 50 Z of total		
Summary Statistics		
mber of samples : 753	Mean value	0.4462

HOWDEL OF SOMETE:	⊃ +	100	2		116011 A0105	•	V+7704	
Number of interva	als :	15	5		Standard Hevia	tion :	0.41722	
Minimuw value	:	-0.602	?		Skewness	:	0.8355	
Maximum value	;	2,238	}		Kurtosis	:	0.0477	
Median value	;	0.380	)		•			
Modal Ranse	;	greater	than 0.3419 to	less than	0.5505			
Values in modal	range :	233 (	30.9 % of tota	1)				

#### Rondar-Cless & Company Ltd., Ottawa

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REPORT

ON

#### DIAMOND DRILLING

#### OPAPIMISKAN LAKE PROPERTY

#### KENORA MINING DIVISION (PATRICIA PORTION), ONTARIO

FOR

#### ORACLE RESOURCES LTD.

VOLUME 2

(DIAMOND DRILL LOGS)

PATRICIA MINING DIV ECEI E MIG & 1007 A.M. 718 9 10 11 12 1 2 3 4 4

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June, 1987

D.J. Corkery, B.Sc.

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#### APPENDIX G

#### DIAMOND DRILL LOGS

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NAME	OF	PROPERTY	OPAPIMIS	KAN LAKE					
HOLE	۰o.	<u>OP-86-1</u>	LENGTH	428'					
LOCATI	ON	12+10NW	1+00SW						
LATITU	DE		DEPARTURE			··· -			
ELEVAT	ION	·		049°	_ DIP	-43°			
STARTE	D_	September 18,	1986 FINISHED	September	22, 1986	5			

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-43°				
428'	-38°				

#### HOLE NO. 0P-86-1 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844238

LOGGED BY D. J. Corkery

			1	<u></u>								
F 0 0 1	FAGE			1 <i>2</i> /	5 A M P	L E			A	SSA1	· 5	
FROM	то	SUMMARY LOG	NO.	SUL PH- IDES	FROM	TO	TOTAL	36	ч	oz/ton	oz/ton	
0	17,3	CASING					•					
17.3	42.4	BANDED IRON FORMATION		[						!		
42.4	87.3	ULTRAMAFIC VOLCANICS										
87.3	191,3	BANDED IRON FORMATION										
		- 87.3 - 89.0 - sheared, brecciated, 10-15% pyrrhotite, 3-5% pyrite.										
		<ul> <li>159.6 - 161.6 - 7-10% pyrrhotite and 2-4% pyrite in poorly banded sections.</li> </ul>							-			
191.3	193.3	LAMPROPHYRE DIKE										
193.3	245.6	BANDED IRON FORMATION										
245.6	274.5	ULTRAMAFIC VOLCANIC										
274.5	275.2	LAMPROPHYRE DIKE										
275.2	277.1	ULTRAMAFIC VOLCANICS										
277.1	283.1	BANDED IRON FORMATION										
^ .1	284.2	ULTRAMAFIC VOLCANICS										
284.2	369.7	BANDED IRON FORMATION										
		- 284.2 - 289.2 - 7-10% pyrrhotite.										
					1							

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FOO	TAGE				SAMPL	E			ASSAYS		
FROM	то	SUMMARY LOG	NO.	* SULPH	FROM	FOOTAGE	TOTAL	-	OZ TON	OZ TON	
		- 323.2 - 324.5 - 15-20% pyrite and pyrrhotite.									
369.7	371.5	CARNET-BIOTITE SCHIST									
371.5	428.0	ULTRAMAFIC VOLCANICS									
428.0		End of Hole.									
								1			
											2
				į .							
					-						
							ļ				
89											
- 366-11										ĥ	In del
10 10									μı	UV I	
GRIDGE								6	V		
LAN											

NAME OF PROPERTY_____OPAPIMISKAN LAKE HOLE NO. 0P-86-1 SHEET NO. 2 of 2

5

NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P 86-1	LENGTH
LOCATION 12+10 NW,	1+00_SW
LATITUDE	DEPARTURE
ELEVATION	AZIMUTH DIP
crumeron September 18.	1986 September 22, 1986

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTI
0	-43°				
428'	-30°				

HOLE NO. 02-86-1 SHEET NO. 1 of 10

REMARKS _____

PA - 844238

LOGGED BY _______ D.J.Corkery

FOOT	AGE				SAMP	LE			A	SSAI	's	
FROM	то	5 2 5 C K TT TT O K	NO.	SULPH	FROM	FOOT AGE TO	TOTAL	5	,; 0	OZ/TON	oz/ton	
0	17.3	CASING										
17.3	42.4	BANDED IRON FORMATION (B.I.F.) - bands of dark grey to black, light grey, light green and dark green, fine grained, moderately con- torted, bands of chert, hornblende - chlorite and magnetite-grun- erite. Few garnets in hornblende bands; 3.0 yo 5.0% magnetite, 1.0 to 3.0% pyrrhotite and pyrite along fractures and paralled to banding.										
		- 17.3 to 20.1 - typical with 0.5 to 1.0% pyrrhotite and pyrite.										
		- 20.1 to 24.6 - contorted banding with 5.0 to 7.0% pyrrhotite and 0.5 to 1.0% pyrite along fractures along rims of boudinaged chert bands and parallel to band.	5001 5002		17.3 20.1	20.1 24.6	2.8 4.5			tr. tr.		
		- 24.6 to 28.0 - similar to above with 5.0 to 7.0% pyrite and 1.0- 3.0% pyrrhotite.	5003		24.6	28.0	3.4			tr.		
		- 28.0 to 33.6. similar with minor garnet along amphibole bands, 3.0 to 5.0% pyrrhotite and 0.5 to 1.0% pyrite sulfides occur in fractured chert and around chert boudins in amphibole bands.	5004 5005		28.0 31.0	31.0 33.6	3.0 2.6			tr. tr.		
		- 32.1 - trace arsenopyrite										
		- 33.6 to 34.7 - well banded, little contortion of bands, with a angle of bands commonly at 63° to core axis.	5006		33.6	34.7	1.1			tr.		
		- 34.7 to 38.0 - sheared, banding near parallel to core axis, fine grained garnets along some hornblende bands. 1.0 to 2.0 % pyrrhotite and pyrite along shear planes, fractures, and around boundinaged chert band.	5007		34.7	38.0	3.3	\		tr.		

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NAME OF PROPERTY	OPAPIMISKAN LAKE
NAME OF PROPERTY	UTATITISKAN LAKE

HOLE NO. 0P-86-1 SHEET NO. 2 of 10

	FOO	TAGE				SAMPL	Ē		1	ASSAYS		
f	FROM	TO	DESCRIPTION	NO.	SULPH		FOOTAGE			 OZ TON	UZ TON	
			- 38.0 to 42.4 - sheared, brecciated, fragments of chert with chlorite, amphibole and sulfides in the matrix, 5.0 to 7.0% pyrrhotite and pyrite.	5008	IDES	38.0	42.4	4.4		tr.		
	42.4	87.3	<ul> <li>42.2 to 42.4 - near massive pyrrhotite at contact with ultramafics.</li> <li><u>ULTRAMAFIC VOLCANICS</u> - medium to dark grey, fine grained, weak to moderately foliated, mineralogy dominated by tremolite with oriented phlogopite and biotite, talc and serpentine. Trace fine grained disseminated pyrite. Many calcite-chlorite fractures.</li> <li>42.4 to 65.5 - typical, medium grey, dominantly tremolite talc, trace disseminated magnetite.</li> </ul>	5009 5010		42.4 46.1	43.4 48.1	1.0 2.0		tr. tr.		
			<ul> <li>42.4 to 42.6 - contact with banded iron formation, 10.0 to 15.0% pyrrhotite parallel to foliation and along fractures.</li> <li>65.5 to 78.0 - dark grey, very little talc, increased phlogopite and serpentine.</li> <li>66.0 - foliated at 72° to core axis.</li> <li>78.0 to 87.3 - similar to 42.4 to 65.5 but with less talc, trace fine grained magnetite.</li> </ul>									
LANGRIDGES - TORONTO - 366-1168	87.3	191.3	<ul> <li>BANDED IRON FORMATION - bands of dark grey to black, light grey, buff cream and dark green, moderate to well banded, fine to very fine grained bands of chert, hornblende-biotite and magnetite- grunerite with an approximate ratio of 4:3:3 respectively. 10-12% magnetite. 0.5-1.0% pyrrhotite and trace to 0.5% pyrite along fractures and in highly contorted bands as wisps and stringers.</li> <li>- 87.3 to 89.0 - sheared and brecciated with fragments of chert in matrix of amphibole-chlorite. 10-15% pyrrhotite and 3.0-5.0% pyrite in matrix, contortions and chert and fractures.</li> </ul>	5011		87.3	91.0	3.7		tr.		

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-1 SHEET NO. 3 of 10

FOO	TAGE				SAMPL	E			ASSAYS		
FROM	то	DESCRIPTION	NO	SULPH	FROM	FOOTAGE	TOTAL	۰.	OZ TON	UZ TON	
		- 88.7 - trace chalcopyrite. - 89.0 to 91.0 - less sheared with 7.0 to 10.0% pyrrhotite and pyrite.									
		<ul> <li>91.0 to 93.3 - sheared but with high concentration of hornblende bands, 3.0 to 5.0% magnetite, 2.0 to 5.0% pyrrhotite and minor pyrite.</li> <li>91.3 - carbonate veinlet at 25° to core axis; no visible sulfider.</li> </ul>	5012		91.0	93.3	2.3		tr.		
		<ul> <li>93.3 to 129.6 - few hornblende bands, moderately contorted, 0.5 to 1.0% pyrrhotite and trace pyrite.</li> <li>96.0 trace arsenopyrite.</li> <li>98.0 - banding at 70° to core axis.</li> <li>100.0 - 102.0 - fine calcite veinlets (15° to core axis.) They cut pyrrhotite mineralization which is parallel to bedding.</li> <li>109.3 - ½" quartz-calcite veinlet 25° to core axis with alteration at walls, no visible sulfides.</li> </ul>	5013 5014 5015 5016 5017 5018 5019 5020		93.3 98.3 103.3 108.3 113.3 118.3 123.3 126.3	98.3 103.3 108.3 113.3 118.3 123.3 126.3 129.6	5.0 5.0 5.0 5.0 5.0 5.0 3.0 3.3		tr. tr. .01 tr. .01 tr. .01		
801-500 - CHONOL - CRONOL		<ul> <li>- 117.0 - banding at 70° to core axis.</li> <li>- 119.7 - very fine grained pyrite disseminated in chert band.</li> <li>- 121.2 - ½" quartz veinlet no visible sulfides</li> <li>- 129.6 to 146.9 - similar to above with higher concentration of hornblende with grunerite-magnetite bands. Few narrow bands of hornblende with disseminated garnets, highly contorted, trace to 0.5% pyrrhotite.</li> </ul>	5021 5022 5023 5024		129.6 134.6 139.6 144.6	134.6 139.6 144.6 146.9	5.0 5.0 5.0 2.3		.01 .01 tr. .01		

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. _____ OP-86-1 _____ SHEET NO. 4 of 10

FOO	TAGE				SAMPL	. E			ASSAYS		
FROM	то	DESCRIPTION	NO.	", SULPH	FROM	FOOTAGE TO	TOTAL	~.	07 TON	OZ TON	
		- 146.9 to 150.9 - several garnet-biotite schist bands trace to 0.5% pyrrhotite parallel to banding.	5025		146.9	150.9	4.0		tr.		
		- 150.9 to 164.7 - same as 129.6 to 146.7 with 0.5 to 1.0% pyrrho- tite concentrated in heavily contorted sections	5026 5027		150.9 155.9	155.9 159.6	5.0 3.7		tr. tr.		
		<ul> <li>- 152.0 - 154.0 - several chlorite and pyrite coated fractures.</li> <li>- 159.6 - 161.6 - 7.0 to 10.0% pyrrhotite and 2.0 to 4.0% pyrite in poorly banded section.</li> </ul>	5028		159.6	161.6	2.0		tr.		
		<ul> <li>- 161.9 - 163.1 - fine fractures with chlorite quartz and pyrite filling, discordant with band- ing at 65° to core axis.</li> <li>- 164.5 - trace arsenopyrite.</li> </ul>	5029		161.6	164.7	3.1		tr.		
		<ul> <li>- 164.7 to 173.9 - slightly contorted 0.5 to 1.0% pyrrhotite. angles of banding to core axis are as follows:</li> <li>63° @ 168.5' 58° @ 171.0' 62° @ 173.0'</li> <li>- 166.0 - trace arsenopyrite.</li> </ul>	5030 5031		164.7 169.7	169.7 173.9	5.0 4.2		tr. tr.		
- ANGRIDGES - TORONIO - 300-1108		<ul> <li>166.7 - trace chalcopyrite.</li> <li>167.2 - 167.3 - band of 15 to 20% pyrrhotite parallel to banding.</li> <li>171.1 - trace arsenopyrite.</li> </ul>									

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-1 SHEET NO. 5 of 10

FO	OTAGE	DECORDENCE			SAMPL	.E				ASSAYS		
FROM	то	DESCRIPTION	NO	" SULPH		FOOTAGE			~	OZ TON	UZ TON	
		- 173.9 to 176.0 - sheared at 35° to core axis with fragments of	5032	ibes	173.9	178.9	5.0			tr.		
1		chert and grunerite-magnetite in hornblende- chlorite.										
		- 176.0 to 178.0 - well banded, dark magnetite rich bands make up 30° (15 to 20% magnetite)trace to 0.5% sulfi- des.										
		- 178.0 to 179.0 - same as 173.9 to 176.0.										
		- 179.0 to 185.0 - same as 176.0 to 178.0 with trace to 0.5% sul- fides.	5033		178.9	183.9	5.0			tr.		
		- 179.1 - trace chalcopyrite.										
		- 185.0 to 191.3 - grading to larger bands and increases in chert content to 75% chert. trace to 0.5% pyrrhotite.	5034 5035		183.9 188.3	188.3 191.3	5.0 3.0			tr. tr.		
		- 190.8 - 191.3 - >90% chert.										
		- 189.0, 190.5 - fine fractures filled with chlor- ite and pyrite.										
191.	3 193.3	LAMPROPHYRE DIKE - black, massive, fine grained, porphyritic with black phenocrysts and 1.0 to 2.0% calcite as replaced grains and veinlets, heavily chloritized, no visible sulfides.	5036		191.3	193.3	2.0			tr.		
193.	3 245.6	BANDED IRON FORMATION - typical, 0.5 to 1.0% pyrrhotite and trace to 0.5% pyrite.										
1 2		- 193.3 to 195.1 - similar to 185.0 to 191.3 with 75 to 80% chert.	5037		193.3	195.1	1.8			tr.		
Z OHO		- 195.1 to 230.8 - moderately banded, contorted, foliation develop	5038		195.1	200.1	5.0			tr.		
6. 4		ed within beds along which slip has occurred in some cases (generally less than 1 0") 10 to 157	5039		200.1	205.1	5.0			tr.		
HUGES		magnetite.	5040		210.1	212.3	2.2			tr.		
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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO 02-86-1 SHEET NO. 6 of 10

FOO	TAGE	DESCRIPTION			SAMPL	.E			ASSAYS		
FROM	то	DESCRIPTION	NO.	5 SUL PH	FROM	FOOTAGE	TOTAL	۰.	OZ TON	OZ TON	
		- 212.6 - 212.8 - brecciated and quartz-carbon- ate filled and chloritized mafic minerals. quartz-calcite mineralization continues to	5042		212.3	213.3	1.0		tr.		
		213.1. The boundaries of brecciated unit occur at 45° to core axis.	5043		213.3	218.3	5.0		tr.		
		- 215.9 - 217.4 - chloritic clots along gruner- ite and hornblende bands.	5044 5045		218.3	223.3	5.0 5.4		tr. tr.		
		- 229.1 - 229.3 - quartz vein with fine grained garnets at contacts and 0.5 to 1.0% pyrrhotite at contacts.	5046		228.7	229.7	1.0				
		- 230.8 to 245.6 - regular banding with little contortion. Band- ing gradually gets narrower, ½"to½"at 231.0 to <1/8" at 245.0. Garnets develop in narrower amphibole bands.	5047 5048 5049		229.7 234.7 238.7	234.7 239.7 242.2	5.0 5.0 2.5		tr. tr. tr.		
		- 233.0 -banding at 66° to core axis. - 242.0 - 243.0 - contorted bands.									
		- 243.0 - 243.2 - massive pyrrhotite and pyrite along a shear (3/2 pyrrhotite to pyrite) lower boundary 70° to core axis, parallel to banding,	5050		242.2	243.2	1.0		tr.		
86		upper boundary is at 50° and cuts banding. - 244.0 - banding is at 62° to core axis.	5051		242.2	245.6	2.6		tr.		
245.6	274.5	ULTRAMAFIC VOLCANIC - medium to dark grey with greenish hue, weakly foliated at 57° to core axos, mineralogy dominated by tremolite-actinolite with several dark clots containing fine grained magnetite no visisble sulfides.									
ANGRIGGE		- 245.6 to 251.5 - typical									

#### NAME OF PROPERTY_____ OPAPIMISKAN LAKE

FOOTAGE SAMPLE ASSAYS DESCRIPTION % SUL PH FOOTAGE NO. FROM то OZ TON OZ TON 1 ~ IDE 5 FROM TO TOTAL 251.3 253.3 5052 - 251.5 to 253.3 - several narrow tremolite bands. 2.0 tr. - 253.3 to 274.5 - dominated by talc-tremolite. 274.5 275.2 5053 274.4 275.4 1.0 LAMPROPHYRE DIKE - dark grey to black, fine grained, porphyritic, tr. massive, many fine calcite grains, weakly magnetic. 275.2 277.1 ULTRAMAFIC VOLCANICS 5054 275.4 277.1 1.7 tr. - 275.2 to 276.1 - typical. - 276.1 to 276.3 - 10.0 to 15.0% pyrrhotite and pyrite, trace chalcopyrite. - 276.3 to 277.1 - fine to very fine grained, dark green to black, dominantly hornblende. 277.1 283.1 BANDED IRON FORMATION - typical, moderately well banded, contorted, 5055 277.1 280.1 3.0 tr. 280.1 283.1 .01 1.0 to 2.0% pyrrhotite parallel to banding and trace to 0.5% pyrite 5056 3.0 as fracture coatings. 1.0 to 2.0% garnets in hornblende bands. 283.1 5057 283.1 284.2 284.2 ULTRAMAFIC VOLCANICS - typical, trace magnetite, trace to 0.5% 1.1 tr. calcite as fracture coatings, trace disseminated pyrite. 284.2 369.7 BANDED IRON FORMATION - typical, 60% light grey bands, 25% dark grey bands, and 15% cream-green bands, 12 to 15% magnetite. 5058 - 284.2 to 289.2 - atypical, poorly banded, highly contorted, 7.0 284.2 289.2 5.0 tr. to 10% pyrrhotite as blebs, wisps and stringers in contorted amphibole and along fractures. 5059 289.2 294.2 - 289.2 to 322.2 - contorted banding, 1.0 - 2.0% garnet along 5.0 tr. hornblende bands, trace to 0.5% pyrrhotite. 294.2 299.2 5060 5.0 tr. 5061 299.2 304.2 5.0 tr. - 289.5 -  $\frac{1}{3}$ " band of pyrrhotite 58° to core axis 5062 304.2 309.2 5.0 tr. 5063 309.2 314.2 5.0 (parallel to banding) tr. 5064 314.2 319.2 5.0 tr.

5065

319.2 322.7

3.5

tr.

0P-86-1 HOLE NO. __

SHEET NO. ____7 of 10

366-1158 TORONTO -ANGRIDGES

366-1168

TORONTO

_ANGRIDGES -

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. __OP-86-1_______ SHEET NO.8 of 10

FOOT	AGE				SAMPL	E				ASSAYS		
FROM	tO		NO.	7, SULPH	FROM	FOOTAGE TO	TOTAL	Ÿ.	7	OZ TON	02 TON	
		- 297.0 - 300.0 - banding almost parallel to core axis.										
		- 304.5 - 2.0" fractured chert with pyrrhotite as fracture filling.										
ĺ		- 322.2 to 330.7 - little contortion, regular banding dominantly chert and grunerite-magnetite bands.										
1		- 323.2 - 323.6 - near massive pyrrhotite with 5.0 to 7.0% pyrite	5066		322.7	324.7	2.0			tr.		
		- 323.2 to 324.5 - 15.0 to 20.0% pyrite and pyrrhotite (3:2 ratio of pyrite to pyrrhotite)	5067 5068		324.7 327.7	327.7 330.7	3.0 3.0			tr. tr.		
		- 330.7 to 334.7 - fine, irregular, contorted banding 330.9 to 331.2 quartz vein with 0.5 to 1.0% pyrrhotite along fractures as wisps.	5069 5070		330.7 331.7	331.7 336.7	1.0 5.0			.01 tr.		
		- 334.7 to 350.0 - more regular banding, low to moderately con- torted, boundinaging of chert bands, intraband laminations visible, trace to 0.5% pyrrhotite	5071 5072 5073 5074		336.7 340.2 341.2 346.2	340.2 341.2 346.2 351.2	3.5 1.0 5.0 5.0			tr. tr. .01		
		- 340.4 - 341.2 - quartz vein with 0.5 to 1.0% pyrrhotite and pyrite along fractures which are filled with chlorite and calcite. Vein is at 17° to core axis.										
		- 346.0 - banded at 57° to core axis.	ļ									
		- 349.0 - ½" calcite band.										
		- 350.0 to 368.5 - moderately contorted, in hornblende and chlorite bands.	5075 5076 5077 5078		351.2 356.2 361.2 366.2	356.2 361.2 366.2 369.7	5.0 5.0 5.0 3.5			.02 tr. .01 tr.		

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#### NAME OF PROPERTY OPAPIMISKAN LAKE HOLE NO. ______ OP-86-1 ______ SHEET NO. 9 of 10

F001	TAGE				SAMPI	.Е		[		ASSAYS		
5.0.01	7.0	DESCRIPTION	NO.	7 SUL PH		FOOTAGE						
FROM	10			IDES	FROM	то	TOTAL	L ·	<u> </u>	02 104	02 104	
369.7	371.5	-368.5 to 369.7 - garnetiferous chlorite-hornblende bands. <u>GARNET BIOTITE SCHIST</u> - black with clear and pink garnets, poorly banded, schistose, dominantly biotite and garnets with minor chlorite. 0.5 to 1.0% pyrrhotite in biotite matrix. - 370.0 - banded at 51° to core axis.	5079		369.7	371.5	1.8			tr.		
371.5	428.0	<ul> <li>ULTRAMAFIC VOLCANICS - light grey to dark grey-green, fine grained, mineralogy dominated by tremolite with many fine fractures and veinlets of carbonate with alteration visible around veinlets. No visible sulfides with veinlets. Unit also has foliations indicated by phlogopite and serpentine.</li> <li>-371.5 to 389.4 - medium to dark green, well foliated, tremolite with minor phlogopite many fine calcite veinlets (1/16 to 1/32")</li> <li>- 389.4 to 394.3 - banded light grey, medium grey-green and dark green-brown bands rich in tremolite, serpen- tine and phlogopite.</li> <li>- 393.0 - foliated at 67° to core axis.</li> <li>- 394.3 to 398.0 - talc schist.</li> </ul>										
		<ul> <li>- 398.0 to 399.7 - sheared light green with dark brown angular clots, dominated by serpentine.</li> <li>- 399.7 to 402.0 - dark greyish green, well foliated, tremolite-serpentine.</li> <li>-402.0 to 407.0 - dark grey, near massive, fine grained tremolite with minor serpentine.</li> </ul>	5080		398.0	399.7	1.7			tr.		

FOOTAGE FROM TO

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	ł	OLE NO	о. <u>ОР</u>	-86-1		SHE	EET NO.	10	of 10	
			SAMPL	.ε				ASSAYS		
DESCRIPTION	NO.	" SULPH		FOOTAGE			M	07 108	07 TON	
		IDES	FROM	to	TOTAL	•	•	01 ION	01 100	
milar but with 0.5 to 1.0% disseminated fine ained magnetite, sometimes forming clots. 11 foliated, dark grey-green, tremolite- tinolite with minor serpentine. Foliated at ° to 65° to core axis.										
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NAME OF PROPERTY___

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OPAPIMISKAN LAKE

		- 407.0 to 413.0 - similar but with 0.5 to 1.0% disseminated fine grained magnetite, sometimes forming clots.							
		- 413.0 to 428.0 - well foliated, dark grey-green, tremolite- actinolite with minor serpentine. Foliated at 60° to 65° to core axis.							
428.	0	End of Hole.							
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366-1168			-					(] .	MAR'
TORONTO -	K.						M	WIM	N ¹⁷
IGRIDGES -							H		
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NAME OF PROPERTY	OPAPIMISK	AN LAKE		
HOLE NO	LENGTH	818'		
LOCATION 12+10NW 2+(	DOSW			
LATITUDE	_ DEPARTURE			
ELEVATION	_ AZIMUTH	049°	D1P	<u>-50.5°</u>
STARTED September 24, 1986	FINISHED	September 29,	1986	

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH
0	-50.5				
818.0'	-28,5°				

HOLE NO.  $\frac{OP-86-2}{SHEET}$  SHEET NO.  $\frac{1 \text{ of } 2}{SHEET}$ 

REMARKS _____ Summary Log

PA - 844238

LOGGED BY ____ D. J. Corkery

FOOT	TAGE	DESCRIPTION			SAMP	LE		ASSAYS					
FROM	то	SUMMARY LOG	NO.	SUL PH-	FROM	FOOT AGE TO	TOTAL	"	*6	OZ/TON	oz/ton		
0	30.0	CASING											
30.0	45.5	ULTRAMAFIC VOLCANICS											
45.5	61.5	BANDED IRON FORMATION											
61.5	370.1	ULTRAMAFIC TO MAFIC VOLCANICS											
		- 102.2 to 103.0 - schistose with many calcite filled fractures.	5086		102.1	103.1	1.0			.06		:	
370.1	371.6	LAMPROPHYRE DIKE											
371.6	473.5	ULTRAMAFIC VOLCANICS											
473.5	539.7	BANDED IRON FORMATION											
		- 521.2 to 525.2 - several concordant and discordant quartz veins, 5-7% pyrrhotite and trace to 0.5% pyrite.	5112		521.2	525.2	4.0			.06			
539.7	571.1	ULTRAMAFIC TO MAFIC VOLCANICS											
571.1	775.5	BANDED IRON FORMATION											
0NTQ - 366		<ul> <li>- 639.8 to 645.2 - weakly banded, 7-10% magnetite,</li> <li>0.5-1.0% pyrrhotite.</li> </ul>	5135		639.8	645.2	5.4			.06			
NDGES - TORC		<ul> <li>- 657.2 to 674.3 - well banded, moderately contorted 15-17% magnetite, 2-5% pyrrhotite and trace-0.5% pyrite.</li> </ul>	5140 5141		662.2 667.2	667.2 672.2	5.0 5.0			.08 .06			
ANG.		- 690.0 to 723.8 - contorted, 3-5% pyrrhotite	5149		700.0	705.0	5.0			.08			

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			HOLE NO0P-86-2						SHEET NO 2 of 2					
FOO	TAGE				SAMPL	.E				ASSAYS				
FROM	то	SUMMARY LOG	NO.	SULPH, IDES	FROM	FOOTAGE TO	TOTAL		·,	UZ TON	OZ TON			
		- 700.8 - 701.4 - 20 to 25% calcite.												
775.5	816.1	PELITIC SEDIMENTS - trace to 0.5% sulfides.	5172		795.5	800.5	5.0			.06				
816,1	818.0	ULTRAMAFIC VOLCANICS												
818.0		End of Hole.												
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OPAPIMISKAN LAKE

NAME OF PROPERTY____

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NAME OF	PROPERTY	<u> </u>	SKAN LAKE	
HOLE NO.	<u>OP-86-2</u>	LENGTH	818'	
LOCATION	<u>12+10NW</u>	2+00SW		
LATITUDE		DEPARTURE .		
ELEVATION	I	AZIMUTH	049° DIP	<u> </u>
STARTED _	September 24	1986 FINISHED	September 29	1986

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	50.5°				
818' -	28.5°				

HOLE NO. 02-86-2 SHEET NO. 1 of 12

REMARKS _____

PA - 844238

LOGGED BY D. J. Corkery

FOOT	TAGE				SAMP	LΕ		A 5 5 A Y 5					
FROM	то		NO.	SUL PH-	FROM	FOOTAGE TO	TOTAL	5	<i>"</i>	oz/ton	oz/ton		
0	30,0	CASING									1		
30.0	45.5	ULTRAMAFIC VOLCANICS - medium grey, fine grained, schistose, folia- tion at $47^{\circ}$ to core axis. Mineralogy dominated by talc with minor tremolite and serpentine. Several narrow (1/4" to 1/8") white bands containing talc and carbonate. Carbonate (0.5-1.0%) occurs within these bands and as disseminations. No visible sulfides.											
45.5	61.5	BANDED LRON FORMATION - dark green-grey to black, fine to very fine grained, poor to moderately banded, bands of chert, hornblende- chlorite-garnet-magnetite, contorted. 1.0 to 2.0% pyrrhotite and pyrite in strongly contorted hornblende-rich bands.											
		- 45.5 to 51.1 - light and dark grey bands with 10 to 15% mag- netite, 0.5 to 1.0% pyrrhotite and pyrite along fractures.	5081 5082		45.5 48.5	48.5 51.1	3.0 2.6			tr. tr.			
		- 51.1 to 56.2 - banded chert and garnetiferous bands. 30 to 40% chert bands, 60 to 70% garnet-hornblende-chlorite with 8.0 to 10% magnetite, 1.0 to 2.0% pyrrhotite, contorted.	5083		51.1	56.2	5,1			tr.			
		<ul> <li>- 56.2 to 61.5 - interbedding of chlorite schist and chert, 3 to 1 ratio of schist to chert, 2.0 to 5.0% magnetite, 7.0 to 10% pyrite and pyrrhotite with trace chalcopyrite.</li> </ul>	5084		56.2	61.5	5.3			.02			
1.5	370.1	ULTRAMAFIC TO MAFIC VOLCANICS - light to dark grey, fine grained, well foliated, dominated by tremolite and actinolite with sections high in talc-serpentine and chlorite, nil to trace sulfides. Few fine, well spaced and randomly oriented siliceous bands.											

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LANGRIDGES TORONTO - 366-1168

NAME OF PROPERTY	OPAPIMISKAN LA	KE
HOLE NO 0P-86-2	SHEET NO	2 of 12

FOO	TAGE				SAMPI	LE	·	ASSAYS						
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE TO	TOTAL		~.	02 TON	OZ TON			
		- 61.5 to 64.3 - medium green with brown biotite foliations, dominantly talc and tremolite with minor serpentine												
		- 64.3 to 79.8 - dark grey-green, schistose, well broken.												
		- 65.0 - foliated at 58° to core axis.												
		- 69.0 - foliated at $48^{\circ}$ to core axis.								-				
		- 71.5 - 73.0 - loss of core "mud seam".												
		- 79.8 to 93.5 - dark grey-green fine grained, tremolite - actino- lite with serpentine, biotite and talc. Talc dis- seminated, trace fine grained pyrite parallel to foliation.												
		<ul> <li>- 83.3, 83.5 - 3/4" to 1" quartz-calcite veinlets, fine grained, contain ultramafic fragments (xenoliths). No visible sulfides.</li> </ul>	5085		83.1	84.1	1.0			tr.				
1		- 89.0 - foliated at 60° to core axis.												
		- 93.5 to 100.0 - dominantly tremolite/actinolite with foliations of phlogopite and serpentine.												
		- 100.0 to 102.0 - as in 79.8 to 93.5.												
		- 102.0 to 105.8 - schistose with fine calcite filled fractures. - $102.0 - 103.0$ - high concentration of fractures.	5086		102.1	103.1	1.0			.06				
		- 105.8 to 111.0 - as in 79.8 to 93.5.	5087		109.5	110.9	1.4			tr.				
		- 111.0 to 121.2 - schistose, strong lineations along foliation plane, several quartz and calcite filled fractures.												
		- 109.5 - 110.9 - sheared and brecciated with quartz and calcite filling, no visible sulfides.												

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- 366-1168

. ANGRIDGES - TORONTO

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-2 SHEET NO. 3 of 12

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FOOT	AGE				SAMPL	E		ASSAYS					
FROM	то	. DESCRIPTION	NO	SULPH IDES	FROM	FOOTAGE	TOTAL	;	۰,	OZ TON	OZ TON		
		<ul> <li>- 121.2 to 158.5 - moderate to well foliated, tremolite-actinote with phlogopite and serpentine.</li> <li>- 137.0 - 140.0 - fractured and 2.0 to 5.0% calcite filling.</li> </ul>	5088		137.0	140.0	3.0			tr.			
		- 149.0 - foliated at 52° to core axis. - 157.0 - foliated at 62° to core axis.											
		- 158.5 to 159.2 - quartz-carbonate alteration zone, retains fol- iation, distinct contacts, no visible sulfides.	5089		158.0	159.2	1.2			tr.			
		- 159.2 to 162.9 - same as 121.2 to 158.5. - 162.9 to 164.9 - quartz-sulfide alteration 7.0 to 10.0% pyrrho- tite and pyrite, alteration visibly fed by fractures at 164.4.	5090		162.9	164.4	1.5			tr.			
		<ul> <li>- 164.4 to 165.2 - same as 121.2 to 158.5.</li> <li>- 165.2 to 179.0 - light to medium grey, fine grained dominantly talc with minor tremolite several calcitic fractures and veinlets.</li> <li>- 169.2 - 170.2 - strong calcitic mineralization, no visible sulfides.</li> </ul>	5091		168.8	170.8	2.0			tr.			
		<ul> <li>179.0 to 207.0 - moderately foliated, fine grained, tremolite with chloritic foliations common fractures of calcite often at 40 to 45° to core axis.</li> <li>207.0 to 208.0 - talc schist with minor tremolite.</li> <li>208.0 to 208.9 - 3.0 to 5.0% pyrrhotite as wisps and stringers in silicified zone. Narrow band of quartz and partially silicified ultramafics. Highly con-</li> </ul>	5092		207.1	208.9	1.8			. 04			
		torted and foliated.							ĺ				

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO 0P-86-2 SHEET NO 4 OF 12

SAMPLE ASSAYS FOOTAGE DESCRIPTION SUL PH FOOTAGE NO FROM то 02 TON OZ TON .... IDES TO TOTAL FROM - 208.9 to 246.6 - same as 179.0 to 207.0 with sparce foliation of phlogopite and gradual loss of chlorite till nil at 219.0. - 208.9 - 213.4 - several quartz clots with mild 5093 208.9 213.4 4.5 tr. alteration around these. - 214.0 - 215.6 - talc schist. - 217.2 - 218.0 - quartz-calcite altered zone. 5094 217.0 218.0 1.0 tr. - 246.6 to 260.8 - increase in phlogopite to create strong foliation, at some points completely surrounding tremolite.Several dark brown clots containing short euhedral crystals with lengthwise striations (augite?) - 256.0 - foliated at 65° to core axis. - 260.8 to 262.0 - increase in talc content. - 262.0 to 267.8 - dark grey-green, strongly foliated, silica 5095 262.7 267.8 5.1 tr. alteration and few garnets in highly contorted sections with quartz. 12 to 15% pyrrhotite and 3.0 to 5.0% pyrite from 262.7 to 267.8, trace yellow alteration with pyrite. - 267.8 to 370.1 - similar to 246.6 to 260.8 grading back to moderate phlogopite as foliations and bands 2" to2" wide minor chlorite. Amphiboles are actinolite tremolite with actinolite dominating. - 297.0 - foliated at 65° to core axis. - 262.3 - 268.3 - several quartz veinlets with 5096 262.3 263.3 1.0 tr. alteration haloes  $(\frac{1}{2})$ , no visible sulfides. 5097 264.9 268.3 3.4 tr. - 360.0 - foliated at 58° to core axis.

### NAME OF PROPERTY_____OPAPIMISKAN LAKE

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HOLE NO 0P-86-2 SHEET NO 5 of 12

FOO	TAGE				SAMPL	.E		ASSAYS						
FROM	то	DESCRIPTION	NO	N SUL PH	FROM	FOOTAGE TO	TOTAL	•		OZ TON	UZ TON			
370.1	371.6	LAMPORHPYRE DIKE - black with fine grains of calcite, porphyritic with black phenocrysts (except those replaced by calcite), heavily chloritized, visible pyroxine pseudimorphs, 0.5 to 1.0% fine grained pyrite with the calcite	5098		370.0	371.7	1.7			tr.				
371.6	473.5	<u>ULTRAMAFIC VOLCANICS</u> -some as before lamprophyre dike. - 371.6 to 414.2 - typical.												
		- 284.0 - foliated at 48° to core axis. - 414.2 to 418.7 - several quartz veinlets with 1/8" to ½" alter- ation rims (cream coloured) veinlet are orien- ted at 45° to 50° to core axis.	5099		414.2	418.7	4.5			tr.				
		<ul> <li>- 417.2 - trace pyrite and orange alteration within veinlet.</li> <li>- 418.7 to 471.3 - typical.</li> <li>- 462.4 - 464.0 - quartz, chlorite and brown biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein. Biotite and biotite in an erratic ½" to ½" vein.</li> </ul>	5100		462.4	464.0	1.6			tr.				
473.5	539.7	chlorite occur as ½" masses. No visible sulfides - 471.3 to 473.5 - talc-chlorite schist, grades from talc to chlorite with both containing tremolite. <u>BANDED IRON FORMATION</u> - bands of dark grey, medium grey and buff cream green, 1/8" to ½" bands, fine grained, contorted. 6:2:3 ratio of chert to horblende to grunerite bands. 7.0 to 10% magnetite. 0.5 to 1.0% pyrrhotite trace pyrite.												
		- 473.5 to 475.3 - no magnetite with 1/16 to 1/8" contorted bands. 1.0 to 2.0% pyrrhotite as fracture fillings.	5101		473.5	475.3	1.8			tr.				
LANGRIDGES -		- 475.3 to 477.3 - 70 to 75% chert, 1.0 to 2.0% magnetite, 3.0 to 4.0% pyrrhotite and 1.0 to 2.0% pyrite as wisps and stringers.	5102		475.3	477.3	2.0			tr.				
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# NAME OF PROPERTY OPAPIMISKAN LAKE HOLE NO OP-86-2 SHEET TO 6 of 12

F001	TAGE				SAMPL	.E		 	A55.A¥5	5		
FROM	10		но	SUL PH IDE S	FRUM	FOOTAGE 10	TUTAL		of the	62 T (N		
		- 477.3 to 486.4 - moderately banded, highly contorted rare garnets, 1.0 to 2.0% pyrrhotite and minor pyrite occuring in contorted bands and fracture fillings.	5103 5104		477.3 482.3	482.3 487.3	5.0 5.0		.04 .02			
		<ul> <li>- 481.7 - 482.0 - quartz rich band with 10 to 15% pyrrhotite.</li> <li>- 486.4 to 503.5 - well banded at 33° to core axis, less contorted many chlorite coated micro fractures with up to 1/16" displacement along them. Fractures commonly at 18° to core axis. 2.0 to 4.0% garnets in hornblende bands. 2.0 to 4.0% pyrhotite dominantly parallel to banding.</li> </ul>	5105 5106		487.3 492.3	492.3 497.3	5.0 5.0		tr. tr.			
		<ul> <li>- 498.0 - graphitic lamination.</li> <li>- 503.3 to 515.7 - thin bands (1/3" to 1/8"), weakly magnetic (1.0 to 3.0% magnetite), 1.0 to 2.0% carbonate as bands; 0.5 to 1.0% pyrrhotite paralled to bands.</li> <li>- 506.0 - banded at 55° to core axis</li> </ul>	5107 5108 5109 5110		497.3 502.3 507.3 512.3	502.3 507.3 512.3 517.4	5.0 5.0 5.0 5.1		tr. tr. tr. tr.			
		<ul> <li>- 515.7 to 521.2 - typical, contorted banding.</li> <li>- 521.2 to 525.2 - several quartz veins with contorted bands at contact with veins. Veins contain wisps of hornblende. Veins are both concordant and discordant. 5.0 to 7.0% pyrrhotite and trace to 0.5% pyrite along fractures in veins and in as wisps and stringers in wall rock at contact.</li> </ul>	5111 5112		517.4 521.2	521.2 525.2	3.8 4.0		.02 .06			
. 1		- 525.2 to 526.2 - same as 515.7 to 521.2.										

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**TORON** 

LANGRIDGE

NAME OF PROPERTY	OPAPIMISKAN LAKE	

HOLE NO.	<u>OP-86-2</u>
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SHEET NO. 7 of 12

F001	AGE				SAMPL	_E			ASSAYS		
FROM	то		NO.	V SULPH	FROM	FOOTAGE	TOTAL		OZ TON	02 TON	
		- 526.2 to 527.6 - 5.0 to 7.0% garnet and decrease in magnetite- grunerite with 10 to 15% pyrrhotite parallel to banding.	5113		525.2	530.2	5.0		tr.		
	-	<ul> <li>- 526.9 - trace chalcopyrite with pyrrhotite.</li> <li>- 527.6 to 530.5 - low angle banding (0 - 20° to near parallel), narrow bands 10 to 15% garnets.</li> </ul>									
		- 530.5 to 533.5 - contorted, 2.0 to 4.0% garnets, 1.0 to 3.0% magnetite, 2.0 to 4.0% pyrrhotite parallel to banding.	5114		530.2	533.5	3.3		tr.		
		- 533.5 to 534.8 - quartz veins separated by narrow sections of wallrock, 0.5 to 1.0% pyrrhotite in veins and 3.0 to 5.0% in adjacent wallrock.	5115		533.5	534.8	1.3		.04		
		- 534.8 to 536.8 - 80 to 85% dark brown to black amphibole rich bands with 15 to 20% quartz rich bands. 1.0 to 3.0% magnetite: contorted.	5116		534.8	539.7	5.1		,02		
		- 536.8 to 539.7 - typical, contorted, 0.5 to 1.0% pyrrhotite.									
539.7	571.1	ULTRAMAFIC TO MAFIC VOLCANICS - dark green-grey, fine grained, moderately foliated, dominantly tremolite/actinolite with chlorite and minor biotite and quartz, trace sulfides.									
	,	- 539.7 to 543.9 - typical.			-						
		- 541.9 - 543.5 - increase in chlorite to near chlorite schist.									
		- 543.9 to 544.9 - quartz-plagioclase vein (½" wide) adjacent wallrock is weakly bleached. No visible sulfide.	5117		543.9	544.9	1.0		tr.		

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO 00-86-2 SHEET NO 8 of 12

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F001	TAGE				E			ASSAYS	SAYS			
FROM	10	BESCHI HON	NO	* SULPH	EROM	FOOTAGE	TOTAL	·.	UZ TON	UZ TON		
F001 FROM	775.5	<ul> <li>DESCRIPTION</li> <li>544.9 to 549.0 - higher content of chlorite than typical and several 2" sections containing clots of euhedral brown amphibole and biotite.</li> <li>549.0 to 559.0 - typical, trace sulfides.</li> <li>559.0 to 571.1 - moderately foliated to weakly banded, banded sections appear tuffaceous (eg. 567.0 to 571.1) several ½ to 1.0" quartz bands. No visible sulfides.</li> <li>563.0 - foliated at 65° to core axis.</li> <li>BANDED IRON FORMATION - typical, moderately well banded, contorted banding angles constantly changing. 0.5 to 1.0% pyrrhotite.</li> <li>571.1 to 594.9 - moderately well banded with several 2" to 5" quartz bands. 1.0 to 2.0% pyrrhotite in fractures in quartz, at boundaries with magnetite amphibole and with wisps of amphibole in quartz.</li> <li>594.9 to 631.6 - well banded 12 to 15% magnetite, increase in grunerite. Band angles constantly changing because of folding, with most between 15 and 40° to core axis.</li> <li>595.0 - banded nearly parallel to core axis.</li> <li>605.8 - 606.8 - trace arsenopyrite with pyrthotite, chlorite and calcite.</li> <li>631.4 - 631.6 - large garnets (up to 3/4")</li> </ul>	NO 5118 5119 5120 5121 5122 5123 5124 5125 5126 5127 5128 5129 5130	SUL PH	571.1 571.1 576.1 581.1 586.1 591.1 594.9 600.0 605.0 610.0 615.0 620.0 625.0 628.0	576.1 576.1 581.1 586.1 591.1 594.9 600.0 605.0 610.0 615.0 520.0 625.0 628.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	·.	.02 .02 .02 tr. .02 tr. .02 tr. .02 tr. .02 .02 .02 .02 .02 .02	07.108		

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NAME OF PROPERTY OPAPIMISKAN LAKE NAME OF PROPERTY_OPAPIMISKAN LAKE HOLE NO 0P-86-2 9 of 12

FOOT	AGE				SAMPL	E			ASSAYS		
FROM	то	DESCRIPTION	NO	* SULPH IDES	FROM	FOOTAGE TO	TOTAL		07 TON	OZ TON	
		- 631.6 to 633.0 - silicified, quartz occurs as a fine network of veinlets, apparently replacing both magnetite and amphibole, trace to 0.5% pyrrhotite in un- silicified banded iron formation.	5131		631.6	633.0	1.4		tr.		
		- 632.0 - graphitic lamination.									
ľ		- 633.0 to 634.0 - same as 594.9 to 631.6.	5132		633.0	634.0	1.0		.02		
		- 634.0 to 635.5 - quartz vein with wisps of chlorite and horn- blende, trace pyrite along fractures.	5133		634.0	635.5	1.5		tr.		
		- 635.5 to 639.8 - near massive magnetite with few ½" chert/am- phibole bands(10%) at 8-10° to core axis. 0.5 - 1.0% pyrrhotite parallel to bands.	5134		635.5	639.8	4.3		tr.		
		- 639.8 to 645.2 - weakly banded chert-amphibole with 7.0 to 10.0% magnetite, banded at 0 to 10° to core axis.	5135		639.8	645.2	5.4		.06	1	
		- 645.2 to 657.2 - same as 635.8 to 639.8 with pyrrhotite also in fractures in bands in chert.	5136 5137 5138		645.2 649.2 653.2	649.2 653.2 657.2	4.0 4.0 4.0		tr. tr. .02		
		- 657.2 to 674.3 - well banded, moderately contorted, 15 - 17% mag- netite occurring as bear massive bands, 2.0 to 4.0% pyrrhotite and trace to 0.5% pyrite.	5139 5140 5141 5142		657.2 662.2 667.2 672.2	662.2 667.2 672.0 675.2	5.0 5.0 5.0 3.0		.02 .08 .06 .02		
		- 674.3 to 680.2 - similar with increased chert and garnet- horn- blende band 1.0 to 2.0% pyrrhotite.	5143		675.2	680.2	5.0		.02		
		- 680.2 to 684.3 - similar to above with strong fracturing with quartz, chlorite and carbonate filling.	5144		680.2	684.3	2.1		tr.		
		- 684.3 to 687.3 - similar to 657.2 to 674.9 with 2.0 to 4.0% pyrrhotite.	5145		684.3	687.3	3.0		.02		

#### NAME OF PROPERTY_OPAPIMISKAN LAKE

HOLE NO OP-86-2

SHEET NO 10 of 12

SAMPLE ASSAYS FOOTAGE DESCRIPTION FOOTAGE SUL PH 110 FROM 10 07 TON 67 TON IDE 5 TOTAL EROM to - 683.0 - lineations along fracture, fracture is at 40° to core axis. 687.3 690.6 3.3 - 687.3 to 690.0 - similar to 680.2 to 684.3 with several chloritid 5146 .02 bands (apparently altered) o.5 to 1.0% pyrite as fracture fillings. - 688.0 - 689.0 - brecciated. 690.6 695.0 4.4 .02 - 690.0 to 723.8 - typical, contorted, with 3.0 to 5.0% pyrrhotite 5147 generally in band dilations. 5148 695.0 700.0 5.0 .02 700.0 705.0 5.0 .08 5149 5.0 .02 - 700.8 - 701.4 - 20 to 25% medium grained calcite 5150 705.0 710.0 710.0 715.0 5.0 tr. 5151 in bands. .04 720.0 5.0 5152 715.0 .02 - 702.5 - 703.4 - garnetiferous. 5153 720.0 723.8 3.0 - 708.9 - 709.9 - coarse grained pink garnets in chlorite-biotite matrix, trace to 0.5% pyrrhotite. 723.8 724.8 1.0 - 723.8 to 731.6 - three 1.0 to 1.6 foot bands of garnet, grunerit \$5154 tr. and chlorite with minor biotite. 30 - 35% medium5155 724.8 725.8 1.0 .02 to coarse grained garnets, trace to 0.5% magne- 5156 725.8 727.4 1.6 tr. 5157 727.4 730.6 3.2 .02 tite. 1.0 - 2.0% pyrrhotite at contact with 5158 730.6 731.6 1.0 .02 typical banded iron formation. The bands are at: 723.8 to 724.8 725.8 to 727.4 730.6 to 731.6 Between these bands is typical banded iron formation. 731.6 736.6 5.0 5159 - 731.6 to 741.0 - typical as in 690.0 to 724.7 with 2.0 - 4.0% .02 736.6 741.0 4.4 5160 .02 pyrrhotite.

			н	OLEN	o. <u>OP</u>	-86-2		SHE	EET NO.	1	1 of 1	2
FOO	TAGE	DEFCRIPTION			SAMPL	.E				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH		FOOTAGE			-	OZ TON	OZ TON	<u> </u>
775.5	816.1	<ul> <li>- 733.7 - 734.9 - garnetiferous with several chert boudins oriented 30° to the core axis.</li> <li>- 736.1 - ½" pyrrhotite bleb.</li> <li>- 741.0 to 773.3 _ less contorted bedding than typical, higher grunerite content (2: 1 grunerite to hornblende), 0.5 to 1.07 pyrrhotite. Banding angle to core axis is:</li> <li>45° @ 756.0 50° @ 766.0 53° @ 760.0</li> <li>- 744.2 - trace arsenopyrite.</li> <li>- 773.3 to 775.5 - 1.0 to 3.0% garnet-hornblende-biotite bands, spaced about 6" apart grading into garnet-biotite schist.</li> <li>PELITIC SEDIMENTS - weakly contorted, 1/8" to 1/2" bands consisting of: a) dark grey, fine grained, finely laminated quartz, grunerite, hornblende, with minor chlorite and 1.0 to 3.0% disseminated magnetite, trace to 0.5% sulfides. b) black, fine grained with fine to coarse pink polkiloblasts; consisting of biotite-garnet schist with minor quartz and no magnetite.</li> <li>- 775.5 to 769.0 - 50 to 60% b, 40 to 50% a.</li> </ul>	5161 5162 5163 5164 5165 5166 5167	IDES	741.0 746.0 751.0 766.0 766.0 771.0	746.0 751.0 756.0 761.0 771.0 771.0 775.5	5.0 5.0 5.0 5.0 5.0 5.0 4.5			.02 .04 .02 .04 tr.		
		<ul> <li>796.0 to 806.0 - 70 to 80% b, 20 to 30% a.</li> <li>806.0 to 816.1 - dominantly garnet-biotite schist compositionally banded (garnet content), few narrow chert bands with 0.5 - 1.0% magnetite.</li> </ul>	5169 5170 5171 5172 5173 5174 5175		780.5 785.5 790.5 795.5 800.5 805.5 810.5	785.0 790.5 795.5 800.5 805.5 810.5 816.1	5.0 5.0 5.0 5.0 5.0 5.0 5.6			.02 .04 .04 .06 tr. tr. tr.		

OPAPIMISKAN LAKE

NAME OF PROPERTY.

LANGRIDGES - TORONTO - 366-1168

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-2 SHEET NO. 12 OF 12

SAMPLE ASSAYS FOOTAGE DESCRIPTION FOOTAGE * SULPH NO. FROM то 02 TON OZ TON -٦, TO TOTAL DES FROM Banding angles to core axis are as follows: 45° 0 776.0 786.0 40° 0 47° 0 700.0 0 47° 814.0 816.1 818.0 ULTRAMAFIC VOLCANICS - dark green, fine grained, well foliated at 5176 816.1 818.0 1.9 tr. 67° to core axis, schistose, tremolite-actinotlite-serpentine, no visible sulfides. 818.0 End of Hole. Marine ANGRIDGES - TORONTO - 366-1168

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NAME OF	PROPERTY	OPAP1	MISKAN LAKE	
HOLE NO.	<u>OP-86-3</u>	LENGTH	378'	·····
LOCATION	L13+00NW	2+48NE		
LATITUDE		DEPARTURE		
ELEVATION	·	AZIMUTH	229°	DIP45°
STARTED	October 1, 19	286 FINISHED	October 3, 19	86

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.09				
378'	-32.3				· · · · · ·

HOLE NO. 0P-86-3 SHEET NO. 1 of 1

REMARKS <u>Summary Log</u>

PA - 844238

LOGGED BY D. J. Corkery

FOOT	FAGE			_	SAMP	LE			,	SSA	Y 5	
FROM	то	SUMMARY LOG	NO.	SUL PH	FROM	FOOT AGE TO	TOTAL	*6	ĸ	OZ/TON	oz/ton	
0	14.0	CASING										
14.0	28.3	CARNET-BIOTITE SCHIST										
28.3	38.0	INTERBEDDED GARNET-BIOTITE SCHIST AND MAFIC VOLCANICS										
38.0	46.3	ULTRAMAFIC VOLCANICS										
46.3	47.3	LAMPROPHYRE DIKE										
47.3	94.0	ULTRAMAFIC VOLCANICS										
94.0	155.5	BANDED IRON FORMATION - trace to 0.5% pyrrhotite and pyrite, laminated to banded, some highly contorted sections.	5192		125.0	130.0	5.0			.05		
155.5	191.7	GARNETIFEROUS METASEDIMENTS										
191.7	240.1	BANDED IRON FORMATION										
		- 193.3 to 196.0 - 7.0-10% pyrrhotite.										
240.1	242.6	LAMPROPHYRE DIKE					4					
242.6	320.6	BANDED IRON FORMATION - 0.5-1.0% pyrrhotite.										
		<ul> <li>242.6 to 263.6 - dominantly chert and magnetite- grunerite bands.</li> </ul>	5221		252.6	257.6	5.0			.06	AVY	DAN
		- 280.8 to 283.4 - 10-12% pyrrhotite, 1.0-3.0% pyrite.									1Â	$\mu^{n}$
320.6	378.0	ULTRAMAFIC TO MAFIC VOLCANICS								14	79 ×	
378.0		End of Hole.										

NAME OF	PROPERTY			OP	APIMI	SKAN L	AKE
HOLE NO.	<u>OP-86-3</u>		LENGTH _	378'			
LOCATION	L 13NW	2+48	NE	<u></u>			
LATITUDE			DEPARTUR	E			
ELEVATIO	ч <u> </u>		AZIMUTH	<u>229°</u>		_ DIP	<u>-45.0°</u>
	October 1:	st. 1986		October	3rd,	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.0				
378'	-32.3				

HOLE NO. _______ SHEET NO. 1_ OF 7

REMARKS _____

PA - 844238

LOGGED BY D.J. Corkery

FOOT	AGE				SAMP	LΕ			A	SSAY	S	
FROM	то		NO.	SUL PH-	FROM	FOOTAGE TO	TOTAL	8	Ϋ́	OZ/TON	OZ/TON	
0	14.0	CASING										
14.0	28.3	GARNET-BIOTITE SCHIST (G.B.S.) - dark grey to black with 1/16" to 1/8" pink garnets, schistose, weak compositional banding. Mineral- ogy dominated by biotite with 20.0 - 25.0% disseminated garnets and minor quartz. Few narrow (½ to ½") chert bands which are commonly boudinaged and contorted. Weak iron staining along fractures, trace pyrite. - 20.0 - 1/16" wide quartz, calcite and pyrite. - 27.0 - bands at 48° to the core.	5177 5178 5179		14.0 19.0 24.0	19.0 24.0 28.3	5.0 5.0 4.3			tr. .02 tr.		
28.3	38.0	INTERBEDDED GARNET-BIOTITE SCHIST AND MAFIC VOLCANICS - 60% garnet- biotite schist and 40% mafic volcanics. Garnet biotite schist-atypical with many fine fractures surrounded by light grey alteration. Mafic volcanics-dark green, fine grained massive to weakly foliated, hornblende with minor chlorite and chloritic fractures, several qu- artz filled fractures at 60° to 65° to core axis, no visible sul- fides. - 37.0 - 37.5 - 5.0 - 7.0% pyrite with calcite veinlets.	5180 5181		28.3 33.0	33.0 37.5	4.7 1.0			tr. .04		
		- 37.5 - 38.0 - quartz-tourmaline vein along contact with unit below and swings up into garnet-biotite schist,	5182		37.5	38.5	1.0			tr.		

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO 0P-86-3 SHEET NO 2 of 7

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F001	TAGE	DESCOND X ION			SAMPL	E				ASSAYS	
FROM	τo	DESCRIPTION	NO	* SULPH IDES	FROM	FOOTAGE	TOTAL	•	•	07 TON	UZ TON
38.0	46.3	<u>ULTRAMAFIC VOLCANICS</u> - medium grey, fine grained moderately foliated, soft, dominantly actinolite, talc and serpentine with diss nated magnetite clots which tend to increase in size toward 46.3. Contact with above garnet-biotite schist is distinct with $\frac{1}{2}$ " to 1.5" quartz-tourmaline veins (these contain no visible sulfides.)	em 1 –								
46.3	47.3	LAMPROPHYRE DIKE - black, massive, porphyritic fine grained with phenocrysts up to 1/8". 2.4 - 4.07. calcite as grains and veinlets, heavily chloritized, trace fine grained disseminated pyrite. Contacts at 35° to core axis.	5183		46.3	47.3	1.0			tr.	
47.3	94.0	ULTRAMAFIC VOLCANICS - same as 38.0 to 46.3, magnetite clots increating size toward the centre of the unit and then decrease in size and abundance toward the lower contact.	e								
		<ul> <li>47.3 - 90.6 - typical.</li> <li>90.6 - 94.0 - schistose, dark green; highly sheared, foliated at 58° to core axis (possibly fault gouge).</li> <li>93.8 - 1/8" quartz, plagiœlase, tourmaline veinlet with trace very fine grained disseminated pyrite.</li> </ul>	5184		93.0	94.0	1.0			tr.	
94.0	155.5	BANDED IRON FORMATION - bands of medium grey, dark green to black and a few white bands, well banded (generally $1/8"$ to $1/4"$ ), fine grained, low to moderate contortion of bands, 50 to 60% of bands are chert, 8.0 - 10.0% magnetite which occurs as fine grained disseminations. Dark green to black bands are hornblende, biotite ±garnet with grunerite haloes, trace to 0.5% pyrrhotite and pyrite parallel to bands and along fractures. Many chert bands have been boudinaged. Grunerite content tends to increase toward 156.5, several fold closures as well as changing band angles around them.									
		- 94.0 to 96.4 - high chert content and low in magnetite.	5185		94.0	96.4	2.4			tr.	

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-3 SHEET NO. 3 of 7

F001	AGE				SAMPL	. E			ASSAYS		}
FROM	70		NO.	* SUL PH	FROM	FOOTAGE TO	TOTAL		02 TON	02 TON	
		- 96.4 - 100.3 - highly garnetiferous (70 to 80%) with biotite matrix, narrow chert beds, very low magnetite content.	5186		96.4	100.3	3.9		tr.		
		- 100.3 - 107.4 - typical low contortion of bands several small microfaults (0 to 30° to core axis) with up to ½" displacement.	5187 5188	5187 5188 100.3 105.0		105.0 110.0	4.7 5.0		tr. tr.		1
1		- 102.0 - banding at 40° to core axis.									
		- 107.4 - 128.8 - bands have many intra band laminations (commonly in chert with alternating magnetite rich and poor laminations)	5189 5190 5191 5192	5189110.05190115.05191120.05192125.0		115.0 120.0 125.0 130.0	5.0 5.0 5.0 5.0		tr. .03 .02 .05		
		- 117.7 - 118.7 - wide garnet/biotite rich bands.			Ì						
		- 115.0 - banding at 60° to core axis.									
		- 124.0 - banding at 53° to core axis.									
		- 128.8 - 155.5 - highly contorted with many fractures, boudinaged chert bands and several fold closures ( eg.134.1) many fractures show displacement (up to ½")	5193 5194 5195 5196 5197	5193         130.0           5194         135.0           5195         140.0           5196         145.0           5197         150.0		135.0 140.0 145.0 150.0 155.5	5.0 5.0 5.0 5.0 5.5		tr. tr. .02 tr. tr.		
155.5	191.7	- 155.5 - 161.5 - dark green to black matrix for the dominantly garnet unit, weak to nil magnetite, several cal- cite veinlets and zones around which the matrix is altered to a light cream green.	5198 5199		155.5	158.5 161.5	3.0 3.0		.02 tr.		

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-3 SHEET NO. 4 of 7

FOO	TAGE				SAMPL	Ē			ASSAYS		· · · ·
FROM	то	DESCRIPTION	NO.	* SULPH	FROM	FOOTAGE	TOTAL	, <u> </u>	OZ TON	OZ TON	
		<ul> <li>-161.5 - 191.7 - dark green to black matrix with pink garnets, compositional banding with garnet content varying from 50% to greater than 80%. Zones of high garnet content have fine grained garnets while zones with less garnets have coarse grained garnets. The matrix consists of hornblende and biotite. Several quartz veinlets alter the surrounding rock to a light buff cream colour. There are few 1" to 2" wide grunerite/magnetite bands. Trace to 0.5% pyrite.</li> <li>167.8 - fine grained pyrite along fractures as coating with calcite.</li> <li>188.3 - 189.8 - calcite vein with coarse euhedral disseminated tourmaline, and minor quartz K-alter ation occurs at the vein contacts, trace pyrite</li> </ul>	5200 5201 5202 5203 5204 5205 5206 5207		161.5 166.5 171.5 176.5 181.5 186.5 186.5	166.5 171.5 176.5 181.5 186.5 188.3 198.8 191.7	5.0 5.0 5.0 5.0 5.0 1.8		tr. tr. tr. tr. tr. tr.		
191.7	240.1	at contacts and ½" pyrrhotite bleb within the vein. Vein is discordant with the sediments. <u>BANDED IRON FORMATION</u> - typical but with fewer and narrower garnet- iferous bands. Increase in grunerite content. Chert bands occupy 30%. Grunerite/magnetite bands are finely laminated. Unit is mod- erately contorted; 0.5 to 1.0% pyrrhotite parallel to banding and nost often in contorted sections. - 191.7 - 193.3 - typical - 193.3 - 196.0 - 7.0 to 10.0% pyrrhotite as wisps and stringers with associated tourmaline.	5208 5209 5210 5211 5212 5213 5214 5215 5216 5217		191.7 196.0 201.0 211.0 216.0 221.0 226.0 231.0 236.0	196.0 201.0 206.0 211.0 211.0 221.0 226.0 231.0 236.0 240.1	4.3 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 4.1		.02 tr. tr. tr. tr. tr. tr. tr. .04 .02		

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-3 SHEET NO. 5 of 7

FOOT	TAGE				SAMPI	- E			ASSAYS 02 TON 62 TON 		
FROM	TO	DESCRIPTION	NO.	". SUL PH	FROM	FOOTAGE	TOTAL		~.	OZ TON	OZ TON
				[							
		- 196.0 - 240.1 - typical.									
ļ		- 214.2, 215.2 - ź" quartz calcite veinlets cut bands at 45° to core axis.									
		- 228.5 - banding at 48° to core axis.									
		- 236.0 - banding at $38^{\circ}$ to core axis.									
240.1	242.6	LAMPROPHYRE DIKE - typical with several $1/8"$ calcite veinlets at $34^{\circ}$ to core axis, no visible sulfides.	5218		240.1	242.6	2.5			tr.	
242.6	320.5	BANDED IRON FORMATION - typical 50-60% chert bands, $20-25\%$ iron rich bands, $15-20\%$ garnet/amphibole, low to moderately contorted. $0.5 - 1.0\%$ pyrrhotite.									
:		- 242.6 - 263.6 - few hornblende and /or garnet rich bands. Domin-	5219		242.6	247.6	5.0			tr.	
		antly chert and magnetite/grunerite rich bands.	5220	1	247.6	252.6	5.0	1		.04	
			5221		252.6	25/.6	5.0			.06	
			5223		260.6	263.6	3.0			.04	
		- 263.6 - 266.3 - three ½" to 1½" quartz-chlorite-calcite-pyrite filled brecciated bands with banded iron formation fragments in the matrix.	5224		263.6	266.3	2.7			tr.	
		- 266.3 - 269.0 - as in 242.6 to 263.6	5225		266.3	269.0	2.7			tr.	
		- 269.0 - 280.8 - typical trace to 0.5% pyrrhotite weakly contorted	5226		269.0	274.0	5.0	1		tr.	}
		few garnets.	5227	1	274.0	277.0	3.0	I		tr.	
ļ		- 279.0 - banding at 50° to core aixs.	5228		277.0	280.8	3.8			tr.	
		- 280.8 - 283.4 - 10.0 to 12.0% pyrrhotite, 1.0 to 3.0% pyrite in contorted bands near fold closure.	5229		280.8	282.4	2.6			.04	
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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-3 SHEET NO. 6 of 7

F00-	TAGE				SAMPL	E		Γ		ASSAYS		
FROM	то	DESCRIPTION	NO.	". SUL PH	FROM	FOOTAGE	TOTAL		,	OZ TON	UZ TON	
		- 283.4 - 300.2 - same as 269.0 to 280.8.	5230		283.4	288.2	4.8			tr.		
		- 287.5 - banding at 60° to core axis.	5231		288.2	293.2	5.0	j		tr.		-
		- 290.0 - banding at 48° to core axis.	5232		293.2	297.2	4.0			tr.		
		- 299.0 - banding at $47^{\circ}$ to core axis.	5233		297.2	300.2	3.0			tr.		
		- 300.2 - 303.7 - less grunerite and increase in horblende. 20 to 25% garnet biotite bands. 1.0 to 3.0% pyrrhotite, banding generally at 35° to core axis.	5234		300.2	303.7	3.5			tr.		
		- 303.7 - 320.5 - typical with an increase in grunerite and chert and low garnet hornblende content.	5235 5236 5237 5238		303.7 308.5 313.5 317.5	308.5 313.5 317.5 320.5	4.8 5.0 4.0 3.0			tr. tr. tr. tr.		
320.5	378.0	ULTRAMAFIC TO MAFIC VOLCANICS - Interbedded ultramafic flows and mafic tuff. 3:2 ratio of flows to tuffs. Flows - dark grey with brown foliations, fine grained, moderately foliated at 52° to core axis. Mineralogy dominated by tremolite with phlogopite and biotite foliations. Tuffs - medium to dark green with light grey bands. fine grained, well foliated, tremolite with minor hornblende and grunerite. Common fine silicious interbeds. - 320.5 - 334.0 - typical - 334.0 - 337.8 - sheared tuff with 15 - 20% pyrrhotite and 1.0 - 2.0% pyrite.	5239		334.0	337.8	3.8			tr.		
		- 337.8 - 345.0 - tuff with 7.0 to 10.0% fine grained disseminated magnetite crystals (not concentrated in bands as in Banded iron formation) Weakly sheared, trace to 0.5% pyrrhotite parallel to foliation.	5240 5241		337.8 341.0	341.0 345.0	3.2 4.0			tr. tr.		

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#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. ____OP-86-3______ SHEET NO.7 of 7_____

FOO	TAGE		SAMPLE AS					ASSAYS				
ERON	TO	DESCRIPTION	NO	" SULPH		FOOTAGE			l	0.7. 70.1	67 TON	
		- 361.0 - 361.3 - quartz vein, fine grained, no visible sulfides at 23° to core axis.	5242	IDES	580M	то 363.0	2.0	•		tr.		
		- 362.6 - 363.0 - same as 361.0 to 361.3. - 345.0 - 378.0 - typical.										
378.0		End of Hole.										
										Å	() de	//h ⁽⁾

NAME OF	PROPERTY _	<u> </u>	<u>ISKAN LAKE</u>			
HOLE NO.	<u>OP-86-4</u>	LENGTH	526'			
LOCATION	<u>13+04NW</u>	2+00SW				
LATITUDE		DEPARTURE	<u></u>			
ELEVATION		AZIMUTH	049°	DIP .	<u>-49°</u>	
STARTED	October 4. 1	.986 FINISHED	October 6.	1986		

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-49.0				
526'	-32.3				

HOLE NO. OP-86-4 sheet NO. 1 of 1

REMARKS ______ Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOOT	FAGE				5 A M P	LE			A	SSAY	′s	
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	~	ĸ	OZ/TON	oz/ton	
0	22.0	CASING					<b>_</b>					
22.0	89.2	BANDED IRON FORMATION										
89.2	99.0	ULTRAMAFIC VOLCANICS										
99.0	119.5	BANDED IRON FORMATION - 8-10% pyrrhotite, 0.5-1.0% pyrite, trace arsenopyrite.										
119.5	304.9	ULTRAMAFIC TO MAFIC VOLCANICS										
		- 278.9 to 289.5 - brecciated, 20-25% pyrrhotite, pyrite, trace chalcopyrite.										
304.9	361.7	BANDED_IRON FORMATION (LEAN)										
361.7	366.7	ULTRAMAFIC VOLCANICS										
366.7	367.8	LAMPROPHYRE DIKE										
367.8	470.2	ULTRAMAFIC VOLCANICS										
² 470.2	478.6	BANDED IRON FORMATION									A	1. 20
8 1 478.6	479.1	GREYWACKE								_γ	VXVA	Q.''
470 1	505.8	BANDED IRON FORMATION										
1		- 502.8 to 505.8 - 7.0-10% pyrrhotite.								4	1	
505.8	526.0	ULTRAMAFIC VOLCANICS								]		
526.0		End of Hole.										

NAME O HOLE NO LOCATIO LATITUD ELEVATIO STARTED	F PROPE D N3 E DN D OCTOB	OPAPIMISKAN LAKE         -86-4       Length       526'         +04NW       2+00SW	FOOTAGE 0 - 526' -	ыр 49 <u>0°</u> 32.3°	AZ IMU	TH FOOTAGE	DIP	AZIMUTH	HOLE REMA LOGGE	NO. <u>OP-</u> RKS	<u>86-4</u> s+ PA - 84 D. J. (	4238 Gorkery	<u>1 of 8</u>
FOOT	FAGE					SAM	PLE				SSA	YS	
FROM	то				10. SU 10	ES FROM	F00T/	TOTAL	,; 0	5	OZ/TON	OZ/TON	
0 22.0	22.0	CASINGBANDED IRON FORMATION - bands of light grey, dark grey tolight cream-green bands of chert and magnetite-gruneritefine grained, moderate to well banded (1/4" to 1/2" bandAverage ModesChert 50 - 60%Amphibole 20 - 30%Magnetite 15 - 20%Pyrhotite 0.5 - 1%Pyrite trace - 0.5%Iron-rich bands are dominantly magnetite-grunerite withhaloes with minor hornblende. Sulphides occur as fractureand in areas of strong contortions as wisps and stringertorted zones boudinaging of chert bands is common as isfaulting with displacement of up to 1/2" (commonly 1/16"Several quartz-carbonate veinlets occur at 40° - 45° toaxis. Few of these veinlets contain biotite, chlorite apyrite.	grunerit s). grunerit re filli s. In c micro- to 1/4" the core and minor	and ende, ngs on- ).	243	22.	0 27	.0 5.0			tr.		

5243 22.0 27.0 5.0 tr.

- 28.8 - quartz-carbonate veinlet. - 30.8 - quartz-carbonate veinlet.

angles and several fold closures.

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-4

_____ SHEET NO. 2.01 8

SAMPLE ASSAYS FOOTAGE DESCRIPTION SUL PH FOOTAGE NO FROM то OZ TON 02 TON . 17 IDE S FROM 10 TOTAL - 29.0 - 38.0 - typical with 1.0 to 2.0% pyrrhotite. 5244 27.0 32.0 5.0 tr. - 31.5 - banding at 50° to core axis. 5245 5.0 32.0 37.0 tr. - 38.0 - 45.6 - less well banded at various angles to the core 5246 37.0 42.0 5.0 tr. axis. Several chlorite coated fractures with trace 5247 42.0 47.0 5.0 tr. pyrite. - 44.2 - 45.2 - garnet/hornblende rich section. . - 47.9 - 48.0 - quartz vein, no visible sulfides. - 45.6 - 67.2 - typical, banding angle varies from 40° to 65° to 5248 47.0 52.0 5.0 tr. core axis. 5249 52.0 57.0 5.0 tr. 5250 57.0 62.0 5.0 tr. 5251 62.0 67.2 5.2 tr. - 53.0 - 53.2 - quartz vein, no visible sulfides. - 53.9 - strong pyrrhotite mineralization in fractures in chert band. - 67.2 - 69.6 - well fractured with fillings and coatings of quartz 5252 67.2 69.6 2.4 tr. calcite, chlorite and trace to 0.5% pyrite. Minor increase in garnet content. - 69.6 - 72.2 - increase in garnets, which are fine grained, sub-5253 69.6 72.2 2.6 tr. hedral and occur along hornblende bands. - 72.2 - 73.3 - quartz vein, with 0.5 - 1.0% pyrrhotite and pyrite 5254 72.2 73.3 1.1 tr. along the contact with banded iron formation and in nearby wall rock. - 72.8 - 72.9 - banded iron formation typical, (xenolith?).

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-4 SHEET NO. 3 OF 8

FOOT	FAGE				SAMPL	.E			ASSAYS		
FROM	то	DESCRIPTION	NO	N SULPH	FROM	FOOTAGE	TOTAL	5	UZ TON	UZ TON	
F001	99.0	<ul> <li>DESCRIPTION</li> <li>73.3 - 82.8 - typical, moderate to highly contorted with common boudinaging of chert bands.</li> <li>82.8 - 85.0 - increase in garnets (5.0 to 7.0%) along hornblende bands.</li> <li>85.0 - 87.0 - typical.</li> <li>87.0 - 87.5 - 7.0 to 10.0% pyrrhotite along fractures and in near massive magnetite band as a network.</li> <li>87.5 - 89.2 - typical.</li> <li>ULTRAMAFIC VOLCANICS - light to dark grey, schistose, fine grained, dominantly talc schist with tremolite and very weak calcite alteration, no visible sulfides.</li> <li>89.2 - 93.5 - distinct contorted tremolite bands. <ul> <li>91.6 - 91.7 - ground section (possible fault gouge)</li> <li>93.5 - 99.0 - typical with foliation at 60° to 65° to core axis.</li> <li>95.8 - 96.5 - previous foliation evident at low</li> </ul> </li> </ul>	ND 5255 5256 5257 5258	- SULPH IDES	SAMPL 73.3 78.3 83.3 86.3 86.3	E FOOTAGE TO 78.3 83.3 86.3 89.2 93.5	101AL 5.0 5.0 3.0 2.9 4.3		.01 tr. tr. tr.	62 TON	
99.0	119.5	angle to core axis and visible overprinting of 60 to 65° foliation. <u>BANDED IRON FORMATION</u> - atypical, weak to moderately well banded, contorted, with 8.0 to 10.0 % pyrrhotite, 0.5-1% pyrite and trace arsenopyrite occuring parallel banding in amphibole/magnetite bands and in fractures in chert bands as well as in necked zone of bound- inaged chert bands, pyrite occurs mainly along chloritic fractures. - 99.0 - 103.3 - moderately banded, and contorted, 2.0 to 4.0% pyrrhotite.	5260		99.0	104.0	5.0		tr.		

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 00-86-4 SHEET NO. 4 of 8

F001	AGE				SAMPL	Ē		[	 ASSAYS		
FROM	то	DESCRIPTION	NO.	". SULPH	FROM	FOOTAGE TO	TOTAL		OZ TON	UZ TON	
		- 100.1 - 101.4 - 15.0-20.0% pyrrhotite. - 103.3 - 106.0 - well banded, little contortion, 1.0 to 2.0% pyrrhotite. - 115.0 - band at 60° to core axis.	5261		104.0	109.0	5.0		.02		
		- 106.0 - 117.2 - moderate banding and contortion, 10.0 to 15.0% pyrrhotite, minor pyrite and trace chalcopyrite.	5262 5263		109.0 104.0	114.0 117.0	5.0 3.0		tr. tr.		
		- 117.2 - 118.1 - massive unit, 20.0 - 25% pyrrhotite.	5264		117.0	118.0	1.0		tr.		
		- 118.1 - 119.5 - typical 5.0 to 7.0% pyrrhotite.	5265		118.0	119.5	1.5		tr.		
119.5	304.9	ULTRAMAFIC TO MAFIC VOLCANICS - light to dark green/grey, massive to well foliated, fine grained, dominantly tremolite/actinolite with sections of talc schist and few serpentinized fractures, trace disseminated pyrite. - 119.5 - 154.6 - light to medium grey, dominantly talc and trem-									
		olite, schistose, abundant tremolite bands (tuff?) which are often contorted.									
80.		- 154.6 - 267.5 - medium to dark grey green, well foliated with foliation indicated by alignment of biotite and phlogopite, talc also occurs along foliations, foliated at 65° to 75° to core axis, several quartz calcite veinlets.									
		- 165.2 - ½" quartz/calcite veinlet, no visible sulfides.	5266		164.7	165.7	1.0		tr.		
		- 198.4 - 198.5 - quartz veinlet which cuts foliat- ion, no visible sulfides.	5267		198.0	199.0	1.0		tr.		

_ANGRIDGES - TORONTO - 366-1168

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-4 SHEET NO. 5 of 8

FOOT	AGE				SAMPL	.E				ASSAYS	
FROM	то	DESCRIPTION	NO.	", SUL PH		FOOTAGE			<u>م</u>	02 TON	07 TON
				IDES	FROM	10	TOTAL	•			
		- 203.2 - 203.3 - quartz calcite veinlet, no vis- ible sulfides.	5268		202.9	203.9	1.0			tr.	
		- 206.0 - 206.4 - several quartz calcite veinlets.	5269		205.8	206.8	1.0			tr.	
		- 267.5 - 271.4 - well fractured and mineralized with calcite and quartz as a network and as veinlets. 2.0 - 4.0% pyrrhotite and pyrite associated with but sep- arate from these.	5270		267.5	271.4	3.9			tr.	
ļ		- 271.4 - 274.0 - as before with little to nil phlogopite, higher ratio of actinolite to tremolite.									
		- 274.0 - 278.9 - similar with abundant quartz filled fractures (1/16") with ½ to½" wide, cream coloured alter- ation haloes.	5271		274.0	278.9	4.9			tr.	
		- 276.8 - 277.2 - 5" alteration band with trace pyrite and galena in the veinlets.									
		- 278.9 - 289.5 - mineralized zone, brecciated, 20.0 to 25.0% pyrrhotite, pyrite (2:1 pyrrhotite to pyrite), trace to 0.5% chalcopyrite non-sulfides are quartz (very fine grained) amphibole and minor garnets. Quartz and garnets are also fractured and filled with sulfide.	5272 5273		278.9 284.2	284.2 289.5	5.3 5.3			tr. tr.	
		- 289.5 - 296.2 - dominantly actinolite with several quartz/calcite filled fractures. (1/32")									
		- 296.2 - 298.5 - as in 274.0 to 278.9 - except with minor calcite vein up to ½".	5274		296.2	298.5	2.3			tr.	

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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 02-86-4 SHEET NO. 6 OF 8

F00	TAGE	DESCRIPTION			SAMPL	E				ASSAYS		
FROM	то		NO.	% SULPH	FROM	FOOTAGE	TOTAL	•	۳.	02 TON	OZ TON	
304.9	361.7	<ul> <li>298.5 - 302.2 - typical, dominantly actinolite.</li> <li>302.2 - 304.0 - same as 296.2 to 298.5.</li> <li>304.0 - 304.9 - same as 296.2 to 302.2.</li> </ul> BANDED IRON FORMATION (LEAN) - medium grey/green with 20% dark grey bands and 15-20% light grey chert bands, 1-3% magnetite concentrating in dark grey bands, high in grunerite, moderate to highly contorted, band angles are quite variable. 0.5-1.0% pyrrhotite. <ul> <li>304.9 - 317.4 - typical.</li> <li>317.4 - 329.0 - banding at very low angle, mainly near parallel to 527</li> </ul>		IDES	302.0 304.9 310.0 315.0 320.0	70 303.0 310.0 315.0 320.0 325.0	1.0 5.1 5.0 5.0 5.0			.03 .01 tr. tr.	07 104	
,		<ul> <li>- 329.0 - 355.0 - typical.</li> <li>- 351.7 - 3/4" bleb of pyrrhotite.</li> <li>- 355.0 - 355.3 - brecciated zone with strong chlorite, quartz and carbonate filling. 10.0 to 15.0% pyrite as blebs.</li> <li>- 355.2 - 357.2 - quartz, chlorite, carbonate vein nearly parallel core axis with chlorite, quartz and minor carbonate and tourmaline in adjacent wall rock, trac 0.5% pyrite along fractures and vein.</li> <li>- 357.5 - 361.7 - typical.</li> </ul>	5279 5280 5281 5282 5283 5284 5285 5286 e-		320.0 325.0 330.0 335.0 345.0 350.0 355.0 355.0	325.0 330.0 340.0 345.0 355.0 355.0 357.5	5.0 5.0 5.0 5.0 5.0 5.0 2.5			tr. .02 tr. tr. tr. tr. tr.		

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#### NAME OF PROPERTY____OPAPIMISKAN LAKE

HOLE NO. OP-86-4 SHEET NO. 7 OF 8

FOOT	TAGE				SAMPL	.E			ASSAYS		
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL		OZ TON	UZ TON	
361.7 366.1	366.1 367.8	ULTRAMAFIC VOLCANIC - typical, talc schist, minor calcite (2-4%) <u>LAMPROPHYRE DIKE</u> - black, massive, fine to very fine grained, por- phyritic; with strong calcite alteration dominant chlorite with chlorite pseudomorphs; trace disseminated pyrite.	5288		366.1	367.8	1.7		tr.		
367.8	470.2	<ul> <li><u>ULTRAMAFIC VOLCANICS</u> - typical.</li> <li>- 367.8 - 369.8 - talc/tremolite schist grading to dominantly tremolite at 469.9'.</li> <li>- 369.8 - 459.8 - dominantly tremolite with minor altinolite, moderately foliated with phlogopite chlorite and</li> </ul>									
		<ul> <li>biotite few fine quartz calcite fractures and narrow quartz calcite bands, no visible sulfides</li> <li>- 459.9 - 462.3 - sheared with strong foliation and visible band of silicification as well as increased talc, phlogopite and biotite, foliation variable but 35% core axis is dominant.</li> </ul>	5289	t t	459.8	462.3	1.5		tr.		
470.2 ع	478.6	<ul> <li>- 462.3 - 467.5 - talc/tremolite schist.</li> <li>- 467.5 - 470.2 - similar to 460.1 to 462.0 with less shearing.</li> <li>BANDED IRON FORMATION - typical as with 22.0 to 89.2.</li> <li>- 470.2 - 474.0 - weak to poorly banded with quartz, calcite and pyrrhotite replacement of magnetite, 5.0 - 7.0%</li> </ul>	5290		470.2	474.0	3.8		tr.		
- 1000010 - 366-1	479.1	pyrrhotite. - 474.0 - 478.6 - strongly banded, highly contorted, trace to 0.5% pyrrhotite. <u>GREYWACKE</u> - dark grey, massive, fine to medium grained, composed	5291 5292		474.0 478.4	478.4 479.4	4.4 1.0		tr. tr.		
- ANGRIDGES		OF grains of quartz, feldspar, biotite and calcite, trace pyrite and clays, distinct contact with banded iron formation.									

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### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 00-86-4

SHEET NO. 8 OF 8

F001	AGE		SAMPLE					ASSAYS				
FROM	то	DESCRIPTION	NO,	SULPH	EBOM	FOOTAGE	TOTAL		~.	07 TON	UZ TON	· · ···
479.1	505.8	BANDED IRON FORMATION - typical, strongly magnetic, well banded moderate to strongly contorted, with few fold closures visible, 0.5 to 1.0% pyrrhotite.	5293		479.4	484.4	5.0			tr.		
		<ul> <li>- 479.1 - 481.1 - 60 to 70% garnet/biotite bands.</li> <li>- 481.1 - 502.8 - typical.</li> <li>- 502.8 - 505.8 - similar to 470.2 - 484.0 with 7.0 - 10.0% pyrrhotite as blebs and wisps.</li> </ul>	5294 5295 5296 5297 5298		484.4 489.4 494.4 498.4 502.8	489.4 494.4 498.4 502.8 505.8	5.0 5.0 5.0 4.4 3.0			tr. tr. tr. tr. .01		
505.8	526.0	ULTRAMAFIC VOLCANICS - medium grey, fine grained, well foliated to weakly banded, dominantly tremolite with minor talc, chlorite and serpentine foliations with several ½" bands of fine euhedral actinolite with calcite (flow tops?) banding could indicate tuffs or sheared flows.										
526.0		End of Hole.										
											Â	M.
											<i>]]"</i>	

NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	0P-86-5	LENGTH	25	9'	
LOCATION	14+00NW	5+00sw			
LATITUDE		DEPARTURE			
ELEVATION	۷	AZIMUTH	<u>049°</u>	_ DIP	46.6°
STARTED	October 8, 19	86 FINISHED	October 9.	1986	

FOOTAG	E DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	46.6°				
	1				

HOLE NO. OP-86-5 SHEET NO. 1 of 1

REMARKS _____ Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOO	TAGE	DESCRIPTION			SAMP	LE			A	SSAN	′ S	
FROM	то	SUMMARY LOG	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	36	26	OZ/TON	OZ/TON	1
0	30.0	CASING										
30.0	86.4	GARNET-BIOTITE-QUARTZ SCHIST										
86.4	104.0	BANDED IRON FORMATION (LEAN)										
104.0	126.1	ULTRAMAFIC VOLCANICS										
126.1	149.6	INTERBEDDED BANDED IRON FORMATION and GARNETIFEROUS METASEDIMENTS										
149.6	160.1	GARNETIFEROUS METASEDIMENTS										
160.1	198.6	BANDED IRON FORMATION										
198.6	212.0	ULTRAMAFIC VOLCANICS			r .							
212.0	235.5	BANDED IRON FORMATION										
		225.3 to 228.7 - 2.0-4.0% pyrrhotite and pyrite.										
		228.7 to 235.5 - 5.0-7.0% pyrrhotite and pyrite.										
235.5	236.8	ULTRAMAFIC VOLCANICS										
236.8	238.0	BANDED IRON FORMATION $-5.0-7.0\%$ pyrite and pyrrhotite.			2						NA A	Will
238.0	259.0	ULTRAMAFIC VOLCANICS								$\Delta I$	A JA	-
2 3		End of Hole.								$\Psi$	ľ	
0000										J		

NAME OF	PROPERTY	<u>OPAPIM</u>	<u>ISKAN LAKE</u>		
HOLE NO.	OP-86-5	LENGTH		259'	·····
LOCATION	14+00NW	5+00SW			
LATITUDE		DEPARTURE			
ELEVATION	I	AZIMUTH	049°	DIP	<u>-46.6°</u>
STARTED _	October 8, 19	86 FINISHED	October	9 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.6				
259'	-37.5				

HOLE NO. 0P-86-5 SHEET NO. 1 of 5

REMARKS

PA - 844238

LOGGED BY D. J. Corkery

FOOT	FAGE				SAMP	LE			А	SSAN	′ S	
FROM	то	UESCRIPTIUN	NO.	SULPH-	FROM	FOOT AGE TO	TOTAL	26	4	OZ/TON	oz/ton	
0 30.0	30.0 86.4	<ul> <li>CASING</li> <li>CARNET-BIOTITE-QUARTZ SCHIST - dark grey, fine grained, with 1/16" to 1/8" poikiloblastic pink garnets. 20 to 30% garnets in a matrix of quartz and biotite, nearly massive with some weak compositional banding indicated by a change in garnet content. Trace to 0.5% sulphides. Few narrow dispersed quartz bands containing few garnets (possibly chert).</li> <li>- 30.0 to 45.0 - typical.</li> <li>- 45.0 to 47.0 - weathered zone, higher content and more well developed biotite, minor chlorite.</li> <li>- 47.0 to 58.1 - typical.</li> <li>- 58.1 to 58.7 - same as 45.8 to 47.0.</li> <li>- 58.7 to 74.0 - typical.</li> <li>- 74.0 to 74.4 - same as 45.8 to 47.0.</li> <li>- 74.4 to 76.6 - typical.</li> <li>- 76.6 to 86.4 - moderately well developed banding with many narrow chert bands, trace to 0.5% magnetite in few of these chert bands, banding at 75° to 80° to the core axis.</li> </ul>	5299 5300 5301 5302 5303 5304 5305 5306 5307 5308 5309 5310	SULERI	БОЛ 30.0 35.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 83.0	то 35.0 40.0 45.0 55.0 60.0 65.0 70.0 75.0 80.0 83.0 86.4	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0			tr. tr. tr. tr. tr. tr. tr. tr. tr. tr.	0Z/TON	
		these chert bands, banding at 75° to 80° to the core axis.					5.7					

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-5 SHEET NO. 2 OF 5

F001	TAGE				SAMPL	E	18		· · · · · · · · · · · · · · · · · · ·	ASSAYS		
FROM	то	DESCRIPTION	NO	". SULPH. IDES	FROM	FOOTAGE TO	TOTAL	÷	° <b>.</b>	UZ TON	GZ TON	
86.4	104.0	BANDED IRON FORMATION (LEAN) - bands of light grey and dark grey with pink poikiloblasts. Bands of chert and garnet-biotite-chert with fine haloes of grunerite around garnetiferous bands. Fine grained, 0.5 to 1.0% disseminated magnetite in both chert and garnetiferous bands. Folds change banding angles. Trace to 0.5% pyrrhotite.	5311 5312 5313 5314		86.4 89.0 94.0 99.0	89.0 94.0 99.0 104.0	2.6 5.0 5.0 5.0			.02 .01 tr. tr.		
		- $100.0$ - banding at 55° to core axis.										
104.0	126.1	ULTRAMAFIC VOLCANICS - light to medium grey, fine grained, schis- tose, foliated at 70° to core axis, talc with tremolite, minor serpentine, and trace disseminated pyrite. Weak carbonate alter- ation parallel to foliation and along fractures, trace to 0.5% disseminated pyrite, trace to 0.5% disseminated magnetite.										
126.1	149.6	INTERBEDDED BANDED IRON FORMATION AND GARNETIFEROUS METASEDIMENTS - Banded Iron Formation is dark grey, fine grained, poor to moderate- ly banded with fine intraband laminae, consists of chert, horn- blende, grunerite and magnetite. 5 to 7% magnetite concentrating in dark grey to black bands. Trace to 0.5% sulphides. Increase in garnet content toward 134.0', several 3" to 4" bands of near massive garnet. The entire unit contains fine chloritic fractures which may account for the dark colour of the unit.										
		- 126.1 to 133.0 - as described.	5315		126.1	129.6	3.5			tr,		
		- 133.0 to 134.0 - near massive, large (up to 1/4") poikiloblastic garnets in hornblende and chlorite, no magnetite	5316		129.6	134.6	5.0			tr.		
		- 134.0 to 141.8 - grades from garnet rich at 134.0 to less than 1% at 141.8.	5317 5318		134.6 139.6	139.6 144.6	5.0 5.0			tr. .01		
		$-138.5$ – banding $43^{\circ}$ to core axis.										
	,	<ul> <li>141.8 to 149.6 - Banded Iron Formation as described with few 1/4" boudinaged chert bands and adjacent laminations contorted around them.</li> </ul>	5319		144.6	149.6	5.0			tr.		
		– 147.0 – banding at $42^{\circ}$ to core axis.					-					

_ANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO ______ 0P-86-5 ______ SHEET NO _____ 3 of 5

FOOT	TAGE	DECEMPTION	ļ		SAMPL	E		_	ASSAYS		
FROM	to	DESCRIPTION	NO.	. SULPH	FROM	FOOTAGE	TOTAL		OZ TON	UZ TON	
149.6	160.1	GARNETIFEROUS METASEDIMENTS - dark grey with pink garnet poikilo- blasts, fine grained. Consists of garnets (30-40%), quartz, bio- tite, amphibole and minor chlorite, several garnet-poor bands, trace to 0.5% pyrrhotite.	5320 5321		149.6 154.9	154.9 160.1	5.3 5,2		tr. tr.		
		- 149.6 to 152.2 - typical.									
		- 152.2 to 155.8 - 1.0 to 3.0% fine grained disseminated magnetite in poorly developed chert-rich bands.									
		- 155.8 to 160.1 - typical.									
160.1	198.6	BANDED IRON FORMATION - bands of dark grey, light grey and light cream-green, well banded, bands of chert and magnetite-grunerite, fine grained, 10 to 15% magnetite, trace to 0.5% pyrrhotite, rare garnets, 1.0 to 3.0% fine grained carbonate within bands and 2.0 to 4.0% calcite as narrow veins and fracture fillings. Several chlorite coated fractures with many exhibiting small displacement of beds.									
		- 160.1 to 173.0 - typical, very few calcitic fractures or veins.	5322 5323 5324		160.1 165.0 169.0	165.0 169.0 173.0	4.9 4.0 4.0		tr. tr. tr.		
		- 173.0 to 182.2 - abundant calcite-filled fractures (3.0 to 5.0%)	5325		173.0	177.3	4.3		tr.	•	
		<ul> <li>175.4 to 176.0 - ground core high in chlorite and calcite.</li> </ul>									
		<ul> <li>177.6 to 178.0 - quartz vein, fine grained, 3.0 to 5.0% pyrrhotite as fracture fillings. Calcite-filled fractures cut the sulphide- filled fractures.</li> </ul>	5326		177.3	178.3	1.0		tr.		
		- 179.9 to 180.1 - calcite vein, coarse grained with veinlets into adjoining fractured Banded Iron Formation.	5327		178.3	180.5	2.2		.02		
		- 181.6 to 182.2 - 7.0 to 10.0% calcite in frac- tures and as veinlets. 1.0 to 3.0% pyrite and hotite with calculated	5328		180.5	182.2	1.7		tr.		-

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 02-86-5 SHEET NO. 4 of 5

ſ	F00	TAGE	DESCRIPTION			SAMPL	E		ASSAYS				
ſ	FROM	70	DESCRIPTION	NO.	" SULPH	FROM	FOOTAGE	TOTAL	:	~.	07 TON	OZ TON	
			- 182.2 to 198.6 - typical. - 192.9 to 193.3 - quartz vein, fine grained, no visible sulphides.	5329 5330 5331 5332		182.2 187.5 192.7 193.7	187.5 192.7 193.7 198.6	5.3 5.2 1.0 4.9			tr. tr. tr. tr.		
	198.6	212.0	<u>ULTRAMAFIC VOLCANICS</u> - typical talc-tremolite-serpentine schist, dominantly talc from 508.7 to 509.0, minor phlogopite, no visible sulphides.										
	212.0	235.5	BANDED IRON FORMATION - atypical, well banded, moderately contorted narrow bands, chert, hornblende and magnetite-grunerite.										
			- 212.0 to 217.0 - typical, few quartz-carbonate fractures.	5333		212.0	217.0	5.0			tr.		
			- 217.0 to 218.0 - garnetiferous hornblende band.										
			- 218.0 to 218.2 - blebs and wisps of pyrrhotite (up to 1/4" wide) in contorted zone.	5334		217.0	222.0	5.0			tr.		
			- 218.2 to 225.3 - bands of garnet-biotite schist with typical bands.	5335		222.0	227.0	5.0			tr.		
			- 225.3 to 228.7 - 60 to 70% laminated, garnet-biotite-hornblende- chert laminae and bands. 2.0 to 4.0% dissemin- ated pyrrhotite and pyrite.										
1168			- 228.7 to 235.5 - higher chert content with corresponding decrease in magnetite-grunerite. 5.0 to 7.0% pyrrhotite and pyrite as wisps, stringers and blebs in fractures and highly contorted bands.	5336 5337		227.0 232.0	232.0 235.5	5.0 3.5			tr. tr.		
ITO - 366-	235.5	236.8	ULTRAMAFIC VOLCANICS - typical tremolite-talc-serpentine, with 0.5 to 1.0% pyrrhotite and pyrite at upper and lower boundaries.	5338		235.5	236.8	1.3			tr.		
ES - TORON	2 2 3	238.0	BANDED IRON FORMATION - typical, laminated to moderately contorted, $5.0$ to $7.0\%$ pyrite and pyrrhotite as blebs, wisps and stringers.	5339		236.8	238.0	1,2			tr.		
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FOO	TAGE				SAMPL	. E			 ASSAYS		
FROM	то	DESCRIPTION	NO.	* SULPH		FOOTAGE		~	OZ TON	UZ TON	
238.0	259.0	ULTRAMAFIC VOLCANICS - typical.		IDES	FROM	10	TOTAL		 		
		<ul> <li>- 238.0 to 239.5 - well foliated tremolite-serpentine-talc, grading to dominantly talc at 239.5.</li> <li>- 238.0 to 239.0 - 1.0 to 3.0% pyrrhotite and pyrite as blebs and wisps.</li> <li>- 239.5 to 242.0 - talc schist with minor tremolite and serpentine.</li> <li>- 242.0 to 259.0 - grades to dominantly tremolite with serpentine and phlogopite foliations, few narrow siliceous bands.</li> </ul>	5340		238.0	239.0	1.0		tr.		
259.0		End of Hole.							Ĺ	Â	AM.

NAME OF PROPERTY_____OPAPIMISKAN LAKE HOLE NO ______ OP-86-5 ______ SHEET NO _____ 5 of 5

NAME OF PROP	ERTY	<b>OPAPIMIS</b>	KAN LAKE		
HOLE NO	P-86-6	LENGTH	305	<u>;'</u>	
LOCATION 14	4+00NW 6+0	1 <u>SW</u>			
LATITUDE		_ DEPARTURE			
ELEVATION		_ AZIMUTH	<u>049</u> °	DIP	-50.0°
STARTED Octo	ber 10, 1986	FINISHED	October 11	1986	

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FOOTAGE	DIP	AZIMUTH	FOOTAGE	PID	AZIMUTH
.0	-50.0	þ			
305'	-41.0				

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#### PA - 844238

LOGGED BY D. J. Corkery

FOOT	TAGE				SAMP	LE			A	SSA	rs	
FROM	то	SUMMARY LOG	NO.	SUL PH	FROM	TO	TOTAL	5	26	OZ/TON	OZ/TON	
0	29.0	CASING										
29.0	140.0	SEDIMENTS - dominantly pelitic with interbeds of wacke and siliceous mudstone.										
•		<ul> <li>- 33.0 to 39.3 - garnet-quartz-biotite with minor sericite, trace pyrite.</li> </ul>	5344		33.1	36.3	3.2			.09		
		- 50.7 to 58.2 - banded, garnetiferous, trace - 0.5% pyrrhotite along fractures.	5351		51,9	56.4	4.5			.14		
140.0	143.5	BANDED IRON FORMATION										
143.5	153.6	ULTRAMAFIC VOLCANICS										
153.6	164.0	BANDED IRON FORMATION										
164.0	172.9	GARNETIFEROUS METASEDIMENTS										
172.9	196.2	BANDED IRON FORMATION										
196.2	206.6	INTERBEDDED BANDED IRON FORMATION and SILICEOUS MUDSTONE										
206.6	236.3	BANDED IRON FORMATION										
236.3	264.2	ULTRAMAFIC VOLCANICS										
26/	266.3	BANDED IRON FORMATION										
266.3	267.6	ULTRAMAFIC VOLCANICS										
267.6	284.7	BANDED IRON FORMATION										

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NAME OF PROPERTYUTATIONAL LAKE	NAME OF PROPERTY	OPAPIMISKAN LAKE
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HOLE NO. ______ OP-86-6_______ SHEET NO. _____ 2 of 2______

Í	F001	TAGE	DECORDINA			SAMPL	-E				ASSAYS		
	FROM	то	SUMMARY LOG	NO,	* SULPH IDES	FROM	FOOTAGE TO	TOTAL		·.	OZ TUN	UZ TON	
			- 282.0 to 284.7 - 7.0 to 10% pyrrhotite and pyrite.										
	284.7	305.0	ULTRAMAFIC VOLCANICS										
	305.0		End of Hole.										
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NAME OF PROPERTY	OPAPIM	ISKAN LAKE	
HOLE NO 0P-86-6	_ LENGTH		··
LOCATION 14+00NW 6+0	01SW		
LATITUDE	DEPARTURE .		
ELEVATION	AZIMUTH	<u>049°</u> DIP	<u> </u>
STARTED October 10, 1986	FINISHED	October 11, 198	36

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-50.0	P			
305'	-41.0	>			
				_	

HOLE NO. 02-86-6 SHEET NO. 1 of 7

PA - 844238

LOGGED BY D. J. Corkery

REMARKS ____

FOO	TAGE	DESCRIPTION			SAMP	LΕ			•	SSAI	5 A Y 5				
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	16	,; 'õ	OZ/TON	OZ/TON				
Г В О Г В О 29.0	то 29.0 140.0	<ul> <li>CASING</li> <li>METASEDIMENTS - dominantly pelitic units with interbeds, garnet free of wacke and siliceous mudstone. 5 types are visible and are as follows:</li> <li>a) Massive to poorly banded, dark grey, fine grained with coarse grained polikiloblastic pink garnets, matrix is dominantly quartz and biotite with minor sericite, and isolated chert bands (1/2" to 1").</li> <li>b) Well banded (1/2" to 2"), bands of light grey, very fine grained chert, fine grained pink-grey garnet. Ferous bands, coarse poikiloblastic garnets with hornblende and biotite, and bands of fine grained biotite, hornblende and grunerite.</li> <li>c) Dark grey, massive, fine to very fine grained quartz, amphibole.</li> <li>d) Wacke, massive, dark grey, unsorted fine to coarse grained, angular to subrounded, grains are cemented by calcite with a few hematitic fractures, grains include quartz, biotite, rock fragments and several angular grains which have green centres and red alteration rims (garnets?). Also contains several calcite veinlets.</li> <li>e) Dark grey-green, massive, fine to very fine grained quartz and amphibole.</li> <li>- 29.0 to 30.8 - typical (a) with 7 to 10% garnets, no visible</li> </ul>	NO.	SUZ PH-	FROM 29.0	FOOTAGE TO	<u>TOTAL</u>		16	οz/τοΝ tr.	OZ/TON				
		sulphides.													

TORONTO

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO0P-86-6	SHEET NO. 2 of 7

FOOTAGE			SAMPLE					ASSAYS				
FROM	то	DESCRIPTION	NO.	". SULPH. IDES	FROM	FOOTAGE TO	TOTAL	•	~	UZ TON	OZ TON	
		- 30.8 to 32.4 - as above with quartz veinlets, no visible sulphide	:5342	-	30.8	32.2	1.4			tr.		
		- 32.4 to 33.0 - quartz vein, trace pyrite as fracture coating.	5343		32.2	33.1	1.1			tr.		
		- 33.0 to 39.3 - typical (a) with trace disseminated pyrite.	5344 5345		33.1 36.3	36.3 39.3	3.2 3.0			.09 tr.		
		- 38.7 to 38.8 - chert band.										
		- 39.3 to 44.9 - typical (c) with trace fine grained pyrite as a fracture coating. Foliated at 52° to core axis.	5346 5347		39.3 42.3	42.3 44.9	3.0 2.6			.01 .01		
		- 44.9 to 46.9 - typical (a) no visible sulphides.	5348		44.9	48.9	4.0			tr.		
		- 46.9 to 47.6 - typical (c) no visible sulphides.										
		- 47.6 to 50.7 - typical (a) with trace pyrite along fractures.	5349		48.9	50.9	2.0			tr.		
		<ul> <li>48.6 - calcite filled fracture with steel blue alteration.</li> </ul>										
		- 50.7 to 58.2 - typical (b) trace to 0.5% pyrrhotite along fractures.										
		- 51.3 - 2" band of massive pyrrhotite.	5350		50.9	51.9	1.0			tr.		
		- 58.2 to $63.5$ - typical (a) 0.5 to 1.0% pyrrhotite and pyrite.	5351		51.9	56.4	4.5			.14		
		<ul> <li>61.0 to 61.2 - carbonate band, weathered and euhedral calcite crystals in vug; chloritized mafic minerals.</li> </ul>	5352 5353		56.4 60.9	60.9 65.2	4.5 4.3			.01 tr.		
		- 63.5 to 66.4 - typical (e).				1		ļ				
		- 65.2 to 65.5 - silicified with trace pyrite.	5354		65.2	66.2	1.0			tr.		
		- 65.8 to 66.1 - quartz vein, 0.5 to 1.0% pyrite as fracture coating.										
		- 66.4 to 69.6 - typical (a) trace pyrite.	5355		66,2	71.2	5,0			tr.		

DIAMOND	DRILL	RECORD	

		н	OLEN	o0F	-86-6	SHEET NO3 of 7					
FOOTAGE	DESCRIPTION	SAMPLE					ASSAYS				
FROM TO		ND.	* SUL PH IDES	FROM	FOOTAGE	TOTAL		·••	07 TON	02 TON	
	- 69.6 to 72.1 - typical (c) no visible sulphides.	5356		71.2	76.2	5.0			tr.		
	-70.6 to $70.7$ - quartz veinlet.										
	- 72.1 to 79.2 - typical (a) trace pyrite.	5357		76.2	79.2	3.0			.01		
	- 79.2 to 80.7 - typical (d) no visible sulphides.	5358		79.2	80.7	1.5			tr.		
	- 80.7 to 86.4 - typical (a) trace pyrite.	5359		80,7	83.7	3.0			tr.		
	- 86.4 to 89.3 - typical (d) no visible sulphides.	5360		83.7	86.4	2.7			tr.		
	<ul> <li>89.3 to 139.0 - typical (a) trace pyrite and pyrrhotite both disseminated and as fracture coatings.</li> <li>104.0 - compositional banding 60° to core axis.</li> <li>127.0 - compositional banding 75° to core axis.</li> <li>138.5 - compositional banding 65° to core axis.</li> </ul>	5361 5362 5363 5364 5365 5366 5367 5368 5369		86.4 89.3 94.0 99.0 104.0 109.0 114.0 119.0 124.0	89.3 94.0 99.0 104.0 109.0 114.0 119.0 124.0 129.0	2.9 4.7 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0			tr. tr. tr. tr. tr. tr. tr. tr. tr.		
	- 139.0 to 140.0 - typical (b) with 1-2% disseminated magnetite.	5370 5371 5372		129.0 134.0 139.0	134.0 139.0 140.0	5.0 5.0 1.0			tr. tr. tr.		
140.0 143.5	BANDED IRON FORMATION - well banded, cream-green, light grey and dark grey to black with pink poikiloblasts, band of grunerite- magnetite, chert and garnet-biotite-amphibole, banded at 70° to core axis, trace pyrite.	5373		140.0	143.5	3.5			tr.		
143.5 153.6	ULTRAMAFIC VOLCANICS - light to medium grey with dark grey to black clots, fine grained, schistose talc with clots and foliations of serpentine (15 to 20%), which also contain minor very fine grained magnetite, several calcite filled fractures. - 150.2 to 152.1 - very broken and ground core.								ļ		

NAME OF PROPERTY_____OPAPIMISKAN LAKE

SAMPLE ASSAYS FOOTAGE DESCRIPTION * SULPH FOOTAGE NO τn EROM ~ 02 TON UZ TON IDES FROM TOTAL TO 164.0 5374 153.6 158.8 5,2 153.6 BANDED IRON FORMATION - dark grey and medium brown: fine grained. tr. bands of garnet amphibole, chert and magnetite-grunerite. 5 to 7% 5375 158.8 164.0 5.2 tr. calcite within bands as fracture fillings and as veinlets. Many chlorite-carbonate filled fractures. These appear to have altered the unit resulting in a green hue in the core. Strong calcite mineralization. Veinlets have random orientation. - 154.2 - 2" band with fracture fillings of pyrrhotite and pyrite with trace chalcopyrite and sphalerite. 164.0 172.9 GARNETIFEROUS METASEDIMENTS - similar to (a) and (b) at 29.0 to 140.0 with much smaller garnets and several chlorite and calcite filled fractures and the unit has a dark green hue. Trace sulphides. - 164.0 to 168.5 - near massive with several bands of cream colour- 5376 164.0 168.5 4.5 tr. ed alteration around calcite veinlets and which have a high calcite content. 5377 168.5 172.9 - 168.5 to 172.9 - moderately well compositionally banded with 4.4 tr. bands nearly parallel to core axis. Apparently corner of box fold at 169.5 (banding at 169.4 is 60° to core axis). Although banding is nearly parallel to core axis, several low amplitude folds are visible. Frequency 0.7', amplitude 0.1' axial plane 90° to axis. 172.9 196.2 BANDED IRON FORMATION - medium to dark grey, fine to very fine grained, poor to moderately banded with chert, magnetite-grunerite and hornblende-garnet. Often no distinct bands and bands are well laminated. Several chlorite-carbonate filled fractures with few carbonate mineralized bands. 0.5 to 1.0% pyrrhotite and pyrite. 10 to 15% magnetite. - 172.9 to 178.8 - banding nearly parallel to core axis, few gar-5378 172.9 176.2 3.3 tr. nets.

- 178.8 to 179.8 - well banded with 60 to 70% chert bands and 30 to 5379

40% grunerite-magnetite with minor hornblende.

NAME OF PROPERTY_____ 0P-86-6

176.2 181.2

5.0

HOLE NO

OPAPIMISKAN LAKE SHEET NO. 4 of 7

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NAME OF PROPERTY	OPAPIMISKAN	LAKE	
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HOLE NO _____ OP-86-6 _____ SHEET NO ____

_____ SHEET NO _____ 5 of 7_____

	FOOTAGE					SAMPL	E			ASSAYS		
FF	NOM	то	DESCRIPTION	NO.	" SULPH	FROM	FOOTAGE	TOTAL		OZ TUN	OZ TON	
			- 179.8 to 193.1 - typical as described, 15 to 20% fine to medium grained garnets.	5380 5381	1015	181.2 186.2	186.2 191.2	5.0 5.0		tr. tr.		
			- 190.0 - banded at 50° to core axis.									
			<ul> <li>- 192.0 - few chlorite-calcite fractures beyond this point.</li> </ul>									
			- 193.1 to 196.2 - few garnets and well banded.	5382		191.2	196.2	5.0		tr.		
19	96.2	206.6	INTERBEDDED BANDED IRON FORMATION AND SILICEOUS MUDSTONE - Banded Iron Formation - well banded, trace garnets. Dominantly bands of chert and grunerite-magnetite. Trace to 0.5% pyrrhotite, no chloritic alteration. Siliceous Mudstone - dark brown to black, fine grained, massive to weakly foliated with trace visible laminations. Mineralogy domin- ated by quartz and biotite with 7 to 10% calcite. 0.5 to 1% chlorite along fractures as coatings, trace sulphides.									
			- 196.2 to 197.4 - massive sediments, typical.	5383		196.2	201.4	5.2		tr.		
			- 197.4 to 200.5 - Banded Iron Formation and massive sediments interbedded.									
			- 200.5 to 201.4 - massive sediments, typical.									
ļ			- 201.4 to 204.6 - Banded Iron Formation as described.	5384		201.6	204.6	3.2		tr.		
			- 204.6 to 206.6 - massive sediments.	5385		204.6	206.6	2.0		tr.		
20	06.6	236.3	BANDED IRON FORMATION - as described in 196.2 to 206.6. In iron-	5386		206.6	209.5	2.9		tr.		
			rich bands, magnetite bands are surrounded by grunerite bands (i.e.	5387		209.5	214.5	5.0		tr.		
			dark grey bands contain magnetite with minor grunerite and surroun-	5388		214.5	219.5	5.0		tr.		
			ding these are light cream to green bands of grunerite with minor	5389		219.5	224.5	5.0		tr.		
			<pre>magnetite). Many randomly oriented calcite filled fractures, weak- ly contorted, 0.5 to 1% sulphides, with pyrrhotite in iron-rich bands and pyrite in calcite filled fractures. Banding angles vary. - 30° @ 207.0' - 55° @ 214.0' - 42° @ 216.5' - 75° @ 224.0'</pre>	5390		224.5	229.5	5.0		tr.		

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NAME OF PROPERTY	ULAT THISKAN	DAKE	
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HOLE NO. 0P-86-6 SHEET NO. 6 of 7

	F001	TAGE	DECEMPTION			SAMPL	E		ASSAYS				
FR	ом	то	DESCRIPTION	NO.	". SULPH. IDES	FROM	FOOTAGE TO	TOTAL			OZ TON	UZ TON	
			<ul> <li>206.6 to 229.5 - typical.</li> <li>229.5 to 231.2 - well fractured with calcite fracture fillings.</li> <li>231.2 to 231.8 - chlorite schist with strong calcite mineralization.</li> </ul>	5391		229.5	231.8	2.3			tr.		
23	6.3	264.2	<ul> <li>- 231.8 to 236.3 - typical.</li> <li><u>ULTRAMAFIC VOLCANICS</u> - light to medium grey, fine grained, schistose. Mineralogy dominated by talc, serpentine and tremolite, 7 to 10% carbonate, trace disseminated pyrite and magnetite. Ground core from 241.7 to 242.3 and from 252.1 to 252.7.</li> <li>- 236.3 to 261.7 - typical.</li> </ul>	5392		231.8	236.3	4.5			tr.		
			<ul> <li>- 261.7 to 264.2 - dominantly tremolite with serpentine and minor phlogopite. Not schistose but well foliated.</li> <li>- 263.6 to 263.8 - quartz vein with no visible sulphides.</li> </ul>	5393		263.2	264.2	1.0			tr.		
26	4.2	266.3	BANDED IRON FORMATION - as described in 206.6 to 236.3 with narrow bands $(1/8" \text{ to } 1/4")$ . Banding at 65° to 70° to core axis. 0.5 to 1% pyrrhotite.	5394		264.2	266.3	2.1			tr.		1
26	6.3	267.6	ULTRAMAFIC VOLCANICS - similar to 251.7 to 254.2.	5395		266.3	267.6	1.3			tr.		
26	7.6	284.7	BANDED IRON FORMATION - similar to 206.6 to 236.3 with 10 to 15% garnet-biotite schist bands (1/8" to 1/4"), 0.5 to 1% pyrrhotite.	5396 5397		267.6 272.6	272.6 275.3	5.0 2.7			tr. tr.		
ES - TORONTO - 3			<ul> <li>267.6 to 2/5.5 - typical.</li> <li>275.5 to 276.1 - wide chert band, 7 to 10% pyrrhotite along fractures. 1 to 3% magnetite as disseminations and in fractures with pyrrhotite.</li> </ul>	5398		275.3	276.3	1.0			tr.		
LANGRIDG			- 276.1 to 279.0 - 40 to 50% garnet-biotite bands. Most chert bands are boudinaged. 3 to 5% pyrrhotite.	5399		276.3	279.0	2.7			tr.		

NAME OF PROPERTY0	PAPIMISKAN LAKE	_
HOLE NO 0P-86-6	SHEET NO. 7 of 7	_

ſ	F00	TAGE	PETCONDUCK	SAMPLE		ASSAYS							
t	FROM	то	DESCRIPTION	NO	°%, SULPH, IDES	FROM	FOOTAGE	TOTAL			OZ TON	UZ TON	
			- 279.0 to 279.6 - moderate to poorly banded, dominantly chert and grunerite-magnetite, no garnets.	5400		279.0	282.0	3.0			tr.		
			- 279.6 to 282.0 - several bands of light brown very fine grained chert.										
			<ul> <li>280.1 to 280.7 - chert band with 3 to 5% pyrrhotite and pyrite along fractures.</li> </ul>										
			- 282.0 to 284.7 - similar to 279.0 to 279.6 with 7 to 10% pyrrho- tite and pyrite in fractures and contorted bands	5401		282.0	284.7	2.7			tr.		
			- 284.5 - trace chalcopyrite.										
	284.7	305.0	ULTRAMAFIC VOLCANICS - medium to dark green, well foliated, fine grained. Grades from dominantly talc and serpentine with minor tremolite and carbonate to dominantly tremolite with minor serpen- tine and phlogopite at 289.2. Foliated at 70° to 75° to core axis.										
			- 299.4 to 299.5 - quartz vein, no visible sulphides.	5402		299.0	300.1	1.1			tr.		
	305.0		End of Hole.										
6-1168									ļ				
ORONTO - 360												AA	Maam
IGRIDGES - 1												JI.	
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NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	OP-86-7	LENGTH	339'		<u> </u>
LOCATION	13+04NW	6+00SW			
LATITUDE		DEPARTURE			
ELEVATION		AZIMUTH	049°	DIP _	-49.7°
STARTED _	October 13, 19	186_ FINISHED	October 16.	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-49,7				
339'	-43,0				

HOLE NO. 0P-86-7 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOOT	TAGE				SAMP	LE			A	SSAY	's	
FROM	то	SUMMARY LOG	NO.	SULPH- IDES	FROM	FOOTAGE TO	TOTAL	*6	² 6	OZ/TON	OZ/TON	
0	27.0	CASING										
27.0	31.8	GARNET-BIOTITE-QUARTZ SCHIST										
31.8	34.2	LAMPROPHYRE DIKE										
34.2	86.7	GARNET-BIOTITE-QUARTZ SCHIST										
. 86.7	93.1	BANDED IRON FORMATION										
93.1	103.2	ULTRAMAFIC VOLCANICS										
103.2	144.7	BANDED IRON FORMATION - 0.5-1.0% pyrrhotite, trace pyrite.	5424		126.7	129.7	3.0		1	.16		
144.7	151.2	INTERBEDDED SILTSTONE and BANDED IRON FORMATION										
151.2	175.9	BANDED IRON FORMATION										
175.9	184.0	ULTRAMAFIC VOLCANICS										
184.0	190.0	BANDED IRON FORMATION										
190.0	193.9	MAFIC TUFF			5							
193.9	206.7	BANDED IRON FORMATION and MAFIC TUFF INTERBEDDED										
2 7	209.7	LOSS OF CORE										
209.7	212.5	BANDED METASEDIMENTS										
212.5	214.9	BANDED IRON FORMATION (LEAN)										

			HOLE NO			_ SHEET NO2 of 2						
FOO	TAGE	DECORIDION			SAMPI	LE	. –			ASSAYS		
FROM	то	SUMMARY LOG	NO.	N. SULPH	FROM	FDOTAGE TO	TOTAL		·,	OZ TON	02 TON	
		- 213.5 to 214.5 - 10-12% pyrite and pyrrhotite.										1
214.9	249.5	ULTRAMAFIC VOLCANICS										1
249.5	256.7	SILICIFIED ULTRAMAFIC VOLCANICS										1
256.7	300.6	ULTRAMAFIC VOLCANICS						Ĩ				
300.6	314.8	BANDED IRON FORMATION										L
314.8	339.0	ULTRAMAFIC VOLCANICS										
339.0		End of Hole.										
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NAME OF PROPERTY _____OPAPIMISKAN LAKE

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NAME OF PROPER	тү	<u>OPAP</u> IM	ISKAN LAKE		
HOLE NOOP-	86-7	LENGTH	339'		
LOCATION	04NW 6+0	OSW			
LATITUDE		DEPARTURE			
ELEVATION		_ AZIMUTH	049°	DIP _	_49.7°
STARTED October	13, 1986	FINISHED	October 16	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-49.7°				
339'	-43.0				

HOLE NO. 00-86-7_ SHEET NO. 1 of 7

REMARKS

PA - 844238

LOGGED BY D. J. Corkery

FOO	TAGE				SAMPLE					ASSAY5					
FROM	то	DESCRIPTION	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	8	ĸ	OZ/TON	OZ/TON				
0	27.0	CASING													
27.0	31.8	GARNET-BIOTITE-QUARTZ SCHIST - dark grey, fine grained with poiki- loblastic pink garnets, massive to poorly banded, matrix is dominantly biotite with quartz, 25-35% garnets, compositional banding indicated by change in garnet content, few narrow (1/4" to 1/2") chert bands, trace to 0.5% pyrrhotite.	5403		27.0	31.8	4.8			.02					
		- 29.7 - 30.2 - chert bands with 3-5% pyrite along fractures, band is at 68° to core axis.													
31.8	34.2	LAMPROPHYRE DIKE - dark grey, massive, porphyritic, fine to coarse grained, subangular to rounded, grains. Phenocrysts and groundmass are commonly replaced by chlorite, serpentine and chlorite. There are several calcite veinlets.	5404		31.8	34.2	2.4			tr.					
34.2	86.7	GARNET-BIOTITE-QUARTZ SCHIST - typical with few chlorite rich bands with well developed biotite, are weathered and core is easily	5405		34.2	39.0	4.8			tr.					
		ground, trace sulphides.	5406		39.0	44.0	5.0			tr.					
		- 48.7 - 49.6 - chloritic band.	5407		44.0	49.0	5.0			tr.					
5-1168		- 53.9 - 54.5 - chloritic band.	5408		49.0	54.0	5.0			tr.					
0 - 36		- 57.2 - 59.3 - chloritic band with a fine limonitic fracture.	5409		54.0	59.0	5.0			tr.					
ORONT		- 64.4 - 64.7 - two 1/16" limonitic fractures.	5410		59.0	64.0	5.0			tr.					
1			5411		64.0	69.0	5.0			tr.					
DGE		- 67.8 - 68.2 - loss of core, "mudseam".	5412		69.0	74.0	5.0			tr.					
ANGR			1913		/4.0	/9.0	υ.ς			cr.					

NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. _____ 0P-86-7______ SHEET NO. ____ 2 of 7_____

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FOOTAGE		DESCRIPTION			SAMPL	E		ASSAYS					
FROM	то	DESCRIPTION	NO.	", SUL PH	FROM	FOOTAGE TO	TOTAL		~	OZ TON	OZ TON		
		– 79.9 – 81.2 – garnet poor, dominantly quartz-biotite- sericite, massive, no visible sulphides.	5414		79.0	84.0	5.0			tr.			
		- 85.5 - 86.7 - chloritic band.	5415		84.0	86.7	2.7			tr.			
86.7	93.1	BANDED IRON FORMATION - well banded, dark grey, dark green and light cream-green with medium to coarse grained garnets in both	5416		86.7	90.1	3.4			tr.			
		dark and light green bands. Bands consist of chert, garnet and amphibole (hornblende and grunerite) and $0.5-1\%$ magnetite which occurs in the chert bands. Bands are generally $1/8"$ to $1/16"$ wide and occur at $73^\circ$ to core axis, trace pyrite as fracture coatings.	5417		90.1	93.1	3.0			tr.			
93.1	103.2	<u>ULTRAMAFIC VOLCANICS</u> - medium to dark grey, fine grained, schistose dominantly talc and serpentine with 5-7% carbonate parallel to foliation and as fracture filling, 0.5-1% magnetite, no visible sulphides.	5418		95.7	98.7	3.0			tr.			
		- 101.0 - foliated at $48^{\circ}$ to core axis.											
ľ		- 101.9 - 102.4 - weathered and ground talc and clays.											
103.2	144.7	BANDED IRON FORMATION - moderate to well banded, dark grey to black, medium grey and light green; bands of chert, grunerite- magnetite and grunerite, fine to very fine grained, low to moder- ately contorted.					:						
		Average Modes					i						
		Grunerite 35 - 45% Chert 25 - 35% Magnetite 15 - 20% Pyrrhotite 0.5 - 1%											
		Pyrite trace											
		- 103.2 - 123.1 - moderately banded, garnet-hornblende-chlorite band in addition to above mentioned bands. Lower content of chert bands. Many randomly oriented chlorite-calcite filled fractures.	5419 5420 5421 5422		103.2 108.1 113.1 118.1	108.1 113.1 118.1 123.1	4.9 5.0 5.0 5.0			.02 tr. tr. tr.			
							:						

366-1168 ANGRIDGES - TORONTO

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NAME OF PROPERTY	COPAPIMISKAN_LAKE

HOLE NO. 0P-86-7 SHEET NO. 3 of 7

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FC	OTAGE	DESCRIPTION	SAMPLE					ASSAYS					
FROM	то		NO.	" SULPH, IDES	FROM	FOOTAGE TO	TOTAL		۳.	OZ TON	UZ TON		
		Several bands with moderate calcite alteration. Entire zone appears to have undergone weak chloritic alteration. Trace to 0.5% pyrrhotite. Banding at 45° to core axis.											
		- 120.2 - 1/2" wide massive pyrrhotite band.											
		- 120.8 - 121.1 - chlorite schist band with car- bonate laminations and minor garnets.											
		- 123.1 - 144.7 - typical.											
e e		- 126.0 - banding at 63° to core axis.	5423 5424		123.1	126.7	3.6 3.0			tr. .16			
		<ul> <li>- 132.6 - 133.6 - massive, dark grey to black, fine to very fine grained biotite-quartz-horn- blende-magnetite; strongly magnetic.</li> </ul>	5425 5426 5427		129.7 134.7 139.7	134.7 139.7 144.7	5.0 5.0 5.0			.01 tr. tr.			
144.7	151.2	INTERBEDDED SILTSTONE AND BANDED IRON FORMATION - interbeds grade into one another. Banded Iron Formation - typical as in 103.2 - 144.7. Siltstone - very dark grey, fine to very fine grained, very weakly laminated with mineralogy consisting of biotite, amphibole, quartz and calcite. 7-10% calcite within laminations and as fracture fillings. Several randomly oriented fractures. Trace disseminated pyrite.											
1		- 144.7 - 146.0 - Siltstone, typical.	5428		144.7	146.0	1.3			tr.			
1168		- 146.0 - 148.0 - Banded Iron Formation, typical.	5429		146.0	148.0	2.0			tr.			
- 366-		- 148.0 - 148.8 - Siltstone, typical.	5430		148.0	151.2	3.2			tr.			
RONTO		- 148.8 - 149.5 - Banded Iron Formation, typical.								i			
ES – TC		- 149.5 - 151.2 - Siltstone, typical.											
DI 151.2	175.9	BANDED IRON FORMATION - typical as in 103.2 - 144.7 with many calcite filled fractures and quartz-calcite veinlets, with 0.5-1%	5431 5432		151.2 155.0	155.0 159.0	3.8 4.0			tr. tr.			

NAME OF PROPERTY	OPAPIMISKAN LAKE

 HOLE NO	<u>OP-86-7</u>		SHEET	NO.	4 0	f /	
s	AMPLE	Τ			ASSAYS		
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FOOT	TAGE	DESCRIPTION			SAMPI	LΕ			ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE TO	TOTAL	۳.	OZ TON	UZ TON	
		pyrite and pyrrhotite in veinlets and as fracture coatings. A few graphitic foliations and narrow bands.									
		- 151.2 - 167.3 - typical.									
		- 159.2 - 159.7 - quartz vein with few fine chlorite-carbonate filled fractures, trace	5433		159.0	160.0	1.0		tr.		
		pyrite.	5434		160.0	165.0	5.0		tr.	ł	
		- 165.9 - 166.5 - quartz vein with disseminated chlorite wisps, no visible sulphides.	5435		165.0	167.3	1.6		tr.		
		- 167.3 - 172.0 - heavily fractured with quartz-carbonate fillings and 0.5-1% sulphides, with brecciated zones at 167.3 - 168.3 and 171.3 - 171.5.	5436	1	167.3	172.0	4.7		tr.		
		- 172.0 - 175.9 - typical.									
		- 174.3 - 174.7 - quartz vein with light green alteration around chloritic fractures.	5437		172.0	175.9	3.9		tr.		
175.9	184.0	ULTRAMAFIC VOLCANICS - well foliated to laminated at both upper and lower contacts with Banded Iron Formation.									
		- 175.9 - 181.8 - typical.									
		- 181.8 - 184.0 - decrease in talc and serpentine and is dominated by tremolite with 7-10% phlogopite.									
184.0	190.0	BANDED IRON FORMATION - typical as in 103.2 - 144.7.									
		- 184.0 - 188.9 - low to moderately contorted, trace to 0.5% pyrrhotite parallel to banding and along fractures. Banding at 57° to core axis.	5438 5439		184.0 189.0	189.0	5.0 1.0		tr. tr.		
		- 188.9 - 190.0 - highly contorted, 5-7% pyrrhotite as veinlets and at boundaries of chert.									

LANGRIDGES - TORONTO - 366-1168

ANGRIDGES - TORONTO

F00	TAGE				SAMPL	E		ASSAYS					
FROM	TO		NO.	™ SULPH		FOOTAGE				OZ TON	OZ TON		
				IDES	FROM	10	TOTAL	· · · ·		-			
190.0	193.9	<u>MAFIC TUFF</u> - medium grey and dark green, fine grained, laminated, clasts of tremolite/actinolite and quartz, upper and lower boun- daries appear discordant with Banded Iron Formation. At 190.0 a tongue of Banded Iron Formation penetrates the tuffs. No visible sulphides. Sheared.	5440		190.0	193.9	3.9			tr.			
		- 190.0 - 192.0 - foliated at $12^{\circ}$ to core axis.											
		- 192.0 - 193.9 - foliated at $53^{\circ}$ to core axis.											
193.9	206.7	BANDED IRON FORMATION AND MAFIC TUFF INTERBEDDED - sheared. Banded Iron Formation - typical as in 103.2 - 144.7, 75% of unit; highly contorted, highly folded and boudinaged, several quartz, calcite and chlorite filled fractures. Few calcite veinlets. 0.5-1% pyrrhotite and pyrite. Mafic Tuffs - typical, 25% of unit; contorted laminations.	5441 5442 5443		193.9 199.0 204.0	199.0 204.0 206.7	5.1 5.0 2.7			tr. tr. tr.			
206.7	209.7	LOSS OF CORE - "void"											
209.7	212.5	BANDED METASEDIMENTS - banded, black and light grey; fine to very fine grained, hornblende, chlorite and biotite with minor garnet, and bands $(1/8"to 1/4")$ of quartz (chert?), trace magnetite, 2-4% pyrite and pyrrhotite. Quartz bands are folded and boudinaged and are often haloed with grunerite. Unit has been sheared.	5444		208.7	212.5	3.8			tr.			
212.5	214.9	BANDED IRON FORMATION (LEAN) - light to medium grey and dark grey, laminated to poorly banded, fine grained to very fine grained, contorted, dominantly chert with laminations of grunerite-magnetite											
		- 212.5 - 213.5 - 1-3% pyrrhotite parallel to lamination and along fractures.	5445		212.5	213.9	1.4			tr.			
		- 213.5 - 214.9 - 10-12% pyrite and pyrrhotite as veinlets, blebs and fracture fillings. In all cases sulphides have rim of chlorite separating them from Banded Iron Formation. Blebs are connected by filled fractures.	5446		213.9	214.9	1.0			tr.			
214.9	249.5	ULTRAMAFIC VOLCANICS - medium to dark grey, well foliated, fine grained.							1				

NAME OF PROPERTY___ HOLE NO. 0P-86-7

OPAPIMISKAN LAKE

SHEET NO 5 OF 7

	F001	TAGE		SAMPLE					ASSAYS					
F	NOF	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL		·. (	0 Z TON	UZ TON		
			<ul> <li>214.9 - 216.7 - talc-tremolite with many chloritic fractures coated with fine grained pyrite and very fine grained hematite.</li> </ul>	5447		214.9	216.7	1.8			tr.			
	i		- 216.7 - 227.5 - talc schist with minor carbonate.											
			- 227.5 - 249.5 - dominantly tremolite with minor phlogopite and serpentine.											
		,	- 233.9 - 234.1 - quartz vein with minor calcite at edge of vein and in fractures within vein, few blebs and needles of tourmaline.	5448		233.5	234.5	1.0			tr,			
2	49.5	256.7	SILICIFIED ULTRAMAFIC VOLCANICS - several fine grained quartz veins	5449		249.5	252.7	3.2			tr.			
			unit has been altered (quartz, grunerite and actinolite, chlorite and trace tourmaline). 7-10% pyrrhotite and 2-4% pyrite along fracture and within remnant foliation.	5450		252.7	256.7	4.0		1	tr.			
2	56.7	300.6	ULTRAMAFIC VOLCANICS - typical, tremolite-serpentine-talc with minor phlogopite foliations. 2" to 3" bands of quartz-carbonate replacement, no visible sulphides. Bands are at:											
			- 279.5 - 279.7 - 284.7 - 284.9 - 286.7 - 287.0	5451		279.1	280.1	1.0			tr.			
			- 288.1 - 288.3 - 289.6 - 289.7	5452		284.7	289.7	5.0			tr.			
0NTO = 366-1168	0.6	314.8	<u>BANDED IRON FORMATION</u> - atypical with fine bands of chert, magnet- ite and grunerite (generally less than $1/8$ ") several fine calcite fractures. Very little contortion of bands with banding at $65^{\circ}$ to $70^{\circ}$ . Trace to 0.5% pyrrhotite.									-		
LANGRIDGES - TOR			<ul> <li>- 300.6 - 308.7 - as described with 15-20% magnetite.</li> <li>- 301.8 - 1/8" quartz-calcite veinlet with minor tourmaline at vein wall and minor pyrrhotite in 1/8" of wall rock adjoining vein.</li> </ul>	5453 5454		300.6 304.8	304.8 309.8	4.2 5.0			tr. tr.			

NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-7 SHEET NO. 6 of 7

NAME OF P	ROPERTY	OPAPIMISKAN LAKE	
	OP-86-7	surray 7 of 7	

				OLE N				 		· · · · · · · · · · · · · · · · ·			
FOO	AGE	DESCRIPTION	L		SAMPI	_E		ASSAYS					
FROM	то		NO.	" SULPH	FROM	FOOTAGE TO	TOTAL	•	5	OZ TON	02 TON		
		- 303.6 - 303.8 - 3-5% pyrrhotite adjacent 1/2" siliceous band.											
		- 307.4 - 1/2" quartz-calcite veinlet, no visible sulphides.											
		- 307.9 - 308.0 - calcite-quartz veinlet.											
		- 308.7 - 314.8 - as described with 5-7% magnetite, several bands of light brown chert.	5455		309.8	314.8	5.0			tr.			
314.8	339.0	ULTRAMAFIC VOLCANICS - atypical with strong alteration around quartz-feldspar-calcite vein, veinlet swarms. Apparently random orientation of veins and veinlets. High concentration of veins and veinlets from 323.2 to 324.4 and from 326.0 to 326.5 and from 335.9 to 337.4. Feldspars are dominantly plagioclase with 2-4% feldspar.	5456 5457 5458 5459		320.9 322.6 325.0 335.4	322.6 325.0 326.6 337.9	1.7 2.4 1.6 2.5			tr. tr. tr. tr.			
339.0		End of Hole.						1					
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NAME OF	PROPERTY	OPAP1	MISKAN LAKE		
HOLE NO.	OP-86-8	LENGTH	297		
LOCATION	12+00NW	4+98SW			
LATITUDE		DEPARTURE .			
ELEVATION	I	AZIMUTH	<u>049°</u>	DIP	<u>-50.7°</u>
STARTED	October 17. 1	1986 FINISHED	October 18	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-50.7				
297'	-42.7°				

HOLE NO. 0P-86-8 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844328

LOGGED BY D. J. Corkery

FOO	TAGE	E DESCRIPTION SAMPLE					A	SSAY	′S			
FROM	то	SUMMARY LOG	NO.	SULPH-	FROM	FOOT AGE TO	TOTAL	36	8	oz/ton	OZ/TON	
0	30.0	CASING										
30.0	42.0	FROST HEAVE?										
42.0	44.0	BANDED IRON FORMATION										
44.0	45.3	MUDSTONE										
45.3	49.6	BANDED GARNETIFEROUS METASEDIMENTS										
49.6	60.9	BANDED IRON FORMATION			1				1			
60.9	68.9	GARNETIFEROUS METASEDIMENTS										
68.9	92.0	BANDED IRON FORMATION										
92.0	92.9	SILTSTONE										
92.9	94.3	BANDED IRON FORMATION							-			
94.3	94.5	SILTSTONE										
94.5	95.5	BANDED IRON FORMATION						1				
95.5	96.6	SILTSTONE - brecciated with quartz-calcite filling.										
96.6	106.6	BANDED IRON FORMATION										
100.6	112.8	ULTRAMAFIC VOLCANICS										
112.8	127.9	BANDED IRON FORMATION						8				
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#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. ______ OP-86-8 ______ SHEET NO. _____ 2 of 2

F001	FAGE		I		SAMPI	Ē				ASSAYS		
FROM	то	SUMMARY LOG	NO.	", SULPH IDES	FROM	FOOTAGE	TOTAL		۳.	07 TON	02 TON	
127.9	219.5	ULTRAMAFIC VOLCANICS										
		- 172.0 - 173.6 - 3-5% pyrrhotite with quartz veinlets and surrounded by bleached (light green) zones.										
219.5	233.0	BANDED IRON FORMATION										
233.0	297.0	ULTRAMAFIC VOLCANICS										
297.0		End of Hole.										
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NAME OF	PROPERTY _	<u> </u>	<u>ISKAN LAKE</u>			_
HOLE NO.	<u>OP-86-8</u>	LENGTH	297'		. <u> </u>	_
LOCATION	12+00NW	4+98SW				_
LATITUDE		DEPARTURE .				_
ELEVATION		AZIMUTH	049°	01P	<u>-50.7°</u>	_
STARTED _	October 17	1986 FINISHED	October 18	1986		_

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	50.7°			_	
297' -	42.7°				

HOLE NO. 0P-86-8 SHEET NO. 1 of 5

REMARKS ____

PA - 844328

LOGGED BY _____ D. J. Corkery _____

FOOT	AGE				SAMP	LE			A	SSAY	5	
FROM	то		NO.	SULPH- IDES	FROM	TO	TOTAL	' <u>`</u>	16	OZ/TON	oz/ton	
0	30.0	CASING										
30.0	42.0	FROST HEAVE? - sections of Banded Iron Formation with pebbles and cobbles of granite, quartzite and mafic. As well, adjacent Banded Iron Formation core does not fit together and is of different composition (e.g. garnetiferous) adjacent garnet free.										
42.0	44.0	BANDED IRON FORMATION - well banded, light and dark grey, fine grained, bands of chert and magnetite-grunerite; bands are 1/16" to 1/8" wide; 10-15% magnetite. Several chloritic fractures. No visible sulphides.	5460		42.0	44.0	2.0			tr.		
44.0	45.3	MUDSTONE - dark grey, fine grained, massive to poorly foliated, hornblende and quartz with minor biotite and grunerite. No visible sulphides.	5461		44.0	45.3	1,3			tr.		
45.3	49.6	BANDED GARNETIFEROUS METASEDIMENTS – light pinkish-grey and light to dark grey, fine to medium grained, well banded, bands of garnet- grunerite-chert and grunerite-magnetite; $60-70\%$ garnet-rich bands; 1-2% magnetite. Several chlorite coated fractures with trace-0.5% pyrite.	5462		45.3	49.6	4.3			tr.		
		- 47.0 - banded at $60^\circ$ to core axis.										
49.6	60.9	BANDED IRON FORMATION										
		- 49.6 - 54.0 - similar to 45.3 - 49.6 but with only 25-35% garnet- rich bands and 7-10% magnetite. Grades to garnet poor at 54.0.	5463		49.6	54.0	4.4			.01		
		- 54.0 - 60.9 - similar to 42.0 - 44.0 but less well banded and with 1-3% garnets.	5464 5465		54.0 57.9	57.9 60.9	3.9 3.0			tr. tr.		

NAME OF PROPERTY	OPAPIMISKAN	LAKE

HOLE NO. ______ OP-86-8 ______ SHEET NO. _____ 2 of 5

FOOT	TAGE				SAMPL	.E			ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL	7.	07 TON	OZ TON	
60.9	68.9	GARNETIFEROUS METASEDIMENTS - poorly to moderately banded, light to dark grey, fine to medium grained, consists of 50-60% fine to medium grained garnets with biotite and grunerite-cummingtonite (anthophyllite?), banding is compositional depending on amount of garnet at ratio of biotite to amphibole. Banding becomes less apparent and unit becomes lighter coloured around dark green amphibole veinlets which have possibly altered the unit. Trace pyrite.	5466 5467		60.9 64.9	64.9 68.9	4.0 4.0		tr. tr.		
68.9	92.0	BANDED IRON FORMATION - well banded; light grey, dark grey toblack and light cream-green; fine grained, moderately contorted, consists of chert, magnetite-grunerite with minor hornblende.Grunerite bands are generally between magnetite-rich bands and chert bands, thus haloing magnetite.Average ModesChert40Grunerite2030% MagnetiteHornblende5 $7%$ PyrrhotitePyrhotite $1/21$ Demokrative along fractures									
LANGRIDGES - TORONTO - 366-1168	92.9	<ul> <li>- 68.9 - 69.7 - typical.</li> <li>- 69.7 - 71.6 - highly contorted; with fine bands.</li> <li>- 71.6 - 92.0 - typical.</li> <li><u>SILTSTONE</u> - dark grey, fine to very fine grained, nearly massive with weak foliation; quartz, hornblende, biotite and calcite, trace to 0.5% pyrrhotite parallel to foliation.</li> <li>- 92.1 - 92.3 - 1/4" quartz vein, highly folded and boudinaged.</li> </ul>	5468 5469 5470 5471 5472 5473		68.9 72.0 77.0 82.0 87.0 92.0	72.0 77.0 82.0 87.0 92.0 93.0	3.1 5.0 5.0 5.0 1.0		tr. tr. tr. tr. tr.		

NAME OF PROPERTY_____OPAPINISKAN LAKE

HOLE NO. _____ OP-86-8 ______ SHEET NO. ____ 3 of 5

	F001	TAGE				SAMPL	E		ASSAYS					
FF	NOF	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL		·.	02 TON	UZ TON		
9	92.9	94.3	BANDED IRON FORMATION - typical, banded 75° to core axis. Trace to 0.5% pyrrhotite.	5474		92.9	95.5	2.6			.01			
ģ	94.3	94.5	<u>SILTSTONE</u> - typical.											
9	94.5	95.5	BANDED IRON FORMATION - typical.								2			
9	95.5	96.6	SILTSTONE - atypical, brecciated with quartz-calcite filling.	5475		95.5	96.6	1.1			tr.			
ç	96.6	106.6	BANDED IRON FORMATION - atypical, fractured with chlorite, calcite, quartz fillings. Small sections have been brecciated and filled with quartz-calcite. Trace to 0.5% fine grained euhedral to sub- hedral pyrite is found in some fractures and brecciated zones.	5476 5477		96.6 101.6	101.6 106.6	5.0 5.0			tr. tr.			
10	06.6	112.8	ULTRAMAFIC VOLCANICS - medium grey, fine grained, well foliated, dominantly talc with serpentine; 1-3% calcite as fracture fillings and disseminations.				,							
			- 108.8 - 110.4 - fractured and calcite-quartz filled.	5478		108.8	110.4	1.6			tr.			
11	12.8	127.9	BANDED IRON FORMATION - typical, contorted, with several narrow garnet-biotite bands. 1-2% pyrite along fractures and in highly contorted bands.	5479 5480 5481		112.8 117.9 122.9	117.9 122.9 127.9	5.1 5.0 5.0			tr. tr. tr.			
			– 113.5 – banding at 67° to core axis.											
12	27.9	219.5	<u>ULTRAMAFIC VOLCANICS</u> - typical.											
366-1168			- 127.9 - 144.7 - talc-tremolite schist with minor serpentine and 0.5-1% carbonate as narrow (1/8") bands parallel to foliation and as disseminations.											
- TORONTO -			<ul> <li>- 137.0 - 138.3 - banded and contorted with sep- aration of tremolite from talc and serpentine (sheared?) trace pyrite as fracture coating.</li> </ul>	5482		137.0	138.3	1.3			tr.			
ANGRIDGES -			- 142.1 - 144.6 - foliated and fractured at 0 to $17^{\circ}$ to core axis.											
-										1				

FOOTAGE

- LANGRIDGES - TORONTO - 366-1168

100	1 402	DESCRIPTION									
		DESCRIPTION	NO	". SULPH		FOOTAGE			[		~
FROM	то		1.0	IDES	FROM	TO	TOTAL		OZ TON	OZ TON	
		<ul> <li>144.6 - 144.9 - Ground core. Caused possibly by competency contact between upper and lower units in conjunction with regional shear.</li> </ul>									-
		- 144.7 - 172.0 - dominantly tremolite with minor phlogopite; weak silicification with common quartz veinlet and minor disseminated quartz.									
		<ul> <li>- 148.3 - 150.8 - silicified with three 1/2" to 1" quartz veinlets to 149.4 and nearly continuous zone to 150.8. Quartz with remnant ultramafics parallel to foliation outside silicified zone. No visible sulphides.</li> </ul>	5483		148.3	150.8	2.5		tr.		
		- 167.3 - 1/4" quartz-calcite veinlet.	5484		167.0	170.0	3.0		tr.		
		- 172.0 - 173.6 - 3-5% pyrrhotite with quartz veinlets and surroun- ded by bleached (light green) zones. Also minor calcite and chlorite with sulphide.	5485		172.0	173.6	1.6		tr.		
		- 173.6 - 182.3 - typical talc schist with minor serpentine and tremolite with several carbonate veinlets (up to $1/2$ "). No visible sulphides.	5486 5487		173.6 178.3	178.3 182.3	4.7 4.0		tr. tr.		
		- 182.3 - 206.1 - typical tremolite-talc-serpentine with minor biotite aligned with the foliation.									
		- 206.1 - 219.5 - abundant quartz-carbonate-feldspar veinlets with bleached alteration haloes around them.	5488 5489 5490		206.1 209.5 214.5	209.5 214.5 219.5	3.4 5.0 5.0		tr. tr. tr.		
219.5	233.0	BANDED IRON FORMATION - typical with fine banding and lamination, weak contortion, $10-15\%$ magnetite with high replacement of magnetite by grunerite. 0.5-1% pyrrhotite. Banding is typically at 55° to 60° to core axis.	5491 5492 5493		219.5 223.0 228.0	223.0 228.0 233.0	3.5 5.0 5.0		tr. tr. tr.		
		– 225.0 – banding is at 58° to core axis.									
233.0	297.0	ULTRAMAFIC VOLCANICS – typical, tremolite with minor talc, ser- pentine and phlogopite. Many calcite-quartz-feldspar veinlets	5494 5495		233.0 237.0	237.0 242.0	4.0 5.0		tr. tr.		

NAME OF PROPERTY _____ OPAPIMISKAN LAKE HOLE NO. _____0P-86-8

SAMPLE

ASSAYS

- 366-1168

ANGRIDGES - TORONTO

			н	OLEN	o0 <u>P</u>	<u>2-86-8</u>		SHE	EET NO.	<u> </u>	<u>E 5</u>	
F00	TAGE				SAMPL	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	SUL PH	FROM	FOOTAGE	TOTAL	:	ī.	02 TON	UZ TON	
		which are commonly from 1/8" to 1/4" wide but some are less than 1/32" and a few are up to 2". They are randomly oriented and many have alteration haloes around them. Few had trace tourmaline. No visible sulphides.	5496 5497 5498 5499 5500 6601 6602 6603 6604 6605		242.0 247.0 252.0 257.0 262.0 267.0 272.0 277.0 282.0 287.0	70 247.0 252.0 257.0 262.0 267.0 272.0 277.0 282.0 287.0 287.0 292.0	5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	-	•	tr. tr. tr. tr. tr. tr. tr. tr. tr. tr.		
297.0		End of Hole.	6606		292.0	297.0	5.0			tr.		
										Ą.	) M	da

NAME OF PROPERTY OPAPIMISKAN LAKE SUFET NO. 5 OF 5

NAME OF	PROPERTY	OPAPIM	ISKAN LAKE		
HOLE NO.	<u>OP-86-9</u>	LENGTH	199'		
LOCATION	12+01NW	6+00SW			·····
LATITUDE		DEPARTURE			
ELEVATION	I	AZIMUTH	049°	_ DIP	-45.8°
STARTED _	October 19	1986 FINISHED	October 21	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTI
0	-45.8				
199'	-37.3				

HOLE NO. OP-86-9 SHEET NO. 1 of 1

REMARKS Summary Log

PA - 844328

LOGGED BY D. J. Corkery

FOOT	TAGE				SAMP	LE			٨	SSA	Y 5
FROM	то	SUMMARY LOG	NO.	SULPH- IDES	FROM	FOOTAGE TO	TOTAL	¥	ъ	OZ/TON	OZ/TON
0	45.0	CASING									
45.0	64.0	BANDED IRON FORMATION									
64.0	74.6	ULTRAMAFIC VOLCANICS									
74.6	89.6	BANDED IRON FORMATION - $5-7\%$ pyrrhotite and $1-2\%$ pyrite.									
89.6	199.0	ULTRAMAFIC VOLCANICS									
		<ul> <li>- 149.4 - 153.5 - strong silicification with abundant quartz veinlets and alteration surrounding these veinlets. Unit is weakly bleached. 7-10% pyrrhotite.</li> </ul>									
199.0		End of Hole.									
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NAME OF	PROPERTY	OPAPIMI	<u>SKAN LAKE</u>		
HOLE NO.	<u>OP-86-9</u>	LENGTH	199'		. <u></u>
LOCATION	12+01NW	6+00SW			<u></u>
LATITUDE	<u> </u>	DEPARTURE			
ELEVATION		AZIMUTH	049°	_ DIP .	<u>-45.8°</u>
STARTED _	October 19.	1986 FINISHED	October 21.	1986	

FOOTAG	E DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.8	•			
199'	-37.3	•			
	I				

HOLE NO. OP-86-9 SHEET NO. 1 of 4

REMARKS _____

PA - 844328

LOGGED BY D. J. Corkery

FOOTAGE		DESCRIPTION			SAMP	LE		A S S A Y S				
FROM	то		NO,	SULPH IDES	FROM	TO	TOTAL	26	ĸ	OZ/TON	OZ/TON	
0	36.0	<u>CASING</u>										
0.0	43.0	boulders.										
45.0	64.0	BANDED IRON FORMATION - bands of light grey, dark grey to black and light cream-green, well banded, fine to very fine grained, low to moderately contorted bands, well fractured. <u>Average Modes</u>	6607 6608 6609 6610		45.0 49.0 54.0 59.0	49.0 54.0 59.0 64.0	4.0 5.0 5.0 5.0			tr. tr. tr. tr.		
		Grunerite $40$ $ 50\%$ Quartz $25$ $ 35\%$ Magnetite $15$ $ 20\%$ Calcite $5$ $ 7\%$ Pyrrhotite $0.5$ $ 1\%$ Pyritetrace $ 0.5\%$ Tourmalinetrace $ 0.5\%$ Potash Feldspartrace $ 0.5\%$										
		<ul> <li>Magnetite-rich bands contain grunerite and are surrounded by grunerite bands. These are interbedded with chert bands. The unit is highly fractured. Many calcite fracture fillings and veinlets. Also few calcite-quartz-potash-feldspar veinlets. Some veinlets contain tourmaline, pyrrhotite and pyrite. Fractures and veinlets have no apparent consistent orientation. Minor displacement along them is often visible. Also minor pyrrhotite parallel to banding.</li> <li>- 48.5 - 54.0 - hematitic fracture with pyrrhotite coating.</li> <li>- 49.0 - banded at 58° to core axis.</li> </ul>										

. ANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY	
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OPAPIMISKAN LAKE

#### HOLE NO. _____ 0P-86-9______ SHEET NO. ____ 2 of 4_____

FOO	TAGE		SAMPLE					ASSAYS				
FROM	то	DESCRIPTION	NO.	", SUL PH	FROM	FOOTAGE	TOTAL	•	·.	OZ TON	ÚZ TON	
64.0	74.6	<u>ULTRAMAFIC VOLCANICS</u> – medium to dark grey, fine to very fine grained, schistose, dominantly talc with minor serpentine, 2-4% carbonate as fine bands and as disseminated grains; no visible sulphides; trace very fine grained disseminated magnetite.										
74.6	89.6	BANDED IRON FORMATION - atypical, moderate to poorly banded, con- torted, few garnet-blotite bands, abundant chlorite fractures, as well as calcite fractures and veinlets containing pyrrhotite and pyrite, 5-7% pyrrhotite and 1-2% pyrite, as band replacement and in veinlets. This unit is weathered and quite broken.	6611 6612 6613		74.6 79.6 84.6	79.6 84.6 89.6	5.0 5.0 5.0			tr. tr. tr.		
		- 74.6 - 82.1 - as described.										
		- 82.1 - 84.5 - dark green and light grey lamination, fine to very fine grained, contorted, dominantly amphiboles (grunerite and hornblende?) no magnetite, few chert bands. Grades into and out of iron formation.					:					
		- 84.5 - 85.2 - Banded Iron Formation as described.					- - -					
		- 85.2 - 85.5 - as in 82.1 - 84.5.										
		- 85.5 - 89.6 - Banded Iron Formation as described.										
89.6	199.0	ULTRAMAFIC VOLCANICS							]			
		- 89.6 - 99.1 - typical with trace magnetite, several crenulated sections.										
00-1108		- 99.1 - 100.0 - dark greenish-brown with light grey, well foliated strong increase in serpentine.							2			
		- 100.0 - 114.6 - similar to 89.6 - 99.1.										
LANGHUGES - IOHO	L.	- 114.6 - 124.9 - medium grey, fine grained, weak to moderately foliated, dominantly tremolite with 1-3% phlogopite, 0.5-1% serpentine as fracture coatings and disseminated.										

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NAME OF PROPERTY	OPAPIMISKAN LAKE

HOLE NO. 0P-86-9 SHEET NO. 3 of 4

Í	FOOT	TAGE	DESCRIPTION			SAMPL	E		ASSAYS				
Ì	FROM	то			[™] SULPH, IDES	FROM	FOOTAGE TO	TOTAL	•		OZ TON	OZ TON	
			- 124.9 - 125.8 - light grey-green, schistose, tremolite- serpentine-talc with several quartz veinlets and bleached alteration haloes surrounding veinlets. No visible sulphides.	6614		124.3	126.3	2.0			tr.		
			- 125.8 - 149.4 - similar to 114.6 - 124.9 - with several quartz veinlets and weak silicification; veinlets are parallel to foliation. No visible sulphides.	6615 6616		130.2 135.2	135.2 139.4	5.0 4.2			tr. tr.		
			- 149.4 - 153.5 - strong silicification with abundant quartz vein- lets and alteration surrounding these, unit weakly bleached, 7-10% pyrrhotite parallel to foliation along fractures and as veinlets and blebs.	6617		149.4	153.5	4.1			tr.		
			- 150.0 - 150.9 - single quartz veinlet (1/32" wide) cuts previous mineralization, nearly parallel to core axis.										
			- 153.2 - 1/4" quartz-calcite veinlet, no visible sulphides.										
			- 153.5 - 168.1 - similar to 114.6 - 124.9.										
			<ul> <li>- 161.7 - 164.2 - four 1" to 2" quartz-potash- feldspar-calcite veinlets with slight adjacent alteration. No visible sulphides.</li> </ul>	6618		161.7	164.2	2.5			tr.		
-1168			- 168.1 - 176.1 - tremolite-serpentine-talc, schistose, medium grey-green.										
- TOPONTO - 366			<ul> <li>172.4 - 172.8 - three 1/4" potash-feldspar veinlets with minor quartz and calcite with calcite and potash alteration an inch into wall rock. No visible sulphides.</li> </ul>	6619		172.1	173.1	1.0			tr.		
LANGRIDGES													

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NAME OF PROPERTYOP	<u>APIMISKAN LA</u>	KE
HOLE NO. 02-86-9	SHEET NO	4 of 4

	I		SAMPL	Ē	·	I		ASSAYS		
DESCRIPTION	NO	1. SUL PH		FOOTAGE			- 1	<u> </u>		
		IDES	FROM	то	TOTAL	1	•	OZ TON	OZ TON	
- 176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides.										
- 186.0 - 187.5 - several quartz-potash-feldspar- calcite veinlets (up to 1/2"). No visible	6620		186.0	187.5	1.5			tr.		
sulphides.	6621		196.0	199.0	3.0			tr.		
End of Hole.								(	M	dant
	DESCRIPTION - 176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides. - 186.0 - 187.5 - several quartz-potash-feldspar- calcite veinlets (up to 1/2"). No visible sulphides. End of Hole.	DESCRIPTION - 176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides. - 186.0 - 187.5 - several quartz-potash-feldspar- calcite veinlets (up to 1/2"). No visible sulphides. End of Hole. 621 End of Hole.	DESCRIPTION TO SUPPORT OF SUPPORT	DESCRIPTION SAMPI - 176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides. - 186.0 - 187.5 - several quartz-potash-feldspar- calcite veinlets (up to 1/2"). No visible sulphides. End of Hole. End of Hole.	DESCRIPTION          VIC       SAMPLE         NO       Samm         Samm       Samm         Tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides.         - 186.0       187.5         salete veinlets (up to 1/2"). No visible         sulphides.       6621         End of Hole.       196.0         Image: Same sulphides       196.0         Ima	DESCRIPTION           SAMPLE           no         SAMPLE           176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	SAMPLE           SAMPLE           TOPIAGE           106.1 = 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to foliation, no visible sulphides.         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10         10	SAMPLE           CESCRIPTION           - 176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite, few quartz veinlets parallel to follation, no visible sulphides.         - 186.0 - 187.5 - several quartz-potash-feldsparcal to veinlets (up to 1/2"). No visible sulphides.         6620         186.0 187.5 1.5         - 1.5           End of Hole.         - 186.0 - 187.5 - several quartz-potash-feldsparcal to veinlets (up to 1/2"). No visible sulphides.         6621         196.0 199.0 3.0         - 199.0 3.0	SAMPLE         ASSAVE           SAMPLE         ASSAVE           10         150/mi         7007Ast         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         .         . <td>SAMPLE         ASSAVS           -176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite. few quartz ventates parallel to follation, no visible sulphides.         -         1         -         0         100 fm/m, -         -         0         0.7 fm           -186.0 - 187.5 - several quartz-potash-feldspar-calcite ventates (up to 1/2"). No visible         6620         186.0 187.5 1.5         tr.         tr.           Brd of Hole.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -</td>	SAMPLE         ASSAVS           -176.1 - 199.0 - medium grey-green, fine grained, dominantly tremolite with minor serpentine and phlogopite. few quartz ventates parallel to follation, no visible sulphides.         -         1         -         0         100 fm/m, -         -         0         0.7 fm           -186.0 - 187.5 - several quartz-potash-feldspar-calcite ventates (up to 1/2"). No visible         6620         186.0 187.5 1.5         tr.         tr.           Brd of Hole.         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -

NAME OF	PROPERTY		OPAPIMIS	KAN LAKE		
HOLE NO.	<u>OP-86-10</u>		LENGTH	339'		
LOCATION	12+00NW	9+00SW	· · ·			······
LATITUDE		(	DEPARTURE .	<u></u>		
ELEVATION	I	<i>,</i>	АZIMUTH	049°	DIP _	<u>-45.5°</u>
STARTED _	October 24, 1	1986 · ,	FINISHED	October 26	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
 0	-45.5				
339'	-36.2				

HOLE NO. 0P-86-10 SHEET NO. 1 of 2

REMARKS ______ Summary Log

PA - 844238

LOGGED BY B. E. Elliott

FOOT	TAGE		ŗ		5 A M P	LE			۸	5 5 A 1	' 5	
FROM	то	SUMMARY LOG	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	*6	v v	OZ/TON	oz/ton	
0	36.0	CASING										
36.0	60.9	FELSIC VOLCANICS (?)										
60.9	83.4	GARNET-BIOTITE METASEDIMENT			1							
83.4	95.3	ARGILLACEOUS QUARTZITE										
95.3	126.1	GARNET-BIOTITE METASEDIMENT	5									
126.1	130.5	ARGILLACEOUS QUARTZITE										
130.5	142.4	MAFIC VOLCANICS			-							
142.4	146.4	GARNET-BIOTITE METASEDIMENT										
146.4	162.4	MAFIC VOLCANICS										
162.4	171.5	GARNET-BIOTITE METASEDIMENT							•			
171.5	177.9	MAFIC VOLCANICS - minor pyrrhotite in quartz veinlets.										
177.9	206.3	GARNET-BIOTITE METASEDIMENT										
206.3	218.5	BANDED IRON FORMATION										
218.5	233.2	ULTRAMAFIC VOLCANICS										
3.2 ا	253.9	BANDED IRON FORMATION										
		<ul> <li>- 236.8 - 237.2 - fracture filling of 5% sulphides - pyrite greater than pyrrhotite greater than chalco- pyrite.</li> </ul>										

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NAME OF PROPERTY	OPAPIMISKAN LAKE

HOLE NO. ______ 0P-86-10 ______ SHEET NO. _____ 2 of 2

F	OOTA	GE			_	SAMPI	E		-	ASSAYS		
FRO	м	то	SUMMARY LOG	NO.	", SULPH IDE 5	FROM	FOOTAGE TO	TOTAL	ыт. •	OZ TON	OZ TON	
253	1.9 2	258.1	BIOTITE-GARNET METASEDIMENT - 254.5 - $1/4$ " quartz veinlet with minor pyrite.									
258	3.1 2	292.5	BANDED IRON FORMATION									
292	2.5 2	294.5	LAMPROPHYRE DIKE									
294	.5 3	316.0	BANDED IRON FORMATION									
316	5.0 3	318.0	CARNET-BIOTITE METASEDIMENT									
318	.03	339.0	ULTRAMAFIC VOLCANICS									
339	.0		End of Hole.									
		ļ										
56-1-68 		2						, ,				
101												XIIM
31												
Dutts										(	LM	
-ANGH											0	
LANG												

NAME OF PI	ROPERTY	<u>OPAPIMIS</u>	SKAN LAKE		
HOLE NO	OP-86-10	LENGTH	339.'		
LOCATION	12+00NW 9+	HOOSW			
LATITUDE		DEPARTURE _			
ELEVATION _		AZIMUTH	<u>049°</u>		<u>-45,5°</u>
STARTED OC	tober 24, 198	6 FINISHED	October 26	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.5				
339'	-36,2			L	
			L	. <u></u>	

HOLE NO. 0P-86-10 SHEET NO. 1 of 7

REMARKS _____

PA - 844238

LOGGED BY B. E. Elliott

FOO	TAGE				SAMP	LE		[	A	5 5 A 1	/ S	<u> </u>
FROM	то		NO.	SULPH	FROM	FOOTAGE	TOTAL	16	γ;	OZ/TON	OZ/TON	
0 36.0	36.0 60.9	CASING         FELSIC VOLCANICS (?) - medium grey, fine to very fine grained, weakly foliated. Commonly at 50° to core axis.         Average Modes         Quartz       75 - 85%         Biotite       15 - 20%         Chlorite       17		IDES	FROM		TOTAL					
		Pyrrhotite trace Pyrrhotite cours as fracture coatings. Abundant hairline carbon- ate filled fractures, some with narrow (less than 1/8") alteration halos. Many fractures are randomly oriented but several are between 30° to 40° to core axis.										
		- 36.0 - 48.5 - typical.	6622 6623		36.0 41.0	41.0 46.0	5.0 5.0			tr. tr.		l
		- 48.5 - 49.5 - light grey-green with decrease in biotite content.	6624		46.0	51.0	5.0		1	tr.		
		- 49.5 - 57.0 - typical.	6625		51.0	54.0	3.0 2,8		1	tr. tr.		
		<ul> <li>- 57.0 - 59.3 - several quartz-calcite veinlets, up to 2". No visible sulphides. Some veinlets parallel to foliation while others crosscut. Many fine quartz-calcite fractures cutting the veinlets.</li> </ul>	6627		56,8	59.4	2,6			tr.		
		- 59.3 - 60.9 - typical.	6628		59.4	60.9	1.5			tr.		
60.9	83.4	GARNET-BIOTITE METASEDIMENT - medium to dark grey, medium to fine grained, moderately to strongly foliated, schistose.	6629 6630		60.9 65.9	65.9 70.9	5.0 5.0			tr. tr.		

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. _____ OP-86-10 _____ SHEET NO. ____ 2 of 7_____

ſ	FOOT	AGE	DECONDENSION			SAMPL	E			ASSAYS		
	FROM	τo	DESCRIPTION	NO.	*, SUL PH	EROM	FOOTAGE	TOTAL		OZ TON	OZ TON	
			Average Modes           Quartz         30         -         40%           Biotite         30         -         40%           Garnet         10         -         15%           Sericite         3         -         5%           Sulphide         trace         -         0.5%	6631 6632 6633		70.9 75.9 79.9	75.9 79.9 83.4	5.0 4.0 3.5		tr. tr. tr.		
	83.4	95.3	Poikiloblastic garnets up to 0.1". Abundant hairline quartz-calcite fractures. Sulphides occur as fracture coatings and fine dissemi- nations. <u>ARGILLACEOUS QUARTZITE</u> - medium grey, medium to fine grained, weakly foliated	6634 6635		83.4 87.4	87.4 91.4	4.0 4.0		tr. tr.		ļ
			Weakly follated.Quartz75-80%Biotite20-25%Carbonate2-5%Sericite1-3%Garnet0.5%0.5%Pyritetrace-0.5%Sparse poikiloblastic garnets.Unit grades from garnetiferousunit above into garnetiferous unit below.Carbonate occurs asfine veinlets and alteration patches.Abundant quartz grainsdisplay yellow staining	6636		91.4	95.3	3.9		tr.		
0RONTO - 366-1168	95.3	126.1	<pre>GARNET-BIOTITE METASEDIMENT - similar to unit 60.9 - 83.4 but with increased garnet content. - 95.3 - 110.7 - 10-15% garnet. - 106.4 - quartz-carbonate veinlet with light green alteration halo, parallel to foliation, trace to 0.5% pyrite in alteration halo.</pre>	6637 6638		95.3 100.3	100.3 105.3	5.0 5.0		tr. tr.		
LANGRIDGES - T(			<ul> <li>- 109.0 - 2" quartz-carbonate vein, no visible sulphides.</li> <li>- 110.7 - 122.3 - 20-25% garnet, weakly banded, several well spaced narrow quartz veinlets, no visible sulphides.</li> </ul>	6639 6640 6641 6642		105.3 110.3 115.3 120.3	110.3 115.3 120.3 123.3	5.0 5.0 5.0 3.0		tr. tr. tr. tr.		

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DIA	M	OND DRILL RECORD	N	AME O	F PROPE	RTY		OPAPI	MISKAN	LAKE	
			н	OLEN	o. <u>O</u> P	-86-10		SHI	EET NO.	<u> </u>	f 7
F00	TAGE	DECONDENS			SAMP	LE				ASSAYS	
FROM	то		NO.	% SULPH IDES	FROM	FOOTAGE	TOTAL		· •	OZ TON	UZ TON
		- 122.3 - 126.1 - 10-15% garnet.	6643		123.3	126.1	2.8			tr.	
126.1	130.5	ARGILLACEOUS QUARTZITE - similar to 83.4 - 95.3.	6644		126.1	130.5	4.4			tr.	
130.5	142.4	MAFIC VOLCANICS - dark green-grey, fine to very fine grained, weak- ly foliated, commonly 55° to core axis.	6645 6646 6647		130.5 134.5 138.5	134.5 138.5 142.4	4.0 4.0 3.9			tr. tr. tr.	
		Amphibole (dark green)50-60%Plagioclase25%Quartz20%Biotite1-Chlorite1%Pyritetrace									
142.4	146.4	<u>GARNET-BIOTITE METASEDIMENT</u> - similar to unit 60.9 - 83.4 but con- taining 10-15% garnet and 10-15% staurolite garnet overgrowths on staurolite.	6648		142.4	146.4	4.0			tr.	
146.4	162.4	MAFIC VOLCANICS - similar to 130.5 - 142.4.									
		- 162.1 - 162.3 - quartz-carbonate veinlet with small fragments of wall rock visible - no visible sulphides.	6649		161.4	162.4	1.0			tr.	
162.4	171.5	GARNET-BIOTITE METASEDIMENT - similar to unit 60.9 - 83.4 but con- taining 7-10% garnet, 7-10% staurolite.	6650 6651		162.4 167.4	167.4 171.5	5.0 4.1			tr. tr.	
171.5	177.9	MAFIC VOLCANICS – similar to 130.5 – 142.4 but contains minor tremolite – numerous fine quartz veinlets both parallel to and crosscutting foliation.									
		- 174.0 - quartz veinlet with minor pyrrhotite.	6652		171.5	174.5	3.0			tr.	
		- 177.4 - fine brecciated quartz-filled fracture.	6653		174.5	177.9	3.4			tr.	

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NAME OF PROPERTY	OPAPIMISKAN	LAKE

HOLE NO. 09-86-10

ĺ	F001	FAGE	DESCRIPTION			SAMPI	E			ASSAYS		
Ī	FROM	то	DESCRIPTION	NO.	°, SULPH,		FOOTAGE		~.	OZ TON	OZ TON	
	177.9	206.3	GARNET-BIOTITE METASEDIMENT - similar to 60.9 - 83.4 but with the		IDE 5	FROM	10	TOTAL				
			- 177.9 - 185.5 - 15% garnet and local areas containing 3-4% staurolite, several 1" to 3" bands of typical mafic volcanics, several quartz veinlets with pyrite as fracture coatings and fine dissemin- ations.	6654		177.9	182.9	5.0		.02		
			<ul> <li>184.5 - 185.5 - highly contorted interbeds of metasediments and volcanics.</li> </ul>	6655		182.9	187.9	5.0		tr.		
			- 185.5 - 198.0 - 10-15% garnet, local areas with 5-7% staurolite.	6656		187.9	192.9	5.0		.02		
1			several 3" to 5" guartz (chert?) bands with fine	6657		192.9	197.9	5.0		tr.		
			interlaminations within.	6658		197.9	202.9	5.0		tr.		-
			- 198.0 - 206.3 - moderate to well defined compositional banding, garnet-rich bands and biotite-rich bands, 10-20% garnets, rare to no staurolite, increase in the abundance of quartz (chert?) bands, few very fine quartz-carbonate veinlets with trace pyrite.	6659		202.9	206.3	3.4		tr.		
) - 366-1168	206.3	213.2	BANDED IRON FORMATION - dark grey to black bands with pink garnets and dark grey-green bands (bedding), medium to fine grained, well banded, bands 2" to 4" thick, schistose, bands commonly 68° to core axis. Bands of chert and 5% magnetite, bands of biotite and 5% poikiloblastic garnets with or without dark amphibole. Minor to trace pyrite occurs as fracture coatings along bedding planes and as fine disseminations. Fine laminations occur within chert- magnetite bands. Chlorite and carbonate occur along bedding plane fractures. A few hairline carbonate veinlets occur along bedding planes but some are crosscutting. Minor pyrite, pyrrhotite and trace chalcopyrite occur within carbonate veinlets.	6660 6661		206.3 210.3	210.3 213.2	4.0 2.9		tr. .02		
LANGRIDGES - TORONTC	°13.2	218.5	BANDED IRON FORMATION - similar to 206.3 - 231.2 but has been intensely chloritized, little to no magnetite, similar carbonate veinlets with associated pyrite, pyrrhotite and chalcopyrite.	6662		213.2	218.5	5.3		tr.		

NGRIDGES

NAME OF	PROPERTY
HOLE NO.	OP-86-10

OPAPIMISKAN LAKE

SHEET NO. ____ 5 of 7

SAMPLE ASSAYS FOOTAGE DESCRIPTION ", SULPH FOOTAGE NO. FROM то OZ TON UZ TON ъ.  $\sim$ IDES FROM TO TOTAL 218.5 233.9 ULTRAMAFIC VOLCANICS - medium grey, fine grained, schistose. Mineralogy is dominated by talc with subordinate serpentine and local areas of tremolite. Few faintly fragmental areas. Local sheared areas with carbonate filling fractures. No visible sulphides. - 218.5 - 221.5 - chloritized zone, no visible sulphides. 6663 232.0 233.2 1.2 tr. - 232.6 - 5" guartz-carbonate vein. BANDED IRON FORMATION - similar to unit 206.3 - 213.2. Garnets up 233.9 253.9 to 1/4". Chert-magnetite boudins. Few fine displacement fractures Few guartz-carbonate veinlets parallel to and crosscutting banding. 233.2 238.2 5.0 6664 tr. - 237.2 - 236.8 - 5% pyrite with minor pyrrhotite and trace chalcopyrite filling fractures. 238.2 243.2 - 239.8 - 240.0 - shear zone with chlorite and carbonate 6665 5.0 tr. 6666 243.2 247.2 4.0 tr. alteration, banding destroyed. .01 247.2 251.2 4.0 6667 - 247.2 - 246.8 - similar shear zone as above. 251.2 253.9 2.7 .04 6668 BIOTITE-GARNET METASEDIMENT - dark grey to black with few medium 253.9 258.1 grey-green bands, fine to very fine grained, weakly schistose. Average Modes **Biotite** 70 75% 20% Garnet 5% Calcite 253.9 255.9 Many fine pink poikiloblastic garnets dispersed evenly throughout 2.0 6669 tr. 6670 255.9 258.1 2.2 tr. the unit. Chloritic alteration along fractures. - 254.5 - 1/4" guartz vein with minor cubic pyrite. ORONTO BANDED IRON FORMATION - well banded, blue-grey to dark grey chert-292.5 258.1 magnetite bands and pale green to brown grunerite-rich bands, fine to very fine grained, bands ranging from 1" to 5" thick and commonly 68° to core axis. 60-65% chert, 20-25% grunerite, 10-15% magnetite. Carbonate occurs as fine veinlets parallel to and crosscutting banding and as a weakly pervasive alteration throughout unit. 1% pyrite and trace pyrrhotite occur as fracture fillings and coatings. Several 1" to 2" quartz veins, with no visible

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NAME OF PROPERTY	OPAPIMISKAN	LAKE	
HOLE NO. 0P-86-10	SHEET NO.	6	of 7

FOO	OTAGE				SAMPL	.E			ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL	~	OZ TON	UZ TON	
		sulphides. Local sheared areas where bedding ? partially des- troyed.									
		- 258.1 - 261.9 - typical, slight shearing.	6671		258.1	261.9	3.8		tr.		
		- 261.9 - 264.0 - moderate shearing.	6672		261.9	264.0	2.1		tr.		
		- $263.0 - 2 1/2$ " quartz vein.							1		i
		- 264.0 - 285.5 - typical, 1" bands of minor shearing.	6673 6674		264.0 269.0	269.0 274.0	5.0 5.0		tr. tr.		
		- 285.5 - 287.7 - strong shearing, numerous fine carbonate vein- lets crosscutting banding, minor pyrite or pyrrhotite?	6675 6676 6677		274.0 279.0 282.0	279.0 282.0 285.5	5.0 3.0 3.5	-	tr. .04 tr.		
		-287.4 - 1/2" quartz vein.	6678		285.5	287.5	2.0	ļ	tr.		
		- 287.7 - 292.5 - typical, many fine displacement fractures and brecciation.	6679		287.7	292.5	4.8		tr.		
292.5	294.5	LAMPROPHYRE DIKE - dark grey to black, fine grained with medium grained phenocrysts, massive, porphyritic. Chlorite and carbonate filled fractures and pervasive carbonate alteration.	6680		292.5	294.5	2.0		tr.		
294.5	316.0	BANDED IRON FORMATION - similar to 258.1 - 292.5, dominated by chert with magnetite and grunerite, many chert boudinage, sheared areas with highly contorted bands, few narrow bands of biotite with minor garnets.									
1168		<ul> <li>294,5 - 296.0 - highly fractured with numerous carbonate veinlets containing minor pyrite and trace pyrrhotite.</li> </ul>	6681		294.5	296.0	1.5		tr.		
- 366		- 296.0 - 305.3 - typical.	6682		296.0	301.0	5.0		tr.		
		<ul> <li>- 305.3 - 306.0 - sheared and contorted bands, bedding destroyed - minor pyrite and trace pyrrhotite.</li> </ul>	6683		301.0	306.0	5.0		tr.		
LANGRIDG		<ul> <li>- 306.0 - 312.9 - highly contorted with many boudins, several 1/8" clots pyrite with minor pyrrhotite, minor chlorite and carbonate alter- tion along fract;</li> </ul>	6684 6685		306.0 311.0	311,0 314,0	5.0 3.0		tr. tr.		

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NAME OF PROPERTY	PAPIMISKAN LAKE	
HOLE NO0P-86-10	SHEET NO. 7 of 7	

FOC	TAGE	DETERIOTION	SAMPLE				ASSAYS				
FROM	то	DESCRIPTION	NO.	N SULPH	FROM	FOOTAGE	TOTAL		•	OZ TON	UZ TON
		- 312.9 - 316.0 - typical.	6686		314.0	316.0	2.0			tr.	
316.0	318.0	<u>CARNET-BIOTITE METASEDIMENT</u> - dark grey to black garnet-biotite bands dominated by biotite with poikiloblastic pink garnets and medium grey chert-rich layers, garnet-biotite bands range from 0.5" to 1" and chert-rich bands range from 1/4" to 2.5". Minor carbonate alteration. Minor pyrite and trace pyrrhotite as fine clots and as fracture coatings.	6687		316.0	318.0	2.0			tr.	
318.0	339.0	ULTRAMAFIC VOLCANICS - medium grey to grey-green to green to dark grey, medium to fine grained, schistose. - 318.0 - 332.5 - medium grey to grey-green. Mineralogy dominated by talc and serpentine with minor tremolite. Few carbonate veinlets but no visible sulphides.									
		- 332.5 - 339.0 - dark grey, medium to fine grained, very fine foliation, schistose. Mineralogy dominated by tremolite with major silicification. 70% tremo- lite, 25% quartz, 1-2% serpentine, 1-2% talc, 1% phlogopite, trace pyrite and pyrrhotite.	6688 6689		332.5 336.5	336.5 339.0	4.0 2.5			tr. tr.	
339.0		- 332.4 - 333.4 - altered zone with phlogopite. End of Hole.									
~											
SHIDGES - TOHONTO - 366-116											Jan

NAME OF	PROPERTY	OPAPIMI	OPAPIMISKAN LAKE							
HOLE NO.	<u>OP-86-11</u>	LENGTH	289'							
LOCATION	11+03NW	8+98SW								
LATITUDE		DEPARTURE			<u></u>					
ELEVATION	۱	АZIMUTH	<u>049°</u>		-47°					
STARTED	October 28		October 30	1986						

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-47.0				
289'	-40,2				

#### HOLE NO. 0P-86-11 SHEET NO. 1 of 2

Summary Log REMARKS_

PA - 844238

D. J. Corkery LOGGED BY ____

FOO	TAGE				SAMP	LE	-		A	5 5 A Y	s	
FROM	то	SUMMARY LOG	NO.	SULPH-	FROM	FOOT AGE TO	TOTAL	ъ	¥	OZ/TON	OZ/TON	
0	32.0	CASING										
32.0	39.5	GARNETIFEROUS METASEDIMENT										
39.5	40.7	LOSS OF CORE										
40.7	45.7	FELSIC VOLCANICS										
45.7	47.4	GARNETIFEROUS METASEDIMENTS										
47.4	51.8	FELSIC_VOLCANICS	ſ									
51.8	89.4	GARNETIFEROUS METASEDIMENTS										1
		- 51.8 - 70.4 - 10-15% fine grained staurolite, trace pyrite.	6696		56.8	61.8	5.0			.06		
89,4	90.5	MAFIC TO INTERMEDIATE VOLCANICS with METASEDIMENTS										
90.5	139.5	GARNETIFEROUS METASEDIMENTS										
139.5	160.3	BANDED IRON FORMATION										
g 160.3	175.6	ULTRAMAFIC VOLCANICS										
175.6	185.7	BANDED IRON FORMATION - 3-5% magnetite.										
.7	208.2	BANDED IRON FORMATION - 10-15% magnetite.										
208.2	213.0	CARNETIFEROUS_METASEDIMENT										
ANG												

NAME OF	PROPERTY	OPAPIMISKAN	LAKE	

HOLE NO. ______ OP-86-11 ______ SHEET NO. _____ 2 of 2

SAMPLE ASSAYS FOOTAGE DESCRIPTION NO. SULPH FOOTAGE FROM то SUMMARY LOG OZ TON UZ TON ъ. ·--IDE 5 FROM TO TOTAL 213.0 250.6 BANDED IRON FORMATION 250.6 256.4 LAMPROPHYRE DIKE 256.4 266.6 BANDED IRON FORMATION 266.6 289.0 ULTRAMAFIC VOLCANICS 289.0 End of Hole. RONTO - 366-1168 Antiplame 1 ANGRIDGES

NAME OF	PROPERTY	OPAPI			
HOLE NO.	OP-86-11	LENGTH		289'	
LOCATION	<u>11+03NW 8+9</u>	8SW			
LATITUDE		DEPARTURE			
ELEVATION	<u></u>	_ AZIMUTH	049°	DIP	<u>-47°</u>
STARTED _	<u>October 28. 1986</u>	FINISHED	October	30, 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-47.0 ⁴				
289'	-40,2				

HOLE NO. 00-86-11 SHEET NO. 1 of 7

REMARKS

PA - 844238

LOGGED BY D. J. Corkery

FOOT	AGE				SAMP	LE			A	5 5 A 1	' S	
FROM	то	DESCRIPTION	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	38	76	OZ/TON	OZ/TON	
0	32.0	CASING										
32.0	39.5	GARNETIFEROUS METASEDIMENTS - dark grey, fine grained, well folia- ted to schistose.	6690 6691		32.0 36.0	36.0 39.5	4.0 3.5			tr. tr.		
		Average Modes										
		Quartz30-40%Biotite25-35%Sericite10-12%Garnet7-10%Staurolite1-3%Pyritetrace										
39.5	40.7	LOSS OF CORE - "mud seam"										
40.7	45.1	FELSIC VOLCANIC - dark grey, fine to very fine grained, weak to moderately foliated.Average ModesQuartz30Quartz30Feldspar20Sericite1515-Amphibole15Biotite3-5%Pyritetrace	6692		40.7	45.1	4.4			tr.		

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 00-86-11 SHEET NO. 2 of 7

FOOT	AGE				SAMPL	E				ASSAYS		
FROM	то		NO.	% SULPH IDES	FROM	FOOTAGE TO	TOTAL		~.	OZ TON	ÚZ TON	
		Several quartz and quartz-calcite-feldspar veinlets; (commonly at 50° to 55°). Pyrite occurs in veinlets.										
45.1	47.4	GARNETIFEROUS METASEDIMENTS - similar to 32.0 - 39.5, trace sulphides.	6693		45.1	47.4	2.3			tr.	-	
47.4	51.8	FELSIC VOLCANICS - similar to 40.7 - 45.1, trace pyrite.	6694		47.4	51.8	4.4			tr.		
51.8	89.4	GARNETIFEROUS METASEDIMENTS - similar to 32.0 - 39.5.										
		- 51.8 - 70.4 - increased staurolite content at 10-15%.	6695		51.8	56.8	5.0			tr. 06		
		- 70.4 - 74.0 - several quartz bands which are folded and boudin-	6697		61.8	66.8	5.0			tr.		
		aged. Trace sulphides.	6698		66.8	71.8	5.0			tr.		
		- 74.0 - 77.0 - typical with 15-20% garnets.	6699		71.8	76.8	5.0			tr.		
		- 77.0 - 81.2 - 30-40% garnet poikiloblasts (up to 1/4")	6700		76.8	81.8	5.0			tr.		
		- 81.2 - 83.4 - 10-15% garnets, 0.5-1% staurolite and several narrow quartz bands.	6701		81.8	85.4	3.6			tr.		
		- 81.4 - 81.6 - quartz band, no visible sulphides.										
		- 83.4 - 86.9 - 20-25% garnet.										
		- 86.9 - 89.4 - 10-15% hornblende occurring in matrix between garnets.	6702		85.4	89.4	4.0			tr.		
89.4	90.5	MAFIC TO INTERMEDIATE VOLCANIC WITH METASEDIMENTS - with typical metasediments are 1-3" interbeds of volcanics. Volcanics are medium grey-green, laminated, fine to very fine grained.	6703		89.4	90.5	1,1			tr.		
		Average Modes - for Volcanics										
		Amphibole         60         -         70%           Plagioclase         15         -         20%           Quartz         15         -         20%										
		Amphibole is dominantly hornblende with actinolite.						ł				

LANGRIDGES - TORONTO - 366-1168

Calcite

Chlorite

**Sulphides** 

#### NAME OF PROPERTY _____ OPAPIMISKAN LAKE OP-86-11

HOLE NO.

SHEET NO. 3 OF 7

SAMPLE ASSAYS FOOTAGE DESCRIPTION 1 SUL PH FOOTAGE NO. FROM τo OZ TON OZ TON ~ ٦. 1DE 5 FROM TO TOTAL GARNETIFEROUS METASEDIMENTS - atypical, schistose with mineralogy 90.5 139.5 as follows: Average Modes 30 40% Biotite 25 35% Garnet 15 20% Hornblende _ 15% 10 Quartz --trace Sulphide Quartz occurs mainly as narrow bands. Few hornblende bands. 6704 90.5 95.0 4.5 tr. -90.5 - 104.0 - poorly banded.95.0 100.0 5.0 6705 tr. 6706 100.0 105.0 5.0 tr. - 104.0 - 131.2 - moderately banded with trace magnetite. 6707 105.0 110.0 5,0 tr. - 123.0 - banding at  $40^{\circ}$  to core axis. 6708 110.0 115.0 5.0 tr. 115.0 120.0 5.0 6709 tr. - 130.0 - banding at 35° to core axis. 120.0 125.0 5.0 tr. 6710 125.0 128.0 3.0 tr. 6711 128.0 131.2 3.2 - 131.2 - 139.5 - well banded with 15-20% chert bands, trace to 6712 tr. 131.2 135.5 4.3 0.5% magnetite and trace to 0.5% grunerite at 6713 tr. 135.5 139.5 .03 6714 4.0 chert contact. BANDED IRON FORMATION - the above sediment grading into this unit. 139.5 160.3 Well banded, light grey, dark grey to black with pink garnets, and light pink-cream-green, fine grained. Average Modes 30% Biotite 25 25 30% Garnet _ 20 25% Quartz 10 15% Hornblende 5% Magnetite 3 5% 3 Grunerite

3%

1%

0.5%

1

trace

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0.5

PONTO - 366-1168 ANGRIDGES -

NAME OF PROPERTY0	PAPIMISKAN LAKE
HOLE NO. 0P-86-11	SHEET NO 4 of 7

FOO	TAGE				SAMPL	E				ASSAYS		
	r	DESCRIPTION	NO	* SULPH		FOOTAGE						
FROM	to		NO.	IDES	FROM	TO	TOTAL	1 •	7	OZ TON	OZ TON	
		Magnetite occurs as disseminated grains in recrystallized chert bands. Grunerite generally at the edge of chert bands. Pyrite and pyrhotite occur in chloritic fractures as fillings and as coatings Calcite occurs in bands, commonly with quartz. Garnets occur in biotite and hornblende bands as $1/8"$ to $1/4"$ poikiloblasts (from less than 20% to more than 70% of individual bands). Banding angle varies across the unit. Banding angles to the core axis are as follows: $- 140.0 - 25^{\circ}$ $- 144.0 - 22^{\circ}$										
~		- 148.0 - 12° - 153.0 - 155.0 - nearly parallel (contorted). - 156.5 - 27°										
		- 159.0 - 57°										
		<ul> <li>140.5 - two 1/8" bands containing limonite, pyrrhotite and euhedral hornblende crystals.</li> </ul>	6715		139.5	144.0	4.5			.03		
		- 153.0 - 156.0 - chlorite filled fracture nearly parallel to the core axis.	6716 6717 6718 6719		144.0 149.0 154.0 157.0	149.0 154.0 157.0 160.3	5.0 5.0 3.0 3.3			tr. .02 .02 tr.		
160.3	175.6	ULTRAMAFIC VOLCANIC - light grey, fine grained, schistose, domin- ated by talc with minor serpentine. Few narrow bands of tremolite. Trace to 0.5% disseminated magnetite grains.										
175.6	185.7	<u>BANDED IRON FORMATION</u> - typical, similar to 139.5 to 160.3, with $2-4\%$ magnetite.	6720 6721		175.6 180.7	180.7 185.7	5.1 5.0			.01 tr.		
105.7	208.2	BANDED IRON FORMATION - atypical, dark grey to black, moderately banded, finely laminated, fine to very fine grained. Consists mainly of bands of quartz-magnetite and biotite-magnetite with minor garnet.										

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NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-11 SHEET NO. 5 of 7

FOO	TAGE	DESCRIPTION			SAMPL	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL			OZ TON	OZ TON	
FROM 208.2	то 213.0	DESCRIPTION         Average Modes         Quartz       40       -       50%         Biotite       20       -       25%         Hornblende       15       -       20%         Magnetite       10       -       15%         Grunerite       1       -       3%         Garnet       1       -       2%         Pyrrhotite       trace       -       2%         Several quartz (recrystallized chert) bands are boudinaged.       -       Pyrrhotite occurs in fractures and around boudins.         -       186.8 - 188.8 - brecciated and filled with calcite, ankerite, quartz and chlorite with trace pyrrhotite.       -         GARNETIFEROUS METASEDIMENTS - dominantly garnet-biotite schist with minor grunerite and trace to 0.5% magnetite. Compositionally banded and contains for well spread chert bands _ Garnets are small	NO. 6722 6723 6724 6725 6726 6727 6728	* SULPH, IDES	ГВОМ 185.7 186.8 188.8 193.2 198.2 203.2 208.2	186.8 188.8 193.2 198.2 203.2 208.2 213.0	1.1 2.0 4.4 5.0 5.0 5.0 4.8	3	~	.02 tr. .01 tr. tr. tr. tr.	62 TON	
213.0	250.6	<ul> <li>banded and contains few well spaced chert bands. Garnets are small (most less than 1/8") and constitute 30-40% of the unit. No visible sulphides. Banding at 60° to core axis.</li> <li><u>BANDED IRON FORMATION</u> - bands of light grey, dark grey and light cream-green; well banded, fine grained.</li> <li><u>Average Modes</u></li> <li>Quartz 40 - 50%</li> <li>Grunerite 20 - 25%</li> <li>Magnetite 15 - 20%</li> <li>Carbonate 10 - 15%</li> <li>Sulphides 0.5 - 1%</li> <li>Bands of recrystallized chert and grunerite-magnetite with grunerite concentrating at boundary between chert and magnetite. Several sections are highly fractured with some brecciated. Calcite occurs in brecciated sections and as fracture fillings. Pyrrhotite and pyrite occur as fracture coatings and fillings.</li> </ul>										

#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 0P-86-11 SHEET NO. 6 of 7

FOOTA	AGE				SAMPL	.E				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE TO	TO TAL	•	÷,	OZ TON	UZ TON	
		<ul> <li>- 213.0 - 221.4 - lean transition zone from above sediments (0.5 to 1% magnetite). 60-70% quartz with narrow band laminations and wisps of biotite-garnet and grunerite. 0.5-1% pyrrhotite.</li> </ul>	6729 , 6730		213.0 217.0	217.0 221.4	4.0 4.4			tr. tr.		
		- 221.4 - 229.7 - Banded Iron Formation - as described. - 229.7 - 235.3 - well fractured with three 6" to 10" brecciated	6731 6732 6733		221.4 225.7 230.7	225.7 230.7 233.5	4.3 5.0 2.8			tr. tr. .02		
		sections.	6734		233.5	236.3	2.8			tr.		
		- 235.3 - 250.6 - same as 221.4 - 229.7.	6735		236.3	240.6	4.3			tr.		
		- 241.0 - banding at $62^{\circ}$ to core axis.	6736		240.6	245.6	5.0			tr.		
		- 248.0 - banding at $65^{\circ}$ to core axis.	6737		245.6	250.6	5.0			tr.		
250.6	256.4	LAMPROPHYRE DIKE - two dikes at 251.0 to 251.5 and 251.9 to 254.2 with several 1/2" to 1 1/2" dikes above, between and below these. The dikes are dark grey, massive, porphyritic. Phenocrysts are dark with replacement by calcite common - calcite, chlorite and biotite dominating the matrix. 0.5-1% disseminated magnetite. Few dikes are concordant but many crosscut banded iron formation banding. The dikes are within typical banded iron formation as in 235.3 - 250.6.	6738 6739		250.6 254.2	254.2 256.4	3.6 2.2			tr. tr.		
		- 257.7 - 257.9 - magnetic bands of banded iron formation are red and contain very fine grained hematite.										
256.4	266.6	BANDED IRON FORMATION - similar to 235.3 - 250.6 but with strong alteration of magnetite to grunerite. 7-10% magnetite. Contains several bands of light cream-coloured chert bands. Trace to 0.5% pyrrhotite as fracture fillings. - 258.0 - 260.6 - similar to 213.0 - 221.4, with 1-2% pyrrhotite. - 265.9 - 266.2 - garnet-biotite schist.	6740 6741		256.4 261.6	261.6 266.6	5.2 5.0			tr. tr.		

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 02-86-11	SHEET NO 7 of 7

F00.	TAGE				SAMPI	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	TOES	FROM	FOOTAGE TO	TOTAL	•	۰.	02 TON	UZ TON	
266.6	289.0	<u>ULTRAMAFIC VOLCANICS</u> - similar to 160.3 - 175.6. - 266.6 to 266.9 - 15 to 20% phlogopite.										
:		- 266.9 to 279.0 - typical.										
		<ul> <li>279.0 to 289.0 — dark grey, fine grained, dominated by tremolite- actinolite with minor phlogopite.</li> </ul>										
289.0		End of Hole.										
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NAME OF	PROPERTY	OPAPIMISKAN LAKE							
HOLE NO.	<u>OP-86-12</u>	LENGTH		335'					
LOCATION	11+00NW	10+00sw			·····				
LATITUDE		DEPARTURE							
ELEVATION		AZIMUTH	049°	DIP	-50°				
STARTED C	<u>ctober 31, 1</u>	986	November	2, 1986					

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH
0	-50.0	>			
335'	-42.0	>			

HOLE NO. 0P-86-12 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844238

LOGGED BY _____B. E. Elliott

F 0 0 1	TAGE				SAMP	LE			А	SSAN	′s	
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	14	10	OZ/TON	OZ/TON	
0	18.0	CASING							n I			
18.0	26.4	CARNET-BIOTITE METASEDIMENT										
26.4	27.7	MAFIC TO INTERMEDIATE INTERBED										
27.7	44.6	GARNET-BIOTITE METASEDIMENT										
44.6	49.6	MAFIC VOLCANIC										
49.6	84.0	GARNET-BIOTITE METASEDIMENT										
84.0	85.9	BIOTITE METASEDIMENT										
85.9	111.4	MAFIC VOLCANIC										
111.4	175.2	GARNET-BIOTITE METASEDIMENT - few $1/4$ " - $1/2$ " quartz and/or carbonate veins with minor to trace pyrite and pyrchotite.										
		- 123.0 - 1/4" sulphide-rich zone - 10% pyrite, 4% pyrrhotite, arsenopyrite?, tourmaline?										
296-11 DB		- 160.3 - 160.5 - quartz vein with 5% pyrite, 1% pyrrhotite, tourmaline?										
175.2	195,2	LEAN IRON FORMATION										
2	214.9	ULTRAMAFIC VOLCANIC										
g 214.9	259.0	BANDED IRON FORMATION						l.				
102 a												

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NAME OF	PROPERTY	OPAPIMISKAN	LAKE	 

HOLE NO	<u>OP-86-12</u>	SHEET	NO	<u>2 of</u>	2
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FOO	TAGE	DESCRIPTION			SAMPL	E		ASSAYS					
FROM	то	SUMMARY LOG	NO	T SULPH.	ERIDA	FOOTAGE	TOTAL			OZ TON	UZ TUN		
				102.5	FROM	10	TOTAL						
259.0	267.0	GARNET-BIOTITE METASEDIMENT											
267.0	314.4	BANDED IRON FORMATION										1	
314.4	335.0	ULTRAMAFIC VOLCANIC											
335.0		End of Hole.											
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NAME OF	PROPERTY	OPAPIN	<u>1ISKAN LAKE</u>		
HOLE NO.	OP-86-12	LENGTH	335	r	
LOCATION	11+00NW	10+00SW			
LATITUDE		DEPARTURE			<u></u>
ELEVATION		AZIMUTH	049°	01P -	50°
STARTED _	<u>October 31, 1</u>	986 FINISHED	November 2.	1986	<u>.</u>

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH
0	-50.0	۹			
335'	-42.0	P			

HOLE NO. 0P-86-12 SHEET NO. 1 of 9

REMARKS _____

PA - 844238

LOGGED BY <u>B. E. Elliott</u>

FOOT	AGE				SAMP	LE		ASSAY5					
FROM	то	DESCRIPTION	NO.	SULPH- IDES	FROM	TO TO	TOTAL	\$	'ö	OZ/TON	OZ/TON		
0	18.0	CASING											
18.0	26.4	<u>GARNET-BIOTITE METASEDIMENT</u> - medium grey, fine grained, weak foliation, weak to no banding.											
		Average Modes											
		Biotite       60       -       70%         Quartz       15       -       20%         Garnet       5       -       15%         Staurolite       1       -       5%         Pyrite       1%											
		Poikiloblastic garnets up to 1/4" diameter, localized patches with up to 5% staurolite. Few carbonate veinlets with trace pyrite. Minor pyrite as fracture coatings. Several 1/2" to 1" quartz veins											
		<ul> <li>- 21.4 - 22.2 - highly silicified zone with carbonate patches and local chloritization along fracture planes, no visible sulphides.</li> </ul>	6801 6802		18.0 23.0	23.0 26.4	5.0 3.4			tr. tr.			
26.4	27.7	<u>MAFIC TO INTERMEDIATE INTERBED</u> - dark green-grey, fine grained, weak schistosity.	6803		26.4	27.7	1.3			tr.			
		Average Modes Actinolite 60 - 70% Rissionland 10 - 15%											
		Quartz 10 - 15% Sulphide trace									}		
27.7	29.0	GRADATION OF MAFIC TO GARNET-BIOTITE METASEDIMENT	6804		27.7	32.7	5.0			tr.			

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FO	OTAGE		Τ		SAMP	LE		ASSAYS					
FROM	то	DESCRIPTION	ND.	*. SUL PH 10E S	FROM	FOOTAGE	TOTAL		ņ,	07 TON	UZ TON		
29.	0 44.6	GARNET-BIOTITE METASEDIMENT - medium grey to grey-green, fine grained, weakly banded, strong schistosity. Average Modes											
		Biotite 70 - 75% Garnet 10 - 15% Staurolite 2 - 5% Sericite 2 - 3% Quartz 2 - 3% Fyrite trace	6805 6806 6807		32.7 37.7 41.7	37.7 41.7 44.6	5.0 4.0 2.9			tr. tr. tr.			
		Poikiloblastic garnets ranging up to 1/16" in diameter. Several fine carbonate veinlets with narrow bleached halos.											
44.	6 49.6	<u>MAFIC VOLCANIC</u> - medium green, medium to fine grained, weak schistosity.											
		Average Modes											
		Hornblende75%Actinolite10%Quartz10%Chlorite3 - 5%											
		Intense green colour, few thin carbonate veinlets, no visible sulphides.											
<b>B911-99E</b> - 0	6 84.0	GARNET-BIOTITE METASEDIMENT - medium to dark grey, medium to fine grained, weak to moderate compositional banding, poikiloblastic garnets.	6808 6809 6810 6811		49.6 54.6 59.6 64.6	54.6 59.6 64.6 69.6	5.0 5.0 5.0 5.0			tr. tr. tr.			
TORONT		Average Modes	6812 6813		69.6 74.6	74.6	5.0			tr. tr.			
LANGRIDGES -		Biotite         70         -         75%           Garnet         10         -         20%           Staurolite         3         -         7%           Quartz         2         -         5%											
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NAME OF PROPERTY	PAPIMISKAN LAKE
HOLE NO. 0P-86-12	SHEET NO. 3 OF 9

FOO	TAGE	DESCRIPTION			SAMPL	E		ASSAYS						
FROM	то	DESCRIPTION	NO.	*, SULPH		FOOTAGE				OZ TON	OZ TON			
		Sericite 1 - 3% Pyrite trace Pyrrhotite trace		IDES	FROM	10	TOTAL							
		Pyrite and pyrrhotite occur as fracture coatings. Numerous 1/4" to 2" zones of chlorite and those of sericite.												
		- 80.6 - 81.8 - silicified zone.	6814		79.6	84.0	4.4			tr.				
84.0	85.9	BIOTITE METASEDIMENT - medium grey, medium to fine grained, weakly foliated, schistose.	6815		84.0	85.9	1.9			tr.				
		Average Modes												
		Biotite 75 - 85% Sericite 10% Quartz 5%												
		Few 1/4" quartz veinlets, unit silicified, minor carbonate alter- ation, no visible sulphides.												
85.9	111.4	<u>MAFIC VOLCANIC</u> – dark green to grey, medium to fine grained, massive to weakly schistose.												
		Average Modes												
		Hornblende     65     -     75%       Actinolite     10     -     20%       Quartz     5     -     7%       Biotite     2     -     3%												
		Several 1/4" quartz-carbonate veinlets with minor pyrite and pyrrhotite. Pyrite and pyrrhotite also occur as fracture coatings. – 97.9 – 111.4 – 2" quartz-carbonate veins with minor pyrite and pyrrhotite.	6816 6817 6818		97.9 102.9 107.9	102.9 107.9 111.4	5.0 5.0 3.5			tr. tr. tr.				
111.4	175.2	GARNET-BIOTITE METASEDIMENT - grey to dark grey to black, medium to fine grained, weakly to moderately banded, compositional												

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LANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-86-12	SHEET NO. 4 of 9

FOOT	AGE				SAMP	LE		ASSAYS						
ROM	τo	DESCRIPTION		N SULPH	FROM	FOOTAGE	TOTAL	•		07 TON	OZ TON			
		banding, well developed schistosity, poikiloblastic garnets. Average Modes												
		Biotite       70       -       75%         Garnet       5       -       20%         Staurolite       3       -       7%         Quartz       2       -       5%         Pyrite       trace       -       1%         Pyrrhotite       trace       -       0.5%												
		<ul> <li>111.4 - 117.8 - poorly banded, large 1/4" poikiloblastic garnets (5%), numerous 1/4" shear zones with fine inter- bands of sericite and carbonate, few 1/4" quartz veins. Biotite 80-85%, Garnet 5%, Quartz 2-3%, Staurolite 2-3%, Sulphides - trace.</li> </ul>	6819 6820		111.4 116.4	116.4 120.4	5.0 4.0			tr. tr.				
		- 117.8 - 129.0 - similar to 111.4 - 117.8 but 10% garnets.												
ľ		- 119.0 - 119.3 - quartz-carbonate vein, no visible sulphides.	6821		120.4	122.5	2.1			tr.				
		<ul> <li>- 122.5 - 124.0 - sheared zone; at 123.0 up to</li> <li>15% sulphides, 10% pyrite, 4% pyrrhotite, arseno- pyrite?, tourmaline?, minor carbonate.</li> </ul>	6822 6823		122.5 124.0	124.0 129.0	1.5			tr. tr.				
1		- 128.5 - 129.0 - amphibole-rich zone (15%).												
		- 129.0 - 175.2 - 20% garnet, 2% staurolite, 1" to 3" garnet-rich and garnet-poor bands define compositional banding, bands commonly 60° to core axis. Several interbands with 50-60% amphibole, fine grained, green, 3-5% garnet, silicified. Several contorted quartz veinlets with boudin- like structure. Several narrow shear zones with	6824		129.0	134.0	5.0			tr.				
		<ul> <li>- 134.9 - 135.2 - carbonate alteration.</li> <li>- 136.4 - 137.4 - carbonate alteration.</li> <li>- 143.7 - 144.0 - carbonate vein - fine clots of pyrite and pyrrhotite.</li> </ul>	6825 6826 6827 6828 6829		134.0 139.0 143.0 144.5 149.5	139.0 143.0 144.5 149.5 154.5	5.0 4.0 1.5 5.0 5.0			tr. tr. tr. tr. tr.				

TORONTO

#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-12 SHEET NO. 5 of 9

SAMPLE ASSAYS FOOTAGE DESCRIPTION FOOTAGE ~ SHI PH NO. FROM 70 ----07 TON 02 TON 2 IDES FROM 10 TOTAL 154.5 159.5 5.0 - 155.7 - 157.5 - several quartz veinlets with 6830 tr. 6831 159.5 164.5 5.0 .02 3% pyrite, 0.5% pyrrhotite. 164.5 169.5 6832 5.0 tr. - 160.3 - 160.5 - quartz vein, 5% pyrite, 1% 169.5 172.5 3.0 6833 tr. pyrrhotite, tourmaline?. 172.5 175.2 6834 2.7 tr. 175.2 195.2 LEAN IRON FORMATION - dark green-grey to dark grey to black, medium to fine grained, weakly schistose to schistose, weak to well banded, poikiloblastic garnet. Average Modes 75% 60 Biotite 15% Garnet 5 10 15% Chert 3% Grunerite 2 2% Magnetite 0.5 Pyrite trace 2% 0.5% Pyrrhotite trace Chalcopyrite trace - 175.2 - 178.3 - 0.5% magnetite, 2" bands of biotite-garnet dom-6835 175.2 180.2 5.0 tr. inated by biotite with 10% garnet, 1/4" to 1/2" blue-grey bands of chert-magnetite, thin grunerite alteration halos around chert bands. Trace pyrite and pyrrhotite as fracture coatings. - 178.3 - 183.2 - 1-2% magnetite, 1" chert-magnetite bands. Increase in garnet size as move down unit and garnets begin to amalgamate. 6836 180.2 185.2 - 179.7 - 1/4" shear zone with chloritization and 5.0 tr. minor pyrite and pyrrhotite as fracture coatings. - 182.2 - 183.2 - carbonate alteration and veinlets with minor pyrite and pyrrhotite. 185.2 190.2 - 183.2 - 187.2 - 0.5% magnetite; silicification, banding destroyed 6837 5.0 tr. or highly contorted, garnets destroyed, amphibole alteration. Few carbonate veinlets with minor pyrite and pyrrhotite as fracture coatings.

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 09-86-12 SHEET NO. 6 of 9

FOC	TAGE	DESCRIPTION			SAMPL	.Е		ASSAYS					
FROM	то	DESCRIPTION	NO.	SUL PH	FROM	FOOTAGE	TOTAL		~.	07 TON	UZ TON		
		- 187.2 - 193.1 - similar to above but alteration less pervasive i.e. patches with original banding.											
		- 187.5 - 188.2 - carbonate veinlets with up to 2% pyrite, 0.5% pyrrhotite and trace chalcopyrite											
		<ul> <li>- 188.7 - 1/4" calcite vein with minor pyrite and pyrrhotite.</li> </ul>											
		<ul> <li>- 191.2 - 1/4" chloritized shear with pyrite and pyrrhotite.</li> </ul>											
		- 193.1 - 195.2 - highly silicified, 1% garnet, no magnetite, very weak to no banding. Mineralogy dominated by quartz and dark amphibole. Minor pyrite and pyrrhotite as fracture coatings.	6838		190.2	195.2	5.0			tr.			
195.2	214.9	<u>ULTRAMAFIC VOLCANIC</u> - light to medium grey-green, coarse to medium grained, few dark green bands, strong schistosity.											
		Average Modes											
	L.	Talc45%Serpentine45%Tremolite10%											
		Local areas with up to 80% talc. Minor isolated clots of carbon- ate. No visible sulphides.											
		- 195.6 - 195.7 - quartz vein. - 214.0 - 214.9 - chloritized zone	6839		195.2	196.2	1.0			tr.			
214.9	259.0	BANDED IRON FORMATION											
		- 214.9 - 223.3 - lean (0.5-1% magnetite), similar to 183.2 - 187.2, banding destroyed or highly contorted; garnets up to 1/2" in diameter and as large formless masses.	6840 6841	-	214.9 219.9	219.9 224.9	5.0 5.0			tr. tr.			
		- 223.3 - 231.6 - fine to very fine grained, well developed band- ing commonly 50° to core axis. Thin, 1/8" to 1/4", blue-grey chert-magnetite bands dominated	6842 6843		224.9 229.9	229.9 234.9	5.0 5.0			tr. tr.			

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NAME OF PROPERTYC	PAPIMISKAN LAKE
HOLE NO0P-86-12	SHEET NO7 of 9

	F00	AGE	DESCRIPTION			SAMPL	E	_	ASSAYS					
F	ROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	10141	-		OZ TON	OZ TON		
		<ul> <li>by chert with 2-5% magnetite. Minor grunerite alteration along chert bands. 1/8" to 1" garnet-biotite bands with 70% biotite and 30% poikiloblastic garnets. Garnets 1/4" at top of unit and becoming very fine at base. Local area with minor deformation of bands. Rare submicroscopic carbonate veinlets crosscutting banding; trace sulphide.</li> <li>- 231.6 - 259.0 - fine to very fine grained, well banded, commonly 55° to core axis. 1/8" to 1", blue-grey to dark grey chert-magnetite bands with 5-8% magnetite. Finely interlaminated. Dark grey to black biotite-garnet bands up to 2" wide. Dominated by biotite with garnet content decreasing from top (10%) to base (2-3%). Very minor grunerite alteration. Several local areas of highly contorted bands. Few fine displacement fractures.</li> <li>- 231.9 - 232.9 - minor carbonate-chlorite alter-</li> </ul>												
			- 231.9 - 232.9 - minor carbonate-chlorite alter- ation with trace sulphide.											
			<ul> <li>- 234.2 - 1/8" carbonate veinlet with trace pyrite as fracture coatings.</li> </ul>	6844 6845		234.9 239.9	239.9 244.9	5.0 5.0			tr. tr.			
			<ul> <li>- 249.0 - 249.5 - fractured zone, submicroscopic carbonate filled fractures with fine clots of pyrite and pyrrhotite.</li> </ul>	6846		244.9	249.9	5.0			tr.			
1168	259.0 267.0		<ul> <li>- 249.5 - 259.0 - several of the above type zones</li> <li>- carbonate filled fractures with fine clots of pyrite and pyrrhotite.</li> </ul>	6847 6848		249.9 254.9	254.9 259.0	5.0 4.1			tr. tr.			
-10 - 366-			GARNET-BIOTITE METASEDIMENT - dark grey to black, medium to fine grained, foliated, schistose, weak compositional banding.	6849 6850		259.0 264.0	264.0 267.0	5.0 3.0			tr. tr.			
- 1080			Average Modes											
LANGRIDGES -			Biotite 55 - 60% Garnet 35 - 40% Quartz 2 - 3% Magnetite trace - 0.5% Sulphides trace											

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LANGRIDGES - TORONTO - 366-1168

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NAME OF PROPE	RTY	OPAPIMISKAN	LAKE
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HOLE NO. _____ 0P-86-12 _____ SHEET NO. ____ 8 of 9

FOOT	FAGE				SAMPL	E				ASSAYS	ТОN 02 ТОН TON 02 ТОН r. r. г.		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE TO	TOTAL	•	۰.	OZ TON	02 TON		
		Poikiloblastic, pink garnets (up to 1/16") distributed evenly throughout section. Minor carbonate throughout section. Sulph- ides as fracture coatings. Minor chlorite alteration. Few sub- microscopic carbonate veinlets. 0.5% magnetite near contact with underlying iron formation.											
267.0	314.4	BANDED IRON FORMATION - green to dark grey-green to black, fine to very fine grained, schistose, well bedded commonly 53° to core axis. Bands of chert, chert-magnetite and chert-grunerite. Local areas with up to 10% magnetite but usually 2-3%. Locally up to 25% grunerite but typically 5-10%.											
		- 267.0 - 278.6 - up to 25% grunerite, bands highly contorted, 0.5-1% magnetite. Numerous microscopic car- bonate veinlets. Trace to minor pyrite as fracture coatings and rare clots.	6851 6852		267.0 272.0	272.0 277.0	5.0 5.0			tr. tr.			
		- 274.3 - 1/2" quartz vein.	ł										
		- 276.6 - 279.8 - intense carbonate alteration, 1% pyrite, trace pyrrhotite.	6853		277.0	282.0	5.0			tr.			
		<ul> <li>279.8 - 291.3 - 2-3% magnetite, 6-7% grunerite, many chert boudins. Numerous displacement fractures filled with carbonate and associated wispy vein- lets of pyrite and pyrrhotite.</li> </ul>											
		- 284.3 - quartz veinlet with hematite (?) stain.	6854		282.0	287.0	5.0			tr.			
		- 286.3 - 2″ quartz vein.								Ì			
		- 291.3 - 314.4 - 7-10% magnetite, 2-3% grunerite, many chert boudins and displacement fractures, few carbonate veinlets with minor pyrite and pyrrhotite.	6855 6856		287.0 292.0	292.0 297.0	5.0 5.0			tr. tr.			
		<ul> <li>- 297.0 - 1" carbonate vein with 1% pyrite and trace pyrrhotite.</li> </ul>	6857 6858		297.0 302.0	302.0 307.0	5.0 5.0			tr. tr.			
		- 311.7 - fine clots of pyrite and pyrrhotite.	6859		307.0	312.0	5.0			tr.			
		- 313.7 - same as above.	6860		312.0	314.4	2.4			tr.			

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NAME OF PROPERTYOPAPIMI	SKAN LAKE
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HOLE NO. OP-86-12 SHEET NO. 9 of 9

FOO	TAGE	DESCRIPTION			SAMPL	.E			ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE TO	TOTAL	۳.	OZ TON	UZ TON	
314.4	335.0	<u>ULTRAMAFIC VOLCANIC</u> - medium to dark grey, fine to medium grained. - 314.4 - 326.7 - mineralogy dominated by talc with subordinate									
		- 326.7 - 335.0 - mineralogy dominated by serpentine and tremolite with up to 15% phlogopite.									
		~ 330.9 - 1/4" carbonate vein.	6861		330.3	331.3	1.0		tr.		
335.0		End of Hole.									
LANGRIDGES - TORONTO - 366-1168										J.M	John Mic

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NAME OF	PROPERTY	OPAPIMIS	KAN LAKE		
HOLE NO.	OP-86-13	LENGTH	299	<u>.'</u>	
LOCATION	10+00NW9+9	5.SW			
LATITUDE		DEPARTURE			
ELEVATION		AZIMUTH	049°	_ DIP _	<u>-50°</u>
STARTED _	November 3, 1986	FINISHED	November 5.	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-50,0°				
299'	-40.2°				

#### HOLE NO. 0P-86-13 SHEET NO. 1 of 1

REMARKS _____ Summary Log

PA - 844238

LOGGED BY ____ D. J. Corkery

FOO	TAGE				5 A M P	LE			A	SSAY	5	
FROM	то	SUMMARY LOG	NO.	SULPH- IDES	FROM	FOOTAGE TO	TOTAL	*	*6	OZ/TON	oz/ton	
0	32.0	CASING										
32.0	43.5	GARNETIFEROUS METASEDIMENTS										
43.5	44.5	FELSIC VOLCANICS										
44.5	79.0	MAFIC TO INTERMEDIATE VOLCANICS				,						
79.0	125.7	CARNETIFEROUS METASEDIMENTS					\					
125.7	153.1	BANDED IRON FORMATION										
153.1	161.6	ULTRAMAFIC VOLCANICS										
161.6	206.4	BANDED IRON FORMATION							:			
206.4	213.1	GARNET-BIOTITE SCHIST										
213.1	265.4	BANDED IRON FORMATION										
265.4	299.0	ULTRAMAFIC VOLCANICS										
299.0		End of Hole.									.0	1. Al
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NAME OF	PROPERTY	<u> </u>	<u>SKAN LAKE</u>			
HOLE NO.	<u>OP-86-13</u>	LENGTH	299	•		_
LOCATION	10+00NW	9+95SW				_
LATITUDE		DEPARTURE		·····		
ELEVATION	۱	AZIMUTH	049°	_ DIP	<u>-50°</u>	
STARTED 1	November 3, 1	986 FINISHED	November	5. 1986		

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 299'	- <u>50.0</u> °				

HOLE NO. 0P-86-13 SHEET NO. 1 of 6

REMARKS ___

PA - 844238

LOGGED BY ____ D. J. Corkery

FO	O T A G E				SAMP	LE			A	SSA	( 5	
FRO	и то		NO.	SUL PH- IDES	FROM	FOOTAGE TO	TOTAL	26	36	OZ/TON	oz/ton	
0	32.0	CASING										
32.	0 43.	GARNETIFEROUS METASEDIMENTS - medium grey-brown, fine grained, schistose.	6742 6743		32.0 36.0	36.0 40.0	4.0 4.0	1		tr. tr.		
		Average Modes	6744		40.0	43.5	3.5			tr.		
		Quartz30-40%Sericite25-35%Biotite15-25%Garnet5-7%Staurolite1-2%Chlorite0.5-1%Pyritetrace-Garnets occur as subhedral poikiloblasts. Pyrite occurs as fracture coatings.1-2% silicified bands at 32.4 and 41.4. Bands are dominantly quartz with remnant foliation and garnets present. No visible sulphides.										
43.	5 44.5	FELSIC VOLCANIC - moderately banded with light and dark grey bands, fine grained. Dominantly quartz with 5-7% biotite and 0.5-1% garnet (Tuff?). No visible sulphides.	6745		43.5	44.5	1.0			tr.		
44.	5 79.0	MAFIC TO INTERMEDIATE VOLCANICS - medium grey-green, fine grained, massive to poorly laminated. Probably tuff.										
		Average Modes										
LANGHIUGES		Amphibole         60         -         70%           Plagioclase         15         -         20%           Quartz         15         -         20%										

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NAME OF PROPERTY	<u>OPAPIMISKAN</u>	LAKE	

			н	OLE N	0. <u>0P</u>	-86-13		SHI	EET NO.	<u>     2    o</u>	<u> </u>		
F00	TAGE	DESCRIPTION			SAMPI	LE		ASSAYS					
FROM	то		NO.	", SULPH IDES	FROM	FOOTAGE	TOTAL	~.		DZ TON	UZ TON		
		Calcite trace - 0.5% Pyrite trace											
		The amphibole is dominantly actinolite with minor hornblende. Calcite occurs in fine quartz-calcite veinlets. Pyrite is fine grained and disseminated.											
		<ul> <li>47.7 - 48.7 - several quartz-calcite veinlets with minor biotite. Contains 1-2% pyrrhotite and trace chalcopyrite.</li> </ul>	6746		47.5	49.0	1.5			tr.			
		- 67.0 - laminated at 70° to core axis. - 76. – 1" quartz vein, no visible sulphides.	6747		76.3	78.3	2.0			tr.			
		- 78.0 - 1" quartz vein, no visible sulphides.						ł					
79.0	125.7	GARNETIFEROUS METASEDIMENTS - dark grey, fine grained with coarse pink grains, massive to weakly banded, schistose.											
		Average Modes	1										
		Biotite       30       -       40%         Garnet       25       -       35%         Quartz       15       -       20%         Hornblende       2       -       4%         Grunerite       1       -       3%         Pyrite       trace       -       3%											
		Biotite and quartz form matrix for 1/16" to 1/8" garnet poikilo- blasts. Few narrow isolated chert bands. Amphiboles occur in hornblende-garnet bands with grunerite within the band and at border of band.											
		- 79.0 - 88.4 - 2-4% staurolite and 3-5% sericite.	6748 6749		79.0 84.0	84.0	5.0 5.0			tr. tr.			
		- 88.4 - 125.7 - typical, weak compositional banding.	6750 6751		89.0 90.0	90.0 95.0	1.0 5.0			tr. tr.			
		- 89.4 - 1/2" pyrrhotite-rich band, adjacent quartz band.	6752 6753 6754 6755		95.0 100.0 105.0 110.0	100.0 105.0 110.0 115.0	5.0 5.0 5.0 5.0			tr. .01 tr. .04			

NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 07-86-13 SHEET NO. 3 of 6

FROM TO DESCRIPTION	H, FOOTAGE FROM TO TOTAL	
		1 02 TON 02 TON
125.7 153.1 <u>BANDED IRON FORMATION</u> - moderate to well banded, light cream-green, dark grey and dark green to black with coarse pink grains, fine to very fine grained. Bands of chert, garnet-hornblende-biotite- grunerite and grunerite-magnetite. Bands are moderately contorted.	115.0 120.0 5.0 120.0 125.0 5.0	.02 tr.
Bigging       Average Modes         Garnet       20       -       25%         Quartz       20       -       25%         Hornblende       20       -       25%         Biotite       10       -       15%         Grunerite       10       -       15%         Magnetite       2       -       4%         Calcite       0.5       -       1%         Pyrite       trace       Composition grades from that of the overlying unit. Calcite occurs in bands and along fractures. Pyrite occurs as fracture coatings.       -         -       125.7 - 135.0 - typical.       6758       6760         -       126.0 banded at 70° to core axis.       6761       6761         -       137.4 - 2" shear with calcite mineralization and few disseminated pyrite blebs.       6763       1         -       137.4 - 2" shear with calcite mineralization and few disseminated pyrite blebs.       6763       1         -       137.4 - 2" shear with calcite mineralization and few disseminated pyrite blebs.       6763       1         -       150.8 - 153.1 - 0.5-1% magnetite, 0.5-1% grading to nil garnet, moderately banded.       6764       1         153.1       161.6       ULTRAMAFIC VOLCANIC - medium green, fine grained, schistose, dominantly tale with mi	125.0       129.0       4.0         129.0       133.0       4.0         133.0       137.0       4.0         137.0       138.0       1.0         138.0       143.0       5.0         143.0       148.0       5.1	tr. .01 tr. .02 tr. tr. tr. tr.

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LANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY	OPAPIMISKAN	LAKE	
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HOLE NO. ______ 0P-86-13 ______ SHEET NO. _____ 4 of 6

FOOTAGE		DESCRIPTION			SAMPL	.E		ASSAYS				
FROM	то	DESCRIPTION	NO.	3 SULPH	FROM	FOOTAGE	TOTAL	ĩ.	ĩ.	OZ TON	UZ TON	
161.6	206.4	BANDED IRON FORMATION - atypical with trace to 0.5% grunerite, trace sulphides.										
		- 161.6 - 170.2 - similar to 135.0 - 145.0, with trace grunerite.	6765 6766		161.6	166.2 170.2	4.6 4.0			tr. tr.		
		- 166.7 - 167.8 - calcite-quartz veinlet, no visible sulphides, conformable.										
		- 168.3 - 168.6 - several calcite-quartz veinlets.										
		<ul> <li>- 170.2 - 190.0 - well banded with interband laminations. Well</li> <li>defined chert and magnetite laminations in iron-</li> <li>rich bands. Several boudinaged chert bands.</li> <li>Mineralogy of this unit is as follows:</li> </ul>			170.2 175.0 180.0 185.0	175.0 180.0 185.0 190.0	4.8 5.0 5.0 5.0			.03 tr. .02 tr.		
		Average Modes										
		Quartz       40       -       50%         Biotite       15       -       20%         Magnetite       15       -       20%         Hornblende       10       -       15%         Garnet       5       -       7%         Calcite       trace       -       0.5%         Sulphides       trace       -       -										
		- $174.0$ - banded at 55° to core axis.										
		<ul> <li>- 187.0 - banded at 63° to core axis.</li> <li>- 190.0 - 202.0 - similar to above with decrease in garnet-biotite hornblende to comprise 20-25%. Several micro-fractures with up to 1/4" displacement. At 194.0 a small bleb of pyrrhotite has developed in one of the areas of displacement. No consistent direction of movement.</li> </ul>	-6771 6772		190.0 195.0	195.0 200.0	5.0 5.0			tr. .01		
		- 197.5 - banded at $70^\circ$ to core axis. - 202.0 - 206.4 - several bands are very finely laminated to near	6773 6774		200.0 203.4	203.4 206.4	3.4 3.0			.01 tr.		

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO 0P-86-13	SHEET NO. 5 of 6

FOO	TAGE	DEFERING			SAMPL	.E		ASSAYS				
FROM	то			SUL PH	FROM	FOOTAGE	TOTAL		07 TON	OZ TON		
206.4	213.1	massive and nearly parallel to core axis from 203.5 to 205.6. <u>CARNET-BIOTITE SCHIST</u> - black with light grey to pink garnets (1/32 to 1/16"), fine grained, moderate compositional banding (commonly at 60° to 65° to core axis). Average Modes	6775 6776		206.4 209.4	209.4 213.1	3.0 3.7		tr. .02			
213.1	265.4	Biotite40-50%Garnet30-40%Amphibole10-15%Quartz1-3%Magnetite1-2%Sulphidestrace.Pyrite occurs as fracture coatings.BANDED IRON FORMATION - similar to mineralogy of 190.0 to 202.0but well banded and weak to indistinct interband laminations.5-7% grunerite most often at boundary between magnetite-rich bandand chert bands.0.5-1% pyrrhotite as fracture fillings and inhighly contorted sections.										
		<ul> <li>- 213.1 - 216.6 - as described but with several 1" to 2" biotite-garnet bands.</li> <li>- 213.2 - 213.6 - quartz-calcite veinlets. (1/16") at 20° to core axis.</li> <li>- 216.6 - 224.8 - moderate to poorly banded with garnet-biotite and magnetite-grunerite occurring as highly irregular bands, networks and wisps. Strong alteration of magnetite to grunerite. 0.5-1% pyrrhotite as fracture fillings and in band dilations in contorted zones.</li> </ul>	6777 6778 6779		213.1 217.1 221.1	217.1 221.1 225.6	4.0 4.0 4.5		.02 tr. tr.			
		- 224.8 - 225.8 - typical.										

HOLE NO0P-86-13	 SHEET NO.	6 of
SAMPLE	A	SSAYS

NAME OF PROPERTY_____

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OPAPIMISKAN LAKE

	F001	AGE				SAMPL	.е				ASSAYS		}
	FROM	то	DESCRIPTION	NO.	SULPH IDES	FROM	FOOTAGE TO	TOTAL		•	07 TON	OZ TON	
			- 225.8 - 226.4 - brecciated with quartz-carbonate filling.	6780		225.6	226.6	1.0			tr.		
			- 226.4 - 228.8 - typical.	6781		226.6	228.8	2.2			tr.		
			- 228.8 - 232.0 - abundant calcite veinlets and fracture fillings.	6782		228.8	232.0	3.2			tr.		
			- 232.0 - 263.0 - dominantly quartz and quartz-magnetite bands with	6783		232.0	237.0	5.0			tr.		
			nornblende bands. 5-3% grunerite, weak to model-	6785		242.0	247.0	5.0	1		tr.		
1			hands (recrystallized chert) common, several	6786		247.0	252.0	5.0			tr.		
			calcite and chlorite veinlets.	6787		252.0	257.0	5.0			tr.	ļ	
				6788		257.0	262.0	5.0			tr.		
			- 263.0 - 265.4 - abundant garnet-biotite bands (20-30% of unit) which are 1/8" to 1/4" wide.	6789		262.0	265.4	3.4			tr.		
	265.4	299.0	ULTRAMAFIC VOLCANICS										
			- 265.4 - 272.5 - similar to 153.1 to 161.6.										
			- 272.5 - 299.0 - medium grey with brown foliations, fine to very fine grained, dominantly tremolite with minor	6790		265.4	267.4	2.0		]	tr.		
			phlogopite. Few quartz veinlets. No visible sulphides associated with the veinlets.	6791		282.9	287.9	5.0			.01		
			- 294.8 - 295.0 - quartz vein with calcite at edge of vein. No visible sulphides.	6792		294.6	296.1	1.5			tr.		
8			- 295.6 - 295.7 - quartz vein with minor calcite. No visible sulphides.	6793		298.0	299.0	1.0			.02		
366-116	299.0		End of Hole.										AN
ONTO -		x										MAR	Jn I
S - TOR		,											
<b>NGRIDGE</b>												1	
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NAME OF	PROPERTY _		OPAPIMI	<u>SKAN LAKE</u>		
HOLE NO.	<u>OP-86-14</u>		LENGTH	269'		
LOCATION	9+00NW	8+9951	√			
LATITUDE			DEPARTURE			<u> </u>
ELEVATION			AZIMUTH	<u>049°</u>	DIP	<u>-47.5°</u>
STARTED _	November 6	1986	FINISHED	November 9	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	47.5°				
269' -	38.3°				

HOLE NO. 0P-86-14 SHEET NO. 1. of 2

REMARKS Summary Log

PA - 844238

LOGGED BY B. E. Elliott

FOOTAGE		DESCRIPTION			SAMP	LE		A 5 5 A Y 5						
FROM	то	SUMMARY LOG	NO.	SUL PH-	FROM	TO TO	TOTAL	26 10	;; ;	OZ/TON	OZ/TON			
0	36.4	CASING												
36.4	49.5	GARNET-BIOTITE METAS EDIMENT				1						[		
49.5	67.0	ULTRAMAFIC VOLCANIC												
67.0	72.3	MAFIC VOLCANIC												
72.3	100.5	BANDED IRON FORMATION												
100.5	104.7	GARNETIFEROUS METASEDIMENT										[		
104.7	133.7	BANDED IRON FORMATION				(								
133.7	133.9	LAMPROPHYRE DIKE								(				
133.9	153.3	BANDED IRON FORMATION												
153.3	164.9	ULTRAMAFIC VOLCANIC			ĺ					1				
164.9	166.5	LAMPROPHYRE DIKE										ĺ		
166.5	203.6	MAFIC TO ULTRAMAFIC VOLCANIC								' 				
203.6	205.9	SHEARED ZONE - mafic to ultramafic, silicified, dominated by quartz, and actinolite-quartz veins containing up to 5% pyrite, 0.5% pyrrhotite and trace chalcopyrite.												
20 2	216.9	ULTRAMAFIC VOLCANIC				ĺ								
216.9	219.0	MAFIC TO ULTRAMAFIC VOLCANIC												
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NAME OF PROPERTY0	PAPIMISKAN LAKE
HOLE NO0P-86-14	SHEET NO 2 of 2

FOOT	TAGE				SAMPI	E				ASSAYS		
FROM	TO	SUMMARY LOG	NO.	TOF S	FROM	FOOTAGE	10141			OZ TON	UZ TON	
219.0	223.0	MAFIC TO INTERMEDIATE TUFF?		1023			IVIAL		· · · · · · · · · · · · · · · · · · ·			
223.0	233.9	MAFIC TO ULTRAMAFIC VOLCANIC										
233.9	237.1	ULTRAMAFIC VOLCANIC										
237.1	243.9	MAFIC VOLCANIC										
243.9	247.1	BANDED IRON FORMATION										
247.1	269.0	ULTRAMAFIC VOLCANIC										
269.0		End of Hole.										
66-1168											h. d	ANT
110 - 3										$\int$	XXX	$\mathcal{L}^{n^{n}}$
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DGES -											/	
LANGR												
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NAME OF	PROPERTY _	OPAPII	<u>HISKAN LAKE</u>		
HOLE NO.	<u>OP-86-14</u>	LENGTH	269'		
LOCATION	9+00NW	8+99SW			
LATITUDE		DEPARTURE	<u> </u>		
ELEVATION	۰	AZIMUTH	049°	DIP	<u>-47.5°</u>
STARTED .	November 6, 1	986 FINISHED	November 9.	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-47.5				
269'	-38.3		ļ		

HOLE NO. 0P-86-14 SHEET NO. 1 of 8

REMARKS _____

PA - 844238

LOGGED BY <u>B. E. Elliott</u>

FOOT	AGE				SAMP	LE			Α	SSAY	′ 5	
FROM	то		NO.	SUL PH	FROM	FOOTAGE TO	TOTAL	5	,; o	OZ/TON	oz/ton	
0	36.4	CASING										
36.4	49.5	GARNET-BIOTITE METASEDIMENT - medium grey to dark grey to black, medium to fine grained, weakly to moderately banded, schistose.										
		Average Modes										
		Biotite $30$ $ 40\%$ Grunerite $20$ $ 25\%$ Quartz $15$ $ 20\%$ Garnet $10$ $ 15\%$ Magnetitetrace $ 0.5\%$ Pyritetrace $0.5\%$										
		Banding highly contorted. Intense silicification and grunerite alteration. Garnets up to 1/4" in diameter and as large formless masses. Pyrite and pyrrhotite as fracture coatings.										
		- $45.6 - 1/4$ " quartz vein with trace pyrite.	6862		36.4	41.4	5.0			.01		
		<ul> <li>45.8 - very fine veinlets of pyrite with trace pyrrhotite.</li> </ul>	6863		41.4	46.4	5.0			.02		
ļ		- 48.7 - similar to above.	6864		46.4	51.4	5.0			.02		
49.5	50.2	MAFIC VOLCANIC - dark grey-green, fine grained, massive. Average Modes Actinolite 85% Plagioclase 15%										
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#### NAME OF PROPERTY _____ OPAPIMISKAN LAKE

HOLE NO 0P-86-14 SHEET NO 2 of 8

FOOT	AGE				SAMPL	E			····	ASSAYS		
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	;	•	07 TON	UZ TON	
50.2	50.7 [°]	<u>GARNET-BIOTITE METASEDIMENT</u> - similar to $30.4 - 49.5$ .										
50.7	07.0	weakly foliated, localized crenulation folding, schistose.										
		Talc75%Serpentine20%Tremolite5%										
		Circular clots of serpentine. Few patches of hematitic staining. Few carbonate veinlets with minor chlorite. No visible sulphides.	6865		63.2	67.0	3.8			tr.		
67.0	72.3	MAFIC VOLCANIC - dark grey-green to dark grey, fine grained, fine foliation.										
		Average Modes										
~		Actinolite75%Phlogopite20%Plagioclase5%										
72.3	100.5	BANDED IRON FORMATION - blue-grey to dark grey bands, fine grained, well banded, fine interlaminations.										
		<ul> <li>- 72.3 - 82.8 - banding highly contorted, localized areas where banding not contorted. 60% garnet-biotite bands and 40% chert-magnetite bands. Fine grunerite alteration between bands. Garnet-biotite bands composed of 45% garnet, 40% biotite, 5% grunerite, trace-1% pyrite, trace pyrrhotite. 2-5% magnetite in chert bands.</li> </ul>										
		- 75.8 - banding 63° to core axis.										
		<ul> <li>- 76.8 - 77.3 - silicification and carbonate alter- ation, hornblende-rich, minor chlorite, 2% magnet- ite. Numerous wispy quartz veinlets.</li> </ul>	6866		72.3	77.3	5.0		1	tr.		
		- 77.3 - quartz veinlet with 2% pyrrhotite.	6867		77.3	82.3	5.0			.01		

366-1168 LANGRIDGES - TOPONTO

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FO	DTAGE				SAMP	LE				ASSAYS		~~~~
FROM	то		NO.	% SULPH	FROM	FOOTAGE	TOTAL		~	07 TON	UZ TON	
		- 82.8 - 90.7 - decrease in garnets (5%), 50% biotite-garnet bands (1/4" to 1/2"), 50% chert-magnetite bands (1/4" to 1"), 7-10% magnetite, banding undeformed, poikilo- blastic garnets less than 1/16", chert boudins, fine interlaminations within chert bands.										
		<ul> <li>- 84.7 - 85.7 - several carbonate veinlets with trace sulphides.</li> </ul>	6868 6869		82.3 87.3	87.3 92.3	5.0 5.0			.01 tr.		
		- 90.7 - 100.5 - similar to 82.8 - 90.7 but with trace to 2% garnets. Rare fine displacement fractures. Numerous carbonate ± chlorite veinlets. Trace pyrite as fracture coatings and as rare fine clots.	6870 6871		92.3 97.3	97.3 100.5	5.0 3.2		Į	tr. tr.		
100.5	104.7	GARNET-BIOTITE METASEDIMENT - medium grey to black, fine grained, weak compositional banding defined by biotite-rich and garnet-rich bands.	6872		100.5	104.7	4.2			tr.		
		Average Modes										
		Biotite 70% Garnet 30% Magnetite trace - 1% Pyrite trace Poikiloblastic (1/32") garnets. Pyrite as fracture coatings.										
		Increase in chert content near base of section.										
104.7	133.7	BANDED IRON FORMATION - 104.7 - 119.0 - green grunerite-rich bands, dark grey to black biotite-garnet bands, blue-grey chert-magnetite bands, fine grained, poorly defined bands. <u>Average Modes</u>										
LANGRIDG		Chert50%Grunerite25%Biotite10%										

OPAPIMISKAN LAKE

NAME OF PROPERTY____

NAME OF PROPERTYOP	APIMISKAN	LAKE
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HOLE NO. 0P-86-14 SHEET NO. 4 of 8

FOC	TAGE				SAMPL	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	TOES	FROM	FOOTAGE TO	TOTAL	•	~	OZ TON	UZ TON	
		Magnetite 1 – 3% Garnet 5 – 15% Carbonate 5% Pyrite 2% Pyrrhotite trace										
		Section dominated by chert and grunerite. Sheared areas with many chert boudins with up	6873	ļ	104.7	109.7	5.0	1		tr.		
		to 15% garnet and 15% hornblende. Carbonate	6874	]	109.7	114.7	5.0			tr.		
		Pyrite and pyrrhotite as fracture coatings and fine clots. Minor chlorite along fractures.	6875		114.7	119.7	5.0			tr.		
		- 116.0 - 3" quartz vein, no visible sulphides.										
		- 119.0 - 133.7 - green to grey to dark grey bands, fine to very fine grained, well banded (1/4" to 1/16")						ĺ				
		Average Modes								l.		
		Chert50 - 60%Grunerite15 - 20%Magnetite10 - 15%Biotite2 - 3%Carbonate2 - 3%Pyrite2%PyrhotitetraceChalcopyritetrace										
366-1168		<ul> <li>- 119.5 - 120.0 - quartz vein with minor pyrite and chlorite as fracture coatings and pyrite as fine clots.</li> </ul>	6876		119,7	124.7	5.0			.01		
		<ul> <li>- 120.3 - 1/4" carbonate-chlorite veinlet with minor pyrite as fracture coatings and very fine clots.</li> </ul>										
LANGRIDGES		- 121.0 - 133.7 - highly fractured and brecciated many fine displacement fractures, numerous car- bonate veinlets and fracture fillings. Several very fine clots and veinlets with pyrite and pyrrhotite? Few narrow (less than 1/4")	6877 6878		124.7 129.7	129.7 133.4	5.0 3.7			tr. tr.		

366-1168

LANGRIDGES - TORONTO

NAME OF PROPERTYOPAPIMISKAN LAKE	
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			н	OLEN	o. <u>OP-</u>	-86-14		SHE	ET NO.	<u> </u>	<u>f</u> 8	
FOOT	TAGE		DESCRIPTION SAMPLE						ASSAYS			
FROM	τo	DESCRIPTION	SAMPLE NO. SULPH FOOTAGE IDES FROM TO TOT							OZ TON	OZ TON	
-		sheared areas with chlorite-carbonate and pyrite as coatings and fine disseminations.										
		<ul> <li>125.0 - 125.7 - carbonate-albite-chlorite alteration zone with fine clots and veinlets.</li> </ul>										
133.7	133.9	LAMPROPHYRE DIKE - dark grey to black, fine grained matrix with medium grained black phenocrysts, 0.5% disseminated pyrite, carbon- ate filled fractures with fine grained disseminated pyrite.	6879		133.4	134.4	1.0			tr.		
133.9	153.3	BANDED IRON FORMATION - similar to 104.7 - 133.7.										
		- 133.9 - 134.6 - pervasive carbonate as fracture fillings. Clots and fracture fillings of pyrite and pyrrhotite.	6880		134.4	135.9	1.5			tr.		
		- 134.6 - 134.9 - quartz vein with 0.5% pyrrhotite as wispy frac- ture fillings.										
		- 135.0 - 135.5 - quartz vein with trace sulphide.										
		- 134.9 - 149.0 - 15% magnetite, banding less contorted, only minor fracturing, chert boudins, minor small scale folding, few fine carbonate veinlets and fracture fillings, fine fractures with pyrite and trace pyrrhotite, few narrow carbonate-chlorite shears.	6881		135.9	140.9	5.0			tr.		
		- 137.2 - banding approximately 63° to core axis.	6882		140.9	145.9	5.0			tr.		
		<ul> <li>145.0 - 1" quartz vein with 2% pyrite and 0.5% pyrrhotite as fine clots and fracture fillings.</li> </ul>	6883		145.9	150.9	5,0			tr.		
		- 148.5 - banding 55° to core axis.										
		<ul> <li>- 149.0 - 153.3 - banding becoming increasingly parallel to core axis, being approximately parallel at 153.5; carbonate-chlorite shears; minor pyrite and trace pyrrhotite as clots and fracture coatings.</li> </ul>	6884		150.9	153.3	3.4			tr.		
		<ul> <li>151.8 - 153.5 - 2-3% magnetite, highly chloriti- zed, 5% pyrite with 1% pyrrhotite as veinlets, fracture coatings and clots. Several carbonate veinlets parallel to core axis.</li> </ul>										

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NAME OF PROPERTY	OPAPIMISKAN LAKE	

HOLE NO 0P-86-14
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____ SHEET NO. ____ 6 of 8

FOO	TAGE				SAMPL	.E		ASSAYS					
		DESCRIPTION		2 SUL PH		FOOTAGE			l				
FROM	10			IDES	FROM	TO	TOTAL		· · · · ·	OZ TON	OZ TON		
153.3	164.9	<u>ULTRAMAFIC VOLCANIC</u> - light grey-green to medium grey-green, medium to fine grained, weakly foliated to massive.		f									
		Average Modes											
		Talc65%Tremolite15%Serpentine10%Carbonate (Magnesite?)10%											
		Numerous clots and stringers of carbonate.											
		- 156.0 - 157.6 - loss of core - mud seam.											
		<ul> <li>- 150.0 - 157.0 - 1688 of core - mud seam.</li> <li>- 163.6 - 164.9 - sheared zone, fractured and brecciated, intense chlorite alteration; fractures filled with lamprophyre.</li> </ul>											
164.9	166.5	LAMPROPHYRE DIKE - similar to 133.7 - 133.9.	6885		163.6	167.4	3.8			tr.			
166.5	203.6	MAFIC TO ULTRAMAFIC VOLCANIC - (possible Mafic Tuff?) - medium to dark green-grey, very fine grained, very fine foliation (possible banding?), faint compositional banding.											
		Average Modes											
		Tremolite-Actinolite 70% Phlogopite 10% Serperting 10%											
100		Carbonate 5% Biotite up to 5%											
		Poorly developed compositional banding defined by bands of tremo- lite-actinolite and bands of biotite-phlogopite. Increase in mica near base of section. Few carbonate-chlorite veinlets with minor pyrite as fine disseminations and as fracture coatings.											
		- 179.6 - 182.6 - silicified zone with series of 1/4" to 1" quartz veins, trace disseminations of pyrite and pyrrhotite.	6886		179.6	184.6	5.0			tr.			
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#### NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. ______ 0P-86-14 ______ SHEET NO. _____ 7 of 8

FOC	TAGE				SAMPL	.E				ASSAYS		
FROM	то	DESCRIPTION	ND	" SULPH IDES	FROM	FOOTAGE TO	TOTAL		•	OZ TON	UZ TON	
203.6	205.9	MAFIC TO ULTRAMAFIC SHEAR ZONE - 2" bands of undisturbed mafics as in previous unit but highly silicified and contorted bands with boudin-like structures containing 2-3% garnet and quartz-potash- feldspar? veins. Mineralogy dominated by quartz and actinolite with minor garnet, biotite and carbonate. Up to 5% phlogopite near base of section. Quartz veins contain up to 5% pyrite, 0.5% pyrrhotite and trace chalcopyrite.	6887		203.6	205.9	2.3			tr.		
205.9	216.9	ULTRAMAFIC VOLCANIC - similar to 153,3 - 164.9.										
216.9	219.0	MAFIC TO ULTRAMAFIC VOLCANIC - similar to 166.5 - 203.6.										
219.0	223.0	MAFIC TO INTERMEDIATE TUFF ? - medium grey-green to dark grey to blue-grey, fine to very fine grained, well banded, bands less than 1/4" to 1/2".						- - -				
		Average Modes						}				
		Tremolite-Actinolite 65% Chert 30% Phlogopite 5%										
		Blue-grey chert bands and grey-green to dark grey tremolite- actinolite bands $\pm$ phlogopite. Minor carbonate-chlorite alteration along fractures. No visible sulphides.										
		- 220.0 - bands $55^{\circ}$ to core axis.									ļ	
1168		- 222.1 - 222.4 - carbonate alteration, no visible sulphides.	6888		222.0	223.0	1.0			tr.		
8 223.0	233.9	MAFIC TO ULTRAMAFIC VOLCANIC - similar to 166.5 - 203.6.										
		- 225.9 - 226.6 - carbonate alteration zone, trace pyrite.	6889		225.9	226.9	1.0			tr.		
1 29	237.1	<u>ULTRAMAFIC VOLCANIC</u> - similar to 153.3 - 164.9 - grading from previous unit.					-					
237.1	243.9	MAFIC VOLCANIC - similar to 166.5 - 203.6 - medium grey-green, very fine grained, very faint foliation, 2-3% phlogopite.			ļ							

OPAPIMISKAN LAKE NAME OF PROPERTY_____

HOLE NO. 07-86-14 SHEET NO. 8 of 8

F00	TAGE		<u> </u>		SAMPL	Ē		ASSAYS				
FROM	TO	DESCRIPTION	NO.	7. SULPH		FOOTAGE			~	07 705	(17 TOP	
				DES	FROM	TO	TOTAL	·	· · ·		02 104	
243.9	247.1	BANDED IRON FORMATION - green-grey to medium grey, very fine grain- ed, finely banded (less than 1/4"). Unit composed of 60% bands of chert (40%) - magnetite (20%) and 40% bands of actinolite with few biotite-rich bands. 5% grunerite alteration of chert-magnetite bands. Trace disseminated pyrhotite. Few fine quartz-carbonate veinlets. Carbonate-chlorite fracture fillings along bedding planes with minor pyrite as fracture coatings.	6890		243.9	247.1	3.2			tr.		
		- 244.0 - 244.1 - shear with 5% pyrite, 3% pyrr- hotite and abundant euhedral tourmaline.										
		- 247.0 - 247.1 - similar to above.										
247.1	269.0	ULTRAMAFIC VOLCANIC - dark grey-green, fine grained, weakly schistose to massive.			l i							
		- 247.1 - 249.0 - similar to 50.7 - 67.0.										
		- 249.0 - 269.0 - Ultramafic to Mafic.				1				1		
		Average Modes										
		Tremolite-Actinolite65%Phlogopite15%Serpentine10%Quartz5%Plagioclase5%?										
		Trace disseminated sulphide throughout. Several 1/4" carbonate-chlorite veinlets.										
		- 251.1 - 251.4 - carbonate-tourmaline vein.	6891		251.0	252.5	1.5			tr.		
		- 252.0 - 252.2 - as above.										Λ
		– 259.0 – 259.5 – intense quartz-carbonate veining.						1			A	
		- 259.5 - 263.5 - several carbonate alteration zones with some tourmaline.	6892		259.0	263.5	4.5		1	tr.	$\square$	him
269.0		End of Hole.									H	V

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NAME OF PROP	ERTY	OPAPIM	IISKAN LAKE		
HOLE NO	P-86-15	LENGTH	309		
LOCATION 8	+00NW 1+001	NE			
LATITUDE	·	_ DEPARTURE			
ELEVATION		_ AZIMUTH	<u>049°</u>	DIP	<u>-46</u> °
STARTED Novem	ber 16, 1986	FINISHED	November 17	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0				
309'	-40 <u>.0</u> °				

HOLE NO. OP-86-15 SHEET NO. 1 of 1

REMARKS Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOOT	TAGE				SAMP	LE		ASSAYS				
FROM	то	SUMMARY LOG	NO.	SULPH- IDES	FROM	FOOTAGE TO	TOTAL	";	%	OZ/TON	OZ/TON	
0	24.0	CASING							ł			
24.0	53.1	BANDED IRON FORMATION										
53.1	54.5	GARNETIFEROUS METASEDIMENT										
54.5	110.8	ULTRAMAFIC TO MAFIC VOLCANICS										
110.8	116.3	BANDED IRON FORMATION							1			
116.3	239.9	ULTRAMAFIC VOLCANICS		1			N					
239.9	289.7	GARNETIFEROUS METASEDIMENTS								[		
289.7	309.0	ULTRAMAFIC VOLCANICS										
309.0		End of Hole.										
												( And
											n A	ANT
											CN	Υν·
											1771	
											J	

NAME OF	PROPERTY _	OPAP1	<u>MISKAN LAKE</u>		
HOLE NO.	<u>OP-86-15</u>	LENGTH	30	9'	
LOCATION	8+00NW	1+00NE			
LATITUDE		DEPARTURE	- <u></u>		
ELEVATION	l	AZIMUTH	049°	DIP _	<u>-46°</u>
STARTED _	November 16	1986 FINISHED	November 17.	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0				
309'	-40.0				

HOLE NO. 0P-86-15 SHEET NO. 1 of 6

REMARKS _____

PA - 844238

LOGGED BY _____ D. J. Corkery

FOOT	TAGE				SAMP	LE		ASSAYS					
FROM	то		NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	26	26	OZ/TON	oz/ton		
0 24.0	24.0 53.1	CASING BANDED IRON FORMATION - bands of light grey, dark grey to black and light cream-green, fine grained. Bands are generally 1/8" to 1/4" and consist of chert, grunerite and magnetite-grunerite ± hornblende. Grunerite bands are found on both sides of magnetite- rich bands.		IDES	FROM		TOTAL				02710		
		Average Modes         Quartz       45       -       55%         Grunerite       30       -       40%         Magnetite       10       -       15%         Hornblende       1       -       3%         Sulphides       trace       -       0.5%         Pyrite and pyrrhotite are associated with fractures, either as fillings or parallel to bands adjacent to fractures.         -       24.0       -       27.2       -       contains 10-15% garnet-biotite bands. Pyrite and limonite fracture coatings.         -       26.0       -       banded at 30° to core axis	16632		24.0	29.0	5.0			.02			
		<ul> <li>- 27.2 - 29.3 - as described, moderately contorted.</li> <li>- 29.3 - 44.9 - as described.</li> <li>- 41.2 - banded at 50° to core axis.</li> <li>- 44.9 - 45.2 - quartz vein, with 1/2" quartz carbonate at lower boundary. No visible sulphides.</li> </ul>	16633 16634 16635 16636		29.0 34.0 39.0 44.0	34.0 39.0 44.0 45.5	5.0 5.0 5.0 1.5			tr. tr. tr. tr.			

_ANGRIDGES _ TORONTO _ 366-1168

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			HOLE NO. 02-86-15 SHEET NO. 2 of 6									
FOOT	AGE				SAMPL	E				ASSAYS		
FROM		DESCRIPTION	NO.	" SULPH		FOOTAGE		179	~	0.7 701	0.7 TON	
				DES	FROM	то	TOTAL	•	· · ·			
		-45.2 - 53.1 - an described	16637		45 5	49 5	4 0			tr	ļ	
		- 45.2 - 55.1 - as described.	16638		49.5	53.1	3.6			.01		
		$52.0$ – banded at $60^{\circ}$ to core axis.										
								1				
53.11	54.5	GARNETIFEROUS METASEDIMENTS - dark green to black with pink poiki-	16639		53.1	54.5	1.4		ĺ	.01		
		toblasts, line glained, weakly banded.										
		Average Modes										ĺ
ļ		Hornblende 35 - 40%										
1		Garnets 25 - 30%						j –	]			
		Quartz 15 - 20%										
		Grunerite 10 - 15%										
		<b>Bi</b> otite 3 - 5%									1	
		Magnetite trace – 0.5%										
		Sulphides 0.5 - 1%										
		Pyrrhotite and trace chalcopyrite occur parallel to bands and along fractures.										
54.5	110.8	ULTRAMAFIC TO MAFIC VOLCANICS - medium to dark green, fine grained, schistose. Dominantly tremolite-actinolite with minor serpentine, phlogopite, biotite and talc. Abundant calcite veinlets commonly at 30° to 35° to core axis and 1/32" to 1/2" wide. Veinlets appear planar. No visible sulphides are visible in either volcanics or calcite veinlets.										
		- 54.5 - 56.5 - transitional zone from sediments with $12-15\%$ narrow quartz bands at $65^\circ$ to core axis.	16640		54.5	59.0	4.5			tr.		
		- 56.5 - 64.0 - typical.	16641		59.0	64.0	5.0			tr.		
		-64.0 - 69.0 - no calcite veinlets.	16642		66,8	67.8	1.0			tr.		
		<ul> <li>- 67.1 - 67.8 - 1-2% pyrrhotite and trace chalco- pyrite parallel to foliation.</li> </ul>										
		- 69.0 - 76.1 - typical.	16643 16644		69.0 73.0	73.0 76.1	4.0 3.1			tr. tr.		

NAME OF PROPERTY______OPAPIMISKAN LAKE

- 117.4 - 142.0 - dominantly talc-serpentine.

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LANGRIDGES - TORONTO - 366-1168

FOO	TAGE				SAMP	LE			ASSAYS	
	1	DESCRIPTION		7, SULPH		FOOTAGE		 r	T	·····
FROM	то		NO.	IDES	FROM	то	TOTAL		OZ TON	OZ TON
		<ul> <li>76.1 - 79.1 - talc schist with rare calcite veinlets.</li> <li>79.1 - 83.7 - talc-serpentine-magnesite schist with rare calcite veinlets.</li> </ul>								
110.8 116.3		- 83.7 - 110.8 - typical. - 84.4 - 86.3 - several quartz-calcite veinlets parallel to foliation at 60° to core axis; veinlets commonly at 25° to 30° to core axis.	16645 16646 16647 16648 16649 16650		83.7 86.3 91.0 96.0 101.0 106.0	86.3 91.0 96.0 101.0 106.0 110.8	2.6 4.7 5.0 5.0 5.0 4.8		tr. tr. tr. tr. tr. tr.	
110.8	116.3	BANDED IRON FORMATION - medium cream-grey to dark grey, fine grained poorly banded.         Average Modes         Grunerite       40         Quartz       30       - 40%         Hornblende       7       - 10%         Magnetite       5       - 7%         Garnet       5       - 7%         Pyrite       trace       - 0.5%         Pyrite occurs in sections of contorted banding.       - 113.1 - 113.3 - 5-7% pyrite as blebs in contorted zone.	16651		110.8	116.3	5.5		.01	
116.3	239.9	<ul> <li><u>ULTRAMAFIC VOLCANICS</u> - light to medium grey, fine to very fine grained, well foliated, dominantly tremolite, minor serpentine, 1-2% talc, 0.5-1% disseminated magnetite and trace disseminated pyrite. Many narrow white bands of talc with few bands of magnesite.</li> <li>- 116.3 - 117.4 - distinct brown laminations of phlogopite and amphibole (hornblende?) which gradually decrease until typical at 117.4.</li> </ul>	16652		116.3	117.4	1.1		tr.	

OPAPIMISKAN LAKE NAME OF PROPERTY_

OP-86-15 HOLE NO. ....

SHEET NO. 3 of 6

4

366-1168

- TORONTO

FOOT	AGE					SAMPI	_E				ASSAYS		
C DON		1	DESCRIPTION	NO.	", SUL PH		FOOTAGE				01.100	6.7. TON	
PROM					IDES	FROM	or	TOTAL	ļ	· · · ·	02 104	02 104	
- 1		- 142.0 - 164.0 -	many serpentine-rich clots (intrusive or thick	16653	1	142.0	147.0	5.0	1	1	tr.		
			flow?) which also contain an increase in	16654		147.0	152.0	5.0		1	tr.		
			magnetite. Abundant fine fractures (black, very	16655		152.0	157.0	5.0	ł		tr.		
			fine grained) of which some contain calcite and	16656		157.0	161.0	4.0			tr.		
		1	some have black alteration haloes. Few contain	16657	[ '	161.0	164.0	3.0	1	[	tr.	Í	
i		1	pyrite with calcite. Fracture angles vary from										
			15° to 35° to core axis. Foliation typically at										
			60° to core axis.					1	1				
			149.8 - fracture with graphite coating $17^{\circ}$ to										
		1	core axis.										
		1						}	1	1			
		_	150.2 - $1/4$ " calcite veinlet at 70° to core axis						1				
			containing purite hlebs.				i		l				
			containing pyrice bress.										
1		_	154.0 - calcite filled fracture containing pyrite				1	[	1	1			
			19410 Chiefee Filles Fidebale containing pyriot										
			typical	16658		170.0	175.0	5.0	1		tr.		
		104.0 - 170.0 -	cypicar.	16659		175 0	180 0	5 0	1		tr		
		- 170 0 - 201 7 -	similar to $1/2$ 0 - $16/10$ with clot being	16660		180 0	185 0	5.0			tr		
		- 1/0.0 - 201.7 -	stratahod from $180.0 - 201.7$ parallal to	16661		185 0	100.0	5 0	1				
			foliation	16662		100.0	195 0	5.0			tr.		
				16663	1	105 0	108 0	3.0	1				
ŀ		201 7 200 7	tu-to-1	16664		108 0	201 7	3.7			tr.		
		- 201.7 - 209.7 -	Lypical.	10004		190.0	201.7	J.,					
		200 7 224 1	-1-1 and $1/2$ 0 $-16/10$ with four dark frequence					]	1				
		- 209.7 - 234.1 -	similar to 142.0 - 164.0 with lew dark fractures.							1			
			217 0 219 7 for each mate weighter as	16666		217 0	22/ 1	7 /	1				
			217.0 - 210.7 - few carbonate ventiets, no	10000		217.0	224.4	/ .4					
			visible sulphides.						1	ł			
		-	222.4, $224.2 - 1/4$ " carbonate veinlets, no						1				
			visible sulphides.										
		22/1 220.0						1	1	1			
		- 234.1 - 239.9 -	grades from medium grey to medium green with an										
			increase in serpentine. Also increase in										
ļ		1	tremolite.						J	1			
										1	1 1		

tremolite.239.9289.7CARNETIFEROUS METASEDIMENTSFine to very fine grained, massive to weakly banded.

#### NAME OF PROPERTY _____ OPAPIMISKAN LAKE

HOLE NO. 0P-86-15 SHEET NO. 4 OF 6

NAME	OF	PROPERTY	OPAPIMISKAN LAKE
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281.8 286.8

5.0

tr.

SHEET NO 5 of 6 HOLE NO. ____OP-86-15 FOOTAGE SAMPLE ASSAYS DESCRIPTION % SUL PH FOOTAGE FROM то NO. OZ TON OZ TON ÷. .... IDE 5 FROM TOTAL TO Average Modes Biotite 35 40% 25 30% Ouartz 20 25% Garnets Hornblende 7 10% Pyrite trace Garnet poikiloblasts are in a matrix of biotite, guartz and hornblende. Few isolated contorted chert bands. Most banding is indicated by a change in garnet content. Pyrite occurs as disseminated grains and as fracture coating. - 239.9 - 258.1 - typical. 239,9 244.0 16667 4.1 tr. 244.0 248.0 4.0 16668 tr. - 240.0 - banding at  $50^{\circ}$  to core axis. 248.0 252.0 16669 4.0 tr. - 256.5 - 257.4 - five 1" contorted quartz veins 252.0 256.5 16670 4.5 tr. containing disseminated wisps of wall rock, 0.5% 16671 256.5 257.5 1.0 .03 pyrite as boundaries of veinlets. - 258.1 - 261.0 - dominantly hornblende/actinolite in the matrix 16672 257.5 261.0 3.5 .01 with 1-3% garnets and minor biotite. Few narrow chert bands. - 261.0 - 273.5 - typical. 16673 261.0 266.0 5.0 tr. 266.0 270.0 16674 4.0 tr. - 265.4 0 265.8 - several narrow guartz bands. 270.0 273.5 16675 3.5 .01 No visible sulphides. - 273.5 - 276.8 - similar to 258.1 - 261.0 with several quartz-16676 273.5 276.8 3.3 tr. carbonate-tourmaline veinlets which contain 1-3% pyrrhotite as blebs and in fractures in tourmaline. Veinlets are 1/2" to 1" wide with tourmaline at the edges. Wall rock contains 0.5-1% pyrrhotite as disseminated grains. - 276.8 - 287.5 - atypical, with increase in biotite so matrix is 281.8 16677 276.8 5.0 tr.

dominantly biotite. 283.5 - 283.6 - quartz veinlet; no visible

#### sulphides.

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NAME OF P	ROPERTY	OPAPIMISKAN	LAKE
	OP-86-15	SUEET NO	6 of 6

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FOO	TAGE				SAMP	LE		I		ASSAYS		
ROM	то	DESCRIPTION	NO.	SUL PH	EROM	FOOTAGE	TOTAL	<u> </u>	•	OZ TON	UZ TON	
		- 287.5 - 289.7 - similar to 258.1 - 261.0 with a gradual decrease in garnet to 288.8 where rare till 289.7 except two bands at 288.4 and 288.6 with large (1/4") garnet poikiloblasts. Few quartz bands from 288.8 to 289.7.	16679		286.8	289.7	2.9			.01		
9.7	309.0	<ul> <li>ULTRAMAFIC VOLCANICS - similar to 142.0 - 164.0 without fractures.</li> <li>- 289.7 - 293.3 - no clots.</li> <li>- 293.3 - 297.4 - typical with 1/8" clots.</li> <li>- 297.4 - 302.2 - clots stretched parallel to foliation at 45° to 50° to core axis.</li> <li>- 302.2 - 309.0 - similar to above but clots are smaller (1/16" to 1/10").</li> </ul>										
.0		End of Hole.										2
										Ĵ	A	<b>J</b> Ø

NAME OF	PROPERTY	<u>OPAPIM</u>	ISKAN LAKE	<u> </u>	
HOLE NO.	OP-86-16	LENGTH	297	ı	
LOCATION	<u>9+03NW C</u>	<u>+97ne</u>			
LATITUDE		DEPARTURE			
ELEVATION	۹	AZIMUTH	049°	DIP	<u>-45.5°</u>
STARTED	November 19, 19	86 FINISHED	November 23	3. 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.5				
297'	-38.8				

HOLE NO.  $\frac{0P-86-16}{5}$  sheet NO.  $\frac{1 \text{ of } 1}{5}$ 

REMARKS _____ Summary Log

PA - 844238

LOGGED BY ____ D. J. Corkery

F 0 0 1	TAGE				SAMP	LE			A	SSAY	′ <b>5</b>	
FROM	то	SUMMARY LOG	NO.	SUL PH-	FROM	FOOT AGE	TOTAL	ч	z	OZ/TON	OZ/TON	
0	15.5	CASING										
15.5	74.8	BANDED IRON FORMATION										
74.8	82.1	GARNET-BIOTITE SCHIST										
82.1	84.3	BANDED IRON FORMATION										
84.3	87.5	GARNETIFEROUS METASEDIMENTS										
87.5	159.1	MAFIC TO ULTRAMAFIC VOLCANICS										
159.1	159.6	INTERBEDDED IRON FORMATION AND ULTRAMAFIC VOLCANICS										
159.6	176.4	ULTRAMAFIC VOLCANICS										
176.4	182.2	GARNETIFEROUS METASEDIMENTS										
182.2	199.3	ULTRAMAFIC VOLCANICS							•			
199.3	297.0	GARNETIFEROUS METASEDIMENTS										
297.0		End of Hole.							:			
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5										A	hM	N
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2										IJ		
1			1									

LANGRIDGES - TORONTO - 366-1168

NAME OF	PROPERTY		OPAPIMI	SKAN LAKE		
HOLE NO.	<u>OP-86-16</u>		LENGTH	<u>297'</u>		
LOCATION	9+03NW	0+97NE				
LATITUDE	<u> </u>		DEPARTURE	<u></u>		
ELEVATION	I		AZIMUTH	049°	DIP	-45.5°
	November 19	1986		November 23	1086	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.5				
297'	-38.8				

HOLE NO. 0P-86-16 SHEET NO. 1 of 7

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PA - 844238

LOGGED BY ____ D. J. Corkery

REMARKS _

FOOT	AGE				SAMP	LΕ		_	A	SSAY	15	
FROM	то		NO.	SUL PH-	FROM	FOOTAGE TO	TOTAL	2%	¥	OZ/TON	OZ/TON	
0	15.5	CASING										
15.5	74.8	BANDED IRON FORMATION - bands of light grey, dark grey to black and light cream-green, fine grained, well banded, commonly 1/8" to 1/4" bands, contorted.										
		Average Modes										
		Quartz       40       -       50%         Grunerite       30       -       40%         Magnetite       12       -       15%         Calcite       2       -       4%         Pyrrhotite       trace       -       0.5%										
		Many bands contain laminations. Grunerite generally occurs between chert bands and magnetite-rich bands. Calcite within bands with minor amounts in fractures. Pyrrhotite occurs parallel to bands and as fracture fillings. Boudinaging of bands common in contorted zones.								(		
		– 15.5 – 16.7 – several light brown chert bands. Few limonitic fractures.	16680		15.5	18.4	2.9			tr.		
ĺ		- 16.7 - 18.4 - 0.5-1% pyrrhotite parallel to bands, limonitic fractures.										
		- 18.4 - 19.4 - loss of core.	ļ									
		- 19.4 - 19.9 - typical, limonitic fractures.	16681		19.4	24.0	4.6			.01		
		- 19.9 - 20.2 - loss of core.										

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LANGRIDGES - TORONTO - 366-1168

NAME OF P	ROPERTY	OPAPIMISKAN L	AKE	
HOLE NO	OP-86-16	SHEET NO	2 of 7	

FOOT	AGE		Τ		SAMPI	_ E		ASSAYS				
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL		-	OZ TON	UZ TON	
		- 20.2 - 24.0 - typical, limonitic fractures, few ground sections.										
		<ul> <li>- 24.0 - 26.1 - several quartz veinlets, contorted, 0.5% tourmalin at boundaries and 1-2% pyrrhotite as wisps in some veinlets.</li> </ul>	e16682		24.0	26.1	2.1			.01		
		- 26.1 - 29.9 - typical.	16683		26.1	29.9	3.8			tr.		
		- 29.9 - 30.8 - quartz vein with wisps of wall rock, trace pyrrhotite in fractures.	16684		29.9	30.9	1.0			tr.		
		- 30.8 - 36.7 - typical.	16685		30.9	31.9	1.0			tr.		ſ
		<ul> <li>- 31.3 - 1/2" quartz veinlet with several 1/4" arsenopyrite blebs and trace to 0.5% pyrrhotite, a wall of veinlets.</li> </ul>	16686		31.9	36.5	4.6			tr.		
-		<ul> <li>- 34.6 - 35.1 - bleached zone of light brown, high in quartz with trace magnetite.</li> </ul>										
		- 36.3 - quartz-chlorite veinlets (1/16") containing minor pyrite.										
		- 36.7 - 37.2 - 1/2" brecciated zone with calcite-tourmaline- pyrite filling; pyrite occurs as 1/4" blebs adjac- ent to tourmaline and constitutes 5-7% of filling.	16687		36.5	37.5	1.0			tr.		
		- 37.2 - 42.0 - typical with few quartz-calcite filled fractures.	16688		37.5	41.5	4.0			tr.		
		- 42.0 - 42.5 - brecciated zone with quartz-calcite filling; 0.5-1% pyrite.	16689 16690 16691		41.5 42.5 46.5	42.5 46.5 49.7	1.0 4.0 3.2			tr. tr. tr.		
		- 42.5 - 50.0 - typical.	16692		49.7	50.7	1.0			tr.		
		- 50.0 - 50.4 - quartz vein with 5-7% pyrrhotite wisps.										
		- 50.4 - 61.7 - 10-15% garnet-biotite bands; 0.5-1% pyrrhotite.										
		<ul> <li>- 53.9 – 54.4 – 5-7% pyrrhotite and trace arseno- pyrite.</li> </ul>	16693		50.7	55.0	4.7			tr.		
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			н	OLEN	o0P-	-86-16		SHEET NO. 3 of 7			
F00	TAGE	DESCRIPTION			SAMPL	Ē				ASSAYS	
FROM	70	DESCRIPTION	NO.	", SULPH, IDES	FROM	FOOTAGE	TOTAL	ï		07 TON	07 TON
		- 59.0 - 59.5 - 5-7% pyrrhotite parallel to bands.	16694		55.0	60.0	5.0			tr.	
		- 61.7 - 68.4 - low contortion of bands, banded at $25^{\circ}$ to core axis.	16695		60.0	65.0	5.0			tr.	
		- 68.4 - 71.7 - banded near parallel to core axis with several fold closures visible.	16696		65.0	70.0	5.0			tr.	
		- 70.9 - trace arsenopyrite in quartz-calcite filled fracture.									
		- 71.7 - 73.3 - typical.									
		- 73.3 - 74.8 - grading into unit below with 15-20% garnet-biotite bands.	16697		70.0	74.8	4.8			tr.	
74.8	82.1	$\frac{GARNET-BIOTITE SCHIST}{weakly banded}$ - black with pink poikiloblasts, fine grained	16698 16699		74.8 78,8	78.8 82.1	4.0 3.3			tr. tr.	
		Average Modes									
~		Biotite         65         -         75%           Garnet         20         -         25%           Hornblende         2         -         4%           Grunerite         1         -         3%           Quartz         1         -         3%           Sulphides         trace         -         3%									
		Pyrite and pyrrhotite generally occur as disseminated grains. Banded at $60^\circ$ to core axis.									
		- 75.6 - $1/4$ " pyrite veinlet at 50° to core axis.									
82.1	84.3	BANDED IRON FORMATION - atypical, laminated to nearly massive, $3-5\%$ hornblende, $1-3\%$ pyrrhotite as fine disseminations and wisps.	16700		82.1	84.3	2.2			tr.	
84.3	87.5	GARNETIFEROUS METASEDIMENTS - dark green to black with pink polkiloblasts and bands, moderately banded, fine grained, moderate- ly foliated.	16701		84.3	87.5	3.2			tr.	

NAME OF PROPERTY _____ OPAPIMISKAN LAKE

NAME OF PROPERTY	OPAPIMISKAN LAKE
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FOOTAGE	DECODIDATION			SAMP	LE		T	 ASSAYS		
500H TO	DESCRIPTION	NO.	SUL PH		FOOTAGE			 07 705	67 TON	
FOOTAGE FROM TO 87.5 159.1	DESCRIPTION Average Modes Hornblende 50 - 60% Garnet 20 - 25% Quartz 7 - 10% Biotite 5 - 7% Grunerite 1 - 3% Magnetite 0.5 - 1% Sulphides 0.5 - 1% Sulphides 0.5 - 1% Sulphides occur as wisps and blebs. <u>MAFIC TO ULTRAMAFIC VOLCANICS</u> - medium to dark green-grey, fine grained, moderately foliated, dominated by actinolite-tremolite with 7-10% phlogopite and 3-5% plagicolase. Several serpentine coated fractures. Trace fine grained disseminated pyrite. Foliated 60° to 70° to core axis. - 87.5 - 109.6 - abundant fine calcite fractures commonly at 25° to 30° to core axis. - 88.3 - 1/2" calcite bleb. - 109.6 - 120.1 - dominantly tremolite-serpentine, well foliated with 3-5% disseminated, brown hornblende, up to 1/4", oriented parallel to foliation. Hornblende occurs as fine grained crystal clusters. (pseudomorphs?) - 109.7 - 110.3 - three 1/2" to 3" dark brown crystal clusters, crystals are fine to medium grained, subhedral, prismatic, hard (approxi- mately 7), striated lengthwise and concoidal fracture, transluscent, (tourmaline). These clusters are connected to contred willets and	NO 16702 16703 16704 16705 16707 16708	SULPH.	SAMP FROM 87.5 90.0 95.0 100.0 105.0 109.6 114.9	90.0 90.0 95.0 100.0 105.0 109.6 114.9 120.1	2.5 5.0 5.0 5.0 5.2		ASSAYS 07 TOW tr. tr. tr. tr. tr. tr. tr. tr.	02 TON	

HOLE NO. 09-86-16 SHEET NO. 4 of 7

LANGRIDGES - TORONTO - 366-1168

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			н	OLE N	o. <u>OP</u> -	-86-16		SHEET NO 5 of 7				
FOOT	TAGE				SAMP	LE				ASSAYS	-	_
FROM	то	DESCRIPTION	NO.	", SUL PH	FROM	FOOTAGE TO	TOTAL		۰.	OZ TON	OZ TON	
		- 120.1 - 124.8 - light grey with dark grey to black clots, schistose, dominantly talc-serpentine with 0.5-1% magnetite and 1-3% carbonate.										
ĺ		- 124.8 - 138.3 - similar to 109.6 - 120.1.										
		<ul> <li>- 138.3 - 159.1 - similar to 85.5 - 109.6 with fractures at 25° to 30° to core axis. Few 1/2" quartz veins, no visible sulphides.</li> <li>- 145.4 - 145.6 - 2" quartz veinlet, no visible sulphides.</li> </ul>	16709 16710 16711 16712 16713 16714		138.0 142.0 145.2 146.2 150.2 154.2	142.0 145.2 146.2 150.2 154.2 158.8	4.0 3.2 1.0 4.0 4.0 4.6			tr. tr. tr. tr. tr. tr.		
		- 145.6 - 146.1 - 15-20% calcite.										
159.1	159.6	INTERBEDDED IRON FORMATION AND ULTRAMAFIC VOLCANICS	16715		158.8	159.8	1.0			.01		
		Ultramafic Volcanics (40%) – dark green, fine grained, well foliated, tremolite-serpentine with few poikiloblastic garnets. $1/4$ " bands at 70° to core axis.										
		Iron Formation (60%) ~ light grey, fine grained, laminated chert and 10-12% magnetite. $1/4''$ bands at 70° to core axis. $1-3\%$ fine grained pyrite parallel to core axis.										
159.6	176.4	<u>ULTRAMAFIC VOLCANICS</u> - similar to $109.6 - 120.1$ , $0.5-1\%$ medium to coarse grained tourmaline in few bands; $0.5-1\%$ brown hornblende in few fine bands; trace to $0.5\%$ magnetite. Few well spaced quartz veinlets with alteration haloes of talc.	16716 16717 16718		164.6 168.4 172.4	168.4 172.4 176.4	3.6 4.0 4.0			tr. tr. .02		
176.4	182.2	<u>GARNETIFEROUS METASEDIMENTS</u> - atypical to 74.8 - 82.1 with 2:1 ratio of garnet to amphibole and contain several quartz veinlets commonly at $65^{\circ}$ to $70^{\circ}$ to core axis.										
		- 176.4 - 178.9 - 15-20% garnets.	16719		176.4	179.9	3.5			.01		
		- 178.9 - 179.7 - silicified zone with several closely spaced quartz veinlets and alteration haloes. 0.5-1% garnets.										

OPAPIMISKAN LAKE

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 02-86-16 SHEET NO. 6 of 7

F00	TAGE	DESCRIPTION			SAMPI	-E			ASSAYS		
FROM	70	DESCRIPTION	NO.	SULPH		FOOTAGE		~.	OZ TON	AYS	
				1025	FRUM	- 10	TOTAL	 	· · · · · · · · · · · · · · · · · · ·		
		- 179.7 - 180.7 - 1-3% garnets.	16720		179.9	182.3	2.4		tr.		
		- 180.7 - 182.2 - grades from 1% garnets at 180.7 to 20-25% at 182.2.									
182.2	199.3	ULTRAMAFIC VOLCANICS - medium green, fine grained, well foliated, serpentine-talc-tremolite.	16721		182.3	184.9	2.6		tr.		
		- 182.2 - 183.9 - 1-2% quartz-calcite veinlets with light green haloes and 1-3% garnet in the haloes.									
		- 185.2 - 185.8 - sheared, brecciated.	16722		184.9	185.9	1.0		tr.		
		– 189.9 – 190.8 – sheared 35° to core axis.	16723		189.9	190.9	1.0	1	tr.		
199.3	297.0	<u>GARNETIFEROUS METASEDIMENTS</u> - similar to 74.8 - 82.1, massive to weakly banded, several $1/8$ " to $1/2$ " quartz veinlets containing no visible sulphides. Some veinlets occur parallel to banding while many are irregular, cut across banding and appear highly folded. Often veinlets are surrounded by narrow hornblende-rich zones. Trace disseminated sulphides.									
		- 199.3 - 200.8 - moderately banded, similar to 84.3 - 87.5 with trace pyrite.	16724		199.3	200.8	1.5		tr.		
		- 200.8 - 205.8 - typical.	16725		200.8	205.4	4.6		tr.		
		- 205.8 - 206.2 - several irregular 1/4" to 1/2" quartz veinlets,	16726		205.4	206.4	1.0		tr.		
		contorted no visible sulphides.	16727		206.4	211.0	4.6		tr.		
		,	16728		211.0	216.0	5.0		tr.		
		- 206.2 - 245.1 - typical.	16729		216.0	221.0	5.0		.01		
			16730		221.0	226.0	5.0		tr.		
			16731		226.0	231.0	5.0		.01		
		- 235.0 - banded at 45° to core axis.	16732		231.0	236.0	5.0		tr.		
			16/33		236.0	241.0	5.0		tr.		
			16/34		241.0	245.0	4.0		tr.		
		- 245.1 - 246.0 - quartz vein with 1-3% pyrite as disseminated blebs and along fractures.	10133		243.0	247.0	2.0		tr.		
		- 246.0 - 246.3 - typical.									

LANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY	OPAPIMISKAN	LAKE	

HOLE NO. 0P-86-16 SHEET NO. 7 of 7

FOO	TAGE	DESCRIPTION	SAMPLE					ASSAYS				
FROM	то		NO.	" SUL PH	FROM	FOOTAGE	TOTAL		••	OZ TON	OZ TON	
		- 246.3 - 246.6 - quartz vein, no visible sulphides. - 246.6 - 253.5 - typical.	16736 16737		247.0 252.0	252.0 257.0	5.0 5.0			tr. tr.		
		- 253.5 - 253.7 - quartz veinlet, no visible sulphides. - 253.7 - 258.7 - typical. - 258.7 - 259.0 - quartz veinlet, no visible sulphides.	16738		257.0	262.0	5.0			tr.		
		<ul> <li>- 259.0 - 263.0 - typical.</li> <li>- 263.0 - 263.2 - silicified zone, quartz with remnant wall rock and original foliation visible.</li> <li>- 263.2 - 297.0 - typical with several 1/8" to 1/2" quartz veinlets no visible sulphides with veinlets. Banding angles not regular and several fold closures</li> </ul>	16739 16740 16741 16742 16743 16744		262.0 267.0 272.0 277.0 282.0 287.0	267.0 272.0 277.0 282.0 287.0 292.0	5.0 5.0 5.0 5.0 5.0 5.0			tr. tr. tr. tr. ,03		
297.0		visible. End of Hole.	16745		292.0	297.0	5.0			tr.		
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NAME OF	PROPERTY	OPAPIM	ISKAN LAKE		
HOLE NO.	<u>OP-86-17</u>	LENGTH	249.'		
LOCATION	13+99NW	2+00NE			
LATITUDE		DEPARTURE			
ELEVATION		AZIMUTH	<u>229°</u>	DIP	_45.5°
STARTED	November 19	1986 FINISHED	November 21	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.5°				
249'	-38.0°				

HOLE NO. 0P-86-17 SHEET NO. 1 OF 1

REMARKS ______ Log

PA - 844239

LOGGED BY <u>B. E. Elliott</u>

FOOT	TAGE		SAMPLE					A	SSAY	ΥS		
FROM	то	SUMMARY LOG	NO.	SULPH IDES	FROM	FOOTAGE	TOTAL	16	'o	OZ/TON	OZ/TON	
0	20.0	CASING										
20.0	39.8	ULTRAMAFIC TO MAFIC VOLCANICS										
39.8	78.6	<u>GARNET-BIOTITE MEDASEDIMENT</u> - several carbonate-chlorite filled fractures with pyrite.										
78.6	112.8	BANDED IRON FORMATION	2 2									
112.8	116.8	GARNET-BIOTITE METASEDIMENT										
116.8	158.2	BANDED IRON FORMATION										
158.2	160.4	LAMPROPHYRE DIKE										
160.4	249.0	BANDED IRON FORMATION										
249.0		End of Hole.										
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										$(\mathcal{N})$	(MY	4
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										V'		

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NAME OF	PROPERTY	<u>OPAPIM</u>	ISKAN LAKE		
HOLE NO.	<u>OP-86-17</u>	LENGTH	249'		
LOCATION	13+99NW	2+00NE			
LATITUDE		DEPARTURE			
ELEVATION		AZIMUTH	22 <u>9</u> °	DIP	_45.5°
STARTED	November 19, 1	1986 FINISHED	November 21,	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.5	>			
249'	-38.0	•			

HOLE NO. 0P-86-17 SHEET NO. 1 of 7

REMARKS _____

PA - 844239

LOGGED BY B. E. Elliott

FOOTAGE		SAMPLE				SAMPLE					ASSAYS				]
FROM TO	DESCRIPTION	NO.	SULPH	FROM	FOOT AGE TO	TOTAL	5	<i>'</i> °	OZ/TON	oz/ton					
0 20.0 <u>C.</u> 20.0 39.8 <u>u</u> 8 - - - - - -	CASING         ULTRAMAFIC TO MAFIC VOLCANIC - medium grey to grey-green, fine grained, foliated.         Average Modes         Serpentine       40       -       50%         Talc       20       -       30%         Tremolite       5       -       10%         Magnetite       5       -       10%         - 20.0       -       28.5       -       10%         - 20.0       -       28.5       -       10%         - 20.0       -       28.5       -       10%         - 20.0       -       28.5       -       10%         - 20.0       -       28.5       -       modium grey with dark circular clots of magnetite and serpentine. Few hairline carbonate fractures oriented approximately parallel to core axis.         -       28.5       -       39.8       -         -       28.5       -       39.8       -       modium grey to grey-green, trace to no magnetite. Several carbonate filled fracture zones as unoriented veinlets with increasing chlorite alteration (up to 10%) as approach base of section. Pyrrhotite as fracture coatings.       -       29.5       -       30.4       - carbonate-chlorite alteration with minor clots of pyrhotite with trace chalcopyrite.       -       33.8       -       fine pyrrhotite clot. <tr< td=""><td>6944 6945 6946</td><td></td><td>29.0 33.0 37.0</td><td>33.0 37.0 39.8</td><td>4.0</td><td></td><td></td><td>tr. tr.</td><td></td><td></td></tr<>	6944 6945 6946		29.0 33.0 37.0	33.0 37.0 39.8	4.0			tr. tr.						

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LANGRIDGES - TORONTO - 366-1168

NAME OF	PROPERTY_	OPAPIMISKAN LAKE	 

HOLE NO. ______ OP-86-17______ SHEET NO. _____ 2 of 7_____

F001	TAGE				SAMPL	E			ASSAYS		
FROM	то		NO.	". SULPH. IDES	FROM	FOOTAGE TO	TOTAL	•	OZ TUN	OZ TON	
		Average ModesBiotite65%Garnet30%Quartz2 - 3%Carbonate2 - 3%Evenly dispensed, pink poikiloblastic garnets (less than 1/8").									
		<ul> <li>Several carbonate-chlorite filled fractures with pyrite as fracture coatings.</li> <li>- 39.8 - 42.4 - compositional banding between garnet-biotite and chert-rich layers. Banding parallel to core axis. Possible shear zone?</li> </ul>	6947		39.8	44.8	5.0		tr.		
		- 41.8 - $1/4$ " quartz vein with 2-3% pyrite.	Į								
		- 49.7 - orange-red chert (possibly jasper). No sulphides.	6948		44.8	49.8	5.0		tr.		
		- 50.3 - same as above.	6949		49.8	54.8	5.0		tr.		
		- 50.7 - same as above.	6950 6951		54.8 59.8	59.8 64.8	5.0 5.0		.02 .01		
		- 51.5 - same as above.	6952		64.8	69.8	5.0		tr.		
		- 70.5 - 70.8 - quartz vein with 5% pyrite as veinlets and clots.	6953		69.8	74.8	5.0		.01		
		<ul> <li>71.7 - 78.6 - typical but with well spaced, dark grey, 1" wide bands of chert-magnetite. Bands contain up to 10% hornblende, 2-3% magnetite and 2% disseminated pyrite. Bands 10° to 15° to core axis with small scale crenulation folds. Numerous fine carbonate filled fractures with pyrite as fracture coatings.</li> </ul>	6954		74.8	78.6	4.0		tr.		
		- 70.5 - 70.8 - quartz vein with up to 5% pyrite as veinlets and clots.									
		- $77.0$ - $78.6$ - quartz-biotite with rare garnets.									
		- 77.5 - 1" quartz-albite veinlet.									

			н	OLEN	5QP	-86-17		SH8	EET NO.	3 0	f 7	
F00	TAGÉ	DESCRIPTION			SAMPL	E	-			ASSAYS		
FROM	70	DESCRIPTION	NO.	" SULPH	FROM	FOOTAGE	TOTAL		~.	02 10N	UZ TON	
78.6	112.8	BANDED IRON FORMATION - grey to dark grey to black, fine grained, well banded, uncontorted to highly contorted bands.										
		- 78.6 - 85.5 - 60%, 1/2" to 2" wide, biotite-garnet bands with 80%	6955		78.6	83.6	5.0			tr.		
		biotite and 20% garnet; 40%, 1/2" to 1" wide, chert-magnetite bands with 5% magnetite. Well banded, uncontorted with fine interlaminations within chert-magnetite bands. Banding commonly 35° to 40° to core axis. 1-2% pyrite concentrated along boundaries between bands. Several 1/8" car- bonate veinlets both crosscutting and parallel to banding with chlorite and pyrite as fracture coatings.	6956		83.6	88.6	5.0			tr.		
		<ul> <li>- 85.5 - 94.1 - well banded, sharp decrease in biotite-garnet bands. (20%). Grades imperceptibly from containing no grunerite to containing up to 5% grunerite at base of section. Generally chert-magnetite bands 1/2" to 1" wide with 5-10% magnetite. 1/4" biotite-garnet bands with up to 10% hornblende. Fine interlaminations within chert-magnetite bands. Banding commonly 50° to core axis. Drag on parasitic folds on bands. Fold closure at 88.5.</li> </ul>	6957		88.6	93.6	5.0	- -		.01		
		<ul> <li>Few 1/2 to 1 carbonate alteration zones often with dark green amphibole. Pyrite as fracture coatings and veinlets parallel to banding.</li> <li>94.1 - 96.4 - sheared zone, intense chlorite alteration, banding highly contorted, minor carbonate along fractures, 3% magnetite, pyrite as fracture coatings and euhedral crystals within fractures.</li> </ul>	0,00		<i></i>	50.4	2.0					
		<ul> <li>- 96.4 - 112.8 - 5-7% grunerite on edges of chert-magnetite bands. Banding consists of chert-magnetite bands, chert bands and thin grunerite bands with rare biotite bands. Magnetite generally 3-5% but locally up to 10%. Creamy-orange-green chert-grunerite bands compose 5%. Banding moderately to highly contor- ted. Where bands not contorted banding 30° to</li> </ul>	6959 6960		96.4 101.4	101.4 106.4	5.0 5.0			tr. tr.		

OPAPIMISKAN LAKE

NAME OF PROPERTY_____

_ANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY_____OPAPIMISKAN_LAKE_____ HOLE NO.___OP-86-17_____SHEET NO.___4 of 7_____

Γ	FOO	FAGE				SAMPL	E				ASSAYS		
		TO	DESCRIPTION	NO.	SULPH.		FOOTAGE			<u> </u>	0.2 TON	07 104	
$\vdash$	- KOM				IDES	FROM	то	TOTAL	·	ļ	02 104	01 104	
			increasingly contorted with accompanying increase in grunerite and chert bondins. Numerous chlorite- carbonate fracture fillings with pyrite as frac- ture coatings. Several 1/4" carbonate-rich areas. Several fine veinlets and clots of pyrite.										
			-107.0 - 112.8 - several well spaced 2" to 3"	6961	ł	106.4	110.4	4.0			tr.	.	
			shears with carbonate, chlorite and pyrite.										
			Numerous fine carbonate veinlets both crosscutting and parallel to banding. Euhedral pyrite in fractures. Locally up to 10% pyrite, 3% pyrrhotite as veinlets and clots.	6962		110.4	112.8	2.4	i		tr.		
1	12.8	116.8	GARNET-BIOTITE METASEDIMENT - dark grey, medium to fine grained, schistose, massive at top of unit becoming weakly banded at base.										
			Average Modes			l				-			
			Biotite       45%         Garnet       40%         Quartz       10%         Amphibole       5%         Carbonate       trace         Chlorite       trace         Pyrite       trace         Magnetite       trace         Few weakly magnetic patches.       Banding near base of unit consists of chert-amphibole bands and garnet-biotite bands.         Banding 20° to 30°       30°										
26-116			- 113.4 - 1/2" carbonate vein, no sulphides.	6963		112.8	116.8	4.0			tr.		
E - DINOH			- 116.6 - 117.3 - sheared zone - carbonate-chlorite with pyrite as fracture coatings.					- 					
- LANGHIUGES - IC	.8	158.2	BANDED IRON FORMATION - creamy orange-green, green, grey-green to dark grey, fine grained, moderately to well banded but often highly contorted.										

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ANGRIDGES

NAME OF PROPERTY	OPAPIMISKAN	LAKE	
NAME OF PROPERTY			

HOLE NO.	OP-86-17
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_____ SHEET NO. ____5 of 7

F001	FAGE	DECONDICAL	SAMPLE			ASSAYS						
FROM	το	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	-	۰.	OZ TON	OZ TON	
		Average ModesChert50%Magnetite10-20%Grunerite10-20%Biotite2-3%Garnet1-2%Bands of chert-magnetite, chert, chert-grunerite, biotite and/orhornblende2%Bands of chert-magnetite, chert, chert-grunerite, biotite and/orhornblende1" carbonate filled fractures bothcrosscutting and parallel to banding. Numerous pyrite-pyrrhotiteclots and veinlets. Numerous chert boudins and hairline displace-ment fractures. Several fold closures.			TRUM							
		<ul> <li>- 116.8 - 122.3 - contorted banding, 3" magnetite- chert bands. Several fold closures. Numerous pyrite-pyrrhotite clots and veinlets usually fol- lowing planes of deformed banding. Trace chalco- pyrite. Few biotite-garnet bands less than 1/4" wide. 5% grunerite.</li> </ul>	6964		116.8	121.8	5.0	-		tr.		
		- 122.3 - 129.2 - 1/8" to 1/2" contorted bands. 15% grunerite. Increase in creamy-orange chert bands. Several fold closures. Numerous concentrations of pyrrhotite-pyrite in contorted grunerite-chert bands and in fold closures.	<b>696</b> 5		121.8	126.8	5.0			.01		
		<ul> <li>123.4 - 1/2" zone with 3% pyrrhotite, 1%</li> <li>pyrite, trace chalcopyrite in chert-grunerite</li> </ul>								-		
		- 124.8 - 125.3 - as above.										
		- 129.2 - 136.8 - banding almost parallel to core axis and highly contorted.	6966		126.8	131.8	5.0			tr.		
		- 129.3 - 3% pyrrhotite, 1% pyrite, trace chalcopyrite.										1
		- 132.8 - as above.	6967		131,8	136.8	5.0			tr.		
		- 136.0 - 136.8 - 3% pyrite, 3% pyrrhotite in fold closures.										

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-17 SHEET NO. 6 of 7

	FOO	TAGE	DESCRIPTION			SAMPL	.E	1	ASSAYS				
FI	OM	то	DESCRIPTION	NO.	™, SULPH, IDES	FROM	FOOTAGE	TOTAL	÷		OZ TON	OZ TON	
			- 136.8 - 153.0 - numerous pyrite and pyrrhotite concentrations in fold closures.	6968		136.8	141.8	5.0			tr.		
			- 143.2 - 144.9 - banding less contorted, com- monly 40° to core axis.	6969		141.8	146.8	5.0			tr.		
			<ul> <li>144.9 - 153.0 - numerous chert-grunerite bands with stretched quartz boudins. Numerous dis- placement fractures but minimal sulphides.</li> </ul>	6970		146.8	151.8	5.0			.01		
			- 151.8 - 152.3 - 1/8" crosscutting car- bonate vein with pyrite.	6971 6972		151.8 156.8	156.8 158.2	5.0 1.4			.01 tr.		
15	8.2	160.4	LAMPROPHYRE DIKE - typical, few fine flecks carbonate.	6973		158.2	160.4	2.2			tr.		
16	0.4	249.0	BANDED IRON FORMATION										
			<ul> <li>- 160.4 - 172.5 - moderately banded, often highly contorted. Banding commonly 25° to 30° to core axis. 10-20% grunerite, 15% magnetite - where grunerite per- vasive magnetite 5%. Similar texture, carbonate veinlets and pyrite-pyrrhotite veinlets as in 136.8 to 153.0.</li> </ul>										
			-160.4 - 160.8 - up to 3% pyrite with carbonate.	6974		160.4	165.4	5.0			tr.		
			- 162.3 - 3% pyrite.	6975		165.4	170.4	5.0			.01		
			- 163.4 - 3% pyrite as wispy veinlets and clots.										
5-1168		ι,	- 172.5 - 192.6 - similar to 160.4 - 172.5. 5-10% magnetite, 15% grunerite, well banded, highly contorted, chert boudins, displacement fractures.	6976		170.4	175.4	5.0			tr.		
98 			- 178.7 - 3% pyrite as wispy veinlets and clots.	6977		175.4	180.4	5.0			tr.		
ONIO			- $189.3 - 1/4$ " carbonate-chlorite alteration with	6978		180.4	185.4	5.0			tr.		
101	]		pyrite and pyrhotite as fracture coatings and disseminations.	6979		185.4	190.4	5.0			tr.		
DGES			- 190.2 - 190.9 - quartz vein; no visible sulphides	6980		190.4	192.8	2.4			.01		
NGR			- 191.6 - 192.6 - quartz vein.										
2													

LANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-17 SHEET NO. 7 of 7

F001	FAGE	DESCRIPTION		SAMPLE			ASSAYS					
FROM	то	BESCH HOW	NO.	", SUL PH	FROM	FOOTAGE	TOTAL		<b>~.</b>	07 TON	OZ TON	
		- 192.6 - 211.3 - typical. Numerous fold closures. Bands highly contorted. Pinched off boudins. Numerous 1/8" carbonate veinlets. Rare orangy-green chert near base.										
		- 199.0 - 199.4 - pyrrhotite as fine clots and	6981		192.8	197.8	5.0			.02		
		wispy veinlets.	6982		197.8	202.8	5.0		l	tr.		
		- 203.1 - 203.4 - pyrrhotite and pyrite in biotite- garnet layer with chlorite alteration.	6983		202.8	207.8	5.0			tr.		
		- 204.5 - carbonate-chlorite fracture with pyrrho- tite and trace arsenopyrite.	6984		207.8	212.8	5.0			tr.		
		<ul> <li>- 211.3 - 230.2 - moderately banded and highly contorted. 2" to 3" magnetite-rich bands with 15% magnetite. Few amphibole-garnet rich bands with 5-10% magnetite. Large (1/4") poikiloblastic garnets. Banding 20° to core axis.</li> </ul>	6985		212.8	217.8	5.0			tr.		
		<ul> <li>211.3 - 211.5 - fractured, brecciated zone with</li> <li>3% pyrite, 1% pyrrhotite and carbonate.</li> </ul>										
		<ul> <li>221.1 ~ carbonate with 4% pyrite, 2% pyrrhotite, trace chalcopyrite.</li> </ul>	6986 6987		217.8 222.8	222.8 227.8	5.0 5.0			tr. tr.		
		<ul> <li>- 228.2 - 228.4 - fine veinlets with pyrite, pyrrhotite, trace arsenopyrite with carbonate.</li> </ul>										
		- 229.1 - as above.	6988		227.8	232.8	5.0			.01		
		- 230.2 - 249.0 - similar to 211.3 - 230.2. Banding almost paral- lel to core axis. Numerous fold closures. Similar pyrite-pyrrhotite occurrences.	6989		232.8	237.8	5.0			tr.		
		- 240.8 - sulphides.	6990		237.8	242.8	5.0			tr.		
		- 241.5 - sulphides.	6991		242.8	246.8	4.0			tr.		ALIA
		- 242.4 - 243.0 - sulphides.										MM
		- 247.7 - 248.0 - 5% pyrrhotite in fold closure.	6992		246.8	249.0	2.2			.02		MW.
249.0		End of Hole.									Ŋ	

NAME OF	PROPERTY	OPAPIM	ISKAN LAKE	
HOLE NO.	<u>OP-86-18</u>	LENGTH	298'	
LOCATION	14+00NW	2+99SW		·····
LATITUDE		DEPARTURE	<u> </u>	
ELEVATION	·	AZIMUTH	049°DI	P46°
STARTED _	November 13.	1986 FINISHED	November 14, 1	986

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0				
298'	-38.5				

HOLE NO. 0P-86-18 SHEET NO. 1 of 1

REMARKS ______ Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOOT	FAGE				SAMP	LE		[	A	SSA	(s	
FROM	то	SUMMARY LOG	NO.	SUL PH	FROM	FOOTAGE TO	TOTAL	~%	8	OZ/TON	OZ/TON	
0	35.0	CASING										
35.0	37.0	ULTRAMAFIC VOLCANICS										
37.0	53.7	BANDED IRON FORMATION										
53.7	62.2	GARNETIFEROUS METASEDIMENTS										
62.2	91.6	BANDED IRON FORMATION										
91.6	138.0	ULTRAMAFIC VOLCANICS										
138.0	172.5	BANDED IRON FORMATION										
172.5	197.2	ULTRAMAFIC VOLCANICS		}								
197.2	217.4	BANDED IRON FORMATION										
		- 215.0 - 217.4 - silicified?, 3-5% pyrite, 1-2% pyrrhotite.										
217.4	223.4	MAFIC TO INTERMEDIATE TUFF		1	1							
		- 219.2 - 221.3 - 7-10% pyrite and pyrrhotite.										
223.4	298.0	ULTRAMAFIC VOLCANICS									ond	
0		End of Hole.									ВИM	n
										4	I P	
										1		

NAME OF	PROPERTY	OPAPIMI	<u>SKAN LAKE</u>			
HOLE NO.	<u>OP-86-18</u>	LENGTH	···	<u>298'</u>		
LOCATION	14+00NW	2+995W				
LATITUDE		DEPARTURE	<u></u>			
ELEVATION	I	AZIMUTH	049°	_ DIP	<u>-46°</u>	
STARTED _	November 13,	1986 FINISHED	November 1	<u>4, 1986</u>		

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0				
298'	-38.5			ļ	
1					

HOLE NO. 02-86-18 SHEET NO. 1 of 7

REMARKS _____

PA - 844238

LOGGED BY ____ D. J. Corkery

F 0 0 1	TAGE		I		SAMP	LE			Α	SSA	/ 5	
FROM	то	DESCRIPTION	NO.	SUL PH-	FROM	FOOTAGE TO	TOTAL	z,	z	OZ/TON	oz/ton	
0	35.0	CASING										
35.0	37.0	<u>ULTRAMAFIC VOLCANICS</u> - medium grey, fine grained to very fine grained, schistose.										
		Average Modes							i			
		Talc       70       -       80%         Serpentine       20       -       30%         Carbonate       5       -       7%										
		Highly fractured, foliated at $25^{\circ}$ to core axis.	ł									
37.0	53.5	BANDED IRON FORMATION - bands of medium grey and dark grey to black with 1/32" to 1/16" poikiloblasts, moderately banded (1/4" to 1/2") commonly with intraband laminations. <u>Average Modes</u>	6794 6795 6796 6797		37.0 42.0 47.0 50.0	42.0 47.0 50.0 53.5	5.0 5.0 3.0 3.5			tr. .01 tr. tr.		
		Quartz30-35%Hornblende25-30%Biotite20-25%Garnet10-12%Magnetite5-7%Carbonate0.5-1%Chlorite0.5-1%Pyrite0.5-1%Pyrthotitetrace-0.5%ChalcopyritetraceHighly fractured ("blocky"), abundant chlorite coated fractures.Sulphides occur as fracture coatings and fillings. Banded at 35°to 40° to core axis										

LANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY	OPAPIMISKAN	LAKE	
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		yrv vrill regyry	н. Н	AME O	F PROPEI	RTY 86-18		<u>огарт</u> sн	EET NO	LAKE 2 0	of 7	
FOOT	AGE	DESCRIPTION			SAMPL	.E		ASSAYS				
FROM	то	DESCRIPTION	NO.	", SUL PH	FROM	FOOTAGE TO	TOTAL		°,	OZ TON	DZ TON	
53.5	62.2	GARNETIFEROUS METASEDIMENTS - dark grey to black with pink poikilo- blasts (commonly 1/16" to 1/8"), poorly banded, fine grained. Average Modes										
		Biotite40-50%Garnet25-30%Quartz15-20%Hornblende5-7%Grunerite5-7%Magnetite1-3%Carbonate0.5-1%Chlorite0.5-1%Pyritetrace-0.5%Garnet-biotite schist with chert and grunerite-magnetite-richbands.Pyrite occurs in carbonate veinlets.										
		fractures. - 53.5 - 55.0 - as described. - 54.4 - 54.8 - few black, very fine grained veinlets containing magnetite.	6798		53.5	58,2	4.7			tr.		
		<ul> <li>- 55.0 - 56.5 - increased grunerite content and 3-5% magnetite.</li> <li>- 56.5 - 62.2 - as described, banded at 55° to core axis.</li> <li>- 61.2 - 62.2 - several narrow discontinuous carbonate - pyrite veinlets.</li> </ul>	6799		58.2	62.2	4.0			tr.		
62.2	91.6	BANDED IRON FORMATION - bands of light grey, and dark grey to black, well banded (1/8" to 1/4"), fine grained, weak to moderately contorted.										
		Average Modes           Quartz         40         -         50%           Grunerite         30         -         40%           Magnetite         12         -         15%           Hornblende         7         -         10%           Carbonate         0.5         -         1%										

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TORONTO - 366-1168

-ANGRIDGES --

NAME OF PROPERTY	<u>OPAPIMISKAN LAKE</u>	

HOLE NO. 0P-86-18 SHEET NO. 3 of 7

F001	AGE				SAMPL	.Ε		ASSAY5				
FROM	то			% SUL PH	FROM	FOOTAGE	TOTAL		۶.	07 TON	0 Z TON	
		Chlorite 0.5 - 1% Pyrrhotite 0.5 - 1% Bands of chert and grunerite-magnetite with grunerite halo between iron-rich and chert bands. Pyrrhotite occurs in carbonate-quartz- chlorite veinlets. Often visible movement along microfractures and veinlets. - 62.2 - 68.0 - poorly banded, abundant chloritic fractures, quite broken. - 68.0 - 83.0 - typical.	6800		62.2	66.0	3.8			tr.		
		<ul> <li>71.8 - banded at 63° to core axis.</li> <li>72.6 - veinlet with limonite (oxidized sulphides).</li> <li>81.0 - banded at 65° to core axis.</li> <li>83.0 - 89.0 - poorly banded.</li> </ul>	16602 16603 16604		71.0 76.0 80.0	76.0 80.0 83.0	5.0 4.0 3.0			tr. tr. tr.		
		<ul> <li>83.4 ~ 84.2 - quartz vein and adjacent veins. Veins contain stranded wisps of iron formation, 1/32" hematitic veinlet cuts across the veinlets at 84.1. Trace to 0.5% pyrite/pyrrhotite in fractures within vein/veinlets.</li> <li>89.0 ~ 91.6 ~ typical.</li> </ul>	16605 16606 16607		83.0 85.0 88.6	85.0 88.6 91.6	2.0 3.6 3.0			tr. tr. tr.		
91.6	138.0	ULTRAMAFIC VOLCANICS - light to medium grey, well foliated, fine grained.         Average Modes         Talc       40       -       50%         Magnesite       15       -       20%         Serpentine       15       -       20%         Tremolite       10       -       20%         Magnesite both as veinlets, bands and disseminated. No visible sulphides.										

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

50.00					SAMO	F				ASCAVE	
F00'	FAGE	DESCRIPTION									
FROM	то		NO	IDES	FROM	TO	TOTAL	•	· ·	07 TON	OZ TON
		- 91.6 - 92.9 - dark green, weakly foliated, fine to very fine grained, grades from dominantly tremolite- plagioclase to typical as described.	16608		91.6	92.9	1,3			tr.	
		<ul> <li>- 92.5 - 92.7 - 2" section laminated with minor garnet and strong pyrrhotite/pyrite mineralization.</li> </ul>									
		- 92.9 - 110.0 - typical with increased magnesite as bands from 105.0 to 107.0.									
		- 110.0 - 128.5 - lighter grey, decreased serpentine.							,		
		- 128.5 - 138.0 - increase in serpentine and decrease in magnesite to 131.0 where dominantly serpentine-talc with 0.5-1% magnesite, medium green to medium brown.									
138.0	172.5	BANDED IRON FORMATION - typical as in 62.2 - 91.6, moderately banded, moderate to highly contorted, decrease in grunerite to 15-20%, 0.5-1% pyrrhotite along fractures and in contorted banding.									
		- 138.0 ~ 143.8 - typical.	16609		138.0	143.0	5.0			.01	
		- 139.1 - 139.3 - several quartz veinlets (1/16") commonly at 35° to 40° to core axis; no visible sulphides in veinlets.									
		- 143.8 - 149.6 - several near massive magnetite bands; banding contorted with few fold closures.	16610		143.0	148.0	5.0			tr.	
		- 149.6 - 153.8 - contorted bands, with angles often near parallel to core axis and several fold closures. Folding appears irregular. 20-25% magnetite.	16611		148.0	153.0	5.0			tr.	
			16612		153.0	158.0	5.0	1	1	tr.	
		- 153.8 - 168.5 - typical composition but still contorted banding.	16613		158.0	163.0	5.0		]	tr.	
			16614		163.0	168.0	5.0			tr.	
		<ul> <li>- 168.5 ~ 1/2.5 - contorted, increased chert bands, 60-70% quartz;</li> <li>3-5% magnetite; 25-30% amphibole; 5-7% garnet;</li> <li>trace to 0.5% pyrrhotite.</li> </ul>	10012		100.0	1/2.3	4.3			tr.	
72.5	197.2	ULTRAMAFIC VOLCANICS - typical as in 91.6 - 138.0, no visible sulphides.									

FOOTAGE DESCRIPTION % SULPH FOOTAGE NO. то OZ TON OZ TON • TOTAL (DE 5 FROM TO - 172.5 - 174.4 - dominantly serpentine and talc as in 128.5 -138.0. - 174.4 - 177.8 - dominantly talc-carbonate with several bands of magnesite similar to 92.9 - 110.0. 16616 194.2 197.2 3.0 tr. - 177.8 - 197.2 - typical. - 195.1 - quartz-carbonate-feldspar veinlet, discontinuous, no visible sulphides. - 196.2 - guartz-carbonate-feldspar veinlet, discontinuous, no visible sulphides. 197.2 217.4 BANDED IRON FORMATION - well banded, light grey and dark green to black, fine grained, contorted. Average Modes Quartz 30 40% 25% Grunerite 20 15 20% Biotite Hornblende 10 15% Garnet 5 7% 0.5 1% Sulphide Pyrite and pyrrhotite occurs in parallel to highly contorted bands and in guartz-carbonate veinlets. Several guartz-feldspar veinlets occur with alteration haloes of 1/8" to 1/4" and are commonly at 30° to core axis. The haloes are commonly light green and reddishbrown (chalcedony). Veinlets with alteration haloes contain no visible sulphides and are at large angles to axial plane of microfolds. 197.2 202.0 4.8 .04 - 197.2 - 215.0 - as described; veinlets with alteration haloes 16617 16618 202.0 207.0 5.0 tr. every 2 to 3 feet. 16619 207.0 211.0 4.0 tr.

16620

211.0 215.0

4.0

- 198.0 - 200.5 - axial planes of microfolds at 45° to 55° to core axis. Frequency is 1" to 3".

HOLE NO. ___ 0P-86-18

NAME OF PROPERTY

SAMPLE

**OPAPIMISKAN LAKE** 

SHEET NO. 5 of 7 ASSAYS

tr.

168

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FROM

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NAME OF PROPERTY	OPAPIMISKAN LAKE

			н	OLEN	ю. <u>ОР</u>	-86-18		Sні	EET NO.	<u>6 o</u>	£ 7	<u></u>
FOO	TAGE				SAMP	LE				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE TO	TOTAL		•	OZ TON	OZ TON	
		- 215.0 - 217.4 - silicified? increase in quartz with decrease in magnetite. 3-5% pyrite and 1-2% pyrrhotite in quartz-sulphide veinlets and microfractures.	16621		215.0	217.4	2.4			tr.		
217.4	223.4	MAFIC TO INTERMEDIATE TUFF - dark green, fine grained, laminated to banded.										
		Average Modes										
		Amphibole       50       -       60%         Quartz       20       -       25%         Plagioclase       15       -       20%         Pyrrhotite       2       -       3%         Pyrite       0.5       -       1%										
		Laminations and bands of hornblende-actinolite, quartz and plagio- clase. Sulphides are dominantly within or parallel to bands. Minor sulphide occurs as fracture fillings.				ц.						
		- 217.4 - 219.2 - 0.5-1% sulphide.	16622		217.4	221.4	4.0			tr.		
		- 219.2 - 221.3 - 7-10% sulphide.								ļ		
		- 221.3 - 223.4 - 0.5-1% sulphide.	16623		221.4	223.4	2.0			tr.		
223.4	298.0	ULTRAMAFIC VOLCANICS						Į		}		
		- 223.4 - 255.0 - typical as in 91.6 - 138.0.										
		- 242.4 - 246.9 - several 1" bands of calcite with serpentine clots. No visible sulphides.	16624		242.4	246.9	2.5			tr.		
		- 255.0 - 268.5 - dominantly tremolite with 10-15% phlogopite and 3-5% serpentine, trace disseminated sulphide. Several quartz-plagioclase veinlets with light green and red alteration haloes.	16625 16626 16627		255.0 260.0 265.0	260.0 265.0 268.5	5.0 5.0 3.5			tr. tr. .01		
		- 268.5 - 288.0 - tremolite-serpentine-phlogopite with minor talc. - 274.7 ~ 277.7 - few quartz-calcite veinlets. No visible sulphides.	16628		274.7	277.7	3.0			.03		

LANGRIDGES - TORONTO - 366-1168

FROM         SAMPLE         ASSAVE         ASSAVE           FROM         TO				HOLE NO. <u>0P-86-18</u>						SHEET NO 7 of 7						
real         to         to be and the second	F00 ⁻	TAGE		Γ		SAMP	LÐ				ASSAYS					
- 284.4 - 285.7 - few quartz and calcite-quartz       16629       284.4       286.4       2.0       tr.         - 288.0 - 298.0 - similar to 255.0 - 268.5 with several quartz       16630       288.0       233.0       5.0       tr.         - 288.0 - 298.0 - 298.0 - similar to the to similar to that in alteration halo veinlets in unit 255.0 - 268.5.       16631       288.0       293.0       5.0       tr.         298.0       End of Hole.       End of Hole.       10       11       11       11       11         298.0       End of Hole.                 298.0       End of Hole.	FROM	то		NO.	°, SULPH IDES	FROM	FOOTAGE TO	TOTAL			OZ TON	UZ TON				
- 288.0 - 298.0 - similar to 255.0 - 268.5 with several quartz       16630       288.0       293.0       5.0       tr.         quartz within vielets similar to that in alteration halo veinlets in unit 255.0 - 268.5.       266.5       298.0       5.0       5.0       tr.         298.0       End of Hole.       Image: similar to 255.0 - 268.5.         298.0       End of Hole.       Image: similar to 255.0 - 268.5.         298.0       End of Hole.       Image: similar to 255.0 - 268.5.       Image: similar to			<ul> <li>284.4 - 285.7 - few quartz and calcite-quartz veinlets; no visible sulphides.</li> </ul>	16629		284.4	286.4	2.0			tr.					
298.0 End of Hole.			- 288.0 - 298.0 - similar to 255.0 - 268.5 with several quartz plagioclase veinlets. Brownish-red staining of quartz within veinlets similar to that in alteration halo veinlets in unit 255.0 - 268.5.	16630 16631		288.0 293.0	293.0 298.0	5.0 5.0			tr. tr.					
	298.0		End of Hole.													
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OPAPIMISKAN LAKE

NAME OF PROPERTY_____

NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	<u>OP-86-19</u>	LENGTH	249	I	
LOCATION	14+00NW	0+98SW		- <u> </u>	
LATITUDE		DEPARTURE			
ELEVATION	۹	AZIMUTH	<u>049°</u>	DIP	<u>-46.8°</u>
STARTED	November 16.	1986 FINISHED	November_17	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.8	<b>&gt;</b>			
249'	-34.0	>			

HOLE NO. OP-86-19 SHEET NO. 1 of 1

REMARKS ______ Log_____

PA - 844238

LOGGED BY B. E. Elliott

FOO	TAGE	DESCRIPTION			5 A M P	LE			A	SSAN	′ S	
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	<u>к</u>	5	OZ/TON	OZ/TON	
0	30.0	CASING										
30.0	31.6	BANDED IRON FORMATION										
31.6	42.3	GARNET-BIOTITE METASEDIMENT										
42.3	64.4	BANDED IRON FORMATION - several narrow intervals with 2-5% pyrrhotite as wispy veinlets and clots, trace chalcopyrite.										
		<ul> <li>48.5 - 49.0 - fine fractures with pyrrhotite and trace chalcopyrite.</li> </ul>	6898		47.3	52.3	5.0			.07		
64.4	65.9	ULTRAMAFIC VOLCANIC							ļ			
65.9	81.7	BANDED IRON FORMATION										
81.7	82.9	ULTRAMAFIC TO MAFIC VOLCANIC										
82.9	91.4	BANDED IRON FORMATION										
		<ul> <li>87.9 - 1/4" quartz-carbonate veinlet with 10% pyrrhotite.</li> </ul>										}
91.4	92.5	ULTRAMAFIC TO MAFIC VOLCANIC									Δ	Ind
92.5	245.9	BANDED IRON FORMATION										NV
2 )	247.5	LAMPROPHYRE DIKE								19	1/1/19	
247.5	249.0	BANDED IRON FORMATION									/ ^v	
249.0		End of Hole.										[

NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	<u>OP-86-19</u>	LENGTH	249'		
LOCATION	14+00NW	0+98SW			
LATITUDE		DEPARTURE			
ELEVATION	·	AZIMUTH	049°	_ DIP _	- 46.8°
STARTED	November 16, 19	86_ FINISHED	November 17	, 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.8	<b>,</b>			
249'	-34.0	<b>,</b>			

HOLE NO. 0P-86-19 SHEET NO. 1 of 8

REMARKS ____

PA - 844238

LOGGED BY B. E. Elliott

FOOT	AGE		SAMPLE				SAMPLE		A S S A Y S					
FROM	то		NO.	SULPH	FROM	TO TO	TOTAL	<i>*6</i>	;; ;	oz/t <b>on</b>	OZ/TON			
0	30.0	CASING												
30.0	31.6	BANDED IRON FORMATION - medium grey to dark grey to black, fine grained, well banded with fine interlaminations.												
		Average Modes												
		Chert60%Magnetite15%Hornblende15%Garnet5%Biotite5%Grunerite1-2%Pyritetrace												
		displacement fractures. Trace pyrite as disseminations. - 30.8 - 1/8" carbonate veinlet.	6893		30.0	31.6	1.6			tr.		ŗ		
31.6	42.3	GARNET-BIOTITE METASEDIMENT - green to medium grey to black, medium to fine grained, moderate to poorly banded, schistose.												
		Average ModesBiotite65%Garnet15%Chert10%												

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FOO	TAGE				SAMPL	.E			ASSAYS		
FRÓM	то	DESCRIPTION	NO.	", SULPH	FROM	FOOTAGE	TOTAL	 · ·	02 TON	UZ TON	
		Grunerite 8% Magnetite 0.5 – 2% Pyrite trace									
		80% black, up to 4" wide biotite-garnet bands; 20% green to medium grey, up to 1/4" chert-magnetite-grunerite bands. Some garnet-rich areas have increased grunerite content. Pyrite occurs as fine dis- seminations and as fracture coatings. Few 1/8" carbonate-chlorite veinlets parallel to banding.									
		- 33.0 - 33.3 - shearing with quartz-carbonate veining and trace disseminated pyrite. Rare hairline cross- cutting carbonate veinlets.	6894 6895 6896	*	31.6 36.6 40.6	36.6 40.6 42.3	5.0 4.0 1.7		tr. tr. tr.		
42.3	64.4	BANDED IRON FORMATION - green to blue-grey to dark grey, fine grained, well banded.									
		Average Modes									
		Chert55-60%Grunerite15-20%Magnetite10-15%Biotite2-3%Garnet1%Pyritetrace-ChalcopyritetraceBlue-grey to grey chert-rich bands.Dark grey magnetite-rich bands.Pale creamy green to green grunerite-rich bands.Rare garnet-									
		<ul> <li>- 42.3 - 49.0 - 1/4" to 1" chert-magnetite bands with fine inter- laminations, 1/16" grunerite bands, garnet-biotite bands up to 1/2". Many chert bands display boudin structure. Bands moderately contorted. Some chert-rich bands brecciated. Banding commonly 65° to core axis. Several carbonate veinlets, parallel to and crosscutting banding with fine clots of pyrite and pyrrhotite. Few carbonate-amphibole weinlets. Sulphides as fracture coatings.</li> </ul>									

NAME OF PROPERTY OPAPIMISKAN LAKE HOLE NO. 0P-86-19 SHEET NO. 2 OF 8

ANGRIDGES - TORONTO - 366-1

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F00	TAGE	DESCRIPTION			SAMPI	_E		<b>.</b>	ASSAYS	
ROM	то		NO.	N SULPH	FROM	FOOTAGE TO	TOTAL	·••	OZ TON	OZ TON
		<ul> <li>- 44.6 - 1/2" carbonate-chlorite shear with amorphous sulphides.</li> </ul>	6897		42.3	47.3	5.0		tr.	
		- 48.5 - 49.0 - fine fractures with pyrrhotite and trace chalcopyrite.	6898		47.3	52.3	5.0		.07	
-		- 49.0 - 49.8 - hornblende-rich zone with 0.5% magnetite and fine wispy veinlets of pyrrhotite.								
		- 49.8 - 64.4 - similar to 43.2 - 49.0. Up to 25% grunerite, 20- 30% magnetite with some bands of massive magnetite. Banding moderately contorted. Banding becomes thicker and more distinct near base of section. 1/4" grunerite bands rimming magnetite-rich and chert-rich bands. Rare biotite-garnet bands. Un- contorted bands commonly 65° to core axis. Several 1/4" to 1/2" quartz veins.								
	, · · · · · · · · · · · · · · · · · · ·	- 50.4 - 52.8 - sheared zone with crosscutting carbon- ate veinlets and chlorite alteration. Brecciated chert bands. 30% grunerite, 15% magnetite. Up to 3% pyrrhotite as wispy veinlets and clots. Tourmaline?								
		<ul> <li>54.0 - 1/4" zone with 5% pyrrhotite, 2% pyrite, chlorite.</li> </ul>	6899		52.3	57.3	5.0		.03	
		- 55.0 - 56.1 - sheared zone with intense carbonate alteration, 30% grunerite, up to 5% pyrrhotite and 2% pyrite as wispy fracture filling and as clots.								
		- 56.5 - 57.0 - 1" quartz vein with chlorite.	6900		57.3	62.3	5,0	1	tr.	
		- 63.6 - 63.9 - quartz vein.	6901		62.3	64.4	2.1		tr.	
4.4	65.9	ULTRAMAFIC VOLCANIC - grey-green, medium to fine grained, schistose, chloritic alteration along fractures.	6902		64.4	65,9	1.5		tr.	
		Average ModesTalc40%Serpentine30%Tremolite10%Magnesite?10%								

NAME OF PROPERTY_____OPAPIMISKAN LAKE

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			н	OLEN	0. <u>OP</u>	-86-19		SH	EET NO.	4 0	f 8
FOOT	TAGE				SAMP	E				ASSAYS	
FROM	то	DESCRIPTION	NO.	* SULPH	FROM	FOOTAGE	TOTAL		'n	07 TON	02 TON
65.9	81.7	BANDED IRON FORMATION - mineralogy and textural features typical, very rare biotite-garnet bands, few local areas with fine interlam- inations within chert-magnetite bands, $10-15\%$ magnetite, few car- bonate veinlets, few $1/2"$ to $2"$ quartz veins, banding commonly $70^{\circ}$ to core axis.									
	·	- 66.5 - 66.7 - sheared zone with carbonate and amphibole.	6903		65.9	70.9	5.0			.01	
		<ul> <li>72.7 - beginning to get few bands of creamy orange-green chert.</li> </ul>	6904		70.9	75.9	5.0			tr.	
		- 76.8 - 77.0 - quartz vein with 5% pyrrhotite and trace chalcopyrite - 0.2' shear on each side.	6905		75.9	79.9	4.0			.02	
		- 77.5 - 78.0 - quartz vein with minor pyrrhotite as fracture coatings.	6906		79.9	81.7	1.8			tr.	
81.7	82.9	ULTRAMAFIC TO MAFIC VOLCANIC - green-grey to grey, fine grained, schistose, faint banding?	6907		81.7	82.9	1.2			tr.	
		Average Modes									
~		Serpentine 40% Talc 30% Tremolite]- 25% Actinolite 5%									
82.9	91.4	BANDED IRON FORMATION - creamy orange-green to blue-grey to dark grey, fine grained, well to poorly banded, schistose. 50% blue- grey to grey chert-magnetite bands; 30% pale green to grey chert- grunerite bands; 20% creamy orange-green chert-grunerite bands. Rare biotite-garnet bands. Well banded commonly 70° to core axis. Few fine clots and veinlets of pyrrhotite.									
		- 83.8 - 84.6 - massive creamy orange-green chert with grunerite but no magnetite.	6908		82.9	87.9	5.0			tr.	
		- 85.8 - veinlets and clots of pyrrhotite. - 87.9 - 1/4" quartz-carbonate veinlet with 10% pyrrhotite.	6909		87.9	91.4	3.5			tr.	

OPAPIMISKAN LAKE

NAME OF PROPERTY____

HOLE NO. ________ OP-86-19_______ SHEET NO. ______ 5 of 8_____

FOOTAGE		DESCRIPTION			SAMPL	.E		ASSAYS				
FROM	то	DESCRIPTION		% SULPH	FROM	FOOTAGE	TOTAL		۳.	02 TON	UZ TON	
91.4	92.5	- 91.0 - 91.4 - quartz vein, no visible sulphides. <u>ULTRAMAFIC TO MAFIC VOLCANIC</u> - similar to 81.7 - 82.9 but dominated by tremolite-actinolite, 0.5% magnetite in fine band.	6910		91.4	92.5	1.1			tr.		
92.5	245.9	BANDED IRON FORMATION - creamy orange-green to pale green-grey to dark grey, fine grained, weakly to moderately banded, section dom- inated by up to 3" bands of chert-magnetite commonly with 15% mag- netite. Pale green, up to 1/4" grunerite-rich bands often with darker amphibole. Few 3" wide bands of orangy-green chert and grunerite with no magnetite. Many quartz veins but may be re- crystallized chert. Few 1/4" carbonate-chlorite shears with many sulphides. Numerous parallel and crosscutting carbonate veinlets with minor pyrrhotite. Several fine clots and veinlets of pyrite and pyrrhotite. Rare poikiloblastic garnets.										
		- 94.6 - 95.5 - silicified zone with dark green hornblende. Minor sulphides as very fine veinlet	6911 ••		92.5	97.5	5.0			.02		
		<ul> <li>99.4 - pyrrhotite and pyrite as fine clots and veinlets.</li> </ul>	6912		97.5	102.5	5.0			tr.		
		- 106.1 - 106.3 - quartz vein with 5% pyrrhotite, 1% pyrite and trace chalcopyrite.	6913 6914		102.5 107.5	107.5 112.5	5.0 5.0			.01 .01		
		- 112.3 - carbonate-chlorite shear with 1% pyrrhotite.	6915		112.5	117.5	5.0			tr.		
		- 122.0 - 122.2 - quartz vein with trace sulphide.	6916		117.5	122.5	5,0			.01		
		<ul> <li>122.3 - 122.5 - carbonate-chlorite shear with sulphides as fracture coatings.</li> </ul>	1									İ
		<ul> <li>122.5 - 129.0 - regular, 1/4" to 3/4" bands.</li> <li>Magnetite-rich, chert-rich and grunerite-rich.</li> <li>Rare garnet-biotite and/or hornblende bands.</li> <li>Many chert boudins. Banding commonly 75° to core axis. Several fine clots and veinlets of pyrite and/or pyrrhotite.</li> </ul>	6917 6918		122.5 127.5	127.5 132.5	5.0 5.0			.01 tr.		
		<ul> <li>129.0 - 142.5 - moderate to highly contorted bands often almost parallel to core axis. Several 1/2" thick bands of massive magnetite. Few clots and fine veinlets of pyrite and/or stite.</li> </ul>	6919 6920		132.5 137.5	137.5 142.5	5.0 5.0			tr. .02		

LANGRIDGES - TOPONTO - 366-1168

NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 02-86-19 SHEET NO. 6 of 8

FOOTAGE					SAMPL	E		ASSAYS				
FROM	то	DESCRIPTION	NO.	% SULPH IDES	FRÓM	FOOTAGE TO	TOTAL	r.	۰.	OZ TON	OZ TON	
		<ul> <li>142.5 - several carbonate veinlets with pyrrho- tite clots.</li> </ul>	6921		142.5	147.5	5.0			tr.		
		<ul> <li>- 149.5 - 154.0 - numerous fine pyrrhotite filled fractures with fine blebs of arsenopyrite.</li> </ul>	6922 6923		147.5 152.5	152.5 157.5	5.0 5.0			.01 tr.		
		<ul> <li>154.0 - brecciated zone with pyrrhotite, arseno- pyrite and chlorite.</li> </ul>										
		- 159.8 - banding 70° to core axis.	6924		157.5	162.5	5.0			tr.		
ľ		- 160.1 - 1/4" carbonate vein.										
	1	<ul> <li>- 161.0 - sheared and brecciated zone with carbon- ate and 5% pyrrhotite.</li> </ul>										
		- 172.2 - 172.6 - quartz vein with 3% pyrrhotite	6925		162.5	167.5	5.0			tr.		
	1	in fractures.	6926		167.5	172.5	5.0			.01		
		<ul> <li>174.2 - 174.5 - quartz vein but no visible sulphides.</li> </ul>	6927		172.5	177.5	5.0			.01		
		- 176.0 - banding 68° to core axis.										
		<ul> <li>179.0 - 197.6 - banding weakly to moderately contorted.</li> <li>70% chert-magnetite bands with 25-30% magnetite. Some fine interlaminations within chert-magnetite bands. Bands up to 3" wide. Grunerite bands 1/4" to 1/2" wide. Few thin carbonate veinlets both crosscutting and parallel to banding.</li> </ul>	6928		177.5	182.5	5.0			.02		
		- 182.9 - fine pyrrhotite veinlets and clots.	6929		182.5	187.5	5.0			tr.		
		- 184.5 - 1/4" carbonate veinlet with 2% pyrrhotite in narrow halo.										
		- 186.0 - 186.3 - pyrrhotite veinlets and clots with trace arsenopyrite.										
		- 187.0 - banding $72^{\circ}$ to core axis.	6930		187.5	192.5	5.0			tr.		
		- 195.0 - banding 70° to core axis.	6931		192.5	197.5	5.0			tr.		
		- 197.6 - 217.7 - well banded but moderately to highly contorted. Rare creamy orange chert. Few brecciated chert bands with grunerite in										
168

LANGRIDGES - * ORONTO

NAME OF PROPERTY OPAPIMISKAN LAKE

HOLE NO. 00-86-19 SHEET NO. 7 of 8

F001	AGE	DESCRIPTION			SAMPL	. E				ASSAYS			
FROM	то		NO.	SULPH	ERON	FOOTAGE	TOTAL		~.	OZ TON	OZ TON		
				1003			1014						
		fractures. Bands generally 1/4" to 1".											
		- 198.1 - 198.4 - quartz vein with trace dis- seminated sulphide.	6932		197.5	202.5	5.0			tr.			
		<ul> <li>203.8 - 5% wispy pyrrhotite with trace chalcopyrite</li> </ul>	6933		202.5	207.5	5.0			.01			
1		- 204.2 - 1" quartz vein with rare pyrrhotite.											
		- 205.0 - 2" carbonate-chlorite shear with 2% pyrrhotite as wispy veins and fracture coatings.											
		<ul> <li>207.8 - 212.6 - numerous hairline carbonate fractures with wispy pyrrhotite as veinlets and clots.</li> </ul>	6934		207.5	212.5	5.0			.02			
		- 212.7 - fine pyrrhotite veinlet.	6935		212.5	217.5	5.0			tr.			
		<ul> <li>217.7 - 237.3 - well banded but highly contorted.</li> <li>Bands generally 1/4" to 1" wide. Some 2" wide chert-magnetite bands.</li> </ul>			1								
		<ul> <li>- 220.4 - 1/4" crosscutting carbonate veinlet with minor pyrrhotite as fracture coatings.</li> </ul>	6936		217.5	222.5	5.0			tr.			
		- 221.3 - 1/4" carbonate filled shear with trace sulphide.	6937		222.5	227.5	5.0			.03			
		- 228.4 - fine pyrrhotite veinlet.	6938		227.5	232.5	5.0			.02			
		<ul> <li>- 231.1 - 1/8" pyrrhotite veinlet with trace arsenopyrite.</li> </ul>											
		- 232.5 - 237.3 - banding almost parallel to core axis but highly contorted. Local areas of brecciation and displacement fractures. Numerous fine clots and wispy veinlets of pyrrhotite.	6939		232.5	237.5	5.0			.01			
		- 237.3 - 243.4 - typical, numerous pyrrhotite clots throughout.											
		- 237.3 - 238.7 - carbonate-chlorite alter- ation. Numerous clots and wispy veinlets and pyrrhotite.	6940 6941		237.5 242.5	242.5 245.9	5.0 3.4			tr. tr.			

			н	IOLE NO	oOP	-86-19		Sн	ET NO.	<u>    8  o</u>	£8	
FOO	TAGE				SAMPI	"E				ASSAYS		
FROM	то		NO.	% SULPH, IDES	FROM	FOOTAGE	FOTAL		۰,	OZ TON	GZ TON	
		<ul> <li>242.5 - 242.9 - minor carbonate alteration, 5% pyrrhotite, 0.5% chalcopyrite.</li> <li>243.4 - 245.9 - numerous fine displacement fractures with carbonate filling. Few 1/4" to</li> </ul>										
		1/2" quartz-carbonate veins. Numerous pyrrhotite veinlets and clots.						ļ			ľ	
245.9	247.5	LAMPROPHYRE DIKE - typical, fine disseminated sulphides. Several fine carbonate veinlets and many fine flecks of carbonate.	6942		245.9	247.5	1.6			tr.		
247.5	249.0	BANDED IRON FORMATION - typical, well banded, little deformation.	6943		247,5	249.0	1.5			tr.		
249.0		End of Hole.						ļ				
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OPAPIMISKAN LAKE

NAME OF PROPERTY____

TORONTO - 366-1168

ANGRIDGES

NAME OF PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO 0P-86-2	0 LENGTH	248'		
LOCATION	1+98NE			
LATITUDE	DEPARTURE _			
ELEVATION	AZIMUTH	<u>229°</u>	_ DIP	<u>-45.5°</u>
STARTED November 25	1986 FINISHED	November	<u>r 26, 198</u>	36

FOOTAGE	DIP	AZ IMUTH	FOOTAGE	DIP	AZIMUTH
0	45.5°				
248'	.34.3°				

HOLE NO. 0P-86-20 SHEET NO. 1 of 1

REMARKS Summary Log

PA - 844239

LOGGED BY D. J. Corkery

FOO	TAGE	DESCRIPTION			SAMP	LE		A	SSAY	r s	
FROM	то	SUMMARY LOG	N0.	SUL PH- IDES	FROM	FOOTAGE TO	TOTAL	 t. o	OZ/TON	OZ/TON	
0	15,3	CASING									
15.3	43.1	MAFIC VOLCANICS									
43.1	77.5	GARNETIFEROUS METASEDIMENT									
77.5	104.2	BANDED IRON FORMATION									
104.2	113.7	GARNETIFEROUS METASEDIMENT									
113.7	119.4	BANDED IRON FORMATION									
		- 117.4 to 118.6 - irregular quartz vein/veinlets with 0.5 to 1.0% pyrrhotite.	16817		117.4	119.4	2.0		.17		
119.4	122.4	LAMPROPHYRE DIKE									
122.4	128.0	BANDED IRON FORMATION									
128.0	132.8	GARNETIFEROUS METASEDIMENT									
132.8	174.0	BANDED IRON FORMATION									
174.0	182.2	INTERBEDDED BANDED IRON FORMATION and GARNETIFEROUS METASEDIMENTS									AN
182.2	195.2	CARNETIFEROUS METASEDIMENT								$\wedge \wedge \lambda M$	M
1°?	248.0	BANDED IRON FORMATION								MM	
248.0		End of Hole.								[]'	
									i i		

NAME OF	PROPERTY	OPAPIMIS	SKAN LAKE		
HOLE NO.	OP-86-20	LENGTH		248'	
LOCATION	15+00NW	1+98NE			
LATITUDE		DEPARTURE _			
ELEVATION		AZIMUTH	229°	DIP	<u>-45.5°</u>
STARTED _	November 25	1986_ FINISHED	November	26 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0.	45.5°				
248'	34.3°				

HOLE NO. 0P-86-20 SHEET NO. 1 of 7

REMARKS

PA - 844239

LOGGED BY D. J. Corkery

FOOT	AGE	DESCRIPTION			SAMP	LE		ASSAYS				
FROM	то	UESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	5	"; 0	OZ/TON	oz/ton	
0	15.3	OVERBURDEN - casing to 15.0'.										
15,3	43.1	MAFIC VOLCANICS - dark grey to black, fine to very fine grained, massive to weakly foliated. Mineralogy dominated by hornblende and actinolite with minor plagioclase and quartz. Trace disseminated pyrite.										
		<ul> <li>17.0 to 18.3 - few quartz veinlets with no visible sulphides. Veinlets near parallel to core axis.</li> </ul>	16799		17.0	19.0	2.0			tr.		
		- 21.5 - 1" quartz veinlet; no visible sulphides.	16800		21.0	22.0	1.0			tr.		
43.1	77.5	GARNETIFEROUS METASEDIMENTS - dark brown with pink poikiloblasts, massive, fine grained, schistose.										
		Average Modes										
		Biotite       50       -       60%         Garnet       15       -       20%         Quartz       15       -       20%         Hornblende       10       -       15%         Calcite       trace       -       0.5%										
		Garnet poikiloblasts (1/16" to 1/8") in biotite-quartz or hornblende matrix. Several fine quartz veinlets. Pyrite and pyrrhotite occur both within quartz veinlets or adjacent to them.										
		- 43.1 to 45.1 - several 1/4" quartz bands, no visible sulphides.	16801 16802		43.1 48.0	48.0 53.0	4.9 5.0			tr. tr.		
		- 45.1 to 61.5 - 0.5 to 1.0% hornblende; dominantly garnets in biotite-quartz.	µ 6803 16804		53.0 58.0	58,0 63,0	5.0			tr. tr.		1
		- 55.0 - 1/2" silicified bands containing a cluster										

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LANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY_	OPAPIMISKAN LAKE

HOLE NO. ______ 0P-86-20 ______ SHEET NO. _____ 2 of 7

ANGRIDGES - TORONTO - 366-1168

#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-20 SHEET NO. 3 of 7

F00	TAGE	DETCONDENSI			SAMPI	E		ASSAYS				
FROM	10	DESCRIPTION	NO.	". SULPH. IDES	FROM	FOOTAGE	TOTAL	•	~.	07 TON	02 TON	
		Pyrite and pyrrhotite occur as fine fracture fillings. Few, fine randomly oriented calcite filled fractures. Bands weakly contorted with crenulation visible in many bands.										
		- 77.5 to 81.7 - typical.	16808		77.5	82.0	4.5			.06		
		- 80.5 - banded at 15° to core axis.									. 1	
		- 81.7 to 84.5 - well banded with highly visible crenulations at high angle to banding.	16809		82.0	87.0	5.0			.01		
		- $83.0$ - band at $10^{\circ}$ to core axis.										
	,	- 84.5 to 92.6 - quartz-magnetite contain intraband laminations.	16810		87.0	92.0	5.0			tr.		
		- 86.8 to 88.5 - several microfolds with axial plane at 10° to 15° to core axis; amplitude of 1" and frequency of 1/2".										
		<ul> <li>92.6 to 104.2 - poorly banded, with garnets in a matrix of amphibole-magnetite and quartz. Grades into unit below and is an iron-rich garnetiferous meta- sediment.</li> </ul>	16811 16812 16813		92.0 97.0 101.0	97.0 101.0 104.2	5.0 4.0 3.2			tr. tr. tr.		
104.2	113.7	GARNETIFEROUS METASEDIMENTS - atypical with 25 to 30% garnets, poorly banded. Few quartz-plagioclase veinlets (1/16" wide) con- taining no visible sulphides (45° to core axis).	16814 16815		104.2 109.2	109.2 113.7	5.0 4.5			tr. tr.		
		- 104.2 to 105.0 - typical.						Į				
		- 105.0 to 105.5 - heavily chloritic in matrix between garnets. Two 1" wide ground sections.										
		- 105.5 to 113.7 - typical.										
7.د11	119.4	BANDED IRON FORMATION - similar to 77.4 to 104.2, poorly banded, typically at $30^{\circ}$ to the core axis. Contains few "z" folds, with amplitude of 1", frequency of 1" and axial plane at $30^{\circ}$ to core axis. Trace to 0.5% sulphide.	16816 16817		113.7 117.4	117.4 119.4	3.7 2.0			tr. .17		
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366-1168

- TORONTO

LANGRIDGES

						86-20		SHEET NO4 of 7					
F00	TAGE				SAMPL	-E				ASSAYS			
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL	•		OZ TON	OZ TON		
		<ul> <li>- 113.7 to 117.4 - typical.</li> <li>- 117.4 to 118.6 - quartz veinlets to 117.9 and quartz vein from 117.9 to 118.6. Veinlets have irregular boundaries. 0.5 to 1.0% pyrrhotite at contact of vein and wall rock and with wisps of wall rock within vein/veinlets.</li> </ul>											
	]	- 118.6 to 119.4 - typical.								ļ			
119.4	122.4	LAMPROPHYRE DIKE - black, massive, porphyritic, fine grained with medium grained phenocrysts, Phenocrysts are subhedral to anhedral. Carbonate occurs as veinlets and disseminated grain replacement (5-7%). Dike dominantly consists of serpentinized phenocrysts (pseudomorphs) and serpentine-chlorite in the matrix with carbonate and minor phlogopite. Contact at 119.4 is at 32° to core axis. Well defined chill margins which are separated from main dike by calcite veinlets.	16818		119.4	122,4	3.0			.01			
122.4	128.0	BANDED IRON FORMATION - similar to 113.7 to 119.4, trace to 0.5% sulphide.	16819 16820		122.4 125.0	125.0 128.0	2.6 3.0			tr. .02			
128.0	132.8	<u>CARNETIFEROUS METASEDIMENTS</u> – atypical, 40 to 50% garnet $(1/32"$ to $1/16"$ ). Few bands containing 1 to 2% magnetite and minor gruner- ite. Few quartz veinlets with no visible sulphides.	16821		128.0	132.8	4.8			.01			
132.8	174.0	BANDED IRON FORMATION - $1/4$ " to $1/2$ " bands of light grey and dark grey to black, fine to very fine grained, well defined bands with 1/16" grunerite rim between chert and magnetite-rich bands. Dark bands contain magnetite-grunerite-quartz while light bands contain quartz $\pm$ grunerite $\pm$ magnetite. Most bands display fine laminations											
		Average Modes											
		Quartz $40$ $ 50\%$ Magnetite $20$ $ 25\%$ Grunerite $15$ $ 20\%$ Hornblende $1$ $ 3\%$ Calcite $1$ $ 2\%$ Chloritetrace $ 0.5\%$											

OPAPIMISKAN LAKE

NAME OF PROPERTY.....

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HOLE NO. 02-86-20 SHEET NO. 5 of 7

F00	TAGE	DESCRIPTION		SAMPLE						ASSAYS					
FROM	τo	DESCRIPTION	NO.	SULPH,		FOOTAGE			~	OZ TON	OZ TON				
		Banding occurs at low angle to core axis. Most chert bands have		IDES	FRUM	10	TOTAL								
		been boudinaged. Pyrrhotite and pyrite occur dominantly parallel to banding in contorted sections and adjacent to chert boudins. Local sulphide concentrations of up to 2%. Calcite occurs as dis- seminated grains within bands and few veinlets. Chlorite occurs as fracture coatings.	vrratice and pyrice occur dominantly parallel wrted sections and adjacent to chert boudins. entrations of up to 2%. Calcite occurs as dis- ithin bands and few veinlets. Chlorite occurs as												
		- 132.8 to 139.7 - highly contorted bands.	16822		132.8	136.7	3.9			.02					
		- 132.9 to 133.2 - calcite veinlet with wisps of wall rock and no visible sulphides.	16823		136.7	139.7	3.0			tr.					
		- 139.7 to 141.2 - sheared at 45° to core axis with strong quartz- calcite mineralization, minor tourmaline and 2 to 4% pyrrhotite. Sulphide occurs generally near edge of zone and with wisps of wall rock within quartz.	16824		139.7	141.2	1.5			tr.					
		- 141.2 to 152.3 - typical with banding near parallel to core axis. Low amplitude folds are common with frequency often 4" to 12". Abundant boudinaging of chert bands.	1682 1682 1682		141.2 146.0 149.0	146.0 149.0 152.0	4.8 3.0 3.0			.03 tr. tr.					
		- 152.3 to 152.7 - brecciated with calcite filling and 1 to 3% pyrite as blebs in calcite.	16828 16829 16830		152.0 153.0 158.0	153.0 158.0 163.0	1.0 5.0 5.0			tr. tr. tr.					
		- 152.7 to 173.4 - similar to 141.2 to 152.3 with trace to 0.5% pyrrhotite. - 156.0 to 157.0 - 1 to 2% pyrrhotite at contact	16831 16832 16833		163.0 168.0 173.0	168.0 173.0 174.0	5.0 5.0 1.0			tr. tr. tr.					
		of chert and magnetite bands and in fractures. -173 ( to 173 6 - brecciated with 15 to 20% calcite filling. Many													
		fragments have been chloritized.													
17/ 0	102.2	- 1/3.6 to 1/4.0 - typical.	1 6 0 7 /		174 0	179 0				*=					
174.0	182.2	INTERBEDDED BANDED IRON FORMATION AND CARNETIFEROUS METASEDIMENTS - 40 to 50% Banded Iron Formation, 50 to 60% Garnetiferous Bands,	16834 16835		178.0	182.2	4.0			tr.					

#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-20 SHEET NO. 6 of 7

FOO	TAGE				SAMP	LE		ASSAYS					
FROM	TO	DESCRIPTION	NO.	10E5	FROM	FOOTAGE	TOTAL	<b>i</b> .	·.	OZ TON	OZ TON		
		well defined bands. Banded Iron Formation is similar to 132.8 to 174.0. Garnetiferous bands are similar to 128.0 to 132.8 but with 3 to 5% magnetite. Banding near parallel to core till 177.5 and 25° to core axis from 177.5 to 182.2. Trace sulphides.											
182.2	195.2	GARNETIFEROUS METASEDIMENT - similar to 128.0 to 132.8, trace sulphide. - 183.0 - banded at 10° to core axis.	16836 16837 16838		182.2 187.2 192.2	187.2 192.2 195.2	5.0 5.0 3.0			tr. tr. tr.			
105.2	2/8.0	- 189.0 - banded at $20^{\circ}$ to core axis. - 193.0 - banded at $70^{\circ}$ to core axis.											
195.2	248.0	BANDED IRON FORMATION - similar to 132.8 to 174.0 but with grunerite rims of up to 1/4". Bands are weak to moderately contorted and are at a high angle to core axis. Trace to 0.5% pyrrhotite.											
		- 195.2 to 200.7 - typical.	16839		195.2	200.0	4.8			tr.			
		- 199.0 - banded at $55^{\circ}$ to core axis.											
		- 200.7 to 204.0 - $10$ to $15\%$ garnet-biotite bands.	16840		200.0	205.0	5.0			tr.			
		- 204.0 to 223.5 - typical. - 215.0 - banded at 57° to core axis.	16841 16842 16843		205.0 210.0 215.0	210.0 215.0 220.0	5.0 5.0 5.0			tr. tr. .02			
R411-405		- 223.5 to 223.8 - quartz vein, no visible sulphides. - 223.8 to 231.3 - typical.	16844		220.0	225.0	5.0	- - -		tr.			
		- 225.0 - banded at 45° to core axis.	16845		225.0	227.5	2.5			tr.			
		- 227.5 to 228.5 - 0.5% pyrrhotite in fractures in quartz veinlets and parallel to bands.	16846		227.5	231.2	3.7			tr.			
LANGHUC		- 231.3 to 232.3 - quartz vein with trace pyrite, several wisps of wall rock.	16847		231.2	233.2	2.0			tr.			

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					HOLE NO					SHEET NO7 of 7					
F00	TAGE	DESCRIPTION			SAMP	LE				ASSAYS					
FROM	то		NO.	% SUL PH	FROM	FOOTAGE TO	TOTAL		•	OZ TON	UZ TON				
		- 232.3 to 232.7 - typical.													
		- 232.7 to 233.2 - quartz vein with 0.5% pyrrhotite in fractures in vein.	16848 16849		233.2 238.0	238.0 243.0	4.8			tr. .01					
		- 233.2 to 248.0 - moderately contorted bands.	10030	]	243.0	240.0	5.0								
248.0		End of Hole.													
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NAME OF PROPERTY _____ OPAPIMISKAN LAKE

NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	<u>OP-86-21</u>	LENGTH	2	98'	
LOCATION	10+03NW	0+97NE			
LATITUDE		DEPARTURE _			
ELEVATION	4	AZIMUTH	049°	_ DIP	-44.7°
STARTED	November 25, 19	86 FINISHED	November	26, 198	6

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-44.7				
298'	-37.5				

HOLE NO. 0P-86-21 SHEET NO. 1 of 1

REMARKS _____ Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOOT	FAGE	DESCRIPTION			SAMP	LE		ASSAYS					
FROM	то	SUMMARY LOG	NO.	SUL PH- IDES	FROM	FOOTAGE TO	TOTAL	16	;; 'o	OZ/TON	OZ/TON		
0	19.8	CASING											
19.8	91.3	BANDED IRON FORMATION											
91.3	96.9	GARNETIFEROUS METASEDIMENTS											
96.9	100.8	BANDED IRON FORMATION											
100.8	114.7	GARNETIFEROUS METASEDIMENTS											
114.7	129.5	INTERBEDDED BANDED IRON FORMATION and GARNETIFEROUS METASEDIMENTS											
129.5	151.0	MAFIC TO INTERMEDIATE VOLCANIC (TUFF)											
151.0	164.5	GARNETIFEROUS METASEDIMENTS											
164.5	209.0	ULTRAMAFIC TO MAFIC VOLCANIC											
209.0	298.0	$\frac{\text{GARNETIFEROUS METASEDIMENTS}{\text{trace disseminated sulphides}} - \text{abundant } 1/4" \text{ to } 1/2" \text{ chert bands},$	16790		254.0	259.0	5.0			.16			
298.0		End of Hole.											
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										$\left( \right)$	M/M		
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NAME OF	PROPERTY	OPAI	PIMISKAN LA	KE	
HOLE NO.	OP-86-21	LENGTH	298'		
LOCATION	10+03NW	0+97NW		<del></del>	
LATITUDE		DEPARTURE			
ELEVATION	I	AZIMUTH	<u>049°</u>	DIP	44.7°
STARTED	November 25	1986 FINISHED	November	26 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	44.7°				
298' -	37.5°				

HOLE NO. 09-86-21 SHEET NO. 1 of 6

PA - 844238

LOGGED BY D. J. Corkery

REMARKS ____

FOOTAGE				SAMPLE					A S S A Y S					
FROM	то		NO.	SUL PH	FROM	FOOTAGE TO	TOTAL	26	"	OZ/TON	oz/ton			
0	19.8	CASING												
19.8	91.3	BANDED IRON FORMATION - bands of light grey, dark grey to black and light cream-green, fine grained, well banded, moderate to highly contorted. Consists of 1/8" to 1/4" bands of chert, grunerite- chert and magnetite-grunerite-chert. Grunerite-rich bands are at the contact between chert and iron-rich bands.												
		Average Modes												
		Quartz       45       -       55%         Grunerite       25       -       35%         Magnetite       10       -       15%         Calcite       3       -       5%         Sulphide       trace       -       0.5%												
		Calcite most often occurs in iron-rich band as fine grained dis- seminations. Pyrite and pyrrhotite occur parallel to banding in contorted zones and as fracture fillings and coatings. In contorted zones banding is commonly tightly folded, boudinaged or fractured and displaced up to 1/4".												
		- 19.8 to 24.6 - banded nearly parallel to core axis with several small parasitic folds. Several bands appear thick- ened (because top of fold?). Several limonitic fractures.	16746		19.8	25.0	5.2			tr.				
		<ul> <li>- 24.6 to 37.0 - folded with large folds (3' to 5') containing parasitic folds (1" to 2") which in turn contain parasitic folds (less than 1/16").</li> <li>- 26.0 - banded at 32° to core axis.</li> </ul>	16747 16748		25.0 30.0	30.0 35.0	5.0 5.0			tr. tr.				

FOO	TAGE	DESCRIPTION			SAMPL	E		ASSAYS					
FROM	то	DESCRIPTION	NO.	". SULPH	FROM	FOOTAGE	TOTAL		•	OZ TON	OZ TON		
		- 29.0 - banded parallel to core axis. - 32.0 - banded at 50° to core axis.											
		- 37.0 to 42.1 - wide bands 1/2" to 1" with near massive iron-rich bands and laminated chert and grunerite which form wide bands. Well folded.	16749 16750		35.0 40.0	40.0 45.0	5.0 5.0	;		tr. tr.			
		<ul> <li>42.1 to 48.8 - narrow banding near parallel to core axis, with many 1/2" to 1" folds. Visible thickening at hinges of small folds. Axial planes commonly at 40° to core axis.</li> </ul>	16751		45.0	50.0	5.0			tr.			
		- 48.8 to 67.3 - typical contorted. - 49.7 - 1/8" calcite-chlorite veinlet at 28° to core axis; 0.5% pyrite within veinlet.	16752 16753 16754		50.0 55.0 60.0	55.0 60'.0 65.0	5.0 5.0 5.0			tr. tr. tr.			
		- 54.4 - 1/2" wide band containing several 1/32" to 1/8" calcite veinlets at 30° to core axis. Several pyrite blebs with these veinlets.											
;		- 67.3 to 78.9 - 10 to 15% garnet-biotite schist bands. 0.5 to 1.0% pyrrhotite and pyrite as wisps in contorted zones and as fracture filling.	16755 16756 16757		65.0 70.0 75.0	70.0 75.0 80.0	5.0 5.0 5.0			tr. tr. tr.			
		- 77.7 - pyrrhotite-rich band containing trace chalcopyrite.					(						
		- 78.9 to 90.3 - typical. - 90.3 to 91.3 - similar to 67.3 to 78.9.	16758 16759 16760		80.0 85.0 88.0	85.0 88.0 91.3	5.0 3.0 3.3			tr. tr. tr.			
91.3	96.9	GARNETIFEROUS METASEDIMENTS - black with 1/16" to 1/32" poikilo- blasts, fine grained, poorly banded.	16761 16762		91.3 94.3	94.3 96.9	3.0 2.6			tr. tr.			

HOLE NO ______ OP-86-21 ______ SHEET NO _____ 2 of 6

NAME OF PROPERTY OPAPIMISKAN LAKE

LANGRIDGES - TORONTO - 366-1168 9

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HOL	F	NO	0P-	-86

0P-86-21 SHEET NO. 3 of 6

FOO	TAGE			••••	SAMPI	_ E			ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE TO	TOTAL		OZ TON	OZ TON	
		Average Modes Biotite 50 - 60% Garnets 15 - 20% Grunerite 7 - 10% Quartz 5 - 7% Hornblende 5 - 7% Pyrite trace									
		Pyrite occurs in quartz-calcite fractures. Banding commonly at 60° to core axis.									
96.9	100.8	BANDED IRON FORMATION - atypical, poor to moderately banded, 1 to 3% magnetite. Dominantly quartz-grunerite with 15-20% biotite- hornblende-garnet bands.	16763		96.9	100.8	3.9		tr.		
100.8	114.7	GARNETIFEROUS METASEDIMENTS - atypical, trace to 0.5% pyrrhotite and pyrite.			100.8	103.8	3.0		tr.		
		<ul> <li>- 100.8 to 103.8 - larger garnets (up to 1/8")</li> <li>- 103.8 to 114.7 - dominantly garnets with grunerite and hornblende. Poorly defined garnets. 10 to 15% garnet- biotite bands. 0.5 to 1.0% magnetite. Abundant quartz-calcite-chlorite and chlorite fine vein- lets. (Possible altered zone.)</li> </ul>	16765 16760 16767		103.8 107.8 111.8	107.8 111.8 114.7	4.0 4.0 2.9		tr. tr. tr.		
114.7	129.5	<ul> <li>- 105.0 to 105.1 - 1/4" quartz-calcite veinlets with 20-25% massive pyrite.</li> <li><u>INTERBEDDED BANDED IRON FORMATION AND GARNETIFEROUS METASEDIMENTS</u> - 60% metasediments, similar to 100.8 to 103.8, 40% banded iron formation, atypical with 7 to 10% magnetite. Moderately banded to laminated. Few calcite-quartz amphibole bands. Trace to 0.5% pyrite. Bands weakly contorted.</li> <li>- 118.0 - banded at 40° to core axis.</li> <li>- 128.0 - banded at 45° to core axis.</li> </ul>	16768 16769 16770		114.7 119.5 124.5	119.5 124.5 129.5	4.8 5.0 5.0		tr. tr. tr.		

LANGRIDGES - TORONTO - 366-1168

			н	OLEN	<u> </u>	-86-21		SHE	ET NO.	<u>4 o</u>	f 6
FOO	TAGE				SAMPL	E				ASSAYS	
FROM	το	DESCRIPTION	NO	", SULPH, IDES	FROM	FOOTAGE TO	TOTAL	3	î,	02 TON	UZ TON
129.5	151.0	MAFIC TO INTERMEDIATE VOLCANIC (TUFF) - dark green-brown, fine grained, laminated.									
		Average Modes									
		Amphibole 40 - 50% (hornblende, actinolite) Plagioclase 20 - 30% Quartz 15 - 20% Biotite 10 - 15% Pyrite trace									
		Laminated commonly at $40^{\circ}$ to $50^{\circ}$ to core axis. Several calcite hairline fractures at $40^{\circ}$ to core axis. ( $90^{\circ}$ to lamination)									
		- 129.5 to 145.8 - typical.									
		- 138.4 - 1" calcite band at $55^{\circ}$ to core axis.	16771		138.0	139.0	1.0			tr.	
		- 143.0 to 145.8 - few 1/4" quartz-calcite veinlets	16772		142.9	146.0	3.1			tr.	
		- 145.8 to 148.0 - less well laminated, 15-20% biotite.									
		- 148.0 to 151.0 - typical.									
151.0	164.5	GARNETIFEROUS METASEDIMENTS - moderately banded, fine grained. Garnet rich and poor bands. Some garnetiferous bands are near massive while others contain distinct poikiloblasts. Consists dominantly of garnets, hornblende and grunerite with 3 to 5% mag- netite occurring in some garnet poor bands. 0.5 to 1% pyrrhotite and pyrite occurring mostly in and adjacent to calcite veinlets as blebs and wisps.									
		- 151.0 to 158.5 - typical.	16773		151.0	156.0	5.0			tr.	
		- 153.5 - 1/2" to 1" calcite veinlet with 1/2" bleached zone and 7 to 10% pyrrhotite.									
		- 158.5 to 160.5 - garnet poor section.	16774		156.0	161.0	5.0			tr.	

OPAPIMISKAN LAKE

NAME OF PROPERTY_____

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-86-21	SHEET NO. 5 of 6

FOO	TAGE	DESCRIPTION			SAMPL	E			ASSAYS		
FROM	то	DESCRIPTION	NO.	SUL PH	EROM	FOOTAGE	1014		OZ TON	UZ TON	
		- 160.1 - calcite veinlet with chlorite and con- tact with wall rock.		IDES	TROM		1014				
		- 160.5 to 164.5 - typical.	16775		161.0	164.5	3.5		tr.		
		<ul> <li>- 161.8 - contorted calcite veinlet with 0.5% pyrrhotite in adjacent wall rock.</li> </ul>					١				
	}	<ul> <li>- 163.6 to 164.1 - light grey garnetiferous band with abundant quartz grains with hornblende.</li> </ul>									
164.5	209.0	<u>ULTRAMAFIC TO MAFIC VOLCANIC</u> - medium to dark green, fine grained, moderate to well foliated (commonly at 50° to core axis). Several fine quartz veinlets, no visible sulphides.									
		- 164.5 to 170.8 - dominantly talc-serpentine schist.	16776		170.0	171.0	1.0		tr.		
		- 170.5 - 1/8" calcite-pyrite veinlet.									
		- 170.8 to 171.8 - 5 to 7% phlogopite with talc-serpentine schist.									
	-	- 171.8 to 179.2 - dominantly tremolite-serpentine.	1.6777		172.8	176.2	3.4		tr.		Ĩ
		- 173.3 to 173.5 - quartz vein with trace to 0.5% remnant amphibole. No visible sulphides.									
		- 174.5 - quartz veinlet. No visible sulphides.									
1168		- 174.3 to 174.7 - silicified with trace to 0.5% pyrite.									
		- 174.2 to 174.5 - 1/8" contorted quartz- calcite veinlet.									
		- 179.2 to 195.7 - dominantly actinolite-tremolite, moderately foliated, few narrow quartz veinlets, no visible sulphides.	16778		186.7	191.7	5.0		.01		
LANG		- 195.7 to 208.0 - similar to 164.5 to 171.8.									

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NAME OF BRODERTY	OPAPIMISKAN	LAKE
NAME OF PROPERTY	Of All Hill Diality	Dimen

OP-86-21 HOLE NO

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FOO	TAGE	DESCRIPTION			SAMP	LE				ASSAYS		
FROM	то			N SULPH	FROM	FOOTAGE TO	TOTAL	-	~	OZ TON	UZ TON	
		- 208.0 to 209.0 - brecciated with dark green to black serpentine filling and few garnets within the serpentine.	16779		208.0	209.0	1.0			.02		
09,0	298.0	GARNETIFEROUS METASEDIMENTS - similar to 91.3 to 96.9, poorly ban- ded, fine grained, with abundant chert bands $(1/4" to 1/2")$ . Trace disseminated sulphides.										
		- 209.0 to 211.0 - grading from rare in garnets at 209.0 to typical at 211.0.	16780 16781 16782		209.0 213.0 218.0	213.0 218.0 223.0	4.0 5.0 5.0			tr. tr. .02		
		- 211.0 to 237.5 - typical.	16783 16784 16785		223.0 228.0 233.0	228.0 233.0 237 0	5.0 5.0 4.0			tr. tr.		
		<ul> <li>- 218.2 - 1/8" calcite-pyrite veinlet at 25 to core axis.</li> </ul>	16786		237.0	239.0	2.0			tr. tr.		
		- 237.5 to 238.5 - quartz vein and adjacent quartz veinlet, trace pyrite within wisp of wall rock within vein. Increase in hornblende and decrease in biotite.	16789 16789 16790		249.0 254.0 259.0	254.0 259.0 264.0	5.0 5.0 5.0			.02 .16		
		- 238.5 to 279.7 - typical variable band angles.	16792 16793 16794		264.0 269.0 274 0	269.0 274.0 279.0	5.0 5.0 5.0			tr. tr.		
		veinlet at 25° to core axis.	10/ 2				5.00					
		- 249.8 - 1/2" calcite veinlet with 0.5 to 1% pyrite. Calcite occurs as subhedral to euhedral crystals while pyrite occurs euhedrally in vugs in calcite.										
		- 279.7 to 298.0 - 20 to 25% hornblende with corresponding decrease in biotite content.	16795 16796 16797		279.0 284.0 289.0	284.0 289.0 294.0	5.0 5.0 5.0			tr. tr. tr.		1
		<ul> <li>- 292.5 to 293.3 - silicified zone with replace- ment of biotite and hornblende by quartz and quartz-calcite from 292.5 to 292.7. No visible sulphides.</li> </ul>	16798		294.0	298.0	4.0			tr.	NAM	dl
298.0		End of Hole.								U		

NAME OF PROPERTY	OPAPIMISKAN LAKE							
HOLE NO. 0P-86-22	LENGTH	279	•					
LOCATION	SW							
LATITUDE	DEPARTURE .							
ELEVATION	_ AZ IMUTH	<u>049°</u>	DIP	_45.3°				
STARTED November 27, 1986	FINISHED	November 30	1986					

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.3				
279'	-34.79				

HOLE NO. OP-86-22 SHEET NO. 1 of 1

REMARKS ______ Summary Log

PA - 844238

LOGGED BY L. Jones

F 0 0 1	TAGE				SAMP	L.E			^	SSA	r s
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOT AGE TO	TOTAL	5	16	OZ/TON	OZ/TON
0	32.0	CASING									
32.0	78.3	GARNETIFEROUS SEDIMENT									
78.3	98.4	BANDED IRON FORMATION - Garnetiferous									
		- 81.9 - 82.1 - 1-2% pyrite, disseminated and as stringers									
		- 83.1 - 83.3 - 1-2% pyrite, disseminated and as fine stringers.	16405		80.8	83.4	2.6			.14	
98.4	100.5	MAFIC FLOW									
100.5	109.8	GARNETIFEROUS SEDIMENT									
109.8	272.6	BANDED IRON FORMATION - trace-0.5% pyrrhotite, trace pyrite, sporadically distributed as fine stringers and disseminations.	16437 16440		229.0 244.0	234.0 249.0	5.0 5.0			.06	
272.6	274.3	LAMPROPHYRE DIKE									
274.3	279.0	BANDED IRON FORMATION - as in 109.8 - 272.6.							1		
279.0		End of Hole.									
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ANGRIDGE

NAME OF	PROPERTY	OPAPIMI	OPAPIMISKAN LAKE					
HOLE NO.	OP-86-22	LENGTH	279'		· · · · · · · · · · · · · · · · · · ·			
LOCATION	15+02NW	1+04SW						
LATITUDE		DEPARTURE .			·····			
ELEVATION		AZIMUTH	049°	_ DIP	-45.3°			
STARTED	November 27.	1986 FINISHED	November 3	30. 1986				

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.3				
279'	-34,7				

HOLE NO. 09-86-22 SHEET NO. 1 of 5

REMARKS

PA - 844238

LOGGED BY L. Jones

FOOTAGE		SAMPLE					ASSAYS					
FROM	то	DESCRIPTION	NO.	SUL PH	FROM	FOOTAGE	TOTAL	5	۰. ۲.	oz/ton	OZ/TON	
0 32.0	32.0	CASING GARNETIFFEROUS SEDIMENT - medium to dark grey-black; very fine grained with medium to coarse grained garnets. Garnets are pink, commonly poikiloblastic; larger garnets subhedral to anhedral; smaller garnets euhedral. 1/2 - 1 cm magnetite-rich bands common; these bands commonly have 2 mm grunerite rims; banding usually 50° to core axis. Garnet content varies locally from 5% to 50%. Average Modes Garnets 40 - 50% Biotite 20 - 30% Chlorite 15 - 20% Chert 5 - 10% Magnetite 5 - 10% Grunerite 3 - 5% - 32.0 - 49.6 - very coarse garnets. - 36.3 - 36.7 - core blocky, broken. - 36.7 - fractures 40° to core axis, limonite stained. - 49.6 - 65.4 - garnets fine to medium grained. - 49.6 - 51.5 - chert bands folded. Axial plane of folds approximately 50° to core axis, fold amplitude approximately 1 cm. - 65.4 - 78.3 - 5-10% coarse grained garnets; no magnetite present. - 67.7 - trace pyrite as fine stringers.	6993 6994 6995 6996 6997 6998 6700 16401 16402 16403		32.0 34.2 39.0 44.1 49.5 52.8 57.9 61.5 65.4 69.0 73.2	34.2 39.0 44.1 49.5 52.8 57.9 61.5 65.4 69.0 73.2 78.3	2.2 4.8 5.1 5.4 3.3 5.1 3.6 3.9 4.6 4.2 5.1			tr. tr. tr. tr. tr. tr. tr. tr. tr.		

NAME OF PROPERTY	OPAPIMISKAN LAKE
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				OLE N	5. <u> </u>	-00-22		SHI	EET NO.	2 0		
FOOT	FAGE	DECONDICAN			SAMPI	_E				ASSAYS		
FROM	то	DESCRIPTION	NO.	" SULPH	FROM	FOOTAGE TO	TOTAL		7	OZ TON	02 TON	
78.3	98.4	BANDED IRON FORMATION - Garnetiferous - medium to dark grey; fine to very fine grained; very finely laminated at 50° to core axis; laminations disturbed, occasionally destroyed, by 1-2 mm garnets. Infrequent grunerite rims on magnetite-chert bands. Chert bands often disrupted, appear boudinaged. Biotite as very fine grained bands 1-2 cm wide, infrequently up to 15 cm wide.										
		Average ModesMagnetite10-15%Chert20-25%Biotite20-25%Chlorite10-15%Garnet20-25%Grunerite5-10%PyrrhotitetracePyritetrace										
		<ul> <li>- 80.8 - 81.0 - trace-0.5% pyrrhotite, as very fine stringers.</li> <li>- 81.4 - fracture at 25° to core axis across banding;</li> </ul>	16404 16405 16406		78.3 80.8 83.4	80.8 83.4 88.1	2.5 2.6 4.7		-	tr. .14 .01		
		- 81.9 - 82.1 - 1-2% pyrite; disseminated and as	16407		88.1 93.2	93.2	5.1			.01		
		- 83.1 - 83.3 - 1-2% pyrite; disseminated and as fine stringers.	10400		55.2	50.4	5.2					
98.4	100.5 [.]	MAFIC FLOW - medium to dark green; very fine grained; contorted foliation; minor carbonate in patches; typical mineralogy.	16409		98.4	100.5	2.1			.01		
100.5	109.8	<u>CARNETIFEROUS SEDIMENT</u> - fine to medium grained; medium grey with pink hues; 1-2 mm euhedral garnets; indistinct banding outlined by biotite-rich and grunerite-rich bands at 55° to core axis; occas- ionally magnetic.	1641( 16411		100.5 104.9	104.9 108.9	4.4 4.9			tr. tr.		
		Average Modes Garnet 40 - 50%										

02-86-22

NAME OF PROPERTY	OPAPIMISKAN LAKE

HOLE NO. ______ OP-86-22 ______ SHEET NO. _____ 3 of 5

FOO	TAGE	DESCRIPTION	SAMPLE			ASSAYS		]			
FROM	то	DESCRIPTION	NO.	5 SULPH	FROM	FOOTAGE	TOTAL		OZ TON	UZ TON	
109.8	272.6	Biotite 20 - 30% Grunerite 10 - 15% Chlorite 5 - 10% Quartz 3 - 5% BANDED IRON FORMATION - medium to dark grey; very fine grained;	16412		109.8	114.8	5.0		tr.		
		well banded; chert and magnetite bands commonly less than 2 cm wide;	16413		114.8	119.0	4.2		tr.		
		grunerite rims on magnetite bands, usually 3-3 mm. Entire section has patches of moderate carbonatization. Infrequent chlorite-	n magnetite bands, usually 3-5 mm. Entire section moderate carbonatization. Infrequent chlorite- 16414		119.0	124.0	5.0		tr.		
		biotite bands usually less than $5_{\rm CM}$ wide. Chert bands frequently	16415		124.0	129.0	5.0		tr.		
		sporadically distributed as fine stringers and disseminations.	16416		129.0	134.0	5.0		tr.		
		Trace pyrite, sporadically distributed as fine stringers.	16417	1	134.0	139.0	5.0		tr.		
		Average Modes	16418		139.0	144.0	5.0		tr.		
		Magnetite 30 - 40%	16419		144.0	149.0	5.0		tr.		
		Chert 30 - 40%	16420		149.0	154.0	5.0		tr.		
		Chlorite 2 - 3%	16421		154.0	159.0	5.0		tr.		
		Biotite 2 - 3% Pyrrhotite trace - 0.5% Pyrite trace Garnets trace	16422		159.0	164.0	5.0		tr.		
		- 109.8 - 117.0 - 1-2% garnets. - 140.6 - 140.8 - blocky, possible shear.									
		– 166.5 – 168.0 – banding parallel to core axis.	16423		164.0	169.0	5.0		tr.		
		= 179.0 = 179.9 = banding contorted folded, axial plane of folds	16424		169.0	174,0	5.0		tr.		
		70° to core axis.	16425		174.0	179.0	5.0		tr.		
		- 181.4 - 181.9 - folded, axial plane of folds approximately 60° to core axis.	16426 16427		179.0 184.0	184.0 189.0	5.0 5.0		tr. tr.		
		- 189.0 - 190.4 - contorted, folded, axial plane of folds approxi- mately 50° to core axis.	16428		189.0	194.0	5.0		tr.		

366-1168 LANGRIDGES - TORONTO -

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NAME OF PROPERTY	OPAPIMISKAN LAKE

HOLE NO. 07-86-22 SHEET NO. 4 of 5

	FOOT	TAGE	DESCRIPTION		SAMPLE					ASSAYS			
1	FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL		~,	OZ TON	OZ TON	
			- 194.0 - 195.3 - banding parallel to core axis.	16429		194.0	199.0	5.0			tr.		
			- 199.6 - 199.8 - chlorite, biotite, garnet-rich zone; garnets 6-8 mm.	16430		199.0	204.0	5.0			tr.		
			- 200.0 - 200.5 - chlorite, biotite, garnet zone.										
			- 200.5 - 211.2 - banding wispy, irregular, in places banding	16431		204.0	209.0	5.0		:	tr.		
			$\sim 211.2$ = fracture $25^{\circ}$ to core axis with purite black	16432 16433		209.0	211.2	2.2			tr. tr		
			<ul> <li>211.2 - 220.4 - massive magnetite band, very fine grained, 20-30% chert, 1-2% grunerite, trace-0.5% pyrrhotite.</li> </ul>	16434 16435 16436		215.5 220.4 224.2	220.4 224.2 229.0	4.9 3.8 4.8			tr. tr. .01		
3			- 249.0 - 250.2 - banding folded, contorted, axial plane of folds approximately 90° to core axis.	16437 16438 16439 16440		229.0 234.0 239.0 244.0	234.0 239.0 244.0 249.0	5.0 5.0 5.0 5.0			.06 .01 tr. .07		
			- 252.8 - 253.8 - banding contorted, folded, axial plane of folds approximately 90° to core axis.	16441		249.0	254.0	5.0			.04		
			- 256.06cm wide garnet-rich zone.	16442		254.0	259.0	5.0			.02		
		х.	- 257.0 - 258.5 - banding contorted, folded, axial planes of folds	16443 1774		259.0	264.0	5.0			.01		
		1	- 271.2 - 272.6 - banding folded, axial plane of folds 60° to core axis.	16445		269.0	272.6	3.6			tr.		
LANGRIDGES - TORONTO - 366-1168	272.6	274.3	LAMPROPHYRE DIKE - black, fine to medium grained, infrequent quartz- carbonate stringers. Chill margins very fine grained, 10 cm. wide, separated from medium grained section by quartz-carbonate stringers. 2-3 mm dark chlorite patches in medium grained area; possibly olivine pseudomorphs. Hematite (?) disseminated as very fine bright red flecks.	16446		272.6	274.3	1.7			tr.		

NGRIDGES - TORONTO - 366-1168

NAME OF FROPERIT	NAME OF PROPERTY	OPAPIMISKAN LAKE
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SHEET NO. 5 OF 5

P-86-22

SAMPLE ASSAYS FOOTAGE DESCRIPTION FOOTAGE SUL PH. NO. FROM τo ~, 02 TON OZ TON IDE 5 FROM TO TOTAL Average Modes Chlorite 50 60% Serpentine? 30 40% Carbonate 1 2% Hematite trace The relation of the chill margins to the core of the dike (separated by guartz-carbonate stringers, no gradation in grain size) suggests the dike may be of two generations. 16447 274.3 279.0 4.7 .02 274.3 BANDED IRON FORMATION - as in 109.8 - 272.6. 279.0 - 274.3 - 278.6 - banding folded, axial planes of folds 60° to 90° to core axis. . 279.0 End of Hole. Thrank MD 1 1

NAME OF PR	OPERTY	<u>OPAPIMIS</u>	<u>SKAN LAKE</u>		
HOLE NO	<u>OP-86-23</u>	LENGTH	348'		
LOCATION	16+03NW 1+5	3 <i>SW</i>		<u> </u>	
LATITUDE		_ DEPARTURE _	•		
ELEVATION		AZIMUTH	049°	DIP	<u>-45°</u>
STARTED NO	vember 27, 1986	FINISHED	November 29.	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.0				
348'	-40, <u>3</u> °				
				_	

HOLE NO. 0P-86-23 SHEET NO. 1 of 1

REMARKS Summary Log

PA - 844238

LOGGED BY L. Jones

FOOT	TAGE	DESCRIPTION	1		SAMP	LE			A	SSA	rs	
FROM	то	SUMMARY LOG	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	5	<i>'</i> ;	OZ/TON	oz/ton	
0	32.0	CASING										
32.0	56.0	GARNETIFEROUS SEDIMENT										
56.0	63.0	ULTRAMAFIC FLOW										
63.0	70.2	GARNETIFEROUS SEDIMENT										
70.2	74.8	ULTRAMAFIC FLOW										
74.8	109.6	GARNETIFEROUS SEDIMENT										
109.6	110,6	MAFIC FLOW										
110.6	156.9	GARNETIFEROUS SEDIMENT - magnetite 5-10% in bands up to 1 cm.						1				
156.9	174.0	BANDED IRON FORMATION - very finely laminated; 10-15% garnets.										
174.0	184.2	<u>GARNETIFEROUS SEDIMENT</u> - strongly magnetic; 5-10% magnetite.										
184.2	348.0	BANDED IRON FORMATION										
		<ul> <li>- 308.0 - 313.0 - few narrow pyrrhotite stringers with 2-3% pyrrhotite from 308.0 - 308.2.</li> </ul>	16511		308.0	313.0	5.0			.17		
		- 318.2 - 320.7 - several quartz veinlets with trace to 0.5% pyrrhotite at contact with wall rock.	16513		318.0	320.7	2.7			.21		MAR
		- 337.4 - 337.7 - quartz vein.	16519		337.1	338.6	1.5			.06		MM
348.0		End of Hole.									Y	$\sim$

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NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	OP-86-23	LENGTH	348 '		
LOCATION	16+03NW	1+53SW			
LATITUDE		DEPARTURE	<u> </u>		
ELEVATION	·	AZIMUTH	049°	DIP	-45°
STARTED N	ovember 27, 19	286 FINISHED	November 29,	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.0 ⁴				
348'	-40.3				

HOLE NO. 0P-86-23 SHEET NO. 1 of 6

REMARKS ____

PA - 844238

LOGGED BY L. Jones

FOO	TAGE				SAMP	LΕ			А	5 5 A 1	(5	
FROM	то	DESCRIPTION	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	16	žó	OZ/TON	OZ/TON	
0	32.0	<u>CASING</u>										
32.0	56.0	<u>GARNETIFEROUS SEDIMENT</u> - matrix dark grey, very fine grained with $1-2$ mm subhedral to euhedral pink poikiloblastic garnets. Quartz stringers 1.5-2.5 cm wide common; generally at 40° to core axis.	16448 16449 16450	-	32.0 36.0 39.9	36.0 39.9 44.2	4.0 3.9 4.3			tr. .01 tr.		
		Average Modes	16451	-	44.2	48.7	4.5			tr.		
		Garnets 30 - 40%	16452	-	48.7	52.0	3.3			tr.		
		Quartz 5 - 10% Chlorite 5 - 10% Hornblende trace	16453	_	52.0	56.0	4.0			tr.		
		<ul> <li>43.0 - 48.0 - quartz stringers parallel to sub- parallel to core axis.</li> <li>49.8 - 49.9 - possible shear, very friable.</li> </ul>										
		- 50.0 - 56.0 - core blocky, broken.										
<del>ب</del> ⁸ 56,0	63.0	ULTRAMAFIC FLOW - light to medium grey, very fine grained, generally friable, talcy; well carbonatized - calcite plus magnesite(?);	16454	-	56.0	58.0	2.0			tr.	-	
366-1		very blocky, broken up.	16455	-	58.0	63.0	5.0			tr.		
63.0	70.2	CARNETIFEROUS SEDIMENT - matrix dark brown-black, very fine grained, infrequent chert bands and chloritic bands, 40°-55° to core axis. Weakly carbonatized in patches. Garnets 1-2 mm, subhedral to euhedral, poikiloblastic.	16456 16357	tr. tr.	63.0 68.0	68.0 70.2	5.0 2.2			tr. tr.		

NAME OF PROPERTY	UPAPIMISKAN	LAKE	

HOLE	NO	OP-86-23

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F001	FAGE				SAMPL	_E				ASSAYS		
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	3		OZ TON	OZ TON	
FROM FROM 70.2 74.8	74.8 109.6	DESCRIPTION         Average Modes         Garnets       20       -       30%         Biotite       50       -       60%         Chlorite       10       -       15%         Chert       10       -       15%         Carbonate       0.5       -       1%         Pyrite       trace       -       63.0 - 65.0 - fractures parallel to subparallel to core axis, displacements up to 1.5cm, pyrite as very fine stringers, or as rare smears on fractures.         ULTRAMAFIC FLOW - medium grey, fine grained, talcy texture, greenish hues, possibly due to chlorite, very friable, carbonatized at contact at 70.2.         Average Modes       -       30% (?)         Talc       20       -       30% (?)         Serpentine       60       -       70% (?)         CARNETIFEROUS SEDIMENT - matrix dark grey-black, very fine grained, garnets 1-2 mm, moderately banded; 10-15% magnetite bands 2/3cm to 1       1/3cmwide. Banding 60° to core axis at 84.0'.	NO.	7. SULPH IDES	54MP1 FROM 74.8 78.0	-E FOOTAGE T0 78.0 83.0 28.0	3.2 5.0		-	assays oz TOM tr. tr.	02 TON	
		Average Modes	16460 16461		83.0	93.0	5.0			tr. tr.		
		Garnets 30 - 40%	16462		93.0	98.0	5.0			tr.		
		Biotite 40 - 50% Chlorite 3 - 5%	16463		98.0	103.0	5.0			tr.		
		Magnetite 5 - 10%	16464		103.0	108.0	5.0			tr.		
		Chert 3 - 5%	16465		108.0	109.6	1.6			tr.		
÷		- 74.8 - 79.0 - fractures subparallel to parallel to core axis, up to 2.5 cm displacement.										
		- 81.3 - 82.3 - very chloritic, 3-5% garnets.										

LANGRIDGES - TORONTO - 366-1168

#### SAMPLE ASSAYS FOOTAGE DESCRIPTION % SULPH FOOTAGE NO. то OZ TON Ξ. -7 07 TON IDES FROM 10 TOTAL - 82.5 - 83.0 - fracture parallel to core axis with pyrite smears. - 96.4 - 99.4 - magnetite bands folded, axial planes of folds 90° to core axis. - 101.3 - 101.8 - same as above. - 108.0 - 109.0 - 1 cm subhedral garnets. 109.6 110.6 109.6 110.6 MAFIC FLOW - medium green, very fine grained, chloritic, foliation 16466 -1.0 tr. at irregular angles to core axis. Silicified (?) in patches, GARNETIFEROUS SEDIMENT - matrix black; very fine grained; garnets 110.6 1156.9 16467 – 110.6 1114.3 3.7 tr. generally 1-2 mm, subhedral to euhedral; magnetite bands up to 114.3 118.0 16468 3.7 tr. 1 cm wide common, at 118' banding 65° to core axis. Magnetite bands often folded. 123.0 118.0 5.0 16469 tr. 123,0 128.0 .6470 tr. 5.0 tr. Average Modes 128.0 133.0 5.0 6471 tr. 60% Biotite 50 133.0 138.0 5.0 6472 tr. Garnets 20 30% 5 10% 138.0 143.0 5.0 Magnetite 6473 tr. Chert 3 5% 6474 143.0 148.0 5.0 tr. 5% Chlorite 3 148.0 153.0 5.0 16475 tr. - 120.9 - 125.5 - garnets 3-5%, up to 1 cm, euhedral. ----153.0 156.9 3.9 tr. - 124.2 - 124.8 - trace-0.5% pyrite and pyrrhotite disseminated and as fine stringers. - 130.0 - 133.5 - magnetite bands folded, axial planes of folds approximately 80° to core axis.

- 131.0 - 131.4 - pyrite coated fracture  $20^{\circ}$  to core axis.

- 146.6 - 156.9 - 3-5 mm garnets 5-8%, increase in abundance towards 156.9'.

-154.3 - 154.5 - guartz vein.

NAME OF PROPERTY____

OPAPIMISKAN LAKE

SHEET NO. ____ 3 of 6

- 366-1168 NGRIDGES - TORONTO FROM

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#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-23 SHEET NO. 4 of 6

- F	001	AGE	DESCRIPTION			SAMP	LE				ASSAYS		
FRO	м	то	DESCRIPTION	ND.	% SULPH IDES	FROM	FOOTAGE TO	TOTAL		~	OZ TON	OZ TON	
			- 154.7 - 154.8 - quartz vein.										
156	.9	174.0	BANDED IRON FORMATION - medium to dark grey, fine to very fine	16477	tr.	156.9	159.0	2.1			tr.		
			grained, very finely laminated, laminations relatively undisturbed at 63° to core axis at 160'. Chert bands occasionally boudinaged.	16478	tr.	159.0	164.0	5.0		1	tr.		1
			Garnets in biotite-rich zones. Very finely disseminated trace	16479	tr.	164.0	169.0	5.0	1		tr.		
			ers.	16480	tr.	169.0	174.0	5.0			tr.		
			Average Modes										
			Magnetite 20 - 30% Chert 30 - 40%							-			
			Biotite 20 - 25%	-									
			Garnets 10 - 15%										
			- 156.9 - 158.2 - banding coarse, somewhat disturbed, trace-0.5% pyrrhotite disseminated on foliation planes.										
			- 167.5 - 170.4 - 30-40% garnets; coarsely banded garnet growth destroying laminations.					2					
174	.0	184.2	GARNETIFEROUS SEDIMENT - matrix dark green to black, very fine	16481	-	174.0	179.1	5.1			tr.		
			grained, sporadically magnetic, often strongly magnetic. Some zones approach 80% garnets.	16482	-	179.1	184.2	5.1			tr.		
1			Average Modes							1			
			Garnet 30 - 40%										
6-116			Biotite 40 - 50% Chlorite 5 - 10%										
- 36			Magnetite 5 - 10%							ļ			
NOLIC													
ES - 10			<ul> <li>175.4 - 175.9 - chloritic, no garnets, possibly</li> <li>a small mafic flow.</li> </ul>										
DOILD 184	. 2	348.0	BANDED IRON FORMATION - medium to dark grey, very fine grained, bands generally less than2.5cm wide, chert bands commonly boudinaged, occasionally hematite stained. Weakly to moderately carbonatized										

LANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-86-23	SHEET NO. 5 of 6

FOOT	AGE				SAMP	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL		*.	07 TON	UZ TON	
			164.07	IDES	10/ 2	100 0	2 0					
		in patches. Trace pyrite as rare stringers; trace-0.5% pyrinotice	10403 16484	tr.	188 0	193 0	5.0			tr		
		it may approach $2-3\%$ . Gruperite as rims $1/2$ cm wide on magnetite	16485	tr.	193.0	198.0	5.0	ĺ		tr.		
		bands.	16486	tr.	198.0	203.0	5.0			.01		
(			16487	tr.	203.0	208.0	5.0			tr.	ĺ	
		Average Modes	16488	tr.	208.0	213.0	5.0			tr.		
ĺ			16489	tr.	213.0	218.0	5.0			tr.		
		Magnetite 20 - 30%	16490	tr.	218.0	223.0	5.0	]		tr.		
		Chert 30 - 40%	16491	tr.	223.0	228.0	5.0	1		tr.		
		Grunerite 10 - 15%	16492	tr.	228.0	233.0	5.0	{		tr.		
		Chlorite 5 – 10%	16493	tr.	233.0	230.0	5.0			EF.		
		Pyrrhotite trace - 0.3%	16494 16494	tr.	230.0	243.0	5.0			tr.		
			16496	tr	248.0	253.0	5.0			tr.		
		Galliers llace	16497	tr.	253.0	258.0	5.0			tr.		
		- 184.5 - Two 1/8" bands of very fine grained, dark blue	16498	tr.	258.0	263.0	5.0	]		tr.		
		mineral, unidentified.	16499	tr.	263.0	268.0	5.0			.02		
		,	16500	tr.	268.0	273.0	5.0			.02		
		~ 185.2 - 185.5 - brecciated.	16501	tr.	273.0	278.0	5.0			.02		
		~ 188.1 - 190.2 - banding contorted.	10502	1	270.0	201.5	J.J			.02		
		~ 198.0 - 198.5 - banding contorted and folded.		1								
		~ 205.3 - 205.5 - pyrite coated fracture 25° to core axis.										
		~ 207.3 - 210.5 - banding contorted.										
		~ 213.2 - 214.0 - 40-50% chlorite.										
		- 213.2 - 214.9 - banding contorted.		ł		ļ		}				
		- 217.3 - 217.5 - quartz vein.										
		~ 227.3 - 242.8 - banding contorted, folded, axial planes of folds approximately 70° to core axis.										
		- 243.1 - 243.5 - banding subparallel to core axis.										
		- 248.7 - pyrite coated fracture 65° to core axis.										
		- 250.2 - 253.6 - banding folded, axial planes 70° to 90° to core axis.										
		- 254.5 - 263.0 - banding weakly to strongly folded, axial planes $70^\circ$ to $90^\circ$ to core axis.										

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-86-23	SHEET NO 6 of 6

FOOTAGE			1		SAMP	LE			ASSAYS		
FROM T	>	DESCRIPTION	NO.	SUL PH	FROM	FOOTAGE		·.	OZ TON	UZ TON	
FROM T	- 282.2 - 285.7 - 308.0 - 313 - 318.2 - 320 - 320.7 - 322 - 326.2 - 326 - 328.9 - 329 - 337.4 - 338	<ul> <li><u>trace arsenopyrite</u>, disseminated and in a very fine stringer.</li> <li>trace disseminated <u>arsenopyrite</u>.</li> <li>3.0 - few narrow pyrrhotite stringers with 2-3% pyrrhotite from 308.0 to</li> <li>0.7 - several quartz veinlets with trace-0.5% pyrrhoti at contact with wall rock.</li> <li>2.6 - banding wispy, irregular, several quartz-carbona stringers.</li> <li>6.7 - massive magnetite band.</li> <li>9.5 - massive magnetite band.</li> <li>328.9 - 329.2 - quartz-carbonate filled fracture 20° to core axis, irregular grunerite alteration halo.</li> <li>8.2 -11/3cmwide quartz-carbonate filled fracture sub-parallel to core axis. Grunerite alteration hal where magnetite bands are crossed.</li> </ul>	1650: 1650: 1650: 1650: 1650: 1650: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1652: 1652: 1652: 1652: 1652: 1652: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1650: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1651: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 1652: 16	10ES tr. tr. tr. tr. tr. tr. tr. tr.	281.5 282.5 285.2 286.0 293.0 293.0 308.0 308.0 313.0 318.0 320.7 322.6 328.0 329.9 333.0 337.1 338.6 343.0	70 282.5 285.2 286.0 293.0 298.0 303.0 308.0 313.0 318.0 320.7 322.6 328.0 329.9 333.0 337.1 338.6 343.0 348.0	1.0         2.7         0.8         2.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         5.0         3.1         4.1         1.5         4.4         5.0		tr. tr. tr. tr. tr. tr. tr. tr. tr. tr.	(.23 c	on c
348.0	- 343.0 - 345.0 - 348 End of Hole.	<ul> <li>- 337.4 - 337.7 - quartz vein.</li> <li>- banding 70° to core axis.</li> <li>8.0 - banding folded, axial planes 70° to 90° to core axis.</li> <li>- 347.3 - 348.0 - fractures subparallel to core axis, up to 2/3 cm displacement.</li> </ul>					-		Ŵ	Jul	a l

NAME OF PROPERTY	<u>OPAPIMIS</u>	KAN LAKE	
HOLE NO OP-86-24	LENGTH		
LOCATION 3+00	DSW		
LATITUDE	DEPARTURE		
ELEVATION	_ AZIMUTH	_049° DIP	<u>-46.5°</u>
STARTED December 1 1986	FINISHED	December 3, 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	46.5°				
278' -	38.0 [°]				

#### HOLE NO. 02-86-24 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOO	TAGE				SAMP	LE		ASSAYS				
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOT AGE TO	TOTAL	,°	,; 0	OZ/TON	OZ/TON	
0	35.0	CASING										
35.0	47.0	LEAN BANDED IRON FORMATION - trace pyrite, few calcite veinlets.	16853		43.0	47.0	4.0			.08		
		- 46.9 - epidote along calcitic fracture in chert band.										
47.0	94.2	ULTRAMAFIC VOLCANICS										
94.2	96.6	INTERBEDDED MAFIC VOLCANICS AND METASEDIMENTS										
96.6	98.0	BANDED IRON FORMATION										
98.0	99.6	ULTRAMAFIC VOLCANICS										
99.6	118.5	BANDED IRON FORMATION										
118.5	130.5	GARNETIFEROUS METASEDIMENTS										
130.5	195.1	BANDED IRON FORMATION										
195.1	201.8	GARNETIFEROUS METASEDIMENTS										
201,8	240.6	BANDED IRON FORMATION										
		- 213.2 to 240.6 - 0.5 to 1.0% pyrrhotite, trace - 0.5% pyrite.										
		- 238.0 to 240.6 - few marrow quartz veinlets.	6895		237.0	240.6	3.6			.96	(rerun	tr.)
240.6	246.2	ULTRAMAFIC VOLCANICS										
		~ 245.2 - 1/4" calcite-hematite veinlet.	6896		244.8	246.2	1.4			.46	(rerun	tr.)

NAME OF PROPERTY	OPAPIMISKAN LAKE
00 96 36	2 6 2

HOLE NO. 0P-86-24 SHEET NO. 2 of 2 ASSAYS SAMPLE FOOTAGE DESCRIPTION FOOTAGE ". SUL PH NO. FROM то 07 TON UZ TON 1 FROM TOTAL IDES TO 246.2 267.7 BANDED IRON FORMATION 267.7 272.2 ULTRAMAFIC VOLCANICS 272.2 272.8 BANDED IRON FORMATION 272.8 278.0 ULTRAMAFIC VOLCANICS 278.0 End of Hole. . papadame 366-1168 NGRIDGES - TORONTO

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NAME OF HOLE NO LOCATIO LATITUD ELEVATIO	F PROP D0 N14 E Decemb	OPAPIMISKAN LAKE         2-86-24       LENGTH       278'         4+99NW       3+00SW	FOOT AGE 0 278 '	DIР -46,5 -38,0	AZIMUTH	FOOTAGE	DIP AZ		HOLE N	NO. <u>OP-</u> RKS	<u>36-24</u> sн РА - 8 D. J.	EET NO 44238 Corkery	<u>1 of 8</u>
			<u> </u>						1				
F 0 0 1	AGE	DESCRIPTION			92	5 A M P	L E		∦	A	55AY		
FROM	то			N	ο. SUĽΡ IDES	FROM	TO	TOTAL	"	16	OZ/TON	OZ/TON	
0	35.0	CASING											
35.0	47.0	LEAN BANDED IRON FORMATION - 1/4" to 1/2" bands of medium g dark green to black with pink poikiloblastic garnets, fine well banded at 65° to core axis. Consists of biotite-garne hornblende-grunerite bands with chert-magnetite bands. Mag is disseminated to laminated within the chert. Average Modes Quartz 25 - 30% Biotite 20 - 25% Garnet 10 - 15% Hornblende 7 - 10% Grunerite 7 - 10% Magnetite 3 - 5% Calcite 1 - 3%	grey an graine et- gnetite	a 168 a 168 168	351 352 353	35.0 39.0 43.0	39.0 43.0 47.0	4.0 4.0 4.0			tr. tr.		
47.0	94.2	<ul> <li>Calcite occurs as disseminations within few chert bands and veinlets. Pyrite occurs as disseminations and as fracture <ul> <li>- 46.9 - epidote along calcitic fracture in chert</li> </ul> </li> <li>ULTRAMAFIC VOLCANICS - light to medium grey, fine to very f grained, well foliated, mineralogy dominated by talc-serpen with minor magnesite (as both disseminations and few veinle 0.5 to 1.0% magnetite occurs as very fine grained dissemina fracture coatings. <ul> <li>- 47.0 to 54.7 - laminated light grey and dark green, few f coated with calcite.</li> </ul> </li> </ul>	few coatin band. ine tine ts). tions a ractur	g. and es									



- 366-1168

LANGRIDGES - TORONTO

			н	OLEN	0. <u>OP</u>	-86-24		SHI	EET NO.	<u> </u>	of 8	
F00	TAGE				SAMPL	.E				ASSAYS		
FROM	то ,	DESCRIPTION	NO	*: SULPH, IDES	FROM	FOOTAGE	10 141			OZ TON	UZ TON	
		- 54.7 to 67.2 - abundant serpentine clots (1/8") which are often elongated parallel to foliation which is 65° to 70° to the core axis. Several calcite veinlets, with no visible sulphide.	16854		56.6	59.6	3.0			tr.		
		- 67.2 to 69.2 - typical.										
		- 69.2 to 75.2 – few calcite-hematite coated fractures oriented from 0° to 25° to core axis. No visible sulphides.	16855 16856		69.2 72.2	72.2 75.2	3.0 3.0			tr. tr.		
		- 75.2 to 79.1 - typical.										
		- 79.1 to 88.6 - similar to 54.7 to 67.2.										
		- 88.6 to 89.5 - typical.										
		- 89.5 to 94.2 - dark grey-green with increase in serpentine.										
94.2	96.6	INTERBEDDED MAFIC VOLCANICS AND METASEDIMENTS – 1" to 2" interbeds of mafic volcanics (60%) and metasediments (40%). Mafic volcanics are dark green, very fine grained, massive with mineralogy dominated by hornblende-actinolite. Metasediments consist of laminations of garnet-biotite and chert. Crenulations in laminae are common. Trace pyrite occurs parallel to laminations in sediment and as fracture coatings. Few en echelon calcite veinlets containing pyrrhotite blebs.	16857		94.2	96.6	2.4			tr.		
96.6	98.0	BANDED IRON FORMATION - medium grey to dark green, fine to very fine grained, laminated to moderately banded. Consists of laminations of chert-magnetite ± grunerite with laminations of hornblende- garnets. Weak to moderately contorted.	16858		96.6	98.0	1.4			.01		
		Average Modes										
	L	Chert     30     -     40%       Magnetite     15     -     20%       Hornblende     15     -     20%       Grunerite     15     -     20%       Garnet     7     -     10%										

NAME OF PROPERTY_ OP-86-24

OPAPIMISKAN LAKE

2 of 8 SHEET NO.

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NAME OF PROPERTY0	PAPIMISKAN LAKE	
HOLE NO0P-86-24	SHEET NO. 3	of 8

F00	TAGE				SAMPL	E		ASSAYS						
FROM	то		NO.	", SULPH, IDES	FROM	FOOTAGE TO	TOTAL		۳.	OZ TON	ÚZ TON			
		Sulphide 0.5 – 1% Calcite 0.5 – 1% Tourmaline trace – 0.5%												
		Pyrite and pyrrhotite occur in calcite-quartz-tourmaline veinlet and with quartz veinlet at 97.1 to 97.2. Banded at 60° to 65° to to core axis.												
98.0	99.6	ULTRAMAFIC VOLCANICS - atypical with mineralogy dominated by tremo- lite with minor serpentine and talc. No visible sulphides.	16859		98.0	99.6	1.6			tr.				
99.6	118.5	BANDED IRON FORMATION - similar to 96.6 to 98.0.												
		- 99.6 to 101.1 - several 1/4" to 1/2" chert bands with 1 to 3% pyrrhotite and edges to the bands. Bands folded with axis near 90° to core axis.	16860		99.6	104.0	4.4			tr.				
		- 101.1 to 104.1 - typical, banded at 65° to core axis.												
		- 104.1 to 105.2 - several small folds with variable orientations.	16861		104.0	109.0	5.0			tr.				
		– 105.2 to 108.3 – weakly chloritized with weak green hue and several chloritic fractures.												
		- 108.3 to 109.1 - heavily chloritized and weathered.												
		- 109.1 to 110.1 - typical, banded at 50° to core axis.	16862		109.0	114.0	5.0			tr.				
		- 110.1 to 112.8 - similar to 105.2 to 108.3.												
		- 112.8 to 115.8 - heavily chloritized, very broken.	16863		114.0	118.5	4.5			tr.				
		– 115.8 to 118.5 – several calcite veinlets.												
		- 118.2 - calcite-pyrite veinlet.												
118.5	130.5	CARNETIFEROUS METASEDIMENTS - medium cream-grey, fine grained with 1/16" poikiloblastic garnets. Massive to weakly banded, schistose. Consists of garnets in a matrix of biotite-quartz-grunerite. Unit has been carbonatized.	16864 16865 16866		118.5 122.5 126.5	122.5 126.5 130.5	4.0 4.0 4.0			tr. tr. tr.				

NAME OF PROPERTY_____OPAPIMISKAN LAKE_____

HOLE NO. 0P-86-24

SHEET NO. 4 of 8

FROM     TO     DESCRIPTION       NO     ". SULPH     FOOTAGE       IDES     FROM     TO       IDES     FROM     TO       Average Modes     Garnet     40       Biotite     25     -       Ouertz     7     -	FOOTAGE				SAMP	LE		ASSAY5					
Average Modes         Garnet         40         -         50%           Biotite         25         -         30%         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <td< th=""><th>FROM TO</th><th>DESCRIPTION</th><th>NO.</th><th>SULPH</th><th>FROM</th><th>FOOTAGE</th><th>TOTAL</th><th></th><th></th><th>07 TON</th><th>OZ TON</th><th></th></td<>	FROM TO	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL			07 TON	OZ TON		
130.5       195.1         BANDED IRON FORMATION - bands of light grey, cream-yellow and dark grey to black, well banded, fine to very fine grained, contorted, consist of 1/4" to 1/2" bands with iron bands of magnetite and grunerite band with grunerite bala with grunerites. The grune	P91-99 - 01NOGOL - SECONDONOGOL - SE	Average Modes         Garnet       40       -       50%         Biotite       25       -       30%         Quartz       7       -       10%         Grunerite       7       -       10%         Galcite       7       -       10%         Galcite       7       -       10%         Galcite       7       -       10%         Galcite       0.5       -       1%         Chlorite       0.5       -       1%         Sulphides       trace       Nagnetite disseminated in few bands. Few calcite veinlets. Sulphide occurs as fine grained disseminations. Several chloritic fractures; some contain pyrite coatings.         BANDED IRON FORMATION - bands of light grey, cream-yellow and dark grey to black, well banded, fine to very fine grained contorted, consist of 1/4" to 1/2" bands with iron bands of magnetite and grunerite band with grunerite haloes. Iron-rich bands are often laminated.         Average Modes       Chert       40       -       45%         Grunerite       30       -       35%         Magnetite       20       -       25%         Galcite       1       -       3%         Sulphides       0.5       -       1%         Sulphides       0.5       -<	16867	IDES	FROM	133.2	2.7			0/ TOM			
LANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-24 SHEET NO. 5 of 8

F001	AGE				SAMPI	Ē			ASSAYS		
FROM	τo		NO.	*: SULPH _I IDES	FROM	FOOTAGE TO	TOTAL	۳.	OZ TON	OZ TON	
		- 133.2 to 134.2 - brecciated with calcite filling and alteration. Trace disseminated pyrite.	16868		133.2	134.2	1.0		tr.		
		- 133.4 - 1/2" calcite veinlet at 30° to the core axis which is visibly connected to other vein- lets and filling within the breccia.									
		- 134.2 to 143.8 - poor to moderately banded, 1 to 3% pyrrhotite and 0.5% pyrite parallel and minor amounts within fractures but the seam relates. Several small 1/2" bands of 7 to 10% sulphide. Section con- tains 10 to 15% garnets.	16869 16870		134.2 139.2	139.2 143.6	5.0 4.4		tr. tr.		
		- 143.8 to 144.2 - two quartz veins, separated by 1/2" of Banded Iron Formation. 3 to 5% pyrrhotite as blebs and wisps within veins and at contact with wall rock.	16871		143.6	144,.6	1.0		tr.		
		<ul> <li>- 144.2 to 156.7 - typical, few 1/2" quartz veinlets, nil to trace sulphides within veinlets.</li> <li>- 146.8 to 147.4 - three calcite-pyrite filled hairline fractures at 45° to core axis.</li> </ul>	16872 16873 16874		144.6 148.7 152.7	148.7 152.7 156.7	4.1 4.0 4.0		tr. tr. tr.		
		- 156.7 to 160.5 - abundant calcite-chlorite fine veinlets, many with pyrite.	16875		156.7	160.5	3.8		.02		
- - - - - - - - - - - - - - - - - - -		<ul> <li>- 157.8 to 158.0 - brecciated with 7 to 10% pyrrhotite and pyrite.</li> <li>- 159.6 to 160.2 - brecciated with quartz-calcite veinlet at 159.9 to 161.1 at 50° to core axis.</li> </ul>									
		- 160.5 to 168.0 - typical, trace to 0.5% sulphide. - 161.1 to 161.4 - quartz vein, no visible sulph- ides.	16876 16877		160.5 164.0	164.0 168.0	3.5 4.0		.01 tr.		
		<ul> <li>- 162.4 to 162.7 - no banding, foliated at 42° to core axis. Probable shear zone. 1 to 3% sul- phides. Moderately chloritized.</li> </ul>									

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NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-24 SHEET NO. 6 of 8

FOO	TAGE				SAMPL	E			ASSAYS		
FROM	10	DESCRIPTION	NO.	", SUL PH	FROM	FOOTAGE TO	TOTAL	~.	OZ TON	UZ TON	
		- 168.0 to 170.4 - brecciated from 168.4 to 168.8 and 169.7 to 170.0. These contain quartz fillings which have also been brecciated and filled with quartz- calcite-chlorite (2 periods?). Fragments of wall rock are altered to light green and pink. Sections between and around the brecciated zone are well fractured and altered to light green and pink. No visible sulphides.	16878		168.0	170.4	2.4		tr.		
		- 170.4 to 171.4 - well folded, no banding, well foliated, moder- ately chloritized. - 171.4 to 181.0 - typical trace to 0.5% sulphide.			170.4	171.4	1.0		tr.		
		<ul> <li>- 171.4 to 181.0 - typical, trace to 0.5% sulphide.</li> <li>- 181.0 to 184.9 - 3 to 5% pyrrhotite and 1 to 2% pyrite as wisps and blebs parallel to banding; 0.5 to 1% sulphide in fractures and veinlets.</li> </ul>	16880 16881 16882		171.4 176.0 181.0	176.0 181.0 184.9	4.6 5.0 3.9		tr. tr. tr.		
		- 184.9 to 195.1 - typical with several hairline quartz fractures at 32° to core axis with fine alteration haloes on some.	16883 16884		184.9 190.1	190.1 195.1	5.2 5.0		tr. tr.		
		- 188.5 ~ 1/4" quartz-calcite veinlet at 30° to core axis.									
G		- 191.5 - 1/16" hematitic alteration with quartz- calcite veinlet.									
8		- 194.0 - banded at $55^{\circ}$ to core axis.					,				
195.1	201.8	GARNETIFEROUS METASEDIMENTS - similar to 118.5 to 130.5 with rare well spaced chert bands and quartz veinlets. Trace disseminated sulphides.	16885 16886		195.1 198.1	198.1 201.8	3.0 3.7		tr. tr.		
8	240.6	BANDED IRON FORMATION - similar to 130.5 to 195.1, weak to moder- ately contorted, trace to 0.5% sulphides.									
		- 201.8 to 205.7 - typical.	16887		201,8	205.7	3.9		tr.		
S		- 205.7 to 213.2 - poorly banded, 1 to 2% pyrrhotite, parallel to	16888		205.7	209.2	3.5		tr.		

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#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. ____ 0P-86-24 _____ SHEET NO. ___ 7 of 8

	F00	TAGE	DECONDICION			SAMPI	_E			ASSAYS		
FF	ROM	то	DESCRIPTION	NO.	* SULPH	FROM	FOOTAGE	TOTAL	۰,	OZ TON	OZ TON	
			- 207.3 to 207.5 - calcite-chlorite veinlet at 207.3 and calcite band to 207.5. 5 to 7% sulphides.									
			- 211.7 to 212.0 - four hairline quartz veinlets at 37° to core axis with 1/4" to 1/2" cream, pink and red alteration haloes (jasper?).	16889		209.2	213.2	4.0		tr.		
			- 213.2 to 240.6 - typical, 0.5 to 1% pyrrhotite, trace to 0.5% pyrite in narrow blebs and stringers.	16890 16891		213.2 218.0	218.0 223.0	4.8 5.0		tr. tr.		
			- 224.5 - banded at 65° to core axis.	16892 16893		223.0 228.0	228.0 233.0	5.0 5.0		tr. tr.		
			<ul> <li>227.6 - 1/8" calcite-chlorite veinlet with trace to 0.5% pyrite 45° to core axis.</li> </ul>	16894		233.0	240.6	3.6		.96	(rerun	tr.)
			- 231.0 - 1/8" quartz veinlet with red and green alteration halo.									
			- 233.5 to 235.5 - 1 to 2% pyrrhotite and 0.5 to 1% pyrite parallel to banding and as fracture filling.									
			- 238.0 to 240.6 - few narrow quartz veinlets.									
24	0.6	246.2	<u>ULTRAMAFIC VOLCANICS</u> - similar to 47.0 to 94.2, trace disseminated sulphides.	19234 16896		240.6 244.8	244.8 246.2	4.2 1.4		tr. .46	(rerun	tr.)
168			- 245.2 - 1/4" calcite-hematite veinlet.							]		
1-99E - 01NOH	6.2	267.7	BANDED IRON FORMATION - similar to 35.0 to 47.0 with garnet-biotite- amphibole bands with quartz-magnetite bands but atypical since not lean with 10 to 15% magnetite. Trace to 0.5% pyrrhotite	16897 16898 16899 16900		246.2 250.4 254.4 258.4	250.4 254.4 258.4 262.4	4.2 4.0 4.0 4.0		tr. tr. tr. .01		
S – TO			- 246.2 to 262.4 - typical.									
LANGRIDGE			<ul> <li>- 262.4 to 264.6 - laminated to poorly banded, with strong sulphide mineralization. 3 to 5% pyrrhotite and 1 to 2% pyrite as wisps, blebs and stringers parallel as well as crosscutting laminations.</li> </ul>	16522		262.4	264.6	2.2		tr.		

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 07-86-24	SHEET NO. 8 of 8

FOO	TAGE	DESCRIPTION		SAMPLE					ASSAYS			
FROM	то	DESCRIPTION	NO.	T SULPH	FROM	FOOTAGE	TOTAL	~		OZ TON	OZ TON	
		- 264.6 - 267.7 - similar to above but with 15 to 20% pyrrhotite and 0.5 to 1% pyrite. Contains few narrow nearly massive bands.	16523		264.6	267.7	3.1			tr.		
267.7	272.2	<u>ULTRAMAFIC VOLCANICS</u> - medium to dark green, fine grained, moder- ately foliated, mineralogy dominated by tremolite-serpentine with minor phlogopite. Few narrow chert bands. Trace sulphides.										
272.2	272.8	BANDED IRON FORMATION - similar to 264.6 to 267.7 with a 1.5" band of near massive pyrrhotite and 3 to 5% pyrite. The unit has 15 to 20% sulphides.	16524		272.0	273.0	1.0			tr.		
272.8	278.0	ULTRAMAFIC VOLCANICS - similar to 267.7 to 272.2 with chert bands near contact with Banded Iron Formation above. Trace phlogopite except 272.8 to 274.2 where there is 5 to 7% phlogopite.										
		- 273.3 to 273.5 - 3 to 5% pyrrhotite.	16525		273.0	274.0	1.0			tr.		
278.0		End of Hole.										
ES - TORONTO - 366-1168										Â	YX M	dan
LANGRIDG												

NAME OF	PROPERTY	<u>OPAPIM</u>	ISKAN LAKE		
HOLE NO.	OP-86-25	LENGTH	34	7'	
LOCATION	<u>15+93NW</u>	2+98NE			
LATITUDE		DEPARTURE .			
ELEVATIO	۷	AZIMUTH	<u>229°</u>	_ DIP	<u>-44.8°</u>
STARTED _	December 3_1	.986 FINISHED	December	5, 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-44.8°				
347'	- 38 - 0°				

#### HOLE NO. 0P-86-25 SHEET NO. 1 OF 1

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REMARKS _____ Summary Log
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PA - 844239
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LOGGED BY D. J. Corkery

FOO	TAGE				SAMP	LE			A	S S A `	15	
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	16	;;	OZ/TON	OZ/TON	
0	5.0	CASING										
5.0	58.9	BANDED GARNETIFEROUS METASEDIMENT					١					
58.9	111.2	ULTRAMAFIC VOLCANICS					, i					
111.2	158.7	CARNETIFEROUS METASEDIMENT										
158.7	209.2	BANDED IRON FORMATION										
		<ul> <li>- 192.4 to 209.2 - contorted banding, near parallel to core axis from 195.2 to 209.2. 0.5 to 1.0% pyrite in fractures in chert bands.</li> </ul>	16562		194.0	199.0	5.0			.09		
		<ul> <li>195.0 to 195.6 - highly contorted with 1 to 3% pyrite.</li> </ul>										
209.2	229.4	<u>METASEDIMENTS</u> - argillite.										
229.4	236.4	GARNETIFEROUS METASEDIMENTS										
236.4	238.5	LAMPROPHYRE DIKE										
238.5	241.5	CARNETIFEROUS METASEDIMENTS									ou di	NAC
241.5	347.0	BANDED IRON FORMATION								()	K V X KO	(), nº '
7.0		End of Hole.								Y	Map 1	

NAME OF	PROPERTY	OPAPIMISKAN LAKE									
HOLE NO.	<u>OP-86-25</u>	LENGTH	347	1	· • • • • • • • • • • • • • • • • • • •						
LOCATION	15+93NW	2+98NE									
LATITUDE		DEPARTURE									
ELEVATION		AZIMUTH	229°	DIP	-44.8°						
STARTED	December 3	1986 FINISHED	December 5	1986							

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	44.8°				
347	-38.0°				

HOLE NO. 02-86-25 SHEET NO. 1 of 8

REMARKS _____

PA - 844239

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FOOT	AGE				SAMP	LE			A	SSAY	'S	
FROM	то	DESCRIPTION	NO.	SULPH-	FROM	FOOT AGE TO	TOTAL	5	۰. ۱.	OZ/TON	OZ/TON	
0 5.0	5.0	CASING         GARNETIFEROUS METASEDIMENTS - dark green to black with pink garnet polkiloblasts (commonly 1/32" to 1/8"), weak to moderately banded, fine grained. Common narrow chert bands (1/4" to 1/2" wide). Few chert bands contain minor magnetite-grunerite.         Average Modes         Biotite       30       -       40%         Hornblende       20       -       25%       Garnet       20       -       25%         Quartz       15       -       20%       Grunerite       0.5       -       1%         Magnetite       trace       -       0.5%       -       1%		JOES	FROM	то	TOTAL		0	02/104	82/10N	
		Sulphide trace Dominantly garnets in biotite and hornblende with quartz grains, laminations and narrow bands. Pyrite and pyrrhotite occur parallel to banding and as fracture coatings. - 5.0 to 9.4 _ moderately banded with minor sericite. - 9.4 to 20.5 - typical, few limonite coated fractures. - 20.5 to 21.1 - quartz vein, no visible sulphides. Vein oriented at 30° to core axis.			5.0 10.0 15.0 20.0	10.0 15.0 20.0 21.5	5.0 5.0 5.0 1.5			.01 .01 tr. tr.		
		- 21.1 to 25.6 - moderately banded with hornblende dominating over biotite.			21.5	26.0	4.5			tr.		
		- 25.6 to 34.0 - typical.	16531 16532		26.0 31.0	31.0 36.0	5.0 5.0			.02 tr.		

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			HOLE NO0P-86-25						SHEET NO. 2 OF 8					
FOC	TAGE				SAMPL	Ē		1		ASSAYS				
FROM	то	DESCRIPTION	NO.	n. SULPH	FROM	FOOTAGE	TOTAL		~	02 TON	OZ TON			
		- 34.0 to 55.2 - moderate to well banded with many quartz-grunerite bands. 0.5 to 1.0% magnetite which is disseminated to laminated within these bands.	16533 16534 16535		36.0 41.0 46.0	41.0 46.0 51.0	5.0 5.0 5.0			tr. .01 tr.				
		- 50.0 - banded at 50° to core axis.	10550	ļ	51.0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	4.0							
		- 55.2 to 58.9 - moderate to poorly banded, grading to very nearly nil biotite with hornblende-garnet with narrow chert bands.	16537		55.0	58.9	3.9			.03				
58.9	111.2	<u>ULTRAMAFIC VOLCANIC</u> - light to medium grey, fine grained, moderately foliated, mineralogy dominated by tremolite-serpentine with minor talc. Trace disseminated pyrite, trace to 0.5% disseminated magnetite.												
		- 58.9 to 63.1 - medium to dark grey-green, massive to weakly laminated, dominated by actinolite-tremolite with few quartz laminations. Few bands of disseminated to laminated magnetite; trace to 0.5% pyrrhotite parallel to lamination and as fracture fillings.	16538		58.9	62.8	3.9			tr.				
		- 63.1 to 66.5 - similar to above with several quartz veinlets. Trace sulphides.												
		<ul> <li>63.1 to 63.5 - 1 to 2% pyrrhotite with trace chalcopyrite and arsenopyrite in fractures assoc- iated with quartz veinlets.</li> </ul>	16539 16540		62.8 63.8	63.8 66.5	1.0 2.7			tr. tr.				
		- 66.5 to 84.6 - typical, as described with few narrow bands con- taining magnesite.												
		- 84.6 to 87.4 – abundant dark clots (1/8" to 1/4") of serpentine with minor magnetite.												
		- 87.4 to 89.8 - as in 66.5 to 84.6.												
		- 89.8 to 92.7 - as in 84.6 to 87.4.												
		- 92.7 to 101.0 - typical wisp serpentine coating fracture from near parallel at 92.7 to 20° to core axis at												

NAME OF PROPERTY_____OPAPIMISKAN LAKE OP-86-25 HOLE NO. ___

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NAME OF PROPERTY_____

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HOLE NO. 0P-86-25 SHEET NO. 3 OF 8

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OPAPIMISKAN LAKE

FOO	TAGE				SAMPL	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	* SUL PH	FROM	FOOTAGE			-	OZ TON	OZ TON	
		- 101.0 to 103.0 - medium grey-green with increased serpentine content.		1023	FROM	10	TOTAL					···
		- 103.0 to 104.0 - 10 to 15% phlogopite and biotite.										
		- 104.0 to 111.2 - dominantly tremolite-actinolite with minor phlogopite.							:			
111.2	158.7	GARNETIFEROUS METASEDIMENTS - dark grey with pink garnets, fine grained, schistose, massive.										
- - 		Average Modes										
		Biotite 40 - 50% Garnets 35 - 45% Quartz 10 - 15% Sulphide trace										
		Garnet poikiloblasts (1/16" to 1/8") occur in a matrix of biotite and fine grained quartz. Sulphides occur as fracture coatings and in fine quartz veinlets.										
		- 111.2 to 121.4 - grades from dominantly quartz, 7 to 10% garnets, minor hornblende and grunerite to typical at 121.4. Trace to 0.5% magnetite.	16541 16542		111.2 116.0	116.0 121.0	4.8 5.0			tr. tr.		
		- 121.4 to 129.0 - typical.	16543		121.0	126.0	5.0	ļ	i	tr. tr.		
		– 129.0 to 132.7 – moderate compositional banding with bands of biotite-quartz.	16549		131.0	136.0	5.0			tr.		
		- 132.7 to 133.7 - typical.										
		- 133.7 to 135.3 - biotite-quartz, no garnets.										
		- 135.3 to 140.0 - 20 to 30% garnets.	16546 16547		136.0 139.8	139.8 141.8	3.8 2.0			tr. tr.		
		- 140.0 to 140.8 - 10 to 12% garnets, several quartz-plagioclase veinlets with green to pink alteration halo veinlets containing several fine blue-grey 'ns (?). Veinl to a several vert 65° to										

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			н	OLEN	o0F	-86-25		Sне	EET NO.	<u>4 o</u>	f 8	
F00'	TAGE				SAMP	LE.				ASSAYS		
FROM	то	DESCRIPTION	NO	SULPH	FROM	FOOTAGE TO	TOTAL			OZ TON	UZ TON	
		core axis. No visible sulphides.										
		- 140.8 to 141.8 - dominantly hornblende, with 7 to 10% garnets and minor quartz. Few veinlets similar to those in 140.0 to 140.8.										
		<ul> <li>- 141.8 to 144.5 - interbedding of garnet-biotite (60%) and garnet- hornblende (40%). Few boudinaged quartz veinlets with trace to 0.5% pyrite adjacent these veinlets or around garnets.</li> </ul>	16548		141.8	146.0	4.2			tr.		
		- 144.5 to 150.0 - typical with trace to 0.5% pyrite adjacent quartz veinlets.	16549		146.0	151.0	5.0			tr.		
		- 149.1 - 1/8" calcite-pyrite veinlet at $47^{\circ}$ to core axis.										
:		<ul> <li>150.0 to 157.0 - few 1/4" bands of chert-magnetite laminations.</li> <li>1 to 3% magnetite. Banding at 13° to core axis at 152.0 and becomes nearly parallel to core axis at 155.0. Several 1/4" concordant quartz veins with 0.5 to 1% pyrite and pyrrhotite within the veins, with associated veinlets and in adjacent wall rock. Also several fine quartz veinlets at high angles to core axis and cut concordant veins. No visible sulphide with these veinlets.</li> </ul>	1655( 16551		151.0 154.0	154.0 157.0	3.0 3.0			tr. tr.		
		- 157.0 to 158.7 - 1 to 3% garnet, contorted quartz veinlets, no visible sulphides.	16552		157.0	158.7	1.7			tr.		
158.7	209.2	BANDED IRON FORMATION - bands of light grey, dark grey to black and dark green, fine grained, moderate to well banded with strong lamin- ation within bands. Generally band of chert-magnetite and hornblen- de-biotite-garnet. Band angles are variable and are given in various subunits.										

NAME OF PROPERTY_____OPAPIMISKAN LAKE

ANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-25 SHEET NO. 5 of 8

FOOT	AGE				SAMPI	ΞE		ASSAYS					
FROM	τo	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE TO	TOTAL		۰;	02 TON	OZ TON		
		Average Modes											
		Quartz       30       -       40%         Hornblende       25       -       30%         Magnetite       20       -       25%         Biotite       7       -       10%         Garnets       5       -       7%         Sulphides       trace       -       0.5%											
		Pyrite and pyrrhotite occur commonly as fracture coatings but in few sections as veinlets and band replacement.											
		- 158.7 to 164.5 - 7 to 10% magnetite and abundant chloritic frac- tures. Fractures are at 15° to core axis (discordant).	16553 16554		158.7 161.5	161.5 164.5	2.8 3.0			tr. tr,			
		- 164.0 - banded at $20^{\circ}$ to core axis.											
		- 164.5 to 165.8 - 12 to 15% pyrrhotite and 2 to 5% pyrite parallel to bands (replacement) and as wisps and stringers across bands.	16555		164.5	166.0	1.5			tr.			
		- 165.8 to 168.8 - 1 to 2% pyrite as wisps associated with hairline fractures.	16556		166.0	169.0	3.0			.03			
		- 166.0 - banded at $66^\circ$ to core axis.											
		- 168.8 to 172.8 - 10 to 15% magnetite.											
		- 171.0 - banded at 20° to core axis.	16557 16558 16559		169.0 174.0 179.0	174.0 179.0 184.0	5.0 5.0 5.0			tr. tr. tr.			
		Several hairline quartz-calcite filled fractures at high angle to core axis. Trace sulphide.	16560 16561		184.0 189.0	189.0 194.0	5.0 5.0			tr. tr.			
		- $177.0$ - banded at $37^{\circ}$ to core axis.											
		- 177.3 - quartz veinlet with light green alter- ation band. No visible sulphides.											

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OPAPIMISKAN LAKE

HOLE NO. _____ 0P-86-25 ______ SHEET NO. ____ 6 of 8

F00	TAGE	DESCRIPTION			SAMP	LË			ASSAYS		
FROM	70	DESCRIPTION	NO.	", SUL PH	FROM	FOOTAGE	TOTAL		OZ TON	OZ TON	
		- 186.0 - 1/4" calcite veinlet with 1% pyrite. - 186.5 - banded at 35° to core axis.									
		- 192.4 to 195.0 - banding contorted.	Į								
		- 195.0 to 209.2 - banding near parallel to core axis but abundant small folds cause constant variations. Folds	16562		194.0	199.0	5.0		.09		
		have 3" to 6" frequency and 1" to 2" amplitude. 0.5 to 1% pyrite in fracture chert bands.	16563		199.0	204.0	5.0		.01		
		- 195.0 to 195.6 - highly contorted with 1 to 3% pyrite.	16564		204.0	209.2	5.2		tr.		
209.2	229.4	METASEDIMENTS - dark grey, fine grained, well foliated, argillite.	16565 16566 16567 16568	5	209.2 214.4 219.4 224.4	214.4 219.4 224.4 229.4	5.2 5.0 5.0 5.0		tr. tr. tr. tr.		ļ
		Biotite 25 - 35% Hornblende 25 - 35% Quartz 25 - 35% Calcite trace - 0.5% Pyrite trace									
		Pyrite occurs as fracture coatings. Calcite occurs in many fine veinlets. Several discontinuous quartz veinlets with minor calcite.									
88	х Т	- 217.9 to 218.0 - quartz vein at 45° to core axis; no visible sulphides.									
0 - 366-11		- 219.8 to 219.9 - quartz vein; no visible sulphides.									
229.4	236.4	<u>GARNETIFEROUS METASEDIMENTS</u> - medium to dark grey, fine to very fine grained with medium to coarse garnet poikiloblasts. Matrix for garnets is hornblende-biotite with minor grunerite. Trace to 0.5% magnetite disseminated in small bands. Several chlorite and calcite filled fractures. Trace sulphides.									
		- 229.4 to 231.7 - typical, garnet content is 30 to 40%.	16569		229.4	232.4	3.0		tr.		

FOO	TAGE	DECONDITION			SAMPL	LE				ASSAYS		
EROM	70	DESCRIPTION	NO.	SUL PH		FOOTAGE			6	07.700	67 704	
- ROM				IDES	FROM	то	TOTAL	•	•	02 104	01 104	
		- 231.7 to 236.4 - garnet content is 50 to 60% and unit appears nearly massive.	16570		232.4	236.4	4.0			tr.		
236.4	238.5	LAMPROPHYRE DIKE - dark grey to black, fine grained, porphyritic with black phenocrysts, massive. Phenocrysts are serpentinized pseudomorphs. Mineralogy consists dominantly of serpentine, chlor- ite and calcite with minor phlogopite. Few fine calcite veinlets. 4" chilled margins. No visible sulphides.	16571		236.4	238.5	2.1			tr.		
238.5	241.5	GARNETIFEROUS METASEDIMENTS - similar to 229.4 to 236.4. Trace pyrite.	16572		238.5	241.5	3.0			.02		
241.5	347.0	BANDED IRON FORMATION - bands of light grey, dark grey and cream- yellow. Well banded, fine to very fine grained, weak to moderately contorted. Generally consists of 1/2" to 2" band of chert inter- bedded with iron-rich bands. The iron rich bands consist of magnetite-grunerite and have a 1/8" grunerite rim.										
		Average Modes					-					
		Quartz       35       -       45%         Grunerite       25       -       35%         Magnetite       20       -       25%         Calcite       3       -       5%         Sulphide       trace       -       0.5%										Ĩ
		Calcite occurs disseminated in iron-rich bands and in few fine veinlets. Pyrrhotite occurs generally within iron-rich bands but also occurs as fracture coatings and fillings.					:					
	1	- 241.5 to 243.0 - typical.										
~		- 243.0 to 245.2 - contorted bands, several brecciated bands, few calcite veinlets in brecciated zone.	16573		241.5	246.0	4.5			tr.		
		- 245.2 to 262.0 - moderately banded and contorted.	16574 16575		246.0	251.0 256.0	5.0 5.0			tr. tr.		
		- 262.0 to 263.2 - 3 to 5% garnet and 1 to 3% pyrite.	16576 16577 16578		256.0 259.0 262.0	259.0 262.0 265.0	3.0 3.0 3.0			.02 tr. tr.		

NAME OF PROPERTY_____OPAPIMISKAN LAKE HOLE NO____OP-86-25_____SHEET NO___7 of 8

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NAME OF PROPERTY_____

OPAPIMISKAN LAKE

HOLE NO. 0P-86-25 SHEET NO. 8 of 8

FOOT	AGE	DECORIDION			SAMP	LΕ				ASSAYS		
FROM	то		ND.	SULPH	FROM	FOOTAGE TO	TOTAL		-,	02 TON	OZ TON	
					205.0	1070 0	5.0	1				
		- 263.2 to 265.1 - massive to finely laminated, dominantly magnetite	165/9		265.0	270.0	5.0	l		Lr.		
1		-grunerite with 1 to 2% pyrrhotite parallel to	16580		270.0	275.0	5.0		1	.02		
1		lamination. Laminated at 30° to core axis.	16281		275.0	280.0	5.0	1		tr.		
			16582		280.0	283.0	3.0	1		tr.		
		- 265.1 to 283.8 - typical.										
		- 283.8 to 284.0 - quartz vein with 0.5 to 1% pyrrhotite.	16583		283.0	285.0	2.0			tr.		
		- 284.0 to 284.5 - 7 to 10% pyrrhotite parallel to banding.				1						
1		- 284.5 to 347.0 - typical, 0.5 to 1% pyrrhotite parallel to banding	16584		285.0	290.0	5.0			tr.		
1		and as fracture filling. Sulphide mainly in	16585		290.0	295.0	5.0			tr.		
		contorted bands. Few narrow quartz veinlets.	16586		295.0	300.0	5.0			tr.		
		· · · · · · · · · · · · ·	16587		300.0	305.0	5.0			.01		
		-289.0 - banded at 40° to core axis.	16588		305.0	310.0	5.0			tr.		
			16589		310.0	315.0	5.0			.01		
		-305.0 to $332.0$ - banding highly variable with	16590		315.0	320.0	5.0			tr.		
		= 505.0 to 552.0 = banding nighty variable	16591	]	320.0	325.0	5.0			.01		
l		many small folds fecognizable.	16592		325 0	330.0	5.0	1		tr.		
		214.0 1" sucrets usin with 1° purchasida	16503		330 0	335 0	5 0			tr.		
		- 514.0 - 1 quartz vein with 1% pyrhotice	1450/		225 0	340 0	5.0			tr		
		in fractures.	10,594	1	2000	240.0	1.0	]	ļ		ļ	
		- 340.0 - banded at $50^{\circ}$ to core axis.	16595		340.0	347.0	3.0			tr.		
47.0		End of Hole.										
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			[							$ \mathcal{A} $		
											1	

NAME OF	PROPERTY	OPAPIMI	SKAN LAK	E		_
HOLE NO.	<u>OP-86-26</u>	LENGTH		298'		_
LOCATION	17+00NW	1+02SW				-
LATITUDE	- <u></u>	DEPARTURE _				_
ELEVATION	AME OF PROPERTY       IIPAPIMISKAN LAKE         OLE NO.       OP-86-26       LENGTH       298'         OCATION       17+00NW       1+02SW       298'         ATITUDE       DEPARTURE       200'       200'         LEVATION       AZIMUTH       049°       01P       -46°         TARTED       December 7, 1986       FINISHED       December 9, 1986		_			
STARTED	December 7, 19	86	Decembe	<u>r 9, 1986</u>		_

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0°				
298'	42.0°				

#### HOLE NO. 0P-86-26 SHEET NO. 1 of 2

REMARKS _____ Summary Log

PA - 844239

LOGGED BY D. J. Corkery

FOO	TAGE				SAMP	LE		ASSAYS						
FROM	то	SUMMARY LOG	NO.	SULPH-	FROM	FOOTAGE TO	TOTAL	16	"'o	OZ/TON	OZ/TON			
0	25.0	CASING												
25.0	40.3	GARNETIFEROUS METASEDIMENTS							:					
40.3	42.4	MAFIC VOLCANICS												
42.4	62.8	GARNETIFEROUS METASEDIMENTS												
62.8	70.8	MAFIC VOLCANIC (SHEARED)												
70.8	90.3	GARNETIFEROUS METASEDIMENTS												
90.3	151.7	ULTRAMAFIC VOLCANICS												
151.7	167.0	CARNETIFEROUS METASEDIMENTS												
167.0	188.4	BANDED IRON FORMATION												
188.4	191.4	GARNETIFEROUS METASEDIMENTS												
191.4	192.9	BANDED IRON FORMATION												
192.9	199.7	GARNETIFEROUS METASEDIMENTS												
199.7	245.7	BANDED IRON FORMATION												
245.7	253.6	CARNETIFEROUS METASEDIMENTS												
252.6	255.7	BANDED IRON FORMATION												
255.7	263.6	GARNETIFEROUS METASEDIMENTS												

NAME OF PROPERTY	<u>OPAPIMISKAN</u> I	<u>AKE</u>
HOLE NO0P-86-26	SHEET NO	2 of 2

	F00	TAGE	DECONIDA			SAMPL	- E				ASSAYS		
	FROM	то	DESCRIPTION	NO.	SUL PH.	FROM	FOOTAGE	TOTAL			07 TON	OZ TON	
	263.6	266.5	BANDED IRON FORMATION										
	266.5	271.3	METASEDIMENTS										
	271.3	272.3	BANDED IRON FORMATION	5									
	272.3	275.5	MAFIC VOLCANICS										
	275.5	277.3	BANDED IRON FORMATION						ľ				
	277.3	280.6	GARNETIFEROUS METASEDIMENTS			-				]			
	280.6	294.4	BANDED IRON FORMATION										
	294.4	298.0	GARNETIFEROUS METASEDIMENTS					5					
	298.0		End of Hole.										
				5									
		×.						-		i I			
68								:					
366-11													/
ONTO -												$\gamma$	MANNE
- TOR													No. C
RIDGES												$\mathcal{T}$	
LANG.													
<b>ا</b> د.													

NAME OF PROPER	OPAPI	MISKAN LAKE		
HOLE NOOP-	<u>-86-26</u> Length	2	98'	
LOCATION	1+02SW			
LATITUDE	DEPARTURE			
ELEVATION	AZIMUTH	049°		-46°
STARTED Decembe	<u>r 7, 1986</u> FINISHED	December	9, 1986	<u>.</u>

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0°				
298'	-42.0				
-					

HOLE NO. 02-86-26 SHEET NO. 1 of 8

REMARKS _____

PA - 844239

LOGGED BY D. J. Corkery

FOOT	AGE				SAMP	LE			A	SSAY	s	
FROM	то	DESCRIPTION	NO.	SUL PH	FROM	FOOT AGE TO	TOTAL	76	7°	OZ/TON	OZ/TON	
0	25.0	CASING										
25.0	40.3	GARNETIFEROUS METASEDIMENT - dark grey, fine grained with coarse white to pink garnet poikiloblasts; well foliated.										
		Average Modes										
		Biotite25-35%Quartz25-35%Garnet15-25%Staurolite5-7%Pyritetrace-0.5%										
		- 25.0 to 27.3 - 3 to 5% garnet. - 27.3 to 31.3 - typical.	16597		25.0	30.0	5.0			tr.		
~		- 31.3 to 33.0 - few narrow sericite-rich bands.	16598		30,0	35.0	5.0			tr.		
		- 33.0 to 40.3 - typical.	16599		35.0	40.3	5.3			tr.		
40.3	42.4	MAFIC VOLCANICS - dark green, fine to very fine grained, weakly foliated, mineralogy dominated by hornblende-actinolite. Gradation- al contact from sediments above and below, thus few garnetiferous bands near contacts. Also few garnets in 1/2" band at 43.8. Trace to 0.5% pyrite and pyrrhotite as fracture fillings.	16600		40.3	42.4	2.1			tr.		

LANGRIDGES - TORONTO - 366-1168

1

NAME OF PROPERTY _____ OPAPIMISKAN LAKE

HOLE NO. 0P-86-26 SHEET NO. 2 of 8

F001	TAGE				SAMPL	E			ASSAYS		
FROM	то	DESCRIPTION	NO.	7, SUL PH		FOOTAGE			OZ TON	UZ TON	
				IDES	FROM	to	TOTAL	 			
42.4	62.8	GARNETIFEROUS METASEDIMENTS - atypical with 20 to 30% garnets, trace staurolite, and 15 to 20% amphibole as narrow interbeds and with biotite. 0.5 to 1% pyrite as disseminations and as fine fracture fillings.	-								
		- 42.4 to 42.9 - grades from mafic flow with banding of mafics and sediments.	19001		42.4	47.4	5.0		.02		
		<ul> <li>42.6 - chalcopyrite wisp with chert lamination in garnet pressure shadow.</li> </ul>									
		- 42.9 to 47.5 - as described.									
		<ul> <li>- 44.2 - 1/2" band of 3 to 5% pyrite and pyrrhotite with trace arsenopyrite.</li> </ul>									
		- 47.5 to 49.0 - sheared and silicified, minor brecciated, highly contorted foliation, no visible sulphides.	19002		47.4	49.0	1.6		tr.		
		- 49.0 to $60.8$ - contains several $1/4$ " to $1/2$ " chert bands.	19003		49.0	53.0	4.0		tr.		
		$60.9$ to $61.4$ sheared at $65^{\circ}$ to some syis. Zone is chloritized	19004		57 0	60.0	3.0		LL. tr		
		and contains 1" quartz-calcite vein at 60.0. Several fine calcite filled fractures, 0.5 to 1% pyrite in fracture in adjacent wall rock.	19006		60.0	62.8	2.8		tr.		
		- 61.4 to 62.8 - amphibole dominates over biotite.									
62.8	70.8	<u>MAFIC VOLCANIC</u> (SHEARED?) - light to medium grey-green, fine grain- ed, schistose, mineralogy dominated by chlorite-carbonate. Many carbonate and quartz veinlets. Trace disseminated pyrite.									
		- 62.8 to 64.8 - as in 40.3 to 42.4, with several garnet-biotite interbeds. (Transition from sediments)	19007		62.8	64.8	2.0		tr.		
		- 64.8 to 67.6 - ground core.	19008		64.8	67.8	3.0		tr.		
		- 67.6 to 70.8 - typical.	19009		67.8	70.8	3.0		tr.		

LANGRIDGES - TORONTO - 366-1168

#### NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-86-26 SHEET NO. 3 of 8

FOOTAG	GE		Τ		SAMPI				ASSAYS		
FROM	то	DESCRIPTION	NO.	SUL PH	FROM	FOOTAGE	total	۰.	OZ TON	UZ TON	
70.8 9	90.3	GARNETIFEROUS METASEDIMENTS - atypical, well banded with 1" to 2" garnet-biotite, garnet-hornblende (± grunerite) with 1/4" to 1/2" chert interbeds. Moderately contorted. Trace to 0.5% pyrite.									
		<ul> <li>70.8 to 88.0 - as described.</li> <li>88.0 to 90.3 - 0.5% magnetite as disseminations and laminations in chert bands.</li> </ul>	19010 19011 19012 19013	2	70.8 75.3 80.3 85.3	75.3 80.3 85.3 90.3	4.5 5.0 5.0 5.0		tr. tr. tr. tr.		
90.3 15	51.7	ULTRAMAFIC VOLCANICS (INTRUSIVE?) - medium to dark grey, fine grained, well foliated.									
		Average ModesSerpentine45-50%Talc35-45%Carbonate3-5%Magnetitetrace-0.5%Magnetite occurs as disseminations or within serpentine clots. Carbonate (magnesite and dolomite) is both disseminated and in laminations 90.3 to 98.0 - typical 98.0 to 102.7 - few 1/4" serpentine clots 102.7 to 120.8 - typical, few hematite coated fractures 120.8 to 138.1 - abundant serpentine clots (1/8" to 1/4") with 0.5 to 1% magnetite. - 125.2 to 126.0 - asbestos 138.1 to 147.2 - typical 147.2 to 150.0 - greenish hue with increase in serpentine 150.0 to 151.7 - transition to sediment below. 1" bands of tremolite-actinolite with minor phlogopite	19014		150.0	151.7	1.7		tr.		

DESCRIPTION

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FOOTAGE

FROM

151.7

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167.0

ANGRIDGES - TORONTO - 366-1168

	DESCRIPTION										
	BESCRIPTION	NO	", SUL PH.		FOOTAGE		1	T	1		<u> </u>
10			IDES	FROM	TO	TOTAL	1.	1	OZ TON	OZ TON	1
	interbedded with 1/4" bands of chert, bands containing 1 to 3% magnetite. 1/8" grunerite rim surround chert bands.										
167.0	<u>GARNETIFEROUS METASEDIMENTS</u> - atypical, well banded to near massive trace disseminated sulphides.										
	- 151.7 to 158.0 - similar to 70.8 to 90.3, with 15 to 20% garnet.	19015	2	151.7	157.0	5.3			tr.		
	- 158.0 to 167.0 - dark grey with pink garnets, fine to very fine grained, nearly massive.										
	Average Modes										
	Biotite 25 – 35% Quartz 25 – 35% Garnet 10 – 15% Hornblende 7 – 10% Sulphides trace										
	- 158.1 to 158.7 - 10 to 12% pyrite parallel to foliation.	1901 <i>6</i> 19017		157.0 162.0	162.0 167.0	5.0 5.0			tr. tr.		
188.4	BANDED IRON FORMATION - bands of dark grey and dark green to black with pink garnets, fine to very fine grained. Consists of bands of hornblende-biotite-garnet interbedded with bands of chert-magnetite Chert-magnetite bands are well laminated and contain disseminated grunerite.										
	Average Modes										

OPAPIMISKAN LAKE

SHEET NO. 4 of 8

ASSAYS

NAME OF PROPERTY___

HOLE NO. 02-86-26

SAMPLE

Quartz	25	-	30%
lagnetite	20	-	25%
Biotite	15	-	20%
lornblende	10	-	15%
Garnets	10	-	15%
Grunerite	5	-	7%
<b>Pyrrhotite</b>	trace	-	0.5%

Pyrrhotite occurs parallel to banding.

FOOTAGE

#### HOLE NO. <u>OP-86-26</u> SHEET NO. <u>5 of 8</u> SAMPLE ASSAYS NO. <u>SULPH</u> FOOTAGE IDES FROM TO TOTAL . . OZ TON OZ TON

NAME OF PROPERTY_____

OPAPIMISKAN LAKE

_ 1	100	- AOL	DESCRIPTION										
1			DESCRIPTION		3 SULPH	1	FOOTAGE						
- 1	FROM	TO		140.	IDES	FROM	10	TOTAL	<b>~</b> •		OZ TON	OZ TON	
	FROM	191.4	DESCRIPTION - 167.0 to 179.3 - typical. - 176.0 - banded at 70° to core axis. - 179.3 to 184.0 - garnet-biotite free. - 181.2 - several pyrite blebs in 1/2" zone with contorted bands. - 184.0 to 188.4 - typical. <u>GARNETIFEROUS METASEDIMENTS</u> - dark grey to black with pink garnets, fine grained with medium grained garnet poikiloblasts, weakly banded <u>Average Modes</u> Biotite 35 - 452	NO. 19018 19019 19020 19021 19023	* SULPH, 1DES	FROM 167.0 172.0 177.0 182.0 185.0 188.4	FOOTAGE         172.0         177.0         182.0         185.0         188.4         191.4	101AL         5.0         5.0         5.0         3.0         3.4         3.0	7	-	02 TON tr. tr. .02 .01 .02 tr.	07 TON	
			Biotite 35 - 45% Garnet 25 - 35% Plagioclase 7 - 10% Hornblende 7 - 10% Magnetite 0.5 - 1% Sulphide trace Sulphides are disseminated. Magnetite is disseminated in small bands. - 188.6 to 188.7 - 3 to 5% disseminated magnetite.										
	191.4	192.9	BANDED IRON FORMATION - similar to 167.0 to 188.4. Trace sulphides.	19024		191.4	192.9	1.5			tr.		
10 - 366-116	192.9	199.7	GARNETIFEROUS METASEDIMENT - similar to 188.4 to 191.4 but with 40 to 50% garnet. Trace sulphide.	19025 19026		192.9 196.7	196.7 199.7	3.8 3.0			tr. tr.		
LANGRIDGES - TORON	199.7	245.5	BANDED IRON FORMATION - bands of light grey, dark grey and cream- yellow, well banded, fine to very fine grained, weak to moderately contorted. Generally bands of chert interbedded with iron-rich bands of magnetite, grunerite, quartz and carbonate. Iron-rich bands have a 1/8" to 1/4" grunerite halo.										

366-1168

TORONTO

LANGRIDGES -

OPAPIMISKAN LAKE NAME OF PROPERTY_____

HOLE NO. 0P-86-26 SHEET NO. 6 of 8

FOOT	AGE	DEFERINTION			SAMPL	-E				ASSAYS		
FROM	то	DESCRIPTION	NO.	", SUL PH		FOOTAGE		.4	~	OZ TON	OZ TON	
				IDES	FROM	<u>, TO</u>	TOTAL		•			
		Average Modes										
		Chert 30 - 40% Grunerite 30 - 40% Magnetite 15 - 20% Calcite 5 - 7% Hornblende 1 - 3% Garnets 0.5 - 1% Sulphide 0.5 - 1% Pyrrhotite and pyrite generally occurs parallel to banding (commonly in iron-rich bands) with minor amounts and fracture fillings. Few										
		narrow calcite veinlets at 35° to core axis. Dominantly garnet free but contains sections with garnetiferous bands.	1									
		- 199.7 to 202.8 - typical.	L9027		199.7	204.0	4.7			tr.		1
		- 201.0 - band at $65^{\circ}$ to core axis.										
		– 202.8 to 205.0 – few 1/4" garnet-biotite bands.										
		- 205.0 to 208.0 - moderately banded, 3 to 5% pyrrhotite.	19028		204.0	208.0	4.0			tr.		
		- 208.0 to 218.7 - typical.	19029		208.0	213.0	5.0			tr.		
		- 218.7 to 221.2 - several garnet-hornblende-biotite bands.	19030		218.0	223.0	5.0			.01		
		- 221.2 to 231.4 - typical.	19032		223.0	228.0	5.0			.01		
		- 229.0 - banded at $70^\circ$ to core axis.										
		- 231.4 to 233.5 - several narrow garnetiferous bands.	19033		228.0	233.0	5.0			tr.		
		- 233.5 to 236.4 - banding near parallel to core axis with several fold closures. Axial planes are near 90° to core axis.	19034		233.0	238.0	5.0			.01		
	,	- 236.4 to 245.5 - typical with several small folds visible.	19035 19036		238.0 242.0	242.0 245.5	4.0 3.5			.01 .02		

NAME OF PROPERTY. OPAPIMISKAN LAKE HOLE NO. ______ 0P-86-26 ______ SHEET NO. _____7 of 8

FOO	TAGE				SAMPI	_E			 ASSAYS		
FROM	τo		NO.	SULPH	FROM	FOOTAGE TO	TOTAL	•	02 TON	UZ TON	
245.5	253.6	GARNETIFEROUS METASEDIMENT - similar to earlier garnetiferous units. Trace sulphides.									
		- 245.5 to 250.2 - similar to 192.9 to 199.7.	19037		245.5	249.6	4.1		.02		
		- 250.2 to 250.5 - 7 to 10% magnetite in garnet-grunerite bands.							1		
		- 250.5 to 253.6 - similar to 184.4 to 191.4.	19038	5	249.6	253.6	4.0		tr.		
253.6	255.7	BANDED IRON FORMATION - similar to 167.0 to 188.4 but poorly banded well laminated. Trace sulphide.	19039		253.6	255.7	2.1		tr.		
		- 255.2 - 1/2" band of 7 to 10% pyrrhotite around a boudinaged chert band.									
255.7	263.6	<u>GARNETIFEROUS METASEDIMENTS</u> - similar to 184.4 to 191.4, trace sulphide.	19040 19041		255.7 259.6	259.6 263.6	3.9 4.0		.01 .03		
		- 262.7 - $1/2$ " quartz vein with no visible sulphide									
263.6	266.5	BANDED IRON FORMATION - similar to 167.0 to 188.4 but moderately banded and moderately laminated. Trace to 0.5% pyrrhotite.	19042		263.6	266.5	2.9		.02		
		- 263.9 to 264.1 - several quartz calcite veinlets.									
		- 265.9 to 266.5 - several quartz-calcite veinlets, 0.5 to 1% pyrrhotite at boundaries of veinlets.									
266.5	271.3	METASEDIMENT – dark brown-grey, fine grained, well foliated, similar to 158.0 to 167.0 but with no garnets. Trace disseminated sulphide. Few narrow quartz veinlets with no visible sulphides.	19043		266.5	271.0	4.5		tr.		
271.3	272.3	BANDED IRON FORMATION - similar to 179.3 to 184.0 with chlorite and calcite veinlets from 179.3 to 179.4. No visible sulphides.	19044		271.0	271.3	1.3		tr.		
L ² 12.3	275.5	MAFIC VOLCANICS - similar to 266.3 to 271.3.	19045		271.3	275.5	4.2		tr.		
275.5	277.3	BANDED IRON FORMATION - similar to 167.0 to 188.4, trace sulphides.	19046		275.5	277.3	1.8		tr.		
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NAME OF PROPERTY_	OPAPIMISKAN	LAKE

HOLE NO. 0P-86-26 SHEET NO. 8 of 8

FC	OTAGE	DESCRIPTION	SAMPLE					ASSAYS				
FROM	to		NO.	", SUL PH	FROM	FOOTAGE	TOTAL		·.	OZ TON	UZ TON	
277.	3 280.6	<u>GARNETIFEROUS METASEDIMENT</u> - similar to 192.9 to 197.7.	19047 19048		277.3	280.6	3.3 3.8			tr. tr.		
200.	0 294.4	pyrrhotite parallel to banding. - 294.0 - banded at 63° to core axis.	19049 19050		284.4 289.4	289.4 294.4	5.0 5.0			.03 tr.		
294.	4 298.0	GARNETIFEROUS METASEDIMENT - similar to 192.9 to 197.7, trace sulphides.	19051	-	294.4	298.0	3.6			tr.		
		– 294.4 to 296.0 – typical. – 296.0 to 297.0 – 3 to 5% disseminated magnetite.										
298.	0	- 297.0 to 298.0 - typical. End of Hole.										
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									- 			
- TORONTO - 366-1168											Appe	la m
LANGRIDGES -										$\mathcal{J}'$		

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NAME OF	PROPERTY		OPAPIM			
HOLE NO.	<u>OP-86-27</u>		LENGTH	397'		<u>_</u>
LOCATION	17+00NW	2+98N	<u> </u>		·····	
LATITUDE			DEPARTURE	<u></u>		
ELEVATION	·		AZIMUTH	229°	019	<u>-58.3°</u>
STARTED	December 9.	1986	FINISHED	December 11.	1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-58.3°				
397'	-49.3°				

HOLE NO. 0P-86-27 SHEET NO. 1 of 1

REMARKS ______ Summary Log

PA - 844239

LOGGED BY L. Jones

FOOT	TAGE				5 A M P	LE		ASSAYS					
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	15	15	OZ/TON	OZ/TON		
0	10.4	CASING											
10.4	84.3	GARNETIFEROUS SEDIMENT										1	
84.3	117.0	ULTRAMAFIC FLOW											
117.0	127.0	MAFIC FLOW (?)											
127.0	180.0	GARNETIFEROUS SEDIMENT										ļ	
180.0	217.9	INTERBEDDED GARNETIFEROUS SEDIMENT and BANDED IRON FORMATION											
217.9	291.2	BANDED IRON FORMATION											
		- 217.9 - 241.8 - bands are commonly finely laminated.											
		- 241.8 - 291.2 - few laminations within bands.										1	
291.2	309.6	MAFIC VOLCANIC							].				
		- 303.0 - 306.7 - Lamprophyre Dike.										I	
309.6	397.0	BANDED IRON FORMATION - trace pyrite and pyrrhotite.	1917	1	347.0	352.0	5.0			.11			
397.0		End of Hole.											
											hand	A.a.A	
										$\square$	W	<i>/</i>	
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NAME OF	PROPERTY	<u>OPAPIMI</u>	SKAN LAKE		
HOLE NO.	<u>OP-86-27</u>	LENGTH	397'		
LOCATION	17+00NW 2+9	8NE			
LATITUDE		DEPARTURE			
ELEVATION	I	AZIMUTH	<u>229°</u>	DIP	-58.3°
STARTED	December 9, 1986	FINISHED	December 11	. 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-58.3				
397'	-49.3	>			

HOLE NO. 0P-86-27 SHEET NO. 1 of 5

REMARKS _____

PA - 844239

LOGGED BY L. Jones

FOOTAGE				SAMP	LE			A	SSAY	'S	
FROM TO	UESCRIFTION	NO.	SULPH-	FROM	FOOTAGE	TOTAL.	4	, . , .	OZ/TON	OZ/TON	
0 10.4	CASING										
10.4 84.3	GARNETIFEROUS SEDIMENT - matrix dark grey-black, very fine grained, infrequently banded, banding 15° to core axis at 38', 50° at 82'. Garnets 1-5 mm, pink, subhedral to euhedral; garnet content varies locally from 15% to 60%. Magnetite in 2/3-2.5 cm chert-magnetite bands. Sulphides occur as fine, infrequent stringers and blebs. Chlorite in infrequent bands up to 2.5 cm.         Average Modes         Biotite       40         Biotite       30         Garnets       30         Average Modes         Biotite       3         Garnets       30         Average Modes         Biotite       5%         Chert       5         Struct       5%         Chert       5         Pyrite       trace         Pyrrhotite       trace         Pyrrhotite       trace         -       81.7 - 82.1 - trace chalcopyrite as fine stringers and blebs.         ULTRAMAFIC FLOW - medium to dark grey, greenish hues towards contacts. Generally fine grained. Mildly magnetic. Mineralogy predominantly talc and serpentine.         -       84.3 - 87.0 - section has greenish hues, almost appears to be mafic flow but grades into ultramafic.         -       92.0 - 105.0 - serpentine as dark, irregular clots 3-5 cm across, possibly pseudomorphs after olivine.	19101 19102 19103 19104 19105 19106 19107 19108 19109 19110 19111 19112 19113 19114 19115 19116 19117		10.4 14.2 17.0 22.0 37.0 42.0 47.0 52.0 57.0 62.0 67.0 72.0 77.0 81.2 82.5	14.2 17.0 22.0 37.0 42.0 47.0 52.0 57.0 62.0 67.0 72.0 77.0 81.2 82.5 84.3	3.8 2.8 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0			tr. tr. tr. .01 tr. .01 tr. tr. tr. tr. tr. .01 tr. tr. tr.		

			HOLE NO. 0P-86-27 SHEET NO. 2 OF 5								
F00	TAGE	DESCRIPTION			SAMP	LE			ASSAYS		
FROM	τo		ND,	% SULPH	FROM	FOOTAGE TO	TOTAL	-ī,	OZ TON	OZ TON	
		- 109.0 - 111.0 - foliation parallel to core axis.									
		- 112.0 - 117.0 as in 84.3 - 87.0.									
		<ul> <li>114.1 - 114.5 - very friable, possibly sheared, general appearance of this unit indicates that it may be intrusive.</li> </ul>									
117.0	127.0	<u>MAFIC FLOW</u> ? - fine grained, dark green with irregular, wispy light grey streaks, possibly due to tremolite-actinolite. Upper and lower contacts both gradational.	19118 19119		117.0 122.0	122.0 127.0	5.0 5.0		.01 tr.		
		- 121.0 - 127.0 - 3-5% garnets, 2-3 mm, irregularly distributed. Banding generally 25° to core axis.						}			
127.0	180.0	GARNETIFEROUS SEDIMENT - matrix dark brown-black, very fine grained, garnets 1-5 mm, commonly 1-2 mm. Garnet content varies locally from 5% to 50%. Infrequent chert-magnetite bands. Trace pyrite and pyrrhotite erratically distributed as fine stringers and blebs.	19120 19121 19122 19123 19123		127.0 132.0 134.7 138.1 139.4	132.0 134.7 138.1 139.4 143.0	5.0 2.7 3.4 1.3 3.6.		tr. tr. tr. tr. tr.		
		Average ModesGarnets $30$ - $40\%$ Biotite $50$ - $60\%$ Chert $5$ - $10\%$ Plagioclase $5$ - $10\%$ Chlorite $5$ - $10\%$ Grunerite $3$ - $5\%$	19125 19126 19127 19128 19129 19130 19131 19132		143.0 147.0 152.0 157.0 162.0 167.0 170.2 174.3	147.0 152.0 157.0 162.0 167.0 170.2 174.3 178.1	4.0 5.0 5.0 5.0 3.2 4.1 3.8		tr. tr. tr. tr. tr. tr. tr.		
180.0	217.9	PyritetracePyrrhotitetrace- 138.2 - 139.2 - mafic flow 163.0 - 164.5 - banding parallel to core axis 171.0 - 174.0 - banding parallel to core axis.INTERBEDDED GARNETIFEROUS SEDIMENT AND BANDED IRON FORMATION -bands commonly 1/2 - 1 cm wide, with iron formation bands finelylaminated.Proportion of garnetiferous sediment decreases towards217.9'.Banding usually less than 20° to core axis.	19133		178.1	180.0	1.9		.01		

OPAPIMISKAN LAKE

NAME OF PROPERTY___

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• · . NAME OF PROPERTY OPAPIMISKAN LAKE 

HOLE NO. ______ OP-86-27______ SHEET NO. _____ 3 of 5______

FOO	TAGE	DESCRIPTION	Τ		SAMP	LE		ASSAYS					
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	•	τ.	OZ TON	OZ TON		
217.9	241.8	Average Modes         Garnets       10       -       15%         Biotite       20       -       30%         Chlorite       5       -       10%         Chert       20       -       30%         Magnetite       5       -       10%         Pyrite       trace       -       187.5       -       209.0       -       banding parallel to core axis.         -       187.5       -       209.0       -       banding parallel to core axis.       -       189.1       -       190.7       -       2-3% pyrite as irregular stringers and blebs.         BANDED IRON FORMATION       -       banding commonly finely laminated, trace grunerite concentrated as halos 1-2 mm around fractures at 55° to	19134 19135 19136 19137 19138 19139 19140 19141 19142 19143 19143		180.0 184.7 189.1 190.7 195.4 200.2 204.1 208.8 213.3 217.9 222.2	184.7 189.1 190.7 195.4 200.2 204.1 208.8 213.3 217.9 222.2 227.0	4.7 4.4 1.6 4.7 4.8 3.9 4.7 4.5 4.6 4.3 4.8			.04 .04 .03 tr. tr. tr. tr. tr. tr. tr.			
1168		core axis.       5-8% garnets, decrease in frequency away from 217.9'.         Trace pyrite very finely disseminated around fractures, and as         smears on foliation planes.       Banding 20° to core axis at 217.9',         55° at 238.0'.         Average Modes         Chert       40       -         Magnetite       20       -       30%         Garnets       5       -       8%         Chlorite       5       -       10%         Biotite       10       -       15%         Grunerite       trace       -       15%	19145 19146 19147		227.0 232.0 237.0	232.0 237.0 241.8	5.0 5.0 4.8			tr. tr. tr.			
241.8 241.8	291.2	BANDED IRON FORMATION - light to medium grey, very fine grained, moderately well banded. Extensive replacement of magnetite by grunerite. Infrequent quartz-carbonate stringers. Garnets confin- ed to chlorite-rich zones.	19148 19149 19150 19151 19152 19153 19155 19156	3	241.8 246.0 250.4 254.3 258.4 262.6 267.0 272.0 276.0	246.0 250.4 254.3 258.4 262.6 267.0 272.0 276.0 281.0	4.2 4.4 3.9 4.1 4.2 4.4 5.0 4.0 5.0			tr. .02 .01 tr. tr. .01 tr. tr. tr. tr.			

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NAME OF PROPERTY OPAPIMISKAN LAKE

			н	OLE N	o. <u>OP</u>	-86-27		ѕні	EET NO.	<u>    4    o</u>	f 5
FOO	TAGE		1		SAMP	E				ASSAYS	
FROM	то	DESCRIPTION	NO.	" SUL PH	FROM	FOOTAGE TO	TOTAL		~.	OZ TON	OZ TON
		Average ModesMagnetite $20$ - $30\%$ Chert $30$ - $40\%$ Chlorite $5$ - $10\%$ Garnets $3$ - $5\%$ Biotite $3$ - $5\%$ Grunerite $15$ - $20\%$ Pyrrhotitetrace- $0.5\%$ Pyritetrace	19157 19158		281.0 286.3	286.3 291.2	5.3 4.9			tr. tr.	
291.2	309.6	<ul> <li>core axis.</li> <li>254.3 - 258.4 - 2-3% pyrhotite, trace-0.5% pyrite.</li> <li>274.8 - 276.0 - chert band.</li> <li>276.0 - 291.2 - banding irregular, contorted, brecciated in places. Degree of disturbance increases towards 291.2'.</li> <li>MAFIC VOLCANIC - light to medium green, fine grained, upper and lower contacts sharp, well defined, no phenocrysts. Possibly intrusive due to disturbance of surrounding banded iron formation.</li> </ul>	19159		291.2	294.5	3.3			tr.	
LANGRIDGES - TORONTO - 366-1168		Average ModesBiotite10-20% (?)Hornblende40-50% (?)Tremolite]-20-30% (?)Actinolite]-20% (?).Feldspar10-20% (?)Quartz5-10% (?)Mineral percentages uncertain due to fine grained nature of unit303.0 - 306.7 -Lamprophyre Dike - black, fine to medium grained, mineralogy dominated by biotite and hornblende; minor hematite stains. Chill	19160 19161 19162		300.1 303.0 306.7	303.0 306.7 309.6	2.9 3.7 2.9			tr. tr. tr.	

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NAME OF	PROPERTY
HOLE NO	<u>OP-86-27</u>

OPAPIMISKAN LAKE

_____ SHEET NO. _____ 5 of 5

F00	TAGE	DESCRIPTION	1	-	SAMPI	_E		ASSAYS					
FROM	то		NO.	% SULPH IDES	FROM	FOOTAGE	TOTAL	•	~	OZ TON	UZ TON		
		margin at 303.0 grades into medium grained section, while chill margin at 306.7 separated from medium grained section by a quartz-carbonate stringer.											
309.6	397.0	BANDED IRON FORMATION - as in 241.8 - 291.2. - $309.6 - 312.6$ - banding disturbed.	19163 19164 19169	9	309.6 313.4 317.0	313.4 317.0 322.0	3.8 3.6 5.0			tr. .01			
		- 312.3 - 312.6 - grunerite alteration halos around fractures.	19166 19167 19168		322.0 327.0 332.0	327.0 332.0 337.0	5.0 5.0 5.0			tr. tr. tr.			
		- 317.5 - banding 50° to core axis.	19169 19170 19171		337.0 342.0 347.0	342.0 347.0 352.0	5.0 5.0 5.0			tr. .01 .11			
		<ul> <li>326.2 - 1-3 mm euhedral quartz crystals on open fracture 40° to core axis.</li> </ul>	19172 19173 19174		352.0 357.0 362.0	357.0 362.0 367.0	5.0 5.0 5.0			.01 .02 .03			
		- 343.0 - banding 20° to core axis. - 346.5 - 347.0 - grunerite alteration halos around	19175 19176 19177		367.0 372.0 377.0	372.0 377.0 381.7	5.0 5.0 4.7			tr. tr. tr.			
		fractures 85° to core axis. - 364.0 - 367.0 - banding irregular, wispy.	19178 19179 19180		381.7 383.1 387.0	383.1 387.0 392.0	1.4 3.9 5.0			tr. tr. tr.			
		- 368.8 - 372.2 - banding parallel to subparallel to core axis.	19181		392.0	397.0	5.0			tr.			
		- 381.7 - 383.1 - quartz vein, may be recrystallized chert.											
		- 384.0 - 387.5 - banding parallel to subparallel to core axis.											
397.0		End of Hole.									M	<i>p</i> ///	

NAME OF	PROPERTY _	OPAPIMI	SKAN LAKE	
HOLE NO.	<u>0P-86-28</u>	LENGTH	496'	
LOCATION	18+00NW	2+39sw		
LATITUDE		DEPARTURE _		
ELEVATION	۹	AZIMUTH	049°DIP	46°
STARTED	December 13	1986 EINISHED	December 15 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0°				
496'	- <u>35</u> .7°				

HOLE NO.0P-86-28 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844239

LOGGED BY D. J. Corkery

FOOT	TAGE				5 A M P	LE			A	SSAN	(5	
FROM	то	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE TO	TOTAL	45	"	OZ/TON	OZ/TON	
0	20.8	CASING										
20.8	78.5	MAFIC VOLCANICS										
78.5	205.8	GARNETIFEROUS METASEDIMENTS										
		-78.9 to $82.0 - 0.5$ to $1%$ pyrite and pyrrhotite.	19188		78.5	83.0	4.5			.21		
	L.	- 82.6 to 82.7 - two 1/4" - 1/2" quartz-calcite veinlets with alteration haloes.										
		- 127.7 to 128.8 - several quartz veinlets with 2 to 4% pyrite parallel to veinlets and in crosscutting quartz~ calcite veinlets.(1/8").	19199		127.0	129.0	2.0			.05		
205,8	217.4	ULTRAMAFIC VOLCANICS										
217.4	241.0	GARNETIFEROUS METASEDIMENTS										
241.0	242.8	ULTRAMAFIC VOLCANICS										
242.8	281.0	GARNETIFEROUS METASEDIMENTS										
281.0	296.4	BANDED IRON FORMATION										
296.4	300.3	GARNETIFEROUS METASEDIMENTS										-
.,3	302.3	BANDED IRON FORMATION										
302.3	305.3	INTERBEDDED IRON FORMATION and METASEDIMENTS										

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NAME OF	PROPERTY	OPAPIMISKAN	LAKE	
NAME OF	PROPERTY	UTATITTSKAN	LAND	· · · · · · · · · · · · · · · · · · ·

FOOTAGE         DESCRIPTION SUMMARY LOG         SAMPLe         FOOTAGE $0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$	
FROM         TO         SUPMARY LOC         MO         SUPMACE         FOOTAGE         TO         TO         OL TON         OL TON	
305.3321.3GARNETIFEROUS METASEDIMENTS321.3483.4BANDED IRON FORMATION483.4485.9LAMFROPHYRE DIKE485.9496.0BANDED IRON FORMATION496.0End of Hole.	
321.3       483.4       BANDED IRON FORMATION         483.4       485.9       LAMPROPHYRE DIKE         485.9       496.0       BANDED IRON FORMATION         496.0       End of Hole.	l
483.4       485.9       LAMPROPHYRE DIKE         485.9       496.0       BANDED IRON FORMATION         496.0       End of Hole.	
485.9         496.0         BANDED IRON FORMATION           496.0         End of Hole.	
496.0 End of Hole.	1
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NAME OF PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO 0P-86-28	LENGTH	49	6'	
LOCATION 18+00NW	2+39SW		<u></u>	
LATITUDE	DEPARTURE _			
ELEVATION	AZIMUTH	049°	DIP	-46°
STARTED December 13	<u>1986</u> FINISHED	December 15	, 1986	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-46.0				
496'	-35.7				

HOLE NO. 02-86-28 SHEET NO. 1 of 8

PA - 844239

LOGGED BY D. J. Corkery

FOOT	FAGE				SAMP	LΕ		ASSAYS					
FROM	то		NO.	SULPH	FROM	FOOTAGE	TOTAL		7. 20	OZ/TON	OZ/TON		
·····			∦───	IDES	TROM	10	TOTAL						
0	20.8	CASING											
20.8	78.5	MAFIC VOLCANICS - dark green, fine grained, massive to weakly foliated.											
		Average Modes											
		Hornblende45-55%Plagioclase20-30%Quartz10-15%Biotite0.5-1%Chloritetrace-0.5%Sulphidestrace											
		– 20.8 to 50.0 – as described.	19182		21.6	26.6 38.0	5.0 3.0			tr. tr			
		- 37.7 - fine, irregular quartz-calcite veinlet with 0.5 to 1% pyrite and pyrrhotite.							i				
		- 50.0 to 78.5 - weakly foliated to weakly laminated (tuffaceous).	19184		46.0	51,0	5.0			tr.			
		- 53.7 to 53.9 - 2" quartz-calcite veinlet, no visible sulphides.	19185		53.3	54.3	1.0			tr.			
		- 61.5 to 61.7 - 2" quartz-calcite veinlet with 0.5% pyrite-pyrrhotite and trace chalcopyrite.	19186 19187 19309		61.1 69.8 70.8	62.1 70.8 74.5	1.0 1.0 3.7			tr. tr. tr.			
		<ul> <li>70.2 to 70.4 - 2" quartz-calcite veinlet, no visible sulphides.</li> </ul>	19419		74.5	78,5	4.0			tr.			

366-1168

LANGRIDGES - TORONTO

			н	OLE NO	DOF	-00-20		SHE	EET NO.	<u> </u>	18	
F00	TAGE	DESCRIPTION			SAMPL	E				ASSAYS		
FROM	то	DESCRIPTION	NO.	", SULPH	FROM	FOOTAGE TO	TOTAL		~.	OZ TON	OZ TON	
78.5	205.8	GARNETIFEROUS METASEDIMENT - dark brown, fine grained with coarse garnet poikiloblasts, schistose.										
		Average Modes										
		Biotite       50       -       60%         Quartz       15       -       20%         Garnet       15       -       20%         Hornblende       3       -       5%         Sericite       1       -       3%         Sulphides       trace       -       -										
		Pyrite and pyrrhotite occur as disseminations and fracture coatings. Several narrow quartz bands containing no visible sulphides.										
		- 78.5 to 78.9 - laminated with mafic volcanic.	19188		78.5	83.0	4.5			.21		
		- 78.9 to 84.4 - 5 to 7% fine grained disseminated staurolite.										
		- 78.9 to 82.0 - 0.5 to 1% pyrite and pyrrhotite.										
		- 82.6 to 82.7 - two 1/4" - 1/2" quartz-calcite veinlets with alteration haloes.										
		- 84.4 to 85.1 - 7 to 10% sericite.	19189		83.0	87.0	4.0			tr.		
		- 85.1 to 86.8 - typical.										
		- 86.8 to 90.0 - 30 to 40% sericite, 3 to 5% garnet.	19190		87,0	91.0	4.0			tr.		
		- 90.0 to 91.0 - typical.										
		- 91.0 to 93.6 - weakly banded, dark green and dark brown, domin- antly biotite and hornblende, trace garnets.	19191		91.0	94.9	3.9			.02		
		- 93.6 to 94.0 - typical.										
		- 94.0 to 94.9 - similar to 91.0 to 93.6.	19192		94.9	100.0	5.1			tr.		
		- 94.9 to 105.1 - 7 to 10% staurolite.	19193		100.0	105.0	5.0			.02		

0P-86-28 SHEET

NAME OF PROPERTY_____

OPAPIMISKAN LAKE

FOOTAGE

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FROM

366-1168

TORONTO

NGRIDGES

SAMPLE ASSAYS DESCRIPTION FOOTAGE SULPH NO. 0.2 TON OZ TON e-FROM TOTAL м. IDES TO 19194 105.0 107.0 2.0 .02 - 105.1 to 106.7 - several quartz veinlets in dominantly garnethornblende, 0.5 to 1% pyrite at boundary of veinlets. 19195 107.0 112.0 5.0 .01 - 106.7 to 127.7 - 7 to 10% staurolite, 10 to 15% garnets, several 19196 112.0 117.0 5.0 .02 quartz laminations and narrow bands. 19197 117.0 122.0 5.0 .02 19198 122.0 127.0 5.0 tr. - 118.1 to 118.3 - 1 to 3% pyrite parallel to schistosity. 19199 127.0 129.0 2.0 .05 - 127.7 to 128.8 - similar to 105.1 to 106.7, 2 to 4% pyrite parallel to veinlets and in crosscutting quartzcalcite veinlets (1/8"). chlorite-quartz. Few fine quartz veinlets. No

- 128.8 to 129.5 - typical. - 129.5 to 130.4 - medium green fine grained dominantly amphibolevisible sulphides. 19200 129.0 134.0 5.0 - 130.4 to 138.8 - 20 to 25% garnets. Trace to 0.5% pyrite. tr. 134.0 139.0 19052 5.0 tr. 19053 139.0 144.0 5.0 - 138.8 to 143.8 - few 1" bands where hornblende replaces biotite. tr. 144.0 149.0 5.0 .01 - 143.8 to 189.4 - atypical well banded with 20 to 25% highly con- 19054 torted quartz bands interbedded with garnet-19055 149.0 154.0 5.0 tr. 154.0 159.0 biotite-hornblende-grunerite bands. An increase 19056 5.0 .01 in hornblende often occurs near the boundary of 19057 159.0 164.0 5.0 .01 164.0 169.0 5.0 19058 tr. a chert band. Trace disseminated sulphides. From 176.0 to 189.4 only, 15 to 20% quartz bands 19059 169.0 174.0 5.0 tr. 174.0 178.0 19060 4.0 tr. 178.0 181.0 3.0 19061 tr. - 181.6 to 181.7 - several quartz-calcite veinlets 19062 181.0 182.0 1.0 tr. Centre of veinlets are calcite with 1/16" orange stained quartz rims. One veinlet contains apparently brecciated fragments. 1% pyrite as bleb at contact of veinlets. - 185.7 - narrow calcite veinlet with 0.5 to 1% 19063 182.0 186.0 4.0 tr. pyrite.

**OPAPIMISKAN LAKE** NAME OF PROPERTY_ HOLE NO. ____OP-86-28

SHEET NO. 3 of 8

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-86-28	SHEET NO. 4 of 8

F001	FAGE	DECONDITION			SAMPI	E		ASSAYS					
FROM	то	DESCRIPTION	NO.	*. SUL PH	FROM	FOOTAGE	TOTAL	•		OZ TON	GZ TON		
		- 187.4 to 187.6 - calcite veinlet, no visible sulphides.	19064		186.0	189.4	3.4			.01			
		- 189.4 to 190.3 - similar to 129.5 to 130.4, no visible sulphides.	19065		189.4	190.4	1.0			tr.			
		- 190.3 to 194.9 - similar to 143.8 to 189.4 with 10 to 15% quartz bands.	19066		190.4	194.9	4,5			tr.			
		- 194.9 to 196.9 - similar to 129.5 to 130.4 but contains no quartz veinlets. No visible sulphides.	19067		194.9	196.9	2.0			tr.			
		- 196.9 to 205.8 - similar to 190.3 to 194.9 but many quartz bands are only weakly contorted.	19068 19069		196.9 201.9	201.9 205.8	5.0 3.9			tr. tr.			
		- 200.0 - banded at $70^{\circ}$ to core axis.											
205.8	217.4	<u>ULTRAMAFIC VOLCANIC</u> ~ medium grey, fine to very fine grained, well foliated, mineralogy dominated by talc and serpentine with 1 to 3% carbonate (calcite and magnesite) both disseminated and in many fine veinlets. No visible sulphides.											
217.4	241.0	GARNETIFEROUS METASEDIMENTS - atypical with few chert bands contain- ing 0.5 to 1% magnetite. Trace sulphides.	19070 19071		217.4	220.0 225.0	2.6 5.0			tr. tr.			
		- 222.7 to 223.1 - three quartz-calcite veinlets, no visible sulphides.	19072 19073 19074		230.0 235.0	235.0 241.0	5.0 6.0			tr. tr.			
241.0	242.8	ULTRAMAFIC VOLCANIC - similar to 205.8 to 217.4.	19075		241.0	242.8	1.8			tr.			
242.8	281.0	GARNETIFEROUS METASEDIMENTS - typical but moderately compositionally banded and contains 7 to 10% chert bands. Trace to 0.5% sulphides.											
		- 242.8 to 246.0 - no banding.	19076		242.8	246.0	3.2			tr.			
		- 246.0 to 255.1 - as described above.	19077		246.0	251.0	5.0			tr.			
		- 251.0 to 251.6 - 1/8" quartz-feldspar veinlet with green copper oxides.	19078 19088		251.0 252.1	252.1 256.0	1.1 3.9			tr. .01			
		- 255.1 to 256.1 - hornblende-rich and 1 to 3% garnets.					, ,						

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			н	IOLE N	o. <u>OI</u>	-86-28			EET NO.	5 (	of 8	
F00	TAGE				SAMP	LE				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SULPH, IDES	• FROM	FOOTAGE TO	TOTAL	•	•	OZ TON	UZ TON	
		- 256.1 to 276.1 - as described, few chert bands (1/4") have 1 to 33 disseminated magnetite within bands (trace to 0.5% magnetite total).	19079 19080 19081 19082		256.0 261.0 266.0 271.0	261.0 266.0 271.0 276.0	5.0 5.0 5.0 5.0			tr. tr. tr. tr.		
		- 276.1 to 281.0 - dark grey, no banding, 0.5 to 1% garnets.	19083		276.0	281.0	5.0			.04		
281.0	296.4	BANDED IRON FORMATION - dark grey, fine to very fine grained, ban- ded, well developed intraband laminations. Generally biotite- hornblende-garnet bands interbedded with laminated chert-magnetite bands.	19084 19085 19086 19087	6 - - 7	281.0 285.0 289.0 293.0	285.0 289.0 293.0 296.4	$ \begin{array}{r} 4.0 \\ 4.0 \\ 4.0 \\ 3.4 \end{array} $			tr. .03 tr. tr.		
		Average ModesQuartz35-45%Magnetite20-25%Biotite10-15%Hornblende7-10%Garnet2-4%Calcite0.5-1%Sulphidetrace-0.5%Pyrite and pyrrhotite occur parallel to laminations and as fracturefillings.Calcite occurs in few 1/4" to 1/2" quartz-calcite vein-lets (no visible sulphides)281.0 to 283.0 - 1/16" quartz-calcite fractures284.9 - 1/2" band of 25 to 30% pyrrhotite parallel to surrounding bands.										
296.4	300.3	- 294.0 - banded at 55° to core axis. <u>GARNETIFEROUS METASEDIMENTS</u> - atypical with 15 to 20% garnet in matrix of biotite and 10 to 15% grunerite and 3 to 5% hornblende. Weak compositional banding. Three chert bands, one calcite veinlet no visible sulphides.	19089		296.4	300.3	3.9			tr.		
300.3	302.3	BANDED IRON FORMATION - similar to 281.0 to 296.4 but less well laminated. Trace sulphide.	19090		300.3	302.3	2.0			tr.		

OPAPIMISKAN LAKE

NAME OF PROPERTY_
NAME	OF	PROPERTY
HOLE	NO	<u>OP-86-28</u>

OPAPIMISKAN LAKE

SHEET NO.

6 of 8

FOOTAGE SAMPLE ASSAYS DESCRIPTION FOOTAGE 7 SULPH NO FROM то ~. ~ OZ TON OZ TON IDES FROM 70 TOTAL 302.3 19091 302.3 305.3 3.0 305.3 INTERBEDDED IRON FORMATION AND METASEDIMENTS - well banded, 70% tr. garnetiferous metasediments (similar to 296.4 to 300.3) and 30% chert-magnetite bands. Trace sulphides. Banding commonly at 55° to core axis. 305.3 321.3 GARNETIFEROUS METASEDIMENT - similar to 296.4 to 300.3 but with 40 to 50% garnets. Trace sulphides. Sharp contact with Banded Iron Formation below. 305.3 310.0 4.7 - 305.3 to 310.0 - 10 to 15% garnet, many irregular quartz-calcite 19092 tr. veinlets (no visible sulphides) with alteration around the veinlets to hornblende and chlorite. 310.0 314.0 19093 4.0 tr. - 310.0 to 321.3 - as described. 314.0 318.0 19094 4.0 tr. 318.0 321.3 3.3 - 318.8 - 1" guartz veinlet, no visible sulphides. 19095 tr. 321.3 483.4 BANDED IRON FORMATION - bands of dark grey, light grey and creamyellow, well banded, weakly contorted. Generally bands of chert interbedded with iron-rich bands, where iron-rich bands consist of grunerite-magnetite-calcite with 1/8" to 1/4" grunerite rims. Bands are usually 1/4" to 1/2" wide. Average Modes 40% Ouartz 30 25 30% Grunerite 15 20% Magnetite 3 5% Calcite 1% 0.5 Sulphide 321.3 326.0 19096 4.7 tr. 326.0 331.0 0.5 to 1% pyrrhotite and trace pyrite within and adjacent iron bands 19097 5.0 tr. 331.0 336.0 5.0 .01 and as fracture fillings. Often where banding is contorted chert 19098 336.0 19099 341.0 5.0 .01 bands will be boudinaged. 346.0 341.0 5.0 19100 tr. 19201 346.0 351.0 5.0 - 321.3 to 375.7 - as described, few dispersed quartz veinlets with tr. 356.0 351.0 5.0 19202 nil to trace sulphide mineralization. tr. 19203 356.0 361.0 5.0 tr. 19204 361.0 366.0 5.0  $\sim$  334.0 - banded at 70° to core axis. tr. 19205 366.0 371.0 5.0 tr. 10000 371 0 376 0 5.0 04

ANGRIDGES - TORONTO - 366-116

FOOTAGE

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FROM

			SAMPI	-E		ASSAYS					
DESCRIPTION	NO	3 SUL PH	-	FOOTAGE							
	140.	IDES	FROM	10	TOTAL	· •	٠.	OZ TON	62 TON		
- 375.7 to 438.0 - similar to above but with few, well spaced	19207		376.0	381.0	5.0			tr.			
hornblende-biotite-garnet bands which usually	19208		381.0	386.0	5.0			tr.			
occur in contorted zones and in fold closures	19209		386.0	391.0	5.0			tr.			
(1/8" to 1" wide).	19210		391.0	396.0	5.0			.04			
	19211	Į	396.0	401.0	5.0			tr.			
- 411.0 to 413.0 - few small folds with fold axis	19212		401.0	406.0	5.0			tr.			
near 90° to core axis.	19213		406.0	411.0	5.0			tr.			
	19214		411.0	416.0	5.0			tr.			
- 418.0 - banded at $80^{\circ}$ to core axis.	19215		416.0	421.0	5.0			.01			
	19216		421.0	426.0	5.0			.01			
-430.8 - 1/2" band of 2 to 4% pyrrhotite.	19217		426.0	431.0	5.0			tr.			
	19218		431.0	435.0	4.0			tr.			
- 435.0 - banded at $65^{\circ}$ to core axis.	19219		435.0	438.0	3.0			tr.			
- 436.6 - 1/4" band of 2 to 4% pyrrhotite.											
- 438.0 to 438.6 - quartz vein with wisps of Banded Iron Formation. No visible sulphides.	19220		438.0	439.0	1.0			.01			
- 438.6 to 445.8 - typical.	19221		439.0	444.0	5.0			tr.			

NAME OF PROPERTY____

HOLE NO. ....

OP-86-28

449.0

454.0

459.0

464.0

469.0

474.0

478.0

480.5

483.4

483.4 486.0

5.0

5.0

5.0

5.0

5.0

5.0

4.0

2.5

2.9

2.6

**OPAPIMISKAN LAKE** 

SHEET NO. 7 of 8

tr.

.01

.02

tr.

tr.

.01

.02

tr.

.02

,01

- 445.8 to 465.5 - 7 to 10% biotite-garnet bands, several calcite 444.0 19222 veinlets both parallel and crosscutting banding, 19223 449.0 454.0 and calcite concentrations at the apex of small 19224 459.0 folds. 19225 464.0 19226 469.0 - 465.5 to 480.5 - typical. 19227 474.0 19228 - 480.5 to 483.4 - weak to nil banding, 1 to 3% magnetite, heavily 478.0 19229 chloritized, weak to moderately carbonatization 19230 480.5 moderate to well foliated (sheared?). No visible sulphides.

483.4 485.9 LAMPROPHYRE DIKE - black, massive, porphyritic, fine grained with 19231 medium to coarse pseudomorphs. Pseudomorphs are serpentine with matrix dominantly serpentine and chlorite with minor phlogopite and carbonate. Several calcite veinlets. No visible sulphides.

TORONTO ANGRIDGES

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NAME OF PR	OPERTY	OPAPIMISKAN	LAKE
HOLE NO.	OP-86-28	SHEET NO.	8 of 8

FOC	TAGE	DECODIDITION	Γ		SAMPI	E				ASSAYS		
	1	DESCRIPTION	NO	% SUL PH		FOOTAGE			t i i i i i i i i i i i i i i i i i i i			
FROM	10			IDES	FROM	TO	TOTAL	<u> </u>	•	OZ TON	OZ TON	
485.9	496.0	BANDED IRON FORMATION - similar to 321.3 to 483.4, 0.5 to 1% pyrrhotite within iron-rich bands.	19232 19233		486.0 491.0	491.0 496.0	5.0 5.0			tr. .01		
		- 485.9 to 487.0 - similar to 480.5 to 483.4.										
		- 487.0 to 496.0 - typical.										
496.0		End of Hole.										
99-11-98											A A A	yi)
									M	XIII	M ^r	
									M			
HUGES									V			
LANG												

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NAME OF PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO	LENGTH	4	98.'	
LOCATION	SW			
LATITUDE	DEPARTURE _			
ELEVATION	АZIMUTH	<u>049°</u>	DIP	<u>-44.7°</u>
STARTED January 10 1987	FINISHED	January 1	12 1987	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	44.7°				
498' -	38.0°				

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PA - 844238

LOGGED BY D. J. Corkery

FOO	TAGE	DESCRIPTION			SAMP	LE			^	SSAN	s	
FROM	то	SUMMARY LOG		SULPH-	FROM	FOOT AGE TO	TOTAL	16	Ŷ.	OZ/TON	OZ/TON	
0	28.5	CASING										
28.5	61.0	GARNETIFEROUS METASEDIMENTS										
61.0	90.5	BANDED GARNETIFEROUS METASEDIMENTS - 25 to 35% chert bands with garnet $\pm$ biotite $\pm$ hornblende $\pm$ grunerite bands. Trace to 1% magnetite. Trace sulphides.	19245		66.0	71.0	5.0			.06		
90.5	96.3	LEAN BANDED IRON FORMATION										
96.3	100.9	MAFIC VOLCANICS										
100.9	110.0	CHLORITIZED METASEDIMENT										
110.0	145.8	ULTRAMAFIC (INTRUSIVE?)										
145.8	171.5	BANDED IRON FORMATION										
171.5	179.5	GARNETIFEROUS METASEDIMENTS										
179.5	183.2	BRECCIATED-ALTERED BANDED IRON FORMATION										
183.2	217.2	BANDED IRON FORMATION										
217.2	320.4	ULTRAMAFIC VOLCANICS										
320.4	339.8	BANDED IRON FORMATION										
3 , 3	423.1	ULTRAMAFIC TO MAFIC VOLCANICS			c							
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NAME OF PROPERTY	• OPAPIMISKAN LAKE	

HOLE NO. 0P-87-1 SHEET NO. 2 of 2

F00'	TAGE		SAMPLE			ASSAYS						
FROM	то	SUMMARY LOG	NO.	": SULPH. IDES	FROM	FOOTAGE TO	TOTAL		۰.	OZ TON	OZ TON	
423.1	429.1	IRON FORMATION (SULPHIDE FACIES?) - 15 to 20% pyrrhotite and 3 to 5% pyrite.										
429.1	498.0	ULTRAMAFIC TO MAFIC VOLCANICS										
498.0		End of Hole.										
:												
:												
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NAME OF	PROPERTY _	OPAPIMI	SKAN LAKE		
HOLE NO.	<u>OP-87-1</u>	LENGTH	4	<u>98'</u>	
LOCATION	<u>15+00NW</u>	3+97SW			
LATITUDE		DEPARTURE _			
ELEVATION	I	AZIMUTH	049°	DIP _	<u>44.7°</u>
STARTED _	January 10, 1	.987 FINISHED	January	12.198	7

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	44.7°				
498'-	<u>38.0°</u>		ļ		

HOLE NO. 0P-87-1 SHEET NO.1 of 10

REMARKS

PA - 844238

LOGGED BY D. J. Corkery

FOOT	AGE				SAMP	LΕ		ASSAY5					
FROM	то	DESCRIPTION	NO.	SULPH	EROM	FOOTAGE	TOTAL			OZ/TON	OZ/TON		
				IDES							<u> </u>	{	
0	28.5	CASING											
28.5	61.0	GARNETIFEROUS METASEDIMENTS - dark grey-brown with pink poikilo- blastic garnets, fine grained, schistose, exhibits some weak com- positional banding.											
		Average Modes											
		Biotite $50$ $ 60\%$ Garnet $20$ $ 25\%$ Quartz $15$ $ 20\%$ Hornblende $3$ $ 5\%$ CalcitetracePyritetrace											
		Few narrow (1/16" – 1/8") chert bands and quartz veinlets. Abundant chlorite coated fractures. Calcite occurs as veinlets and fracture coatings. Pyrite occurs as disseminations and fracture coatings.											
		- 28.5 to 52.6 - as described.	19235		28.5	33.5	5.0			tr.			
		– 29.5 – banding at 50 $^{\circ}$ to core axis.											
		<ul> <li>- 34.2 - 1/2" carbonate veinlet with 5 to 7% pyrrhotite as blebs. Veinlet at 38° to core axis.</li> <li>- 37.0 - banding at 60° to core axis.</li> <li>- 52.6 to 53.4 - dark grey-green, few garnets, dominantly hornblend -actinolite with chert laminations. No visible</li> </ul>	19236 19237 19238 19239 19240 19240		33.5 35.0 40.0 45.0 49.0 52.5	35.0 40.0 45.0 49.0 52.5 53.5	1.5 5.0 5.0 4.0 3.5 1.0			tr. tr. tr. .01 tr.			
		sulphides.											

1% pyrite parallel to banding.

TORONTO

HOLE NO. _____0P_87-1 FOOTAGE SAMPLE ASSAYS DESCRIPTION " SUL PH FOOTAGE C D O M то NO. ~**.** UZ TON UZ TON IDES FROM TOTAL 10 -53.4 to 57.0 - as described. 19242 53.5 57.0 3.5 .01 -57.0 to 61.0 - weak to moderately banded with few sections of 19243 57.0 61.0 4.0 .01 chert bands interbedded with amphibole-rich bands. 61.0 90.5 BANDED GARNETIFEROUS METASEDIMENTS - well banded with 25 to 35% quartz bands (1/8" - 1/4") interbedded with garnet ± biotite ± hornblende ± grunerite bands. Trace to 1% magnetite disseminated within quartz bands. Trace to 0.5% calcite in fractures and within bands. Trace sulphides as disseminations and fracture coating. Several chlorite coated fractures. - 61.0 to 70.6 - as described. 19244 61.0 66,0 5.0 .03 19245 66.0 71.0 5.0 .06 - 65.0 - banded at  $33^{\circ}$  to core axis. - 70.0 - banded at  $30^{\circ}$  to core axis. - 70.6 to 85.5 - banded at  $0^{\circ}$  to  $15^{\circ}$  with abundant fold closures. 5.0 19246 71.0 76.0 .01 19247 76.0 81.0 5.0 .01 81.0 - 79.0 to 80.5 - 10 to 12% calcite which occurs in 19248 86.0 5.0 tr. a chert band near parallel to core axis. 19249 - 85.5 to 89.5 - as described. 86.0 90.5 4.5 tr. - 88.0 - banded at  $40^{\circ}$  to core axis. - 89.5 to 90.5 - grades into unit below with 0.5 to 1% disseminated magnetite in chert bands. 90.5 96.3 LEAN BANDED IRON FORMATION - grades from unit above with 1 to 5% 19250 90.5 93.3 2.8 tr. 96.3 magnetite in bands. 10 to 15% grunerite in 1/8" rim around magne-19251 93.3 3.0 .01 tite bearing chert bands. Trace pyrite as fracture coating. ٢ 100.9 MAFIC VOLCANIC - chlorite schist, dark green, fine grained, few h 92 52 96.3 100.9 4.6 tr. carbonate coated fractures. 100.9 105.0 100.9 110.0 CHLORITIZED METASEDIMENTS - dark grey to black, dominantly chlorite 19253 4.1 tr. schist with visible remnants of chert banding and garnets. 0.5 to 19254 105.0 110.0 5.0 tr.

NAME OF PROPERTY

OPAPIMISKAN LAKE

SHEET NO ____ 2 of 10

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			HOLE NO0P-87-1						SHEET NO3 of 10				
FOO	TAGE	DEFERIDION			SAMP	LE			<u>.</u>	ASSAYS			
FROM	то	DESCRIPTION	NO	", SUL PH IDES	FROM	FOOTAGE TO	TOTAL	-	".	02 TON	UZ TON		
110.0	145.8	ULTRAMAFIC (INTRUSIVE?) - medium to dark grey, fine to very fine grained, well foliated (35° - 40°), mineralogy dominated by serpentine with talc and minor carbonate (magnesite ± calcite) and 2 to 5% magnetite which is disseminated and in dark serpentine clots Trace hematite occurs as fracture coating with carbonate. Dark grey-black clots (pseudomorphs?) occur throughout the section but are less common at contacts. These generally consist of serpentine with magnetite. These are often stretched parallel to foliation indicating shearing.											
		- 110.0 to 115.5 - few clots 0.5 to 1% magnetite.		1									
		- 115.5 to 131.0 - as described.											
		- 131.0 to 143.7 - several bands (1/4" - 1") consisting of magnesite with serpentinized subhedral pseudomorphs, several fine clots. Carbonate filled fractures which contain minor hematite.	19255 19256 19257		131.0 135.7 139.7	135.7 139.7 143.7	4.7 4.0 4.0			tr. tr. tr.			
		- 143.7 to 145.8 - few clots.	19258		143.7	145.8	2.1			tr.			
145.8	171.5	BANDED IRON FORMATION - medium to dark grey, fine to very fine grained, laminated to moderately banded. Average Modes Chert 35 - 45%											
		Hornblende Chlorite $25$ $35\%$ Magnetite7 $-$ Magnetite7 $-$ Garnet5 $-$ Grunerite1 $-$ Grunerite1 $-$ Sulphidetrace $-$											
FANGHIDGE		Pyrite and pyrrhotite occur parallel to banding and as fracture fillings. Several chlorite coated fractures.											

OPAPIMISKAN LAKE

NAME OF PROPERTY_____

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		HOLE NOOP-87-1											
F00	TAGE				SAMPI	-E		ASSAYS					
FROM	то		NO.	" SULPH	FROM	FOOTAGE TO	TOTAL		n.	OZ TON	OZ TON		
		- 145.8 to 150.0 - laminated, $65^{\circ}$ to core axis; few garnets.	19259		145.8	151.1	5.3			tr.			
		- 150.0 to 151.1 - as described.											
		- 151.1 to 151.3 - chlorite schist.	19260		151.1	154.2	3.1			tr.			
		- 151.3 to 157.2 - 1 to 3% magnetite.	19261		154.2	157.2	3.0			tr.			
		- 156.2 - 1.5" band with 7 to 10% pyrrhotite.											
		- 157.2 to 162.2 - 10 to 20% garnet, moderately banded.	19262		157.2	162.2	5.0			tr.			
		- 162.2 to 165.5 - laminated, 0.5 to 3% magnetite.	19263		162.2	164.5	2.3			tr.			
		- 164.5 to 164.8 - two 1/8" - 1/4" pyrite filled fractures.	19264		164.5	165.5	1.0			tr.			
		- 165.5 to 171.5 - laminated, 10 to 15% magnetite, few boudinaged chert bands.	19265 19266		165.5 168.5	168.5 171.5	3.0 3.0			tr. tr.			
171.5	179.7	CARNETIFEROUS METASEDIMENTS - dark grey to black with light grey garnet poikiloblasts (1/32" to 1/16"), fine grained, schistose, 40 to 50% garnets with matrix of biotite, chlorite, amphibole and trace to 2% magnetite which concentrates in narrow bands. Weak compositional bands are visible. Several fine calcite-chlorite filled fractures. Abundant chlorite coated fractures. Nil to trace sulphides.	19267 19268		171.5 175.7	175.7 179.7	4.2 4.0			tr. tr.			
179.7	183.2	BRECCIATED-ALTERED BANDED IRON FORMATION - dark grey to black, fine to very fine grained, well foliated, brecciated and heavily infilled with calcite, 3 to 5% magnetite, strong chlorite alteration mask original sedimentary texture. Still high quartz content. Trace to 0.5% pyrite with carbonate.	19269		179.7	183.2	3.5			tr.			
1		- 179.7 to 181.2 - very blocky.											
		- 181.2 to 182.1 - very fine calcite infilling of brecciation.								·			
		- 182.1 to 182.5 - 20 to 25% calcite.											
		- 182 5 to 183 2 - work banding visible						l	ļ				

OPAPIMISKAN LAKE NAME OF PROPERTY____

LANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY	OPAPIMISKAN	LAKE
HOLE NO 0P-87-1	SHEET NO.	5 of 10

FOO	TAGE				SAMPI	. E			 ASSAYS		
		DESCRIPTION		* SILL PH		FOOTAGE					
FROM	TO		NO.	IDES	FROM	то	TOTAL		OZ TON	UZ TUN	
183.2	217.2	BANDED IRON FORMATION - dark grey to black and medium grey-green, fine to very fine grained, laminated to moderately banded, contorted									
		Average Modes									
		Quartz $30$ $ 40\%$ Grunerite $20$ $ 30\%$ Magnetite $15$ $ 20\%$ Chlorite $ 3$ $-$ Hornblende $ 5\%$ Calcite $3$ $-$ Sulphide $1$ $-$									
		Iron rich bands contain magnetite and grunerite and are rimmed by grunerite. Bands are contorted and chert bands are often boudin- aged. Calcite occurs within bands and in numerous fine fractures as fillings. Pyrite and pyrrhotite occur parallel to banding and in fractures with calcite.						-			
		- 183.2 to 185.5 - 0.5 to 1% pyrite in fractures.	19270		183.2	185.5	2.3		tr.		
		- 184.0 - banded at $62^{\circ}$ to core axis.									
		- 185.5 to 186.7 - 10 to 15% garnet.	19271		185.5	186.7	1.2		tr.		
		- 186.7 to 187.0 - brecciated with 5 to 7% calcite infilling, heavily chloritized.	19272		186.7	188.7	2.0		tr.		
		- 187.0 to 188.7 - 5 to 7% pyrrhotite and pyrite parallel to banding.									
		<ul> <li>188.3 - fine calcite fracture with pyrite in fracture, adjoining fractures and into nearby magnetite bands.</li> </ul>									
		- 188.7 to 200.3 - as described.	19273 19274		188.7	192.3 196.3	3.6 4.0		tr. tr.		
1		- 200.3 to 201.3 - few $1/2$ " - 1" quartz veins with trace to 0.5% pyrite.	1927 5 1927 6		196.3 200.3	200.3 201.3	4.0		tr. tr.		

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NAME OF	PROPERTY	OPAPIMISKAN	LAKE		
	OP-87-1		6	af 10	

,	-		HOLE NO0P-87-1					SHEET NO6 of 10				
FOC	DTAGE	DECODIDION			SAMPI	LE				ASSAYS		
FROM	то	DESCRIPTION	NO.	% SUL PH	FROM	FOOTAGE	TOTAL			02 TON	UZ TON	
		<ul> <li>- 201.3 to 210.5 - several chloritic clots replacing amphiboles.</li> <li>- 210.5 to 215.0 ~ moderate to highly contorted with few calcite</li> </ul>	19277 19278 19279		201.3 205.0 210.0	205.0 210.0 215.0	3.7 5.0 5.0			tr. tr. tr.		
		- 215.0 to 217.2 - several calcite-pyrite filled fractures (anastomosing).	19280		215.0	217.2	2.2			tr.		
217.2	320.4	<u>ULTRAMAFIC VOLCANIC</u> - light to dark grey, fine grained, well folia- ted, friable, mineralogy dominated by talc-serpentine with 10 to 15% carbonate (magnesite). Nil to trace disseminated magnetite. Nil to trace disseminated pyrite.										
		- 217.2 to 219.2 - medium grey-green, higher concentration of serpentine.	19281		217.2	219.2	2.0			tr.		
		- 218.8 to 219.0 - quartz-carbonate veinlet with 7 to 10% pyrrhotite and pyrite in wall rock in associated fractures.										
		- 219.2 to 241.0 - several narrow blocky sections.										
		- 241.0 to 264.5 - as described.										
		- 264.5 to 268.2 - very blocky.						ł				
		- 268.2 to 319.1 - as described.							a a a a a a a a a a a a a a a a a a a			
		- 319.1 to 320.4 - light grey to white fragments? (talc, magnesite) in dark grey-green matrix (serpentine, minor phlogopite). Fragments become larger toward contact with Banded Iron Formation at 320.4.	19282		319.1	320.4	1.3			tr.		
320.4	339.8	BANDED IRON FORMATION - well banded, light to medium grey and dark grey-brown to black, fine to very fine grained, contorted.										
100 100 100		Average Modes										
144		Quartz 30 - 40% Grunerite 15 - 20%										

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LANGRIDGES - TORONTO - 366-1168

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NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-87-1	SHEET NO7 of 10

FOOT	AGE	DESCRIPTION			SAMPL	E		ASSAYS					
FROM	то		NO.	% SULPH	FROM	FOOTAGE TO	TOTAL	3	۰.	OZ TON	UZ TON		
		Chlorite ]- 15 - 20% Hornblende ]- 15 - 20% Garnet 10 - 15% Magnetite 10 - 15% Pyrrhotite 1 - 4% Pyrite 0.5 - 1% Calcite trace - 0.5% Chalcopyrite nil - trace Consists of bands of chert, magnetite-grunerite ± chert, garnet- chlorite ± hornblende. Chert bands are often boudinaged. Sulphides dominantly occur parallel to banding in more highly contorted zones.											
		- 320.4 to 323.0 - few garnets.	19283		320.4	323.0	2.6			tr.			
		<ul> <li>- 322.3 to 322.5 - brecciated with 7 to 10% pyrite and pyrrhotite.</li> </ul>											
		- $323.0$ to $329.1$ - 7 to $10\%$ chlorite and hornblende.	19284		323.0	325.0	2.0			tr.			
		- 325.3 to 325.8 - 20 to 25% pyrite and pyrrhotite (1:1) and trace chalcopyrite in contorted bands with chlorite.	19285		325.0	326.0	1.0			tr.			
		$220.7 \pm 220.1 = 20.4 \pm 20.9$	19286		326.0	328.4	2.4			tr.			
		to banding.	1920/		320.4	529.4	1,0			tr.			
		- 329.1 to 336.3 - 7 to 10% magnetite, blue-grey chert bands, 0.5 to 1% sulphide.	19288 19289		329.4 333.3	333,3 336,3	3.9 3.0			tr. tr.			
		- 331.0 - banded at $70^{\circ}$ to core axis.											
		- 336.3 to 339.8 - poor to moderately banded dominantly chert- grunerite with 3 to 5% magnetite, 0.5 to 1% pyrrhotite.	19290		336.3	339.8	3.5			tr.			
		- 338.3 to 339.0 - 65 to 75% quartz with 2 to 4% pyrrhotite as wisps and stringers in quartz and at contact of quartz and grunerite.											

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			HOLE NO					SHEET NO8 of 10					
FOO	TAGE				SAMPI	_E				ASSAYS			
FROM	то	DESCRIPTION	NO.	% SULPH	FROM	FOOTAGE	TOTAL		~.	07 TON	ÚZ TON		
39.8	423.1	ULTRAMAFIC TO MAFIC VOLCANIC - medium to dark grey, fine to very fine grained, well foliated, mineralogy dominated by tremolite- actinolite with serpentine foliations and minor phlogopite and biotite. Trace disseminated pyrite. Several narrow (1/4") quartz and quartz-carbonate veinlets with no visible sulphides.											
		- 339.8 to 344.0 - dominantly talc-serpentine with minor magnesite.							1				
		- 342.5 to 343.0 - one 1" quartz vein and few quartz lenses, no visible sulphide.	19291		342.3	343.8	1.5			tr.			
		- 344.0 to 345.2 - sheared, dominantly serpentine.											
		- 344.2 to 344.5 - 5 to 7% pyrite along foliations.	19292		343.8	344.8	1.0			tr.			
		- 345.2 to 352.0 - similar to 339.0 to 344.0.											
		- 352.0 to 406.0 - as described for unit, commonly foliated at 60° to core axis.	19293		383.0	388.0	5.0			tr.			
		- 406.0 to 411.1 - several narrow quartz-carbonate veinlets of which some have narrow jasper alteration. Many are oriented parallel to the foliation at 40° to 50° to core axis. Few form network,	19294		406.0	411.0	5.0			tr.			
		- 411.1 to 412.7 - quartz-carbonate alteration, quartz-carbonate veinlets at 411.4 and 411.8. Alteration is weaker from 412.2 to 412.7.	19295		411.0	413.0	2.0			tr.			
		- 412.7 to 418.4 - as described for the unit.											
		- 418.4 to 423.1 - several quartz veinlets.	19296		418.1	423.1	5.0			.02			
23.1	429.7	IRON FORMATION (SULPHIDE FACIES?) - dark grey, fine to very fine grained, laminated to weakly banded. Consists of chert, minor grunerite and chlorite, few garnets and 15 to 20% pyrrhotite and 3 to 5% pyrite. Sulphides may be syngenetic or replacement. Sulphide occurs as bands and infilled in brecciated zones.											

OPAPIMISKAN LAKE NAME OF PROPERTY____

OP-87-1

8 of 10 SHEET NO.

366-1168

LANGRIDGES - TORONTO

				022.0									
F00	TAGE	DESCRIPTION			SAMPL	. E				ASSAY5			
EROM	to		NO.	* SULPH		FOOTAGE			2	07.70*	47 TON	-	
		- 423.1 to 424.8 - highly brecciated.		IDES	FROM	to	TOTAL		•	01 104			
		- 424.8 to 428.0 - weakly banded, well folded with axes at 70° to 80° to core axis. Several chert bands boudin- aged.	19297 19298		423.1 426.8	426.8 429.8	3.7 3.0			tr. tr.			
		- 428.0 to 429.5 - highly brecciated.											
		- 429.5 to 429.7 - chert.											
429.7	498.0	ULTRAMAFIC TO MAFIC VOLCANIC - similar to 339.8 to 423.1, nil to trace sulphides.											
		- 429.7 to 444.7 - dominantly talc-serpentine and with minor magnesite.											
		- 431.3 to 433.0 - sheared near parallel to core axis with 2 to 4% pyrite and pyrrhotite as fracture filling along shear plane.	19299		431.3	433.0	1,7			tr.			
		<ul> <li>- 435.1 to 435.5 - dark green and white bands of serpentine and magnesite with trace magnetite.</li> </ul>	19300		434.8	435.8	1.0			.03			
		<ul> <li>444.7 to 468.0 - dark grey-green, dominantly actinolite-tremolite with minor hornblende, plagioclase and phlogopite</li> <li>several quartz-carbonate veinlets.</li> </ul>											
		- 449.9 to 450.6 - network of quartz-calcite vein- lets with light green and orange alteration.	19301		449.7	450.7	1.0			tr.			
		<ul> <li>457.3 to 457.7 - quartz-calcite vein with red hematitic staining.</li> </ul>	19302		457.0	458.0	1.0			tr.			
		- 468.0 to 476.0 - as above but with several quartz-carbonate vein/ veinlets (1/16" to 1") with jasper alteration rims. Common angle to core axis are 15° - 20° and 70° - 75°	19303 19304		468.0 472.0	472.0 475.2	4.0 3.2			tr. tr.			
		- 475.0 to 475.2 - quartz-calcite (1/4") veinlet at 20° to core axis cuts 1" quartz-calcite- bematite vein at 75° to core axis											

OPAPIMISKAN LAKE NAME OF PROPERTY___

OP-87-1 HOLENO

SHEET NO.

9 of 10

		HOLE NO0P-87-1					SHEET NO10 of 10					
FOO	TAGE		Γ		SAMP	L.E				ASSAYS		
FROM	то		NO.	SULPH	FROM	FOOTAGE	TOTAL		•	OZ TON	OZ TON	
		- 475.3 to 476.0 - minute quartz fractures with light green alteration of wall rock. 5 to 7% pyrrhotite and pyrite as fracture filling.	19305		475.2	476.2	1.0			tr.		
		- 476.0 to 479.2 - similar to 444.7 to 468.0.					,	ĺ				
		- 479.2 to 498.0 - dominantly serpentine-talc with minor magnesite. Several quartz-carbonate and carbonate-serpen- tine veinlets.	19306 19307 19308		484.0 489.0 493.0	489.0 493.0 495.5	5.0 4.0 2.5			tr. tr. tr.		
498.0		End of Hole.										
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NAME OF PROPERTY _____ OPAPIMISKAN LAKE

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NAME OF	PROPERTY	OPAPIMI	SKAN LAKE		
HOLE NO.	OP-87-2	LENGTH	498 '		
LOCATION	15+99NW	2+50SW			
LATITUDE		DEPARTURE _			
ELEVATION	·	AZIMUTH	<u></u>	)IP	-45°
STARTED _	January 13 1	987 FINISHED	January 15	1987	

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FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0	-45.0				
498 '	-36.3	•			

HOLE NO. 0P-87-2 SHEET NO. 1 of 2

REMARKS Summary Log

PA - 844238

LOGGED BY D. J. Corkery

FOOT	FAGE		[		SAMP	LE		[	А	5 5 A 1	r s	
FROM	то	SUMMARY LOG	NO.	SUL PH-	FROM	FOOTAGE TO	TOTAL	45	26	OZ/TON	OZ/TON	
0	20.3	CASING										
20.3	89.2	GARNETIFEROUS METASEDIMENTS										
		- 63.6 to 82.8 - well banded with 20-25% quartz bands. Trace to 0.5% magnetite. Trace sulphide.	19321		63.6	68.0	4.4			1.01		
89.2	134.6	ULTRAMAFIC (INTRUSIVE?)										
134.6	136.7	BANDED GARNETIFEROUS METASEDIMENTS										
136.7	145.3	BANDED IRON FORMATION										
145.3	147.0	GARNETIFEROUS METASEDIMENTS										
147.0	149.3	BANDED IRON FORMATION										
149.3	165.0	GARNETIFEROUS METASEDIMENTS										
165.0	181.0	BANDED IRON FORMATION - well banded, 15-20% magnetite, 0.5-1% pyrrhotite and pyrite.	19337		167.0	169.7	2.7			.06		
		<ul> <li>172.7 to 173.7 - 7-10% pyrrhotite and pyrite in contor- ted zone.</li> </ul>	19339		172.7	173.7	1.0			.12		
181.0	185.4	BANDED GARNETIFEROUS METASEDIMENTS										
1 4	199.6	GARNETIFEROUS METASEDIMENTS										
199.6	222.0	BANDED IRON FORMATION										
		<ul> <li>214.7 to 215.0 - quartz vein with 3-5% pyrite and pyrrhotite at contact with wall rock and along fractures</li> </ul>	19352 •		214.3	215.3	1.0			.16		

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NAME OF PROPERTY	OPAPIMISKAN	LAKE

HOLE NO. 0P-87-2 SHEET NO. 2 of 2

F00	TAGE	DESCRIPTION			SAMPL	_Ε			· · ·	ASSAYS		
FROM	τo	SUMMARY LOG	NO.	SULPH	FROM	FOOTAGE	TOTAL		~.	OZ TON	UZ TON	1
222.0	226.8	GARNETIFEROUS METASEDIMENTS										
226.8	280.6	BANDED IRON FORMATION										
280.6	313.3	ULTRAMAFIC VOLCANICS										
313.3	326.3	BANDED IRON FORMATION - 0.5-1% pyrrhotite parallel to banding.	19372	2	320.3	324.3	4.0			.08		
326.3	333.7	INTERBEDDED BANDED IRON FORMATION and MAFIC TUFF										
333.7	335.1	MAFIC TUFF										
335.1	339.4	BANDED CHEMICAL SEDIMENTS - dominantly chert.										
339.4	341.2	BANDED IRON FORMATION (SULPHIDE FACIES?) - 15-20% pyrrhotite.										
341.2	342.4	ULTRAMAFIC VOLCANIC										
342.4	362.4	BANDED IRON FORMATION (SULPHIDE FACIES?) - $20-30\%$ pyrrhotite, $1-3\%$ pyrite, with sections of brecciation and sulphide infilling.										
362.4	473.4	BANDED IRON FORMATION				1						
473.4	475.5	LAMPROPHYRE DIKE										
475.5	498.0	BANDED IRON FORMATION										
498.0		End of Hole.				:						
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NAME OF	PROPERTY	<u>OPAPIMI</u>	SKAN LAK	Ε	
HOLE NO.	OP-87-2	LENGTH		498'	
LOCATION	15+99NW	2+50SW			
LATITUDE		DEPARTURE			
ELEVATION		AZIMUTH	049°	DIP	<u>-45°</u>
STARTED -	January 13, 198	37 FINISHED	January	15 1987	

FOOTAGE	DIP	AZIMUTH	FOOTAGE	DIP	AZIMUTH
0 -	45.0°				
498' -	36.3°				
				_	

HOLE NO. 0P-87-2 SHEET NO. 1 of 10

REMARKS

PA - 844238

LOGGED BY D. J. Corkery

FOOT	AGE				SAMP	LΕ	•	T	A	SSAN	s	
FROM	то		NO.	SUL PH-	FROM	FOOT AGE TO	TOTAL	26	"	OZ/TON	OZ/TON	
0	20.3	CASINC										
20.3	89.2	GARNETIFEROUS METASEDIMENTS - dark brown, fine grained with coarse garnet poikiloblasts, schistose.										
		Average Modes										
		Biotite       50       -       60%         Garnet       20       -       25%         Quartz       10       -       15%         Hornblende       3       -       5%         Sulphides       trace       -       5%										
		Weak compositional banding, several narrow chert bands, few horn- blende rich, garnet poor bands. Pyrite occurs as disseminations and fracture coatings with chlorite.										
		- 20.3 to 22.6 - nearly massive, no compositional banding.	19310		20.3	24.3	4.0			tr.		
		- 22.6 to 27.7 - 3 to 5% fine grained disseminated staurolite.	19311		24.3	28.3	4.0			tr.		
		- 27.7 to 31.9 - typical.	19312		28.3	31.5	3.2			tr.		
		- 31.9 to 32.5 - hornblende rich, garnet-biotite poor, laminated.	19313		31.5	33.0	1.5			tr.		
		– 32.5 to 34.7 – 3 to 5% staurolite.	19314		33.0	38.0	5.0			tr.		
-		- 34.7 to 61.6 - several quartz bands which are commonly surrounded by hornblende-garnet bands.	19315 19316 19317 19318		38.0 43.0 48.0 53.0	43.0 48.0 53.0	5.0 5.0 5.0			tr. tr. tr.		
		- 39.0 to 39.5 - chloritic bands around chert band.	19319		58.0	61.6	3.6			tr.		

DIAMOND	DRILL	RECORD
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LANGRIDGES - TORONTO - 366-1168

NAME OF PROPERTY_____OPAPIMISKAN LAKE

F00	TAGE				SAMPI	_E			ASSAYS		
FROM	τo	DESCRIPTION	NO.	", SULPH.	FROM	FOOTAGE	TOTAL		OZ TON	UZ TON	
		- 61.6 to 63.6 - silicified zone with minor carbonated 40 to 50% quartz with remnant garnet-hornblende. Trace to 0.5% pyrrhotite in fractures in quartz.	19320		61.6	63.6	2.0		tr.		
		- 62.6 - chalcopyrite bleb in strain shadow of garnet.									
		<ul> <li>- 63.6 to 82.8 - atypical, well banded with 20 to 25% quartz bands interbedded with garnet-biotite-hornblende- grunerite bands. An increase in hornblende often occurs near the boundary of a chert band. Trace to 0.5% magnetite. Trace sulphide.</li> </ul>	19321 19322 19323 19324		63.6 68.0 73.0 78.0	68.0 73.0 78.0 82.8	4.4 5.0 5.0 4.8		1.01 .02 tr. tr.		
		- $68.0$ - banded at $67^{\circ}$ to core axis. - $82.0$ - banded at $70^{\circ}$ to core axis.	10336		82.8	86.2	3 /		01		
	L	<ul> <li>- 82.8 to 89.2 - Similar to above but with 1-3% magnetite.</li> <li>- 85.5 to 86.9 - few garnets with bands at 70° to core axis.</li> </ul>	19326		86.2	89.2	3.0		tr.		
89.2	134.6	<u>ULTRAMAFIC (INTRUSIVE?</u> )-medium to dark grey with dark grey to black clots, fine to very fine grained, well foliated. Mineralogy domin- ated by serpentine and tremolite with minor talc. 1 to 3% magnetite which is concentrated in dark serpentine pseudomorphs. Pseudomorphs are anhedral and have been stretched parallel to foliation due to weak shearing. At margins of unit there are no clots (chill margins?). Nil to trace sulphides as fracture coating.									
		- 89.2 to 93.7 - light grey-green, no clots, dominantly serpentine with talc; trace to 0.5% magnetite.									
		- 93.7 to 132.4 - as described.									
		- 132.4 to 134.6 - similar to 89.2 to 93.7.									
134.6	136.7	BANDED GARNETIFEROUS METASEDIMENTS - similar to 62.9 to 82.8.	19327		134.6	136.7	2.1		tr.		

HOLE NO. 0P-87-2 SHEET NO. 2 of 10

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NAME OF PROPERTYOPAPIMI	SKAN LAKE
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HOLE NO. 0P-87-2 SHEET NO. 3 of 10

FOO	TAGE	PETCHINTION			SAMPI	_E		ASSAYS					
FROM	10	DESCRIPTION	NO.	" SUL PH	r Bou	FOOTAGE			A.	OZ TON	UZ TON		
				TUES	FRUM		TOTAL						
136.7	145.3	BANDED IRON FORMATION - dark grey, fine to very fine grained, massive to weakly banded. Generally consists of chert, magnetite (3-5%), chlorite, hornblende, biotite and few sections garnet- grunerite. Abundant randomly oriented calcite filled fractures. Trace pyrite as fracture coating.	19328 19329		136.7 140.3	140.3 145.3	3.6 5.0			tr. .04			
145.3	147.0	<u>GARNETIFEROUS METASEDIMENTS</u> – dark grey, fine grained with $1/32''$ to $1/8''$ poikiloblastic garnets, schistose.	19330		145.3	147.0	1.7			tr.			
		Average Modes											
		Garnet 20 - 30% Chlorite]- 20 - 30% Hornblende 10 - 20% Quartz 5 - 10% Grunerite 5 - 10% Magnetite trace - 0.5% Pyrite trace											
		Pyrite occurs as fracture coating.											
147.0	149.3	BANDED IRON FORMATION - similar to 136.7 to 145.3. Trace pyrite as fracture coating with chlorite-calcite.	19331		147.0	149.3	2.3			.02			
149.3	165.0	<u>GARNETIFEROUS METASEDIMENTS</u> – similar to 145.3 to 147.0 but with $40-50\%$ garnets and $0.5-1\%$ magnetite as disseminated grains concentrated in $1/2$ to 1' zones.											
5-1168		- 149.3 to 155.1 - typical.	19332		149.3	153.0	3.7			tr.			
TORONTO - 36(		- 155.1 to 156.5 - 1 to 2% magnetite. - 156.5 to 165.0 - typical.	19333 19334 19335		153.0 157.0 161.0	157.0 161.0 165.0	4.0 4.0 4.0			tr. tr. tr.			
1.c.0	181.0	BANDED IRON FORMATION - dark grey, fine to very fine grained, moderately banded with intraband laminations. Generally hornblende- garnet-biotite-grunerite bands interbedded with laminated chert- magnetite [±] grunerite bands.											

NAME OF PROPERTY	OPAPIMISKAN LAKE
HOLE NO. 0P-87-2	SHEET NO 4 of 10

FOO	TAGE				SAMPL	_ E				ASSAYS		
EDON	1 10	DESCRIPTION	NO.	∾. SULPH		FOOTAGE				0.1 700	(1) TON	
P NOM				IDE 5	FROM	TO	TOTAL	<u> </u>	<u> </u>	01 104	01 /04	
		Average Modes										
		Quartz 30 - 40% Magnetite 15 - 20% Hornblende 15 - 20% Grunerite 10 - 15%										
	[	Garnet 3 - 5%	Í	[	[			ĺ	Í	[		
		Biotite 3 ~ 5%								[		
		Calcite 0.5 ~ 1%							Į			
		Sulphide 0.5 ~ 1%					1	1				
		Pyrrhotite and pyrite occur parallel to laminations, in contorted bands and along fractures. Calcite occurs in few 1/4" to 1/2" quartz-calcite veinlets and lenses. (no visible sulphides)										
		- 165.0 to 167.0 - 10 to 15% garnet, few 1/8" quartz-carbonate- feldspar veinlets at 35° to core axis.	19336		165.0	167.0	2.0			tr.		
	ļ		00007		167 0	100 7	0.7	1		06		
		- 167.0 to 172.7 - typical, banded at 53° to core axis.	1933/	ļ	160.7	172 7	2.7	1	Į	.00		
		- 172.7 to 173.7 - 7 to 10% pyrrhotite and pyrite in band dilations in a contorted zone.	19339		172.7	173.7	1.0			.12		
		- 173.7 to 176.4 - typical.	19340		173.7	176.0	2.7			tr.		
		- 176.4 to 176.5 - 10 to 15% pyrrhotite and pyrite in contorted zone.	19341		176.0	177.0	1.0			.04		
8		- 176.5 to 181.0 - typical.	19342		177.0	181.0	4.0			tr.		
		– 179.0 – banded at $50^{\circ}$ to core axis.										
181.0	185.4	BANDED GARNETIFEROUS METASEDIMENTS - similar to 62.9 to 82.8, trace sulphide.	19343		181.0	185.4	4.4			tr.		
18. 4	199 6	CARNETIFEROUS METASEDIMENTS - dark grey fine grained with coarse	19344		185.4	189.6	4.2			tr.		
5		pink garnets (7-10%) moderately foliated. Matrix dominated by	19345		189.6	194.6	5.0	1		tr.		
		biotite-quartz with minor hornblende. Trace pyrite as fracture coating.	19346		194.6	199.6	5.0			tr.		
		coating.										

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LANGRIDGES - TORONTO - 366-1168

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F00	TAGE				SAMPI	E				ASSAYS					
FROM	TO		NO.	" SUL PH		FOOTAGE			hq.	0.7 TON	07 TON				
			ļ	DES	FROM	то	TOTAL	· · · ·	•	01 104					
199.6	222.0	BANDED IRON FORMATION - similar to 165.0 to 181.0 but with more distinct lamination; trace to 0.5% sulphides.													
		- 199.6 to 206.7 - typical. - 204.0 - banded at 70° to core axis.	19347 19348		199.6 203.6	203.6 206.7	4.0 3,1			tr. tr.					
		- 206.7 to 207.2 - brecciated with 10 to 15% quartz-carbonate infilling and fracture filling.	19349		206.7	207.7	1.0			tr.					
		<ul> <li>207.2 to 214.7 - typical,</li> <li>214.7 to 215.0 - quartz vein with 3 to 5% pyrite and pyrrhotite at contact with wall rock and along fractures. Vein has irregular boundaries.</li> </ul>	19350 19351 19352		207.7 210.7 214.3	210.7 214.3 215.3	3.0 3.6 1.0			tr. tr. .16					
		- 215.0 to 217.2 - typical. - 217.2 to 219.0 - several garnet-biotite-chlorite bands (1/2" to 1").	19353		215.3	219.0	3.7			.02					
		- 219.0 to 222.0 - typical.	19354		219.0	222.0	3.0			tr.					
222.0	226.8	<u>GARNETIFEROUS METASEDIMENTS</u> - similar to 149.3 to 165.0 but with $30-40\%$ garnets. Trace sulphides.	19355		222.0	226.8	4.8			tr.					
226.8	280.6	BANDED IRON FORMATION - bands of dark grey, medium grey and cream- green, well banded, weak to moderately contorted. Generally bands of chert interbedded with iron-rich band and minor hornblende- garnet bands. Iron-rich bands consist of grunerite-magnetite $\pm$ calcite with 1/8" to 1/2" grunerite rims. Bands are usually 1/4" to 1/2" wide.Average ModesQuartz30Quartz30Grunerite25Hornblende2-5%													

NAME OF PROPERTY_____OPAPIMISKAN LAKE

HOLE NO. 0P-87-2______ SHEET NO. 5 of 10_____

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366-1168

TORONTO 1

ANGRIDGES

FOOTAGE		DESCRIPTION			SAMPL	_E		ASSAYS					
6 DOM	10	DESCRIPTION	NO.	* SUL PH		FOOTAGE					(1) TON		
FROM	10			IDE 5	FROM	TO	TOTAL	•	•	UZ TUN	02 104		
		Calcite 2 - 5% Garnet 0.5 - 1% Sulphide 0.5 - 2%											
		Pyrrhotite occurs parallel to bands and at fracture fillings in chert bands, quartz veins and at contact of quartz veins and Banded Iron Formation.										:	
		- 226.8 to 228.0 - transition from garnetiferous metasediments to typical Banded Iron Formation at 227.5.	19356		226.8	228.0	1.2			tr.			
		- 228.0 to 229.0 - brecciated and quartz-carbonate infilled from 228.4 to 228.5 surrounded by zone of light green alteration and several chlorite and calcite- chlorite veinlets. Minor hematite in both brecciated and altered zone.	19357		228.0	229.0	1.0			tr.			
		- 228.8 to 229.0 - 2 to 4% pyrrhotite and chalco- pyrite.											
		-229.0 to $238.0$ $-$ typical.	19358		229.0	234.0	5.0			.01		i	
			19359		234.0	238.0	4.0			tr.		1	
		<ul> <li>230.3 to 230.5 - several quartz-calcite veinlets, no visible sulphides.</li> </ul>			-								
		- 238.0 to 241.0 - several 1/2" to 2" quartz veins with 2 to 4% pyrite and pyrrhotite in fractures and in adjacent wall rock.	19360		238.0	241.0	3.0			tr.			
		-241.0 to $267.0$ - typical moderately conforted.	19361		241.0	245.0	4.0		ļ	tr.		1	
			19362		245.0	250.0	5.0		Ì	tr.		1	
			19363		250.0	255.0	5.0			tr.		1	
			19364		255.0	260.0	5.0	l		.02		1	
			19365		260.0	265.0	5.0		1	tr.		1	
		- 267.0 to 268.0 - nearly massive iron-rich band.	19366		265.0	270.0	5.0		1	tr.		1	
			19367		270.0	275.0	5.0		l	tr.		1	
		-268 0 to 269 3 $-$ same as 241 0 to 267 0	19368		275.0	278.0	3.0		[	tr.			
		200,0 to 207.3 - Same as 19110 to 207.01	19369		278.0	280.5	2.5	ļ		tr.		1	

OPAPIMISKAN LAKE

SHEET NO. 6 of 10

NAME OF PROPERTY___

HOLE NO. ...

OP-87-2

- 268.0 to 269.3 - same as 241.0 to 267.0. - 269.3 to 280.6 - weak to very weakly contorted, trace garnets.  $272.0 = \text{banded } 57^\circ$  to some price

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NAME OF PROPERTY	OPAPIMISKAN LAKE	
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HOLE NO. ______ OP-87-2______ SHEET NO. _____ 7 of 10______

FOO	TAGE	DESCRIPTION			SAMPL	- E		ASSAYS					
FROM	то	DESCRIPTION	NQ.	SULPH	FROM	FOOTAGE	TOTAL		~.	OZ TON	OZ TON		
280.6	313.3	LITRAMAFIC VOLCANICS - light grey-green, fine grained, well folia- ed, mineralogy dominated by tremolite-serpentine-talc-phlogopite. Phlogopite content increases toward boundaries of the unit. Very finor phlogopite from 293.0 to 306.2. In few locations alteration of tremolite to serpentine is visible. Foliated at 50° to 55° to core axis. No visible sulphides.											
313.3	326.3	BANDED IRON FORMATION - similar to 226.8 to 280.6 but with 10 to 15% calcite as laminations and bands. Moderately contorted. 0.5 to 1% pyrrhotite parallel to banding.	19370 19371 19372		313.3 316.3 320.3	316.3 320.3 324.3	3.0 4.0 4.0			tr. .02 .08			
		- 313.3 to 324.3 - typical.											
		- 324.3 to 326.3 - laminated to weakly banded, moderate to highly contorted, 2 to 4% pyrrhotite.	19373		324.3	326.3	2.0			tr.			
326.3	333.7	INTERBEDDED BANDED IRON FORMATION AND MAFIC TUFF - 7;3 ratio Banded Iron Formation; Mafic Tuff. <u>Banded Iron Formation</u> similar to 226.8 to 280.6 but with finer banding (commonly 1/16" to 1/4"), moderate to strongly contorted. 1 to 2% pyrrhotite parallel to banding and with quartz-calcite filled fractures. <u>Mafic Tuff</u> medium to dark green, fine grained, laminated, dominantly hornblende-chlorite and plagioclase. Trace sulphides.	19374 19375		326.3 329.7	329.7 333.7	3.4 4.0			tr. tr.			
333.7	335.1	MAFIC TUFF - similar to above with few narrow bands of quartz and grunerite. Trace sulphides.	19376		333.7	335.1	1.4			tr.			
335.1	339.4	BANDED CHEMICAL SEDIMENTS - dark grey, fine to very fine grained, laminated to weakly banded, 65 to 70% quartz with interbeds of grunerite, hornblende-actinolite. Trace to 0.5% magnetite. 1 to 3% pyrrhotite and trace to 0.5% pyrite along fractures.	19377		335.1	339.4	4.3			tr.			
339.4	341.2	BANDED IRON FORMATION (SULPHIDE FACIES?) - grades from above. Laminated to weakly banded, light grey, medium green and bronze. Consists of laminations of chert (40-50%), grunerite-hornblende (30-40%), pyrrhotite (15-20%) and 1-2% garnet. Chert is often boudinaged.	19378		339.4	341.2	1.8			tr.			
341.2	342.5	<u>ULTRAMAFIC VOLCANIC</u> – similar to 280.6 to 313.3 but with no phlogo- pite. Foliated at $35^{\circ}$ to $40^{\circ}$ to core axis. No visible sulphides.	19379		341.2	342.5	1.3			tr.			

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NAME OF PROPERTY	<b>OPAPIMISKAN</b>	LAKE
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HOLE N	o	P-8/-2
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SHEET NO. 8 of 10

FOO	TAGE		SAMPLE					ASSAYS						
FROM	то	DESCRIPTION	NO.	SULPH	FROM	FOOTAGE	TOTAL	;	•	OZ TON	OZ TON			
342.5	362.4	BANDED IRON FORMATION (SULPHIDE FACIES?) - similar to 339.4 to 341.2 but with 20 to 30% pyrrhotite and 1 to 3% pyrite. Large sections heavily brecciated with pyrrhotite infilling. These sections contain up to 30 to 40% pyrrhotite. Most sections are contorted (sheared?), strong fracturing and boudinaging of chert.												
		- 342.5 to 344.1 - typical. - 343.9 to 344.0 - calcite band.	19380		342.5	344.1	1.6			tr.				
		- 344.1 to 348.7 - heavily brecciated, 20 to 30% pyrrhotite.	19381		344.1	348.7	4.6			tr.				
		- 348.7 to 350.5 - typical.	19382		348.7	350.5	1.8			tr.				
362.4	473.4	<ul> <li>- 350.1 to 350.3 - near massive band of pyrrhotite.</li> <li>- 350.5 to 357.7 - heavily brecciated, 20 to 30% pyrrhotite.</li> <li>- 350.5 to 352.5 - 30 to 40% pyrrhotite.</li> <li>- 357.7 to 359.0 - sheared, 15 to 20% pyrrhotite.</li> <li>- 359.0 to 362.4 - heavily brecciated, 20 to 30% pyrrhotite.</li> <li>BANDED IRON FORMATION - similar to 226.8 to 280.6, with moderate contortion of bands. 0.5 to 1% calcite in bands and as fracture fillings. 0.5 to 1% pyrrhotite parallel to band (commonly as stringers) and as fracture fillings.</li> </ul>	19383 19384 19385 19386		350.5 353.7 357.7 359.0	353.7 357.7 359.0 362.4	3.2 4.0 1.3 3.4			tr. tr. tr.				
		<ul> <li>- 362.4 to 368.2 - 3 to 5% calcite.</li> <li>- 368.2 to 368.8 - quartz vein, no visible sulphides, contact at 40° to core axis.</li> <li>- 368.8 to 407.3 - typical, abundant small folds.</li> <li>- 385.0 - fold axial plane at 65° to core axis.</li> <li>- 391.0 - banded at 63° to core axis.</li> </ul>	19387 19388 19389 19390 19392 19392 19393 19395 19396		362.4 367.4 369.0 373.0 378.0 383.0 388.0 393.0 398.0 403.0	367.4 369.0 373.0 378.0 383.0 388.0 393.0 398.0 403.0 407.3	$5.0 \\ 1.6 \\ 4.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 4.3 $			.01 .02 .02 .01 .01 .01 .01 tr. .01 .01				

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		SAMPLE					ASSAYS							
	NO.	% SULPH	í	FOOTAGE						ſ				
		IDES	FROM	TO	TOTAL	•	~	OZ TON	02 TON	L				
% pyrrhotite parallel to	19397		407.3	410.3	3.0			.03						
tite. Zone has undergone	19398		410.3	413.3	3.0			.02						
	-													

NAME OF PROPERTY ...

OPAPIMISKAN LAKE

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			- 407.3 to 413.6 - 5 to 7% calcite, 2 to 4% pyrrhotite parallel to banding. 3 to 5% magnetite. Zone has undergone strong calcite-chlorite alteration.	19397 19398	407.3 410.3	410.3 413.3	3.0 3.0			.03 .02		
			- 407.8 - calcite-chlorite veinlet $(1/4")$ at $25^{\circ}$ to core axis.									
			- 413.6 to $419.0$ - typical with 1 to $3\%$ calcite.	19399	413.3	418.3	5.0			tr.		
			- 419.0 to 423.2 - 10 to 15% garnet poikiloblasts, trace to 0.5% pyrrhotite.	19400	418.3	423.2	4.9			tr.		
			- 423.2 to 427.1 - typical, trace to 0.5% pyrrhotite.	19401	423.2	428.2	5.0			tr.		
			- 427.1 to 432.9 - similar to 419.0 to 423.2.	19402	428.2	433.2	5.0			tr.		
			- 432.9 to 438.3 - typical.	19403	433.2	438.3	5,1	l		tr.		
			- 438.3 to 440.8 - 10 to 15% pyrrhotite in magnetite bands.	19404	438.3	440.8	2.5		1	tr.		
			- 440.8 to 442.5 - 1 to 3% pyrrhotite.	19405	440.8	442.5	1.7			tr.		
			- 442.5 to 444.7 - 3 to 5% pyrrhotite.	19406	442.5	444.7	2.2			tr.		
			- 444.7 to 473.4 - typical, trace to 0.5% pyrrhotite, few garnets.	19407 19408	444.7	449.0	4.3			tr. tr.		
			= 450.0 = handed at 52° to core axis	19409	454.0	459.0	5.0	· ·		tr.	1	
			- 450:0 - Danded at 52 to core datas	19410	459.0	464.0	5.0			.01		
				19411	464.0	469.0	5.0			tr.		
-1168				19412	469.0	473.4	4.4			tr.		
- TORONTO - 366	473.4	475.5	LAMPROPHYRE DIKE - black, porphyritic, fine grained with coarse grained pseudomorphs, massive, dominantly chlorite and serpentine with 5 to 10% carbonate as replacement and veinlets - Contacts Banded Iron Formation at $55^{\circ}$ to core axis.	19413	473.4	475.5	2.1			tr.		
LANGRIDGES -												management of the

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LANGRIDGES - TORONTO

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FOOT	TAGE				SAMP	E				ASSAYS		
FROM	то		NO.	SULPH	FROM	FOOTAGE	TOTAL	•	~	07 TON	UZ TON	
475.5	498.0	BANDED IRON FORMATION - similar to 362.4 to 473.4 but with few garnets; weak to moderately contorted, trace to 0.5% pyrrhotite. - 488.0 - banded at 50° to core axis.	19414 19415 19416 19417		475.5 478.0 483.0 488.0	478.0 483.0 488.0 493.0	2.5 5.0 5.0 5.0			tr. tr. tr. tr.		
498.0		End of Hole.	19418		493.0	498.0	5.0			.01		
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OPAPIMISKAN LAKE



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Ministry of Rep Natural Outarin	oort Vork		Te te	Rev 1 37-10	scd Instructions - 4 -	Supply re type at y For Geo t of Work ()	quired data or vork to be rec schnical work ( Geological, Geo	n e sopriate foi corded (see ta use form no, 13 pobysical, Geoc	rm for each file below), 162 "Report fiemical and
Assess. Libn	·	The Mining Act Exi			Expenditures)".				
Power i lorations	•					Prospector's Licence No. T. 4642			
1003 - 34 King St	F	Toronto 0	ntario	M	C 1F5		1 4042		
Summary of Work Performa	uce and Dist	ribution of Credi	11. dl. 10						
Total Work Days Cr. claimed	Mi	ning Cinim	Werk		Mining Claim	Work	MinIn	g Claim	Work
10,467	Fierix Sod	Attached	Days Cr.	Frelix	Number	Unys Cr.	Prefix	Number	Days Cr.
work. (Check one only)		Actached						·····	
🛄 Manual Work								·····	-
Shaft Sinking Drifting or other Lateral Work, Compresent Air, other Power driven or mechanical equip.									
Power Stripping						-			- ]
Diamond or other Core									-
Land Survey					·····				-
All the work was performed on	Mining Claim	(s): Pa84423	8. Pa8	44230	. l	<i>C</i> 22	a Skin	in Lak	- <b></b>
Required Information eg: 1	type of equip	ment, Names, A	dillesses,	elc. (Sr	e Table Below)	<u>G</u> Rali	J SICIN	ther Nam	<u> </u>
	<u></u>								
Core Size: B.Q.	1 7/1	ling Ltd, 4 Lario L6S	3G3	1610	Ku,		6 - 4 198)	Р.М.	
Geologist in Charg	ge: Dani Cobo	iel J. Cork ourg, Ontar	ery, io,	R.R.# K9A	4J9	8 9 10	111211212 1	3141516	1 5
Number of Holes:	30					1	= ( ≴	lecordec	, k
l'otal Footage: 1	0 467	Allanahla	Cree	1.Tr	Sect. rc/6)	6119	davs	May 29,	1997
)ates: September January 1	c 18th, 1 LOth, 198	1986 to Dec 37 to Janua	ember ry 15t	15th, h, 19	1986 987		Lou	u Har	Co
		Pa	. 8/80	016	May, 1987		Inteorded He	beler or April	(Signature)
Certification Verifying Rep	ort of Work					·····		V C	<u>}</u>
Elienity certify that I have or witnessed same during an	a personal and id/or after its c	Intimate knowledg completion and the	e of the fea ennexed re	cissel fo eport is t	rth in the Report of rue,	Work anna:	ced hereto, hav	ing performed	the work
Vame and Postal Address of Po	- 34 Kit	ne St. E.	Toron	nto, (	Dutario MS	G 1E5			• • <u>•••</u> •••
	churgate Dec	wied by the Mir	Lun Baco		Date Cartilioit	1987	Certified to	Man	10
Type of Work	Sor	cific information of	nr type		Define information (C	Common to	2 or more type	n) Attac	hnierit
Manual Work									
Shaft Sinking, Drifting or other Laterat Work		NII			Names and addresses of men who performed Work Sketch: thes manual work / operated aquipment, together are required to sho			itch: these red to show	
Compresentair, other power driven or mechanical equip.	Type of equ	lpment .							work in o the
Power Stripping	Type of equ Note: Proof within 30 de	Ipment and amount of actual cost must syst of recording.	l expended   be submit	l. Lted	Names and address together with dates	ns of owner when dritti	or operator ng/stripping	neerest c1	ann pust,
Diamond or other core dritting	Signail core core, munite	log showing; footne ir and angles of hole	in, diaminte 15.	er of	i tione. Work Sketch (e ebove) in dupli			itch (ns i duplicata	
Lauri Survey	Nation brief be	diffess of Ontario In	nd surveye		Nii Nii			NII	

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#### OPAPIMISKAN LAKE PROPERTY

المحادث بمحيد مستنب المعرا

#### LIST OF CLAIMS

		46.46			46.46			46.46			
		Credits			Credits			Credits			Credits
۱	010016	requested:	••	026400	requested:	•.		requested:	••		requested:
'a	818016	<del>70</del>	ľa	836490	70	ľa	857575	-70-	ľa	844230	70
	818017			836491			857576			844231	
	818018			836492			857577			044232	
	818019			836493	**		857578	••		844233	
	818020	**		836494	**		857579			844234	11
	818021			836495			857580	11 -		844236	11
	818022	11		836496	**		857581			844237	11
	818023	11		836497	**		857582	11		844238	11
	818024	11		836498	**		857583	11		844239	11
	818025	11		836499	11		857584	11		844240	11
	818026	11		816500	11		857585	11		844241	11
	818027	11		000000			057586	**		844242	*1
	010027	11	ľа	844226	i i		057507	11		844243	11
	010020	11		844227	120		057507	11		844244	11
	010029	11		844228	130		057500	11		044243	**
	818030	<b>11</b>		844229	130		857589	**		844240	ŧ1
	818031	**			46.46		857590	11		866769	+1
	818032	**	Pa	857560	70-		857591	**		844240	- 11
	818033	11		85756L	11		857592	11		844250	H ·
	818034	**		857562	*1		857593	11		844250	11
	818035	••		857563	11		857594	11		844252	**
				857564	TT		857595	11		844253	
		10.10		857565	11		857596	**		844254	
Pa	. 836483	46.46		857566	11		857597	**		844255	
	036708 036707	11		057567	11		057597			844256	
	030404	11		057507	11		057550	**		844257	
	836485	11		857568			857599			844258	**
	836486	**		857569	11		857600	**		844259	11
	836487	11		857570			857601			844260	11
	836488	11		857571	11		857602			844261	
	836489	• ••		857572	11		857603				
				857573	**		857604				
				857574	11						

Total Claims: 119

Credits requested: <del>10,110</del> *6,44*9.1



#### DIAMOND DRILLING

#### AREA: SKINNER LAKE

#### REPORT NO:15

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WORK PERFORMED FOR: Power Explorations Inc.

RECORDED HOLDER: Same as above [xx] : Other []

<u>C1a</u>	im No.	Hole No.	Footage	Date	<u>Note</u>
Pa	844238	OP-86-1 OP-86-2 OP-86-3 OP-86-4 OP-86-5 OP-86-6 OP-86-7 OP-86-7 OP-86-8 OP-86-9 OP-86-10 OP-86-11 OP-86-12 OP-86-13 OP-86-15 OP-86-16	428' 818' 378' 526' 259' 305' 339' 297' 199' 339' 289' 335' 289' 335' 299' 269' 309' 297'	Sept/86 Sept/86 Oct/86 Oct/86 Oct/86 Oct/86 Oct/86 Oct/86 Oct/86 Oct/86 Oct/86 Oct/86 Nov/86 Nov/86 Nov/86 Nov/86	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Pa	844239	OP-86-17	249 <b>'</b>	Nov/86	(1)
Pa	844238	OP-86-18. OP-86-19	298 <b>'</b> 249 <b>'</b>	Nov/86 Nov/86	(1) (1)
Pa	844239	0P-86-20	248'	Nov/86	(1)
Pa	844238	OP-86-21 OP-86-22 OP-86-23 OP-86-24	298' 279' 348' 278'	Nov/86 Nov/86 Nov/86 Dec/86	(1) (1) (1) (1)
Pa	844239	OP-86-25 OP-86-26 OP-86-27 OP-86-28	347' 298' 397' 496'	Dec/86 Dec/86 Dec/86 Dec/86	(1) (1) (1) (1)
Pa	844238	0P-87-01 0P-87-02	498 <b>'</b> 498 <b>'</b>	Jan/87 Jan/87	(1) (1)

NOTES: (1) #104-87, filed in Feb/88



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#### LEGEND

Overburden Ultramafic volcanics Mafic volcanics Chlorite schist Banded Iron formation Sediments : a) biofite, garnet ± amphibole ± quartz ± magnetite b) biotite ± umphibole± quartz ± magnetite 6 Greywacke 7 Mafic tuff 8 Felsic volcanics 9 Lamprophyre 10 Intermediate volcanics q.v. Quartz vein Banding Geological contacts defined inferred questionable Gold assay in ounces per ton 0.014 2.5 Core interval in feet Nagnetic profile





-200'



LEGEND Overburden Ultramafic volcanics Mafic volcanics Chlorite schist Banded iron formation Sediments: a) biotite, garnet± amphibole±quartz±magnetite b) biotite±amphibole±quartz ±magnetite Greywacke 7 Matic tuff 8 Fetsic vo'canics 9 Lamprophyre 10 Intermediate volcanics Quartz vein — — Banding Geological contacts defined inferred -?--?- questionable 0.014 Gold assay in ounces per tan 2.5 Core interval in tast Core interval in feet .----. Magnetic profile - 50 FEET ORACLE RESOURCES LTD. OPAPIMISKAN LAKE PROPERTY Patricia M.D., Ontario D.D.H. SECTION 9+00 NW BY: D. J. Corkery DATE: Dec. 1986 GEOCANEX LTD TORONTO, CANADA DWG. No. 3


LEGEND Cverburgen Ultramatic voicanics Matic volcanics Chlorite schist Banded Iron formation Sediments : a) biotite, garnet ± amphibole‡quertz±magnetite b) bietite±amphibole±quartz ± magnetite Greywocke Nofic tuff Felsic volconics Lamprophyre Intermediate volcanics Quartz vein --- Banding Geological contacts ----- defined --- inferred -?-?- questionable Cord assay in curices per ton Co**re** interval n feet .---- Magnetic profile FEET ORACLE RESOURCES LTD. OPAPIMISKAN LAKE PROPERTY Patricia M.D., Ontario D.D.H. SECTION 10+00 NW GEOCANEX LTD



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		LEGEND
	0/5	Overburden
		Ultramafic volcanics
	2	Mafic volcanics
	3	Chlorite schist
	4	Banded Iron formation
	5	Sediments: a) biotite, garnet ± amphibole ± quartz ± magnetite b) biotite ± amphibole ± quartz ± magnetite
	6	Greywucke
	7	Mafic tuff
	8	Felsic volcanics
	9	Lamprophyre
	10	Intermediate volcanics
	q.v.	Quartz vein
		Banding
		Geological contacts
		defined inferred
	-?-?-	questionable
	0.014	Gold assay in ounces per ton
	2.5	Core interval in feet
		Magnetic profile
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	URACE	E RESOURCES LTD.
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Narros	D.C	D.H. SECTION 11+00 NW

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SECTION





LEGEND 2/5 Gverburden 1 Ultramafic volcanics 2 Matic volcanics 3 Chlorite schist 4 Banded Iron formation 5 Sediments : a) Diolite, garnet ± amphibole ± quartz ± magnetite b) biotite ± amphibole = quartz ± magnetite Greywaarra 5 Greywacke 7 Mcfic tuff 8 Fels:c volcanics 9 Lamprophyre 10 Intermediate volcanics* q.v. Quartz vein ---- Banding Geological contacts defined -?-?- questionsble 0:014Gold assay in ounces per ton2:5Core interval in feet .--- Magnetic profile -50 FEET ORACLE RESOURCES LTD. OPAPIMISKAN LAKE PROPERTY Patricia M.D., Ontario D.D.H. SECTION 12+00 NW D.D.H. OP-86-1, 2, 8, 9, 10 GEOCANEX LTD SCALE: 1" 260

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AN LAKE PROPERTY cia M.D., Ontario
D.H. SECTION 5 + 00 NW
6-20, 22, 24, OP-87-1
BY DU CUIKERY DATE Dec 1986 DCANEX LTD SCALE

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LEGEND Ultranofic volcanics 2 Mafic ve canics 3 Chlurite schist Banded ron formation Sediments : al biotife garnet ± amphibale ± quartz ± magnetite bi biotife ± amphibale ± quartz ± magnetite 5 Greywacke - Votic tuff e Feisic voicanias 9 Lumprophyre intermediate volcarias C. Guartz vein -- Fonding Secting call crimitants ---- defined 2.5 Gold creatly in ounces per ton Core interval in fast .--- Magnetic profile 50 FEET ORACLE RESOURCES LTD. OPAPIMISKAN LAKE PROPERTY Patricia M.D., Ontario D.D.H. SECTION 16 + 00 NW D.D.H. OP-86-23, 25, OP-87-2 GEOCANEX LTD SCALE 1" = 40 TORONTO, CANADA DWG. No. 10





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	Vertical Field Magnetic Profile	( 1000's gammas )	40 - 30 - 20 - 10 -
LEGEND Cverburden Ultramatic volcanics Matic volcanics Matic volcanics Chlorite schist Banded Iran formation Sediments : al biolite, g amphibale ± quartz ± ma bi biotite ± amphibale: ± magnetite Greywacke Vafic ±uff Fetsic volcanics Lamprophyre Intermediate volcanics Guartz vein Eanding Geological contacts defined inferred questionable Gold assay in ounces per Core interval in feet Magnetic profile	arn bgn t qi		± te 1z
FEET FEET E RESOURCES LTD CAN LAKE PROPE ICIA M.D., Ontario D.H. SECTION 18+00 NW 36-28 BY: DJ C DATE: DE SCALE: DWG. NO	R acl	TY	



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L52N L48N L44N . 2 844242 L40N L36N L 32 N L28N L24 N Lake L20N L 16 N 8442 L12 N L8N 844245 · √ √ ↓ ↓ ↓ ↓ ↓ ↓ . L4N Halams 340 ORACLE RESOURCES LTD. • OPAPIMISKAN LAKE PROPERTY Patricia M.D., Ontario Geochemical Soil Survey ARSENIC CONTOURS GEOCANEX LTD TORONTO, CANADA BY: R.T.M. DATE: Feb. 1987 SCALE: 1" = 400' DWG. No: 14