REPORT
ASSESSMENT WORK - EO 608347
Bissett Creek Graphite Property
Maria Township, Ontario
Recorded Holder:
Industrial Minerals Canada Inc.
2500 One Dundas St. West
Toronto, Ontario
M5G 1Z3
Client # 400757

2.30544

Location:

Industrial Minerals Canada Inc. currently holds Mining Lease No. 106693, which is comprised of surface and mining rights of land and land under water in the geographic Township of Maria, now in the United Townships of Clara, Head and Maria, in the County of Renfrew, Province of Ontario. The graphite rock which was the subject of beneficiation/assays was taken from Pit #3, Mining Claim EO 608347, located in the north half of Concession IV, Lot 24. (**See Appendix A - Key Map**). Unpatented mining claims SO 1249711 and SO 1234705 are contiguous to the block of twenty-eight leased claims. (**See Appendix B - Contiguity Map**).

History:

The mining claims comprising the lease were originally staked in 1980. Donegal Resources Ltd. optioned the property the same year, and carried out a geophysical survey using ground magnetometer equipment. After carrying out a modest exploratory trenching program, the company terminated the option.. Hartford Resources Inc. optioned the property in 1981. Line cutting, VLF-EM surveys and further trenching were carried out.

Princeton Resources Corporation (Princeton) acquired Hartford Resources Inc.(and the option on the claims) in 1984. Geological mapping, trenching, sampling and diamond drilling were carried out during 1984: five trenches totalling 285 metres and seven drill holes for a total

depth of 317 metres. The following year, Princeton did more mapping, geophysical surveys, diamond drilling, some bench testing and bulk sampling.

North Coast Industries Ltd. (North Coast) acquired a 58% interest in the property in 1986. It carried out an extensive program of exploration and test work. Almost 700 metres of trenching and 2100 metres of diamond drilling, for a total of 7232 metres in 160 holes, were completed. Percussion drilling was carried out with 82 holes completed, for a total of 1207 metres. Both Princeton and North Coast took bulk samples for pilot scale testing.

North Coast acquired the remaining interest in the property in 1989. North Coast then commissioned KHD to complete a feasibility study for the project, assisted by Kilborn Engineering (B.C.) Ltd. After the feasibility study was completed, the project was put on hold due to a severe decline in graphite prices. The property was returned to the original vendor group.

Industrial Minerals Inc. acquired the leased mining claims in 2001, and transferred the lease to its wholly-owned subsidiary, Industrial Minerals Canada Inc.(IMCI) in 2003. Work carried out on behalf of IMCI included a testing method of pre-concentrating the flake by a novel dry process. IMCI constructed a processing plant at the Bissett Creek site, which incorporates the novel dry process; the company's Mine Development and Closure Plan was accepted for filing in 2004, and the company began commissioning in October 2004.

Geology, Mineralogy:

(The following information taken, with permission, from: "Summary Review and Geological Report for the Bissett Creek Graphite Project", B. Ainsworth, P.Eng. B.C., November 25th, 2001.)

The graphite deposit occurs in a belt of the Ontario Gneiss, a segment of the Grenville

Province of Pre-Cambrian rocks of the Southern Canadian Shield. The main rock type is a quartzo-feldspathic gneiss, which is reportedly an upper amphibolite grade of metamorphism. The Ontario Gneiss is distinguished from other formations in the Grenville by having a dominant northwestern foliation.

Ontario Geological mapping in 1976 by S.B. Lumberg reports that the property area is underlain by Middle Pre-Cambrian metasediments. These are gneisses with medium to coarse-grained, quartz, biotite-k-feldspar and quartz plagioclase feldspar units. The beds are highly deformed and lie in northwest trending, northeast dipping recumbent folds. A significant amount of remobilization of quartz and feldspar occurred during the metamorphism and as much as ten percent of the rock is migmatite.

For mapping purposes, the rocks are divided into graphite gneisses, transitional graphite gneisses and barren gneisses.

The graphite gneiss horizon has a thickness of approximately seventy-five metres as demonstrated by drilling. In the area of the drilling, it dips eastward at five to twenty-five degrees. The graphite horizon is sandwiched between an upper, barren non-calcareous gneiss and a similar lower unit. These are pale to dark green units with biotite, dark green amphiboles and red garnets. Drill results indicate that the bulk of the graphite occurs with a graphitic carbon grade of between one percent and ten percent.

The transitional gneiss is an intermediate unit that has muscovite and biotite with mauve garnets in the quartz-feldspar gneiss. This may occur near the foot wall and hanging walls or as small lenses within the graphitic gneiss horizon.

Two minor intrusive units were identified on the surface within the claims. These have

been emplaced as minor dykes and sills of lamprophyre and migmatic quartz-feldspar pegmatites with biotite and muscovite.

The Bissett graphite is a metasedimentary deposit of unspecified sub-type. The original sediments were probably carbon rich - low iron sandstones that either developed crystalline graphite from the confined metamorphism and destruction of the carbonates or from the re-working of carbonaceous material in the sediments.

A petrographic study carried out as part of the feasibility study for North Coast determined that the graphite gneisses were biotite schists with variable contents of amphibole, clinopyroxene, chlorite, carbonate and graphite. Ubiquitous minerals included sphene, apatite, garnet and zircon. Sulphides were reported as trace amounts only, usually as pyrite and pyrrhotite. It was concluded that the mineral assemblage was derived from calcareous bands of sediments with interbedded clastic sediments possibly derived from rocks of granitic composition. The grade of regional metamorphism was considered to be upper medium grade as determined by the development of garnet, amphibole and diopside.

Beneficiation:

In September 2004, IMCI requested a final pilot plant test to confirm previous graphite beneficiation by air classification (using novel dry process) and optimization of bench scale process; the work conducted in 2002 and 2003 yielded a 94% carbon concentrate from a 3% to 4% head grade. IMCI also wanted to confirm that the structural geology and rock types were consistent within the deposit, for processing purposes; the rock taken for the final pilot plant test was taken from Pit #3, approximately 1300 feet west of Pit #1, which was the source of rock for testing conducted in 2002. Confirmation was also required to determine optimum air settings

for the classifiers.

Description of Work:

On September 27 and 28, 2004, two truck loads of rock (approximately 20 tons) were taken from Pit #3, a pit which was blasted in 1981. Personnel and equipment from IMCI loaded the truck, which returned from Bissett Creek to the pilot plant at Erana Mines Limited, 59 Nelson Rd., Lively, Ontario. The rock was crushed and screened, then processed through the classifier, at different air settings.

Names of personnel involved in work, and dates worked:

Albert Jerome	Sept 29 - Oct 1; Oct 4 - Oct 8; Oct 12 - 15, 2004
Tyler Fauvelle	Sept 29 - Oct 1; Oct 4 - Oct 8; Oct 12 - 15, 2004

Equipment used at 59 Nelson Rd. facility:

6 x 12' Pacific jaw crusher;

Hazemag impact crusher;

Sweco Vibro energy screen;

Trommel screens; and

Graphite air classifier, novel, informally referred to as "wizard"

The cost for this beneficiation program was:

Bulk sample preparation (crushing, screening, etc.)	$4,256.	
Assays, lab	1,387.	
Freight & transport	1,200.	
Report	175.	$7,018.

The bulk sample preparation began on September 29th, and concluded on October 8th. The material was processed through the "wizard" classifier during the week of October 12 - 15, 2004. Four tests were conducted, during which approximately 5 tons of material per test were processed. Samples were sent to SGS Lakefield for analysis:

October 12th, 2004:

Samples taken at four different air settings; results (**SGS Lakefield LR Report CA09499-OCT04, appended to this report**) :

Sample ID	Total Carbon %
BC 300	86.7
BC 301	89.1
BC 302	89.7
BC 303	94.0

(Note: The BC 303 sample was sent to a large graphite end-user; they reported 96.1% carbon, LOI).

October 13th, 2004:

Samples taken at three different air settings; results (**SGS Lakefield LR Report CA09823-OCT04, appended to this report**):

Sample ID	Total Carbon %
BC 6	70.8
BC 7	94.8
BC 8	86.8

October 14th, 2004:

Samples taken at 2 different settings; lower air, inconclusive; results (**SGS Lakefield LR Report CA09264-OCT04, appended to this report**):

Sample ID	Total Carbon %
BC 9	84.1
BC 10	74.4

October 15, 2004:

Samples taken at 4 different settings; results (**SGS Lakefield LR Report CA09488-NOV04, appended to this report**):

Sample ID	Total Carbon %
65221	51.0
65222	29.9
65223	66.6
65224	93.6

Conclusion:

Testing indicated that the optimal air setting to process this rock using the novel "wizard" classifier was the one which yielded the 94% total carbon result achieved in BC 303. There was no material difference between rock processed from Pit #1 (2002 testing) and the rock processed from Pit #3, at least with respect to air classifier processing results.

Discussion - Graphite as an Industrial Mineral:

These are the traditional uses for graphite:

Refractories

- castable ramming
- carbon bonded brick
- ladles
- magnesite and alumina carbon brick

Brake linings

Foundries

These are emerging uses:

Fuel cells for hybrid and electric vehicles

Energy storage systems

- VRB
- lithium-ion battery

Heated runways

Conductive plastics.

Properties of graphite which make it important to both traditional and emerging markets:

- high electrical conductivity
- high thermal conductivity
- light weight
- high strength
- high stiffness
- high lubricity
- low permeability due to flake form

- dimensional stability
- chemical inertness.

Industrial Minerals Canada Inc. began commissioning of its processing plant at Bissett Creek in October 2004.

Prepared this 29th day of November, 2004

Edward J. Blanchard

Erana Mines Limited

APPENDIX A

2.30544

EXISTING & PROPOSED OPENINGS TO SURFACE MAP - Nº 4

Bissett Creek Graphite Project

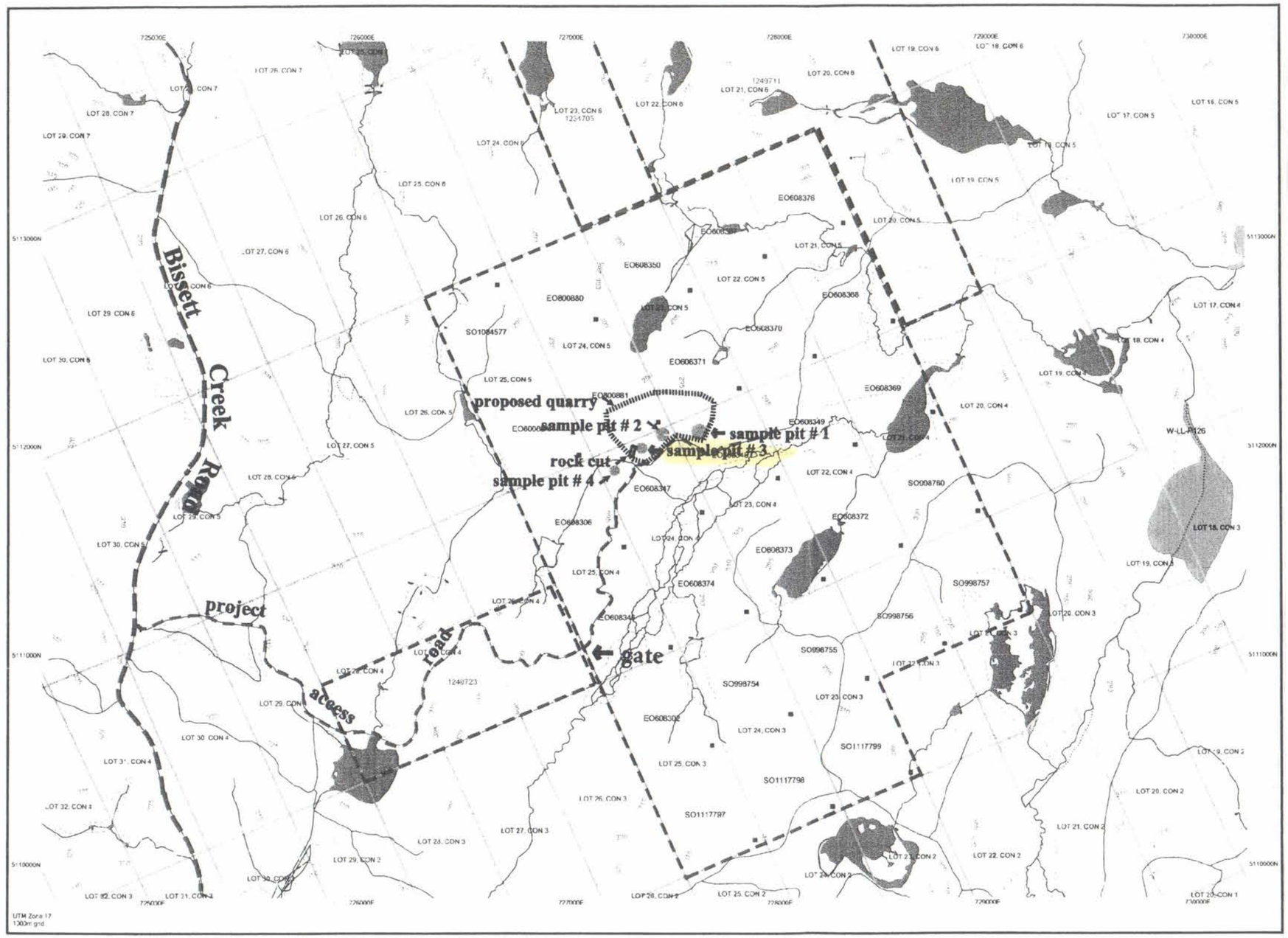
geographic Township of Maria

United Townships of
Head, Clara and Maria

County of Renfrew

Scale: 1 to 20,000
1 centimetre represents 200 metres

0 400 800 1200 1600



LEGEND

MINING LEASE

SAMPLE PITS

ROCK CUT

PROPOSE QUARRY PERIMETER

ACCESS ROADS

Projection: Universe Transverse Mercator (6 degrees)
Map Datum: NAD 83

Topographic Data Source: Land Information Ontario
Mining Land Tenure Source: Provincial Mining Recorders' Office

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division: SOUTHERN ONTARIO
Land Titles / Registry Division: RENFREW
Ministry of Natural Resources District: PEMBROKE

Search by: G-Plan Numbers | Township/Area Names | Claims | Dispositions

Search! | Help

Begin your search by clicking on one of the radio buttons (G-Plan, Township/Area, Claim, or Disposition). Then enter your search criteria in the text box and click on the search button.

Select from a list below and press its "Go" button to jump to the specified view.

Mining Division GO | G-Plan # GO | Township / Area GO

View Reports: Select Claim GO | Select Disposition GO | Order Map | Download Curre

CONTIGUITY MAP APPENDIX B

The centre of your map is in: **Division:** Southern Ontario **Township:** MARIA **G-Plan:** G-

Map Tools

Go to Ontario View.

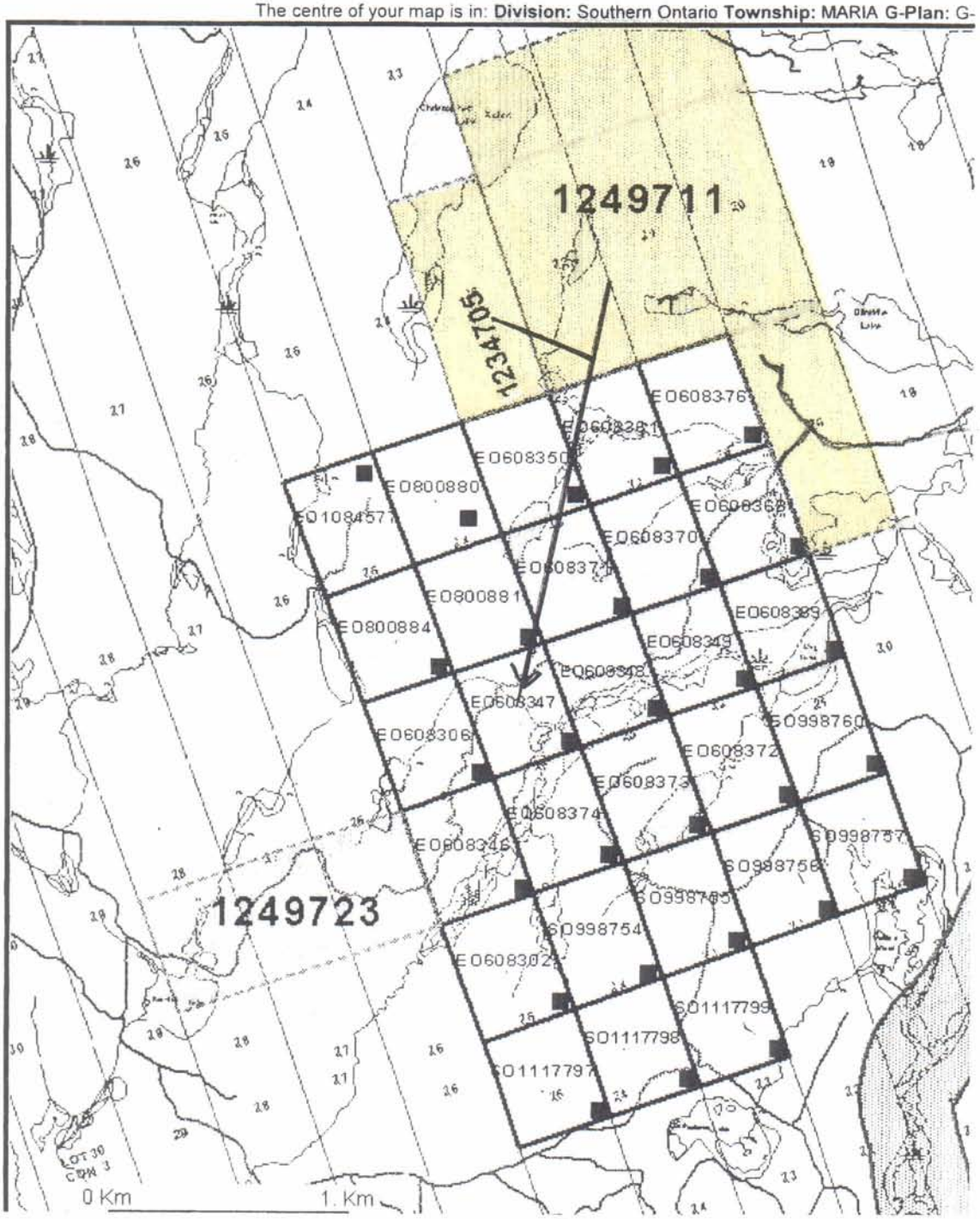
10x Zoom Factor.

Zoom In | Zoom Out

Pan | Identify Alienation

Identify Disposition | Identify Claim

Legend | Help



SGS

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
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Erana Mines Limited
Attn : Vickey

59 Nelson Road
Lively, Ontario, P3Y 1P4
Canada

Phone: (705) 682-0649
Fax:(705) 682-2447

Friday, October 29, 2004

Date Rec. : 20 October 2004
LR Report : **CA09499-OCT04**
Project : 2403063
Client Ref : BC300 to BC303

CERTIFICATE OF ANALYSIS

Sample ID	LOI %	C(t) %
1: BC300	80.5	86.7
3: BC301	80.1	89.1
5: BC302	86.9	89.7
7: BC303	88.9	94.0

N. Mozola

Nicole Mozola, B.Sc. (Eng)
Project Coordinator
Mineral Services, Analytical

OnLine LIMS

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Friday, October 29, 2004

Date Rec. : 21 October 2004
LR Report : **CA09823-OCT04**
Project : 2403132
Client Ref : BC#6 to BC#8

CERTIFICATE OF ANALYSIS

Sample ID	LOI %	C(t) %
1 BC6	67.8	70.8
3 BC7	84.1	94.8
5 BC8	82.8	86.8

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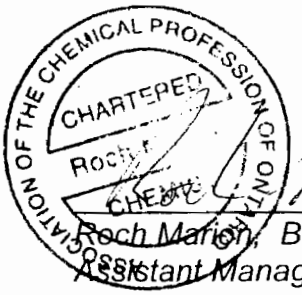
Monday, November 15, 2004

Date Rec. : 29 October 2004
LR Report : **CA09264-OCT04**
Project : 2403196
Client Ref : BC9+10

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	C(t) %	LOI %
1: BC9	82.4	84.1
3: BC10	77.4	74.4



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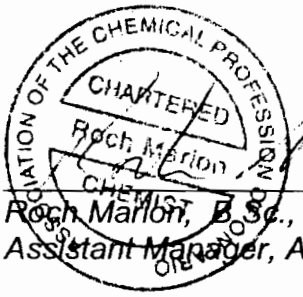
Tuesday, November 16, 2004

Date Rec. : 12 November 2004
LR Report : **CA09488-NOV04**
Project : 2403408

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	C(t) %
1: 65221	51.0
2: 65222	29.9
3: 65223	66.6
4: 65224	93.6



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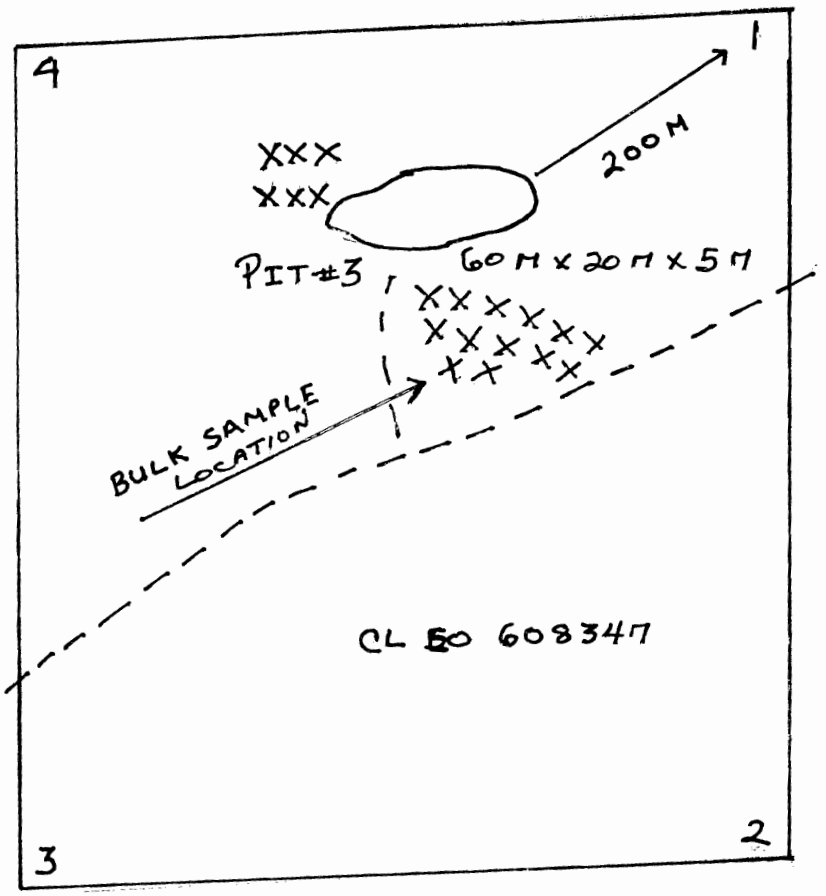
OnLine LIMS

MARIA TOWNSHIP
G-1387



ROCK TYPE:

- granitic gneisses with some quartz and biotite
- semi-pelitic

LEGEND:

PIT

XX BLASTED ROCK

--- ROAD