GM 59271

REPORT, ABLOVIAK FJORD PROPERTIES, UNGAVA BAY AREA

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REPORT
ABLOVIAK FJORD PROPERTIES
UNGAVA BAY AREA, QUEBEC

Prepared for

Dumont Nickel Inc.

MRN-GÉOINFORMATION 2002

GM 59271

APEX Geoscience Ltd.

September, 2000
Revised November, 2000

D.J. BESSERER

REPORT
ABLOVIAK FJORD PROPERTIES
UNGAVA BAY AREA, QUEBEC

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EXECUTIVE SUMMARY

Diamondiferous kimberlite dykes exist within the Abloviak Fjord area. During August and September 2000, APEX Geoscience Ltd. (APEX) and Dumont Nickel Inc. (Dumont) conducted field exploration in and around permits held by Dumont Nickel Inc. in the Abloviak Fjord area. Both the August and September 2000 exploration programs were managed by APEX Geoscience Ltd. Subsequently, 27 ultramafic dykes, a number of which are possibly kimberlitic were discovered within 4 of the 5 permits held by Dumont Nickel Inc.

Of the 27 dykes discovered to date, all were sampled for thin section study. As well, 23 of the dykes were sampled for: (a) caustic fusion; and (b) diamond indicator minerals. Finally, one other dyke was sampled for diamond indicator minerals and three dykes were not sampled. Not all of the dykes were sampled because: (a) only a small amount of material was available/discovered for sampling; (b) there was deep snow cover; or (c) the dykes are believed to be extensions of previously discovered dykes. The samples have all been submitted to the Saskatchewan Research Council in Saskatoon for analysis and have been received by the laboratory.

Further systematic exploration is necessary within the Dumont permits at this time in order to prioritize known dykes and determine whether or not they have favorable indicator mineral chemistry for the preservation of diamonds and/or contain diamonds. The proposed kimberlite testing and exploration should comprise a staged program consisting of:**STAGE 1:** (a) completing caustic analysis, processing for diamond indicators, thin section and microprobe work on the already existing samples collected at the properties during August and September 2000; (b) further staking prospective areas in and around areas where dykes are known to exist; (c) geophysical leveling and interpretation of the existing geophysical data; and (d) formal assessment reporting of all aspects of the of 2000 exploration program. **STAGE 2:** (a) A 45 day field program during summer 2001 utilizing an eight person crew. The program should include mapping of existing dykes, sampling dykes where diamonds were discovered, ground geophysical surveying, prospecting and possibly staking. **STAGE 3:** Premised on success of both the 2000 and 2001 exploration programs: (a) trench diamond-bearing ultramafic dykes; (b) process the sample(s) using a dense media separation (DMS) plant at a credited facility and ship all the recovered concentrates for diamond recovery to determine a preliminary grade and diamond distribution. The program would be completed during fall 2001. The preliminary maximum budget for all three stages is about **$1,350,000**, not including a provision for GST and QST. Based on the recommended budget, the minimum budget allowable would be **$270,000**, not including a provision for GST and QST. The minimum budget would include **STAGE 1**, as per the maximum recommended budget. **STAGE 2** would include a 21 day field program during summer 2001 utilizing a four person crew.

INTRODUCTION

Terms of Reference

APEX Geoscience Ltd. (APEX), was retained during summer of 2000 as consultants by Dumont Nickel Inc. (Dumont) to conduct and manage an exploration program at Dumonts' Abloviak Fjord area properties. Two APEX personnel and two Dumont personnel worked in the field during August and two APEX personnel, Mr. J. North (Dumont) and Mr. Lee Barker (Independent consultant) worked on the project during September. The Dumont property is situated in northeast Quebec within the Torngat mountains and comprises four permits (1470, 1492, 1469 and 1522). Both the August and September 2000 exploration programs were managed by APEX Geoscience Ltd. As well, one area was staked concurrently while conducting exploration in the area (Table 1). This report has been prepared on the basis of available published and unpublished data and fieldwork thereon. The author, Mr. D. Besserer, has personally visited the properties and conducted exploration work thereon.

Property Description and Location

The legal description for the Torngat/Abloviak Fjord properties is provided in Table 1. Situated within the most northerly portion of Quebec, within the Torngat mountains, the Abloviak Fjord properties, which encompass more than 45,650 hectares, lie about 150 miles (230 km) north and northeast of Kuujjuaq (Figure 1). The properties are within the 1:250,000 scale National Topographic System (NTS) map sheet 24 P. The location of the property is shown on Figures 1 and 2.

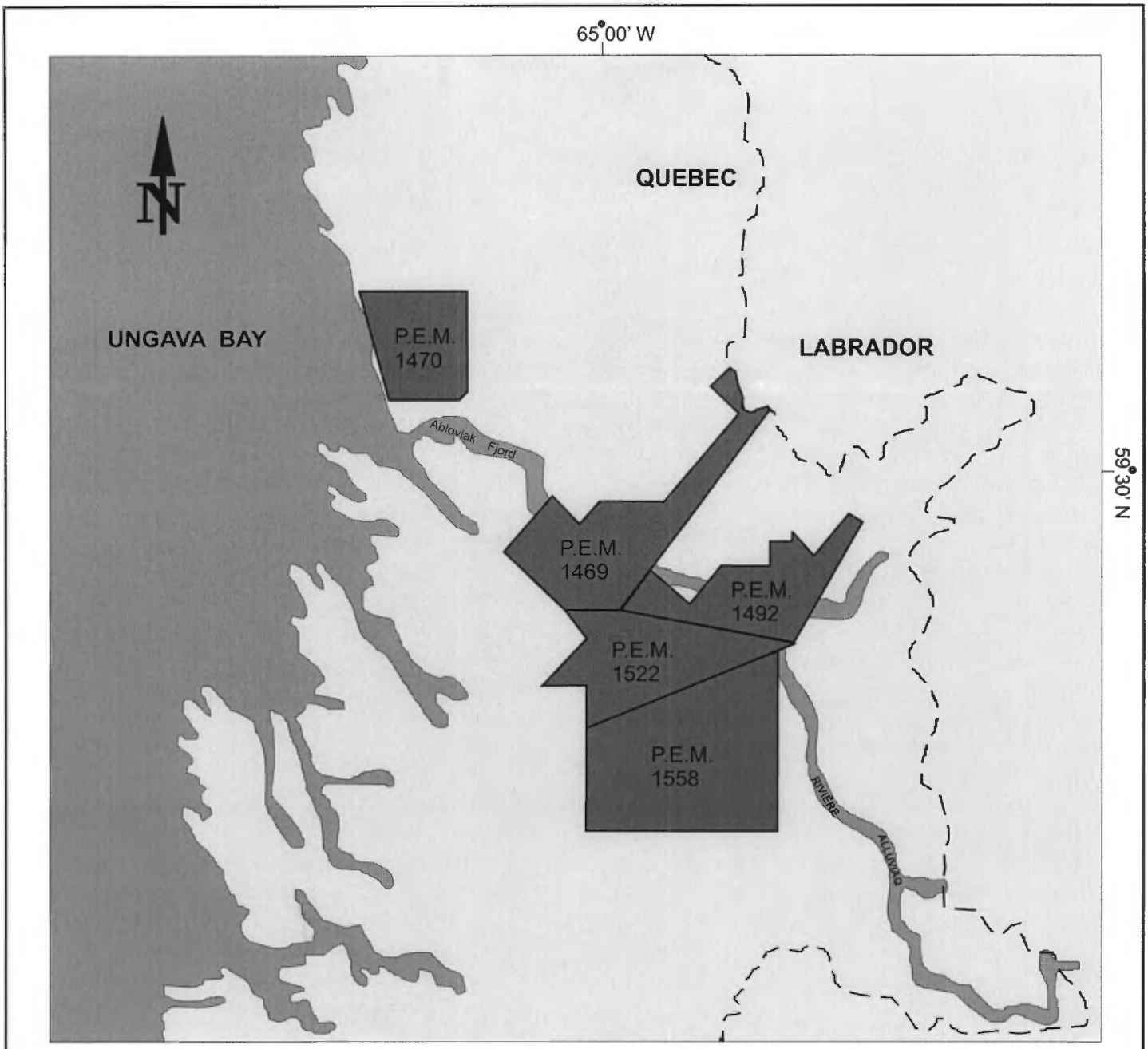
TABLE 1
LEGAL PERMIT DESCRIPTION, ABLOVIAK FJORD PROPERTIES*

Permit Number	Issue Date	Permit Holder	Map Area	Hectares
1469	October 19, 1999	Dumont Nickel Inc.	24 P/07	15,200
1470	October 19, 1999	Dumont Nickel Inc.	24 P/11	8,100
1492	November 19, 1999	Dumont Nickel Inc.	24 P/07	9,750
1522	May 03, 2000	Dumont Nickel Inc.	24 P/06/07	12,600
1558	September, 2000	Marum Resources Inc.	24P/02/03 /07	???

*Provided by Dumont Nickel Inc. and Marum Resources Inc.

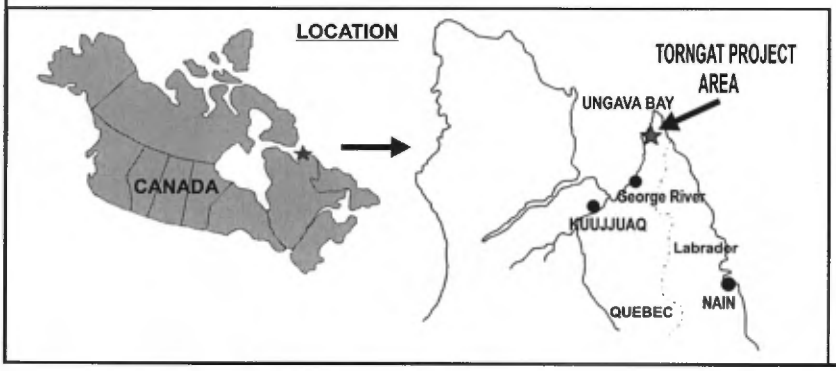
Accessibility, Climate and Local Resources

The Torngat Property may be accessed from both Kuujjuaq and George River using: (a) Float or wheel equipped aircraft from either Kuujjuaq or George River; (b) helicopter from either Kuujjuaq or George River; or (c) boat from either George River or Kuujjuaq. Kuujjuaq is serviced daily by First Air from Montreal. Helicopter access is limited to suitable



Legend

P.E.M. 1470 — Permits Held by Dumont Nickel Inc.; Identifier



Dumont Nickel Inc.

LOCATION

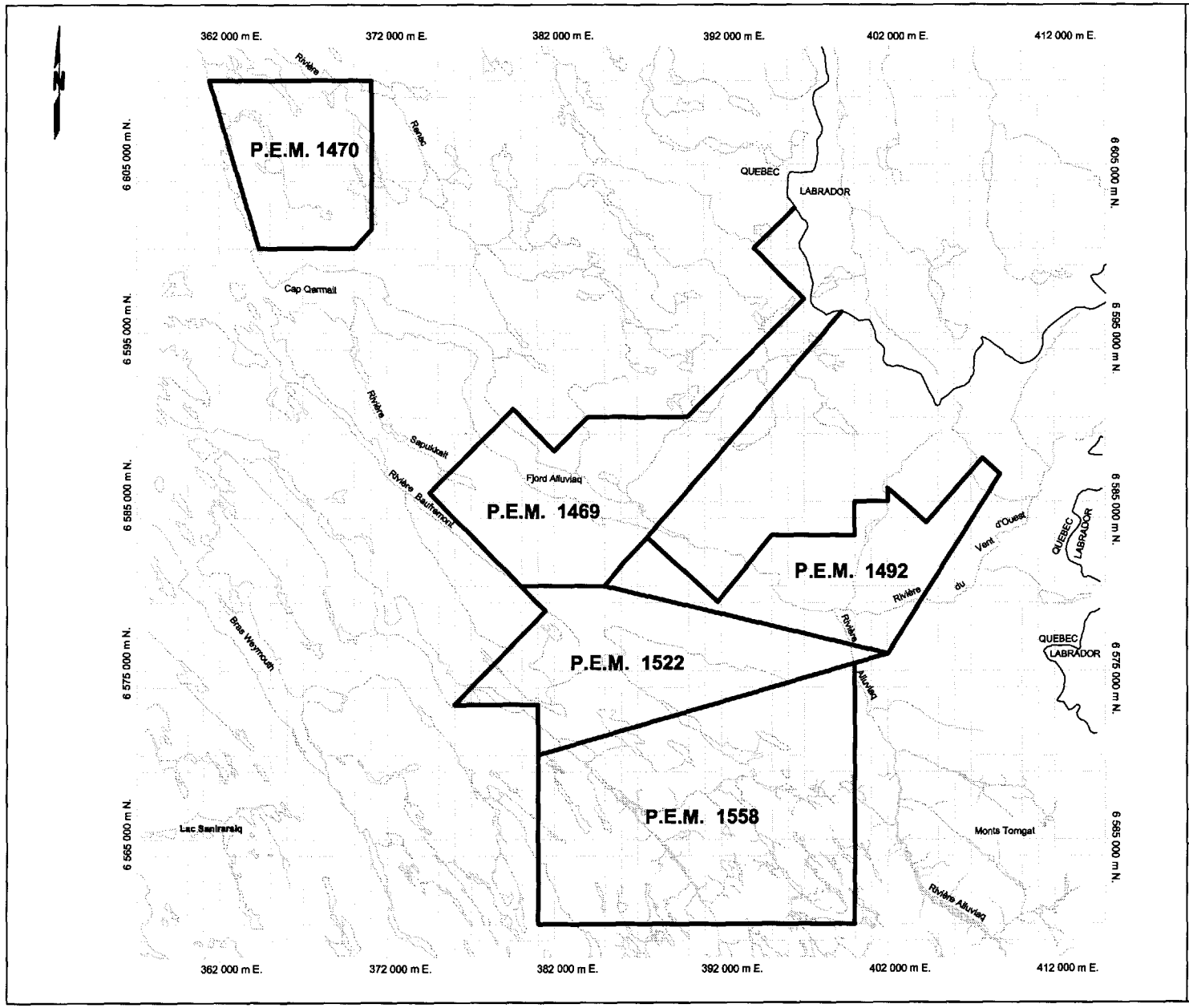
Scale 0 10 20 Km

NTS 24P

APEX Geoscience Ltd.

EDMONTON, ALBERTA NOVEMBER 2000

FIGURE 1



LEGEND

Permits Held by Dumont Nickel Inc.; Identifier

Drainage

Lake

DUMONT NICKEL INC.

TORNGAT PROJECT

PROPERTY LOCATION

Scale 0 2 4 6 8 Km

NTS 24P

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FIGURE 2

landing locations. A small natural airstrip is located at the camp along the Abloviak River. Accommodation at Kuujjuaq and/or George River can be obtained at local hotels.

Accommodation at the property is obtained from an existing outfitters camp located along the Abloviak River. Food and supplies are also obtained from the camp. Limited supplies are available in Kuujjuaq and George River.

The Property lies within the Torngat Mountains physiographic zone. Elevation in the Abloviak Property rises from about sea level to more than 2700 feet. The properties saddle the Abloviak River and Abloviak Fjord. Average annual temperatures range from -40°C in winter to about +20°C during summer months. The majority of the area is void of tree cover and typically has greater than 80 per cent rock outcrop.

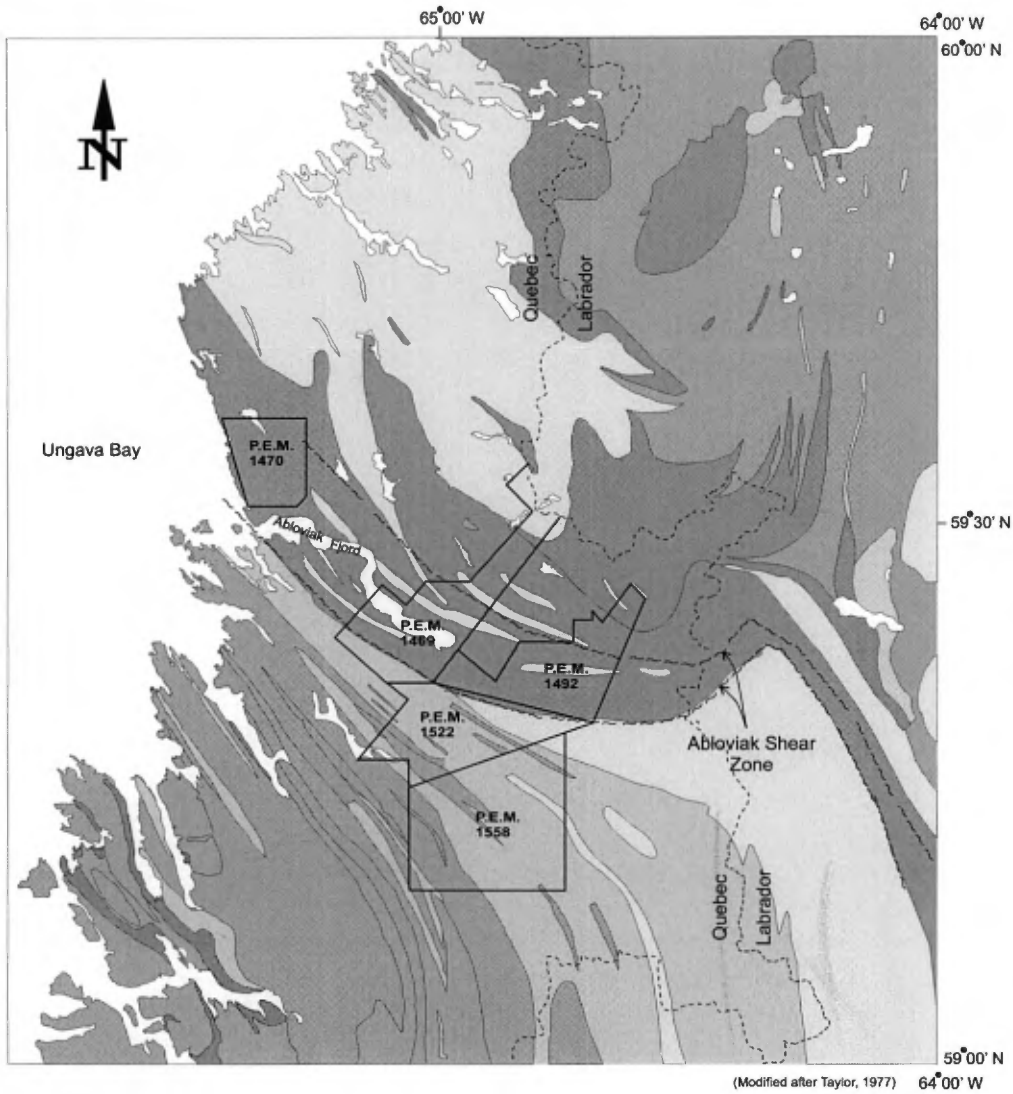
REGIONAL GEOLOGICAL SETTING

In the Ungava Bay area, the north-eastern Churchill Province separates Archean cratons of the Superior and Nain provinces. The eastern boundary of the Churchill Province (Rae Subprovince) is marked by an orogenic suture zone known as the Torngat Orogen. The Paleoproterozoic Torngat Orogen defines the collision zone between the Rae and Nain provinces. Within the Torngat Orogen exist numerous high-grade metamorphic domains. Some of these domains include the Tasiuyak and Lac Lomier Complex. The Tasiuyak Domain forms the axis of the Torngat Orogen and consists mainly of the 30 kilometre wide, north-south trending Tasiuyak Gneiss (Mitton, 1999). The Tasiuyak gneiss is comprised of a sequence of garnetiferous amphibolite to granulite facies paragneiss believed to be Paleoproterozoic in age. The gneiss developed as an east verging accretionary prism on the Nain Craton during the eastward thrusting of the Rae Province (Digonnet *et. al.*, 1999). The Abloviak shear zone defines the southern margin of the unit and is the most prominent deformational feature of the Torngat Orogen. In northern Labrador and Quebec the Abloviak shear zone and the Tasiuyak domain diverge eastward towards the Nain Province and pass under the Abloviak Fjord area. The Abloviak shear zone is contained within the Tasiuyak Gneiss but also affects the adjacent Rae and Nain province rocks (Digonnet *et. al.,* 1999; Mitton, 1999). The regional geology is shown on Figure 3.

Abloviak Fjord Area Geology

The ultramafic dykes at the Torngat area are located within the Tasiuyak gneisses and are, in part, within the Abloviak shear zone. The dykes have been described as having an inequigranular texture in which anhedral macrocrysts of olivine, garnet, phlogopite, rare-ilmenite and rare clinopyroxene xenocrysts are within a finer-grained matrix of phlogopite, spinel, olivine, perovskite and carbonate. Olivine and phlogopite are often replaced by secondary serpentine and chlorite (Digonnet *et. al.,* 1999). Phlogopite age dating using Ar/Ar method, determined the dykes to be about 544 Ma or Cambrian-aged. As well, some of the dykes are reported to contain diamond inclusion field indicator minerals (Digonnet *et. al.,* 1996; Digonnet *et. al.,* 1999; Mitton, 1999).

The Abloviak dykes are believed to have been emplaced into tension fractures associated with the reactivation of major structures during the opening of the Iapetus



LEGEND

- Rusty graphitic quartz-rich paragneiss; local biotite and garnet
- Tasiuyak Gneiss Garnet-quartz-feldspar gneiss
- Paragneiss, biotite-quartz feldspar gneiss
- Rusty graphitic quartz-rich paragneiss; local garnet and biotite
- Granite gneiss; locally dioritic
- Limestone marble with minor paragneiss
- Anorthosite
- Paragneiss; biotite-quartz-feldspar gneiss
- Granulite

SYMBOLS

- P.E.M. 1470 — Permits Held by Dumont Nickel Inc.; Identifier
- ~~~ Shear Zone
- ----- Provincial Boundary

Dumont Nickel Inc.

GENERALIZED GEOLOGY

Scale 0 20 Km

NTS 24P

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FIGURE 3

Ocean (650-550 Ma). The dykes are subvertical and discontinuous and range from a few centimetres up to greater than 2 m in width (Digonnet *et. al.,* 1996; Mitton, 1999).

PREVIOUS EXPLORATION

Cambrian-aged hypabyssal kimberlite dykes which cut Tasiuyak Gneiss were identified during a regional study begun in 1991 by the Universite du Quebec, Montreal (Digonnet *et. al.*, 1996; Mitton, 1999).

During 1997, Fjordland Minerals Ltd. staked a 39,000 hectare property in the Ungava Quebec area to cover 12 kimberlite dykes discovered by a University of Quebec post-graduate student which reportedly contained a gem quality macrodiamond. The properties lapsed and Twin Gold Corporation re-staked the area previously held by Fjordland Minerals Ltd. and began conducting diamond exploration for kimberlite dykes, blows, and pipes in the Abloviak Fjord area (Mitton, 1999). It is not known by the author why the properties were dropped by Fjordland Minerals Ltd. An 'Information Report' was prepared by Mr. B. Mitton during November, 1999 on behalf of Dumont after acquiring property within the Abloviak fjord area during the fall of 1999. The report is enclosed in Appendix 1.

Richard Roy, of FRANCAUMAQUE EXPLORATIONS, reports *'In 1998, SOQUEM, Mine d'Or Virginia and Cambior completed a geophysical and geological program on their permits in northeastern Quebec including the Le Droit Permit (PEM 1331). Following an airborne survey completed in June 1998, a team composed of geologists from all three companies spent two weeks exploring the EM anomalies identified as priority on the AEM survey. ....the assessment reports (#56596 and #56597) review the results of the airborne survey .... and most AEM anomalies visited by the geologists were explained by the presence of graphitic and sulphidic metasediments. Nevertheless, some mafic and ultramafic rocks were identified on the property, some of which returned weak nickel values (highest are 750, 770, 860, and 990 ppm). Whole rock assays from these samples returned* SiO_2 *above 45% and MgO values below 22%. In addition to these results, a single sample of silicified anorthosite returned 220 ppb Au. The authors recommend dropping the permit'* (Richard Roy, 2000).

Subsequently, Twin Gold Corporation and/or Twin Mining have announced the presence of macrodiamonds in kimberlite dykes along Abloviak fjord, which are up to 3.2 mm in size (Twin Mining press release, August, 2000). More recently, Tandem Resources Ltd. have announced the presence of macrodiamonds in ultramafic dykes along Abloviak fjord (Tandem Resources Ltd. press release, September, 2000). At least three ultramafic dykes discovered by Tandem Resources Ltd. are in close proximity to, or are extensions of, dykes existing within permits held by Dumont. During summer 2000, at least nine companies were actively exploring throughout the Torngat area. The companies include Marum Resources Inc., Dumont Nickel Inc., International Tower Hill, 737142 Alberta Ltd., CaribGold Resources Inc./ J.P. Cloutier, Tandem Resources Ltd., Trivalence Mining, Band-Ore Resources Ltd. and Twin Mining Corp.

PROPERTY EXPLORATION

Personnel and Logistics

On August 6th, Mr. D. Besserer, the party leader from APEX, an APEX geologist (Andrea Noyes, M.Sc.) and a geologist (Mathew-Lennox King; Dumont) and prospector (David Healy; Dumont) from Dumont, mobilized to Torngat Mountain Outfitters Ltd's, Abloviak Fjord camp, from Kuujjuaq, Quebec. Mr. D. Besserer and a Dumont prospector demobilized from the Torngat camp on August 24, 2000 and both the APEX and Dumont geologists demobilized from the Torngat camp on August 28, 2000. On September 10th, Mr. D. Besserer, the party leader from APEX, an APEX geologist, Mr. Jon North, the vice-president of exploration for Dumont Nickel Inc. and Mr. Lee Barker, an independent geological consultant, mobilized to Torngat Mountain Outfitters Ltd's, Abloviak Fjord camp, from Kuujjuaq, Quebec. Mr. North and Mr. Barker demobilized on September 16th and the APEX crew demobilized on September 25th, from the Torngat camp.

During August, the APEX/Dumont crew worked concurrently for Marum Resources Inc., International Tower Hill, and 737142 Alberta Ltd. During September, only the APEX crew (Mr. D. Besserer and Ms. A. Noyes) worked concurrently for Marum Resources Inc., International Tower Hill, 737142 Alberta Ltd., and CaribGold Resources Inc.

August / September 2000 Exploration

On August 7, both foot and helicopter traversing within Dumonts' permits 1469, 1470, 1492, and 1522 began. During early August, Mr. D. Besserer noticed structures which appeared to be dykes south of Dumont's existing permits and recommended staking open ground. Subsequently, a new permit was applied for by both Dumont and Marum Resources Inc. (mmu-cdnx) as part of a 50:50 joint venture property (Permit 1558). At the completion of the August exploration program a total of 19 ultramafic dykes were discovered within the Dumont permits and on newly staked ground which are believed to be geochemically related to kimberlite and/or lamprophyre and are in places similar to those discovered by Twin Mining within the Abloviak area. During September, a total of 8 dykes were discovered by helicopter traversing within the permits. In total, 27 ultramafic dykes have been discovered within permits held by Dumont (Table 2).

The dykes found to date within Dumonts' permits are summarized in Table 2. Of the 27 spatially separate dykes discovered to date, 3 are within permit 1469, 10 are within permit 1492, 8 are within permit 1522, and 6 are within the newly staked permit, 1558. No dykes were discovered within permit 1470. The dykes typically strike from 360 degrees to 60 degrees. Although the true strike length and width of most dykes are not yet known, the dykes have been seen from 30 cm up to 3 m in width and have been traced semi-continuously in some cases for up to 4.0 km within the Dumont permits. At least seven of the dykes which have been discovered within the Dumont permits, continue off Dumont permits onto permits held by others (Table 2).

TABLE 2
PRELIMINARY DYKE DESCRIPTIONS

Dyke Name	Permit Number	Strike length/ Approx. direction in degrees	Generalized Mineralogy	Comments
K1	1469	4.0 km/ 30	Altered Ol; phlog; pyx; carb	Up to 1m wide. Visible from the Fjord.
K3	1469	1.5 km/ 30	Pyx; phlog; carb	Up to 1m wide. Possible continuation of K1.
K4	1492	700 m/ 30	Pyx; phlog; carb;+/- gar	East of K3.
K5	1492	400 m/ 30	Ol; phlog; pyx; carb; +/-gar	Also within permit held by other.
K6	1492	700 m/ 30	Ol; phlog; gar; carb veins; +/- gar; breccia	Mineralogically similar to Twin Mining dykes.
K7	1492	700 m/ 30	Phlog; carb	West of K6.
K8	1492	800 m/ 30	Pyx; phlog; carb; brecciated at contact	Also within permit held by other.
K9	1492	1.9 km/ 360	Phlog; carb; gneissic fragments	Also within permit held by other.
K10	1522	200 m/ 15	Phlog; carb	Very micaceous. May be continuous to the north.
K11	1522	1.0 km/ 15	Phlog; ol; carb	May be continuous to the south.
K12	1558	1.0 km/ 360	Ol; gar; phlog; carb veins	Possible eclogitic nodules.
K13	1558	1.0 km/ 360	Phlog; gar; ol; chr	May be an extension of K14.
K14	1558	1.0 km/ 360	Ol; gar; chr; pyx; mag and carb veins	May be an extension of K13.
K15	1492	300 m/ 15-30	Brecciated at contact; phlog; carb	Poorly exposed. Also within permit held by other.
K16	1492	1 km/ 15	Brecciated; phlog; ol; gar; pyx	Kimberlitic mineralogy.
K17	1492	Unknown	Phlog; ol	Poorly exposed. Likely a fracture from K16.
K18	1469	200 m/ 30	Phlog; ol; carb	Poorly exposed. East of K1.
K19	1558	200 m/ 360	Phlog	Very poorly exposed. Possibly an extension of K31?
K20	1492	850 m/ 30	Phlog; pyx; carb	Also within permit held by other.
K21	1522	100 m/ 360	Phlog; ol; pyx	Possibly an extension of K6.
K22	1522	200 m / 60	Phlog; ol	Poorly exposed. Possibly an extension of K7?
K23	1522	200 m/ 360-20?	Ol; mag; Phlog	Up to 3 m wide.
K24	1522	100 m/ 360	Very micaceous; Ol; Phlog	Most likely northern extension of K10.
K25	1522	1.0 km/ 30	Phlog; serpentinized clasts.	Up to 3-5 m wide in places.
K27	1522	100 m/ 30	Phlog; carb	Micaceous. Poorly exposed.
K31	1558	1 km / 360	Phlog; pyx; sulphides	Possibly an extension of K19.
K38	1558	250 m / 12-30	Phlog; chr; ol; carb; pyx	In small drainage. Abundant felsenmeer and sub-crop.

Note: phlog=phlogopite; ol=olivine;pyx=pyroxene;carb=carbonate;gar=garnet; mag=magnetite.

Mineralogically, at least six dykes contain some of the classic kimberlite indicator minerals visible in hand samples (garnet, olivine, chromite, clinopyroxene; ilmenite; Table 2). Breccias were observed within a number of dykes (Table 2). As well, dykes typically have calcite and/or brucite within the matrix and, in places, as veins. All of the dykes have a recessive weathering pattern and often are discovered within open fractures along hill tops and cliff faces (see photo attached of K11; Appendix 2). Dyke rock is often difficult to find as outcrops are rare. Mostly frost heaved rock (felsenmeer) and sub-crop are visible at surface.

All of the dykes discovered to date are moderately to highly magnetic but are usually about 1 m in thickness and have been difficult to trace using the unlevelled proprietary airborne geophysical data available.

Rock Sampling

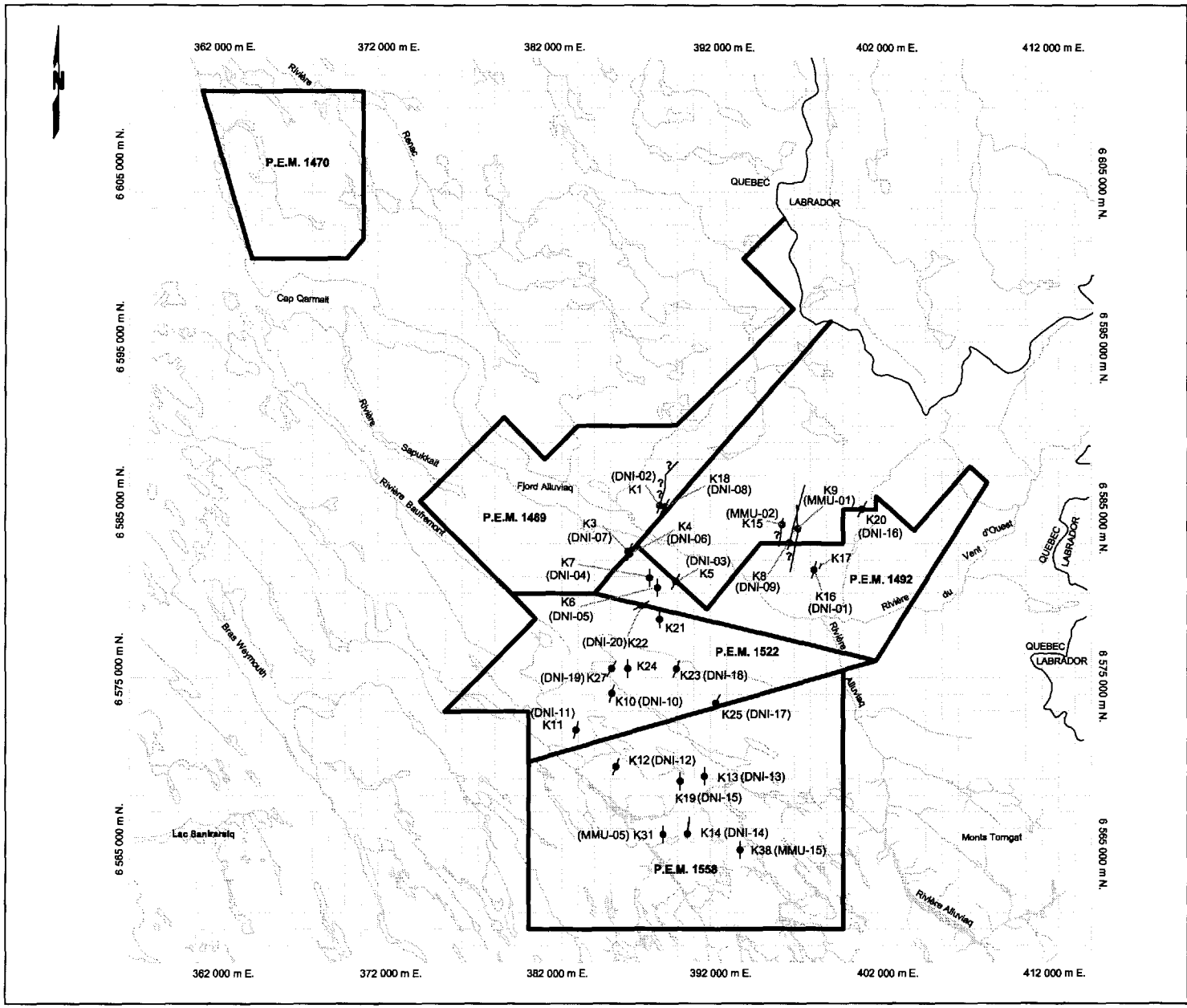
Of the 27 dykes discovered to date, all were sampled for thin section study. As well, 23 of the dykes were sampled for: (a) caustic fusion; and (b) diamond indicator minerals. Of the 23 dykes which were sampled, two of the dykes were sampled within the 737142 Alberta Ltd. permit 1478 (several hundred metres north of the Dumont permit 1492 boundary). This company (737142 Alberta Ltd.) has agreed to share data and some costs with respect to dykes existing on both Dumont and 737142 Alberta Ltd. property. Finally, one other dyke (K19) was sampled for diamond indicator minerals only due to the lack of outcrop. Three dykes, K17, K21 and K24 were not sampled. Not all of the dykes were sampled because: (a) only a small amount of material was available/discovered for sampling; (b) there was deep snow cover; or (c) the dykes are believed to be extensions of previously discovered dykes. That is, two 10 gallon pails of dyke rock and one full 10 L sample bag of material was collected at each of the 23 sample sites. The two pails of rock (about 50 kg) were collected for caustic fusion to be tested for micro-diamonds and the bag of material (about 15 kg) was collected for crushing and processing for diamond indicator mineral chemistry. Any possible kimberlite indicator mineral grains recovered from the processing for diamond indicator minerals will be sent to R.L. Barnett Geological Consulting Ltd. for microprobe analyses. All of the Dumont samples were collected and sealed using zip ties and/or security seals under the supervision of Mr. D. Besserer. The samples (both pails and bags) from the August exploration were shipped to the Saskatchewan Research Council (SRC) in Saskatoon, Saskatchewan on August 24, 2000 from Kuujjuaq, Quebec and were received on September 5, 2000, where they are with the exception of DNI-12,13 (which are being analyzed immediately) being held, unopened, in a secure compound. The laboratory has started processing two samples from the joint venture permit 1558, for diamonds. One sample, which was collected on August 25, 2000 by an APEX and Dumont geologist was shipped to the laboratory in Saskatoon on September 16th and has been received. The samples (pails only) from the September exploration were shipped to the SRC on September 25th, 2000 from Kuujjuaq, Quebec and have all been received by the lab. The sample details and locations are listed in Appendix 3 and both the samples and dykes are shown on Figure 4.

DISCUSSION

Diamond Potential

Exploration conducted to date on the Abloviak Property for diamonds is very limited considering the size of the area. The true potential of the Abloviak Property for diamondiferous kimberlites and associated intrusives can not be properly evaluated based on the sparse data currently available.

The age and distribution of potential kimberlite pipes in northern Quebec is considered to be relevant to Dumonts' Abloviak Property, as the age may have a bearing on the style of volcanism and, therefore, different preservation potential for different ages



LEGEND

- Permits Held by Dumont Nickel Inc.; Identifier
- Drainage
- Lake
- K1 — Approximate dyke extension; Identifier
- ? — Unknown dyke extension; Identifier
- (DNI-02) — Sample Locations; Identifier

DUMONT NICKEL INC.

TORNGAT PROJECT

SAMPLE AND DYKE LOCATION

Scale 0 2 4 6 8 Km

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FIGURE 4

and styles of dykes, pipes or blows. As an example, Early Tertiary kimberlite pipes of the Lac de Gras region are typically small, carrot shaped pipes that can be highly diamondiferous. In comparison, the Fort à la Corne and Mountain Lake pipes are poorly diamondiferous and are lenticular, stratabound pyroclastic deposits. In Alberta, evidence exists for four and possibly five ages of alkaline volcanic activity (Dufresne*et. al.*, 1996). In Quebec, four kimberlite fields exist which contain pipes, dykes or both of varying ages, some of which are diamondiferous (Moorhead *et. al.*, 2000).

The regional geological and tectonic setting for the Abloviak Property is favourable for the formation and preservation of diamonds in the upper mantle beneath the permit area. The potential for discovery of an economic diamondiferous kimberlite on Dumont's Property is low based upon world statistics for the discovery of economic kimberlites. However, the presence of numerous dykes within the property and properties in close proximity with mineralogically similar diamondiferous dykes (Twin Mining press release, August, 2000; Digonnet *et. al.,* 1999;Twin Mining Field Visit by APEX), indicate that there is potential for discovery of one or more diamondiferous kimberlite or lamprophyre dykes, pipes or blows within Dumonts' permits. The risk for finding an economic diamondiferous dyke and/or possibly pipe on Dumonts' Property is high.

Observations from Twin Mining Dykes

On August 13, 2000 the entire crew visited two spatially separate dyke locales within the Twin Mining permits along with two representatives of Twin Mining. One locale was the site of one trench sample collected by Twin Mining earlier in spring 2000 (DU Dyke). Dykes observed were 30cm up to 1-2m in width. Dyke rock contained garnet (often with kelyphitic rims), olivine (phenocrysts and xenocrysts), phlogopite and chrome diopside (clinopyroxene) within a fine matrix containing phlogopite, olivine, magnetite, chromite and carbonate. The dykes are brecciated in places containing both clasts of country rocks and some peridotidic nodules. Dykes exposed along Abloviak Fjord are seen as swarms. Dykes typically strike at 30 degrees near the Abloviak Fjord and at 60 degrees north of the fjord. The dykes are deformationally unaffected by the Abloviak shear zone. Most dykes have a 1-5 cm, well developed fine grained chilled margin at the contact with country rocks. The dykes pinch, swell and are often offset by late brittle faults. Dykes often horse-tail or split, prior to pinching out. Some dykes are semi-continuous for up to 10-15 km (R. Roy, *pers. comm.*, August, 2000). It should also be noted that Twin Mining employed similar sampling and exploration techniques as those used by APEX within Dumont Nickel Inc.'s properties which subsequently led to the discoveries of Twin Minings diamondiferous kimberlite dykes.

CONCLUSIONS AND RECOMMENDATIONS

Further systematic exploration is necessary within the Dumont permits at this time in order to prioritize known dykes and determine whether or not they have favorable indicator mineral chemistry for the preservation of diamonds and/or contain diamonds. Diamondiferous dykes exist in the area which appear to be similar mineralogically to some of those found within Dumont Nickel Inc.'s properties.

APEX Geoscience Ltd. recommends further exploration at this time. The proposed testing and kimberlite exploration should comprise a staged program consisting of:**STAGE 1:** (a) completing caustic analysis, processing for diamond indicators, thin section and microprobe work on the already existing samples collected at the properties during August and September 2000 by APEX; (b) further staking prospective areas in and around areas where dykes are known to exist; (c) geophysical leveling and interpretation of the existing geophysical data; and (d) formal assessment reporting of all aspects of the of 2000 exploration program. **STAGE 2:** (a) A 45 day field program during summer 2001 utilizing an eight person crew. The program should include mapping of existing dykes, sampling dykes where diamonds were discovered, ground geophysical surveying, prospecting and possibly staking. **STAGE 3:** Premised on success of both the 2000 and 2001 exploration programs: (a) trench diamond-bearing ultramafic dykes; (b) process the sample(s) using a dense media separation (DMS) plant at a credited facility and ship all the recovered concentrates for diamond recovery to determine a preliminary grade and diamond distribution. The program would be completed during fall 2001. The preliminary maximum budget for all three stages is about**$1,350,000**, not including a provision for GST and QST.

Based on the recommended budget, the minimum budget allowable would be **$270,000**, not including a provision for GST and QST. The minimum budget would include **STAGE 1**, as per the maximum recommended budget. **STAGE 2** would include a 21 day field program during summer 2001 utilizing a four person crew. The program should include mapping of existing dykes, sampling dykes where diamonds were discovered, ground geophysical surveying, prospecting and possibly staking. The minimum budget does not include a provision for a third stage. A more detailed break down of the proposed exploration budgets (both maximum and minimum) are shown in Appendix 4.

APEX Geoscience Ltd.

Dean J. Besserer, B.Sc., P.Geol.

September, 2000 (*revised November, 2000*)
Edmonton, Alberta

REFERENCES

Digonnet, S., Goulet, N., Bourne, J., Stevenson, R., and Archibald, D. (1999). Petrology of the Abloviak Aillikite dykes, New Quebec: evidence for a Cambrian diamondiferous alkaline province in north-eastern North America. In, Canadian Journal of Earth Sciences, Vol. 37, pp. 517 to 533.

Digonnet, S., Goulet, N., Bourne, J., and Stevenson, R. (1996). Model de mise en place des kimberlites diamantiferes dans les Torngats, Nouveau Quebec. Dan: Vers de Nouvelles decouvertes, Seminaire d'information sure la recherche geologique, program et resumes, Ministere des Resources naturelles, Quebec, Seminaire. DV 96-02, p.18.

Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G. and Edwards, W.A.D. (1996). The Diamond Potential of Alberta; Alberta Geological Survey, Bulletin No. 63, 158 pp.

Mitton, B. (1999). Information Report, Torngat Project, Abloviak Fjord Area, Ungava Bay, Quebec. An unpublished report prepared for Dumont Nickel Inc., November 29, 1999.

Moorhead, J., Perreault, S., Berclaz, A., Sharma, K., Beaumier, M., and Cadieux, A. (2000). Kimberlites and Diamonds in Northern Quebec. Geologie Quebec, PRO 99-09.

Roy, R. (2000). Geological Compilation, Ungava Diamond Projects, Alluviaq Fjord Area, Québec. Unpublished Report prepared by FRANCAUMAQUE EXPLORATIONS.

CERTIFICATION

I, D.J. BESSERER OF 131 FOXBORO LANDING, EDMONTON, ALBERTA, CERTIFY AND DECLARE THAT I AM A GRADUATE OF THE UNIVERSITY OF WESTERN ONTARIO, LONDON WITH A B.SC. DEGREE IN GEOLOGY (1994). I AM REGISTERED AS A PROFESSIONAL GEOLOGIST WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS OF ALBERTA.

MY EXPERIENCE INCLUDES SERVICE AS A CONTRACT GEOLOGICAL ASSISTANT WITH THE MINISTRY OF NORTHERN DEVELOPMENT AND MINES, ONTARIO, FROM 1991 TO 1992 AND THE GEOLOGICAL SURVEY OF CANADA, OTTAWA IN 1993. FROM 1994 TO 1999, I HAVE CONDUCTED AND DIRECTED PROPERTY EXAMINATIONS AND EXPLORATION PROGRAMS ON BEHALF OF COMPANIES AS A GEOLOGIST IN THE EMPLOY OF APEX GEOSCIENCE LTD. SINCE JANUARY 2000, I HAVE BEEN A PRINCIPAL AND SHAREHOLDER OF APEX GEOSCIENCE LTD.

I HAVE NO INTEREST, DIRECT OR INDIRECT, IN THE PROPERTIES THAT ARE THE SUBJECT OF THIS REPORT OR SECURITIES OF DUMONT NICKEL INC., NOR DO I EXPECT TO RECEIVE SUCH INTEREST. AS WELL, APEX GEOSCIENCE LTD. HAS NO INTEREST, DIRECT OR INDIRECT, IN THE PROPERTIES, OR SECURITIES OF DUMONT NICKEL INC., NOR DOES IT EXPECT TO RECEIVE SUCH INTEREST. APEX PRESENTLY HAS MORE THAN 20 ACTIVE CLIENTS AND/OR PROJECTS IN CANADA, THE UNITED STATES, SOUTH AMERICA AND AUSTRALIA. SUBSEQUENTLY, DUMONT NICKEL INC. IS NOT THE ONLY COMPANY FROM WHICH APEX RECEIVES INCOME.

MY REPORT ENTITLED " REPORT, ABLOVIAK FJORD PROPERTIES, UNGAVA BAY AREA, QUEBEC " IS BASED UPON THE STUDY OF PUBLISHED AND UNPUBLISHED DATA AND FIELD EXAMINATIONS CONDUCTED THEREON. I HAVE PERSONALLY VISITED THE PROPERTIES THAT ARE THE SUBJECT OF THIS REPORT.

I HEREBY GRANT DUMONT NICKEL INC. OF TORONTO, ONTARIO, CANADA PERMISSION TO USE THIS REPORT AS PART OF A PROSPECTUS OFFERING IN THE PROVINCE OF QUEBEC.

D.J. BESSERER, B.SC., P.GEOL.

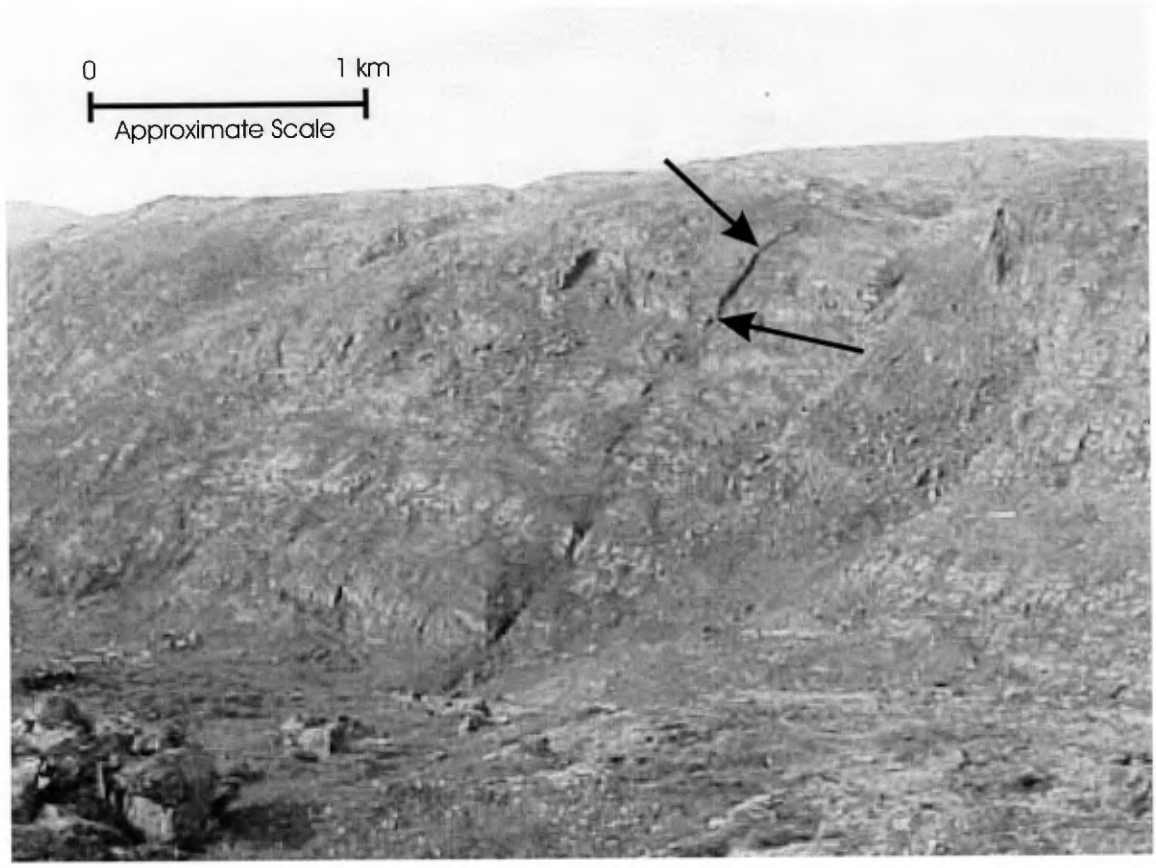
SEPTEMBER, 2000
EDMONTON, ALBERTA

APPENDIX 1

B. MITTON REPORT, NOVEMBER, 1999

APPENDIX 2

PHOTOS



K11 Dyke (shown by arrows). View looking Northwest.

K6 Dyke (geologist for scale). View looking South.

APPENDIX 3

SAMPLE LOCATIONS

APPENDIX 3

SAMPLE LOCATIONS

Sample Identifier*	Location		Dyke	Description
	Easting	Northing	Name	
DNI-01	398245	6581408	K16	Fresh olivine. Pyroxene +/-garnet, magnetite, carbonate in matrix, phlogopite.
DNI-02	388941	6585281	K1	Fresh olivine 2 cm with kelyphite rimming. Fine grained matrix with phlogopite. Chromite up to 1cm. Minor amounts of carbonate in the matrix. Pyroxene present. Moderately magnetic.
DNI-03	389889	6580707	K5	Micaceous. Carbonate veins. Trace amounts of olivine.
DNI-04	388336	6580950	K7	10% matrix carbonate in a fine grained blue-grey mafic matrix. 10% matrix carbonate, calcite veining. Evidence of flow banding. Moderate to weakly magnetic. Grey-brown weathering.
DNI-05	388790	6580365	K6	Altered garnet. Chromite macrocrysts present. Up to 2% pyrite. Brecciated. Moderately magnetic. Altered olivine. Pyroxene present. Orange weathered surface.
DNI-06	387109	6582383	K4	30% fine grained phlogopite. 10% Altered olivine. 15% pyroxene. Some small xenoliths of country rock. Brown-green weathering. Carbonate veining.
DNI-07	387018	6582547	K3	Micaceous. Carbonate in the matrix. Altered olivine. Medium to coarse grained. Up to 30% phlogopite 2mm in size.
DNI-08	389251	6585198	K18	Fresh and altered olivine. Undetermined altered phenocrysts with rims comprised mostly of phlogopite. Fine grained micaceous matrix. Occasional chromite. Trace amounts of matrix carbonate and pyroxene. Weakly magnetic.
DNI-09	396748	6583052	K8	Micaceous. Magnetic. Evidence of flow banding. Phlogopite and pyroxene phenocrysts. No clasts or nodules. Carbonate in matrix.
DNI-10	386034	6574088	K10	Coarse grained phlogopite ~0.5cm. Abundant pyroxene, 1cm. No carbonate. Weakly magnetic. Green blue matrix, serpentine? No garnet.
DNI-11	383866	6571918	K11	Micaceous dyke in steep crevase. Magnetic. Approximately 1m wide. Carbonate in matrix. Some altered olivine.
DNI-12	386295	6569770	K12	Type 1: Abundant altered olivine, up to 5mm. 15% matrix carbonate. Weakley to moderately magnetic. 7mm garnet, heavily altered. Minor phlogopite, 5-10%. Type 2: fine grained. Olivine not abundant. Some samples contain bands of coarse phlogopite. 15% carbonate, stringers present also. Moderately magnetic. Minor amounts of pyroxene. Phlogopite in matrix.
DNI-13	391638	6569129	K13	Garnets with kelyphitic rims. Fine to coarse grained material. Fresh and altered olivines. Magnetic. 1-1.5m wide. Carbonate bands and matrix carbonate. Pyroxene in matrix.
DNI-14	390704	6565938	K14	Garnet, olivine macrocrysts. Country rock clasts up to 2cm. Minor phlogopite in matrix. Magnetite and carbonate veins. 0.5-0.8m wide, pinches out in places.
DNI-15	390228	6568781	K19	**Only DIM** and TS samples taken, not enough material for caustic. Medium grained, mica rich. Weathers green-grey. No evidence of nodules, olivines, garnets or pyroxene. Very few boulders or float, however, there is a fair amount of weathered soil present in the fracture.
DNI-16	401156	6585030	K20	Medium grained, blue-grey matrix. No matrix carbonate. 30% matrix phlogopite, calcite nodules up to 7mm. Pyroxene xenocrysts approximately 2mm. Weathers green-grey and dark brown grey. No evidence of garnet or olivine. Width ranges from 0.5m to 1.5m along strike. Chilled margins and stringers into country rock easily visible.
DNI-17	392341	6573238	K25	Coarse grained phlogopite abundant. Dyke is approximately 2-3 m in width. Abundant outcrop available. Some minerals altered to serpentine. Moderately magnetic. Weathered out clasts on surface of outcrop. Strike ranges from 5 to 30°.
DNI-18	389970	6575570	K23	Altered 1cm olivine (to serpentine). Well-rounded magnetite nodules up to 7mm in diameter. Strongly magnetic. Large phlogopite megacrysts as well as groundmass phlogopite. N-S striking.
DNI-19	386053	6575551	K27	Very micaceous. Dyke approximately 1m in width. Moderately magnetic. <5% calcite in matrix. Abundant pyroxene. Strike approximately 10°.
DNI-20	387839	6579365	K22	Outcrop is scarce. Moderately magnetic. Weathered out nodules on surface. 10-15% altered olivine. Abundant phlogopite medium grained 20%. 10% calcite in matrix. 60° strike direction.
MMU-01	397262	6583882	K9	Moderately magnetic. Fine grained at contact. Calcite veins and stringers, 10-15% matrix carbonate. 30% coarse grained phlogopite. No weathered-out clasts. Some brecciation seen.
MMU-02	396318	6584120	K15	Very micaceous. Strongly magnetic. Minor matrix carbonate. Few nodules. Veins cutting through country rock. Ranges from coarse grained to very fine grained chilled margins.
MMU-15	393855	6564723	K38	Xenoliths of gneiss found within dyke. Large pyroxene 2cm in length are present. Strongly magnetic. Groundmass phlogopite and 1cm books also found. Magnetite macrocrysts. Abundant chromite (?) macrocrysts. 5-10% matrix calcite. Altered olivine macrocrysts present. Approximately 2m wide. Abundant outcrop and fragments. Possibly opx present (pink). Strike 12°??
MMU-05	389167	6565607	K31	Abundant phlogopite both fine- and coarse grained. Flow banding present. No calcite in matrix. 1cm sized pyroxene. Strongly magnetic. Some sulfides present. N-S striking dyke. Approximately 2m wide.
NS	398601	6581537	K17	Not sampled as it is believed to be a splay off of K16 and is discontinuous.
NS	388937	6578500	K21	Not sampled due to snow cover. Possibly a continuation of K6.
NS	387038	6575560	K24	Not sampled as it is believed to be an extension from K10 and lack of outcrop/subcrop.

*Note: at each sample site a sample was also collected for DIM's and one for thin section work.

APPENDIX 4

PROPOSED BUDGETS

APPENDIX 4

PROPOSED BUDGETS

BUDGET ITEM (MAXIMUM BUDGET)	ESTIMATED COST
FIELD RELATED COSTS	
Stage 1 – Analyse Existing Samples and Reporting Includes caustic fusion, thin section and diamond indicator mineral processing on samples collected during August/September 2000. Geophysical leveling and interpretation of the existing geophysical data; and (b) formal reporting of all aspects of the of 2000 exploration program.	$125,000
Stage 2 – 2001 Field Work Assumes about 115 hours of helicopter (Bell Long Ranger) per day @ about $785/hour and fuel consumption of about 1 drum (205 L) per hour at $800 / barrel landed. Also assumes camp accommodation for eight persons for 45 days at $300/day/ person. Assumes a provision for bags, flagging, plastic pails and field gear, airfares etc. Assumes caustic fusion of at least 20, 50 kg samples.	$405,000
Stage 3 – Trenching and Heavy Mineral Separation Heavy minerals will be separated using dense medium separation at a credited facility. Includes blasting, drilling and the processing of 5 to 10 trenched samples.	$800,000
Miscellaneous Expenses (a) Includes miscellaneous rental charges, satellite telephone, courier, administration, shipping, office supplies etc.	$20,000
Total Estimated Project Costs (Excluding GST, QST)**	**$1,350,000****

APPENDIX 4

PROPOSED BUDGETS

BUDGET ITEM (MINIMUM BUDGET)	ESTIMATED COST
FIELD RELATED COSTS **Stage 1 – Analyse Existing Samples and Reporting** Includes caustic fusion, thin section and diamond indicator mineral processing on samples collected during August/September 2000. Geophysical leveling and interpretation of the existing geophysical data; and (b) formal reporting of all aspects of the of 2000 exploration program. **Stage 2 – 2001 Field Work** Assumes about 50 hours of helicopter (Bell Long Ranger) per day @ about $785/hour and fuel consumption of about 1 drum (205 L) per hour at $800 / barrel landed. Also assumes camp accommodation for four persons for 20 days at $300/day/ person. Assumes a provision for bags, flagging, plastic pails and field gear, airfares etc. Assumes caustic fusion of at least 10, 50 kg samples.	$125,000 $140,000
Miscellaneous Expenses (a) Includes miscellaneous rental charges, satellite telephone, courier, administration, shipping, office supplies etc.	$5,000
Total Estimated Project Costs (Excluding GST, QST)**	**$270,000****