

GM 58749

REPORT ON THE 2000 EXPLORATION PROGRAM, TORNGAT PROJECT

Documents complémentaires

Additional Files



Licence



License

Cette première page a été ajoutée
au document et ne fait pas partie du
rapport tel que soumis par les auteurs.

Énergie et Ressources
naturelles

Québec 

Twin Mining Corp.

TORNGAT PROJECT

**REPORT ON THE 2000
EXPLORATION PROGRAM**

UNGAVA, QUEBEC

Ressources Naturelles
Secteur mines

13 FEV. 2001

Bureau Régional Val-d'Or

Richard Roy

December 2000

MRN-GÉOINFORMATION 2001

GM 58749

01044013

TABLE OF CONTENT

1.0 INTRODUCTION:	4
2.0 LOCATION AND ACCESS:	4
3.0 PREVIOUS WORK HISTORY – ABLOVIK FJORD AREA:	7
4.0 GEOLOGICAL ENVIRONMENT:	9
5.0 TORNGAT PROPERTY – 1999 PROGRAM:	10
6.0 SUMMER 2000 EXPLORATION PROGRAM:	13
6.1 PART I: PROPERTY-WIDE PROSPECTING AND MAPPING:	13
6.2 PART II: AD SITE BULK SAMPLING:	21
7.0 CONCLUSIONS:	23
8.0 PROPOSED 2001 PROGRAM AND BUDGET:	24
REFERENCES	27

TABLES

Table 1: Torngat Property Airborne Magnetic Target Selections

Table 2: Dykes Summaries

Table 3: Dyke Mineralogy Histogram

FIGURES

Figure 1: Location Map

Figure 2: Claim Map

Figure 3: Torngat vs. Bellsbank Fissure Systems

APPENDIX

Appendix 1: 50 Kilogram Sample Site Descriptions

Appendix 2: Pictures, 2000 Exploration Program

MAPS

Map 1: Torngat Project; PROSPECTING TRAVERSE MAP; West Sheet; scale 1:25 000

Map 2: Torngat Project; PROSPECTING TRAVERSE MAP; East Sheet; scale 1:25 000

Map 3: Torngat Project; GEOLOGICAL COMPILATION; West Sheet; scale 1:25 000

Map 4: Torngat Project; GEOLOGICAL COMPILATION; East Sheet; scale 1:25 000

Map 5: AD-DD Grid; GEOLOGY; scale 1:5 000

Map 6: NORTH DU Grid; GEOLOGY; scale 1: 5 000

Map 7: PITA Grid; GEOLOGY; scale 1:5 000

Map 8: SW Grid; GEOLOGY; scale 1: 5 000

Map 9: Torngat Project; GEOLOGICAL COMPILATION; scale 1:50 000

Map 10: AD Site – Bulk Sample; scale 1:100

FRANCAUMAQUE EXPLORATIONS

TEL / FAX : (8 1 9) 8 7 4 - 4 4 4 6

Twin Mining Corp.

Geological Report on the Year 2000 Program Torngat Project Alluviaq Fjord Area

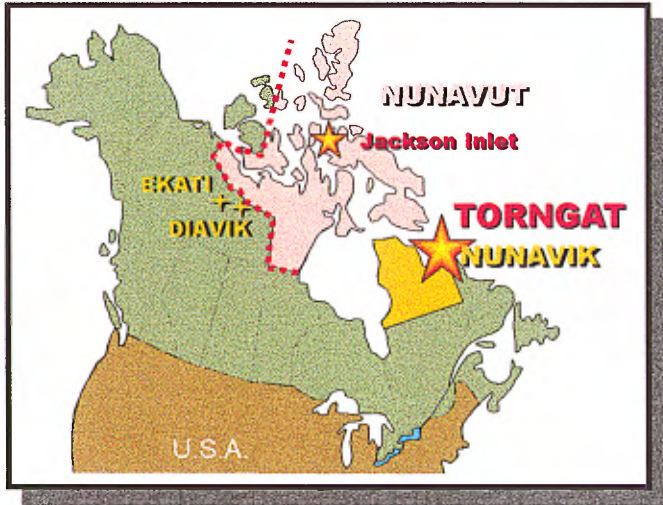
1.0 INTRODUCTION:

Following a successful sampling program by Twin Mining Corp during the Spring 2000 Sampling Program on it's Torngat Project, the company opted to conduct an aggressive exploration program consisting of prospecting, detailed mapping and bulk sampling across the entire group of properties totaling 444 sq. km. The company applied for a financial aide from the Quebec Government through their "*Programme d'assistance à l'exploration minière du Québec*". Agreement No. 2000-B-602 was signed in July 2000 and all exploration expense incurred between June 7th and March 31st 2001 is applicable to the agreement conditions.

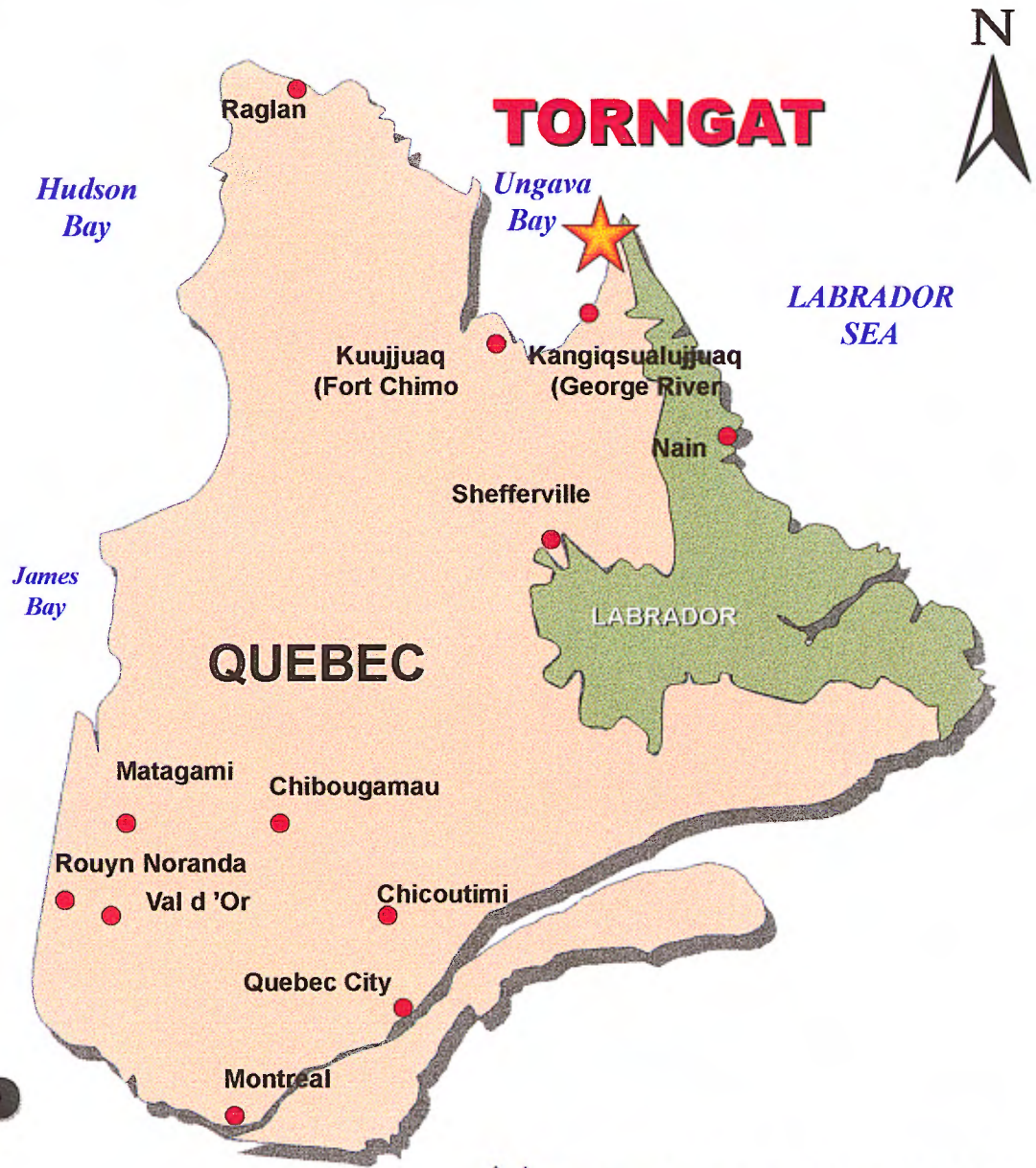
The following provides a description of the entire program including prospecting, detailed mapping and ground geophysics along with rock sampling held between the months of June and October 2000. The sample processing stage and bulk sample treatment are still in progress and therefore are not part of this report.

2.0 LOCATION AND ACCESS:

The Abloviak Area is located along the east shore of the Ungava Bay Quebec (figure 1) at 59°30'N and 65°00'W. The fjord enters the mainland of Québec in an ESE direction over a distance of 20 kilometers. As shown in Figure 2, Twin Mining Corp. holds a block of four contiguous permits totaling 444 sq.-km. In addition, the company staked a new permit to the east of the main block (PEM 1557 – 62.85 sq.-km) during the summer program. The original discovery is located along the northeastern ridge of the Fjord, 10-km inland which is located in the center of the first permit (PEM 1459) staked by Twin Mining on June 30th 1999. The topography of the Alluviaq area is characterized by a series of ESE trending rivers and fjords along the shore which enter mainland, carving tall cliff faces measuring



400 KILOMETRES

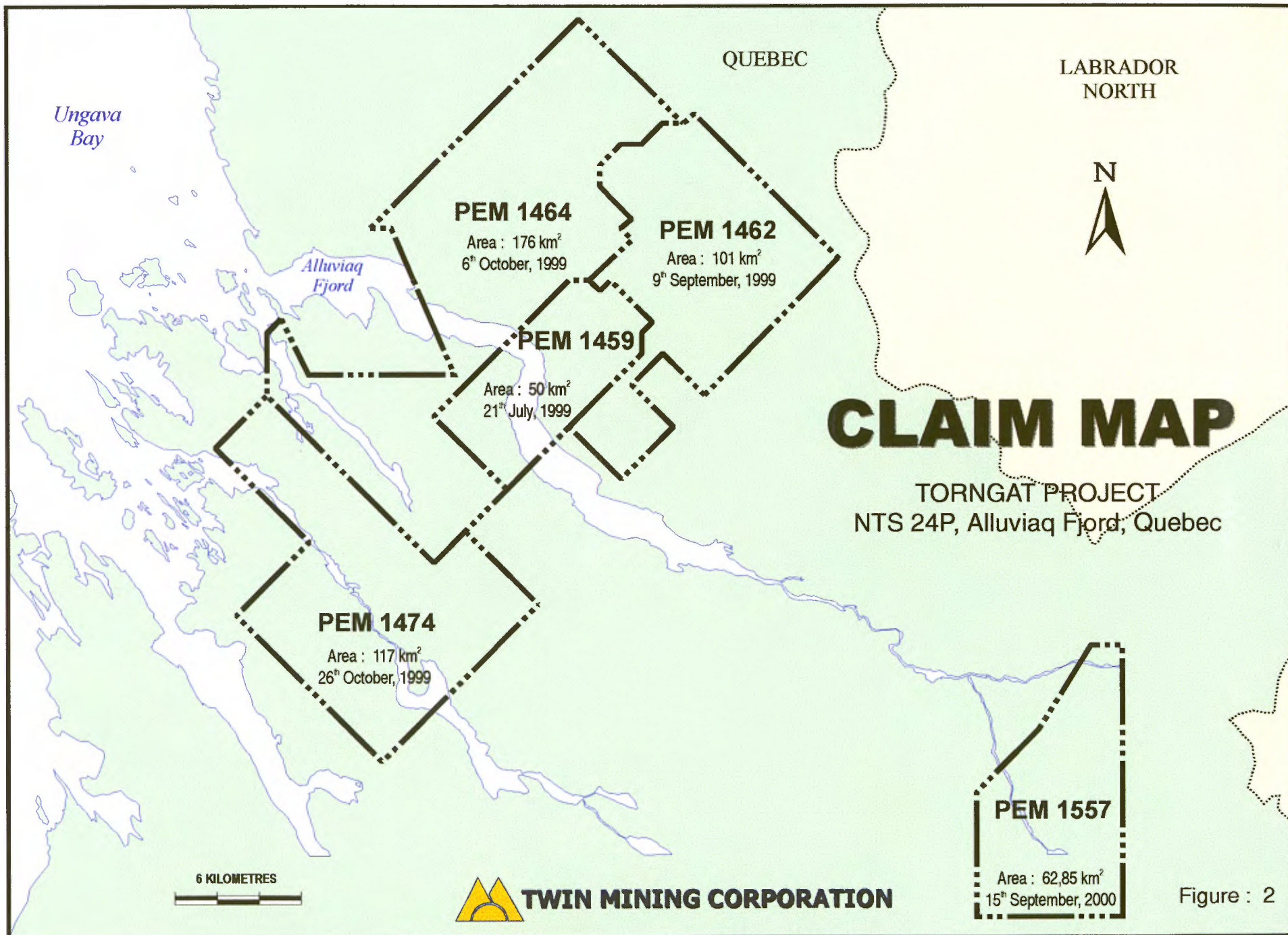


LOCATION MAP

TORNGAT PROJECT
Alluviaq Fjord, Quebec



Figure : 1



close to 600 meters. Being 100 km north of the tree line, the area contains mainly grasses and lichens as vegetation (Appendix 2: Plate 1).

Among the local Inuit communities found in the area are Kangiqsualujjuaq (George River) located 100 km to the southwest, and Kujjuuaq located 200-km southwest (Appendix 2: Plate 2). The latter provides daily commercial flights through First Air to Montreal and to Kangiqsualujjuaq by Air Inuit's Twin Otter. The closest ground access is located at Schefferville, 500 km to the south. In addition, a series of ships transport material from Montreal to all northern Inuit communities including George River, during the months of July and August.

3.0 PREVIOUS WORK HISTORY – ABLOVIK FJORD AREA:

Prior to Taylor's mapping programs held in 1968, 1969 and 1971, the interior region of northeastern Quebec and Labrador was virtually unknown geologically. The coastal areas of Labrador have been settled for several centuries and many rock samples have been collected by seamen and missionaries before any formal study was done. Although some reconnaissance work was completed by Bell (1885), Low (1896), Daly (1902), and much later Wheeler (at least nine different references between 1933 to 1968), most of it was in the Nain Province along the Labrador Coast. British Newfoundland Explorations Ltd. is among the rare private companies previously active in the area. They completed a reconnaissance mapping of the Labrador portion of the map area but the Quebec side was not studied.

Taylor (1979)'s work covers an area of more than 168 000 km² and includes NTS map sheets 13O to 13M, 14C to 14F, 14L, 14M, 23P, 24A, 24B, 24G to 24J, 24P, and 25A. Mapping was completed using a 6.4 km line-interval throughout the map area. Taylor's contribution to the understanding of the area includes principally the establishment of a relatively detailed group of units based on mineralogy and metamorphic facies. In addition, well over 100 samples were taken by Taylor for age determination which significantly helps establish the history of the area, more particularly of the later intrusives. Of importance here is a determination of 524 +/- 78 Ma (Cambrian) from a subophitic, medium grained diabase dyke located approximately 60 km northwest of the Torngat 1, 2, and 3 dykes.

In 1990, Goulet and Cieselski (1990) completed a more detailed mapping of the area more particularly the Abloviak Shear Zone located at the junction of two geological provinces. The ultramafic dykes currently known as the NG dykes (Map 9) were then identified and sampled. Goulet and Cieselski (1990) also identified a series of sulphide showings near the mouth of the Abloviak Fjord. In 1993, Falconbridge participated in a field trip organized by Goulet that was focused on the nickel-bearing graphitic sediments identified by Goulet in 1990 and later sampled and studied in greater detail by Bodycomb (1992, 1993 and 1994). Mrs. Bodycomb's work identifies five different types of mineral targets as follows:

- 1) massive sulphides and graphite
- 2) disseminated sulphides in paragneiss

- 3) disseminated sulphides in deformed mafic intrusions
- 4) sulphide stringers and graphite in brittle fault zones
- 5) lamprophyre dykes (analysis not permitted for publication)

Anomalous base metal and tungsten values were returned from the first three types. The first type revealed anomalous nickel (up to 1100 ppm) and zinc (up to 7300 ppm) values while Type 3 returned low nickel (up to 206 ppm) and anomalous copper (1900 ppm) values.

The Falconbridge field trip also included a visit of a late mafic dyke located at 59°26'24" N and 65°10'73" W. The dyke contained mica, olivine and garnets which indicated a resemblance with kimberlites. Two samples (1.7 and 2.5 kg) were taken and sent to Lakefield Research for analysis. Lakefield's results confirmed the kimberlitic affinity of the dyke but all indicator minerals identified (garnet and chromites) plotted outside the field of diamondiferous kimberlites. It is important to note here that the coordinates given to Moorhead et al. (1999) by Falconbridge point to a location southwest of the fjord, roughly halfway between Torngat 1, 2, and 3 and Torngat South.

Meanwhile, a mapping program completed in 1991 to 1993 by Wardle, Ryan, and Ermanovics on the Labrador side of the Abloviak area identified a group of ultramafic lamprophyre dykes. The description provided is very similar to that of the Torngat dykes (olivine-phlogopite-carbonate-perovskite) and the orientation of the dykes is said to be towards the east or northeast.

In 1994, Digonnet studied and resampled the kimberlite dykes identified by Goulet in 1991 as part of his Master's Thesis at the U.Q.A.M. Digonnet also identified another dyke to the north of the fjord (currently known as the Torngat 1 Dyke). The Thesis published in 1997 provides a detailed petrological study of the dykes but only a general overview of their geometry in the host gneiss. Nonetheless, the detailed work provides important new information regarding the dykes. Firstly, a 1.5mm gem quality diamond was observed within the dyke along with both G9 and G10 garnets. Secondly, the dyke was dated at 544 +/- 12 Ma (Cambrian). Finally, an interpretation is provided regarding the mode of emplacement of the dykes. Digonnet (1997) suggests that the magma has intruded the open fractures during the reactivation of the major fault structures (Abloviak Shear) at the opening of the Iapetus Ocean.

During the summer of 1997, Gaudreault (1997) mapped permit 1197 for Heron Exploration Inc. The permit is located immediately northwest of the Torngat dykes and covers most of the base metal showings identified by Bodycomb (1994). All showings, including the Little Balls, Pointe Verte, and Char Bay showings were sampled and compared to the results obtained by Bodycomb but unfortunately, all values obtained are lower or similar to those obtained by Bodycomb.

Following the publication of the Thesis by Digonnet, Fjordland Minerals Ltd. obtained a permit covering 400 km² centered on the diamondiferous dykes. Photo-interpretation and till sampling was completed (41 samples) but the known kimberlite dykes were not sampled (Moorhead et al., 1999). Indicator minerals found in the till samples were

considered disappointing and no further work was completed. The permits were abandoned and no report was filed for assessment.

In 1998, the government commenced a mapping program of the NTS map sheet 24I immediately south of the Alluviaq area. Lineaments similar to those associated with the Torngat dykes and lamprophyre dykes similar to those described by Digonnet were identified throughout the map sheet. Also 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) reviews the results of the airborne survey and mentions the presence of crosscutting linear thin magnetic features which are believed to represent late mafic dykes. 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 SiO₂ 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.

Many other companies have acquired ground following Twin Mining's 1999 Discovery in the Torngat including Trivalence Mining Corp., Dumont Nickel Inc., Marum Resources, International Tower Mines Ltd., Ayrex Resources Ltd and Band-Ore Resources Ltd. On April 3rd 2000, Marum and three other companies (Dumont, Southern Era, Band Ore) announced the commencement of a fixed wing airborne survey on a group of permits surrounding the Twin Mining block. All companies mentioned have had some ground exploration work on their property and many companies have uncovered similar ultramafic dykes. Dumont Nickel is probably the most successful of these with more than 20 different dykes. No caustic fusion work has been reported to date on any of these samples. Finally, Copper Hill Corporation announced in a release dated November 5th 1999 that ultramafic dykes occurring on their claims (owned since 1996-97) located on the Labrador side of the Alluviaq area, were identified as kimberlites. These dykes were originally identified by Wardle et al. (1994) as lamprophyres. Based on the composition of the clino- and orthopyroxene, calculated temperatures and pressures of crystallization are compatible with the diamond stability field.

On June 14th 2000, the Government of Newfoundland and Labrador released information concerning an agreement between themselves and the Labrador Inuit Association which removed most of the Labrador portion of the Torngat Mountains from staking (www.gov.nf.ca/release/2000).

4.0 GEOLOGICAL ENVIRONMENT:

According to work completed by Taylor (1979) and Digonnet (1997), the Abloviak Shear represents the tectonic contact zone between Rae and the Nain Province of the Canadian

Shield. Basement rock is composed principally of amphibolite to granulite facies metamorphosed sediments of paleoproterozoic age. The Abloviak Shear is a major regional structure of senestral displacement oriented WNW near the Fjord area and NNW further south.

The kimberlites of the Alluviaq Fjord is yet another example of the many kimberlitic bodies uncovered in North America within the last few decades and described by Card et al. (1997), Mitchell et. al. (1995), and Scott (1981).

The kimberlite dykes intruded the area during the Cambrian age (544+/- 12 Ma). The orientation of the dykes (N030 to N060) and related late fractures appear to correspond to the Riedel system associated with the regional senestral Shear Zone. It is therefore thought that the magma has intruded the open fractures during the reactivation of the major fault structures at the opening of the Iapetus Ocean.

The dykes are composed of frequently serpentized olivine macrocrysts and phlogopite in a matrix of phlogopite, olivine, spinels, perovskite, and interstitial carbonate. The geochemical work recently done on these rocks classifies the Torngat dykes as being hypabyssal phlogopite kimberlites of Group 1. Another report by Digonnet (2000) discusses the exact nomenclature to use for the dykes but the data seems to partly contradict the conclusions.

Geochemically, the kimberlites are quite homogeneous as to their content in major elements (Digonnet, 1997). They are characterized by low silica (<35% SiO₂) and are ultrapotassic (K₂O/Na₂O>4.4 but generally greater than 10). Among the other major elements, the Al₂O₃ (<4.0%), MgO (>22%), and TiO₂ (>1.9%) are also good indicators of their kimberlitic affinity. The compatible element results (Sc, V, Cr, Co, and Ni) obtained by Digonnet (1997) all indicate a kimberlitic affinity based on results presented by Mitchell (1986). The kimberlite dykes in Alluviaq are also enriched in LREE (La = 55 – 120 ppm), reaching values of up to 450 times chondrites. On the other hand, the HREE do not show such a high enrichment compared to chondrites (only 3x to 15x).

5.0 TORNGAT PROPERTY – 1999 PROGRAM:

Twin Mining Corporation obtained the permits in 1999 and initiated a preliminary sampling program on the kimberlite dykes during the summer months. In August of that year, a dyke of more than 2.5m wide, traceable over 1.5 km was observed and sampled. Three other dykes were also identified. New permits were obtained for a total of 101 km². In addition, a photo-interpretation study and a visit on September 6th identified other lineaments parallel to the known kimberlites. Other land was secured for a total of 331 km². A new series of dykes (Torngat South) was later identified to the south west of the original discovery. The South dykes are located southwest of the Abloviak Shear (Map 9), within the Rae Province. In the fall of 1999, a new permit was obtained from the Quebec Government. Total land holding controlled by the company amounted to 444 km² at that time. In the summer 2000, following the discovery of two new dykes in an open area,

Twin Mining staked a new permit totaling 62.85 sq. km. (figure 1) centered on the new Olympe dykes.

The preliminary sampling program completed in the summer of 1999 returned promising results. The kimberlite samples from TORNGAT dykes 1, 2 & 3 and TORNGAT South, have produced 475 diamonds of which 80 are macro diamonds. Most of the diamonds are of high quality, and are white and transparent. The following is a detailed description of some selected results:

<u>Sample No.</u>	<u>Weight (kg)</u>	<u>No. Diam.</u>	<u>No. Marco.</u>	<u>Description</u>
TORNGAT 1				
AD1 Coarse	109.8	214	44	Float grab sample, coarse grained part of dyke.
AD1 Fine	244.8	17	2	Float grab sample, Fine grained part (contacts ?) of dyke.
AD2	39.61	62	3	Mixed medium and fine grained material of subcropping kimberlite.
TORNGAT 2/3				
AD6-14	10.804	26	4	Float grab samples at the base of the cliff where dykes 2 and three are located.
AD6	26.94	16	5	
TORNGAT South				
AD10	27.48	7	0	Float grab samples from a linear depression above weathered dyke at top of cliff overlooking Beaufremont River estuary.

During the winter 1999-2000, a fixed wing magnetic survey was completed across the entire main group (444 km²). Clearly, the known dykes appear as moderate linear magnetic anomalies trending 040 to 060 Az., virtually perpendicular to the gneissosity and the general magnetic trend across the entire property. In addition, other continuous and parallel magnetic anomalies are identified throughout the property. Some of these are not only much stronger and continuous than those associated with the known dykes, but are also associated with subtle linear trends observed on the air photos. The most important of these coincident magnetic anomaly/air photo lineament features are presented on the attached compilation map.

A mini-bulk sampling program was completed during the months of March, April and May 2000 (Appendix 2: Plate 3). It consisted of collecting five 10-ton samples taken along the main dyke systems including two along a strong magnetic anomaly located south of, and along strike with, the main showing (maps 3, 4, and 9). The sample locations were selected based on results obtained in 1999 (e.g. AD-2 on Torngat 1 and DD from Torngat 2), or on the presence of intriguing anomalies as observed on the airborne magnetic survey maps (e.g. DU, RRR-2, and RRR-4). The exact sites to be sampled were dependent on snow cover, topography and overburden cover.

The AD-2 Sample was taken from the Torngat 1 Dyke where 3 macrodiamonds in 39 kilos were obtained in 1999. The dyke measures close to 2 meters but quickly pinches to less than 0.5 meter to the southwest where it reaches the edge of the cliff face. Snow cover was thick at the northeast portion of the trench making it difficult to establish the width of the dyke in that direction. The kimberlite dyke at the AD-2 Site contains some common phlogopite and garnet phenocrysts along with the olivine.

The DD Sample was taken from Torngat 2 Dyke where analyzed float samples from 1999 work contained 4 macro diamonds out of only 10 kilos of rock. A somewhat narrower dyke but abundant coarse grained phenocrysts of phlogopite, garnet, and diopside characterizes this sample.

The DU Site was selected using topographical and geophysical data. It is located 5 km north of the AD-2 Site along what appears to be the same Torngat 1 Dyke based the airborne magnetic data. The exact location is at the top of a hill where the dyke seems to split into two branches. The strike of the dyke at the trench (081° AZ), the indication of a second dyke to the north, and the swaying of the dyke to the northeast all suggest that the dyke splits into two. The sample is at the junction of this split and therefore the width (2 meters) is above average for the Torngat System. Mineralogy and grain size at the DU Site was similar to that observed at the AD-2 Sample site.

The RRR-2 and RRR-4 Sample sites are south of the Alluviaq Fjord, along the Kakivuuq Zone (now known as the Pita Dyke) represented by a very strong magnetic signature along strike with the Torngat 1, 2 and 3 Dyke system. Both are approximately 5 to 6 kilometers south of AD-2. Both Sites are quite similar in width, mineralogy and grain size. The kimberlite observed at the Pita was finer grained than to the north, contained less phenocrysts of garnet and phlogopite but the width appeared regularly above 1.5 meters. At the south end of the RRR-4 Site occurs a minor transverse fault which is believed to displace the dyke by less than 5 meters.

Results have been received for the AD-2 and DU sites while only partial results are available for the DD, RRR2 and RRR4 sites. At AD-2 and DU, results were very promising with 77 and 99 macrodiamonds respectively. The largest diamond came from site AD-2 (3.8 x 3.6 x 3.2 mm) although the highest grade was calculated from the DU site (15.7 cpht.). Both samples weighed 8.7 tonnes each. A total of 66 macrodiamonds were recovered to date from all three other samples. The diamond population contains 17% of stones larger than 2 mm, the largest of which measures 2.70 x 1.96 x 1.46 mm.

MRDI Canada has recommended to proceed with the 300 to 500 tonnes sampling at the AD-2 site because of the higher proportion of larger diamonds.

6.0 SUMMER 2000 EXPLORATION PROGRAM:

Because the property is characterized by both advanced and grass-root targets, the 2000 Program was divided into two parts. The first was to produce an inventory of all ultramafic dykes on the 444 sq. km property and also provide more details on the most interesting areas known based on the geophysics maps. Part II consisted in completing MRDI's recommendation and obtain a bulk-sample (300 to 500 tonnes) from the AD Site in order to obtain a larger number of diamonds for evaluation and grade estimate of the site.

6.1 PART I: Property-Wide Prospecting and Mapping:

On July 15th 2000, the team of four geologists (Richard Roy, Stéphane Dignonnet, Bronislaw Popiela, and Burkhard Dressler) and four technicians (Denis Chamberland, René de Carufel, Alain Lafond, and Adrian Davis) arrived at the Torngat Outfitting Camp. The camp is located approximately 20 kilometers to the southeast of the AD Site (Appendix 2: Plate 4). The team of technicians was immediately given the mandate to complete a set of four grids to cover specific target areas along the main dyke system, the Torngat 1/ Pita system (maps 5 to 8). On each grid, a detailed geological survey as well as a magnetic survey were completed. In parallel, a series of traverses were completed across the entire property in order to complete the inventory of all the dykes on the property (maps 1 and 2). The traverses were planned to ensure complete coverage of the property and also to cover a series of geophysical anomalies tabulated by MPH (Table 1). These anomalies are divided into groups, the "P" anomalies, which are circular and isolated magnetic highs, and "D" anomalies, which are linear magnetic features distinct from the general trend of the surrounding gneisses. A total of 39 "P" and 29 "D" anomalies were field-checked during the summer.

Fortunately, the summer was exceptionally warm and dry with only six days lost due to weather out of 43 possible work days (14% lost time). This is exceptional, as the average rate used for budget purposes is normally 30%. This helicopter supported program used 197.4 flight hours of a Long Ranger provided by Abitibi Helicopters (Appendix 2: Plate 5). The following is a detailed description of the results obtained during the mapping, geophysical surveying, and systematic sampling of the dykes. A set of maps at a scale of 1:5,000 (for the grids) and 1:50,000 / 1:25,000 (for the property) is provided at the end of this report while all geophysical data is available in a separate report by Plant (2000).

Approximately 20 crew-days were used to traverse the entire group of properties (maps 1 and 2). Estimated coverage per day is estimated at about 7 kilometers. The property wide prospecting program was extremely successful in confirming and establishing many

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Table 2: Dykes Summary

Name	No. Samples	Ave. Width (m)	Max Width (m)	Length (km)
Richard 1	2	0.65	0.80	1.20
Richard 2	1	0.25	0.25	0.30
Dallas	4	0.71	0.80	3.00
NG-1	2	0.20	0.30	0.80
NG-2	3	0.53	0.70	2.00
NG-3	1	0.10	0.10	0.30
NG-4	1	0.25	0.25	0.30
Olympe	2	0.85	1.20	1.00
Pita 1	30	1.37	4.00	8.50
Pita 2	1	0.40	0.40	0.30
Pita 3	3	0.83	1.50	0.90
SD	4	1.30	2.80	2.00
Tomgat 1	33	1.52	3.50	11.50
Tomgat 2	5	0.98	1.50	2.00
Tomgat South	2	0.25	0.30	0.80
Tomgat South 2	2	0.80	0.80	1.60
West	1	0.30	0.30	0.50
17	97	1.19	-	37.00

different kimberlitic dykes along a series of five different dyke systems. As shown in Table 1, some of the dykes uncovered were identified as targets from the magnetic data but some were also geophysically blind, or too subtle and were only highlighted on the airborne geophysical maps after the fact. Table 1 also shows that the circular anomalies targeted (the "P" anomalies) were generally caused by magnetic rocks in the gneisses (pyrrhotite and/or magnetite), rocks of slightly higher magnetic susceptibility compared to the surrounding rocks, or possibly topographic effects on the magnetic survey. In some instances, there were no evidence of any kind in the field although outcrops were common (commented as "nothing" in Table 1). These anomalies were rendered using a "horizontal derivative" method which, in the case of the Tornгат Property, over-emphasized some of the subtle magnetic responses which are probably caused by minor variations in the background magnetic relief. The "horizontal derivative" map provided by MPH was somewhat more successful in the identification of significant "D" anomalies. Some of these (such as the SD, NG-3, HD, and West dykes) were identified although also readily visible on the total field map. It should also be stated though that the compilation provides many other interpreted anomalies that were not explained and contribute significantly in masking those which are significant within their compilation.

After two weeks of limited success at visiting the "horizontal derivative" targets, it was decided to proceed more systematically with respect to the traverses and rely on the raw data (i.e. the original total field maps from SIAL) to point out the areas where particular attention should be given. In addition, key tools observable in the field were stellar features which directed the prospecting team to the identification of new dykes. Among these, the presence of linear recessive erosion across the gneisses (especially those along a favorable direction of 030 to 060 degrees), and the presence of a fracturing system roughly perpendicular to the gneissosity (Appendix 2 – plates 6 and 7)

The prospecting program established a total of 17 dykes along 5 different corridors (Table 2). As shown maps 3, 4, and 9, the 5 systems are located as follows:

- 1) ***The West System:*** includes the West Dyke and the SD Dyke and follows the northwest property boundary. Both dykes together total approximately 2.5 kilometers. The SD Dyke is known to cross the property boundary towards the northeast but not for a great strike length (Dean Besserer, personal communication),
- 2) ***The Dallas System:*** includes only the Dallas Dyke. Although it could be part of the Main System (see below), it appears to follow a separate structural corridor based on structural features observed in the field along the system to the southwest. No other dykes were observed but further investigations will probably reveal new finds along this system. The Dallas Dyke measures 3.0 km long,
- 3) ***The Main System:*** is the most significant system on the property. It includes the Pita dykes, all the Pita branches (K-A, to K-G), the Tornгат 1 and the Tornгат 2 dykes. Kimberlite dykes were found to outcrop consistently along the 20 kilometers of strike length of the corridor. The total collective strike

length of all these dykes is 23.2 kilometers. Both ends of the system end inside the property boundary and are characterized by intense en-echelon features in the north (as shown in Appendix 2 – Plate 8) and the occurrence of a different crosscutting structural regime in the south.

- 4) ***The East System:*** it includes all the NG dykes, and the Richard dykes. The total strike length of all the dykes is 4.9 kilometers. This system seems somewhat oblique to the other systems. It's strike (040 degrees) is different from the other systems (060 degrees) but is compatible with the fact that the dykes on Dumont ground to the east are much closer to north-south, and even NNW in some instances (Dean Bresserer – personal communication). In other words, the dykes seem to shift from NE to N-S from west to east.
- 5) ***The South System:*** is very different from the four other systems, as it strikes perpendicular to them and parallel to the gneissosity (Appendix 2 – Plate 9). It includes 2 dykes, the Torngat South 1 and 2, which were traces over a total strike length of 2.4 kilometers. The northwest end of the dyke corresponds to the southwest end of the Pita 1 Dyke. Although these dykes are outside the interpreted limit of the Abloviak Shear, this structure alone does not explain the change in dyke direction. Indeed, other northeast trending dykes to the SW of the fault were observed by at least two neighbors.

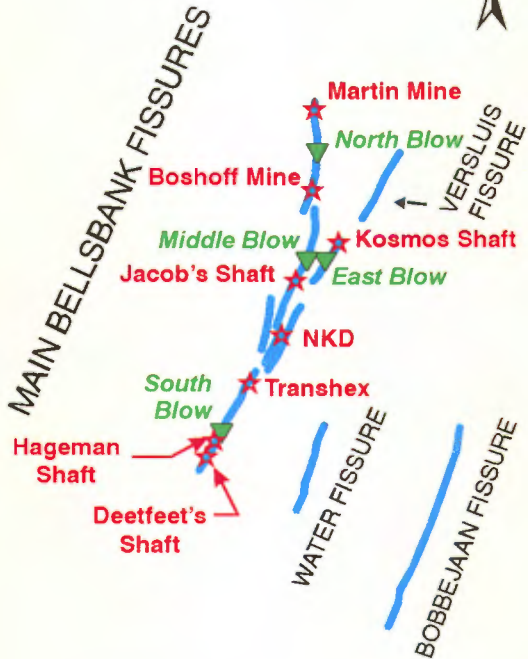
A total of 97 50-kilo samples were taken along all of the outcropping sections of all the dykes. On average, the 37 kilometers of defined dykes were sampled at every 400 meters, while 29 of these sample sites were supported by an additional 300 kilograms sample (Maps 3, 4, and 9 for position of 50 kilograms and 300 kilogram samples). The site selection of the 300 kilograms sample was made to ensure a complete coverage of the main Torngat 1 and Pita dykes along a strike length of more than 15 kilometers. Based on the detailed descriptions of the 97 samples (appendix 1), the dykes measure up to 4.0 meters wide and average 1.2 meters, favorably comparable to many of the well known South African dykes (ex: Bellsbank and Bobbejaan – 60 cm, Star Dyke – 60 cm according to Gurney et al. 1996). Figure 3 shows well the extent of the Torngat Fissure System vs. the South African dykes. The entire Bellsbank Fissure System is approximately one third the size of the Torngat System. The most continuous and widest dyke system observed to date at Torngat is by far the Main System, which averages 1.45 meters wide over an estimated strike length of more than 23.2 kilometers (Table 2). The mapping and sampling of the dyke was completed by August 27th, 2000.

In general, all dykes were composed of the same mineralogy as those described by Dignonnet (1997) although volume percentages of these mineral changes considerably from site to site. In a general sense, the Torngat 1 and the south end of the Pita dykes contained the highest percentages of olivine phenocrysts, varying up to 40% of the rock, often appearing as two different populations, one less altered than the other. On a weathered surface, the altered phenocrysts (and occasionally the xenoliths) are well visible when strongly altered as they erode less than the surrounding carbonaceous matrix (Appendix 2 – Plate 10). The NG dykes seem to consistently contain the most preserved olivine phenocrysts. Other minerals (opx, cpx, garnet, phlogopite) and alteration effects were

**TWIN MINING CORP
TORNGAT PROJECT
Alluviaq Fjord Area**



**BELLSBANK DIAMOND MINE
BARKLY WEST DISTRICT**



3000 Metres



TWIN MINING CORPORATION

**TORNGAT vs BELLSBANK
FISSURE SYSTEMS**

FIGURE : 3

TWIN MINING CORPORATION
TABLE 1: TORNGAT DIAMOND PROPERTY AIRBORNE MAGNETIC TARGET SELECTIONS

Target	Priority Rating JB	Priority Rating HC	NTS	NAD 27 Coordinates			Exploration Grid		Target Type	Comments JB	Comments HC	Field check results Richard Roy
				UTM(mE)	UTM(mN)	Elevation (+/-10m)	m NE	m NW				
D-1	B	B+	24P/6&7	379455	6593925	410	20795	7385	T-1 Dyke		Limited size potential	known Torngat 1
D-2	A	A	24P/6,7&11	382830	6596875	440	25160	7150	T-2+3 Dyke		Good size potential	Torngat 1 East
D-3	A-	B+	24P/10&11	386625	6600235	470	30280	6820	Dyke		Limited size potential	Torngat 1 East
D-4	B-	C+	24P/11	383900	6600545	350	28290	8915	Dyke		Limited size potential	Dallas Dyke
D-5	B	C+	24P/6,7&10	385160	6595530	430	25860	4450	Dyke		Limited size potential	Nothing
D-6	B-	C+	24P/6	380695	6592360	470	20855	5455	Dyke		Limited size potential	Partly Richard 1 Dyke
D-7	B-	B-	24P/11	381515	6607075	430	31465	15235	Dyke		Possible major system	SD Dyke
D-8	B+	C+	24P/6	378005	6590750	200	16075	7600	Dyke		Limited size potential	NG-2 Dyke
D-9	C-	C-	24P/6&7	388015	6594885	470	27550	2195	Dyke		Limited size potential	Nothing
D-10	A	A+	24P/6	374735	6592760	290	16415	9985	Pita Dyke		Good size potential	Known - Pita Dyke
D-11	B	B	24P/6	367445	6588840	60	8710	12235	Dyke		Topo linear	Nothing
D-12	B	C+	24P/6	366415	6589410	110	8335	13505	Dyke		Limited size potential	Nothing
D-13	C	C	24P/6	368975	6578420	210	2635	4115	Dyke		Cross-cuts dyke trend	Nothing
D-14	C	C	24P/6	373045	6587185	440	11575	7180	Dyke		Cross-cuts dyke trend	Nothing
D-15	B-	B-	24P/6	380000	6593500	450	20840	6750	Dyke			Nothing
D-16	B	C+	24P/6&11	380090	6597945	320	24035	9875	Dyke		Cross-cuts D-1, D-2	Nothing
D-17	B-	C+	24P/11	382480	6599480	430	26795	9200	Dyke		Limited size potential	Nothing
D-18	B	C+	24P/11	383510	6599565	400	27550	8440	Dyke		Limited size potential	Nothing
D-19	B+	C+	24P/11	383895	6598750	370	27140	7635	Dyke		Limited size potential	Nothing
D-20	B+	B-	24P/6	384340	6595550	450	25450	5070	Dyke		Limited size potential	Nothing
D-21	B	B	24P/6	388220	6597235	580	29080	3495	Dyke		Limited size potential	Nothing
D-22	B+	A	24P/6	372030	6587895	240	11275	8400	Dykes		Torngat South area	Nothing
D-23	B	B-	24P/6	370325	6587240	240	9630	9200	Dyke		Torngat South area	Nothing
D-24	B	B-	24P/6	370240	6586680	200	9130	8800	Dyke		Torngat South area	Nothing
D-25	B+	C+	24P/6	364560	6588920	140	6620	14440	Dyke			Nothing
D-26	C+	B	24P/6	372580	6590295	260	13285	9700	Dyke		Torngat South area	Nothing
D-27	B-	B-	24P/11	381735	6602765	350	28650	12050	Dyke			Nothing
D-28	B	C+	24P/6	377895	6595440	380	20630	9530	Dyke		Oblique trend	Nothing
D-29	B-	B	24P/11	374510	6600325	300	21660	15400	Dyke			Nothing

Target	Priority Rating JB	Priority Rating HC	NTS	NAD 27 Coordinates			Exploration Grid		Target Type	Comments JB	Comments HC	Field check results Richard Roy
				UTM(mE)	UTM(mN)	Elevation (+/-10m)	m NE	m NW				
P-1	B-	C	24P/11	372330	6601955	320	21415	18100	Pipe/blow		Limited size potential	West Dyke
P-2	B	C	24P/11	372420	6602170	320	21645	18200	Pipe/blow		Limited size potential	Nothing
P-3	B	C+	24P/11	373380	6602620	260	22610	17855	Pipe/blow		Limited size potential	Nothing
P-4	B+	A	24P/11	374530	6600345	300	21810	15445	Pipe/blow		Topo dep. On D-29 trend	top of hill
P-5	C+	B	24P/11	376740	6599680	270	22940	13375	Pipe/blow		Good size potential	rusty rock
P-6	B	B	24P/11	375770	6598700	340	21560	13390	Pipe/blow	Assoc. with lineament.	Good size potential	rusty rock
P-7	C+	C+	24P/6	376325	6596815	350	20595	11670	Pipe/blow			rusty rock
P-8	C	C+	24P/11	381320	6606935	200	31240	15295	Pipe/blow		Limited size potential	SD Dyke lineament
P-9	A-	A-	24P/11	381210	6604025	390	29175	13310	Pipe/blow		Topo depression	Nothing
P-10	B-	B+	24P/11	381615	6601580	370	27715	11310	Pipe/blow		Topo depression	Nothing
P-11	B	C	24P/11	382950	6598165	400	26220	7915	Pipe/blow	Assoc. with lineament	Topo high	rusty rock
P-12	C-	B-	24P/11	381635	6597915	340	25110	8685	Pipe/blow		On D-12 trend	rusty rock
P-13	B-	C-	24P/11	383795	6604640	380	31405	11920	Pipe/blow	Flight line ?		Nothing
P-14	B-	C-	24P/11	384475	6603990	370	31405	10965	Pipe/blow	Flight line ?		rusty rock
P-15	C	C-	24P/11	385405	6603110	410	31456	9705	Pipe/blow	Flight line ?		top of hill
P-16	C	C-	24P/11	384150	6603015	460	30505	10525	Pipe/blow		Limited size potential	Good lineament
P-17	C-	C-	24P/11	386165	6602505	460	31585	8705	Pipe/blow	Flight line ?		top of hill
P-18	B-	B-	24P/6	379955	6595855	430	22465	8460	Pipe/blow		On D-12 trend	graphitic seds
P-19	B+	C+	24P/6	383455	6596535	500	25420	6440	Pipe/blow	Assoc. with lineament	Topo high	rusty rock
P-20	A-	A-	24P/11	385090	6598345	360	28865	6540	Pipe/blow	Possible swell on dike	On D-2 trend	nothing particular
P-21	A	A+	24P/11	385600	6599120	480	28815	6735	Pipe/blow		On D-3 trend	nothing particular
P-22	A	A+	24P/11	386390	6600110	430	30045	6835	Pipe/blow		On D-3 trend	nothing particular
P-23	A	A+	24P/11	386285	6598625	550	28895	5930	Pipe/blow		On D-2 trend	tonalite
P-24	B-	C+	24P/10	388145	6598715	590	30310	4650	Pipe/blow		Limited size potential	Good lineament
P-25	B	B-	24P/10	388530	6597480	580	29715	3520	Pipe/blow		On D-21 trend	rusty rock
P-26	C+	C-	24P/7	388175	6596860	600	28995	3310	Pipe/blow		Limited size potential	nothing
P-27	B+	A-	24P/7	390390	6596440	690	30310	1440	Pipe/blow		Good size potential	rusty rock
P-28	B-	B-	24P/7	390405	6596455	640	29655	1655	Pipe/blow		On D-9 trend	Nothing
P-29	B+	B	24P/6	389845	6596145	550	25140	2850	Pipe/blow	Assoc. with lineament	On D-9 trend	rusty ourcrop
P-30	B+	C+	24P/6	385780	6593820	480	20510	3260	Pipe/blow			rusty ourcrop
P-31	C+	C+	24P/6	382200	6590815	400	20210	5425	Pipe/blow		Limited size potential	amphibolite
P-32	A	A-	24P/6	378875	6592800	320	19575	7020	Pipe/blow		Topo high, D-15 trend	Nothing
P-33	A+	A	24P/6	375640	6593135	310	17490	9535	Pipe/blow		On D-10 trend	rusty ourcrop
P-34	A+	A	24P/6	375487	6593245	310	17475	9780	Pipe/blow		D-10	Nothing
P-35	A	A+	24P/6	374700	6592720	290	16620	9920	Pipe/blow	Possible swell on dike	D-10, topo low	two dykes
P-36	C+	B+	24P/6	375775	6590550	240	15750	7550	Pipe/blow	Assoc. with lineament	On D-8 trend	Nothing
P-37	B+	B+	24P/6	371860	6578610	150	4565	1940	Pipe/blow	Assoc. with lineament	Good size potential	rusty ourcrop
P-38	B-	B+	24P/6	371535	6578470	50	4250	2080	Pipe/blow	Assoc. with lineament	Good size potential	rusty ourcrop
P-39	C-	C+	24P/6	369050	6577850	150	2070	3400	Pipe/blow	Weak response	Topo depression	rust ?

quite variable and their importance remains to be established, in light of the results from the caustic fusion and petrographic work on these samples. Distribution of the visual markers (phenocryst size and volume percent, and presence of other minerals such as pyroxene) along the two main dykes (Pita and Torngat 1) is presented in Table 3 in a form of a histogram along the trend of the dyke. This clearly shows that the sites of samples DU and AD are quite "average looking" compared to other sites that show much higher phenocryst percentage and size.

A total of four grids were completed on property for a total of 164.8 km (see maps 3, 4, and 9 for grid locations). Each grid was traversed for a detailed geological mapping and a magnetometer survey was also completed. All grids and geophysics was completed by August 27th 2000. The ground geophysical surveys provide additional structural and geometrical information regarding the kimberlite dykes. Indeed, pinch and swells, bifurcation, and Y-shape geometry are observed in the field and on the geophysical maps. These features are typical of most of the known kimberlite fissures of South Africa and around the world. The following is a summary of the observations made on all four grids.

- 1) ***The AD-DD Grid (Map 5):*** This grid covers the AD and DD sites where a large sample was taken in the spring. It continues to the east for 3 kilometers, following the Main System. The grid lines are between 1.0 and 1.2 kilometers long, totaling 33.95 kilometers. Three lines were also completed with the magnetometer across Grid Lake for an additional 3.635 km. From west to east, both the Torngat 1 and Torngat 2 dykes continue up to the lake with a consistent width and mineralogy. Although the Torngat 2 dyke seems to continue across the lake without significant displacement, the Torngat 1 dyke seems to be greatly displaced (en echelon or faulted) somewhere under the lake. The fact that both the Torngat 1 and 2 are only weakly magnetic make the interpretation difficult even in a low magnetic background environment. Further east, the Torngat 2 dyke appears to pinch out while the Torngat 1 dyke continues across a zone of strong magnetism and its position is traced principally from the rock exposure. Although ground evidences suggested possible blows near the east end of the grid, the strong magnetic background hides any kind of detail that could be obtained from the magnetic survey. The mineralogy of the Torngat 1 Dyke east of the lake is quite variable and contains sections where the olivine phenocrysts are much less altered and where garnet is much more common than at the AD site.
- 2) ***The North DU Grid (Map 6):*** This grid covers an interesting area according to data obtained from the airborne magnetic survey, particularly on the "horizontal derivative" map. The geophysical maps suggest the presence of an isolated circular feature located on strike with the Torngat 1 Dyke in an area where much en echelon geometry is observed in the dyke. The grid totals 39.875 line kilometers covering an area of about 2.0 x 1.5 km. As for the AD-DD Grid, the weak magnetism of the dyke make it difficult to interpret the position of the dykes based on the magnetic survey. Most of the interpretation is based on field mapping of the dyke. In the DU North Grid, the Torngat 1 Dyke is quite complexly faulted and/or displaced by en echelon geometry in a

Microfilm

PAGE DE DIMENSION HORS STANDARD

MICROFILMÉE SUR 35 MM ET

POSITIONNÉE À LA SUITE DES

PRÉSENTES PAGES STANDARDS

Numérique

PAGE DE DIMENSION HORS STANDARD

NUMÉRISÉE ET POSITIONNÉE À LA

SUITE DES PRÉSENTES PAGES STANDARDS

Microfilm

PAGE DE DIMENSION HORS STANDARD

MICROFILMÉE SUR 35 MM ET

POSITIONNÉE À LA SUITE DES

PRÉSENTES PAGES STANDARDS

Numérique

PAGE DE DIMENSION HORS STANDARD

NUMÉRISÉE ET POSITIONNÉE À LA

SUITE DES PRÉSENTES PAGES STANDARDS

dextral fashion. Both field mapping and the geophysical survey confirms that the circular feature is caused by a magnetic tonalitic intrusive which follow a northwest direction, parallel to the gneisses. The presence of favorable lineaments and subtle linear magnetic trends suggest that other undefined lenses of kimberlite probably occur on the grid, particularly in the southeast corner. The mineralogy of the dyke here is somewhat similar to the DU and AD sites although olivine phenocrysts are less abundant and more altered.

3) ***The Pita Grid (Map 7):*** The Pita Grid (referred to as the Kakivug Grid in Plante, 2000) is by far the largest, totaling 73.4 line-kilometers and covering an area measuring approximately 3.2 km x 2.5 km. The northwest part of the grid was covered at 50 meters spacing while the southwest was completed at 200 meters spacing. Steep cliffs limit the northeast and east parts of the grid but geological information was obtained and plotted to the east of the limits of the grid. Much important information was gathered relative to the Pita Dyke. Firstly, a second parallel dyke (the Pita 2) was identified in the west half of the grid. This dyke was not seen on the airborne magnetic survey and its presence does explain why the magnetic anomaly is relatively strong and wide in this area. Further east, the Pita dyke splits into a series of at least 5 kimberlite dykes, most of which appears to pinch rapidly but a few do show signs of continuity down to the fjord. These observations are confirmed by the ground magnetic survey. The five dykes are generally fine-grained and homogeneous although the two southernmost branches show coarse grained and phenocrystic varieties. Near the west-end of the grid, the Pita 1 dyke widens to more than 4 meters (Appendix 2 – Plate 11). Based on the magnetic data, the dyke most probably widens even more to the southwest of the 4 meters wide dyke before pinching out entirely. It then re-opens to the south and continues outside the grid area. A few traverses (15.155 km) with the magnetometer were completed on the fjord. Although quite blurred, some magnetic trends are observed coincident with known dykes. The interpretation of the position of the dyke under the fjord is based on this data presented by Plante (2000). The magnetic survey also identifies a circular feature in the southeast quarter of the grid that remains unexplained in the field. The anomaly does not appear to be caused by the gneiss. Further investigation will be required before an explanation can be offered.

4) ***The Southwest Grid (Map 8):*** This grid was established to attempt to better understand the relationship between the Main System and the Torngat South System. The grid totals 17.575 km line kilometers in 16 lines which cover a square of about 1.5 km by 1.5 km. The Pita 1 and Pita 2 dykes extend on the grid and was followed to the southwest of the Sapukkait River. In the south corner of the grid, the Torngat South 2 Dyke (Appendix 2 – Plate 9) is observed but cannot be extended across the small bay in the Beaufremont Inlet. Unfortunately, the magnetic survey was unable to help in the interpretation. The area where both systems are to meet (Torngat South and Main systems) is characterized by strong magnetic relief that masks the responses caused by the

dykes. Two minor diabase dykes were seen parallel to the Pita 1 and 2 dykes but these do not seem to have any extension.

6.2 PART II: AD Site Bulk Sampling:

On August 9th 2000, a crew of three men (a miner, a shovel operator and a blaster) arrived at the site in preparation for the bulk sampling program. Following a few days of delay, the barge arrived on site on August 17th 2000 with all mining equipment and sample bags. The excavation commenced on the 21st while blasting started on the 22nd of August 2000 (Appendix 2 – Plate 12).

Prior to blasting, the Torngat 1 Dyke at the AD Site area was traced with the help of the magnetometer and both contacts were position over a strike length of approximately 100 meters, roughly centered on the original AD-2 Sample of 8.7 tonnes taken in the spring. It appears from this information that the dyke seems wider and more continuous to the southwest of the AD-2 Site. In addition, the stronger magnetic response to the southwest suggested that the fresh rock was closer to surface to the southwest than to the northeast. Nonetheless, the original AD-2 Site was also selected as part of the new sample site in order to ensure an adequate comparison between the results of the two sample sizes. A map at a scale of 1:100 showing the plan view, longitudinal, and sectional view of the trench is presented in the back pocket (Map 10).

As shown on the plan view, the AD Site was mined in two different trenches, separated by a 6 meters long section of very narrow kimberlite dyke. The northeast trench covers the area where the 8.7 tonnes were collected. The Kubota was used to remove all overburden and altered kimberlite sitting on top of the fresh rock. Once this was completed, an area of approximately 21.0 m x 1.2 m was excavated to a depth of 1 to 3 meters deep. While drilling this area, it was noticed that layers of altered kimberlite were present below the fresh material. In addition, while mucking the ore, the south walls started to collapse. It was therefore decided not to proceed with this side of the trench. It is estimated that approximately 50 tonnes were recovered from this trench. The remaining estimated 310 tonnes were recovered from the south trench, which measures (after overburden is removed) 33 meters long, up to 5 meters deep and 1.0 to 2.5 meters wide (Appendix 2 – Plate 13). The south trench is vertical, very regular and flanked by relatively competent rock. Although the trench is 7 meters deep (with overburden), both walls have held up well. In addition, both walls of the trench contain between 5 to 20 cm of fine-grained contact kimberlitic material. This is indicative that a minimal amount of dilution was included in the sample and that much of the diamond-poor contact zone was left in place. This excellent selective mining was achieved by determining the best drill hole pattern and charge quantity during the mining operation. Loading was usually light and tightly packed with dust and soil while a “V-shape” drill-hole configuration enabled to reduce pressure on the walls during the blasting.

Mineralogically, both trenches are very similar and show the same assemblage as what was observed in the 8.7 tonnes sample. Nine representative 50 kilogram samples were taken at different sites within the trenches (see longitudinal view). The descriptions of these 9

samples are presented in Appendix 1. Generally, the kimberlite contains up to 15% olivine phenocrysts (usually altered) and some phlogopite as well. Some samples also contain both garnet and diopside phenocrysts but these are rare. In addition, both coarse magnetite masses and rare peridotite nodules were seen in some instances.

All the material was put in 737 bags with the help of a one-cubic-yard Kubota shovel. Each bag is manufactured to hold up to 3,000 kilograms. Because of constraints from the helicopter, no more than 550 kilograms of rock was put in each bag. In an effort to better understand the distribution of the diamond population, the 737-bags sample was subdivided into three sub-samples that grossly correspond to the mining sequence. Sample "A" corresponds to all of the northeast trench and part of the top half of the southeast trench, and Sample "No Name" corresponds mostly to the top half of the southwest trench. Finally, Sample "C" corresponds to the lower half of the southeast trench. Because the mining operation was often done on two levels at once, or at both trenches at once, there has considerable mixing between the three sub-samples and therefore results should be considered as approximate indications as oppose to exact diamond distribution in the dyke.

Each bag was then carried by helicopter (sling) to a storage area near the shore of the Alluviaq Fjord (Appendix 2 – Plate 14) where the barge was expected to arrive. A balance located on the sling of the A-Star helicopter helped us estimate the mined weight. Regular checks of the weight per bag suggested a total of more than 400 tonnes of ore. The mining operation was completed on September 20th 2000 while slinging down to the fjord continued on until September 27th 2000.

The barge arrived to the site on the 30th of September at noon. Loading of the material commenced immediately and lasted a total of four days including one day of down time due to extreme winds (Oct 3rd). A second helicopter (Long Ranger) arrived to the site on the 30th to help loading the material onboard. During those four days, a total of 244 empty barrels, all the mining equipment, 737 bags of sample from the AD Site and an additional 29 bags containing the 300-kilogram samples were put onboard the Barge General Chemical No. 37 of the Jerritt McKeil (Appendix 2 – Plate 15).

On October 4th 2000, the Jerritt McKeil left the Alluviaq Fjord en route to Portneuf Quebec (near Quebec City) via the coast of Labrador. Arriving at Shangle Bay, the barge was transferred to the Florence McKeil which arrived at Portneuf on October 20th 2000 (Appendix 2 – Plate 16). A total of 48 hours were necessary to unload the barge of all its content with the help of a 25-tonne crane provided by Guay Inc and to position the material on the dock. From October 20th to the 26th, a total of 14 trucks of Cabano-Kingsway were loaded with the sample bags with the help of two forklifts and a platform (Appendix 2 – Plate 17). The last truck arrived at Lakefield Research on October 28th 2000. Anywhere from 25 to 30 skids, each containing two samples were placed in each truck. All but one truck was weighed in Montreal, on their way to Lakefield Research in Lakefield Ontario. These weights are within 10% of the estimated wet weight as calculated by Lakefield Research during the crushing operation. The weights below are based on Lakefield's calculations for the three large samples, and based on estimated truck weights for samples GL1 to 29.

GL 1 to 29 = 29 samples of approximate 349 kilos = 10.1 tonnes
Pails: 18 = 9 samples of approximate 50 kilos = 0.45 tonnes

Sample A: 185 bags = 95.2 tonnes

Sample C: 125 bags = 60.6 tonnes

No Name: 427 bags = 194.9 tonnes

GRAND TOTAL = A+ NO NAME + C = 350.7 tonnes

ALL Shipment = 361 Tonnes

7.0 CONCLUSIONS:

The 2000 Exploration Program has revealed the following information regarding the Torngat Property:

1 - The property wide prospecting program was extremely successful in confirming and establishing many different kimberlitic dykes along a series of five different dyke systems. The prospecting program established a total of 17 dykes along 5 different corridors. The West, HD, Main, East, and South systems total approximately 37 kilometers of defined dykes. A total of 97 50-kilo samples were taken along all of the outcropping sections of all the dykes. On average, dykes were sampled at every 400 meters, while 29 of these sample sites were supported by an additional 300 kilograms sample. Based on the detailed descriptions of the 97 samples, the dykes measure up to 4.0 meters wide and average 1.2 meters, favorably comparable to many of the well known South African dykes (ex: Bellsbank and Bobbejaan – 60 cm, Star Dyke – 60 cm). The most continuous and widest dyke system observed to date is by far the Main System, which averages 1.45 meters wide over an estimated strike length of more than 23.2 kilometers.

2 – During the months of August and September 2000, a total of almost 400 tonnes were collected from the AD Site for mineralogical testing and grade estimate. The blasting and sampling operation was able to not only reduce the dilution (gneiss country rock and overburden) to a minimum but also to leave most of the fine grained diamond-poor contact zone on the walls of the trench. The sample was brought to Lakefield Research's DMS Plant for diamond recovery.

3 – Ground magnetic surveys were able to assist in the final interpretation of the position of the dyke but because of the relative narrow widths for such survey detail, it is difficult to evaluate a thickness based on this data. An other type of geophysical tool may be appropriate for this property. Further magnetic data could be useful between the AD-DD Grid and the Pita Grid so to better understand the relationship between the Torngat 1 and 2 fissures and the Pita dykes.

4 – Although analytical results from the summer samples are still incomplete, current preliminary results suggests that many of the 50 kilogram samples and some of the 300 kilogram samples will return significant results which will justify further sampling, and possibly drilling. A recommended program below is dedicated to this next phase. In addition, results from the 400 tonnes sample will hopefully continue to return favorable results for further economic evaluation.

8.0 PROPOSED 2001 PROGRAM AND BUDGET:

The proposed follow-up program is obviously dependent on analytical results from the 2000 samples. Nonetheless, it is possible to envisage an exploration program that would vary as results justify and would also be flexible with respect to the budget.

The Proposed 2001 Program includes a small winter program of ground geophysics to cover the area between the Torngat 1 and Pita dykes. This would be useful only if analytical results on both sides of the fjord justify the need to understand the relationship between the Pita and Torngat dykes. The lines completed on the water this summer have shown that much information can be obtained from this area. A fixed grid on the ice followed by a magnetic survey will clearly resolve the interpretation between the two areas. In addition, it is proposed to complete a few test Gravity Surveys across known areas. These test surveys will determine the accuracy of the method on the property. If successful, other areas could be covered during the summer months. The proposed winter program includes costs related to helicopter services and lodging which would be out of the town of George River.

Both sampling and diamond drilling is proposed for 2001. Once results are compiled, the exact position of the samples and the diamond drill schedule can be determined. Nevertheless, it is expected that at least one diamond drill and one blasting team will be needed for 1.5 months. During this period a total of 1,200 meters of core, and 80 tonnes of rock can be taken from selected sites. If results are better than this estimate accounts for, another drilling crew and/or blasting crew may be needed.

The proposed budget excludes all work to be completed at the AD Site. Because the follow-up work at the AD Site is greatly dependant on the results of the 400 tonne sample, and that the required work will involve extensive permitting, mine planning and scheduling, a separate budget should be envisaged for this work.

<u>ITEM</u>	<u>TOTAL COST</u>
<u>A) Fixed Costs of Camp and Supplies</u>	
1- Camp acquisition	\$ 200,000
2- Camp construction	\$ 50,000

3- Weekly Supply Transportation	\$ 50,000
4 - Supplies (food)	\$ 45,000
5 - Cook/Camp Manager	\$ 20,000

Sub Total **\$ 365,000**

B) Wages and Services

1 - Program planning, and consulting	\$ 30,000
2 - On site Geology Wages (geologist)	\$ 60,000
3 - On site Geology Wages (technicians)	\$ 60,000
4 - Sat Phone and Line Charge	\$. 20,000
5 - Post Season Report, compilation, and presentation	\$. 25,000
6 - Geophysical Consulting and Data processing	\$. 20,000
7 - QA/QC MPH	\$ 25,000

Sub Total **\$ 240,000**

C) Consumables and Transportation

1 - 20 man Crew Mob/Demob	\$. 50,000
2 - Boat delivery of fuel, camp, all blasting gear, drill etc.	\$ 100,000
3 - Boat demob, all blasting gear, fuel drums, samples etc.	\$. 100,000

Sub Total **\$ 250,000**

D) Fuels and Helicopter Use

1 - Jet B (300 barrels delivered)	\$ 100,000
2 - Camp and drill diesel (150 Barrels delivered)	\$ 50,000
3 - 206L Helicopter 350 Hours @ \$700/hr (average)	\$ 245,000

Sub Total **\$ 395,000**

<u>ITEM</u>	<u>TOTAL COST</u>
<u>E) Geophysics</u>	
1 - Winter Program (including line prep - Fjord mag. survey and gravity test survey)	\$ 100,000
2 - Summer Program (gravity or others)	\$ 40,000
<u>Sub Total</u>	<u>\$ 140,000</u>
<u>F) Blasting and Diamond Drilling</u>	
1 - Blasting of a series of samples on property. Size and amount of samples is dependant on results A total of 40 days of work should enable about 80 tonnes from different sites.	\$ 50,000
2 - Direct Drilling cost for 1,200 meters Estimated at \$150 per meter	\$ 180,000
<u>Sub Total</u>	<u>\$ 230,000</u>
<u>G) Sample Processing</u>	
1 - Laboratory processing of samples at Lakefield Research	\$ 200,000
SUB TOTAL PROGRAM	\$1,820,000
Contingencies	\$ 180,000
<u>GRAND TOTAL</u>	<u>\$2,000,000</u>



REFERENCES

- Bell, R., 1885:** Observations on the Geology, Mineralogy, Zoology, and Botany of the Labrador Coast, Hudson Strait and Bay. GSC Rep. Progr. 1882-84, pt. VII.
- Bodycomb, V., 1993:** Graphitic and Base Metal (Ni, Zn, +/- Cu) Showings of the Abloviak Fjord, Eastern Ungava Bay, Quebec: Ideas on their Origin and the Metallogenic Implications for the Region. In: R.J. Wardle and J. Hall (eds.), Eastern Canadian Shield Onshore-Offshore Transect (ECSSOT), Report of Transect Meeting (Dec. 4-5, 1992), The University of British Columbia, LITHOPROBE Secretariat, Report No. 32, p. 74-82.
- Bodycomb, V., 1994:** Characterization and Metallogeny of Base Metal, Graphite, and Tungsten Showings, Paleoproterozoic Torngat Orogen, Eastern Ungava Bay, Quebec. MSc. Thesis presented at the Université du Québec à Montréal.
- Bodycomb, V., and Goulet N., 1992:** Metallogenic and Structural Study of Base Metal (Ni-Zn) Showings in the Tasiuyak Gneiss, Eastern Ungava Bay, Quebec. GAC/MAC Abstracts Volume 17, p. A10.
- Daly, R.A., 1902:** The Geology of Northeast Coast of Labrador, Harv. Univ., Mus. Comp. Zool., Bull., v. 38, p. 205-270.
- Digonnet, S., 1997:** Étude Pétrogéochimique de Kimberlites Dans Les Monts Torngats, Nouveau Québec. MSc Memoire presented at the Université du Québec à Montréal. Thesis directed by James Bourne and Norman Goulet.
- Digonnet, S., 2000:** Petrology of the Abloviak Aillikite dykes, New Québec: evidence for a Cambrian diamondiferous alkaline province in northeastern North America. Can. J. Earth Sci. Vol. 37, 2000
- Gaudreault, D., 1997:** Field Work Report; Abloviak Fjord Property, PEM 1197 (Eastern Ungava Bay, Quebec) NTS 24P/06 and 24P/07. Assessment Report No. 55257
- Goulet, N. and Cieselski, A., 1990:** The Abloviak Shear Zone at the Northwest Torngat Orogen, Eastern Ungava Bay, Quebec. Geoscience Canada, 17, pp. 269-272.
- Guilbert J.M. and C.F. Park Jr., 1986:** The Geology of Ore Deposits, W.H. Freeman and Company ed., pp. 346-352.

- Gurney, J.J. and Kirkley, M.B. 1996:** Kimberlite dyke mining in South Africa. *Africa Geosciences Review*, 3, pp. 191-201.
- Low, A.P., 1896:** Report on Explorations in the Labrador Peninsula Along the East Main, Koksoak, Hamilton, Manicouagan, and Portions of Other Rivers in 1892, 93, 94, 95. *GSC Annual Report 1895*, v. VIII, pt. L, p. 221-222, 309-310.
- Mitchel, R.H., 1986:** Kimberlites: Mineralogy, Geochemistry, and Petrology. New-York: Plenum, 442 pp.
- Mitchel, R.H., 1995:** Kimberlites Orangeites and Related Rocks, Plenum Press, New York.
- Moorhead, J., Beaumier, M., Bernier, L., Lefebvre, D.L., Martel, D., 1999:** Kimberlite, Linéaments et Rifts Crustaux au Québec. *Ministère des ressources naturels*, MB 99-35.
- Plant, L., 2000:** Torngat Project, Alluviaq Fjord Area, QC, N.T.S. 24P/06. Internal report for Twin Mining Corporation.
- Scott, B.H., 1981:** Kimberlites and Lamproite Dykes from Holsteinburg, West Greenland, *Medd. Gronland Geosci.* 4, 24 pp.
- Scott, B.H., 1995:** Petrology and Diamonds. *Explor. Mining Geol.*, 4, p. 127 – 140.
- Sobie, P., 2000:** Torngat Field Observations. Internal report by MPH Consulting Ltd. for Twin Mining Corp. Dated August 15th 2000.
- Taylor, F.C., 1979:** Reconnaissance Geology of a Part of the Precambrian Shield, Northeastern Quebec, Northern Labrador, and Northwest Territories. *Geological Survey, Memoir* 393.
- Wheeler, E.P., 1933:** A Study of Some Diabase Dykes on the Labrador Coast. *Jour. Geol.*, v. 41, p. 418-431.
- Wheeler, E.P., 1942:** Anorthosite and Associated Rocks About Nain, Labrador., *Jour. Geol.*, v. 50, p. 611-642.
- Wheeler, E.P., 1965:** Fayalitic Olivine in Northern Newfoundland-Labrador. *Can. Min. J.*, v. 8, p. 339-346.
- Wheeler, E.P., 1968:** Minor Intrusives Associated with the Nain Anorthosite. In *Isachsen, I. W., ed., NY State Mus. Sci. Serv., Mem.* 18, p. 189-206.

APPENDIX 1

50 Kilogram Sample Site Descriptions

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: DA-01 - 500 tons Trench **Date Sampled:** 00-08-22
Easting: n/a
Northing: n/a **Elevation:** n/a
Sample Number: 888401
Sampler: RRR/SD **300 kilo Site No:** n/a

Site Description:		
Petrography:	Colour:	Fresh: <u>dark gray</u> Weathered: <u>dark green to gray</u>
	Phenocrysts:	<u>OI</u>
	Xenocrysts:	<u>Diopside (rare)</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>Medium</u>
Sampling Site:	Width of dike: <u>1.2 m</u>	Width of lineament (actual dike width unknown):
Description:		
In 500 ton trench. See trench map for exact location.		
Two generation of olivine, fresh (rare) and serpentinized. Size of olivines are up to 1 cm		
Phlogopite set in the matrix.		
Highly carbonatized and highly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviag Fiord, Quebec

Sample Site Record

Site: DA-02 - 500 tons Trench **Date Sampled:** 00-08-23
Easting: n/a
Northing: n/a **Elevation:** n/a
Sample Number: 888402
Sampler: RRR/SD **300 kilo Site No:** n/a

Site Description:		
Petrography:	Colour:	Fresh: <u>blue gray</u> Weathered: <u>gray</u>
	Phenocrysts:	<u>OI</u>
	Xenocrysts:	<u>Diopside (rare)</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>Medium</u>
Sampling Site:	Width of dike: <u>1.5 m</u>	Width of lineament (actual dike width unknown):
Description:		
<p>In 500 ton trench. See trench map for exact location.</p> <p>High quantity of phlogopite set in a medium grained matrix.</p> <p>Occurrence of olivine and rare diopside</p> <p>Highly carbonatized and moderately magnetic.</p>		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: DA-03 - 500 tons Trench **Date Sampled:** 00-08-26
Easting: n/a
Northing: n/a **Elevation:** n/a
Sample Number: 888403
Sampler: SD **300 kilo Site No:** n/a

Site Description:		
Petrography:	Colour: Fresh: <u>blue gray</u>	Weathered: <u>dark gray</u>
	Phenocrysts: <u>Ol and Phlog.</u>	
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>Medium</u>	
Sampling Site:	Width of dike: <u>1.2 m</u>	Width of lineament (actual dike width unknown):
Description:		
In 500 ton trench. See trench map for exact location.		
Fresh and altered olivine (<0.8 cm) set in a very dark blue gray matrix.		
Phlogopite are generally fresh with sizes of up to 1 cm. Lots of calcite veinlets.		
Highly carbonatized and highly magnetic.		

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: DA-07 - 500 tons Trench **Date Sampled:** 00-09-13
Easting: n/a
Northing: n/a **Elevation:** n/a
Sample Number: 888474
Sampler: RRR **300 kilo Site No:** n/a

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: _____
	Phenocrysts:	<u>OI and Phlog.</u>
	Xenocrysts:	<u>Olivine</u>
	Nodules:	<u>peridotite (?)</u>
	Xenoliths:	<u>rare gneiss</u>
	Grain Size:	<u>cg</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>1.4 meters</u>	
Description:		
In 500 ton trench. See trench map for exact location.		
Coarse and abundant olivine phenos with up to 2 cm crystals, moderately altered, some fresh sections.		
Nodules of peridotite (?) and gneiss xenoliths are also seen. Rock is very coarse grained.		
Low carbonatized and moderate magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: DA-08 - 500 tons Trench **Date Sampled:** 00-09-13
Easting: n/a
Northing: n/a **Elevation:** n/a
Sample Number: 888475
Sampler: RRR **300 kilo Site No:** n/a

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: _____
	Phenocrysts:	<u>Ol and garnet</u>
	Xenocrysts:	_____
	Nodules:	_____
	Xenoliths:	_____
	Grain Size:	<u>cg</u>
Sampling Site:	Width of dike: <u>1.2 m</u>	Width of lineament (actual dike width unknown):
Description:		
In 500 ton trench. See trench map for exact location.		
Common type, coarse grained olivine (up to 1 cm) with rare garnets in a groundmass of phlogopite magnetite and olivine.		
Highly carbonatized and highly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: DA-09 - 500 tons Trench **Date Sampled:** 00-09-13
Easting: n/a
Northing: n/a **Elevation:** n/a
Sample Number: 888476
Sampler: RRR **300 kilo Site No:** n/a

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: _____
Phenocrysts:	Ol	
Xenocrysts:	Ol	
Nodules:		
Xenoliths:	gneiss	
Grain Size:	mg	
Sampling Site:	Width of dike: 2 x 0.5 meters	Width of lineament (actual dike width unknown):
Description:		
In 500 ton trench. See trench map for exact location.		
Taken where the dyke splits into two dykes at the north end of the south trench. Contains finer grained phenos of ol, phlog, with medium groundmass of olivine phlog. And carbonate. Abundant xenoliths of gneiss.		
Highly carbonatized and moderately magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-01 **Date Sampled:** 00-08-10
Easting: 379617
Northing: 6593999 **Elevation:** 436
Sample Number: 887562
Sampler: RRR/SD **300 kilo Site No:**

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki brown
Phenocrysts: phlog 10%, Ol, garnet (rare)
Xenocrysts: _____
Nodules: _____
Xenoliths: _____
Grain Size: mg, in very fg matrix

Sampling Site: Width of dike: 1.3 Width of lineament (actual dike width unknown): _____

Description:

Closest sport on T1 dyke from the Grid Lake.

Medium grained kimberlitic dyke with abundant but small (2mm) phenos of phlogopite (up to 30% locally).

Some olivine is still visible although ost are serpentinized.

Dyke well exposed over a strike length of 25 to 30 meters. Same composition and texture on entire outcrop area.

Dyke is weakly carbonatized and strongly magnetic.

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-02 **Date Sampled:** 00-08-10
Easting: 379274
Northing: 6593840 **Elevation:** 401
Sample Number: 887563
Sampler: RRR/SD **300 kilo Site No:** GL-17

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>kaki green</u>
	Phenocrysts:	<u>rare ol, garnet, phlog</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	<u>much gneiss xenolith</u>
	Grain Size:	<u>very fine grained</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>1.25</u>	
Description:		
<p>Best site north of the AD2 Trench. Over a length of 50 meters, all blocks seen are fine grained, contain only rare xenocrysts and phenocrysts of olivine, garnet and phlogopite. Some recrystallized coarse grained calcite is seen locally. Many xenoliths of gneiss are also seen. A small branch from the main dyke was seen along a strike length of 5-meters.</p>		
<p>Dyke is moderate to strong carbonatized and moderately magnetic.</p>		

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-03 **Date Sampled:** 00-08-10
Easting: 378944
Northing: 6593731 **Elevation:** 403
Sample Number: 887564
Sampler: RRR/SD **300 kilo Site No:** GL-05

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki green
Phenocrysts: ol (10% - all altered), phlog 10%, garnet (rare)
Xenocrysts: ol, diop
Nodules: peridotite (rare)
Xenoliths: moderate gneiss
Grain Size: coarse grained in mg matrix

Sampling Site: Width of dike: 1.5 Width of lineament (actual dike width unknown):

Description:

Down near cliff south of AD Site
Coarse grained olivine and phlogopite and rare garnets which are strongly altered in general.
Contains some large diopside crystals but these are quite rare.
Occasional gneiss fragments within the dyke.

Dyke is strong carbonatized and moderately magnetic.

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-04 **Date Sampled:** 00-08-11
Easting: 379461
Northing: 6593731 **Elevation:** 403
Sample Number: 887566
Sampler: RRR/SD **300 kilo Site No:** GL-05

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki brown
Phenocrysts: ol and phlog.
Xenocrysts: ol
Nodules:
Xenoliths:
Grain Size: mg in fine grained matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 1.0 m

Description:

Quite dull looking, fine grained to medium grained phlog. And olivine containing minor phenocrysts of olivine less than 3mm in diameter.
Matric composed of very fine grained phlog. And minor carboate. Abundant magnetite

Dyke is weakly carbonatized and highly magnetic.

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-05 **Date Sampled:** 00-08-11
Easting: 380036
Northing: 6594792 **Elevation:** 404
Sample Number: 887567
Sampler: RRR/SD **300 kilo Site No:** GL-15

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>kaki brown</u>
	Phenocrysts:	<u>ol (5%0, phlog (5%), garnet (rare)</u>
	Xenocrysts:	<u>ol</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>cg in a mg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>1.0m</u>	
Description:		
<p>Considerably altered kimberlite with about 20% coarse grained phenocrysts mostly of unknown origin although most of the fresh ones appear to be olivine. Some xenocrysts (?) of olivine are also seen. Garnets are rarely seen as fresh phenocrysts. Phlogopite phenocrysts are common. Large magnetite crystals also seen.</p> <p>Dyke is strongly carbonatized and highly magnetic.</p>		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-06 **Date Sampled:** 00-08-11
Easting: 380470
Northing: 6595265 **Elevation:** 473
Sample Number: 887568
Sampler: RRR/SD **300 kilo Site No:** -

Site Description:

Petrography:	Colour:	Fresh:	<u>black</u>	Weathered:	<u>kaki brown</u>
	Phenocrysts:	<u>ol (15%, phlog (10%), garnet (rare))</u>			
	Xenocrysts:	<u>ol</u>			
	Nodules:				
	Xenoliths:	<u>gneiss (rare)</u>			
	Grain Size:	<u>cg in a mg matrix</u>			

Sampling Site: **Width of dike:** 1.2m **Width of lineament (actual dike width unknown):**

Description:

20% large phenocrysts and xenocrysts in a fine grained and medium grained matrix of phlogopite, carbonate mostly. Olivine phenocrysts are often seen as well. They are well preserved and the few garnets appear somewhat altered. Phlogopite phenocrysts are common. Phenos of phlogopite are 3 to 10 mm.

Dyke is strongly carbonatized and low magnetic.

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-07 **Date Sampled:** 00-08-11
Easting: 380670
Northing: 6595393 **Elevation:** 472
Sample Number: 887569
Sampler: RRR/SD **300 kilo Site No:** GL-13

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki brown
Phenocrysts: ol (15%, phlog (5%), garnet (rare))
Xenocrysts: ol
Nodules:
Xenoliths: gneiss (rare)
Grain Size: cg in a mg matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 1 to 2 m

Description:

Coarse grained but moderately altered. Some olivine and rare garnets are present. Phenos are between 2 and 10 mm and some larger xenos are up to 15 mm. Moderate carbonate with occasional recrystallized veinlets and crystals of calcite.

Dyke is moderate carbonatized and moderate magnetic.

Twin Mining Corp.
Tornqat Project: Alluviag Fjord, Quebec

Sample Site Record

Site: T1-08 **Date Sampled:** 00-08-11
Easting: 381042
Northing: 6595632 **Elevation:** 445
Sample Number: 887570
Sampler: RRR/SD **300 kilo Site No:** GL03

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>kaki brown</u>
	Phenocrysts:	<u>Ol., Phlog, Magnetite, calcite (remob)</u>
	Xenocrysts:	<u>Ol.</u>
	Nodules:	<u>peridotite</u>
	Xenoliths:	<u>gneiss (abundant especially in contact breccia)</u>
	Grain Size:	<u>cg in fg to mg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>3 - 4 meters</u>	
Description:		
<p>Coarse grained but strongly altered kimberlite. Very wide dyke. Many fragments showing different textures (breccia, plastic flowing, differentiation). Remobilization of calcite and magnetite within small veinlets and as masses within the dyke is also seen.</p> <p>Olivine is rarely fresh but up to 10mm. Phlog phenos are quite common.</p> <p>Many gneiss xenoliths within the kimberlite. Indication of injection breccia within the gneiss.</p> <p>Some good evidence of a blow with a structure of more than 10 meters wide and 20 meters long uphill from the current sample.</p> <p>Strong carbonate and low to moderate magnetite.</p>		

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-09 **Date Sampled:** 00-08-11
Easting: 381257
Northing: 6595898 **Elevation:** 447
Sample Number: 887571
Sampler: RRR/SD **300 kilo Site No:** GL-12

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki brown
Phenocrysts: ol (10%), phlog (minor), garnet (1%)
Xenocrysts: ol
Nodules:
Xenoliths: gneiss (rare)
Grain Size: cg in a fg matrix
Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 1.5m

Description:

Coarse grained but moderately altered. Abundant olivine phenocrysts which are moderately altered. And some larger garnets.
Sample taken where dyke is offset (en echelon) senestrally (25m)

Dyke is moderate to highly carbonatized and weakly magnetic.

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-11 **Date Sampled:** 00-08-11
Easting: 382064
Northing: 6596362 **Elevation:** 439
Sample Number: 887573
Sampler: RRR/SD **300 kilo Site No:** GL-10

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki brown
Phenocrysts: ol and rare phlogopite
Xenocrysts:
Nodules:
Xenoliths:
Grain Size: mg in fg matrix
Sampling Site: Width of dike: 1.5 -2 m Width of lineament (actual dike width unknown):

Description:

Very fine grained to medium grained, strongly carbonated and strongly magnetic dyke. Contains rare remnants of olivine but usually less than 3 mm. No other significant minerals and xenoliths. Quite dull looking. Some 3 mm completely altered crystals show alignment based on similar reflection of crystals.

Dyke is strongly carbonatized and strongly magnetic.

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-12 **Date Sampled:** 00-08-11
Easting: 382364
Northing: 6596546 **Elevation:** 462
Sample Number: 887574
Sampler: RRR/SD **300 kilo Site No:** GL-09

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>kaki brown</u>
	Phenocrysts:	<u>ol (5%), gam (2%), phlog(2%), diop (rare)</u>
	Xenocrysts:	<u>ol?</u>
	Nodules:	<u>peridotite with garnets</u>
	Xenoliths:	
	Grain Size:	<u>cg in a fg matrix</u>
Sampling Site:	Width of dike: <u>2 m</u>	Width of lineament (actual dike width unknown):
Description:		
<p>Massive fine grained matrix of phlogopite and altered olivine with minor carbonates. Phenocrysts composed of olivine, garnet, phlogopite and diopside Average size of phenos are 3 to 5 mm</p> <p>Dyke is weakly carbonatized and weakly to moderately magnetic.</p>		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-14 **Date Sampled:** 00-08-15
Easting: 382842
Northing: 6596905 **Elevation:** 449
Sample Number: 887586
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: brownish green

Phenocrysts: Ol. (10%) Phlog.(5%) rare garnets

Xenocrysts: Olivine

Nodules: one dunititic (?)

Xenoliths: gneiss

Grain Size: cg in mg matrix

Sampling Site: Width of dike: 1.3 meters Width of lineament (actual dike width unknown):

Description:

About 75 meters northeast of the DU site.

Pieces containing coarse grained phenocrysts of olivine and phlogopite in a medium grained matrix of olivine with phlogopite, calcite and magnetite.

Phenos and rare xenos (10%) are about 3 to 5 mm (locally 20 mm) and generally well altered
Strongly carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-15 **Date Sampled:** 00-08-15
Easting: 382996
Northing: 6596921 **Elevation:** 438
Sample Number: 887587
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography:	Colour:	Fresh:	<u>Black</u>	Weathered:	<u>kaki brown</u>
	Phenocrysts:	<u>ol, phlog, garnet (rare), diopside, ilmenite</u>			
	Xenocrysts:	<u>Olivine</u>			
	Nodules:	<u>peridotite</u>			
	Xenoliths:	<u>gneiss</u>			
	Grain Size:	<u>cg in mg matrix</u>			
Sampling Site:	Width of dike:	<u>2.3 m</u>	Width of lineament (actual dike width unknown):		

Description:

Coarse grained phenocrysts of partly altered olivine, phlogo, and rare garnets (20% total) in a medium grained groundmass of olivine and phlog. Mostly. Some rare nodules of peridotite. Rare diopside and ilmenite (?) seen.
Both contacts of the dyke are established within 20 cm. Measurement of 2.3 to 2.5 meters.
Weakly carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-16 **Date Sampled:** 00-08-15
Easting: 383151
Northing: 6597062 **Elevation:** 423
Sample Number: 887588
Sampler: RRR/SD **300 kilo Site No:** GL-07

Site Description:

Petrography: Colour: Fresh: Black Weathered: brownish green

Phenocrysts: ol, opx (5%), cpx, phlog, garnet (rare)

Xenocrysts: Olivine (large)

Nodules:

Xenoliths: gneiss

Grain Size: very cg in a mg groundmass

Sampling Site: Width of dike: 2.3 m Width of lineament (actual dike width unknown):

Description:

Trench on side of hill. Just liberated from snow cover.

Shows a miniblow, 3 m long by 2.3 meters wide along a dyke of 0.9 to 1.5 meters.

Sample was taken inside the center of the blow. Contacts at blow are seen to curve at the walls of the gneiss.

Coarse grained opx (5%) and phlog (5%) and ol (3 to 5%) and rare garnets and cpx

Phenos are very fresh looking and up to 5 mm. Some large magnetite crystals also seen.

Groundmass composed of ol, phlog, and magnetite and carbonate

Strongly carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-17 **Date Sampled:** 00-08-15
Easting: 383988
Northing: 6597396 **Elevation:** 419
Sample Number: 887589
Sampler: RRR/SD **300 kilo Site No:**

Site Description:		
Petrography:	Colour: Fresh: <u>Black</u>	Weathered: <u>grayish green</u>
	Phenocrysts: <u>ol, phlog.</u>	
	Xenocrysts: <u>ol.</u>	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>mg in fg matrix</u>	
Sampling Site:	Width of dike: <u>1.0 m</u>	Width of lineament (actual dike width unknown):
Description:		
Fine to medium grained groundmass containing abundant phlogopite and moderate carbonate. Phenos of phlogopite and olivine are somewhat altered. No more than 5% phenos. Largest id 5 mm.		
Moderately carbonated and moderately to strongly magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-18 **Date Sampled:** 00-08-15
Easting: 386906
Northing: 6600635 **Elevation:** 429
Sample Number: 887590
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: brownish green

Phenocrysts: ol, phlog.

Xenocrysts:

Nodules:

Xenoliths: gneiss

Grain Size: mg in fg matrix

Sampling Site: Width of dike: 0.4 Width of lineament (actual dike width unknown):

Description:

In cliff wall. The entire dyke is seen.
Measures 0.4 m and finishes in a series of veinlets, veins, small sills and offshoots in the gneiss.
It is fg and shows a few small (2mm) olivine and phlogopite phenocrysts.
A nice looking boulder showing injection breccia is seen.

Weakly carbonated and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-19 **Date Sampled:** 00-08-15
Easting: 384396
Northing: 6597715 **Elevation:** 470
Sample Number: 887591
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: brownish green

Phenocrysts: ol (large), gam, phlog, opx

Xenocrysts: ol (large)

Nodules: peridotite

Xenoliths: gneiss

Grain Size: cg in mg matrix

Sampling Site: Width of dike: 2.5 m Width of lineament (actual dike width unknown):

Description:

Coarse grained dyke containing abundant (10 - 20% phenos of olivine (+xeno) but moderately to strongly altered.

Also contains phenos of opx (1-2% @ 1 to 3mm) and minor garnets

Also saw one nodule of serpentized peridotite

and a few minor gneiss xenoliths.

Weakly carbonated and moderately to strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-20 **Date Sampled:** 00-08-15
Easting: 384544
Northing: 6597842 **Elevation:** 475
Sample Number: 887592
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Black</u> Weathered: <u>brownish green</u>
	Phenocrysts:	ol (large), gam (rare), phlog (5mm), opx (up to 15mm) = total 25%
	Xenocrysts:	ol (large)
	Nodules:	peridotite
	Xenoliths:	gneiss
	Grain Size:	cg in mg matrix
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	1.5 m	
Description:		
Moderately altered coarse grained phenos of olivine (15%), phlogopite (5%), opx (5%) and minor garnet in a groundmass of olivine, phlogopite and moderate carbonate. A few nodules of u/m rocks (altered to serpentine) and some gneiss xenoliths were also seen.		
Moderately carbonated and weakly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-21 **Date Sampled:** 00-08-15
Easting: 384733
Northing: 6598018 **Elevation:** 432
Sample Number: 887593
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: brownish green

Phenocrysts: Ol, diops, garnet (rare), and phlog.

Xenocrysts: ol. (rare)

Nodules: peridotite

Xenoliths: gneiss

Grain Size: cg in mg matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 2.5 m

Description:

Coarse grained but altered olivine and quite fresh diopside and phlogopite.
Some large xenos of olivine (?) and one peridotite nodule seen.
Garnets are well rimmed with kelpite

Weakly carbonated and weakly to moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-22 **Date Sampled:** 00-08-23
Easting: 383296
Northing: 6597289 **Elevation:** 380
Sample Number: 888466
Sampler: RRR/SD **300 kilo Site No:** GL06

Site Description:

Petrography: Colour: Fresh: black Weathered: greenish grey

Phenocrysts: Ol (15%), phlog (5%), diop (tr), garn (tr)

Xenocrysts: Ol (1% - 5%)

Nodules: common peridotite

Xenoliths: gneiss (rare)

Grain Size: cg in fg matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 1.3 m

Description:

Very coarse dyke containing abundant phenocrysts and xenocrysts from 2 to 15mm of altered olivine and some other minerals (probably some pyroxenes). Olivines are generally altered although some are fresh. Xenocrysts are rimmed and darker green. Also rare diopsides and garnet phenocrysts of 2 - 4 mm. Peridotite nodules observed on many occasions throughout the samples. Nodules up to 20 mm in diameter. Rock is strongly magnetic and strongly carbonated

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-23 **Date Sampled:** 00-08-22
Easting: 386364
Northing: 6600100 **Elevation:** 431
Sample Number: 887655
Sampler: BP **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: dark brown

Phenocrysts: Ol. (less than 5%)

Xenocrysts: rounded olivine, altered

Nodules:

Xenoliths: gneiss (locally up to 20%)

Grain Size: mg in fg matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 1.5 - 3m

Description:

Medium grained and fine grained rock with abundant xenoliths locally.
Not much olivine phenocrysts abd no garnet, or phlogopite phenos.

Moderately carbonated and moderately to strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-24 **Date Sampled:** 00-08-22
Easting: 385939
Northing: 6599469 **Elevation:** 445
Sample Number: 887656
Sampler: BP **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: dark brown
Phenocrysts: Ol. (5% - 15%), Diop (tr)
Xenocrysts:
Nodules:
Xenoliths:
Grain Size: mg in fg matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown): 1 - 1.5 m

Description:

Fresh olivine phenocrysts (1 - 10 mm) and traces of diopside (0.5 mm)
Phlogopite only occurs as part of the matrix

Weakly carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-25 **Date Sampled:** 00-08-22
Easting: 385355
Northing: 6598539 **Elevation:** 394
Sample Number: 887632
Sampler: BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Grey Weathered: Greenish Grey

Phenocrysts: Ol, rare gam.

Xenocrysts: Ol.

Nodules:

Xenoliths:

Grain Size: fg

Sampling Site: Width of dike: 1.5 Width of lineament (actual dike width unknown):

Description:

Fine disseminated carbonate fragments and some coarse xenocrystic material (10%)
Xenocrysts are up to 10mm
Most commonly smaller though

Highly carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-26 **Date Sampled:** 00-08-22
Easting: 385205
Northing: 6598464 **Elevation:** 372
Sample Number: 887631
Sampler: BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Grey Weathered: Greenish Grey

Phenocrysts: Phlog

Xenocrysts: Ol.

Nodules: altered olivine rock

Xenoliths:

Grain Size: fg

Sampling Site: Width of dike: 1 - 1.5 m Width of lineament (actual dike width unknown):

Description:

Coarse xenocrystic material up to 10mm
make up to 5 or 10% of the rock
A few coarse carbonate/altered olivine rock, nodular up to 50mm
No garnets observed.

Highly carbonated and highly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-27 **Date Sampled:** 00-08-22
Easting: 385060
Northing: 6598329 **Elevation:** 390
Sample Number: 887630
Sampler: BD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: Fresh: <u>Grey</u>	Weathered: <u>Greenish Grey</u>
	Phenocrysts: <u>Phlog (up to 10mm)</u>	
	Xenocrysts: <u>OI (up to 15 mm)</u>	
	Nodules:	
	Xenoliths: <u>gneiss (up to 50mm, rounded)</u>	
	Grain Size: <u>fg</u>	
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown): <u>1.5m</u>
Description:		
Fine grained rock containing carbonate in matrix and in 1 mm wide veinlets Coarse altered phenocrysts make up to 5% of the rock Nodules of up to 50mm of serpentinized olivine and tiny unaltered garnet Garnets are up to 1mm)		
Highly carbonated and highly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-28 **Date Sampled:** 00-08-22
Easting: 385168
Northing: 6598832 **Elevation:** 370
Sample Number: 887633
Sampler: BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Grey Weathered: Greenish Grey

Phenocrysts: Phlog (up to 10mm)

Xenocrysts: OI (up to 15 mm)

Nodules:

Xenoliths:

Grain Size: fg

Sampling Site: Width of dike: 1.5m Width of lineament (actual dike width unknown):

Description:

Olivine xenocrysts in part altered. Up to 15mm corresponds to about 5% of the rock
Scarce carbonate in the matrix
and in blebs of up to 10mm
Garnets are up to 1mm)

Highly carbonated and highly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: T1-29 **Date Sampled:** 00-08-22
Easting: 385406
Northing: 6598984 **Elevation:** 439
Sample Number: 887634
Sampler: BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Grey Weathered: Greenish Grey

Phenocrysts: Minor Phlog.

Xenocrysts: OI.

Nodules:

Xenoliths: minor gneiss

Grain Size: fg

Sampling Site: Width of dike: 1.5m Width of lineament (actual dike width unknown):

Description:

At grid coords 285/68.5 (DU North Grid)
Carbonate bearing in matrix and in minor veinlets
Xenocrysts material of 1 to 10%
No unaltered phenocrysts

Highly carbonated and highly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-30 **Date Sampled:** 00-08-22
Easting: 385608
Northing: 6599153 **Elevation:** 468
Sample Number: 887635
Sampler: BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Grey Weathered: Brownish gray

Phenocrysts: ol, phlog (both up to 5 mm) garnet up to 5 mm

Xenocrysts:

Nodules:

Xenoliths: Locally abundant gneiss

Grain Size: fg

Sampling Site: Width of dike: 2 - 3m Width of lineament (actual dike width unknown):

Description:

At grid 287/68.5

Carbonaceous groundmass. Very weakly magnetic

Gneiss xenoliths are up to 15 x 5 cm, numerous in places

Color of rock is different with stronger brownish tint

Kimberlite nearly 30m away is strongly magnetic

At 385644E / 6599184N is a good exposure for larger sample. Although rock is not visually "promising" though.

Highly carbonated and weakly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-31 **Date Sampled:** 00-08-22
Easting: 385670
Northing: 6599246 **Elevation:** 511
Sample Number: 887636
Sampler: BD/BP **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: <u>Grey</u>	Fresh: <u>Grey</u>
	Weathered: <u>Grey</u>	
Phenocrysts:		
Xenocrysts: <u>Ol.</u>		
Nodules:		
Xenoliths: <u>minor gneiss</u>		
Grain Size: <u>fg</u>		
Sampling Site:	Width of dike: <u>1m</u>	Width of lineament (actual dike width unknown):
Description:		
Phlogopite and carbonate rich. Rough weathered surface. Less than 2% xenocrysts of olivine		
Highly carbonated and moderately magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-32 **Date Sampled:** 00-08-22
Easting: 386554
Northing: 6600216 **Elevation:** 418
Sample Number: 887654
Sampler: BP **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: Kaki brown
Phenocrysts: Phlog (5%) ol. (5%)
Xenocrysts: Ol.
Nodules:
Xenoliths:
Grain Size: mg in fg

Sampling Site: Width of dike: Width of lineament (actual dike width unknown):
1 - 1.5m

Description:

Some olivines of 1 to 5 mm while phlog. ls 1 to 8 mm
Recrystallized calcite blebs of up to 10 mm
Xenocrysts of olivine, rounded, strongly magnetic (serpentinized)

Highly carbonated and moderately to strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T1-33 **Date Sampled:** 00-08-25
Easting: 380325
Northing: 6595026 **Elevation:** 440
Sample Number: 888469
Sampler: SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Blue grey Weathered: grey brown

Phenocrysts: Ol. Diops., phlog

Xenocrysts: Ol.

Nodules: peridotite

Xenoliths:

Grain Size: mg in fg matrix

Sampling Site: Width of dike: 0.60m Width of lineament (actual dike width unknown):

Description:

Altered olivine in a matrix composed of olivine and phlog.
Large quantities of pheno of olivine (up to 20mm)
and occurrences of diops up to 20 mm) with olivine xenocrysts
Minor garnets with kelpitic rims

Highly carbonated and strongly magnetic

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T2-01 **Date Sampled:** 00-08-10
Easting: 378717
Northing: 6594356 **Elevation:** 381
Sample Number: 887558
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: kaki brown
Phenocrysts: gam (1%), ol (10%), phlog (5%)
Xenocrysts: ol (3%)
Nodules:
Xenoliths:
Grain Size: cg in fg matrix
Sampling Site: Width of dike: Width of lineament (actual dike width unknown):
1m

Description:

Near top of cliff, about 10 to 15m from trench DD (south). Area of multiple blocks of kimberlite under grass on lineament.
Generally cg with large ol and gam. (up to 15mm) and most are altered with thick kelpitic rims although some appear fresher.
Also much phlog as large phenos.

Moderately carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T2-02 **Date Sampled:** 00-08-10
Easting: 378848
Northing: 6594392 **Elevation:** 385
Sample Number: 887559
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography:	Colour:	Fresh:	<u>black</u>	Weathered:	<u>kaki brown</u>
	Phenocrysts:	<u>gam (1%), ol (5%), phlog (25%)</u>			
	Xenocrysts:	<u>ol (3%)</u>			
	Nodules:	<u>peridotite</u>			
	Xenoliths:	<u>gneiss</u>			
	Grain Size:	<u>cg in fg matrix</u>			

Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>1.2m</u>	

Description:

At base of cliff, 20m north of DD. Many blocks in the talus cliff
Large fragments, xenocrysts of olivine, quite fresh on some samples
With garnets of up to 20mm. Olivine up to 10mm
Also contains large nodules of peridotite - dunite which also contain garnet and carbonate.
Phlogopite is often present as a fresh phenocryst of up to 20mm
Some large blocks show clear banding and near contacts, contain recrystallized carbonate veinlets.

Weak carbonated and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T2-03 **Date Sampled:** 00-08-10
Easting: 379005
Northing: 6594556 **Elevation:** 439
Sample Number: 887560
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: reddish brown

Phenocrysts: Ol (15%), Phlog (5%), Garn (2%)

Xenocrysts: Ol, Cpx, Opx

Nodules: peridotite (?)

Xenoliths: gneiss

Grain Size: cg in mg matrix

Sampling Site: Width of dike: 1.5 meters Width of lineament (actual dike width unknown):

Description:

Core of a dyke in a puddle at the base of a cliff. Contains large and very fresh garnets, olivine, and phlogopite

Also, relatively fresh green pyroxenes and light brownish beige crystals as well.

Most olivine phenocrysts are 2 to 5 mm while the larger olivines are darker green and rimmed

Garnets are generally only slightly rimmed

Magnetic is strong and carbonate is moderate to strong

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T2-04 **Date Sampled:** 00-08-10
Easting: 379433
Northing: 6594707 **Elevation:** 452
Sample Number: 887561
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: Fresh: <u>Black</u>	Weathered: <u>brownish green</u>
	Phenocrysts: <u>ol (30%), Phlog (3%) less than 3 mm, Garn (3%)</u>	
	Xenocrysts: <u>ol, diop, opx (rare)</u>	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>mg-cg in fg matrix</u>	
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
		1 - 2m
Description:		
<p>Top of hill overlooking lake. Many blocks on lineament. Very fresh and cg olivine, two generations (dark and light color green) both producing large crystals of up to 15mm. Presence of cpx in one piece. In some instances, minute calcite veinlets cross the fresh kimberlite and alters it across a 10mm on both sides of the veinlet. Contact seen. Two cm of chilled fine grained contacts.</p> <p>Weakly carbonated and weakly magnetic</p>		

Twin Mining Corp.
Torngat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T2-05 **Date Sampled:** 00-08-23
Easting: 379834
Northing: 6594991 **Elevation:** 418
Sample Number: 887637
Sampler: BB/BD **300 kilo Site No:** none

Site Description:

Petrography:	Colour:	Fresh:	<u>Grey</u>	Weathered:	<u>Grey</u>
	Phenocrysts:	<u>Phlog (6 - 8 mm), gam, ol</u>			
	Xenocrysts:	<u>ol</u>			
	Nodules:				
	Xenoliths:	<u>gneiss</u>			
	Grain Size:	<u>fg</u>			
Sampling Site:	Width of dike:	<u>0.45m</u>		Width of lineament (actual dike width unknown):	

Description:

Carbonaceous matrix, coarse grained xenocrysts material of 10 to 20%.
Trends 030/90 at 40 meters north of lake.
Also seen at shore in water. About 25m west of 218 BL. In water it is 0.80m wide.

Moderately carbonated and moderately magnetic

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-01 **Date Sampled:** 00-08-12
Easting: 372150
Northing: 6590511 **Elevation:** 227
Sample Number: 887576
Sampler: RRR/SD **300 kilo Site No:** GL-18

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>brownish green</u>
	Phenocrysts:	<u>Ol, Phlog, Garnet</u>
	Xenocrysts:	<u>ol.</u>
	Nodules:	
	Xenoliths:	<u>gneiss</u>
	Grain Size:	<u>mg to cg in fg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.80m</u>	
Description:		
<p>Coarse grained olivine and phlogopite in a groundmass of olivine, phlog, and carbonate. Rare preserved olivine as most are strongly altered to serpentine. Phlogo phenos are less than 5 mm. A few rare garnets of up to 10mm</p>		
<p>Moderately to weakly carbonated and moderately magnetic</p>		

Twin Mining Corp.
Torngat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-02 **Date Sampled:** 00-08-12
Easting: 372334
Northing: 6590631 **Elevation:** 214
Sample Number: 887577
Sampler: RRR/SD **300 kilo Site No:** GL-19

Site Description:

Petrography: Colour: Fresh: black Weathered: brownish green

Phenocrysts: Ol, Phlog

Xenocrysts:

Nodules:

Xenoliths:

Grain Size: mg in fg matrix

Sampling Site: Width of dike: Width of lineament (actual dike width unknown):
0.5 - 1.5 m

Description:

Dull looking medium grained (10%) olivine phenocrysts, totally altered, in a groundmass of ol, phlog, carb, and magnetite.

Moderately carbonated and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-03 **Date Sampled:** 00-08-12
Easting: 373412
Northing: 6591756 **Elevation:** 307
Sample Number: 887578
Sampler: RRR/SD **300 kilo Site No:** GL-22

Site Description:

Petrography: Colour: Fresh: black Weathered: brownish green

Phenocrysts: Ol, Phlog

Xenocrysts: Ol, cpx

Nodules: cpx/opx nodules

Xenoliths: gneiss

Grain Size: cg in fg matrix

Sampling Site: Width of dike: 0.7m Width of lineament (actual dike width unknown):

Description:

Coarse grained and quite fresh olivine (15%) and phlog. (5%) in a groundmass of olivine, phlog, and carbonate. Some recrystallization of calcite in some pieces. Nodules containing cpx/opx were seen other diops xls as well. Phenos are up to 15mm. Entire dyke is well exposed, and fine grained at the contact. Contact not in sample. Alteration is weak to moderate.

Moderately carbonated and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita1-04 **Date Sampled:** 00-08-11
Easting: 373639
Northing: 6592076 **Elevation:** 305
Sample Number: 887579
Sampler: RRR/SD **300 kilo Site No:** GL01
GL-02 is 100 south

Site Description:

Petrography:	Colour:	Fresh: <u>black</u>	Weathered <u>brownish gray</u>
	Phenocrysts:	Ol (10-20%) Phlog (5%), Garn (rare)	
	Xenocrysts:	Ol (abundant)	
	Nodules:	peridotite (tr to 2%)	
	Xenoliths:	gneiss (1 to 30% in breccia)	
	Grain Size:	very cg in mg matrix	
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):	
	4 meters		

Description:

Four meters wide dyke along the Kakivuuq Zone at the base of a tall cliff overlooking a till covered valley.

Very fresh and some very altered xenocrysts and phenocrysts of olivine and phlogopite in a matrix of medium grained phlogopite, olivine, carbonates and traces of pyrite locally.

Some blocks of breccia are also seen, containing 20 to 30% gneiss fragments

Xenocrysts and phenocrysts are up to 25 mm wide.

Peridotite nodules generally contain carbonate and garnets

Weakly to moderately carbonated and moderately magnetic.

GL01 was taken on the site while GL02 is 80 meters southwest, on the other side of the valley

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-05 **Date Sampled:** 00-08-11
Easting: 374016
Northing: 6592335 **Elevation:** 301
Sample Number: 887580
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>kaki green</u>
	Phenocrysts:	<u>OI (strongly altered) and garn (rare)</u>
	Xenocrysts:	<u>OI.</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>cg in fg matrix</u>
Sampling Site:	Width of dike: ?	Width of lineament (actual dike width unknown): ?
Description:		
Coarse grained phenocrysts and xenocrysts (?) of olivine which is strongly altered Only rare fresh olivine and garnets Massive and textureless apart from indications of flow banding		
Weakly carbonated and moderately to highly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-06 **Date Sampled:** 00-08-12
Easting: 374746
Northing: 6592777 **Elevation:** 295
Sample Number: 887584
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: light kaki green

Phenocrysts: Ol., phlog, (20% total)

Xenocrysts: Ol.

Nodules:

Xenoliths:

Grain Size: cg in fg matrix

Sampling Site: Width of dike: ? Width of lineament (actual dike width unknown): ?

Description:

Original blasting site of RRR where MPH got microdiamond
Coarse grained well altered olivine (10mm) and abundant cg phlog. (10 to 15mm)
in a matrix of strong phlog and olivine and carbonate.

Weakly to moderate carbonated and moderately to highly magnetic.

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-07 **Date Sampled:** 00-08-12
Easting: 375506
Northing: 6593321 **Elevation:** 306
Sample Number: 887585
Sampler: RRR/SD **300 kilo Site No:** GL-27

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>greenish brown</u>
	Phenocrysts:	Phlog, ol, garnet (30%) total
	Xenocrysts:	ol, opx, cpx
	Nodules:	peridotite (common)
	Xenoliths:	
	Grain Size:	cg in mg matrix
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown): 4.0 m
Description:		
Wide dyke contains very fresh crystals of phlogopite (up to 35mm) and olivine (20 mm) and also minor garnets (30mm) in a matrix of phlog and olivine. Some samples are more altered as well. Very common peridotite nodules up to 40mm in diam		
Weakly carbonated and moderately to weakly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-08 **Date Sampled:** 00-08-15
Easting: 375574
Northing: 6593339 **Elevation:** 309
Sample Number: 887611
Sampler: BP/BD **300 kilo Site No:**

Site Description:

Petrography: Colour: Fresh: Dark grey Weathered: greenish dark grey

Phenocrysts: Phlog., (up to 10mm)

Xenocrysts: Ol - 20 mm,

Nodules:

Xenoliths: mg mafic igneous rock and some gneiss

Grain Size: fine to medium

Sampling Site: Width of dike: Width of lineament (actual dike width unknown):
1.0m

Description:

Apophyse of main Kakivuq dyke 25 to 30 m long mostly covered by blocks of gneiss
Very fine grained at end of apophysis which trend parallel to schistosity
Abundant garnet 3 to 6mm Coarse xenocrysts material of up to 40% of the rock

Highly carbonated and strongly magnetic.

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita1-09 **Date Sampled:** 00-08-15
Easting: 375604
Northing: 6593372 **Elevation:** 301
Sample Number: 887612
Sampler: BP/BD **300 kilo Site No:**

Site Description:		
Petrography:	Colour:	Fresh: <u>Grey</u> Weathered: <u>greenish dark grey</u>
	Phenocrysts:	<u>Phlog up to 30mm</u>
	Xenocrysts:	<u>gam (keliph) 3% up to 10mm, ol,</u>
	Nodules:	<u></u>
	Xenoliths:	<u>gneiss</u>
	Grain Size:	<u>fine in medium matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
		<u>4.0 m</u>
Description:		
Two different kimberlite phases:		
1) Fine to medium homogeneous grey rock containing very few altered ol.		
2) coarse grained material with 30% of olivine (strongly altered)		
Highly carbonated and strongly magnetic.		

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita1-10 **Date Sampled:** 00-08-15
Easting: 375607
Northing: 6593393 **Elevation:** 250
Sample Number: 887613
Sampler: BP/BD **300 kilo Site No:**

Site Description:		
Petrography:	Colour:	Fresh: <u>Grey</u> Weathered: <u>greenish dark grey</u>
	Phenocrysts:	<u>ol</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	<u>gneiss</u>
	Grain Size:	<u>fine in medium matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>1.0m</u>	
Description:		
Fine grained homogeneous rock		
Two dykes at bottom of cliff, continuation of dyke sampled above (887612)		
Rock from both dykes are sampled.		
Macroscopically identical		
Highly carbonated and strongly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita1-12 **Date Sampled:** 00-08-16
Easting: 374978
Northing: 6592955 **Elevation:** 290
Sample Number: 887625
Sampler: BP/BD **300 kilo Site No:**

Site Description:		
Petrography:	Colour:	Fresh: <u>Grey</u> Weathered: <u>grey</u>
	Phenocrysts:	<u>Phlog rich</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>fine grained</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
		<u>1m</u>
Description:		
Homogeneous phlogopite rich dyke. (1 - 4 mm) Disseminated carbonate in places (3%) minor olivine of 5 mm locally		
Highly carbonated and strongly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita1-13 **Date Sampled:** 00-08-16
Easting: 375244
Northing: 6593155 **Elevation:** 278
Sample Number: 887626
Sampler: BP/BD **300 kilo Site No:** GL-28

Site Description:		
Petrography:	Colour: <u>Fresh: Grey</u>	Weathered: <u>grey</u>
	Phenocrysts: <u>rare (ol)</u>	
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>fine grained</u>	
Sampling Site:	Width of dike: <u>1m</u>	Width of lineament (actual dike width unknown):
Description:		
Homogeneous phlogopite rich dyke. Disseminated carbonate in places		
Highly carbonated and strongly magnetic.		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-14 **Date Sampled:** 00-08-20
Easting: 373176
Northing: 6591515 **Elevation:** 277
Sample Number: 887627
Sampler: BP/BD **300 kilo Site No:** GL-21

Site Description:

Petrography: Colour: Fresh: grey Weathered: greenish grey

Phenocrysts: Ol. (up to 3 cm)

Xenocrysts: altered olivine (up to 2 cm)

Nodules: peridotite

Xenoliths: gneiss

Grain Size: fine matrix and coarse xenocrysts

Sampling Site: Width of dike: 1.5 Width of lineament (actual dike width unknown):

Description:

1.5 meters by 3 meters outcrop in a small valley.

One autoclast (4 cm) of similar grain size but slightly different weathering. (lighter color)

Coarse 5 to 30 mm xenocrysts of olivine mostly composing up to 10% of the rock

Some peridotite (altered) fragments and some gneiss xenoliths are also seen.

Matrix is fine grained and composed of phlogopite, olivine and carbonate with some magnetite

Moderately magnetic and minor carbonate

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-15 **Date Sampled:** 00-08-20
Easting: 372962
Northing: 6591367 **Elevation:** 245
Sample Number: 887628
Sampler: BP/BD **300 kilo Site No:** GL-20

Site Description:

Petrography: Colour: Fresh: Dark grey Weathered: greenish grey

Phenocrysts: Phlog. Up to 10mm

Xenocrysts: ol. Up to 20mm - altered

Nodules: one aphanitic altered nodule (?) 40mm

Xenoliths:

Grain Size: fine matrix and coarse xenocrysts

Sampling Site: Width of dike: 1.5 Width of lineament (actual dike width unknown):

Description:

No fresh olivine or garnet. All xenocrysts are altered (black aphanitic serpentinized)

Up to 1 mm wide veinlets of carbonate locally.

Very similar to sample 887627

Xenocryst and xenoliths material corresponds to 10% of the rock

Moderately magnetic and strong carbonate

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-17 **Date Sampled:** 00-08-20
Easting: 371685
Northing: 6590055 **Elevation:** 65
Sample Number: 887651
Sampler: BP/BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: grey Weathered: grey
Phenocrysts: phlog. Up to 10mm, ol
Xenocrysts: altered olivine
Nodules:
Xenoliths: small 10 x 30mm dunite (?)
Grain Size: very fine.
Sampling Site: Width of dike: ? Width of lineament (actual dike width unknown): ?

Description:

Olivine phenocrysts are quite common. It is pale, almost colorless.
Minor fresh and very fine grained garnets of up to 0.5mm

Moderately magnetic and strong carbonate

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita1-19 **Date Sampled:** 00-08-20
Easting: 371335
Northing: 6589747 **Elevation:** 27
Sample Number: 887652
Sampler: BP/BD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: grey Weathered: greenish grey

Phenocrysts:

Xenocrysts: altered olivine

Nodules:

Xenoliths:

Grain Size: very fine.

Sampling Site: Width of dike: 0.4m Width of lineament (actual dike width unknown):

Description:

ONLY ONE PAIL!!!

Fine grained carbonate in matrix

Up to 25% of the rock.

Black aphanitic xenocrysts of olivine make up to 10% in places. Commonly 5% up to 15mm in size.

Moderately magnetic and strong carbonate

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita1-20 **Date Sampled:** 00-08-12
Easting: 374376
Northing: 6592568 **Elevation:** 282
Sample Number: 887582
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Black</u> Weathered: <u>dark grey (in water)</u>
	Phenocrysts:	<u>ol (30-40%) and rare garnet</u>
	Xenocrysts:	<u>ol (10%)</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>cg in fg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>1.5m</u>	
Description:		
<p>In water entirely next to shore of lake. Many pieces of kimberlite contain abundant olivine of 5 to 30mm. Generally well altered although some are partly preserved. A few rare garnet phenocrysts were also seen. Many veinlets of remobilized carbonate throughout</p> <p>Weakly carbonatized and moderately magnetic</p>		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: PA-B1 **Date Sampled:** 00-08-15
Easting: 375965
Northing: 6593507 **Elevation:** 269
Sample Number: 887615
Sampler: BP/BD **300 kilo Site No:** GL-25

Site Description:		
Petrography:	Colour:	Fresh: <u>dark grey</u> Weathered: <u>grey</u>
Phenocrysts:		
Xenocrysts: <u>one 5mm fresh olivine</u>		
Nodules:		
Xenoliths: <u>one 50 x 20mm gneiss xenolith</u>		
Grain Size: <u>very fine</u>		
Sampling Site:	Width of dike: <u>0.35m</u>	Width of lineament (actual dike width unknown):
Description:		
Probably only relatively thin en echelon dyke. Little exposure, we had to dig to get samples No significant coarse xenos component.		
Moderately magnetic and weakly carbonate		

Twin Mining Corp.
Torngat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: PA-C2 **Date Sampled:** 00-08-16
Easting: 376348
Northing: 6593520 **Elevation:** 200
Sample Number: 887620
Sampler: BP/BD **300 kilo Site No:** GL-04

Site Description:

Petrography:	Colour: Fresh: <u>dark gray</u> Weathered: <u>gray</u>
	Phenocrysts: Phlog. (1.5 cm), garnet (up to 2 cm)
	Xenocrysts: Ol. (up to 2 cm)
	Nodules: Ol peridot (?)
	Xenoliths: gneiss
	Grain Size: coarse in fine to medium matrix

Sampling Site: Width of dike: 1.6 meters Width of lineament (actual dike width unknown):

Description:

Similar to 887616, containing abundant olivine and garnets phenocrysts in a carbonaceous rich matrix

Some collected fragments contain up to 20% of fresh olivine. This dyke is the most visually promising among the Kakivug dykes along the fjord.

Well exposed and easily accessible and appears to align with the T-2 dyke across the fjord
Among all the Kakivug dykes (A to F), this one appears the best visually.

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: PA-C3 **Date Sampled:** 00-08-25
Easting: 376412
Northing: 6593548 **Elevation:** 172
Sample Number: 887638
Sampler: BP/BD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>dark gray</u> Weathered: <u>dark grey</u>
	Phenocrysts:	<u>Phlog. (up to 20mm), ol (up to 5 mm)</u>
	Xenocrysts:	<u>ol up to 25mm</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>medium</u>
Sampling Site:	Width of dike: <u>1.5m</u>	Width of lineament (actual dike width unknown):
Description:		
Olivine phenocrysts in places make up to 25% of the rock minor diopside (3 to 5mm) 50 to 75m north is gneiss. No lineament or outcrop of kimberlite visible.		
Strongly carbonated and strongly magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: PA-D1 **Date Sampled:** 00-08-15
Easting: 375757
Northing: 6593665 **Elevation:** 252
Sample Number: 887617
Sampler: BP/BD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>grey</u> Weathered: <u>greenish grey</u>
Phenocrysts:		
Xenocrysts:		
Nodules:		
Xenoliths:		
Grain Size: <u>medium</u>		
Sampling Site:	Width of dike: <u>1.0m</u>	Width of lineament (actual dike width unknown):
Description:		
Medium grained phlogopite, homogeneous rock No significant xenoliths and/or phenocrysts In places, carbonate is contained in 5 mm blebs. Trend is 55/75 Strongly carbonated and strongly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: PA-E1 **Date Sampled:** 00-08-16
Easting: 375717
Northing: 6593531 **Elevation:** 247
Sample Number: 887618
Sampler: BP/BD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>grey</u> Weathered: <u>greenish grey</u>
	Phenocrysts:	<u>Minor gamets (up to 10mm) and ol (up to 10mm)</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	<u>minor gneiss</u>
	Grain Size:	<u>medium</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.35m</u>	
Description:		
<p>Must dig to get sample here. Dyke cuts across a small hill. Trend is 230/70 Parts of some fragments contain up to 10% of fresh olivine. Some roundish nodules are also seen Some samples also contain both types of olivine</p> <p>Strongly carbonated and strongly magnetic</p>		

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: PA-F1 **Date Sampled:** 00-08-16
Easting: 375758
Northing: 6593482 **Elevation:** 253
Sample Number: 887619
Sampler: BP/BD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: Fresh: <u>dark grey</u>	Weathered: <u>grey</u>
Phenocrysts:		
Xenocrysts: minor olivine (2 - 5 mm)		
Nodules:		
Xenoliths:		
Grain Size: fine		
Sampling Site:	Width of dike: 0.35m	Width of lineament (actual dike width unknown):
Description:		
Very homogeneous fine grained phlogopite rick.		
Strongly carbonated and strongly magnetic		

Twin Mining Corp.
Tomqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: PA-G1

Date Sampled: 00-08-16

Easting: 375975

Northing: 6593906

Elevation: 235

Sample Number: 887621

Sampler: BP/BD

300 kilo Site No: none

Site Description:		
Petrography:	Colour: Fresh: <u>grey</u>	Weathered: <u>grey</u>
<u>Phenocrysts:</u>		
<u>Xenocrysts:</u>		
<u>Nodules:</u>		
<u>Xenoliths:</u>		
<u>Grain Size:</u> <u>fine</u>		
Sampling Site:	Width of dike: 1.0m	Width of lineament (actual dike width unknown):
Description:		
Very fine grained homogeneous rock No phenos and no xenos		
Weakly carbonated and strongly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: PA-G2 **Date Sampled:** 00-08-16
Easting: 375886
Northing: 6593788 **Elevation:** 253
Sample Number: 887622
Sampler: BP/BD **300 kilo Site No:** GL-23

Site Description:

Petrography: Colour: Fresh: dark grey Weathered: grey
Phenocrysts: Phlog
Xenocrysts:
Nodules:
Xenoliths:
Grain Size: fine

Sampling Site: Width of dike: 1.5m Width of lineament (actual dike width unknown):

Description:

Fine, yet coarser than 887621.
Still homogeneous although minor phlog phenos are seen.

Weakly carbonated and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviag Fiord, Quebec

Sample Site Record

Site: PA-H1 **Date Sampled:** 00-08-16
Easting: 375863
Northing: 6593623 **Elevation:** 248
Sample Number: 887623
Sampler: BP/BD **300 kilo Site No:** GL-24

Site Description:

Petrography: Colour: Fresh: dark grey Weathered: grey
Phenocrysts:
Xenocrysts: Small (1 to 6 mm) black aphanitic ol(?) xenos
Nodules:
Xenoliths:
Grain Size: fine
Sampling Site: Width of dike: 0.75m Width of lineament (actual dike width unknown):

Description:

Fine grained rock which contains 10% of black aphanitic ol (?)
Altered fragments are more clearly observed due to differential weathering of the matrix

Moderately carbonated and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Pita2-01 **Date Sampled:** 00-08-20
Easting: 372234
Northing: 6590234 **Elevation:** 201
Sample Number: 888470
Sampler: BD/BP **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: <u>Fresh:</u>	<u>Dark grey</u> <u>Weathered:</u> <u>grey</u>
Phenocrysts:		
Xenocrysts: <u>3 to 10mm black aph. Olivine, altered</u>		
Nodules:		
Xenoliths:		
Grain Size: <u>very fg</u>		
Sampling Site:	Width of dike: <u>0.4</u>	Width of lineament (actual dike width unknown):
Description:		
Carbonate disseminations in places up to 5% (up to 5mm blebs)		
Altered xenocrysts make up to 10% of the rock		
Trend 75/85		
Strongly carbonatized and strongly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: Pita3-01 **Date Sampled:** 00-08-12
Easting: 374107
Northing: 6592469 **Elevation:** 308
Sample Number: 887581
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Blue blk</u> Weathered: <u>brownish grey</u>
	Phenocrysts:	<u>rare ol.</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>mg in fg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.5m</u>	
Description:		
<p>Dull looking sample. Fine grained and light greenish blue to purple tinge to it from the magnetite and the phlogopite. And olivine and carbonate.</p> <p>Strongly carbonatized and strongly magnetic</p>		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: NG1-01 **Date Sampled:** 00-08-17
Easting: 375955
Northing: 6590781 **Elevation:** 201
Sample Number: 887598
Sampler: SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>blue grey</u> Weathered: <u>light brown</u>
	Phenocrysts:	<u>ol (20%), gam, phlog</u>
	Xenocrysts:	<u>diops</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>med to fine</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.3</u>	
Description:		
Fresh phenos (30%) set in a matrix composed of phlog mostly Numerous xenocrysts of diops (2mm to 5mm) and phlog (20mm) Garnets are kelpitized		
Weakly carbonatized and very weakly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: NG1-02 **Date Sampled:** 00-08-17
Easting: 376375
Northing: 6591358 **Elevation:** 6
Sample Number: 888452
Sampler: SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>blue grey</u> Weathered: <u>dark grey</u>
	Phenocrysts:	<u>ol, phlog, gam (1 to 2%)</u>
	Xenocrysts:	<u>diops</u>
	Nodules:	
	Xenoliths:	<u>gneiss</u>
	Grain Size:	<u>fine to med</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.1</u>	
Description:		
Fresh phenos (30%) set in a matrix composed of phlog mostly Garnets are fresh and present little rims of alteration.		
Weakly carbonatized and highly magnetic		

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: NG2-01 **Date Sampled:** 00-08-17
Easting: 375495
Northing: 6590112 **Elevation:** 283
Sample Number: 887596
Sampler: SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Dark grey</u> Weathered: <u>dark green to brown</u>
	Phenocrysts:	<u>ol (5% to 10%) phlog (5%), gam (rare)</u>
	Xenocrysts:	<u>Garn - ol</u>
	Nodules:	<u>peridotite with cpx and garnet</u>
	Xenoliths:	
	Grain Size:	<u>mg in fg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.70m</u>	
Description:		
Altered olivine and garnet and fresh olivine sometimes		
Fresh phlogopite is set in a fine grained matrix		
The host gneiss shows strong fracturation		
Highly carbonatized and moderately magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: NG2-02 **Date Sampled:** 00-08-17
Easting: 375746
Northing: 6590403 **Elevation:** 266
Sample Number: 887597
Sampler: SD **300 kilo Site No:** GL-29

Site Description:		
Petrography:	Colour:	Fresh: <u>Grey</u> Weathered: <u>green brown</u>
	Phenocrysts:	<u>ol (15%) and phlog and garnet</u>
	Xenocrysts:	<u>diops</u>
	Nodules:	<u>peridotite</u>
	Xenoliths:	
	Grain Size:	<u>fine</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown): <u>1.0m</u>
Description:		
Large phenocrysts (up to 10mm) set in a matrix of fine grained phlog, ol, and carb. Two generations of ol: serpentized and fresh olivine Phlog is very fresh while garnets are kelpitized large xenocrysts of diops (up to 15mm)		
Highly carbonatized and highly magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: NG2-03 **Date Sampled:** 00-08-17
Easting: 375981
Northing: 6590720 **Elevation:** 197
Sample Number: 887599
Sampler: SD **300 kilo Site No:** none

Site Description:

Petrography:	Colour:	Fresh:	<u>blue grey</u>	Weathered:	<u>light brown</u>
	Phenocrysts:	<u>ol (15%) phlog, gamet</u>			
	Xenocrysts:	<u>diops</u>			
	Nodules:	<u>gamet peridotite</u>			
	Xenoliths:				
	Grain Size:	<u>med to fine</u>			
Sampling Site:	Width of dike:	<u>0.20m</u>		Width of lineament (actual dike width unknown):	

Description:

Dyke dipping 20 degrees to west. Fracturation at contact of dyke is very strong
Olivine and phlog are generally fresh whereas gamets show keliphitic rims

Highly carbonatized and highly magnetic

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: NG3-01 **Date Sampled:** 00-08-17
Easting: 376340
Northing: 6591339 **Elevation:** 4
Sample Number: 888451
Sampler: SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: blue grey Weathered: green to dark grey

Phenocrysts: gam, ol, phlog

Xenocrysts: diops

Nodules:

Xenoliths:

Grain Size: mg in fg matrix

Sampling Site: Width of dike: 0.10m Width of lineament (actual dike width unknown):

Description:

Minerals are altered apart from xenocrysts.

Proportions of phenos are 3 to 30%, quite variable depending of piece

Generally altered ol.

The contact of the dyke is aphanitic to medium grained further in the dyke.

Highly carbonatized and moderately to highly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: NG4-01 **Date Sampled:** 00-08-10
Easting: 378378
Northing: 6592827 **Elevation:** 0
Sample Number: 887565
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: Kaki green

Phenocrysts: altered ol, (rare), phlog (rare) calcite sphearoids

Xenocrysts:

Nodules:

Xenoliths:

Grain Size: very fg

Sampling Site: Width of dike: 0.25m Width of lineament (actual dike width unknown):

Description:

Fine grained kimberlitic dyke, on shore of fjord near falls of T-1 Dyke
Az 45 - 60. Dyke curves and swings to east (looking at cliffwall)
Fg. Phlog and some minor ol. And carbonate. Strongly altered. Presence of 15mm chill margin
Also contains spheroids (geode) of calcite of 2 to 3 mm in diam.

Weakly carbonatized and strongly magnetic

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: HD-01 **Date Sampled:** 00-08-15
Easting: 384469
Northing: 6601554 **Elevation:** 469
Sample Number: 887594
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: brownish
Phenocrysts: ol (rara) and phlog (2mm)
Xenocrysts:
Nodules:
Xenoliths:
Grain Size: mg in fg matrix
Sampling Site: Width of dike: 0.80m Width of lineament (actual dike width unknown):

Description:

Fine grained phlog. Rich dyke with rare phenos of olivine
Quite fresh (greater than 2 mm) within a mass of phlog. Some traces of phlog phenos as well

Very weakly carbonatized and weakly magnetic

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: HD-02 **Date Sampled:** 00-08-15
Easting: 384670
Northing: 6601758 **Elevation:** 503
Sample Number: 887595
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>brownish</u>
	Phenocrysts:	<u>ol (rara) and phlog</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>mg in fg matrix</u>
Sampling Site:	Width of dike: <u>0.75m</u>	Width of lineament (actual dike width unknown):
Description:		
Fine grained phlog. Rich dyke with rare phenos of olivine Dull looking fine grained rock. Only 1 or 2% phenos and mostly phlog.		
Weakly carbonatized and weakly magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: HD-03 **Date Sampled:** 00-08-22
Easting: 383828
Northing: 6600450 **Elevation:** 434
Sample Number: 888464
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>brownish</u>
	Phenocrysts:	<u>ol, phlog</u>
	Xenocrysts:	<u>ol (10 - 20mm) fresh</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>cg in fg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.60m</u>	
Description:		
<p>Fine grained matrix of phlog, ol, with some magnetite and minor carb. Phenos are rare (ol 5mm) and moderately to strongly altered xenocrysts, very fresh and large 10-20mm are also seen.</p>		
<p>Weakly carbonatized and weakly magnetic</p>		

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: HD-04 **Date Sampled:** 00-08-22
Easting: 383849
Northing: 6600478 **Elevation:** 437
Sample Number: 888465
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: green kaki

Phenocrysts: ol (10%) and magnetite

Xenocrysts: ol (?)

Nodules:

Xenoliths:

Grain Size: cg in fg matrix

Sampling Site: Width of dike: 0.70m Width of lineament (actual dike width unknown):

Description:

Large fresh ol (10%) and magnetite (2%) phenos. These measure 5 - 15mm and are well scattered in the rock. Rest is mostly phlog. and ol and magnetite matrix

Weakly carbonatized and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: SD-01 **Date Sampled:** 00-08-22
Easting: 382048
Northing: 6607251 **Elevation:** 448
Sample Number: 888460
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: Fresh: <u>black</u>	Weathered: <u>brownish green</u>
	Phenocrysts: <u>rare ol</u>	
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>mg</u>	
Sampling Site:	Width of dike: <u>0.75m</u>	Width of lineament (actual dike width unknown):
Description:		
Rare olivine phenos in a groundmass of much mg phlog and olivine with moderate carbonate.		
Moderately to strongly carbonatized and moderately to strongly magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: SD-02 **Date Sampled:** 00-08-22
Easting: 382131
Northing: 6607260 **Elevation:** 471
Sample Number: 888461
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: brownish green

Phenocrysts: ol (5 to 10%) and diops (?)

Xenocrysts: ol (rare)

Nodules:

Xenoliths: rare gneiss

Grain Size: cg in fg matrix

Sampling Site: Width of dike: 0.50m Width of lineament (actual dike width unknown):

Description:

Two phases observed. One is fg matrix of phlog and olivine and rare carbonate containing minor (5%) largely unaltered olivine. (2 to 5mm). The other phase is similar apart from the larger and more common olivines phenos (10% 3 to 7mm) and the presence of minor diops and xenoliths which are quite fresh.

The fresher phase is in contact with the country rock.

Moderately to strongly carbonatized and moderately to strongly magnetic

Twin Mining Corp.
Tongat Project: Alluviag Fjord, Quebec

Sample Site Record

Site: SD-03 **Date Sampled:** 00-08-22
Easting: 381178
Northing: 6606785 **Elevation:** 454
Sample Number: 888462
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: black Weathered: greenish kaki

Phenocrysts: ol (strongly altered 5%)

Xenocrysts:

Nodules:

Xenoliths:

Grain Size: cg in fg matrix

Sampling Site: Width of dike: 1.2m Width of lineament (actual dike width unknown):

Description:

Coarse grained but strongly altered ol in a matrix of phlog and ol.
The phenos are 2 to 5mm and consist of 5% of dyke.
Dyke continues uphill (N) and shifts parallel to the foliation for 30m then shifts back to 060

Weakly carbonatized and moderately magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: SD-04 **Date Sampled:** 00-08-22
Easting: 380970
Northing: 6606585 **Elevation:** 469
Sample Number: 888463
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>black</u> Weathered: <u>greenish kaki</u>
	Phenocrysts:	<u>ol (5%)</u>
	Xenocrysts:	<u>ol (?)</u>
	Nodules:	<u>peridot?</u>
	Xenoliths:	
	Grain Size:	<u>cg in fg matrix</u>
Sampling Site:	Width of dike: <u>0.80m</u>	Width of lineament (actual dike width unknown):
Description:		
Coarse olivine, completely altered in a groundmass of phlog and olivine. The phenos are 2 to 5 mm A small nodule of peridotite and a few large xenocrysts of about 15 to 20mm were also seen.		
Weakly carbonatized and weakly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Richard 1-01 **Date Sampled:** 00-08-24
Easting: 379868
Northing: 6591889 **Elevation:** 382
Sample Number: 888467
Sampler: SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: Fresh: <u>grey</u>	Weathered: <u>light grey</u>
	Phenocrysts: <u>olivine and phlog</u>	
	Xenocrysts: <u>ol</u>	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>medium to fine</u>	
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown): <u>0.50m</u>
Description:		
Big masses of phlog. (20 to 30%) and size up to 3mm Olivine size up to 3mm and set in a fine to medium grained matrix		
Strongly carbonatized and Strongly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Richard 1-02 **Date Sampled:** 00-08-24
Easting: 380558
Northing: 6592284 **Elevation:** 382
Sample Number: 888468
Sampler: SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>grey</u> Weathered: <u>medium brown</u>
	Phenocrysts:	<u>phlog</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>medium to fine</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown): <u>0.80m</u>
Description:		
All altered dirt of dyke. Composed of olivine and phlog up to 1mm intense fractures in dyke..faulted (?)		
Not carbonatized (disolved?) and Strongly magnetic		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Richard 2-01 **Date Sampled:** 00-09-01
Easting: 378373
Northing: 6590355 **Elevation:** 2
Sample Number: 888471
Sampler: SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour: Fresh: <u>grey</u>	Weathered: <u>brown</u>
	Phenocrysts: <u>Phlog, ol (rare)</u>	
	Xenocrysts:	
	Nodules:	
	Xenoliths:	
	Grain Size: <u>med to fine</u>	
Sampling Site:	Width of dike: <u>0.25m</u>	Width of lineament (actual dike width unknown):
Description:		
Dyke presents about 40 to 50% phlogo (dark brown) with minor partly altered ol. All is set in a matrix of medium size grains.		
Could be same dyke as Fantomas		
Weakly carbonatized and strongly magnetic		

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: W-01 **Date Sampled:** 00-08-22
Easting: 372039
Northing: 6602314 **Elevation:** 314
Sample Number: 888459
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>blue grey</u> Weathered: <u>brown</u>
	Phenocrysts:	<u>rare ol</u>
	Xenocrysts:	
	Nodules:	
	Xenoliths:	<u>gneiss</u>
	Grain Size:	<u>fg</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown): <u>0.30m</u>
Description:		
Large quantities of phlog (size fg) incorporated in the matrix		
Rare altered ol phenos. Size from 1 to 10mm and corresponds to 2% of the rock		
One pail of kimberlite sand and one of blocks. Both pails are half full		
Weakly carbonatized and weakly to moderately magnetic		

Twin Mining Corp.
Tomgat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: T South1-01 **Date Sampled:** 00-08-20
Easting: 372448
Northing: 6587307 **Elevation:** 325
Sample Number: 888453
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Dark grey Weathered: Dark grey
Phenocrysts: Ol
Xenocrysts:
Nodules:
Xenoliths: Gneiss
Grain Size: med to fine

Sampling Site: Width of dike: 0.20m Width of lineament (actual dike width unknown):

Description:

Altered ol set in a matrix of very fine grained phlog and carb with some magnetite
Some rare phlog phenos (2 to 3mm)

Could be same dyke as Fantomas

Weakly carbonatized and strongly magnetic

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: TSouth1-02 **Date Sampled:** 00-08-20
Easting: 372429
Northing: 6587344 **Elevation:** 327
Sample Number: 888454
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography: Colour: Fresh: Black Weathered: light brown
Phenocrysts: ol (altered) and phlog (rare)
Xenocrysts:
Nodules:
Xenoliths:
Grain Size: med to fine

Sampling Site: Width of dike: 0.30m Width of lineament (actual dike width unknown):

Description:

Medium grained phenos of olivine in a fine grained matrix of ol and phlog.

Weakly carbonatized and moderately magnetic

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: TSouth2-01 **Date Sampled:** 00-08-20
Easting: 371457
Northing: 6588528 **Elevation:** 0
Sample Number: 888455
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Black</u> Weathered: <u>greenish grey</u>
	Phenocrysts:	<u>ol, phlog</u>
	Xenocrysts:	<u>ol</u>
	Nodules:	<u>peridotite</u>
	Xenoliths:	
	Grain Size:	<u>mg to cg in fg matrix</u>
Sampling Site:	Width of dike: <u>0.80m</u>	Width of lineament (actual dike width unknown):
Description:		
Dyke on shore of Beauforemont Inlet See all of dyke, both contacts for 10m long. Dyke was sampled in two samples 1) contains just contact rock (this one) and other 2) only the center. Rock shows 10% coarse ol (strongly altered) in a fg matrix of phlog ol, and carb. Moderately carbonatized and strongly magnetic		

Twin Mining Corp.
Torngat Project: Alluviaq Fiord, Quebec

Sample Site Record

Site: TSouth2-02 **Date Sampled:** 00-08-20
Easting: 371457
Northing: 6588528 **Elevation:** 0
Sample Number: 888456
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Black</u> Weathered: <u>greenish grey</u>
	Phenocrysts:	<u>ol, phlog</u>
	Xenocrysts:	<u>ol</u>
	Nodules:	<u>peridotite</u>
	Xenoliths:	
	Grain Size:	<u>mg to cg in fg matrix</u>
Sampling Site:	Width of dike:	Width of lineament (actual dike width unknown):
	<u>0.80m</u>	
Description:		
<p>Dyke on shore of Beaufremont Inlet See all of dyke, both contacts for 10m long. Dyke was sampled in two samples 1) contains just contact rock (previous sample) and this one 2) only the center. Contains more coarse grained ol (15%) but some are less altered Phlog is rare phenos while one large (20mm) xenocrysts of ol (weakly altered) Weakly carbonatized and strongly magnetic</p>		

Twin Mining Corp.
Tornqat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Olympe-1 **Date Sampled:** 00-08-20
Easting: 401874
Northing: 6573572 **Elevation:** 512
Sample Number: 888457
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:

Petrography:	Colour:	Fresh:	<u>Black</u>	Weathered:	<u>grey black</u>
	Phenocrysts:	<u>ol (mod), phlog (20% large more 10 mm)</u>			
	Xenocrysts:	<u>ol</u>			
	Nodules:				
	Xenoliths:				
	Grain Size:	<u>cg in fg matrix</u>			
Sampling Site:	Width of dike:	<u>0.50m</u>	Width of lineament (actual dike width unknown):		

Description:

Coarse grained phlog. In a minor olivine (altered) in a fg matrix of phlog olivine and some carbonate.

Moderately carbonatized and moderately magnetic

Twin Mining Corp.
Tongat Project: Alluviaq Fjord, Quebec

Sample Site Record

Site: Olympe-2 **Date Sampled:** 00-08-20
Easting: 401888
Northing: 6573622 **Elevation:** 492
Sample Number: 888458
Sampler: RRR/SD **300 kilo Site No:** none

Site Description:		
Petrography:	Colour:	Fresh: <u>Black</u> Weathered: <u>greenish brown</u>
	Phenocrysts:	<u>ol, phlog (5 to 30mm)</u>
	Xenocrysts:	<u>ol</u>
	Nodules:	
	Xenoliths:	
	Grain Size:	<u>cg in fg matrix</u>
Sampling Site:	Width of dike: <u>1.2m</u>	Width of lineament (actual dike width unknown):
Description:		
10% cg phlog phenos (15mm) ave. and some olivine (10% - 2 to 10mm) in a matrix of ol and phlog.		
Weakly carbonatized and moderately magnetic		

APPENDIX 2

Pictures, 2000 Exploration Program

Plate 1: Typical topography, Alluviaq River

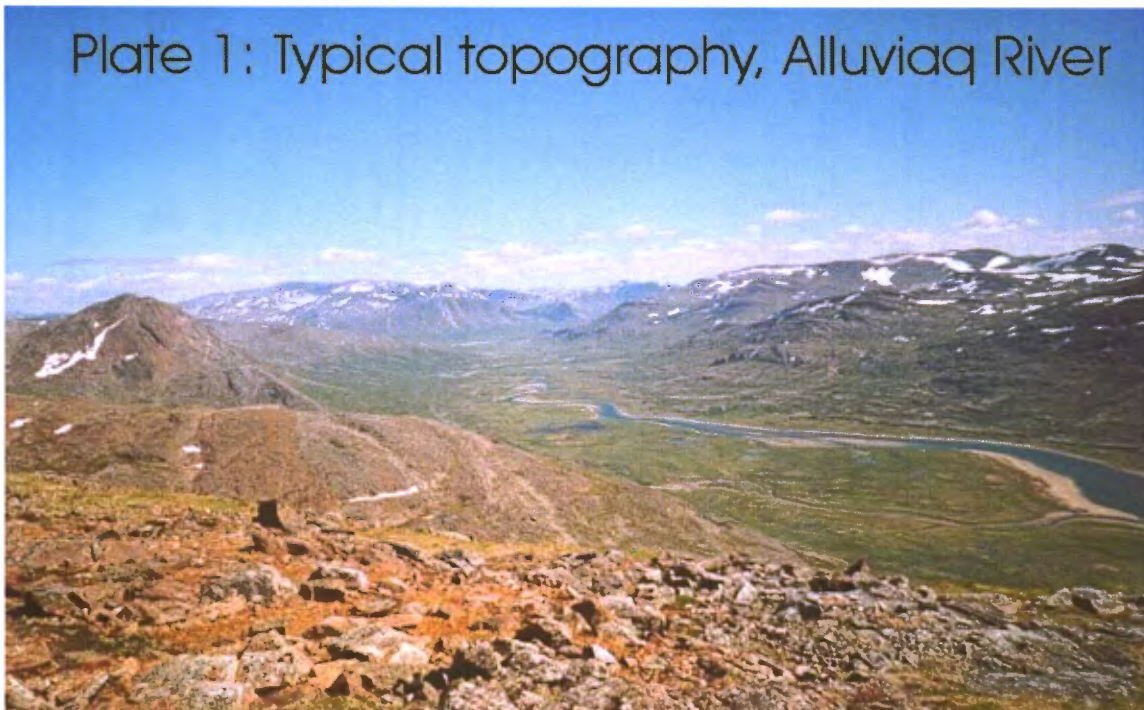


Plate 2: Town of Kuujjuaq

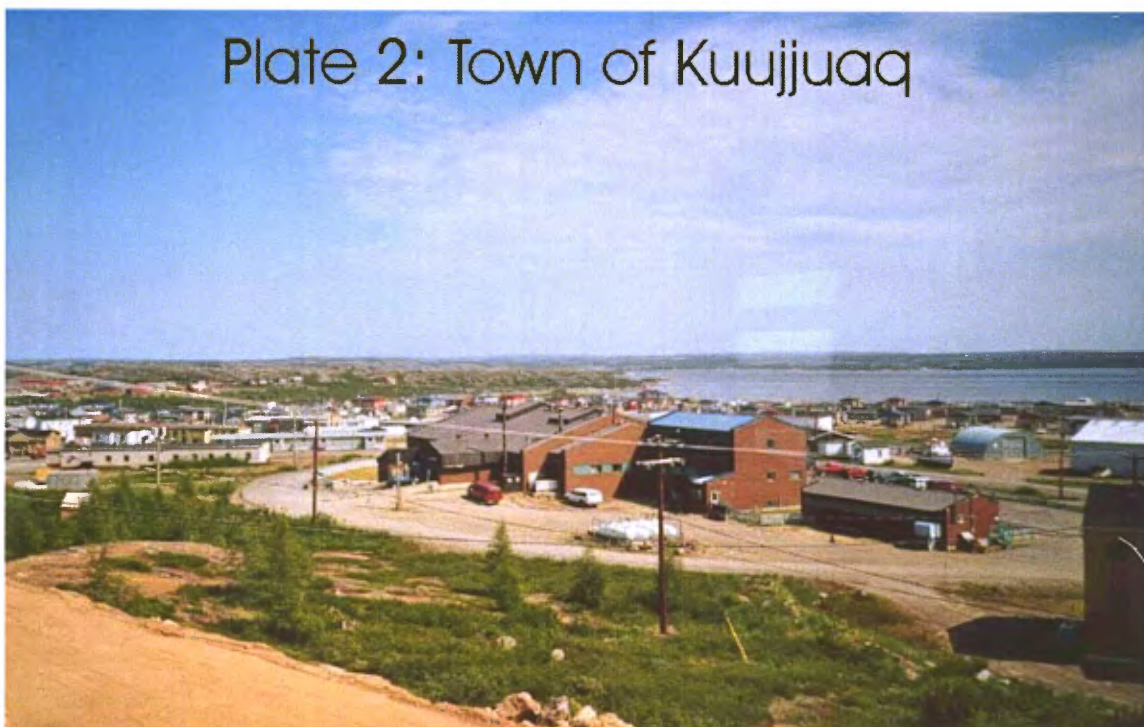


Plate 3: Drilling at the DU Site



Plate 4: Torngat Camp, Summer 2000



Plate 5: Abitibi Helicopter's Long Ranger



Plate 6: Recessive erosion of dyke



Plate 7: Dyke fracture pattern

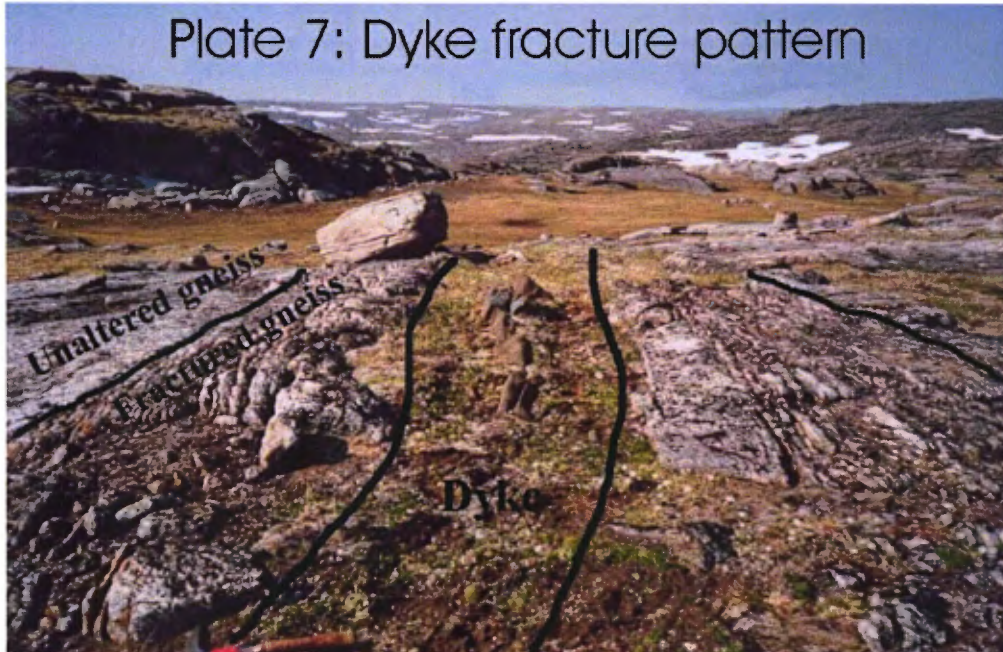


Plate 8: En echelon Dyke



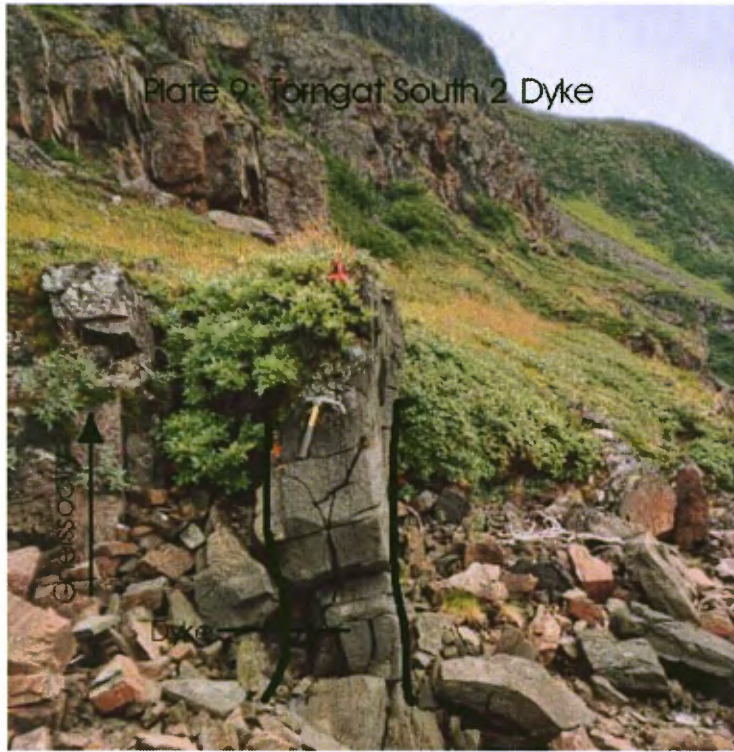


Plate 11: Pita Dyke, 4 meters wide



Plate 12: Blasting at AD Site

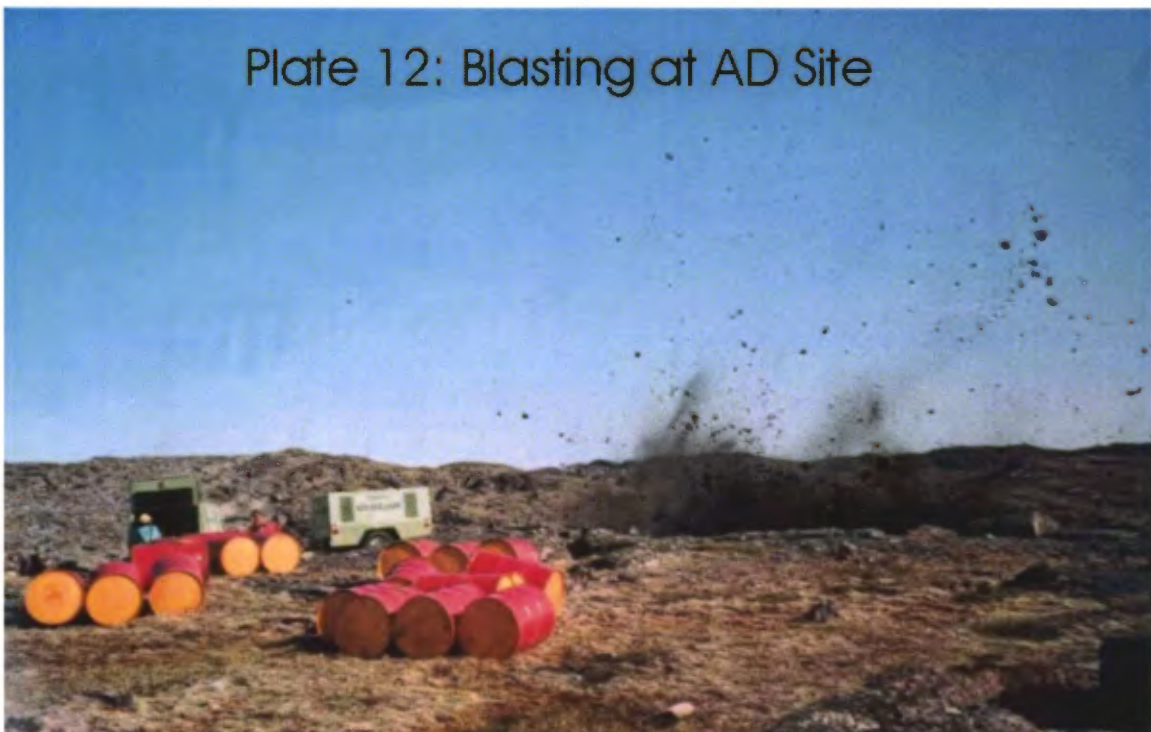


Plate 13: AD Site, South Trench



Plate 14: AD Site Sample at the fjord



Plate 15: Loading of Barge



Plate 16: Arrival of Barge at Portneuf, Québec

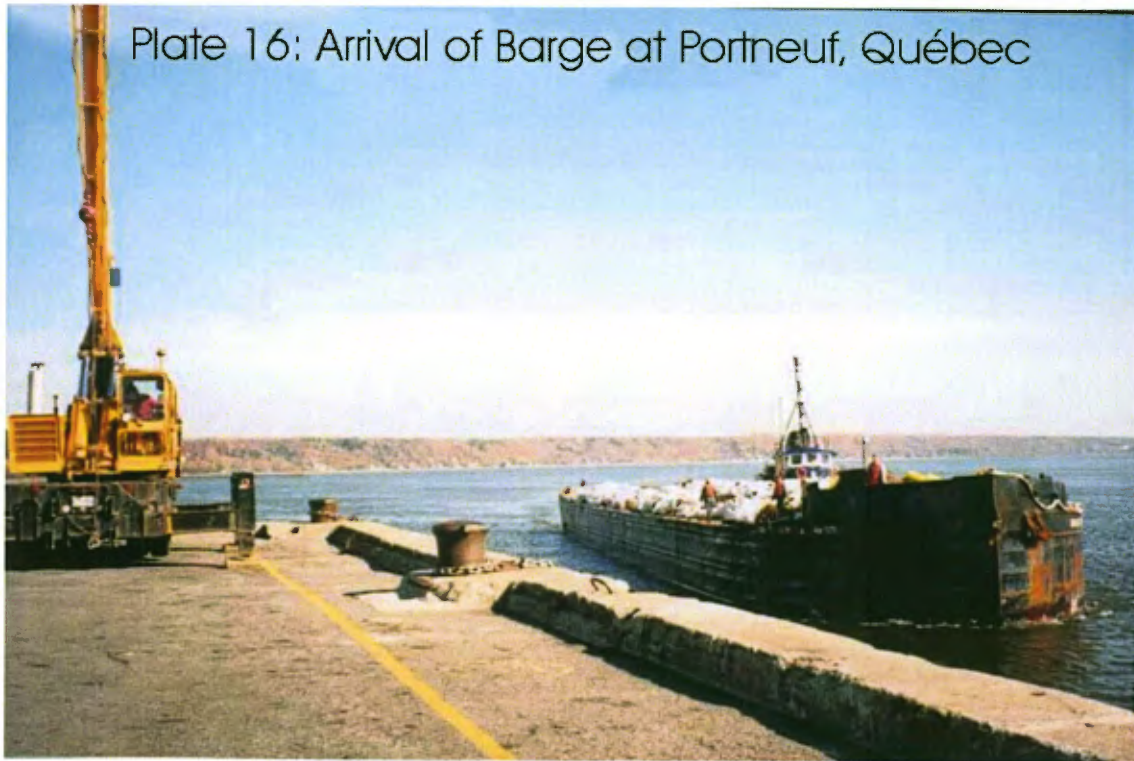
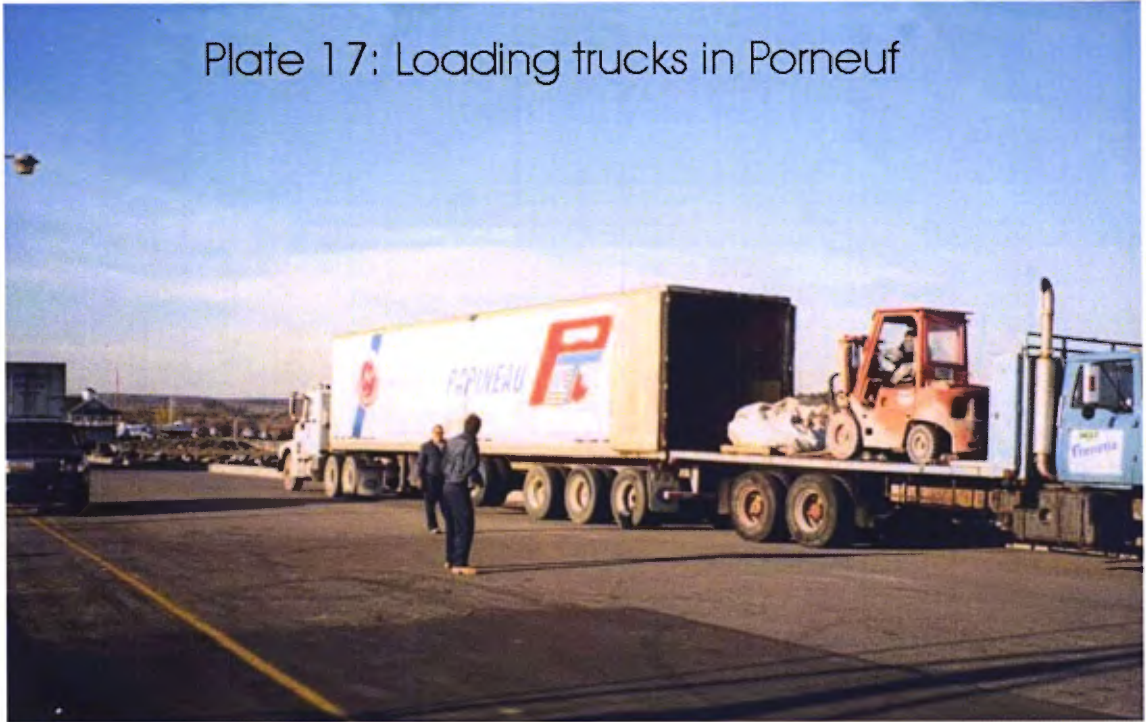


Plate 17: Loading trucks in Porneuf



Twin Mining Corp.

TORNGAT PROJECT

**REPORT ON THE 2000
EXPLORATION PROGRAM**

MAPS

Ressources Naturelles
Secteur minier

13 FEV. 2001

Bureau Régional Vallée

REG DU AU MRN
2001-02-14
BUREAU DU REGISTRAIRE

Richard Roy

December 2000

010-4013