

GM 59416

INTERIM REPORT OF ACTIVITIES ON THE LEVELLAND PROPERTY IN THE TORNGAT MOUNTAINS OF NORTH-EASTERN QUEBEC

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Énergie et Ressources
naturelles

Québec 

Year 2001

INTERIM REPORT OF ACTIVITIES
ON
THE LEVELLAND
PROPERTY

TANDEM RESOURCES LTD.
CLAIM LICENCE NO.
0001481

NTS Sheets 24P/10 & 24P/11
IN
The TORNGAT MOUNTAINS
OF
NORTH-EASTERN QUEBEC

MRN-GÉOINFORMATION 2002

GM 59416

Gerard J Mazerolle BSc.
88 Brookland Street, Antigonish, N.S.
November 2001

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SUMMARY

A geochemical survey was completed over the Tandem Resources exploration licence number 0001481 during July, August and September of the year 2001. Twenty five to thirty five kilogram samples of stream sediments were collected on key drainage sites on the property. These samples were further processed in camp to obtain a fine and a coarse concentrate of the heavy minerals found in that sample. The concentrate vials were then shipped to ~~Peter~~^{Bob} Dillman of Arjadee Prospecting for microscope examination of the grains in order to identify Diamond Indicator Minerals (or diamonds) contained in the samples. Results are pending.

In this way the drainage area for each sample can be examined for indications of the presence of diamond bearing dykes or pipes.

Bonus

In the process of collecting these stream sediments Dan and Tommy-2 noticed an interesting looking cleft in a hill on the Tandem Resources ground. Upon investigating they discovered kimberlite rock associated with it. This became known as the T2 dyke. Subsequent work there lead to the discovery of the Sandy "S" and the Maurice "M" dykes in the same area. These dykes were mapped and sampled.

All assay lab work is yet pending.

No previous geological work is known to have been done on the Tandem Resources licence area.

1.0 INTRODUCTION

This interim report the fieldwork completed on the Tandem Resources Licence 0001481 in the TORNGAT Mountains of North-eastern Quebec during the 2001 field season.

Stream Sediment Samples were collected from the principle river drainages in an attempt to find Diamond Indicator Minerals in the Heavy Mineral Concentrates (HMC) of these samples.

The concentrates were sent to Peter Dillman of Arjadee Prospecting for microscope examination of the individual grains. Selected grains; from each anomalous sample; are then sent for detailed microprobe identification.

Serendipitously two alert silt-sampling crewmembers found a kimberlite dyke while walking between silt sites. This lead to the location of two other kimberlite Dykes on the same mountain. The kimberlite from these dykes was sampled and the rock sent to Lakefield Labs for the detection of the presence of diamond. The analytical results for this work are still pending. These dykes were mapped at a scale of 1:5000. The property was prospected by the entire field crew for one day in an attempt to find additional Kimberlite dykes in this area away from those known further south in the Abloviak Fiord. That day of prospecting generated the finding of the "M" dyke on the property. A few hours of helicopter prospecting failed to locate additional kimberlite dykes on the property.

2.0 LOCATION AND ACCESS

The Tandem Resources Torngat Mountain property (licence 0001481) is approximately centered on Latitude 59°02'00"N and 065°40'00"W. The licence is about 22kms Northeast and on strike with the diamondiferous dykes discovered by Twin Mining Corp. in the Abloviak Fiord.

The nearest community, George River - KANGIQSUALUJJUAQ, Quebec is about 60 kms to the Southwest The only practical access is by helicopter. There are lakes large enough for a fixed wing aircraft to land but most have numerous rocks causing a hazard. The field crew was serviced out of a camp at Pangea Lake 065°15'W 59°36'N about 18kms west of the Tandem Resources claims.

The ground of the claims is entirely above an elevation of 1000 feet with the only vegetation being some grasses found up to an elevation of about 1500 feet.

3.0 REGIONAL GEOLOGICAL SETTING

The rocks underlying the Tandem Resources claims are part of the Nain Province that makes up most of Labrador and Northern Quebec above the Abloviak Fiord. The Nain geological province is part of the Torngat Orogen (2 to 1.9 billion years ago). Two rock units traverse the property striking NW-SE.

The southern unit is The Tasuyaik gneiss mainly a garnet -silliminite bearing paragneiss. It is often rusty with some graphite and locally traces of pyrite, pyrrhotite (that is sometimes nickel bearing), and occasionally chalcopyrite. Rusty zones are more intense in areas of faulting or shearing AND when in contact with dyke intrusions. The northern limit of the Tasuyaik gneiss crosses the Tandem Resources claims. It is about one to two kms North of the Southwest boundary of the Tandem Resources property. James Moorhead et el in "Kimberlites and Diamonds In Northern Quebec" place the northern limits of the SE trending Abloviak Shear Zone (ABZ) (his Fig 8) at this contact. The ABZ then contains the Tasuyaik gneiss in this region of Quebec. The Kimberlite dykes in the ABZ discussed in the literature are all in the Tasuyaik gneiss in this Abloviak Shear Zone.

The second rock unit, north of the Tasuyaik gneisses are reworked Archean metasedimentary gneisses of the Nain Province. Some reworking took place at 1.89 to 1.84 billion years and metamorphosed the rock to charnokites or they were intruded from depth at this time.

The three kimberlite dykes found on the Tandem Resources ground are in this metasedimentary unit.

It is suggested Moorhead et.el. Those tensional events opened the crust in the area of the ABZ for the emplacement of the Kimberlite dykes. The dykes found on Tandem Resources Lic 0001481 are not in the ABZ and they trend Northeast to east and have a notable more shallow dip than dykes do in the ABZ. Kimberlite dykes in the ABZ trend NNW through NNE. Other kimberlite dykes on Diamond Discoveries International ground are also in these metasedimentary units above the Abloviak Shear Zone. Moorhead et.el (page 4) "some of which are kimberlites, have been identified in the northernmost portion of Labrador, approximately 75 km NE of the Abloviak." Exploration efforts therefore need not be restricted to the area of the Abloviak Fiord.

4.0 LOCAL GEOLOGY

The rock foliation on the property strikes NW-SE roughly parallel to the southwest boundary of the claim group. The rocks have been folded and their axial planes have the same trend as the foliation. The distance between axial planes is about 1.5 to 2 km. Usually the western fold limbs dip nearly vertically and the eastern limbs of the folds dip at a shallow angle (about 35°) to the west.

One day was spent looking at the Tasuyaik gneiss in the southwest of the claim block. A number of interesting but small sulphide lenses were observed and a trace of a reaction for Ni was detected in one sample. The mineralization has a poddy nature on the scale of 10 meters and does not differ from the copper nickel mineralization examined elsewhere in the Tasuyaik gneisses of Labrador. I believe there is little likelihood of a significant sulphide deposit of economic importance existing on the property.

The metasedimentary gneisses underlying the remainder of the property are composed of about 80% quartz and feldspar with less than 10% garnets and 10% plus black (mafic) minerals. Locally some units have 40-50% mafics usually amphiboles (or pyroxenes). These beds are contorted and drag folded on the scale of 10 - 30 meters. This is undoubtedly because they more easily undergo plastic deformation at lower temperatures and pressures than the more silica rich rocks that make up the bulk of the Metasedimentary gneisses underlying the property.

Into these brittle rocks three kimberlite-bearing dykes were observed to intrude on the Tandem Resources licence. These dykes range from about 20 cm ("M" dyke) to about 2 meters in parts of the "T2" dyke. The "S" dyke appears to be about 1 to 1.5 meters in true thickness. These dykes strike around 065° true and locally a bearing of 090° (east) was measured. The dips of the dykes are to the north with places on the T2 dyke inclined at 65°. The "M" dyke dip is near 85° but the "S" dyke has one section measured at 70°. These values are not found on any of the other kimberlite dykes mapped so far. Usually the strike of the dykes is between 10° West of North to 24° East of North and the dips are within 5° of being vertical. It is possible that the three dykes on the Tandem Resources claims are faulted and rotated extensions of the Twin Mining dykes found in the Abloviak Fiord. Their diamondiferous dykes on a bearing of 024° would enter the

Tandem Resources ground; if the dykes extend this far North and remain undisplaced. The three Levelland dykes may also be portions of the same dyke that has been cut and displaced by a NW trending fault. Such a fault was recorded on the linear map done last winter to cover the Tandem Resources and DDI claims.

I favour this explanation because of the apparent offset in a part of the T2 dyke that shows almost no rock deformation. The north end of the T2 dyke may have been displaced toward the Northwest under snow and ice to become the West End of the "S" dyke. The "S" dyke terminates on a northerly trending shear just off of the claims to the East. The smaller "M" dyke would be a separate entity north and west of the shear and its' extension should exist again northwest of the "S" dyke if this is the case. The existence of the possible "M" dyke twin to the NW of the "S" dyke would confirm fault displacement and rotation of the dykes. General prospecting was done: but measurement of distances and directions are needed to narrow the search for this extension in heavy broken rock cover.

The Kimberlite in the dykes appears to be 40 - 60% phlogopite mica with a crystalline size up to 2-3mm. Olivine is hard to observe being very fine-grained and weathers out first. Olivine is estimated to be 20 - 30 % of the rock magnetite is about 5% with the remainder of the rock mostly carbonate (on an visual level) in the form of calcium carbonate. The "S" dyke is somewhat different as its' nature changes about 60 meters east of the discovery and sample location. It becomes more massive fine grained and much more carbonatised. It is tan to buff weathering and does not disintegrate like the phlogopite rich variety. Large blocks up to 1000 lbs of this rock can be found in various places along strike to the East. One such block had a 4cm wide hole more than 10 cm deep in it - possibly from weathered out carbonate. This rock type was not sampled and should be on the priority list for sampling in the coming field season.

5.0 LICENCE INFORMATION

The Tandem Resources claims are Quebec Exploration Licence Number 0001481. They cover about 57 square kilometres. The Licence has a maximum width of 8 km and its maximum north to south length is 11 kilometres.

6.0 2001 EXPLORATION PROGRAM

The program was to designed to collect 22 stream sediment samples, concentrate the heavy minerals from the samples and have the mineral grains from these concentrates examined for the presence of any diamond indicator minerals that are present in the watershed that drainage the given sample site. Twenty sample sites were visited and nineteen were collected and the concentrates were and sent to Peter Dillman for examination. The results from this work are pending.

6.1 ADDITIONS TO THE INITIAL PLAN

With the discovery of Kimberlite dykes on the Tandem Resources property additional work of sampling the rock and mapping of the dykes on a scale of 1:5000 was carried out. In addition four prospecting traverses were made over the property with the goal of locating other kimberlite dykes - the "M" dyke was first seen from a distance on this day.

Three samples from the kimberlite dykes were taken and shipped to Lakefield Labs for the detection of any diamonds contained in them. A bagged sample of "soil" (about 12kg) from the "M" dyke was concentrates and shipped to Arjadee for examination of its heavy minerals. The dyke was so deeply weathered that very little rock was found even at a depth of 2.5 meters (7').

6.2 RESULTS

The results of the sample work - rocks and stream sediment - are pending. The Geology field sketches are in the hands of the draftsman. Mazerolle has entered the sample locations and numbers into AutoCad. This data is with the draftsman ready to be plotted on the base maps prepared last year by Graeme Scott.

If any of the 2001 stream HMC samples were anomalous follow up silt HMC work needs to be completed to narrow the target drainage. After a narrowing the suspect drainage a grid of soil sampling for HMC's should be used to locate buried or hidden dykes or pipes in the large areas of the property that are talus covered. Foot prospecting would not be effective in these types of areas.

APPENDIX H

9.1 SAMPLE LOCATIONS

Rock samples

Sample No.	Name	UTM Coordinates		Weight	Collection Date
#5281	T2 dyke	389491E	6611518N	172lbs	22 Aug 2001
#5282	S dyke	389854E	6612066N	250lbs	23 Aug 2001
#5285	M dyke	389600E	6611828N	10lbs	02 Sept 2001

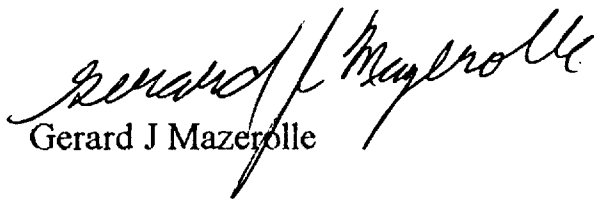
Stream Sediment Heavy Mineral Concentrates

Sample ID	No of fine vials	No. of coarse vials	UTM Coordinates
Lev 01	Site not visited		387820E 6608600N
Lev 02	1	1	389160E 6608134N
Lev 03	1	1	388363E 6612020N
Lev 04	1	1	388613E 6612159N
Lev 05	1	1	388655E 6612247N
Lev 06	1	1	389563E 6612502N
Lev 07	No Sample		389700E 6612580N
Lev 08	2	1	387650E 6612958N
Lev 09	1	1	387615E 6613298N
Lev 10	1	1	385826E 6613085N
Lev 11	1	1	385356E 6613249N
Lev 12	1	1	384763E 6613295N
Lev 13	No sample		
Lev 14	1	1	385188E 6614829N
Lev 15	1	1	384527E 6615588N
Lev 16	1	1	385336E 6617200N
Lev 17	1	1	385401E 6617244N
Lev 18	1	1	386691E 6615881N
Lev 19	1	1	386691E 6615734N
Lev 20	1	1	387823E 6616628N
Lev 21	1	1	388375E 6615412N
Lev 22	1	1	388846E 6615432N

10.0 DISCLAIMER

I, Gerard J Mazerolle of 88 Brookland Street, Antigonish, Nova Scotia; have been a professional Geologist for more than 32 years. I declare that I have never, nor do I hold any interest, monetary or otherwise, in any of the Tandem Resources properties or in the company itself.

I declare that I performed and supervised the performance of all the fieldwork declared in this report on behalf of Tandem Resources Ltd


Gerard J Mazerolle

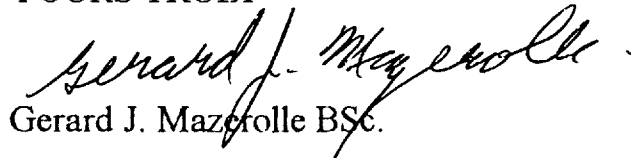
11.0 QUALIFICATIONS

I, Gerard J. Mazerolle, declare I am a graduate geologist. I received my B.Sc. degree in Geology from St. Francis Xavier University in 1969.

I have practiced my profession in Canada and the United States over the last 32 years. I am a member of the Prospectors and Developers Association of Canada.

I have performed or supervised all the work declared in this report.

YOURS TRULY


Gerard J. Mazerolle BSc.

7.0 CONCLUSIONS

These kimberlite dykes are proof that such dykes exist outside the Abloviak Fiord area. Their existence opens up the area north of the fiord to exploration for kimberlite dykes and pipes.

There is very little vegetation above 1000 feet. Since one of the key signs of the presence of the kimberlite dykes is the grassy cleft in the rocks; exploration at this elevation needs to be done on the ground. The magnetometer used in walking mode is a very good tool in following invisible kimberlitic dykes once they disappear under the extensive boulder fields in these higher elevations. It should be used to follow extensions of known or suspected kimberlite dykes.

8.0 RECOMMENDATIONS

The 2002 field season should see that the following work is carried out.

Sample the known dykes in a number of places with sample size of at least 500 lbs. "S" dyke sampled in three places for 1500lbs. The "T2" dyke sampled in three places for 1500. The "M" dyke sampled in three places using weathered soil material for 1500. Only about 100lbs of the soil need be shipped after it has been concentrated by panning. Special attention should be paid to the tan weathering carbonate rich part of the "S" dyke -two samples should be taken from it because of its unusual nature and lack of sampling this past year.

Construct a grid on the known dykes and their projected extensions. Conduct a walking magnetic survey over these grids to trace the east and western extension of the known dykes. I would suggest that the survey use the Magnetometer in walking mag mode and convert the results mathematically to gradient format. (The gradient results on the airborne work are the only form that showed any reflection of the dykes.) It was slight but on the ground the results should be more definitive.

The entire claim group should be prospected by an experienced field crew in a search for additional kimberlite dikes. Footwork by an experienced crew should find additional kimberlite dykes and possibly pipes as well.

Dec 18, 2001

To: Peter Ferdorber
Stan Hawkins Tandem Resources

From: Robert Dillman

Subject: Petrological Summary of LEV- series samples
Torngat Diamond Project, Quebec

Twenty of twenty-two heavy mineral samples were examined for kimberlite and related minerals.

Five of the heavy mineral samples contain potential kimberlitic or related minerals. The samples include: LEV-2, LEV-15, LEV-19, LEV-20, LEV-21.

Kimberlitic or related minerals in the LEV samples include: large grains of biotite-phlogopite mica, potential grains of chromite and Mg-ilmenite, eclogite garnet, enstatite, apatite, sphene and zircon.

The minerals in the LEV samples are similar with the mineral assemblages of the kimberlitic and lamprophyre pipes and dikes found in the project area (i.e. DDI-3-30).

Samples: LEV-19 and LEV-21 have been collected in the immediate vicinity to source. Samples: LEV-2, LEV-15 and LEV-20 have been collected at an increasing distance from source.

Rusty oxidized grains of unknown composition occur in samples: LEV-8, LEV-9 and LEV-15.

Mineral grains have been selected for microprobe analyses from samples: LEV-2, LEV-3, LEV-8, LEV-9, LEV-15, LEV-19, LEV-20, LEV-21.

Respectfully submitted,


Robert Dillman Geologist

PETROLOGIC DESCRIPTION OF HEAVY MINERAL SAMPLES

LEV- SERIES

CLIENT: TANDEM RESOURCES LTD.

PROJECT: TORNGAT PROJECT, QUEBEC

PETROLOGY BY: ROBERT DILLMAN ARJADEE PROSPECTING

- LEV-1 -7 biotite-phlogopite mica, 4 flakes <2.0 mm.
 -trace of black metallic grains, possible Mg-ilmenite or chromite candidates.
- LEV-2 -20 biotite-phlogopite mica, most small sections of rounded or pellet-shaped books. Source close.
 -trace of black metallic grains, possible Mg-ilmenite or chromite candidates, crustal ilmenite.
 -1% red zircon, all fragments.
 -<5% light brown amphibole
 -3 enstatite.
- LEV-3 -8 biotite-phlogopite mica, small flakes.
 -trace of black metallic grains, possible Mg-ilmenite or chromite candidates, crustal ilmenite and rutile.
 -1 chromite?
 -10 red zircon, all fragments.
 -5% light brown amphibole with yellow mica inclusions.
 -8 enstatite, dark green block-shaped fragments.
- LEV-4 -16 black metallic grains, possible Mg-ilmenite or chromite candidates, crustal ilmenite and rutile.
 -1 enstatite.
- LEV-5 -2 biotite-phlogopite mica, one flake +1.0 mm.
 -10 of black metallic grains, possible Mg-ilmenite or chromite candidates, crustal ilmenite, 1 graphite flake.
 -4 red zircon, most fragments, 1 partial crystal.
- LEV-6 -5 biotite-phlogopite mica, 3 flakes +1.0 mm.
 -10 black metallic grains, possible Mg-ilmenite or chromite candidates, crustal ilmenite and rutile.
 -5 red zircon, all fragments.
 -1 andradite garnet?
 - 4 apatite.

- LEV-7 No Sample
- LEV-8 -2 biotite-phlogopite mica, 1 'cluster' grain.
 -1% black metallic grains, most weakly magnetic crustal ilmenite, possible Mg-ilmenite or chromite candidates.
 -14 red zircon, all fragments.
 -trace purple-brown zircon, euhedral-subhedral crystal, immediate source.
 -trace rusty-brown oxide mineral, immediate source.
 -trace apatite.
 -trace orange silicate as seen in LEV-19.
 -3 enstatite, dark green block-shaped fragments.
- LEV-9 -15 black metallic grains, most weakly magnetic crustal ilmenite, possible Mg-ilmenite or chromite candidates.
 -trace orange garnet, as pellets or anhedral crystals. 1 pink garnet, pellet-shaped frosted surface.
 -10 red zircon, all fragments.
 -5 rusty-brown oxide mineral, immediate source.
 -3 apatite.
 -6 enstatite, block-shaped fragments.
- LEV-10 -1 biotite-phlogopite mica, small flake.
 -trace black metallic grains, possible Mg-ilmenite or chromite candidates.
 -8 red zircon, all fragments.
 -7 enstatite, block-shaped fragments.
 -trace brown amphibole? several 'fresh' grains in composite with brown mica.
- LEV-11 -5% brown amphibole? several 'fresh' grains in composite with brown mica.
 -7 black metallic grains, possible Mg-ilmenite or chromite candidates.
 -2 biotite-phlogopite mica, small flakes <0.2 mm.
- LEV-12 -7 black metallic grains, possible Mg-ilmenite or chromite candidates.
- LEV-13 No Sample

- LEV-14
- 1 biotite-phlogopite mica, 1.0 mm flake, number of mica-brown amphibole-white silicate grains from close source: metamorphic?
 - 1 Mg-ilmenite or chromite candidate.
 - 2 red zircon, all fragments.
 - trace brown amphibole? several 'fresh' grains in composite with brown mica.
 - trace orange garnet, as pellets or anhedral crystals. 1 pink garnet, pellet-shaped frosted surface.
- LEV-15
- 2% black metallic grains, shapeless as seen in LEV-19, Mg-ilmenite or chromite candidates.
 - traces of red zircon, all fragments.
 - 1% brown amphibole? several subhedral crystal, close source.
 - several brown-black rusty oxides, 1 grain +1.0 mm.
 - 2 enstatite, blocky grains.
- LEV-16
- several pellet and fragments of orange garnet.
 - trace golden-brown mica, small flake some in composite with orange garnet and quartz, metamorphic? 2 small biotite-phlogopite grains.
 - 2 enstatite.
 - 1 green clinopyroxene, small grain <0.2 mm.
 - 10 black metallic grains, shapeless grains.
- LEV-17
- no minerals of interest.
- LEV-18
- 1 biotite-phlogopite mica, traces of mica-brown amphibole-white silicate grains from close source: metamorphic?
 - trace of shapeless black metallic grains, some 'fresh' as seen in LEV-19, possible Mg-ilmenite or chromite candidates.
 - traces of red zircon, mostly fragments, several broken subhedral crystals.

- LEV-19
- 5% black metallic grains, shapeless grains, some very weakly magnetic, source close, possible Mg-ilmenite or chromite candidates.
 - <1% sphene? clear-yellow grains with black inclusions, some as clusters of small anhedral crystals, source close.
 - trace biotite-phlogopite mica, zoned black core golden-brown margins, some flakes +4.0 mm, mica clusters, some as inclusions with other mineral grains, source close.
 - 12 apatite, clear pellet-shaped grains.
 - 10 enstatite, green blocky-shaped fragments.
 - trace red zircon, shapeless fresh fragments.
 - good number of orange pellet-shaped garnets, and orange-red grains some of which could be zircon, some fresh pink fragments source close.
 - traces of grey-white silicate, some very large grains +4.0 mm, some-what pellet-shaped, zoned, clear core grey margins, source close.
 - 3 graphite flakes.
- LEV-20
- 1% black metallic grains, shapeless grains, some very weakly magnetic, source close, possible Mg-ilmenite or chromite candidates.
 - trace sphene? some clear-yellow grains.
 - 7 biotite-phlogopite mica, zoned black core golden-brown margins, some large flakes +1.0 mm, some mica clusters or deformed bools.
 - 3 apatite, clear pellet-shaped grains.
 - 1 enstatite.
 - trace red zircon, shapeless fresh fragments.
 - traces of orange pellet-shaped garnets and orange-red grains some of which could be zircon.
- LEV-21
- 1% red zircon, fresh fragments from close source, some grains +2.0 mm.
 - traces of biotite-phlogopite mica, zoned, some books or broken pellets, large flakes +2.0 mm, source close.
 - 1% black metallic grains, shapeless grains, some very weakly magnetic, source close, possible Mg-ilmenite or chromite candidates.
 - trace sphene? some clear-yellow grains
 - trace orange pellet-shaped garnets, and orange-red grains some of which could be zircon.
- LEV-22
- 5 orange-red garnet or zircon.
 - 3 small black mica, 2 clusters.
 - 3 enstatite.
 - trace yellow sphene, small eroded fragments.
 - 7 black metallic grains, shapeless, Mg-ilmenite or chromite candidates.

D. D. I #5 & TANDEM & LEVILLAND
"S" DYKE

SAMPLE NUMBER: S DIKE WEST SOIL

DATE OF SUBMISSION: SEPTEMBER 2001

CLIENT: DIAMOND DISCOVERIES INTERNATIONAL

TOTAL CONCENTRATE RECEIVED: 58.3 SIZE FRACTION: <0.5 millimetres

MAGNETIC FRACTION: 0 grams COARSE OR FINER FRACTION AVAILABLE?: ?
 NONMAGNETIC FRACTION: 58.3 grams
 TOTAL 58.3 grams

PETROLOGY BY: RJD

TOTAL CONCENTRATE EXAMINED: 14.3 grams

DATE: MARCH 13, 2002

NUMBER GRAINS SUBMITTED FOR ANALYSES:

ELECTRON MICROPROBE: RL BARNETT GEOLOGICAL SERVICES, LAMBETH ONTARIO

SUBMISSION DATE:

COLOUR	GARNET				PYROXENE				OLIVINE	MICA		OPAQUES						AMPH.	SPHENE	OTHER
	PYROPE	ALBITE	ANDRADITE	OTHER %	Cr DIOPHIDE	Cr CPX	ENSTATITE	AUGITE	OLIVINE	PHLOGOPITE	BIOITTE	CHROMITE	Mg ILMENITE	PEROV	MAG	PHYRITE	RUTILE	AMPH.	SPHENE	CORUN.
PURPLE																				
LILAC																				
RED																				
ORANGE				20%																15%
PINK				20%																15%
BROWN																				
BLACK											Tr.				1%		Tr.	5%		
Br. GREEN																		Tr.		
DK. GREY							1g													
YELLOW																		5%	Tr.	
CLEAR																		10%		
SILVER																				
TOTAL				40%			1g				Tr.				1%		Tr.	20%	Tr.	30%

Tr.: Trace (<1%)

g: grains

KIMBERLITE OR RELATED MINERALS: yes

DISTANCE ESTIMATE:

TOTAL KIMBERLITE OR RELATED MINERALS: 50%

OTHER MINERALS OF INTEREST: abundant orange & pink corundum

COMMENTS: rare dike fragments of biotite "clusters". good portion of orange and pink garnet could be corundum

SIGNED BY:



MARCH 18/02

ROBERT J. DILLMAN

ARJADEE PROSPECTING

BIOTITE CORUNDUM LAMPROPHYRE DIKE

February 13, 2002

To: Stan Hawkins
Tandem Resources Ltd.
Toronto, Ontario

From: Robert Dillman
Arjadee Prospecting
Mount Brydges, Ontario

**Subject: Electron Microprobe Results: LEV- series heavy mineral samples
Tomgat Project, Quebec**

111 mineral grains were selected from the LEV series of heavy mineral concentrates and submitted to R.L. Barnett Geological Services for electron microprobe analyses.

37 of the mineral grains analyzed have compositions overlapping similar mineral types known to occur in world-wide kimberlite and related occurrences. The analyses also coincide with similar minerals found in the kimberlite and lamprophyre dikes discovered in the Tomgat region. The minerals include: phlogopite-biotite mica, apatite, eclogite garnet, and enstatite. Additional minerals in the LEV series samples which may also have an association with primitive intrusions in the region include: ilmenite, rutile, chrome-spinel, clinopyroxene and amphibole.

Based on petrological examination, sample LEV-19 was collected within a short distance to the source of large mica grains, orange and red eclogite garnet, apatite, enstatite and ilmenite. LEV-2, LEV-15 and LEV-20 have been collected at greater distances to the source.

Phlogopite-biotite grains 2 mm in diameter are found in LEV-19. Coarse mica is characteristic of primitive magmas in the Tomgat region. 1 - 8 grains of phlogopite can be found in most of the samples. Mica is most abundant in LEV-19, LEV-2 and LEV-21.

Clear pellet-shaped grains of apatite occur in LEV-6, LEV-9, LEV-20. Apatite is most prevalent in LEV-8 and LEV-19.

Traces of garnet occur in most of the heavy mineral samples. Most of the garnets are from regional sources and tend to have almandine-spessartine compositions. Orange and red pellet-shaped garnets were observed in LEV-9, LEV-14 and in notable concentrations in LEV-19, LEV-20 and LEV-21. Microprobe analyses indicates these garnets have Ca-Mg almandine compositions comparable to eclogite garnets of both kimberlite association and of metamorphic origin associated with regional metamorphic eclogite terrains. The overlap between potential sources of these Ca-Mg almandine garnets causes some caution to be exerted in the use of these garnets as an indicator of primitive magmas. Based on the amount of CaO, the microprobe analyses indicates a distinct field of these garnets within the range of 1 - 2 weight % CaO. This field directly coincides with garnets analyzed from several primitive mica dikes located in the region (particularly, the 'H' dike and 'K' dike).

1 - 3 large, dark green grains of enstatite occur in most of the LEV samples. Enstatite occurs as megacrystic grains in many of the primitive mica dikes in the region. Enstatite was observed in elevated concentrations in samples: LEV-6, LEV-7 and LEV-19.

Five green clinopyroxene grains analyzed by the microprobe were found to be augite with slightly elevated Na₂O. The grains have chemistries common to a wide variety of basic and ultrabasic rock types and can not be used with certainty as a guide to locating primitive magma within the area.

Black metallic opaque grains were selected as potential chromite and picrolimenite but analyses found most of the grains to be simple or crustal ilmenite composition. 1 - 2% crustal ilmenite is present in LEV-8, LEV-15, LEV-20, LEV-21 and as much as 5% ilmenite occurs in LEV-19. Although the region where the samples were collected is characterized by granite and gneiss, microscopic analyses of grain shapes suggest much of the ilmenite from local sources. It should be noted that elevated concentrations of crustal ilmenite occur in the vicinity to several primitive pipe-like intrusions in the region. Local-sourced ilmenite is most prominent in LEV-19, LEV-20 and LEV-21.

A single chrome-spinel grain was identified in sample LEV-15. The chromite grain occurs in composite with amphibole and may be representative of some type of primitive magma in the area.

Yellow, transparent grains initially thought to be sphene, were determined by microprobe analyses to be yellow amphibole. The relationship of this mineral to the local geological setting is unclear. Yellow amphibole is abundant in LEV-20, LEV-21 and most abundant in LEV-19, occurring as small clusters of crystals and potential evidence of an immediate source.

Rusty brown oxide grains in LEV-9 were determined to be magnetite. The rusty, partially weathered nature of the grains suggests an immediate source.

Large, red transparent grains, initially thought to be zircon, were identified by the microprobe to be rutile. 1 to 15 grains per sample appear to be common throughout the sampling area. Higher concentrations of rutile occur in LEV-19 and LEV-20 and approximately 1% red rutile occurs in LEV-2 and LEV-21. LEV-2 contains 'fresh' rutile grains in excess of 2 mm and are potentially from an immediate source. Rutile is an important ore mineral of titanium.

In summary, microscopic and electron microprobe analyses of the LEV- series of heavy mineral samples has verified the presence of minerals associated with kimberlite and lamprophyre magmas occurring in the Torngat region. There are characteristics and sufficient numbers of the mineral grains to suggest the presence of primitive magma within the region covered by the heavy mineral survey. The mineralogy of several of the LEV samples is identical to mineralogical models derived from successful heavy mineral sampling programs in areas where diamond-bearing Torngat kimberlite magmas were discovered. The results of this survey warrants additional heavy mineral sampling. Areas to focus further exploration include regions in the vicinity to LEV-19, LEV-20, LEV-21, LEV-2 and LEV-15. Sample LEV-19 was collected in the immediate vicinity to the source of a large component of the minerals in sample.

Sincerely,



Robert Dillman Geologist
Arjadee Prospecting

Mr. Robert Dillman,
For
Mr. Stan Hawkins
Tandem Resources Ltd.,
Suite 402,
111 Richmond Street W.,
Toronto, Ontario
M5H 2S4

February 12, 2002

Ph 1-416-368-9411 Fax 1-905-686-2487

R. L. Barnett Geological Consulting Inc.,
9684 Longwoods Road,
RR 32, London, Ontario,
N6P 1P2

Ph. 1-519-652-1498 Fax 1-519-652-1475

Dear Stan,

The purpose of this letter is to provide for your records, the identity of the "non-indicator" minerals in the batch of grain given to me on your behalf by Robert Dillman with his cover letter of December 18, 2001. These grains were identified using the EDS system on the microprobe.

Sample LEV-2 - Grains 1-3 - ilmenite
Grain 4 - Fe clinopyroxene

Sample LEV-3 - Grain 1 - Fe clinopyroxene
Grain 2 - ilmenite
Grain 3 - spinel
Grains 4,5 - spessartine-almandine ss.

Sample LEV-8 - Grain 4 - zircon
Grains 5-8 - ilmenite

Sample LEV-9 - Grain 5 - almandine
Grains 7,9 - magnetite
Grain 8 - rutile
Grains 10,11,14 - ilmenite
Grains 12,13 - amphibole

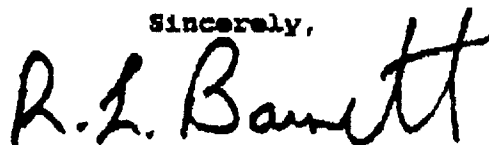
Sample LEV-15 - Grains 1,3,7,9,11,12,13,14,16,18 - ilmenite
Grain 4 - magnetite
Grains 5 - spinel
Grains 8,10,15,17 - rutile

Sample LEV-19 - Grains 1,2,3,5,9-16,23,24 - ilmenite
Grain 3 - amphibole
Grain 19 - apatite
Grain 20 - phlogopite-biotite ss.
Grains 21,22 - in plastic

Sample LEV-20 - Grain 1 - phlogopite-biotite ss.
Grains 2,3 - ilmenite
Grain 3 - amphibole

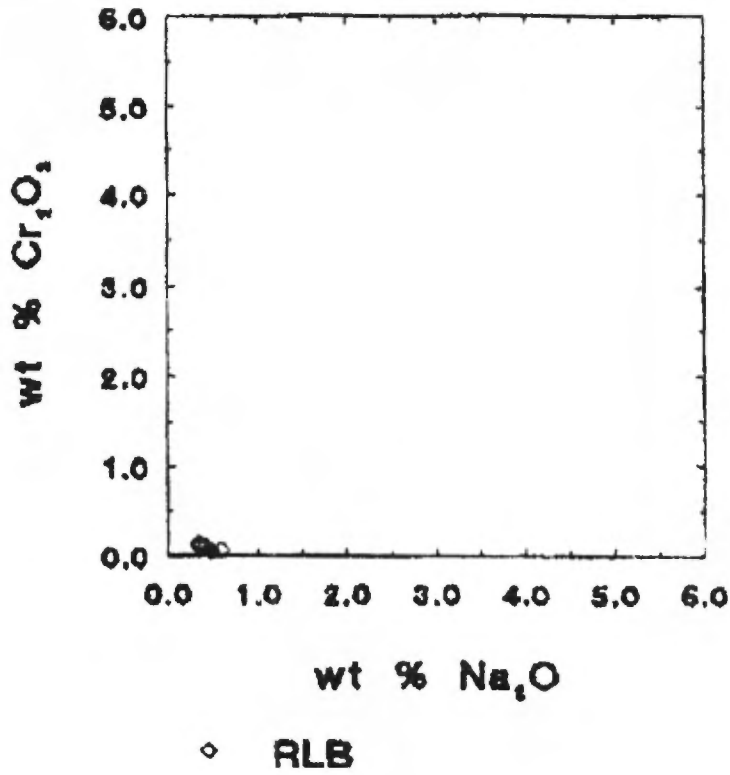
Sample LEV-21 - Grains 1-3,11,12,13,19,20 - rutile
Grains 8,9,10,15,16,17 - ilmenite
Grain 18 ilmenite

Sincerely,

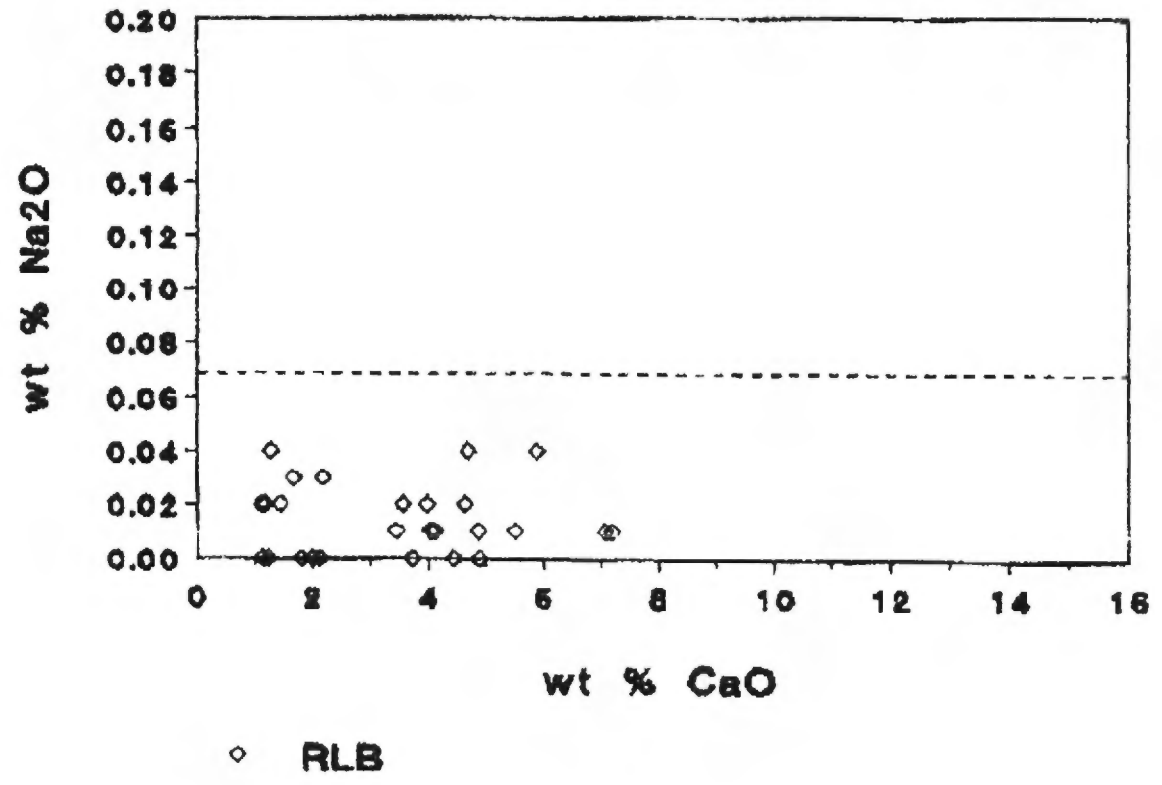


R. L. Barnett

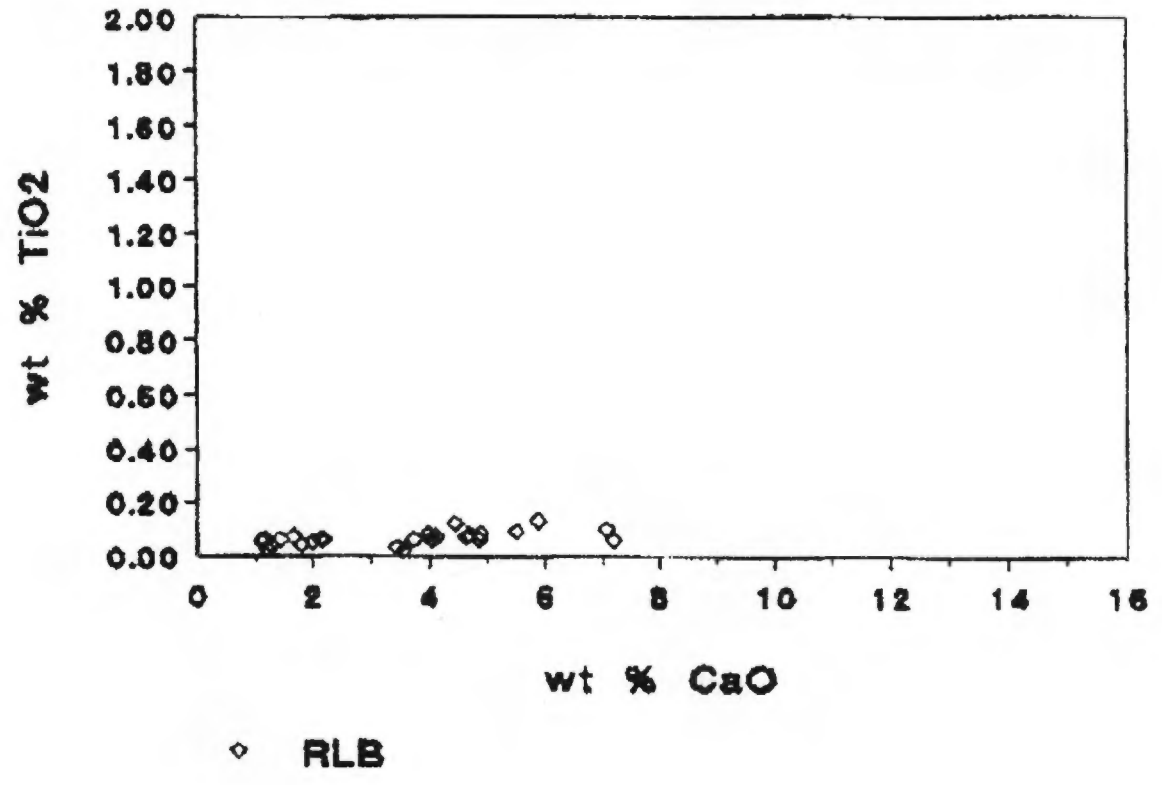
CLINOPYROXENE
TANDEM RESOURCES December 18 2001



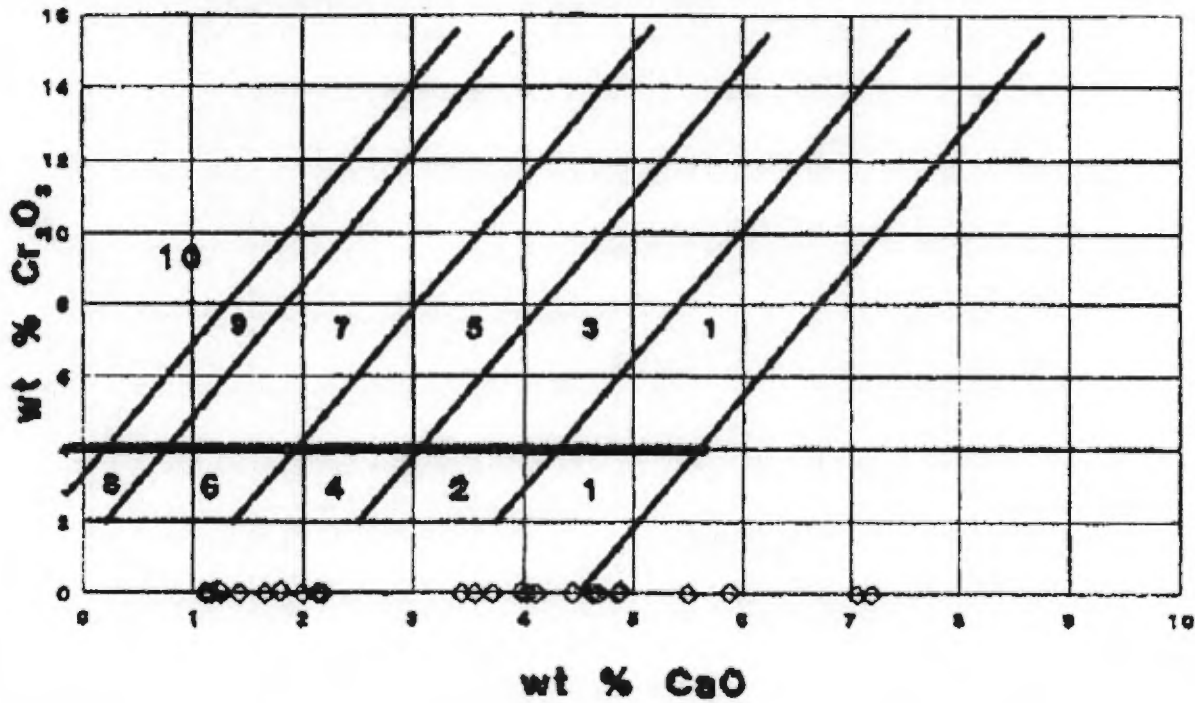
ECLOGITIC GARNET TANDEM RESOURCES December 18 2001



ECLOGITIC GARNET TANDEM RESOURCES December 18 2001



ECLOGITIC GARNET TANDEM RESOURCES December 18 2001



◇ RLB

SAMPLE NUMBER: JMG

DATE OF SUBMISSION: SEPTEMBER 2001

CLIENT: DIAMOND DISCOVERIES INTERNATIONAL

TOTAL CONCENTRATE RECEIVED: 61.2 SIZE FRACTION: <5.0 millimetres

MAGNETIC FRACTION: 0 grams
NONMAGNETIC FRACTION: 61.2 grams
TOTAL 61.2 grams

COARSE OR FINER FRACTION AVAILABLE?: NO

PETROLOGY BY: RJD

TOTAL CONCENTRATE EXAMINED: 3 grams

DATE: MARCH 2002

NUMBER GRAINS SUBMITTED FOR ANALYSES:

ELECTRON MICROPROBE: RL.BARNETT GEOLOGICAL SERVICES, LAMBETH ONTARIO

SUBMISSION DATE:

COLOUR	GARNET				PYROXENE				OLIVINE	MICA		OPAQUES					OTHER				
	PYROPE	ECLOGITE	ANDRADITE	ALM.D	Cr DIOP	Cr Cpx	ENSTATTITE	AUGITE	OLIVINE	PHLOGO	BIOTITE	CHROMITE	Mg SILICATE	PENOV	MAG	PYRITE	MUTILE	AMPHI	SPHENE	ZIR	CORUN.
PURPLE																					
LILAC																					
RED																					
ORANGE				75%																	
PINK																					
BROWN																					
BLACK											Tr.			10%		Tr.?	15%				
Br. GREEN																					
Dk. GREEN																					
YELLOW																					
CLEAR																					
SILVER																					
TOTAL																					

Tr.: Trace (<1%)

g : grains

KIMBERLITE OR RELATED MINERALS: NO

DISTANCE ESTIMATE:

TOTAL KIMBERLITE OR RELATED MINERALS:

OTHER MINERALS OF INTEREST:


COMMENTS: rusty coarse-grained metamorphic rock fragments all consisting of almandine garnet - hornblende - magnetite -
biotite - quartz - calcite

RUSTY METAMORPHIC ROCK FRAGMENTS

SIGNED BY:

ROBERT J. DILLMAN

ARJADEE PROSPECTING


 March 20/02

SAMPLE NUMBER: HD-26 S

DATE OF SUBMISSION: SEPTEMBER 2001

CLIENT: DIAMOND DISCOVERIES INTERNATIONAL

TOTAL CONCENTRATE RECEIVED: 2.9 SIZE FRACTION: < 0.5 millimetres

MAGNETIC FRACTION: 0 grams
 NONMAGNETIC FRACTION: 2.9 grams
 TOTAL 2.9 grams
 COARSE OR FINER FRACTION AVAILABLE?: ?
 PETROLOGY BY: RJD

TOTAL CONCENTRATE EXAMINED: 2.9 grams DATE: MARCH 2002

NUMBER GRAINS SUBMITTED FOR ANALYSES:

ELECTRON MICROPROBE: RL BARNETT GEOLOGICAL SERVICES, LAMBETH ONTARIO

SUBMISSION DATE:

COLOUR	GARNET				PYROXENE				OLIVINE	MICA		OPAQUES					AMPH	SPHENE	OTHER	
	PYROPE	ECLOGITE	ANDRADITE	OTHER %	Cr DIOPSIDE	Cr CPIX	EMSTATITE	AUGITE	OLIVINE	PHLOGOPITE	BIOTITE	CHROMITE	Mg ILMENITE	PEROVSKITE	PYRITE	RUTILE	AMPH	SPHENE	CORUN.	
PURPLE																				
LILAC																				
RED																				
ORANGE																				0.25%
PINK																				0.75%
BROWN																				
BLACK																				
Br. GREEN																				
DL. GREEN																				
YELLOW																				
CLEAR																				
SILVER																				
TOTAL																				

Tr.: Trace (<1%) g: grains

KIMBERLITE OR RELATED MINERALS: NO

DISTANCE ESTIMATE:

TOTAL KIMBERLITE OR RELATED MINERALS: 0

OTHER MINERALS OF INTEREST: red oxide on 1% of black metallic opaques and amphibole.
 possibly copper related.

SIGNED BY:

COMMENTS: abundant shapeless / anderal light green amphibole or olivine?, 1% magnetite crystals
 many as inclusions in amphibole grains, 1 pyrite with chalcopyrite inclusion, 1% clear apatite,
 sample is unique, some black opaques could be rare earth's?
 AMPHIBOLE-OLIVINE? DIKE

ROBERT J. DILLMAN

ARJADEE PROSPECTING

SAMPLE NUMBER: **AY - 5**

DATE OF SUBMISSION: **SEPTEMBER 2001**

CLIENT: **DIAMOND DISCOVERIES INTERNATIONAL**

TOTAL CONCENTRATE RECEIVED: **62.5** SIZE FRACTION: **<1.0** millimetres

MAGNETIC FRACTION: **3.5** grams
 NONMAGNETIC FRACTION: **59** grams
 TOTAL **62.5** grams

COARSE OR FINER FRACTION AVAILABLE?:

PETROLOGY BY: **RJD**

TOTAL CONCENTRATE EXAMINED: **59** grams

DATE: **APRIL 2002**

NUMBER GRAINS SUBMITTED FOR ANALYSES:

ELECTRON MICROPROBE: **RL BARNETT GEOLOGICAL SERVICES, LAMBETH ONTARIO**

SUBMISSION DATE:

COLOUR	GARNET				PYROXENE				OLIVINE	MICA		OPAQUES					OTHER							
	PYROPE	ECLOGITE	ANDRADITE	ALMID	Cr DIOP	Cr CPX	ENSTATITE	AUGITE	OLIVINE	PHLOGO	BIOTITE	CHROMITE	Mg ILMENITE	PEROV	MAG	PYRITE	RUTILE	AMPHL	SPHENE	ZIR	CORUN.			
PURPLE																					1 g			
LRAC																					Tr.			
RED																					Tr.			
ORANGE				45%																	?			
PINK				50%																	7 g?			
BROWN																					Tr.			
BLACK			3 g?								5 g										1%			
Bv. GREEN																								
Dk. GREEN							3 g																	
YELLOW																								
CLEAR																								
SILVER																								
TOTAL			3 g?	95%			3 g				5 g										1%	Tr.	Tr.	7 g?

Tr. : Trace (<1%) g : grains

KIMBERLITE OR RELATED MINERALS: **?**

DISTANCE ESTIMATE: **potential lamprophyre in area.**

TOTAL KIMBERLITE OR RELATED MINERALS:

OTHER MINERALS OF INTEREST:

COMMENTS: several black flakes and clusters of mica, some with quartz, metamorphic source, several mica without quartz could be lamprophyric, fresh pink garnet, several euhedral crystals of potential andradite. Potential pink corundum fragments.

SIGNED BY:

RJD Apr 16/02

ROBERT J. DILLMAN

ARJADEE PROSPECTING

04/19/2002 16:12 5192649278

ARJADEE PROSPECTING

PAGE 01

**HEAVY MINERAL CONCENTRATE DESCRIPTIONS: TORNGAT PROJECT
DIAMOND DISCOVERIES INTERNATIONAL
PETROLOGY BY: ROBERT DILLMAN, ARJADEE PROSPECTING
DATE: AUGUST 9, 2001
MINIMUM SPECIFIC GRAVITY OF CONCENTRATES: 3.0
NONMAGNETIC FRACTIONS**

MCW-4A +0.5 mm

- 85% pink and orange almandine, 6 pink-purple grains; Ca-almandine?, 2 orange-red.
- 15% amphibole; 75% brown amphibole, fresh grains source in area, 25% black hornblende.

VEN-2

P.E.M. 0001463

- 17 orange and orange-red almandine.
- 9 green clinopyroxene, 2 Cr-cpx.
- 4 rutile.
- 4 ilmenite.
- 1 rock fragment with euhedral crystals of orange-red garnets and 1 brown biotite pellet in fine silvery-grey mica matrix; garnet gneiss?

VEN-2A -1.0 mm

P.E.M. 0001463

- 80% pink and orange almandine garnet, some orange-red, several yellow spessartine?
- 20% black and dark brown amphibole.
- traces of purple pellets and clear zircon crystals.
- several pyrite.

ARX-1 -2.0 mm

- mica-olivine lamprophyre rock fragments from immediate source.
- 95% greenish-brown and golden-brown mica.
- <5% fine olivine, mostly matrix olivine in composite with mica, 2 megacrystic olivine with silvery-grey oxide? on grain surfaces.
- traces of euhedral and subhedral perovskite, many with white oxide? on grain surface and calcite composites.
- traces of <0.1 mm fragments of clear euhedral rod-like crystals of unknown mineral.
- 2 pink almandine fragments, contamination?
- not as well-mineralized as previous dyke samples, perovskite and olivine megacrysts not abundant.

MCW-6 1 monazite
1 apatite
3 Fe cpx

MCW-8 3 Mg-Ca almandine
5 cpx (low Cr augite)

6-12 abundant rutile & crustal ilmenite *TANDEM - LEVELLAND*

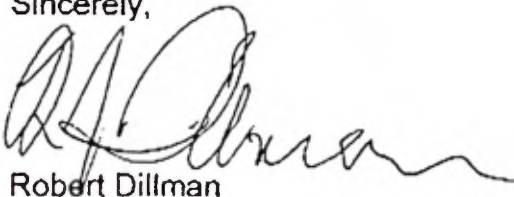
6-17 abundant rutile & crustal ilmenite *P.E.M. 0001463*
1 Ti-magnetite

AY-2 -abundant rutile. *P.E.M. 0001463*

In summary,

- 1.) Kimberlite minerals in DRX-3 sample confirmed. Iron content of olivine is high decreasing potential for diamond. Additional grains available for analyses.
- 2.) Chromite in Chassin-1 is consistent with results of previous sampling in area.
- 3.) Follow-up sampling recommended in areas of Cr- amphibole. These include: MC-2, MCW-3
- ✓ 4.) Igneous source for low Cr-clinopyroxene minerals in: MC-2, MC-3, MCW-3, MCW-6, MCW-8. Source could be kimberlite but remote; probable source could range from peridotite to lamprophyre to alnoite (similar to Montreal area).
- 5.) MC-10 has low Cr picroilmenite which is very rare in the survey area. Big yellow crystals are sphene and could be of gem quality!!
- 6.) Olivine in MC-9 is an anomaly. Probable source close to sample site.
- 7.) Abundant black metallic opaque grains in MC-12, MC-13, MC-14 are crustal ilmenite. (Basaltic flows in area?)
- 8.) Potential carbonatite or related intrusion in the vicinity to MCW-6
- 9.) No chromite in DDI-6-17.

Sincerely,



Robert Dillman

MINISTÈRE DES RESSOURCES NATURELLES

5700 4^e AVENUE QUÉBEC C-408

CHARLESBOURG QUÉBEC G1H 6R1

REÇU AU MRN

10 JUIN 2002

BUREAU DU REGISTRAIRE

MARC FULLHAM:

SORRY I AM SLOW WITH THE MAPS & REPORTS, BUT I AM STILL WAITING FOR RESULTS FROM LAKEFIELD. ENCLOSED IS A LIST OF SAMPLES STILL TO BE DONE.

I AM SENDING YOU MAPS & REPORTS FOR ALL PROPERTIES OF D.D.I. IN THE TORNGAT REGION

P.E.M. 1473

P.E.M. 1472

P.E.M. 1499

P.E.M. 1463

P.E.M. 1482

P.E.M. 1481

P.E.M. 1483

WILL FORWARD MORE RESULTS AS THEY COME AND THE FINAL REPORT

THANK YOU FOR YOUR PATIENCE

YOURS TRULY



PETER FERDERBER

Diamond Discoveries (8901-278)

Samples Left To Process as of April 5, 02

Sample ID	Weight in Kg	No of Pails	No of Pours	1st Pour	2nd Pours	Disposal	PM*	Dia. Sel.**	Total
5266	224.9	14	30	450.00	9280.00	100.00	130.00	130.00	10090.00
5268	79.3	4	11	450.00	3200.00	100.00	130.00	130.00	4010.00
5269	71.6	4	10	450.00	2880.00	100.00	130.00	130.00	3660.00
5270	105.8	8	22	450.00	6720.00	100.00	130.00	130.00	7530.00
5271	185.2	8	25	450.00	7680.00	100.00	130.00	130.00	8490.00
5272	194.2	9	26	450.00	8000.00	100.00	130.00	130.00	8810.00
5273	19.4	1	3	450.00	640.00	100.00	130.00	130.00	1450.00
5274	159.4	9	21	450.00	6400.00	100.00	130.00	130.00	7210.00
5277	121.4	5	16	450.00	4800.00	100.00	130.00	130.00	5610.00
5278	251.6	12	34	450.00	10560.00	100.00	130.00	130.00	11370.00
5279	55.8	3	7	450.00	1920.00	100.00	130.00	130.00	2730.00
5283	42.9	2	6	450.00	1600.00	100.00	130.00	130.00	2410.00
5284	11.3	1	2	450.00	320.00	100.00	130.00	130.00	1130.00
5285	4.4	1	1	450.00	0.00	100.00	130.00	130.00	810.00
5286	37.4	2	5	450.00	1280.00	100.00	130.00	130.00	2090.00
5287	115	6	15	450.00	4400.00	100.00	130.00	130.00	5280.00
5288	218.9	9	29	450.00	8960.00	100.00	130.00	130.00	9770.00
5289	155.3	7	21	450.00	6400.00	100.00	130.00	130.00	7210.00
5290	104.3	5	14	450.00	4180.00	100.00	130.00	130.00	4970.00
5295	78	7	10	450.00	2080.00	100.00	130.00	130.00	3690.00
5296	66.8	4	9	450.00	2580.00	100.00	130.00	130.00	3370.00
5297	54.5	3	7	450.00	1920.00	100.00	130.00	130.00	2730.00
5298	22.3	3	3	450.00	640.00	100.00	130.00	130.00	1450.00
5884	187.3	6	22	450.00	6720.00	100.00	130.00	130.00	7530.00
21101	30.9	1	4	450.00	980.00	100.00	130.00	130.00	1770.00
21106	8.9	1	1	450.00	0.00	100.00	130.00	130.00	810.00
21107	264.8	10	35	450.00	10880.00	100.00	130.00	130.00	11690.00
5263 b	32.3	1	4	450.00	960.00	100.00	130.00	130.00	1770.00
L.V.13 CORE	54.03	3 bags	?	0.00	0.00	0.00	0.00	0.00	0.00
L.V.14 HQ core	36.77	2 bags	?	0.00	0.00	0.00	0.00	0.00	0.00
Total Weight 3035 kg									3139,480.00

* PM = Project Management

** Diamond Selection - this charge applies for zero diamonds; incremental charges apply for greater than zero diamonds and can be furnished on request.