2009 UPDATE OF ACTIVITIES
ON THE
LEADBETTER DIAMOND PROJECT

(Pursuant to National Instrument 43-101 of the Canadian Securities Administrators)

NTS 42C/2, Chabanel Township, Ontario

Centered at Latitude: 48^o 03' 57"N, Longitude: 84^o 42' 15"E or 671,030E; 5,326,160N (UTM, NAD83, zone 16)

For

DIANOR RESOURCES INC.

649 – 3rd Avenue, 2nd Floor

Val-d'Or, Quebec J9P 1S7

Tel: 819-825-7090

By

Carl G. Verley, PGeo
Amerlin Exploration Services Ltd.
2150 – 1851 Savage Road
Richmond, B.C. Canada V6V 1R1
Tel: 604-821-1088

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1.0 Summary

The Leadbetter Diamond Project is comprised of 2 contiguous properties (Leadbetter and Leadbetter Extension), 1,590 hectares in total area, located 12 kilometres northeast of the town of Wawa, Ontario. A separate 3-claim block forms another part of the original Leadbetter property at Arliss Lake. This report is prepared for the purpose of providing an update and summary compilation of results received to date and future exploration and development proposals for the Leadbetter Diamond Project.

Figure 1. Location of Leadbetter project.
(Some of the more significant diamond-bearing kimberlites, such as Ekati, Diavik and Victor are denoted by yellow diamonds)

Dianor Resources Inc has a 100% ownership interest in the Leadbetter and Leadbetter Extension Properties, subject to a 20% gross overriding royalty (GOR) for diamonds and a 1.5% GOR for all other metals and minerals in favour of 3814793 Canada Inc. Currently the gross overriding royalty (GOR) has been decreased to 15.44%.

The Leadbetter diamond project is underlain by Archean age metavolcanics and metasediments that have been intruded by Paleoproterozoic mafic dykes and pyroxenite intrusions. Diamonds were discovered in an outcropping conglomeratic unit within the volcano-sedimentary succession in 2004. Reconnaissance diamond drilling of the entire Leadbetter conglomerate has enabled the preliminary subdivision of it into 3 units: a basal, mixed volcanic - volcaniclastic, conglomeratic unit (S1CV), the main Leadbetter diamond-bearing conglomerate (S1C) and an overlying conglomerate (S1CO). Diamonds have been recovered from all 3 units. In addition, a suite of minerals (garnet, chromite, ilmenite, clinopyroxene, olivine and corundum) characteristic of conventional diamond deposits occurs in the conglomerate and shows evidence of minimal transport from source. In terms of the sedimentary environment and deposit model, the conglomerates are interpreted to be part of an alluvial fan complex, which was probably subjected to seasonal flushing that transported and concentrated diamonds into discreet channels that are now preserved as the higher grade zones. Gold values have been reported from all three conglomerate units, as have rubies and sapphires. These commodities could be significant by-products should a commercial mining operation be established.

Exploration, by Dianor, consisted of three phases of diamond drilling totalling 157 holes for 47,532.51 metres (108 NQ holes totalling 42,684.68 metres, 38 BQ holes totalling 3,038.83 metres and 11 HQ holes totalling 1,809.00 metres) and test pitting of representative areas across the width and breadth of the conglomerate outcrop. The test pitting of 105 sites was completed and the samples, weighing on average 5 tonnes, were processed to recover diamonds through a dense media separation (“DMS”) plant at SGS Lakefield Research in Lakefield Ontario. Of the 94 pits in the conglomerate a total of 349 tonnes was processed, yielding 3,603 diamonds weighing 82.7 carats. An additional 23 test pits were sampled in 2006, but have not yet been processed by DMS. Also in 2006, four of the original test pits were resampled, but with 70 to 80 tonnes collected at each site. These samples were processed by DMS at Kennecott Exploration Canada Inc’s facility in Thunder Bay. The 298 tonnes of material processed in Thunder Bay yielded 2,911 diamonds weighting in total 82.82 carats. The largest diamonds recovered were 1.522 and 1.011 carats in size. Audit of the tailings recovered an additional 354 diamonds weighing 6.653 carats. Sample grades (including stones recovered in audit of tailings) for the larger samples of conglomerate processed at the Kennecott facility range from 11.69 to 42.53 cpht (carats per hundred tones). Extrapolation of these grades as “average” grades for the rest of the diamondiferous conglomerate is not possible due to insufficient sample density. Collection of additional large samples will be required in order to assess the lateral and down dip grade variations in the conglomerate units. In addition, continuous samples of NQ diamond drill core have returned significant variations in diamond contents which suggest that high-grade zones in excess of 100 cpht are possible in the conglomerate. Estimated true thicknesses of the high grade intervals tested to date range from 15.80 to 32.95 metres and average 23.98 metres with diamond content ranging from 113.7 to 281.8 cpht

In conjunction, with the drilling and test pitting, geological mapping of the property was undertaken. Airborne geophysical surveys (magnetic, electromagnetic and radiometric) and ground penetrating radar surveys of Quaternary sediments were conducted. Test sampling of an area of Quaternary gravels was undertaken in order to investigate the potential for alluvial diamonds in this material.

Drill core was routinely split and samples sent out for recovery of diamonds by caustic fusion techniques. To date complete results have been received from 24 holes, 18 of which intersected the diamondiferous horizons. Due to an insufficient amount of results at the present time, no attempt at a mineral resource or mineral reserve estimate has been made.

Specific gravity determinations were measured from samples of drill core. The specific gravity measurements and 139 of the 157 drill holes were compiled into a model used to estimate the volume and tonnage of the Leadbetter conglomerate. The results of this work indicate ranges for preliminary tonnages of the conglomerate units, based on an uncertainty of approximately 3 percent for the conglomerate envelopes, as tabulated below.

Table 1. Ranges for Preliminary Tonnage Estimates of the Diamondiferous Conglomerates

	Tonnage Ranges (metric tonnes*)		
Unit	**High**	**Median**	**Low**
S1C	377,375,000	366,375,000	355,375,000
S1CV	103,510,000	100,510,000	97,510,000
S1CO	102,115,000	99,115,000	96,115,000
Total	**583,000,000**	**566,000,000**	**549,000,000**

* 1 metric tonne = 1000 kilograms

Results to date demonstrate that there is a sufficiently large volume of diamondiferous rock on the property. Based on that and the encouraging diamond recoveries to date further exploration is warranted in order to determine the grade variations within the conglomerate and to obtain representative parcels of diamonds from the various conglomerate units in order to determine an average value for the diamonds.

A staged program is recommended in order to continue the evaluation of the conglomerates. The first phase is processing of drill core from the North Sector with further infill HQ core drilling in order to better define diamond variations in the conglomerates in the North Sector. The extensive size of the diamond-bearing Leadbetter conglomerate will necessitate taking a number of bulk samples at differing levels throughout the deposit in order to firmly establish a mineral resource/reserve estimate. Underground declines are recommended to reach these zones and acquire bulk samples. The proposed bulk sampling is of sufficient size as to justify the purchase and construction of a Dense Media Separation plant (“DMS”) on site, in order to expedite result reporting and timely development of the project. Further metallurgical testing is also recommended in order to determine if cost effective methods for upgrading the diamondiferous conglomerate can be achieved.

The estimated cost of the first phase program is $23,000,000; second phase work is estimated to cost $9,000,000, for a total program cost of $32,000,000.

2.0 Introduction

This report was prepared at the request of Mr. John M. Ryder, President of Dianor Resources Inc. as a NI 43-101 compliant report providing an update and summary compilation of results received to date and future exploration and development proposals for the diamondiferous Leadbetter conglomerate. In addition, the report is provided to maintain and compile Dianor's continuous disclosure of work and results thereof on the Leadbetter diamond property.

Sources of information for this report came from the many technical papers and reports on the property by authors cited throughout the text and listed in the *Reference* section at the end of this report.

The author of this report has visited the Leadbetter project during the period May 16 to 22, 2005 during which time he examined the sampling in progress and samples sites and again from September 16 to October 5, 2005. In 2006 he was on site for 49 days. In addition, he prepared a preliminary geological map illustrating the distribution of the diamond-bearing lithologies, as they were understood at that time. He has met with personnel and reviewed DMS and caustic fusion processing operations at SGS Lakefield Research, Saskatchewan Research and Kennecott Exploration Canada Inc's facilities in Thunder Bay, Ontario.

3.0 Reliance on Other Experts

The author of this report relied on the information contained on the Ontario Ministry of Northern Development and Mines website concerning the title and status of the *Leadbetter Property* and on information supplied by Dianor Resources Inc. concerning the title and status of the *Leadbetter Extension Property*, as well as legal agreements concerning both properties.

4.0 Property Description And Location

The Leadbetter project area consists of two contiguous land packages: the *Leadbetter Property* and *Leadbetter Extension Property*. In addition, a group of 3 contiguous claims, located at Arliss Lake, comprises another part of the project area, and are part of the original Leadbetter property. All of the blocks are located in the central and southeast area of Chabanel Township which is within the Mining District of Algoma; Sault Ste. Marie area of Northwestern Ontario (Figure 2). The combined Leadbetter and Leadbetter Extension properties consist of unpatented (mining rights) and patented (surface and mining rights) claims, totaling 1,590 hectares or 16.0 square kilometers.

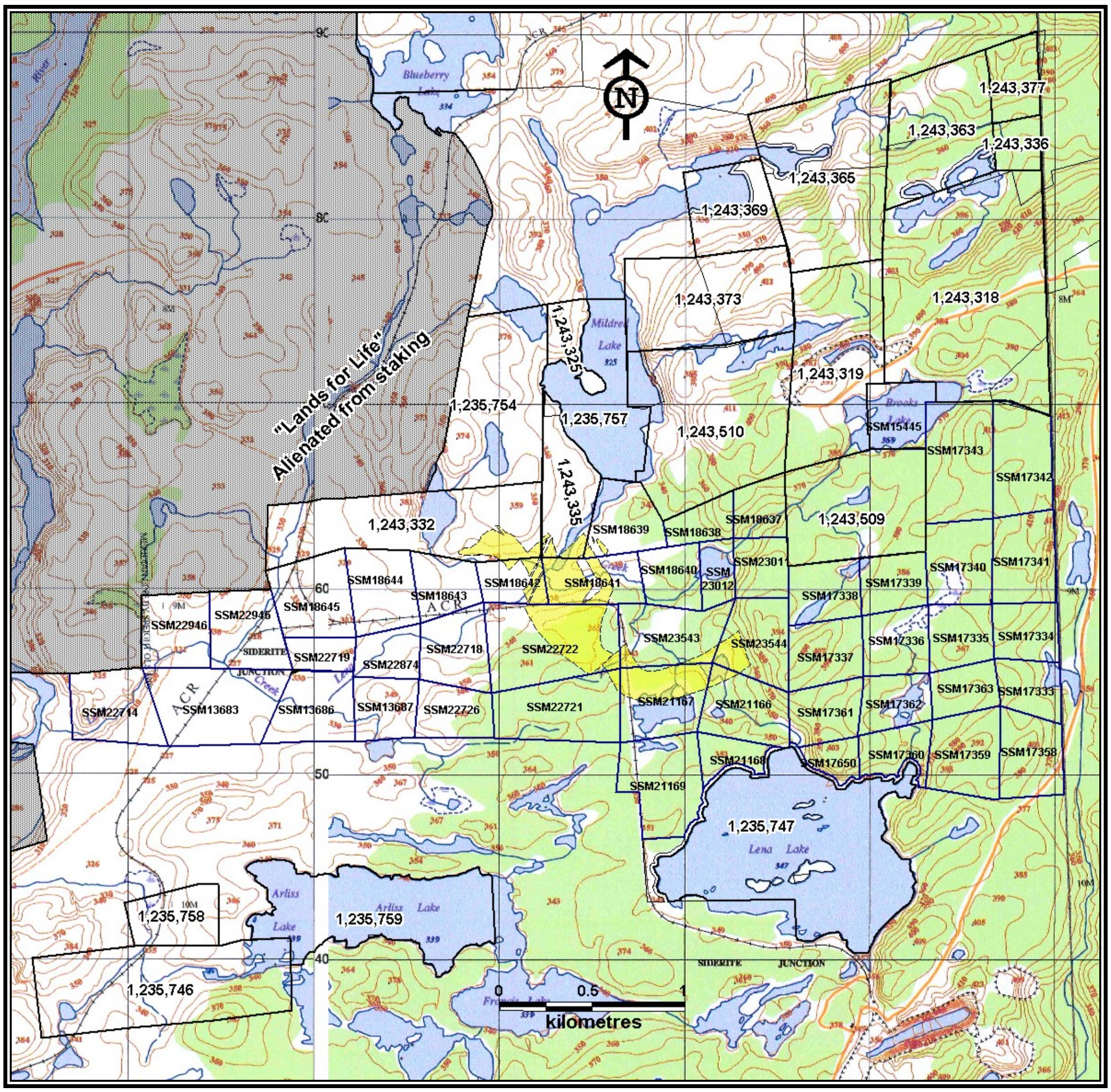


Figure 2. Claim location map

Note: claims of the *Leadbetter Property* are outlined in black with haloed 7 digit claim numbers; patented claims of the *Leadbetter Extension Property* are outlined in dark blue with SSM series claim numbers. The yellow tone band denotes the surface trace of the Leadbetter diamondiferous conglomerate sequence.

The property is situated 12 kilometers northeast of the Town of Wawa and 6 kilometers west of the Town of Hawk Junction (from other major centers, approximately: 1,100 kilometers northwest of Toronto, 220 kilometers north of Sault Ste. Marie, and 520 kilometers east of Thunder Bay). Wawa is located on the Trans Canada Highway #17. The diamond-bearing discovery outcrops on the *Leadbetter Property* are centered at 671,030E, 5,326,160N (UTM, NAD83, zone 16). The *Leadbetter Property* consists of unsurveyed mining claims (19 in number), whereas the *Leadbetter Extension Property* is comprised of surveyed patented mining claims (49 in number).

Table 2. Unpatented mining claims constituting the Leadbetter Property

Claim No.	Township	Record Date	Expiry Date	Area	Owner
1243332	Chabanel	16-Sep-03	16-Sep-14	50.27	3814793 Canada Inc
1235754	Chabanel	27-Nov-02	27-Nov-14	47.52	3814793 Canada Inc
1243335	Chabanel	16-Sep-03	16-Sep-14	19.3	3814793 Canada Inc
1235757	Chabanel	22-Nov-02	12-June-17	31.15	3814793 Canada Inc
1243325	Chabanel	02-Oct-02	02-Oct-14	8.237	3814793 Canada Inc
1243510	Chabanel	16-Sep-03	16-Sep-14	66.75	3814793 Canada Inc
1243373	Chabanel	12-May-03	12-May-15	44.02	3814793 Canada Inc
1243369	Chabanel	27-May-03	27-May-15	21.5	3814793 Canada Inc
1243365	Chabanel	27-May-03	27-May-15	58.17	3814793 Canada Inc
1243319	Chabanel	16-Sep-03	16-Sep-14	49.22	3814793 Canada Inc
1243509	Chabanel	16-Sep-03	16-Sep-14	42.01	3814793 Canada Inc
1243318	Chabanel	16-Sep-03	16-Sep-14	103.9	3814793 Canada Inc
1243363	Chabanel	27-May-03	27-May-15	37.95	3814793 Canada Inc
1243377	Chabanel	27-May-03	27-May-15	11.52	3814793 Canada Inc
1243336	Chabanel	16-Sep-03	16-Sep-14	7.004	3814793 Canada Inc
1235746*	Chabanel	22-Nov-02	22-Nov-09	57.89	3814793 Canada Inc
1235759*	Chabanel	22-Nov-02	22-Nov-09	51.82	3814793 Canada Inc
1235758*	Chabanel	22-Nov-02	22-Nov-09	14.33	3814793 Canada Inc
1235747	Chabanel	22-Nov-02	22-Nov-14	91.08	3814793 Canada Inc
				813.641	

*Arliss Lake Claims

Table 3. Patented mining claims constituting the Leadbetter Extension Property

SSM No.	Township	Area	SSM No.	Township	Area
13683	Chabanel	26.80	18639	Chabanel	13.75
13686	Chabanel	15.66	18640	Chabanel	10.49
13687	Chabanel	11.23	18641*	Chabanel	13.60
15445	Chabanel	11.71	18642	Chabanel	8.38
17333	Chabanel	10.02	18643	Chabanel	10.65
17334	Chabanel	10.18	18644	Chabanel	15.46
17335	Chabanel	11.01	18645	Chabanel	17.76
17336	Chabanel	11.08	21166	Chabanel	15.97
17337	Chabanel	11.80	21167	Chabanel	17.56
17338	Chabanel	12.77	21168	Chabanel	6.42
17339	Chabanel	11.07	21169	Chabanel	20.30
17340	Chabanel	15.38	21171	Chabanel	15.39
17341	Chabanel	16.93	22714	Chabanel	17.54
17342	Chabanel	19.95	22718	Chabanel	14.55
17343	Chabanel	21.74	22719	Chabanel	6.52
17358	Chabanel	15.03	22721	Chabanel	22.44
17359	Chabanel	16.73	22722	Chabanel	29.85
17360	Chabanel	9.26	22726	Chabanel	11.32
17361	Chabanel	11.98	22874	Chabanel	9.00
17362	Chabanel	10.79	22945	Chabanel	16.44
17363	Chabanel	9.19	22946	Chabanel	14.87
17650	Chabanel	5.55	23011	Chabanel	9.60
18637	Chabanel	8.66	23012	Chabanel	6.41
18638	Chabanel	7.37	23543	Chabanel	17.73
			23544	Chabanel	15.48
		311.89			357.48

* A 0.48 hectare claim held by others lies within SSM 18641

Both the Leadbetter and Leadbetter Extension Properties were originally acquired by Dianor under the terms of option agreements with the property owners. In 2008, Dianor acquired a 100% ownership interest in the Leadbetter and Leadbetter Extension Properties, subject to a 20% gross overriding royalty (GOR) for diamonds and a 1.5% GOR for all other metals and minerals in favour of the property owners. Currently the gross overriding royalty (GOR) has been decreased to 15.44%.The Leadbetter Extension Property is also subject to a 10% royalty for all minerals in favour of a third party. Dianor can purchase up to one-half of the 20% GOR on both properties by making cash and share payments over a period of 40 months The Company did not proceed with the April 1st 2009 interim payment under the 10% gross overriding royalty (GOR) purchase agreement and on April 16, 2009 the vendor cancelled this agreement dated March 30, 2007. The Company has now acquired 4.56% of the GOR. Definitive agreements provide that in the case of a merger, amalgamation, change in control, successful takeover bid or other similar event involving Dianor, all amounts then outstanding and owing to the property owner and persons associated with him by Dianor under the agreements will become immediately due and payable at their sole and exclusive option, exercised on 30 days' notice.

The Leadbetter diamond project area is situated in a vegetation fume kill zone that resulted from toxic fume release during sintering operations at Algoma Steel's iron sintering plant in Wawa. Vegetation was killed in an area, locally known as the "barren lands", forming a belt 20 kilometres long and 5 kilometres wide extending to the northeast from Wawa. Vegetation in the fume kill zone is recovering. Grasses make up the predominant species in the vegetative cover at present, because of this, during dry summers; there can be extreme fire hazard conditions in the area, resulting in access closures. Consequently, operation of heavy equipment may be limited during closures. This is the only environmental liability that the project area is subject to as far as the writer knows.

The early stage work undertaken on the Leadbetter project area did not require permits. For alluvial sampling conducted on Crown Land a permit was required and was obtained. More extensive drilling and bulk sampling programs will require permits under the Mining Act, R.S.O. 1990, and/or local ordinances that Dianor must secure before proceeding with such work. In May 2009 Dianor was given approval of its mine closure plans allowing it to proceed with its intended 50,000 tonne bulk sampling program, which will consist of the development of 2 underground declines: one testing the North Sector and one the Central Sector.

5.0 Accessibility Climate, Local Resources, Infrastructure and Physiography

The Leadbetter diamond project area is situated in an area of gentle rolling hills. The maximum topographic relief is 110 metres with the lowest point being, Mildred Lake at approximately 325 metres above sea level. Three-fifths of the property is void of vegetation as it lies within the “fume-kill” area caused by sulphur emissions from the Algoma Steel sintering plant in Wawa. A majority of the diamondiferous zones are also void of vegetation and much of the higher elevation areas are void of organics and till cover due to wind erosion and glacial scouring respectively.

Access is by car or truck from the Town of Wawa, either by driving some 7 kilometers from Wawa east along Highway #101 and taking the Loonskin Lake Forest Access Road for some 5 kilometers north around the east side of Wawa Lake to the southeast side of the property, or by taking Trans Canada Highway #17 north from Wawa for some 9 kilometers to the Steephill Falls Road and for another eight kilometers east to the west side of the property. The property can be accessed from Hawk Junction along the old Algoma Central Railway bed west for some 17 kilometers to the north side of the property; Hawk Junction is 8 kilometers due east of the property. The northeast side of the property is accessible by the Loonskin Lake Forest Access Road to the Loonskin-Lucy Mine Road fork (at the south side of Lena Lake) a distance of 4.5 kilometers.

Access can also be made by floatplane to Lena or Mildred Lake from either Wawa or from Hawk Lake. These lakes are in the southeast and central parts of the property respectively.

The property has abundant water supply from lakes and creeks within the property boundaries.

Power is available from Steephill Falls hydroelectric plant operated by Brascan and located approximately 3 kilometres west of the property.

Skilled and experienced mining workforce is available from Hawk Junction and Wawa. Housing and supplies are available in Wawa.

Exploration can be conducted on a year-round basis. The extent of the property provides a large land base for a future production facility, associated tailings facility, and potential waste dumps. Screened gravel and waste can be used for roadbed material.

6.0 History

Previous mineral exploration in the vicinity of the Leadbetter Project area has, since the 1930's focused on gold, iron – such as the carbonate iron formations found at the nearby Lucy and Ruth Mines - and the nickel-copper-platinum group element (PGE) mineralization within the Lena Lake Peridotite Intrusion and the Mildred Lake Peridotite Intrusion. However, there appears to have been negligible exploration work conducted directly on the Leadbetter project area, especially for diamonds.

There are no records of prior ownership of the *Leadbetter Property* before its acquisition by staking in 2002 by Mr. Leadbetter for 3814793 Canada Inc. Algoma Steel Company owned the *Leadbetter Extension Property* prior to 3814793 Canada Inc, entering into a purchase agreement with Algoma Steel in December of 2004 for the surface and mining rights on 49 of Algoma's patented claims adjoining and immediately to the south of the *Leadbetter Property*.

Initial exploration work by Mr. Leadbetter in the area of the Leadbetter project consisted of following up on alluvial diamond and diamond indicator mineral occurrences within the Magpie River valley. The heavy mineral anomalies had been established through a regional sampling program conducted by the Ontario Geological Survey in 1994 (Morris, 1999). The exploration conducted by Mr. Leadbetter resulted in the discovery of 2 macrodiamonds in the Magpie River and a 1.39 carat gem quality diamond recovered from a tributary of the Magpie. Mr. Leadbetter then staked the area at the head of the diamondiferous creek and this became the *Leadbetter Property.*

During 2003 and 2004, Mr. F.T. Archibald, B.Sc., P.Geo, was retained by Mr. Leadbetter to help evaluate the ground.

A field work program, conducted between October 15, 2003 and late November 2004, consisted of line cutting and/or marked-picketed lines (80.7 km.), proton magnetometer (62.2 km) and VLF electromagnetic surveys (24.5 km), rock outcrop sampling, diamond drilling (669.0 metres in four holes), and geological mapping (34.3 km) (Archibald, 2004a).

The VLF-EM survey lines were placed 50 metres apart with stations at every 15.0 metres. The station at Seattle, Washington with a frequency of 24.1 KHz**.** was used for the survey. Two weak to moderate VLF electromagnetic anomalies were located at the southwest corner of Mildred Lake. One corresponds with a northeasterly splay fault, which crosses (offset) across the Mildred Lake Fault. The second corresponds to a weak anomalous trend, which truncates against the Mildred Creek Fault and has been traced in a northwesterly direction for some 400 meters.

The magnetic survey was conducted using an Exploranium-Geometrics "Unimag" proton field and base station magnetometers with sensitivities of plus or minus ten gammas. A total of 62.2 line kilometres of line was surveyed in a north-south direction. Readings were taken every 15.0 metres on lines spaced at approximately 50 metres apart and in some cases 25 metres apart. The magnetic survey located a series of magnetic high anomalies associated with known iron formation to the east of the Mildred lake fault. In the Leadbetter project, the magnetic survey results did not conclusively distinguish anomalies indicative of kimberlite or other possible diamond-bearing lithologies.

A series of 7 diamond drill holes were drilled into the diamond-bearing unit on the Leadbetter property under the supervision of F.T. Archibald, PGeo commencing July 4, 2004. Colbert Diamond Drilling of Timmins, Ontario was the drill contractor. The drilling intersected ‘hetrolithic breccia’ in all holes as tabulated below. Subsequent work has determined that the ‘hetrolithic breccia’ is the same as the diamond bearing rock originally described in Dianor news releases (June 20, 2005) and now referred to as the Leadbetter conglomerate.

In conjunction with the drilling, a number of surface pits were excavated under Mr. Archibald’s supervision (Archibald, 2004a, 2004b). Excavated material from the pits was placed beside each pit. This material was screened down to minus 2 inch material and run through a 9.0 meter long sluice box to produce a heavy mineral concentrate. The heavy mineral concentrates from the sluice were then “panned” down to a smaller concentrate volume, which was sent to SGS Lakefield Research for further processing in order to determine if diamonds were present. The results of SGS Lakefield’s examination of the concentrates indicated that there were 332 diamonds in the material**.** The largest diamond in the parcel had dimensions of 2.94 mm x 2.71 mm x 1.53 mm and weighed 0.11 carats. The stone was also described as a transparent pink octahedral fragment. Mr. Archibald also had SGS Lakefield recover diamond indicator minerals from rock sample Chab B-4. SGS Lakefield recovered 28 grains, 18 of which were chromites and 4 clinopyroxene. Microprobing of these grains indicated that the clinopyroxenes grains fall within the field indicative of a garnet peridotite paragenesis. The chromite exhibited a wide range of MgO contents, none fell within the diamond inclusion field.

An independent third party tested 130.4 kilograms of outcrop material from 5 exposures of the diamondiferous conglomerate. The samples were processed by SGS Lakefield Research using heavy liquid separation. The result of this work yielded a total of 53 diamonds ranging up to +0.600 mm in size from the material sampled. In addition, a total of 99 diamond indicator minerals including pyrope garnets (8), clinopyroxenes, ilmenite (1) and chromite (90) were selected from the material. The single ilmenite had a high MgO content and therefore is likely of mantle derivation. A significant proportion of the chromite grains had high Cr_2O_3 contents and plotted in the diamond inclusion field. The garnets exhibited chemistries indicative of a lherzolitic paragenesis.

In November 2004, under the supervision of the late Winfried Brack, PhD, PGeo Dianor Resources Inc. initiated a due diligence sampling program on the Leadbetter project. The exploration program focused on verifying diamond results obtained by the vendor as well as testing other areas of exposed conglomerate on the property. The work consisted of excavating pits in surface exposures and sampling these (Verley, 2006). A total of 15 pits were excavated and sampled. Of these 11 pits occur along a 400 metre strike-length of the Leadbetter conglomerate. The collected samples were shipped to Saskatchewan Research Council’s laboratory in Saskatoon for recovery of diamonds by caustic fusion process. The results of the work succeeded in demonstrating that a significant microdiamond population exists in the conglomerate. Three large samples, totaling 2.7 tonnes, from three of the pits excavated on the property were also submitted to SGS Lakefield for recovery of diamonds by dense media separation. The composite result was 2.25 carats of diamonds (63 stones,) for a sample average sample grade of 83 cpht in the size fractions collected on 0.85 mm square mesh aperture sieves and greater. The largest stone recovered from the DMS work weighed 0.14 carats. The largest stone recovered from the caustic fusion work measured: 3.50 by 2.72 by 2.40 millimetres in size and weighed 0.1735 carats. In general the stone population consists of approximately 50% white, transparent stones exhibiting excellent preservation (greater than 85% and better). Octahedral forms are common.

During 2005 to 2008, Dianor conducted diamond drilling, alluvial testing and test pit sampling of the conglomerate horizons, as well as testing alluvial materials adjacent to the diamondiferous bedrock exposures for diamond (Verley et al., 2007)

7.0 Geological Setting

7.1 Regional Geology

From a regional perspective the Leadbetter Project area is located in the southern part of the Superior craton. The Craton is one of the largest Archean age blocks and forms the old stable continental nucleus around which younger terranes have been accreted. The Superior is made up of a series of volcano-sedimentary terranes that amalgamated in early Proterozoic times and were then deformed and intruded during the Proterozoic by granitic batholiths.

The Leadbetter Project is situated in the Michipicoten Greenstone Belt – one of the Archean volcano-sedimentary belts within the Superior Craton. This greenstone belt is considered a western extension of the Southern Volcanic Zone of the Abitibi greenstone belt (Ludden et al., 1986), but differs from it in that the mafic and felsic volcanic rocks record three cycles of igneous activity (at approximately 2.89, 2.75 and 2.70 billion years ago- Turek et al., 1982, 1992 and also named the Hawk, Wawa and Catfish assemblages respectively – Williams et al. 1991), compared with one (at approximately 2.75–2.7 billion years ago) in the Abitibi. All of the Michipicoten cycles are bimodal basalt–rhyolite suites with the oldest (2.89 billion years) containing komatiites (Sage and Lightfoot, 1996).

The first cycle of volcanism consists of mafic flow of the Gros Cap greenstone, estimated to range from 600 to 6,000 metres in thickness. The mafic volcanics are overlain by intermediate to felsic volcanics. The volcanics are capped by iron formation conjectured to have formed in a hotspring environment during the later stages of volcanic activity (Goodwin and Shklanka, 1967).

The second cycle of volcanism (Figure 3) is characterized by massive and pillowed, intermediate to mafic, tholeiitic lava flows that are conformably overlain by intermediate to felsic tuff, breccia and minor clastic sedimentary rocks (Williams et al., 1991; Sage, 1994). Intrusive rocks generated by this cycle of magmatism include gabbro to quartz–diorite sills and dykes (Sage, 1994) and syenites (Stott et al., 2002). Termination of the second cycle is also marked by the deposition of iron formation.

A third cycle of volcanism is documented by renewed mafic to felsic volcanism which is succeeded by sediments consisting of greywackes, siltstone and conglomerates. The volcanic component of cycle three consists primarily of pillowed mafic flows with intermediate and felsic pyroclastics prevailing in the upper section of the sequence below the sediments. The sediments are interpreted to have been derived from the cycle two intermediate and felsic volcanics by rapid erosion into relatively shallow water basins (Sage, 1993).

U-Pb dating of zircons by the Ontario Geological Survey (Wyman et al., 2007) has shown that volcanic material (felsic tuff) in the Leadbetter conglomerate is 2.697 billion years old. The age date clearly places the Leadbetter conglomerate in the third cycle of volcanism and suggests that it is 20 million years older that the diamond-bearing “Wawa volcaniclastic” succession located to the north of the Leadbetter project area.

Syn-and post-Kenoran magmatism in the Michipicoten is represented by four events: lamprophyre dyke intrusions at 2.7–2.67 billion years ago (Stott et al., 2002), granite intrusions at 2629–2650 million years ago (Percival and West, 1994), the northwesterly striking Matachewan diabase dyke swarm at 2454 million years ago (Osmani, 2001) and the northeasterly striking Keewenawan dyke swarm at 1142 million years ago (Vallancourt et al., 2003). Lamprophyre dyke emplacement occurred in the Abitibi Greenstone Belt at 2687–2675 million years ago (Wyman and Kerrich, 1993; Wyman and Kerrich, 2002; Ayer et al., 2003), and over a wider range within the Superior Craton between 2.7 and 2.67 billion years ago (Barrie, 1990; Stern and Hanson, 1992). The age of the Sunrise carbonatite intrusion has been dated at 1097 million years (ref Sage, 1993). Pyroxenite intrusions at Lena and Mildred Lake are likely either the same age or younger.

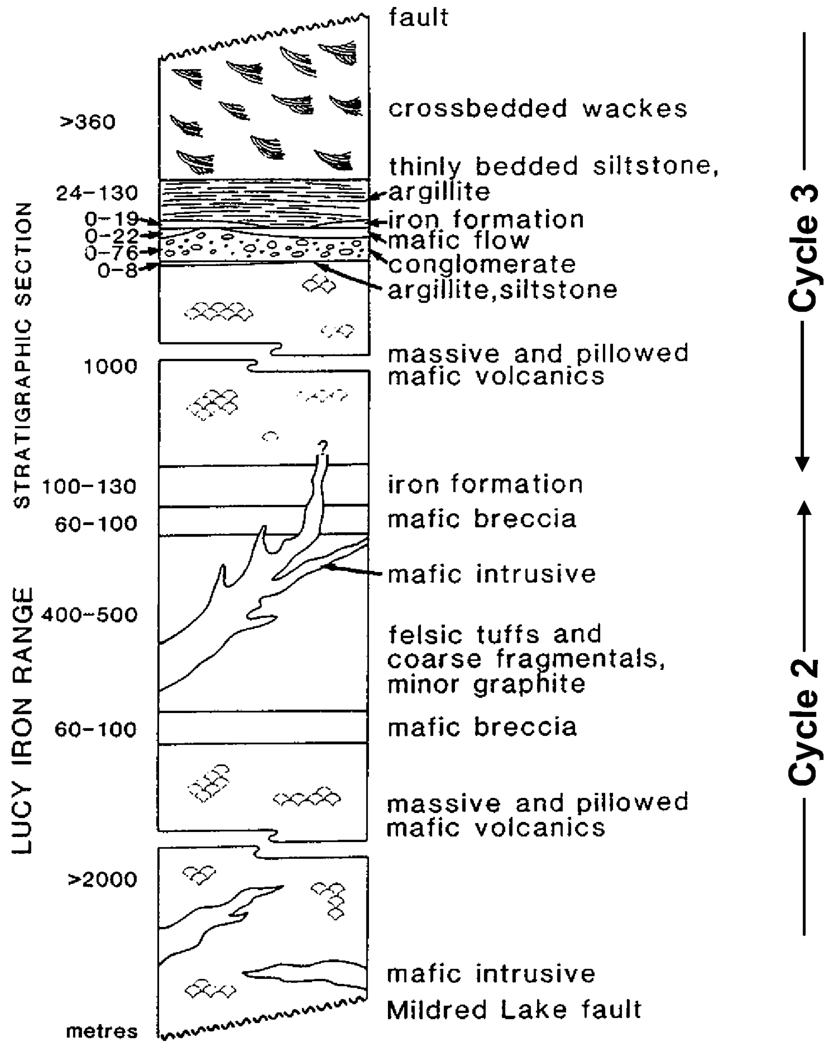


Figure 3. Regional stratigraphic setting of the Leadbetter Project within the Michipicoten Greenstone Belt, Chabanel Township
(from Sage, 1993 with modifications after Arias and Helmstaedt, 1990)

Deformation during the Wawan phase of the Kenoran orogeny (approximately 2.67 billion years ago - Stott, 1997) resulted in large-scale recumbent folding and thrusting of the Michipicoten Greenstone Belt. Upright folding and high-angle reverse faulting (Arias and Helmstaedt, 1990; McGill, 1992) followed this deformation, resulting in local stacking of stratigraphy (Figure 4). A four-stage deformational history for the Michipicoten Greenstone Belt has been recognized by Arias (1996).

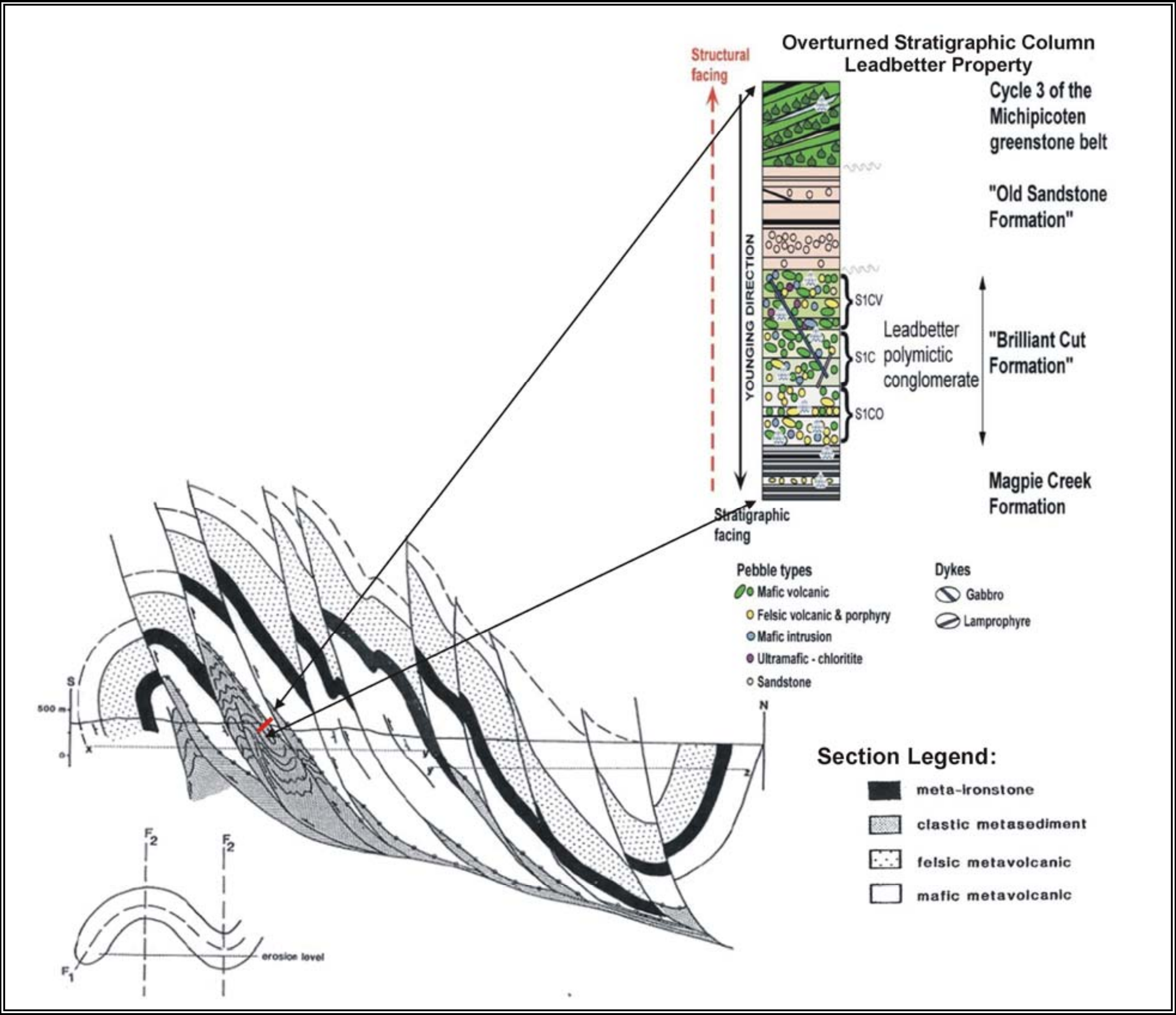


Figure 4. Regional structural model for the Leadbetter Project area (Based on Arias & Helmstaedt, 1991: the structural section is derived from work conducted in the central part of the Michipicoten greenstone belt; the sketch in the lower left illustrates the present configuration of the belt as a regional nappe fold (F_1) refolded about F_2; imbricate thrusts are considered related to F_2)

At present, two tectonic models have been set forth as possible histories for the Early to Middle Archean rocks of the Superior province. The first suggests the Superior province may have formed by repeated accretion of terranes as a result of subduction in a compressional margin (Hoffman, 1989; Williams et al., 1991). This model is supported by seismic, structural and geological data (Calvert et al., 1995; Calvert and Ludden, 1999; Thurston, 2002). Under this model, deformation within the Michipicoten Greenstone Belt resulted from subsequent accretion of volcanic arcs during formation of the belt, and by accretion of the Wawa subprovince to the Superior Craton nucleus (Arias, 1996). The volcanic rocks of Wawa are interpreted to be allochthonous assemblages of island and continental arcs (Sylvester et al., 1987), tectonically transported to their present position (Thurston, 2002).

An alternative model calls for an autochthonous origin for the Michipicoten Greenstone Belt, with greenstones being accumulated in place, erupting through and being deposited upon older units (Thurston, 2002; Ayer et al., 2003). Under this model, the Superior Province would have experienced orderly, autochthonous progression from platforms through rifting of continental fragments, and late assembly during the Kenoran orogeny. This interpretation of all cycles of Michipicoten volcanics as intra-cratonic magmatism is supported by geochemical evidence, which records crustal geochemical signatures and significant contributions from continental passive margin sources (Sage and Lightfoot, 1996).

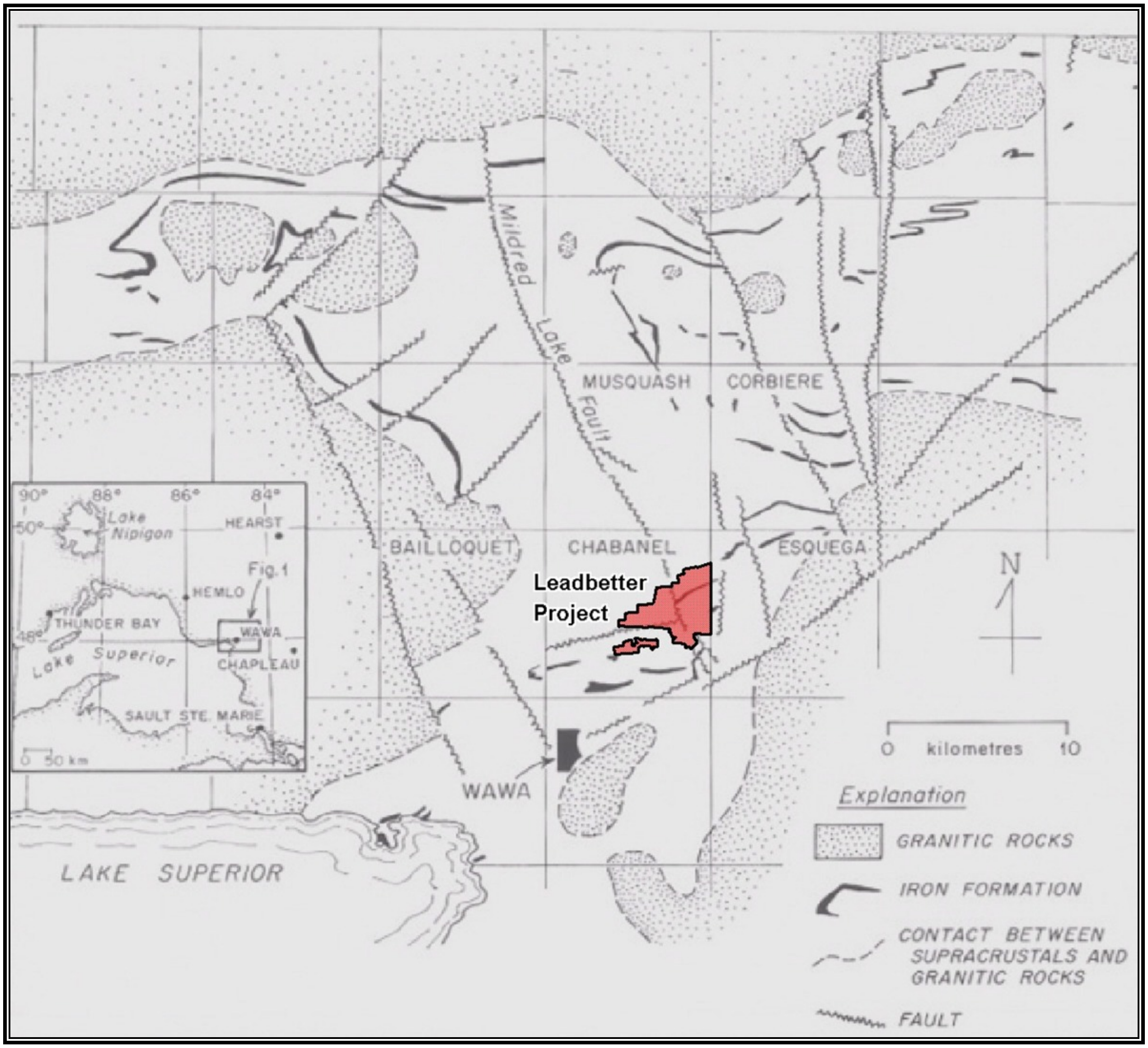


Figure 5. Regional geological setting of the Leadbetter Project (from McGill, 1992)
Note: the non-stippled area containing iron formation and within which the Leadbetter project is situated represents the supracrustal rocks, i.e. metasediments and metavolcanics.

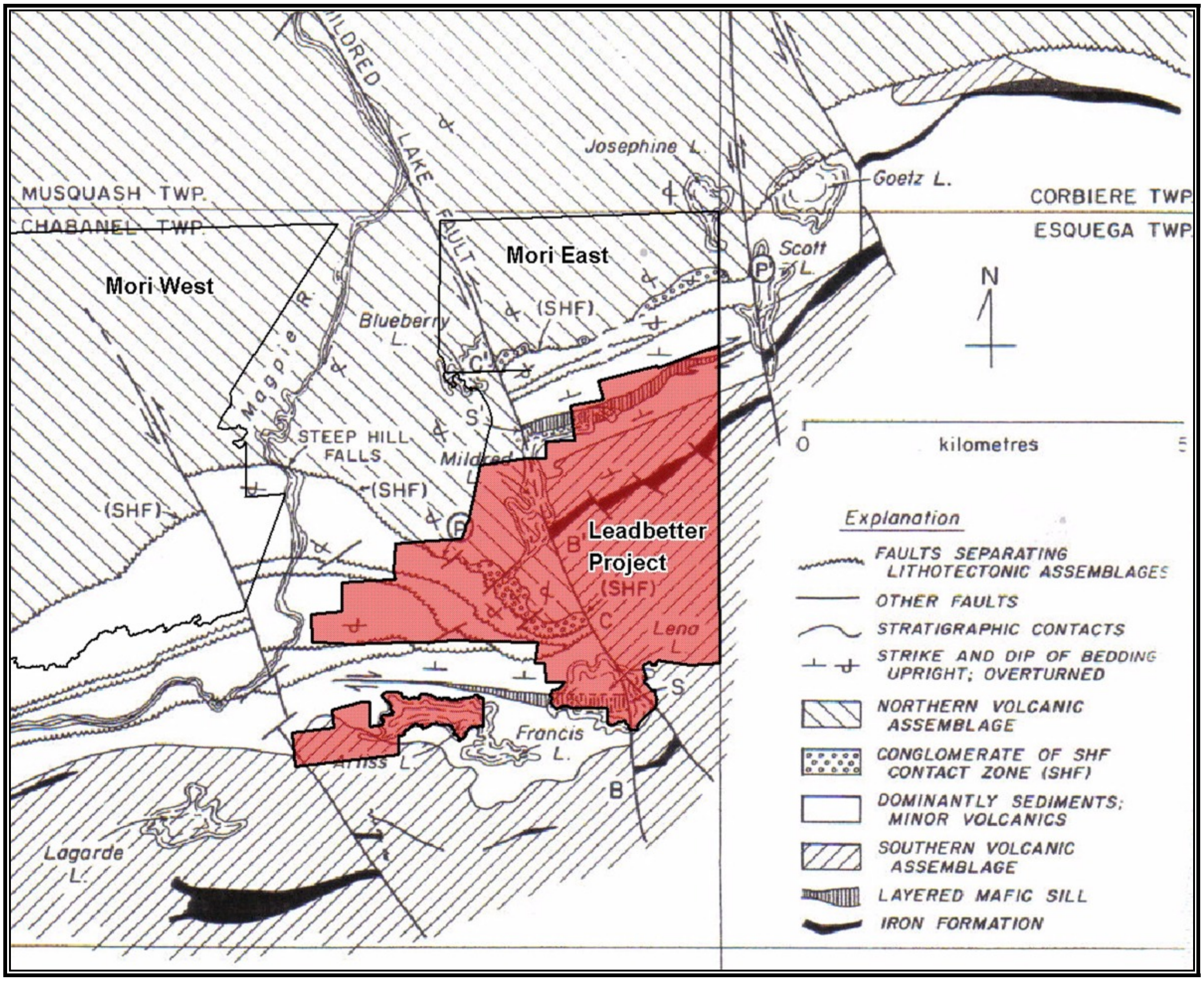


Figure 6. Local geological setting Leadbetter Diamond Project (from McGill, op.cit.)
Note: the diamondiferous conglomerate of the Leadbetter Project area is McGill's "conglomerate of the SHF (Steep Hill Fault) contact zone"

7.2 Property Geology

Preliminary mapping and stratigraphic correlation by Allan R. Miller, PhD, PGeo, (2005a, 2005b and 2006) in conjunction with the work of the late Winfried Brach, PhD, PGeo, Ed Van Hees, PhD, PGeo and MSc candidate Dawn Niedermiller has documented the distribution of lithologies outcropping on the Leadbetter project area. In 2008 Corey Wendland, an MSc student under the supervision of Dr Philip Fralick at Lakehead University, started a study of the sedimentalogical characteristics of the metasedimentary succession on the property. Detailed logging of drill core by and under the supervision of Bernard-Olivier Martel PGeo has enabled the subdivision of the conglomerate and other lithologies into the units tabulated and described below. It is believed that this sequence correlates to Cycle 3 volcanics of Sage (1993). The degree of metamorphism has been determined to be sub-biotite zone greenschist facies based on the mineral assemblage: Mg-chlorite with epidote+actinolite (Miller, 2005a). The lithologies are distributed across the property in a manner illustrated in Figure 7 and 8.

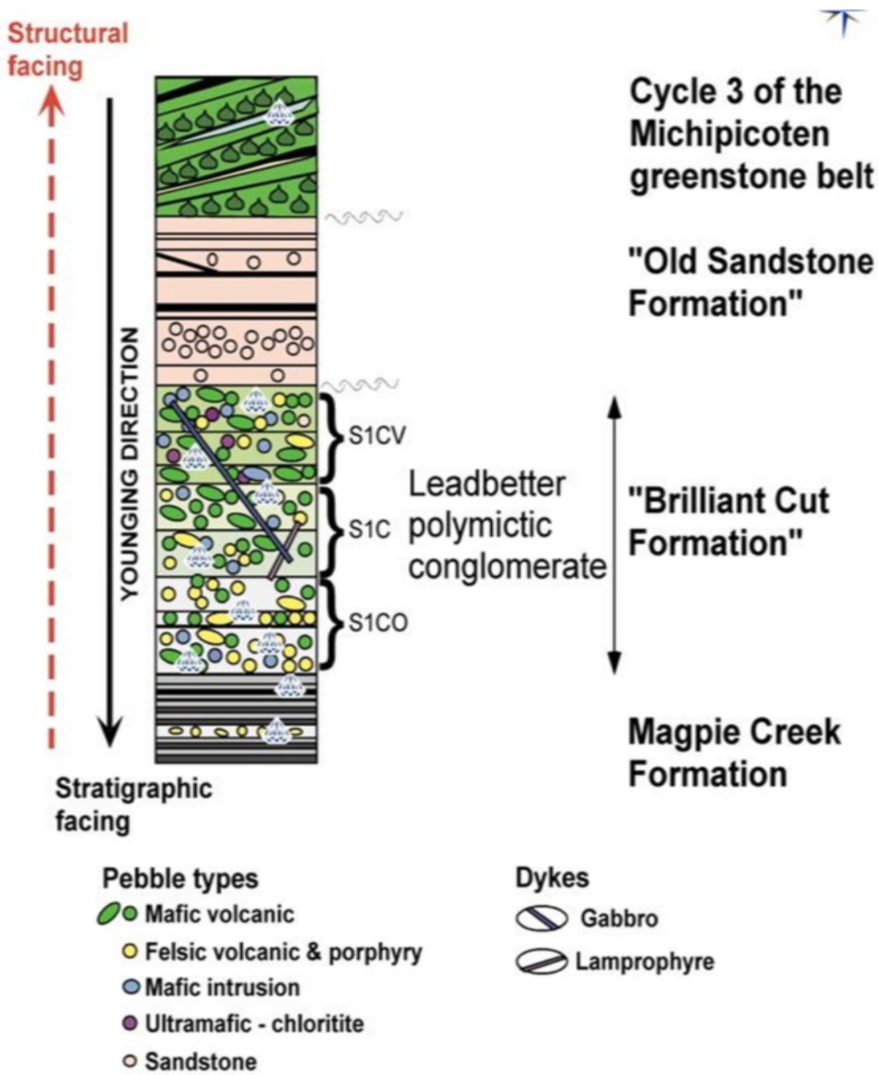


Figure 7. Stratigraphy – Leadbetter Project (from Miller & Associates, 2007)

Basal Volcanic Sequence (V, V3A, V3B, V3R, V2T):

The oldest unit on the property consists of a sequence of grey-green to pale greenish, metavolcanics exhibiting distinct pillow structures, massive flow units, minor interflow argillite-siltstone-fine-grained sandstone and volcaniclastic members as well as rare felsic tuff. The metavolcanics range in composition from basalt to dacite with rare rhyolitic intervals.

The Basal Volcanic sequence crops out in a northwesterly striking band that dips to the northeast across the northern part of the project area. A complete section of the unit is not exposed in the project area, therefore the thickness of it is not known, but is estimated to be in excess of 1000 metres by Sage (op cit).

A basal unit consists of a relatively thin (2 to 20 metres) sequence of pale tan to pinkish weathering, fine to medium-grained, thick to medium bedded metapsammite of probable greywacke composition. Cross bedding is preserved in some areas. Rare, thin silty layers and felsic tuff occur within this unit.

Overlying the pillow lavas is a clastic sedimentary succession, locally called the Brilliant Cut Formation and also referred to as the Leadbetter conglomerate sequence, consisting of the following lithologies.

Conglomerate/Volcanic (S1CV)

This unit is consists of alternating volcanic and sedimentary horizon with occasional intercalated massive flows locally having pillowed texture. Two types of fragmental volcanic horizons can be seen in the unit. The first is a pyroclastic horizon with fragments ranging from ash sized particles to lapilli sized clasts. The unit appears to be a welded tuff. The second is volcaniclastic (clasts/fragments are predominantly mafic volcanic in origin) in nature with the lithic fragments being angular to sub-rounded and although locally monomictic the unit is predominantly polymictic. The beds comprising this unit vary in composition from siltstone to conglomerate and generally display graded bedding/laminae that have been overturned. The alternating sequences are probably the result of two combined phenomenon: 1) synvolcanic sedimentation 2) superposition by folding or thrust faulting. The matrix to the conglomerate is fine grained and contains quartzofeldspathic grains and chlorite. Pentlandite, pyrrhotite, chalcopyrite and pyrite are minor sulphide phases occurring predominantly in the matrix. The true thickness of S1CV is estimated to average 66 metres. Conglomerate of S1CV is very similar to the overlying conglomerate unit (S1C).

Conglomerate (S1C)

This unit, referred to as the Leadbetter Conglomerate, is the main diamond-bearing unit on the property; it is comprised of clast supported polymictic conglomerate that is poorly sorted. Predominantly massive, the unit is rarely stratified and when it is the bedding varies in thickness from 10-30 centimetres to over 1metre with no obvious graded bedding. The sediments range in clast size from mud-sized particles to boulder-sized clasts, which are sub-rounded to rounded, flattened and highly stretched. The matrix is very fine grained and chlorite rich with a minor amount of quartzofeldspathic material. The clasts predominantly consist of volcanics (mafic dominant with lesser felsic clasts) with a minor amount of non-volcanics (siltstone, chert).

Pentlandite, pyrrhotite, chalcopyrite and pyrite are minor sulphide phases occurring predominantly in the matrix.

The “conglomerate” appears to pinch out to the northwest in the project area, but thickens dramatically in the central and eastern parts of the project area where surface exposures give an indicated thickness of up to 300 metres. However, the average true thickness is estimated to be in the order of 110 metres. Deformation of this unit has resulted in stretched or elongated clasts. The degree of stretching is variable suggesting that there are local zones of intense deformation. Deformation appears to have imbricated the unit resulting in an increased thickness due to staking of panels of conglomerate.

The diamondiferous conglomerate is interpreted to represent valley fill deposits in the proximal reaches of an alluvial fan complex (Wendland, 2009) with the matrix supported cobble and boulder conglomerates forming a debris flow sequence. An ultramafic component in the source for the matrix component of the conglomerate is indicated by immobile element geochemistry. The fact that a distinct suite of diamond indicator minerals, consisting of chromite, olivine, and rare ilmenite, pyrope garnet and chrome diopside, have been recovered from the conglomerate makes it unique in comparison to the sparsely diamondiferous Wawa volcaniclastics located to the north, which contain a paucity of conventional indicator minerals. Furthermore, the suite of minerals found in the Leadbetter conglomerates indicates that there was a conventional diamondiferous rock in the source drainage basin, which probably consisted of either kimberlite, lamproite or and upthrust wedge of diamondiferous mantle rocks.

Upper Conglomerate (S1CO)

This unit is a polymictic conglomerate and occurs as either matrix or clast supported depending on the location within the property. The unit is poor to weakly stratified and displays an unequal layering that varies in thickness from very thin (1-3 centimetre) to very thick (>1 metre) and locally displays reversed graded bedding. The sediment grain size varies from silt and mud sized particles to cobble sized clasts and their morphology ranges from sub-rounded to rounded and highly stretched. The matrix is very fine grained and quartzofeldspathic rich, but poor in chlorite. There are three types of predominant clasts in this unit; 1) Quartz and feldspar crystal rich clasts (possibly dacitic-rhyolitic) 2) volcanic clasts (felsic dominant, with lesser mafic clasts) 3) Non volcanic clasts consisting of chert and siltstone. The average true thickness estimated for unit S1CO is 60 metres. Pentlandite, pyrrhotite, chalcopyrite and pyrite are minor sulphide phases occurring predominantly in the matrix.

Magpie Creek Formation: Meta-Argillite/Sandstone (S4A)

Overlying the Leadbetter conglomerate is a succession of thin-bedded and interbedded metapelites and metapsammites with bedding ranging from 1centimetre to greater than 1 metre thick. The bedding may occur as normal graded or it may occur as reverse graded bedding depending on the location on the property. Along with bedding a number of other sedimentary features such as rip-up-clasts, lode casts and flame structures can be identified in the unit. The sediments range in size from mud to sand sized particles. Pentlandite, pyrrhotite and chalcopyrite are minor sulphide phases in the sediments. The top of this unit is not exposed on the property, consequently the thickness is unknown, but work by Sage (op cit.) would indicate that the siltstone – sandstone unit is in the order of 100 + metres in thickness. This unit is typical of distal classical turbidites (d-e bouma series) and therefore represents deposition into a relatively quiet basin. This period of quiescence in sedimentation clearly helped preserve the Leadbetter conglomerate.

Intrusive Rocks

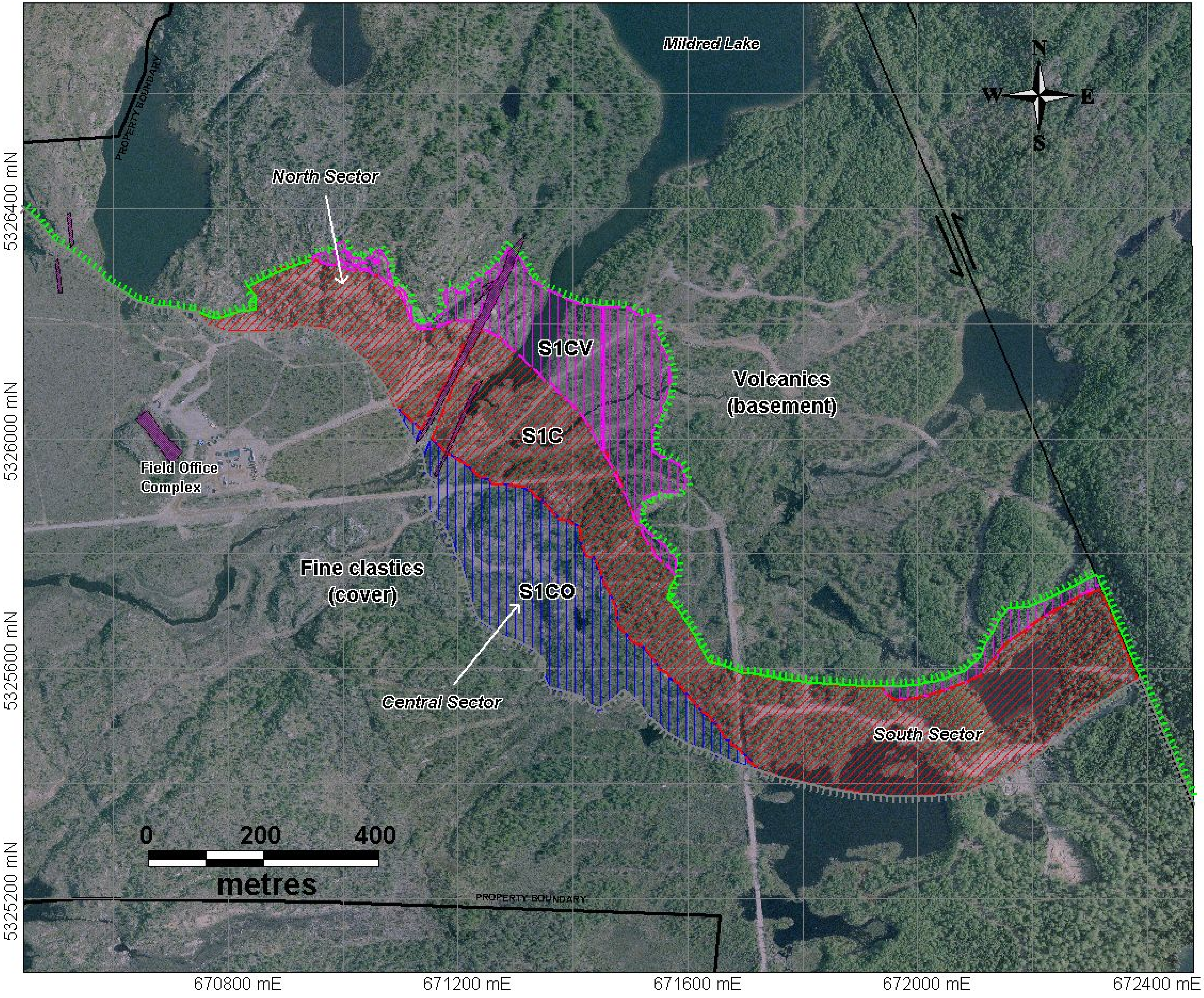
The volcano-sedimentary sequence is cut by several dyke sets. The older set is a lamprophyre based on the melanocratic colour index and abundant fine-grained black mica. This dyke set is metamorphosed and deformed along with the metasediments into which it has intruded. These dykes are typically less than 1 metre in width. The second dyke set contains rare euhedral feldspar phenocrysts up to 3 centimetres in diameter. The dykes can be up to 20 wide on the property. These dykes strike to the northwest and believed to be part of the 2.5 billion year old Matachewan diabase dyke swarm. A third set of dykes consists of relatively unaltered northeasterly striking gabbroic apophyses that are probably part of the 1.1 billion year old Keewenawan dyke swarm. On the property, Keewenawan dykes are up to 15 metres wide.

Alluvium

The central part of the project area is covered by Pleistocene and Recent glaciofluvial sand, gravel and lacustrine deposits to a thickness exceeding over thirty metres in some locations. Sampling of this material by backhoe indicates that the glaciofluvial material to be made of rounded cobbles (5 to 20 centimetres in diameter) generally consisting of granitic rock, mafic volcanics, felsic volcanics, and carbonatite. In areas where bedrock was encountered, a clay layer (light brown to light grey) was observed for a few meters, mixed with coarse boulders, lying immediately above the bedrock. The glaciofluvial material was a product of Late Wisconsinian glacial advance that had an ice direction of 165 degrees to 263 degrees (T. Morris, 2001). Studies conducted by T.F. Morris of the Ontario Geological Survey in 1993 and 1994 have demonstrated that there is a heavy mineral dispersion anomaly (chromite, garnet and ilmenite) that emanates from the area of the Leadbetter project (Morris, 1999). The original discovery of alluvial diamonds in Lena Creek draining westward from the Leadbetter project area was from the glaciofluvial outwash material that is exposed in the banks of Lena Creek where it enters the Magpie River. **There is clearly potential in the Leadbetter Project area for the discovery of a resource of alluvial diamonds in the glaciofluvial material that underlies parts of the property.**

Structure

Structurally, the lithologies underlying the Leadbetter project area have been folded several times, in addition brittle failure has produced a series of prominent fault directions on the property some of which have been intruded by northwesterly and northeasterly striking mafic dykes. Based on small-scale structures in the siltstone-sandstone unit overlying the conglomerate and the regional stratigraphy, it appears that the volcano-sedimentary succession underlying the Leadbetter project area has been isoclinally folded and overtuned. Later deformation has warped the conglomerate sequence into a gentle synform-antiform pair that plunges approximately 30^o to the northeast. In addition, slip within high strain zones has imbricated the sequence into a series of panels, that are not well defined at the present time, but which may have resulted in an apparent thickening of the conglomerate in the central part of the project area.



LEGEND

Archean & Younger

Mafic dykes, undifferentiated

Archean

Metasedimentary cover, Siltstone & sandstone

Diamondiferous Conglomerates

S1CO: felsic volcanic clast dominated conglomerate

S1C: polymicitic conglomerate, main diamondiferous unit

S1CV: intercalated volcaniclasts, lavas and sediments

Volcanic basement, basalt to rhyolite with minor sediments

Note: Refer to Figure 8 for Geolgy Legend
Orthophoto topographic base is georeferenced to NAD 83, zone 16
Refer to Figure 2 for location with respect to property boundaries

Ressources dianor inc.

PROPERTY GEOLOGY

LEADBETTER DIAMOND PROJECT

Chabanel Township
Ontario, Canada

Figure 8.

8.0 Deposit Types

The mineral deposit model for the Leadbetter project is predicated by the view that is taken for the origin of the diamond-bearing host rock. If one assumes that the host is sedimentary in origin, then the deposit model would be that of a **paleoplacer diamond deposit**. Examples of which are found in conglomerates of the 2.7 billion year old Fortescue Group in the Nullagine area, Western Australia and certain conglomerates of the 2.5 to 2.4 billion year old Witswatersrand Supergroup in the Republic of South Africa (Konstantinovskii, 2003). If the host is regarded as epiclastic, then the deposit model could be similar to that of a **conventional "kimberlite" pipe diamond deposit** (Mitchell, R.H., 1986).

The character of the Leadbetter conglomerate suggests that it is a debris flow rather than a mature fluvial conglomerate. In terms of the sedimentary environment, the conglomerates are interpreted to be part of an alluvial fan complex, which was probably subjected to seasonal flushing thus transporting and concentrating diamonds into discreet channels. The presence of minerals within the Leadbetter conglomerate that typically are associated with conventional diamond bearing rocks such as kimberlite or lamproite and the presence of chlorite-rich fragments in an unsually chlorite-rich matrix strongly suggests that there was nearby input from such diamond bearing rocks by either direct eruption into a basin or by rapid erosion of a primary diamond source rock and subsequent dumping into a local catchment basin. A combination of input from an eruptive event into a graben basin with active sedimentation as illustrated in Figure 9 may explain some of the features observed on the Leadbetter Project area. Alternatively, a fluvial-deltaic model, as illustrated in Figure 10, may also explain some of the features observed in the deposit.

With respect to diamonds, the geological concepts to be applied in exploration of the Leadbetter project area relate primarily to defining the lateral and down dip extent of the diamondiferous rock, estimating the quantity and size distribution of diamonds that it contains and estimating an average value per tonne of the diamonds. Structural geological information will be one of the keys in determining the direction that the exploration drilling should proceed in order to efficiently gather reliable data to make estimates of volume as well as providing geotechnical data for possible future mine planning. Geophysical work that utilizes the contrast in either magnetic, electromagnetic, radiometric or other properties of the host rock can also be used during exploration to target areas for detailed sampling and drill testing, particularly in covered parts of the property. Down-hole geophysical methods may be effective in differentiating variations in the diamondiferous conglomerate.

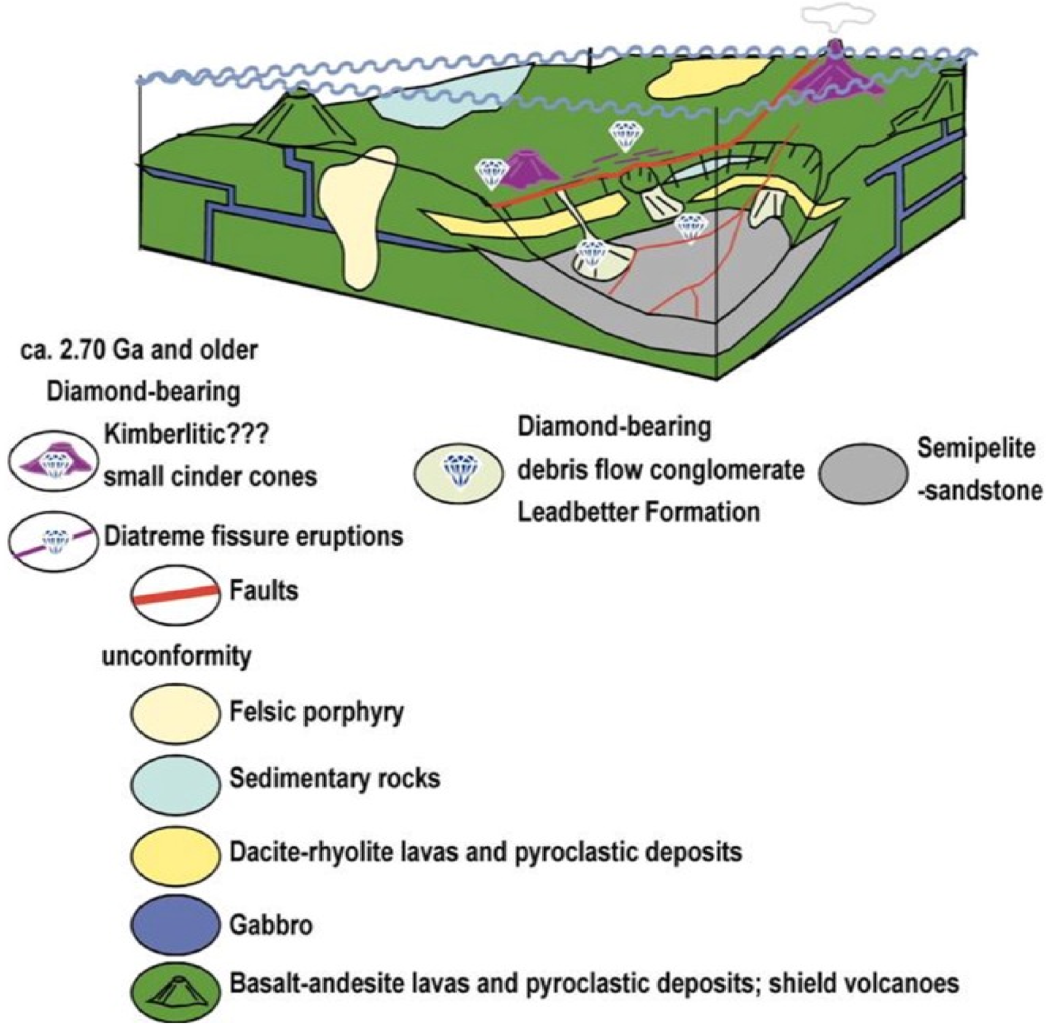


Figure 9. Schematic subaqueous debris flow model for the Leadbetter conglomerate illustrating the interpreted volcanic-intrusive-sedimentary setting
(diagram by Miller & Associates, 2007)

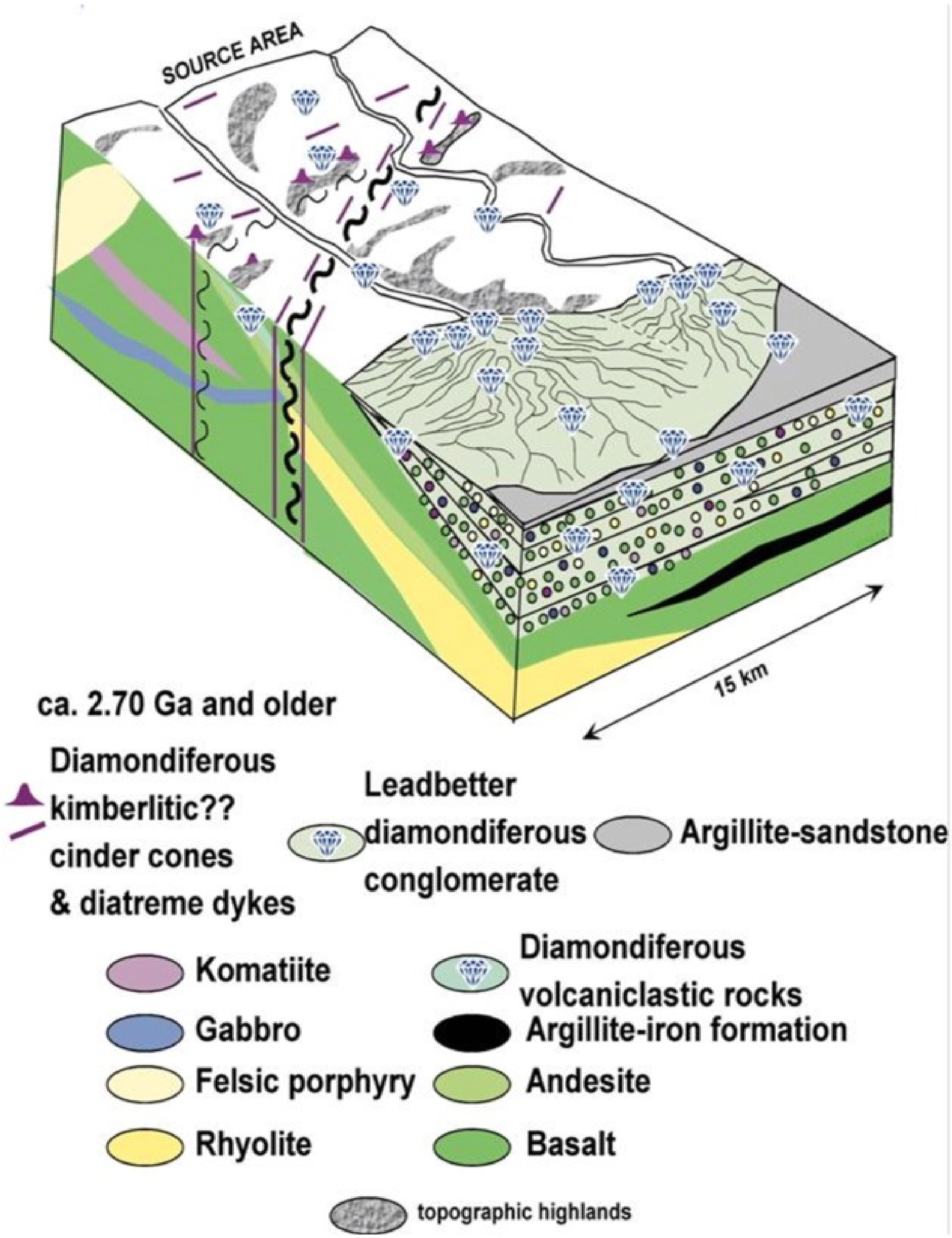


Figure 10. Schematic fluvial-deltaic model for the diamondiferous Leadbetter conglomerate

(diagram by Miller & Associates, 2007)

9.0 Mineralization

9.1 Diamonds

Diamond mineralization on the Leadbetter Project is primarily confined to the Leadbetter conglomerate. Preliminary geological mapping has determined that the Leadbetter conglomerate extends from the western part of the project area across to the Mildred Lake Fault on the eastern side – a distance of 1.7 kilometres. The unit pinches out to the west and is truncated to the east at the Mildred Lake fault. Left-lateral strike-slip movement on the Mildred Lake fault has shifted the eastern extension of the conglomerate 3.4 kilometers to the north where it crops out on property that is held under a joint venture agreement between Dianor Resources Inc., Metalex Ventures Corp. and Mori Diamonds Inc.

The Leadbetter conglomerate sequence has been subdivided into three units, each has varying diamond content and within each unit the diamond distribution varies. The conglomerate sequence has been structurally deformed such that it has been warped into a gentle synform-antiform pair that plunges approximately 45^{o} to the northeast. In addition, slip along foliation planes may have imbricated the sequence into a series of panels, that are not entirely defined at the present time, but which appear to have resulted in an apparent thickening of the conglomerate in the central part of the project area. Based on diamond drill hole data, the deformation has resulted in estimated true thickness for the main diamond-bearing unit, S1C, varying from 93 metres in the central part of the north sector (Hole 06-34) to a maximum of 186 metres (hole 06-68) in the south sector. West of hole 06-34, S1C thins and may pinch out.

Sampling by the author of several of the original test pits (Pits 1, 4 and 8) that were weathered and thereby allowed a separation of coarse clasts from matrix to be done, revealed that most, if not all, diamonds reside in the matrix.

The characteristics of diamonds recovered by caustic fusion processing of NQ diamond drill core indicate that 72% are white in colour, 11% yellow, 9% grey, 4% amber, 2% green and 2% a mix of other colours for stones greater than 0.425 millimetres in size (Figure 11).

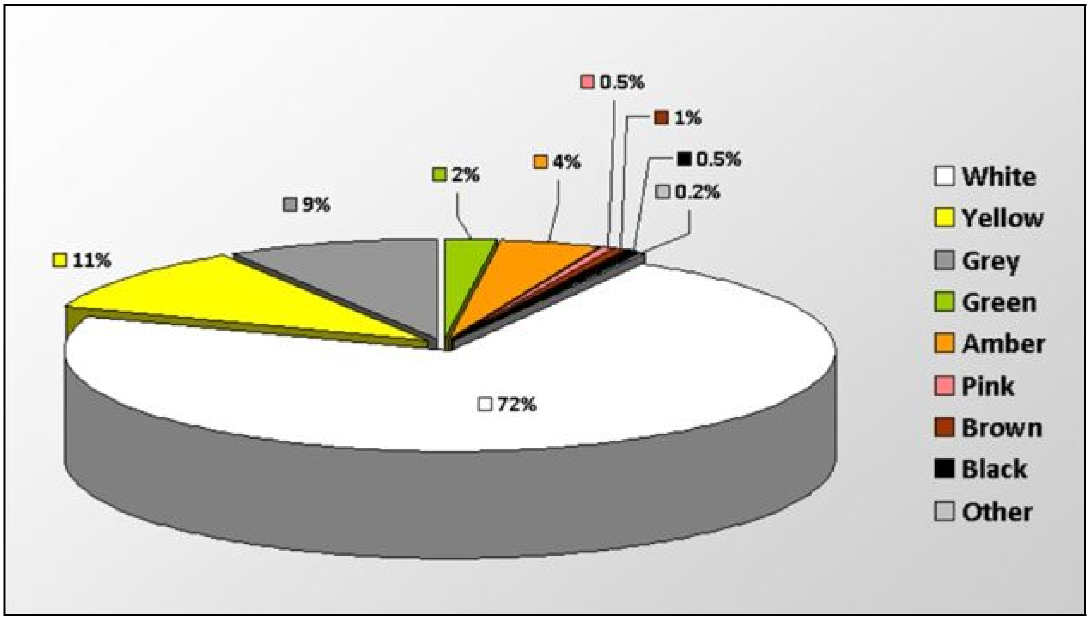


Figure 11. Colors of diamonds (>0.425 mm) recovered by caustic fusion processing of NQ diamond drill core.

In terms of clarity of those diamonds, 30% of the white stones are clear or transparent and 24% of the white diamonds are frosted, 9% have inclusions.

In terms of crystal morphology of the diamonds recovered from NQ drill core (Figure 12), 29% of the diamonds that were reported on exhibit crystal habits predominantly of octahedral form with tetrahexahedral shapes representing 8%, macles 2%, cubic forms 22%, crystal aggregates 6%, fragments 22% and irregular shapes 11%.

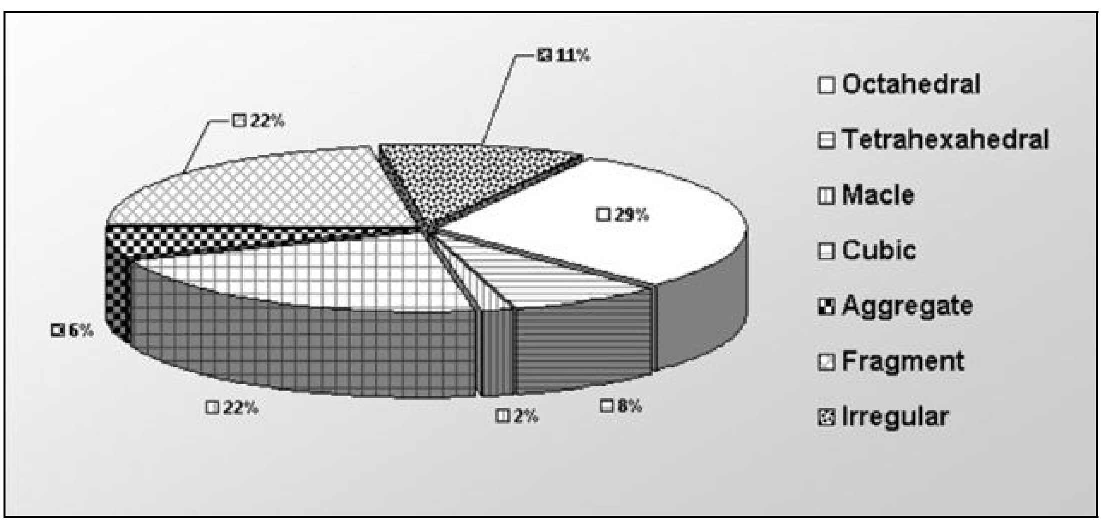


Figure 12. Shapes of diamonds (>0.425 mm) recovered by caustic fusion processing of NQ diamond drill core.

Preservation has been estimated for 4 of the largest diamonds recovered from the DMS work and it ranges from 85 to 99 percent.

Diamonds recovered by DMS processing of 6 tonne surface samples of conglomerate have color and shape characteristics that are similar to those from the drill core (Figures 13 & 14). In terms of colour for diamonds greater than 0.850 millimetres in size, 83% are white, 9% are grey, 3% are brown, 2% are yellow and the remaining 3% having other colors (green, amber, pink, black).

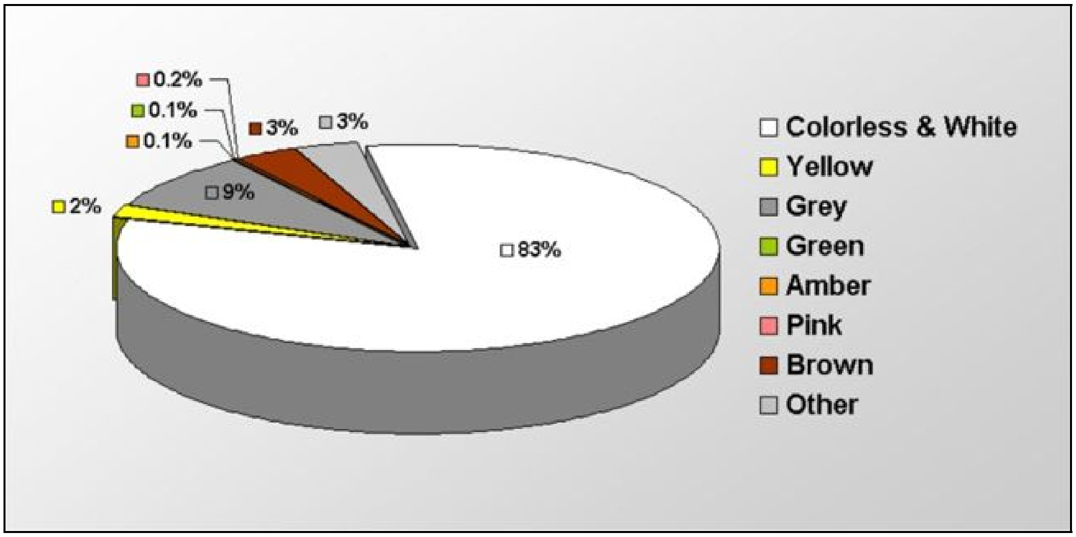


Figure 13. colours of diamonds (>0.85 mm) recovered from DMS processing of 6 tonne samples

The shapes of the diamonds from the 6 tonne surface pit samples vary octahedral (37%), tetrahexahedral (13%), cubic (14%), macles (5%) with fragments, crystal aggregates and irregular stone shapes make up the remaining 31% of the stone population.

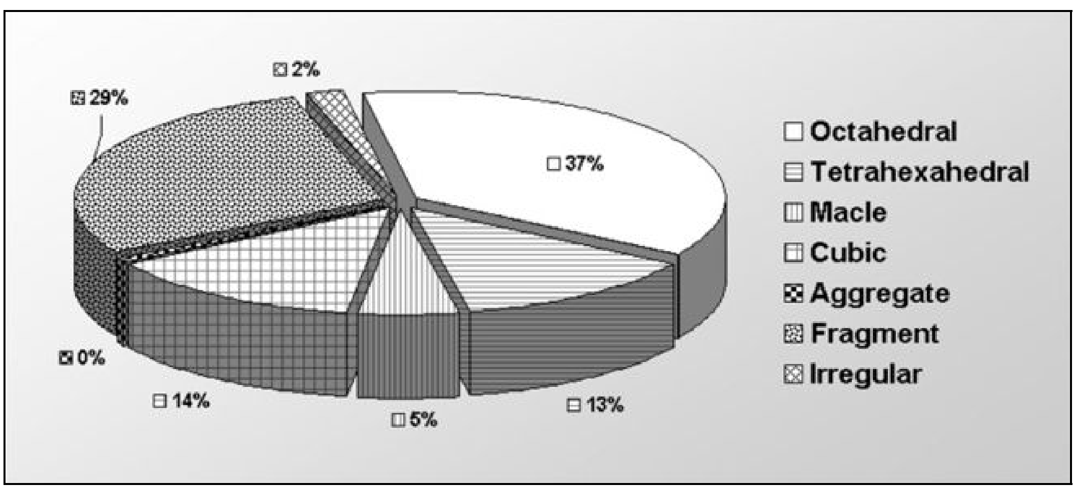


Figure 14. Shapes of diamonds (>0.85 mm) recovered from DMS processing of 6 tonne samples

A study of the limited diamond data available at the end of 2006 for Dianor by Drs Tom Nowicki and John Gurney of Mineral Services Canada Inc (MSC) was carried out in January of 2007. The objective of this consultation was to:

i) estimate the probable grade of commercially relevant diamonds from the available data at that time and
ii) estimate the expected frequency range of larger stones.

The estimations were based on limited SRC caustic fusion drill hole data (9 holes: Chab 05-08, 09, 10, 11, 12, 16, 17, 18 and Chab 06-34) and the 2005 SGS DMS test pit data provided by Dianor and not verified by MSC. MSC stated that the reliability of the data is critically dependent on the size of samples as well as how well the samples reflect internal variations in the deposit. It must be pointed out that the size of the split NQ drill core samples investigated is small as are the 6 tonne test pit samples. Furthermore, internal variations in the geology of the conglomerate are extremely difficult to recognize due to deformation. Consequently, defining higher grade portions to the deposit has been an iterative process that has relied on continued feed-back from the caustic fusion data as well as additional test pit sampling in order to attempt to recognized facies variation within the conglomerate.

The results of the MSC study suggest that:

i) there are 3 or 4 grade groupings or populations within the Leadbetter conglomerate
ii) the presence of coarser diamonds exists for the North Sector when compared to the Central Sector.
iii) the caustic fusion (microdiamond) data could be linked to the DMS (macrodiamond) data. The modeled data showed a good fit to a lognormal distribution.
iv) modeled macrodiamond grades for the North Sector range from 0.19 to 0.29 carats per tonne, with a middle case of 0.24 carats per tonne. The grade for the Central Sector was lower, ranging from 0.11 to 0.17 carats per tonne with a middle case of 0.14 carats per tonne. Data for the Central Sector is less in aggregate than that available for the North Sector. These estimates are somewhat in line with recent test pit sample results. However, recent test pit data, that was not available at the time of the MSC study, indicate that higher grades may be obtainable in some parts of the North Sector as observed in the later four 60 tonne bulk samples processed by DMS at the Kennecott facility in Thunder Bay, Ontario in 2007.
v) the modeling predicted a predominance of small diamonds in the conglomerate. However test pit sampling conducted after the MSC assessment indicates that larger stones (+3.35 mm) may be more frequent than estimated for the data set that MCS initially evaluated. Clearly the viability of the Leadbetter property will hinge on demonstrating that a population of diamonds exists in it that has sufficient value on an average per carat basis to make mining economic.

Since the MSC study, Dianor has received results from four 60 tonne bulk samples processed by DMS and a total of 24 diamond drill holes.

Preliminary results of studies of the cathode luminescence (CL) of the Leadbetter diamonds in comparison to that of the diamonds from the Wawa volcaniclastics indicates that the microdiamond suite from the Leadbetter conglomerate has a different CL in comparison to the

Wawa Volcaniclastic diamonds (Bruce et al., 2009) Two models are proposed to explain this difference. The first model postulates that the diamonds came from differing mantle source regions and that metamorphic fluids are responsible for variations in the CL. The second model postulates the same mantle source region for the diamonds. Work is currently on going to test these models studying the variation in nitrogen aggregation in diamonds of the two populations.

9.2 Diamond Indicator Minerals

A distinct suite of diamond indicator minerals were recovered from test pit samples of the Leadbetter conglomerate. The minerals were extracted by attrition milling of the samples at CF Minerals Ltd laboratory in Kelowna, B.C. and SGS Lakefield Research. In general the recovered grains exhibited minor abrasion features, suggesting that they have undergone little transportation from their source rock, which therefore is presumably nearby. A total of 647 chromite, 30 olivine, 63 garnet, 26 ilmenite and 85 clinopyroxene grains were recovered. The chemistry of the grains was also determined at CF Minerals by electron microprobe techniques. In conjunction with this work, indicator mineral grains were extracted and microprobed from 10% of the material submitted to SGS Lakefield for DMS work by Dr. R. Khoun, P.Geo.. A total of 51 garnet, 18 olivine and 5 ilmenite grains were recovered and probed. The results for a selection of microprobe data are found in the accompanying plots (Figures 15 to 18). In addition, Dr R. Khoun, P.Geo. has recovered diamond indicator minerals from 60 tonne samples processed at Kennecott Exploration Canada Inc's facility in Thunder Bay. These include a number of coloured corundum grains having gem qualities (varieties: rubies and sapphires).

The majority of **garnets** recovered from the Leadbetter samples fall into the lherzolite field of paragenesis (i.e. "G9"). There is a small proportion of garnets that are low in chrome (<2% Cr_2O_3) and may either be indicative of a megacryst suite or eclogitic paragenesis. One garnet that is high in Cr and low in Ca has a very favorable composition with respect to diamond potential (i.e. "G10"). Data for **chromites** have a relatively high proportion (9%) of grains falling into the diamond inclusion field. **Ilmenite** grains are high in MgO (>8%) and fall with the field for ilmenites from kimberlites in North America (Wyatt et al., 2004), which would therefore indicate a mantle-source for these grains. In addition, the diamond preservation potential as indicated by FeO/Al_2O_3 abundances in the ilmenites predicts that diamond preservation should be high. This in fact appears to be the case based on the low resorbtion exhibited in the diamonds recovered to date. The chemistry of **clinopyroxenes** is indicative of a garnet peridotite source. Recovered **olivine** grains are predominantly of diamond inclusion type and exhibit predominantly a hartzburgitic paragenesis. In summary, the microprobe data, taken as a whole, are indicative of mineral grains that have been sourced from diamond-bearing mantle regions. The exact nature of the transporting magma has yet to be determined. The distinct suite of diamond indicator minerals that have been recovered from the conglomerate is strong evidence that the source for the diamonds in the Leadbetter conglomerate is different than that for the sparsely diamondiferous Wawa volcaniclastics located to the north, which contain no indicator minerals.

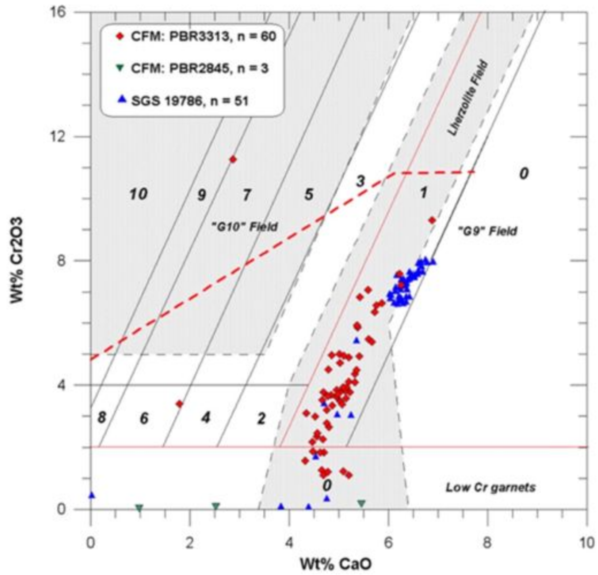


Figure 15. Composition of garnets recovered from the Leadbetter conglomerates

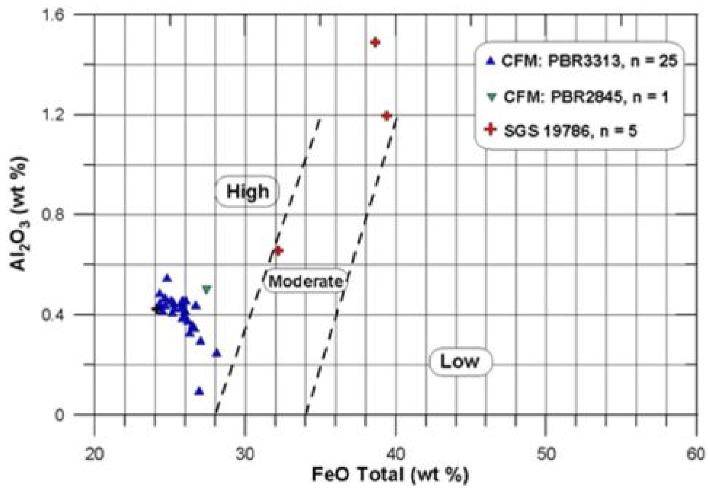


Figure 17. Diamond preservation potential based on the chemistry of ilmenite grains recovered from the Leadbetter conglomerates

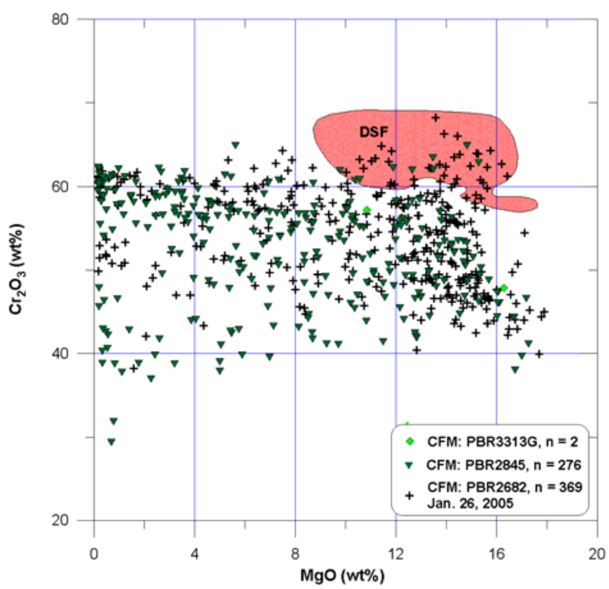


Figure 16. Composition of chromite grains recovered from the Leadbetter conglomerates

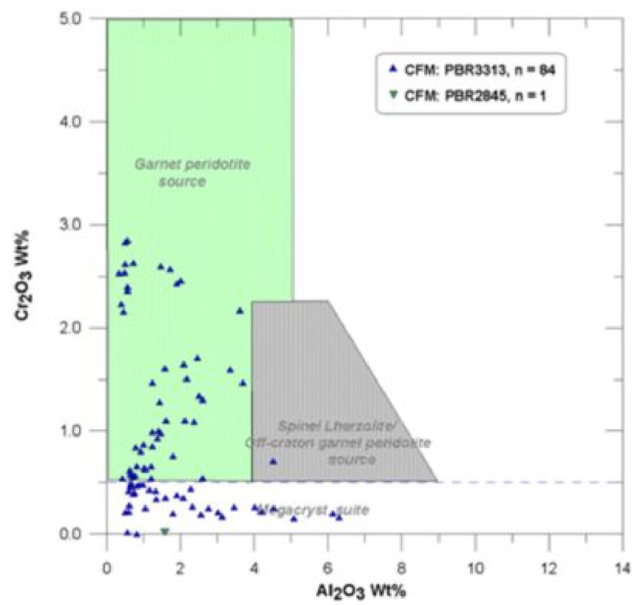


Figure 18. Composition of clinopyroxene grains

9.3 Gold

In addition to diamond in the conglomerates, native gold has been observed in the caustic fusion residues from drill cores as well as DMS concentrates. Dr. Allan Miller, PGeo has observed minute native metal grains that he has tentatively identified as gold in polished thin-sections of conglomerate drill core. Geochemical analyses of over 2,100 drill core samples have consistently reported detectible gold (>5 ppb) to be present in the conglomerate. Samples from unit S1C have returned the highest gold values with 6 samples having values greater than 1,000 ppb Au (Table 4 & Figure 19). The highest analysis was fire assayed and returned a value of 9.01 grams per tonne gold. The other conglomerate units, S1CV and S1CO are also anomalous in gold. A study of the gold content of 8 DMS samples was undertaken by SGS Mineral Services (Brenden et al, 2009), who found that gold values ranged from <20 ppb to 503 ppb. Duplicate samples splits varied considerably, indicating a severe nugget effect consistent with the observation of particulate gold. The gold may be of placer origin. If this is the case a strong correlation with diamonds should be evident and, therefore, gold may serve as another proxy for locating diamond concentrations in the conglomerate. Gold may also have been mobilized and emplaced in parts of the conglomerate in metamorphic fluids coursing through shear zones and adjacent dilatant structures during deformation. The potential for gold mineralized shears in this structural setting should not be overlooked. However, trace elements such as arsenic, copper and lead, that typically are associated with “metamorphic” gold, are relatively low in the drill core and do not correlate well with gold, possibly adding credence to the idea that the gold is placer in origin. Gold may be recoverable as a byproduct of a diamond recovery process if appropriate features are included in the recovery plant design.

Table 4. Basic Statistics for gold in the Leadbetter conglomerate

	Gold in ppb				
	S1C	**S1CV**	**S1CO**	**Volcanics**	**Sandstone**
No of samples	1363	402	375	1652	343
Minimum	2.5	2.5	2.5	2.5	2.5
Maximum	8794	363	901	1069	210
Arithmetic Mean	30	8	13	7	5
Standard Deviation	327	23	58	31	14
Percentiles					
25.00%	2.5	2.5	2.5	2.5	2.5
50.00%	5	2.5	2.5	2.5	2.5
75.00%	10	7	7	7	2.5
95.00%	55	25	25	19	14
98.00%	128	42	85	31	26
Thresholds					
Background	0 – 14				
Mixed	15 – 49				
Anomalous	50 – 99				
Strongly anomalous	100 +				

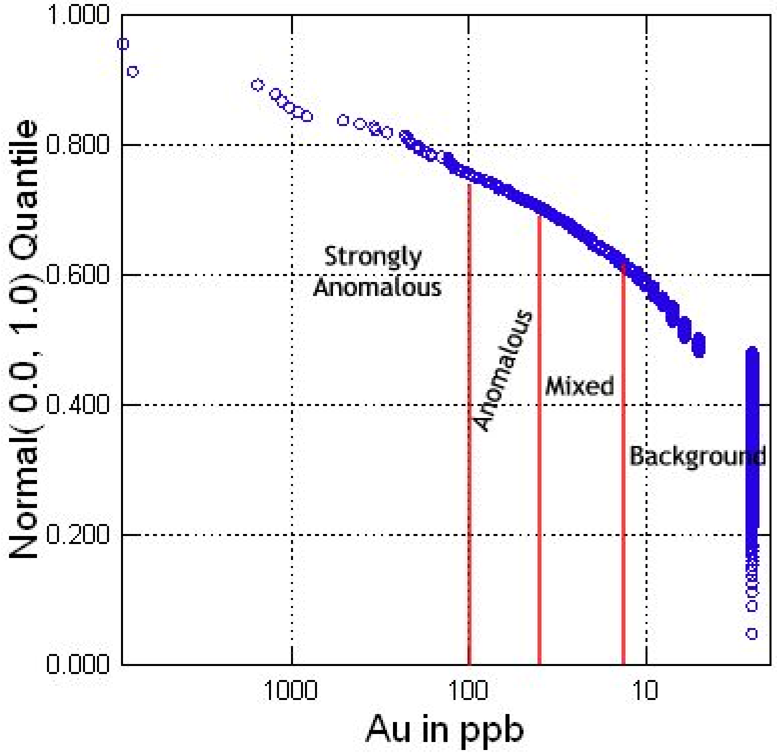


Figure 19. Probability plot of gold in Leadbetter conglomerate

9.4 Other Gemstones

During the course of checking the DMS concentrates and tails arising from the 2005 test pit samples, Dr Rosemarie Khoun, PGeo, recovered a number of corundums having gem qualities. These grains consisted of both red and blue corundums (rubies and sapphires). The largest rubies recovered to date have measured up to 4 mm in largest dimension (Figure 20); the largest sapphire measured 2 mm (Figure 21). Corundums have a specific gravity of approximately 4 gm/cc and report to the heavy mineral suite along with conventional indicator minerals, gold and diamonds. Therefore, the corundums will report to a heavy mineral concentrate during processing of the conglomerate and should be recoverable as a byproduct of that process. Furthermore, like gold and conventional indicator minerals the corundums will act as a proxy for locating diamond concentrations in the conglomerate during the exploration evaluation stage. Further studies will need to be conducted in order to determine the importance of these minerals.

Figure 20. Ruby recovered from non-magnetic fraction of MBP 108

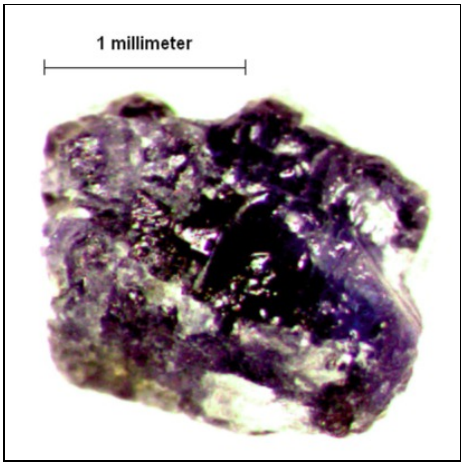


Figure 21. Sapphire recovered from non-magnetic fraction of MBP 145.

10.0 Exploration

Dianor Resources has conducted exploration on the Leadbetter property since November 2004. During this period, the initial thrust of the exploration work was to verify the diamondiferous nature of the host rock and determine if a suite of diamond indicator minerals exists in the diamond host that can be utilized to shed light on the nature of the source of the diamonds (“Due Diligence Diamond Sampling Phase”). The results of this work were successful in verifying the diamondiferous nature of the Leadbetter conglomerate. In addition, microprobe data of diamond indicator minerals recovered, taken as a whole, were indicative of mineral grains that have been sourced from diamond-bearing mantle regions and have both eclogitic and peridotitic parageneses. The exact nature of the transporting magma has yet to be determined. A detailed presentation and discussion of the results can be found in a SEDAR filed report by C.G. Verley, PGeo (2006).

Since that time Dianor has continued exploration of the Leadbetter properties, starting in April 2005 with a Phase 1 diamond drilling program designed to test the lateral and down-dip continuity and diamond content of the conglomerate. In the Fall of 2005 a program of surface test pit sampling was undertaken and 105 test pits were sampled primarily in the north sector, with some in the central sector. In addition, permitted bulk sampling of an area of alluvial material was undertaken at that time. McPhar Geosurveys Ltd undertook an airborne magnetic and radiometric survey of the Leadbetter Project area on October 22, 2005. In the late Fall of 2005 a Phase 2 diamond drilling program was initiated and completed in December 2006. Additional test pit sampling was also conducted during the fall of 2006. In conjunction with this work low-level aerial surveys (3,000 and 4,500 metres) were flown under the supervision of Eagle Mapping Ltd. Orthophoto maps and detailed topographic maps to 1 metre contour intervals were produced. In 2007 a Ground Penetrating Radar (GPR) survey was carried out on the flat alluvial plain directly south and west of the outcropping conglomerates. In the late Fall of 2008 a Phase 3 diamond drilling program was initiated and completed by December 2008. Summary disclosure of these programs and their results are presented below.

10.1 Phase 1 Diamond Drilling

Dianor initiated its first stage of diamond drilling on the Leadbetter property on April 24, 2005. The object of this work was to drill a fence of holes across the Leadbetter conglomerate in order to get a preliminary idea of the thickness and attitude of that unit. Colbert Drilling of Timmins, Ontario and Foramex Drilling of Val d’Or, Quebec undertook the work.

A total of 16 NQ- and 38 BQ-sized core holes were drilled during this phase, which was completed November 16, 2005 (Figure 22). The NQ drill holes were laid out along an east-west line and drilled at an inclination of $–60^{o}$ to the west (azimuth: 270^{o}).. Results of diamond recovery by caustic fusion (Table 8) indicate that the Leadbetter conglomerate is consistently diamondiferous and that diamonds having commercial characteristics were present in sufficient quantities to warrant a further stage of drill testing and surface test pit sampling. Summary of drill intercepts of the diamond-bearing units is presented under Section 18.0 “Other Relevant Data and Information”.

Of the holes drilled during the Phase 1 campaign, the NQ-sized core were split and processed to recover diamonds by caustic fusion techniques at Saskatchewan Research Council

(“SRC”) in Saskatoon, Saskatchewan. The BQ-sized core holes were primarily drilled to provide visual checks of geological problems. These will be used to obtain more information on the gold content

10.2 Phase 2 Diamond Drilling

A second phase of diamond drilling commenced in August 2005 and was completed in December 2006. The object of this program was to further define the lateral and down dip extension of the Leadbetter conglomerate and to provide preliminary data on the diamond content of the unit. Foramex Drilling and Forage Benoit of Val d’Dor, Québec undertook the work.

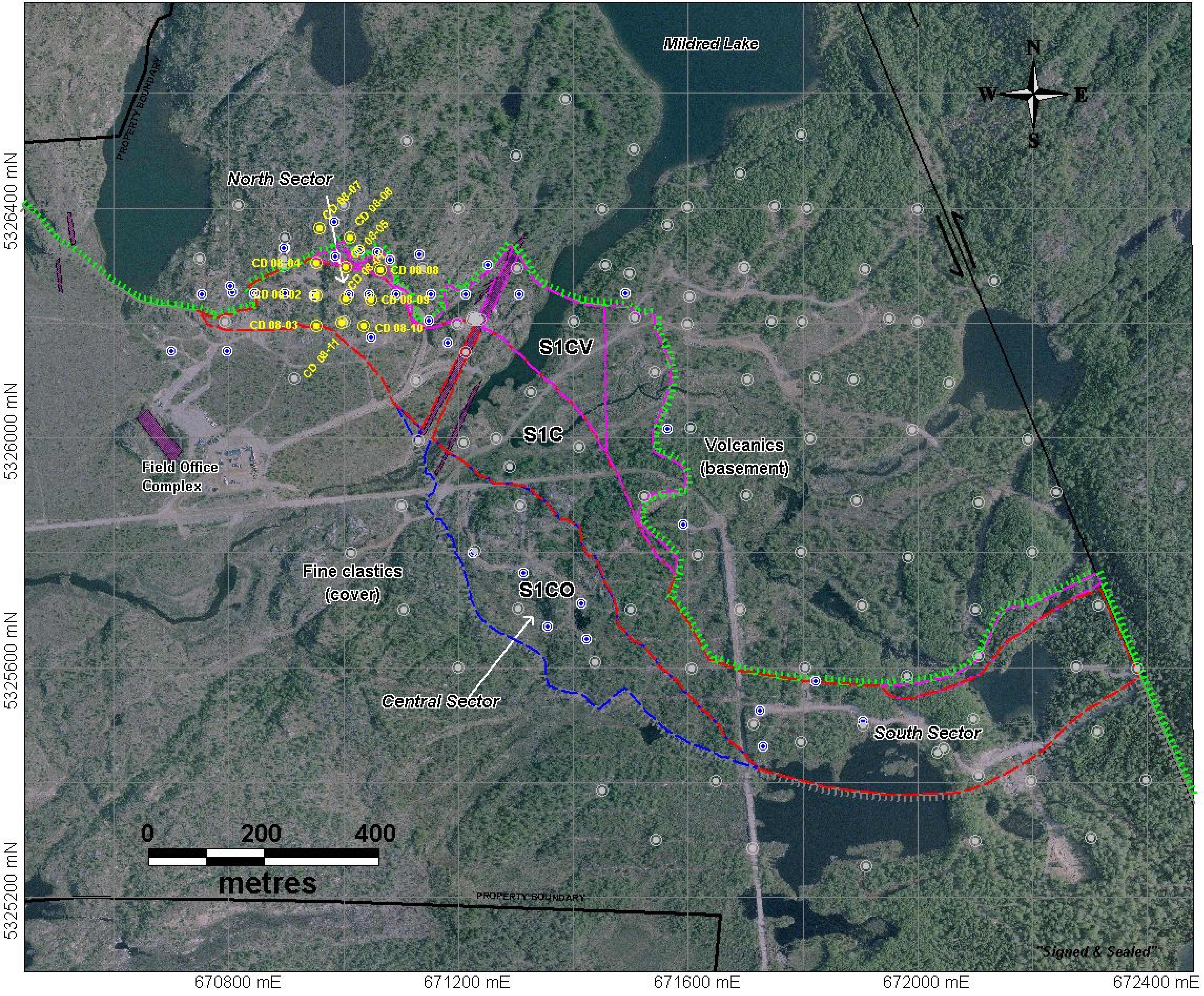
A total of 92 NQ-sized drill holes were completed during this phase (Figure 22). Four holes (Q4 to Q7 series) were drilled through a diabase dyke in order to obtain additional material that would be suitable for use as blanks for quality control purposes during diamond recovery.

The object of the Phase 2 drilling was to delineate, on a reconnaissance basis, the lateral extent and down-dip continuity of the Leadbetter conglomerate. The program was successful in reaching this objective as the conglomerate succession was found to be continuous over a strike length of 1.7 kilometres and was tested down-dip to a depth of 742 metres (hole Chab 06-101). The conglomerate is still open beyond that depth. To the east the succession is truncated by the Mildred Lake fault. To the west the conglomerates appear to pinch out, but exposures of diamondiferous conglomerate across the lake and west of the area drilled in the North Sector suggest that the sequence has not been completely closed off to the west. In addition, the program gathered sufficient information to estimate a preliminary tonnage of the conglomeratic units (refer to Section 18.0 of this report).

As with the Phase 1 drill holes, conglomerate intercepts from the NQ-sized core of Phase 2 drill holes were split and shipped to Saskatchewan Research Council (“SRC”) in Saskatoon, Saskatchewan to be processed to recover diamonds by caustic fusion techniques. Duplicate samples of core were collected from each drill hole and shipped to SGS Lakefield Research to be processed to recover diamonds by caustic fusion techniques. Approximately 15% of all core samples caustically fused were duplicates. Specific gravity determinations of drill core were made from samples taken at 3.5 metre intervals, in the conglomerate units and of representative samples of the basal volcanic sequence and overlying siltstone-sandstone succession. At present, diamond results from 24 of these drill holes have been received. These results excluding duplicate samples (Table 5) continue to demonstrate the persistently diamondiferous nature of the conglomerate.

10.3 Phase 3 Diamond Drilling

In the Fall of 2008, a program of diamond drilling was undertaken. The objective of this program was to initiate consultants’ recommendations for additional resource infill drilling of the North Sector to provide additional diamond data for this area and to provide guidance for the proposed underground bulk sampling program. A total of 1,809 metres were drilled in 11 vertical, HQWL holes. All eleven of the holes successfully intercepted the diamondiferous conglomerate horizons. The core was logged in detail and is stored on site pending processing to recover diamonds. In conjunction with the 11 resource drill holes, 9 holes totaling 318 metres in length were drilled for geotechnical and hydrological purposes. Foramex Drilling of Val D'Or, Quebec was the contractor responsible for the drilling. A map showing the drill hole locations is found in Figure 22.



LEGEND

CB 08-01 Phase 3 HQ Diamond Drill Holes

Phase 1 & 2 NQ Diamond Drill Holes

BQ Diamond Drill Holes

Note: Refer to Figure 8 for Geolgy Legend
Topographic base is from orthophotos georeferenced to NAD 83, zone 16
Refer to Figure 2 for location with respect to property boundaries

PHASE 3 DRILL HOLE LOCATION PLAN

LEADBETTER DIAMOND PROJECT

Chabanel Township
Ontario, Canada

Figure 22.

Table 5. Summary of Diamond Recovery by Caustic Fusion for NQ Diamond Drill Holes(duplicate sample results excluded)

Drill Hole Number	Rock Unit	From	To	Intercept (m)	Weight (Kgs)	>0.425 mm Stones	>0.850 mm Stones	>0.850 mm Sample inferred cpht*
Chab 05-08	S1C	0.30	27.00	26.70	55.65	10	2	26.9
Chab 05-09	S1C	3.00	57.10	54.10	118.99	23	3	74.0
	including	18.00	45.00	27.00	60.08	14	3	146.5
Chab 05-10	S1C	0.70	138.00	137.30	320.59	71	7	43.4
	including	0.70	42.00	41.30	93.09	30	3	113.7
Chab 05-11	S1CV	30.80	44.96	14.16	32.25	9	1	39.6
	S1C	77.54	241.90	164.36	373.97	76	5	25.5
	including	117.00	199.34	82.34	176.08	40	4	49.1
Chab 05-12	S1C	202.50	417.15	214.65	392.76	108	16	87.5
	including	227.40	279.30	51.90	112.80	50	9	146.8
	including	301.30	354.76	53.46	90.00	21	5	184.5
Chab 05-13	S1C	376.50	484.00	107.50	303.25	71	4	11.4
Chab 05-16	S1C	15.00	179.67	164.67	366.80	72	9	40.6
	including	29.00	115.50	86.50	190.70	50	9	78.1
Chab 05-17	S1CO	9.28	77.30	68.02	149.11	50	2	16.7
	including	47.50	72.83	25.33	55.60	23	2	44.8
Chab 05-18	S1CO	2.10	114.75	112.65	249.51	55	2	6.9
	including	16.00	40.5	24.50	54.51	22	2	31.6
Chab 05-19	S1CV	501.47	509.50	8.03	18.95	1	0	0
	S1C	582.49	674.90	92.41	213.63	14	0	0
	S1CO	688.11	798.37	110.26	251.29	67	6	24.6
	including	754.00	795.40	41.40	92.48	35	3	37.1
Chab 05-20	S1C	169.60	237.20	67.60	146.16	30	6	111.8
	including	175.00	199.50	24.50	43.30	16	4	281.8
Chab 05-21	S1C	40.30	266.50	226.20	543.59	102	14	40.9
	including	51.20	131.70	80.50	185.43	37	7	71.3
	including	163.00	203.00	40.00	90.01	19	5	64.4

Table 5 cont'd. Summary of Diamond Recovery by Caustic Fusion for NQ Diamond Drill Holes

Drill Hole	Rock			Intercept	Weight	>0.425 mm	>0.850 mm	>0.850 mm
Number	Unit	From	To	(m)	(Kgs)	Stones	Stones	Sample inferred cpht*
Chab 05 -25	Volc/sst	156.77	199.50	42.73	88.59	0	0	0
Chab 05-26	S1CV	273.18	372.58	99.40	211.07	1	0	0
	S1C	372.58	555.80	183.22	420.47	89	4	12.2
Chab 05-29	S1CV	432.15	507.80	75.65	131.60	1	1	31.2
	S1C	507.80	559.24	51.44	117.76	19	4	43.2
	Including	507.80	535.00	27.20	63.91	14	4	79.6
Chab 06-30	Volcanics	33.00	321.10	288.10	410.00	0	0	0
Chab 06-31	Volcanics	42.00	309.24	267.24	341.46	0	0	0
Chab 06-32	S1C	207.00	432.92	225.92	487.63	55	6	23.3
	Including	294.09	393.10	99.01	215.35	26	4	42.2
Chab 06-33	Volcanics	36.00	780.00	744.00	514.91	0	0	0
Chab 06-34	S1C	321.08	549.88	228.80	535.14	94	13	54.1
	Including	433.02	549.88	116.86	262.63	69	10	96.0
	S1CO	564.00	575.62	11.62	29.95	7	2	72.40
Chab 06-41	Sediments	15.00	249.00	39.72	89.00	0	0	0
Chab 06-44	S1CV	347.25	373.05	25.80	64.17	0	0	0
	S1C	484.16	586.85	102.69	243.58	8	1	3.4
Chab 06-51	Volcanics	24.00	327.00	45.50	102.11	0	0	0
Chab 06-52	S1CO	1.10	96.57	95.47	208.56	3	0	0

* **CAUTIONARY NOTES:**

1. cpht = carats per hundred tonnes.
2. According to CIM "Guidelines for the Reporting of Diamond Exploration Results" most of the diamonds liberated and recovered by total dissolution methods, such as caustic fusion, would not be recovered in a commercial treatment process. And the Guidelines go on to emphasis that in order "to eliminate confusion with potentially commercial grades generated by a pilot plant, usage of the word "grade" for results from total dissolution should be avoided".
3. Duplicate sample results excluded

The results of the caustic fusion processing of the drill core indicate that diamond counts vary significantly throughout the conglomerate. At least 3 distinct populations are recognised in the stone count data. An analysis of the total diamond counts per sample suggests that there are "anomalous" populations in the conglomerate that may be interpreted to represent channels where stones have been concentrated; levee and overbank deposits; more distal deposition in flood plains forming a "background" material with fewer stones (Figure 23 and Table 6).

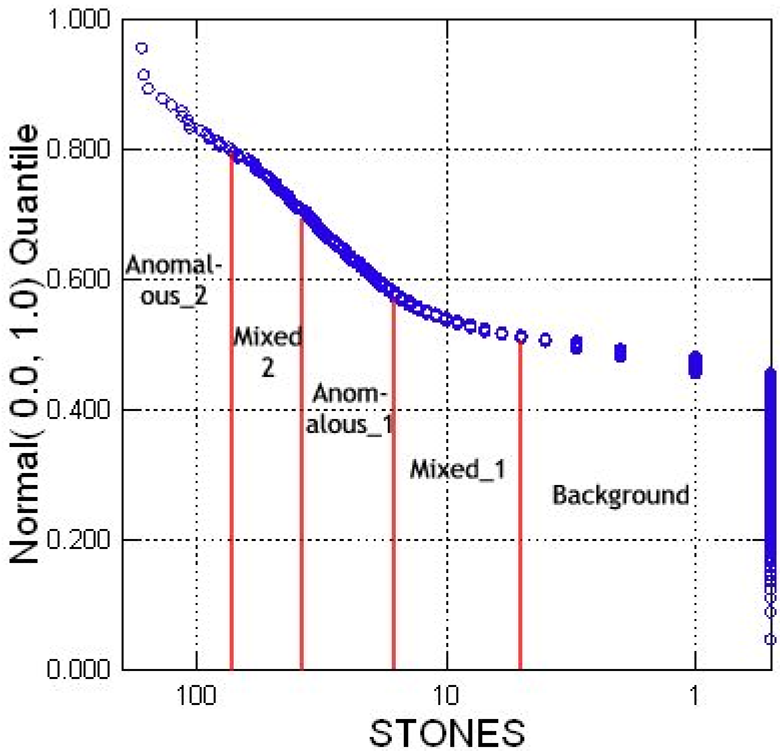


Figure 23. Probability plot of total stone counts
per caustically fused sample of drill core

Table 6. Interpretation of Stone distribution

Range of Stone Counts per drill core sample	Population	Interpretation
0 – 5	Background	Alluvial plain
6 – 17	Mixed 1	
18 – 41	Anomalous 1	Levee & overbank deposits
42 – 77	Mixed 2	
78 +	Anomalous 2	Channel deposits

Preliminary modelling of diamond distributions has looked at the combined distribution of the different diamond population in only a few of the drill holes and the 2005 test pit samples. In the writers opinion this has skewed the expected probability of recovering large stones to the low side because of the fact that much of the material used in the modelling was of low diamond counts. Clearly the diamond distribution in the suspected channel deposits will be different from the earlier estimate and it is believed that it will reflect higher probabilities for larger stones. Therefore targeting the anomalously high diamond count portions of the conglomerate with bulk sampling should provide data to appropriately model these zones.

10.4 Test Pit Sampling - 2005

During the Fall of 2005 a series of 105 test pits were excavated across the North Sector and into the Central Sector of the property (Figure 24). The object of this phase of exploration was to obtain preliminary indications of the distribution of diamonds in the Leadbetter conglomerate across the exposed areas in the North and Central Sectors. Sample pits spaced at intervals of approximately 35 metres apart across the sampled areas. The pits were excavated to depths of approximately one metre. The excavated rock was placed in fiber-weave “megabags”, each of approximately one tonne capacity, with 6 bags constituting one sample, and shipped to SGS Lakefield Research, in Lakefield, Ontario. There, the samples were processed using dense media separation techniques (DMS) in order to recover diamonds.

The program successfully demonstrated that diamonds are persistent throughout the Leadbetter conglomerate. A total of 3,741 diamonds (>0.85 millimetres in size) weighing a total of 97.53 carats were recovered from the 547 tonnes of rock excavated from the 105 test pits that included, conglomerates, volcanic, sandstone/argillites and overburden materials. 3,603 diamonds (>0.85 millimetres in size) weighing 82.7 carats were recovered from the 349 tonnes of conglomerate excavated and processed from the 94 pits in the conglomerate. There are variations in diamond content between the different diamond bearing lithologies. In some areas where there has been intense shearing and/or hydrothermal alteration as evidenced by quartz veining there appears to be a decrease in the number of diamonds in the conglomerate units. Further work, consisting of larger bulk samples, will be required to quantify these variations.

10.5 Test Pit Sampling – 2006

Duplicate samples, labeled 401 and 402, of test pits MBP 301 and MBP 302, respectively, were taken in order to see the magnitude of variation between duplicate “6-tonne” samples. The results of this work as tabulated (Table 7) below indicate that there is little variation between number of diamonds on a per unit weight of sample basis, but significant variation in the carat weight of diamonds on a per unit weight of sample basis. The data indicates that larger samples will be required in order to obtain more consistent or representative averages.

Table 7. Test Pit resample results

	Pit No.	Easting	Northing	Altitude	Weight (kg)	No. of Diamonds	Total Carats	Lithology Sampled
	MBP 301	671199	5326169	332	4,903	105	2.009	S1C
	401	671199	5326169	332	6,360	147	3.324	S1C
	MBP 302	671011	5326178	329	5,307	88	2.481	S1C
	402	671011	5326178	329	6,389	97	1.903	S1C

During the Fall of 2006 a series of test pits were excavated across the Central Sector and South Sectors of the property (Figure 24). The object of this phase of exploration was to complete the sampling of the exposures of conglomerate on the Leadbetter property and to obtain preliminary indications of the distribution of diamonds. The excavated samples were approximately 6 tonnes in size and processing of the 6 tonne samples by DMS methods will be conducted at a later date. In addition, 25 kilogram samples were collected at each of the test pits and sent to Kennecott Canada Exploration Inc's mineral processing laboratory in Thunder Bay, Ontario for processing by caustic fusion to recover diamonds. Results of the caustic fusion work are tabulated below. All test pit locations (2005 & 2006) have been surveyed by Descarreaux & Dubé, licenced surveyors from Val-d'Or, Québec. The program successfully demonstrated that diamonds persist through the Leadbetter conglomerate in the Central and South Sectors.

In conjunction with the "6 tonne" test pit samples, 4 test pits of approximately 60 tonnes each were excavated at sites in the North and Central Sectors. The "60 tonne" samples (i.e. 60 mega bag samples) were shipped to Kennecott Canada Exploration Inc's dense media separation ("DMS") facility near Thunder Bay, Ontario. There they were treated to recover diamonds by DMS methods.

The sampled pits were essentially resamples of previously sampled pits and therefore were labeled with the same number. The objective of this work was to test the variability of the diamond content of incremental 15 tonne samples, totaling 60 tonnes at each site; and to test for larger diamonds.

Of the four surface samples, three are from the North Sector and one from the Central Sector. In terms of the lithologic subdivision of the Leadbetter diamondiferous conglomerate, two of the samples (136 and 401) were from the main conglomerate horizon (S1C). **Sample 136** yielded 795 diamonds (>0.850 mm), for a total weight of 24.8575 carats, from 70.7 tonnes of rock. The largest diamonds recovered from this sample were a 1.522 carat pale yellow macle, a stone weighing 0.461carats and two diamonds each weighing 0.43 carats. **Sample 401** returned 1,096 diamonds (>0.850 mm), weighing 31.127 carats, from 78.1 tonnes and included diamonds weighing 0.31, 0.29 and 0.23 carats.

Of the others, **sample 101** was from the North Sector unit S1CV which underlies S1C. Sample 101 returned 737 diamonds (>0.850 mm), weighing 19.481 carats, from 79.9 tonnes. The largest diamonds weighed: 1.011, 0.311, 0.217, 0.184 and 0.181 carats.

Sample 184 was from the Central Sector and unit S1CO or the upper subdivision of the Leadbetter conglomerate. From sample 184, 246 diamonds weighing 7.181 carats were recovered from 68 tonnes of material. The largest diamond recovered was a 0.797 carat stone, followed by 2 stones each weighing of 0.268 carats and a third diamond weighing 0.126 carat.

The results indicate that there is still variation in diamond content between incremental 15 tonne samples, although this variation is less for samples from S1C in the North Sector. The single sample from the Central Sector, while having lower diamond content than the North Sector samples has the third largest diamond at 0.797 carats of all the diamonds recovered from the samples. Diamonds comparable in size to the alluvial diamond recovered in Lena creek by Mr. Leadbetter were recovered from the samples, i.e. diamonds of 1.522 and 1.011 carats compared with Leadbetter's 1.39 carat stone. RTZ (Kennecott) reported that there appears to be very little diamond breakage in the stones recovered.

Audit of the –4 +1 millimeters rejects or tailings from the DMS processing was under taken in July 2007 at Kennecott Canada Exploration Inc's mineral process laboratory in Thunder Bay, Ontario. Mr Michael Rylatt of Hatch (Montréal) supervised the reprocessing work. Details of the audit process are described in Section 16.0.

An additional 354 diamonds weighing 6.653 carats were recovered (Table 8). A total of 61 diamonds totaling 1.2585 carats including a 0.244 carat free diamond were recovered during the first pass run of the rejects through the DMS plant. The -4mm +2 mm DMS tailings recrush treatment liberated an additional 5.413carats (298 diamonds) or 6.5% diamonds by weight, indicating that a "fine grind" will maximize liberation and recovery.

Table 8. Summary of Audit Results

Pit No	Tails (kg)	Diamonds (carats)	Locked Diamonds	Total Diamonds	Diamond Sizes*			
					>0.85	1.18	1.7	2.36
101	34,537	1.985	80	98	62	35	0	1
136	27,647	1.787	88	98	58	38	2	0
184	28,711	0.769	33	44	28	15	1	0
401	35,427	2.113	97	114	78	33	3	0
		6.653	**298**	**354**				

*Diamond sizes: based on stones recovered on square millimetre sized sieves

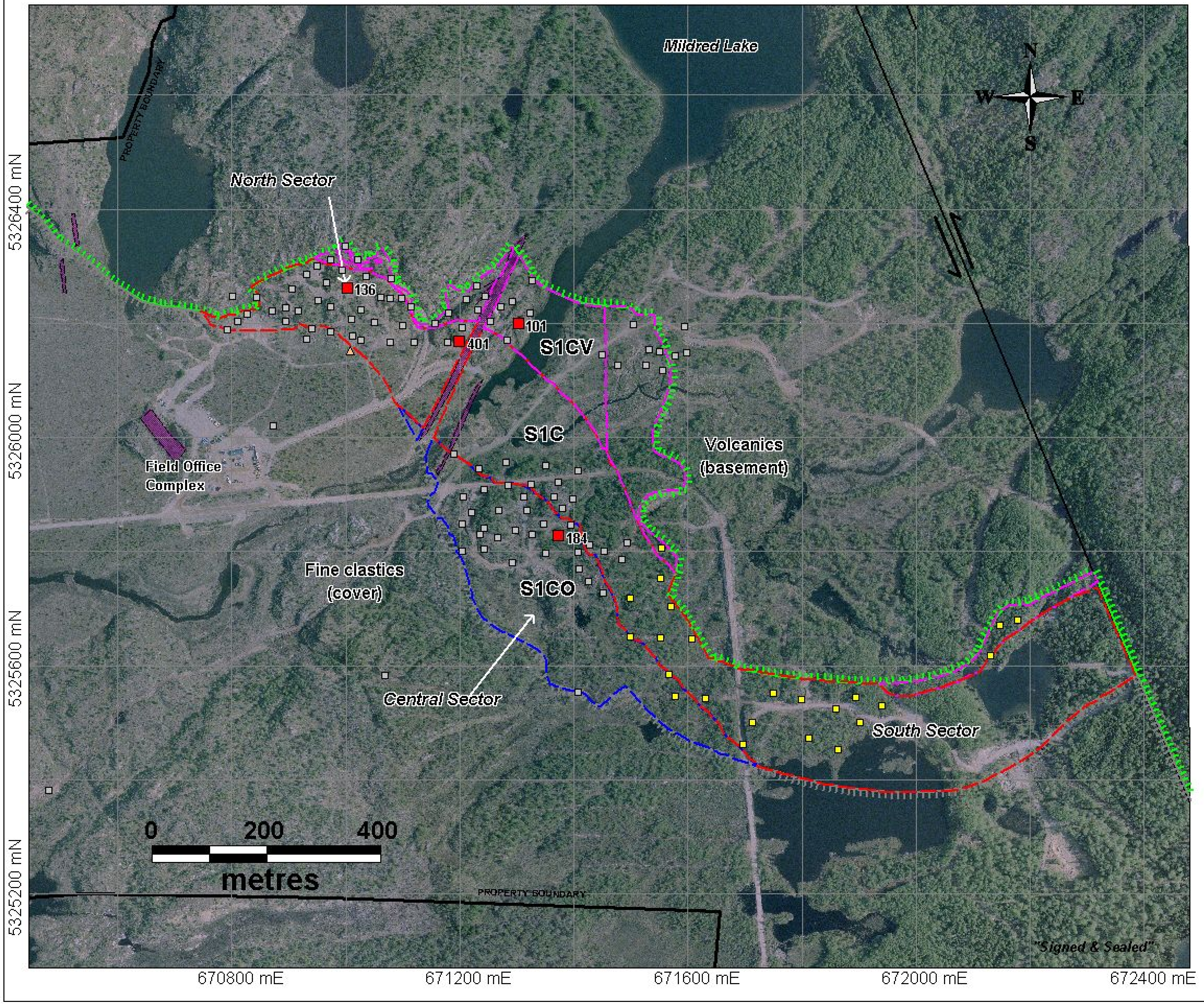
The rejects audit data combined with the original test pit sample results allows for an updated grade for diamonds greater than 0.85 mm to be estimated for the samples (Table 9). For test pits 136 and 401 that sampled the main diamondiferous unit, S1C, the average grade of these samples is 40.22 carats per hundred tonnes. For the sample 101 of volcaniclastic conglomerate, S1CV, the grade is 26.88 carats per hundred tonnes. For sample 184, taken in the overlying conglomerate, S1CO, the grade is 11.69 carats per hundred tonnes.

Table 9. Diamond Contents for 2006 "60 tonne" Test Pit Samples

Pit No	Original Dry Wt (kg)	Original Sample Grade (cpht)	Initial Diamonds* (carats)	Audit Diamonds (carats)	Total Diamonds (carats)	Revised Sample Grade (cpht**)
101	79,855	24.40	19.481	1.985	21.466	26.88
136	70,736	35.14	24.858	1.787	26.645	37.67
184	68,006	10.56	7.181	0.769	7.949	11.69
401	78,151	39.83	31.127	2.113	33.240	42.53

*Diamonds greater than 0.85 millimetres in size
** cpht = carats per hundred tonnes

It must be pointed out that the grade data is only applicable to the above samples. Extrapolation of the above grades as "average" grades for the rest of the diamondiferous conglomerate units is not possible due to insufficient sample density. Collection of additional large samples will be required in order to assess the lateral and down-dip grade variations in the conglomerate units.



LEGEND

- 2006 Test Pit Sample Location Site
- 184 "60 tonne" Test Pit Sample Location Site
- Alluvial Test Pit Sample Site
- 2005 Test Pit Sample Location Site

Note: Refer to Figure 8 for Geolgy Legend
Orthophoto topographic base is georeferenced to NAD 83, zone 16
Refer to Figure 2 for location with respect to property boundaries

Ressources dia N or Inc.

2006 TEST PIT SAMPLE LOCATION PLAN

LEADBETTER DIAMOND PROJECT

Chabanel Township
Ontario, Canada

Figure 24.

10.6 Alluvial Sampling

A program to test the diamond potential of the alluvial cover of the Leadbetter property was undertaken in the late Fall of 2005 (Hourican, 2006). The purpose of this work was to determine if significant quantities of diamonds could be recovered from overburden draped around the exposed Leadbetter conglomerate. The nature of the overburden is complex on the property, consisting of lacustrine sediments overlain by glacio-fluvial sediments. The lacustrine sediments may have been the source of the diamonds that Mr. Leadbetter recovered while prospecting up Lena creek.

The alluvial sampling program consisted of the collection of 10 samples of approximately 6 tonnes each (2.5 x 2 x 1.5 metres in size) from successively deeper layers of the overburden material. Each sampled layer was between 1 and 1.5 metres in thickness. The excavated pit measured approximately 10 x 5 metres and was centered at 670,850mE, 5,326,200mN. The excavated samples were processed through a vibratory screen to remove the plus 0.5 inch material. The minus 0.5 inch material was feed through a 2 compartment Denver jig, having a 2 mm screen under the upper box. Thus concentrates consisting of –0.5 inch, +2 millimetre and, in the bottom hutches, -2 millimetres heavy minerals were recovered by the processing. The concentrates were placed in metal 20 litre pails and shipped to SGS Lakefield Research in Lakefield, Ontario for processing. At SGS Lakefield the +0.5 inch/–2 millimetre concentrates were subjected to heavy liquids separation technique to further concentrate the material. The final concentrates from the heavy liquid separation were then examined for diamonds. The –2 millimetre concentrates were processed in the DMS plant at SGS's facilities. Concentrates produced from this were then subjected to magnetic separation and the non-magnetic fraction resulting from this was examined for diamonds. The objective of the sampling program was met, as results of the sampling indicate that diamonds do occur in the alluvium and the diamond content of the material sampled increased with increasing sample depth for the –2.0 millimetre jig concentrates.

Table 10. Diamonds recovered from –2.0 mm Jig Concentrates form Alluvial material

Sample	**Bottom screen aperture in microns***									**TOTAL**
Level	**Depth (m)**	**106**	**150**	**212**	**300**	**425**	**600**	**850**	**1180**	**DIAMONDS**
Level 1	1.50	0	0	0	0	0	0	0	0	0
Level 2	3.00	0	1	2	1	3	6	5	3	21
Level 3	4.50	1	2	0	1	1	0	3	2	10
Level 4	6.00	7	12	5	3	2	4	3	0	36
	Total	**8**	**15**	**7**	**5**	**6**	**10**	**11**	**5**	**67**

* 1000 microns = 1 millimetre

In the case of the +2.0 millimetre jig concentrates no diamonds except for 4 Congo rounds, or 25% of the spiked diamonds, were recovered. This recovery rate for the spiked diamonds is poor. Further work will be required in order to determine the best recovery parameters and to adequately test the surficial material on the Leadbetter property.

10.7 Ground Penetrating Radar Survey

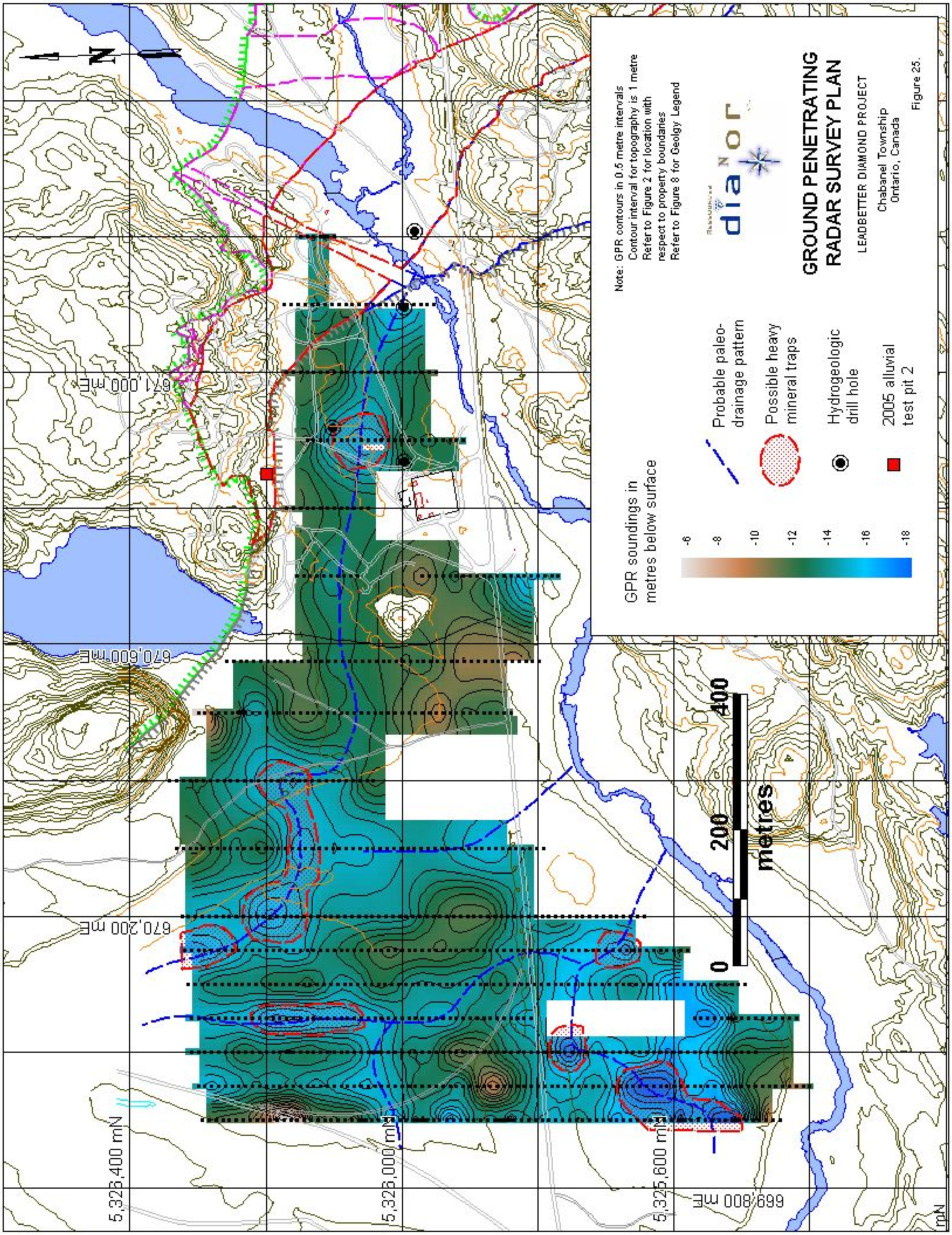
In order to further investigate the potential of the alluvial material on the Leadbetter project site a Ground Penetrating Radar (GPR) survey was undertaken in late June 2007. The purpose of this survey was to determine the thickness of overburden and to locate potential heavy mineral trap sites at the overburden/bedrock interface.

Global GPR Services of Toronto was contracted to conduct the survey, which was undertaken using a Sensors & Software Pulse ekko Pro system with a 100 Mhz antenna and a 1000 V transmitter. Velocity of signal in the ground averaged 0.095 m/ns during the survey. A total of 17 north-south surveyed lines covered approximately 58 hectares of the alluvial plain extending south and west from the exposures of the Leadbetter diamondiferous conglomerate. Results of the survey were interpreted to indicate that the maximum thickness of alluvial overburden in the surveyed area is 18 to 19 metres. Confirmation of the nature and thickness of the alluvial sand and gravel was provided by 3 of the 4 hydrogeological drill holes that tested sites within the surveyed area. The survey was successful in imaging several trap sites that are inferred to occur along paleostream drainages. The trap sites have potential for collecting heavy minerals such as diamonds and warrant further testing (Figure 25).

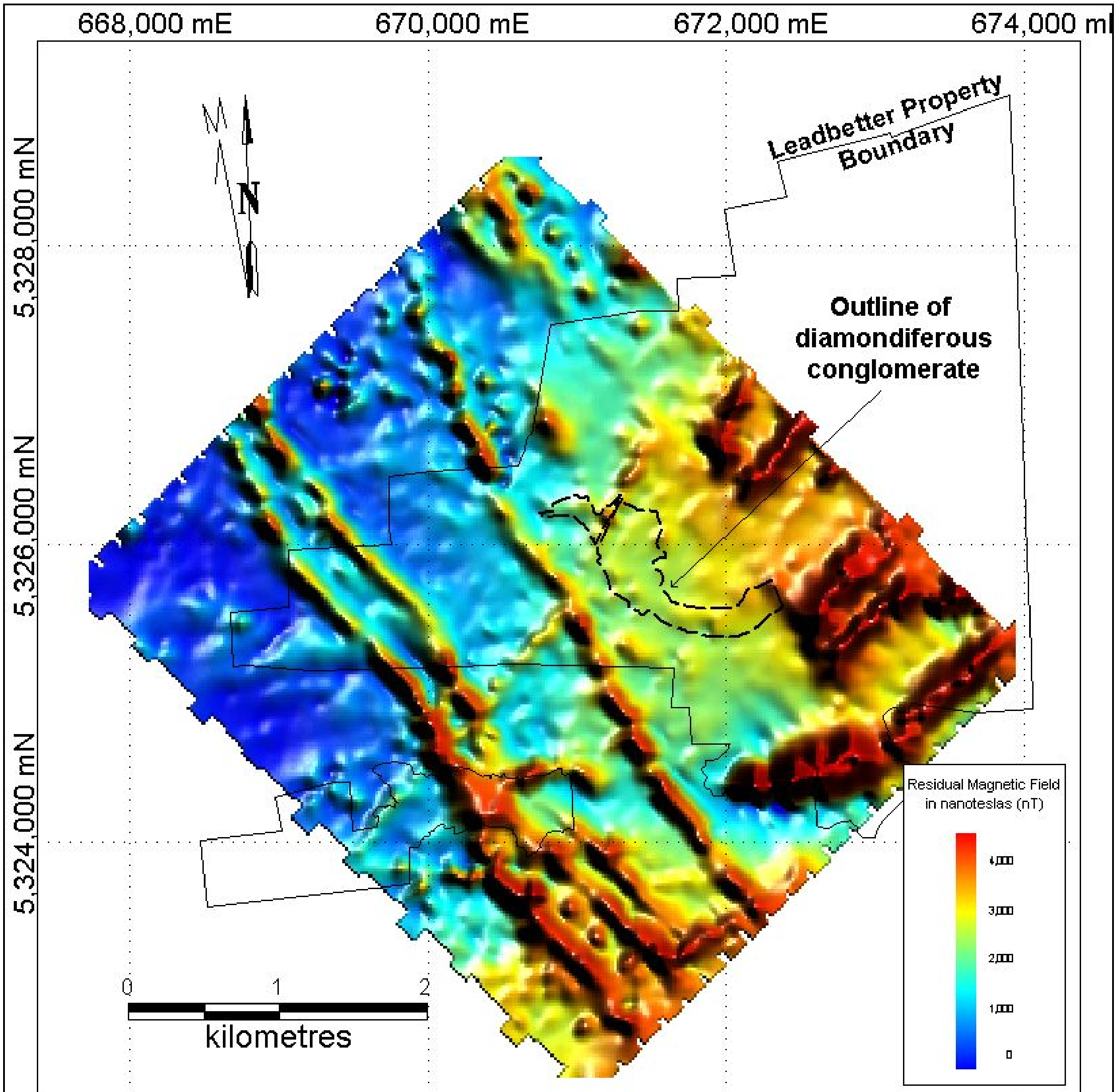
10.8 Airborne Geophysical Surveys

McPhar Geosurveys Ltd of Newmarket, Ontario undertook an airborne geophysical survey of the Leadbetter Diamond Project area during the period October 20 to 22, 2005. The program consisted of a combined high resolution magnetics and radiometric helicopter survey. A total of 222.0 line kilometres of data were acquired, covering an area of approximately 180 hectares. The survey area was flown with a nominal mean terrain clearance of 30 metres for the magnetometer and 50 metres for the Gamma Ray Spectrometer and helicopter flight lines oriented southwest-northeast at a spacing of 100 metres and tie lines oriented northwest-southeast at a spacing of 3,500 metres. Technical details of the survey and instrumentation used are documented in the report by McPhar (2005).

The objective of the survey was to determine if the diamondiferous conglomerate had a unique geophysical signature that could be used as a guide during exploration. Results of the survey (Figure 26 and 27) indicate that a unique signature for the conglomerates is not readily apparent in the data. However features from the magnetic survey were useful in the geological interpretation of the property as the survey highlights the location of mafic dykes and structural features such as the Mildred Lake fault.



GPR soundings in metres below surface
-6
-8
-10
-12
-14
-16
-18
Probable paleo-drainage pattern
Possible heavy mineral traps
Hydrogeologic drill hole
2005 alluvial test pit 2
Note: GPR contours in 0.5 metre intervals
Contour interval for topography is 1 metre
Refer to Figure 2 for location with respect to property boundaries
Refer to Figure 8 for Geolgy Legend
GROUND PENETRATING RADAR SURVEY PLAN
LEADBETTER DIAMOND PROJECT
Chabanel Township
Ontario, Canada
Figure 25.
0
200
400
metres
5,323,400 mN
5,323,000 mN
669,800 mE
670,200 mE
670,600 mE
671,000 mE
N



Note: Aeromagnetic data from McPhar Geosurveys file RTP.grd - reduction of the total magnetic intensity to the pole with the International Geomagnetic Reference Field (IGRF) removed

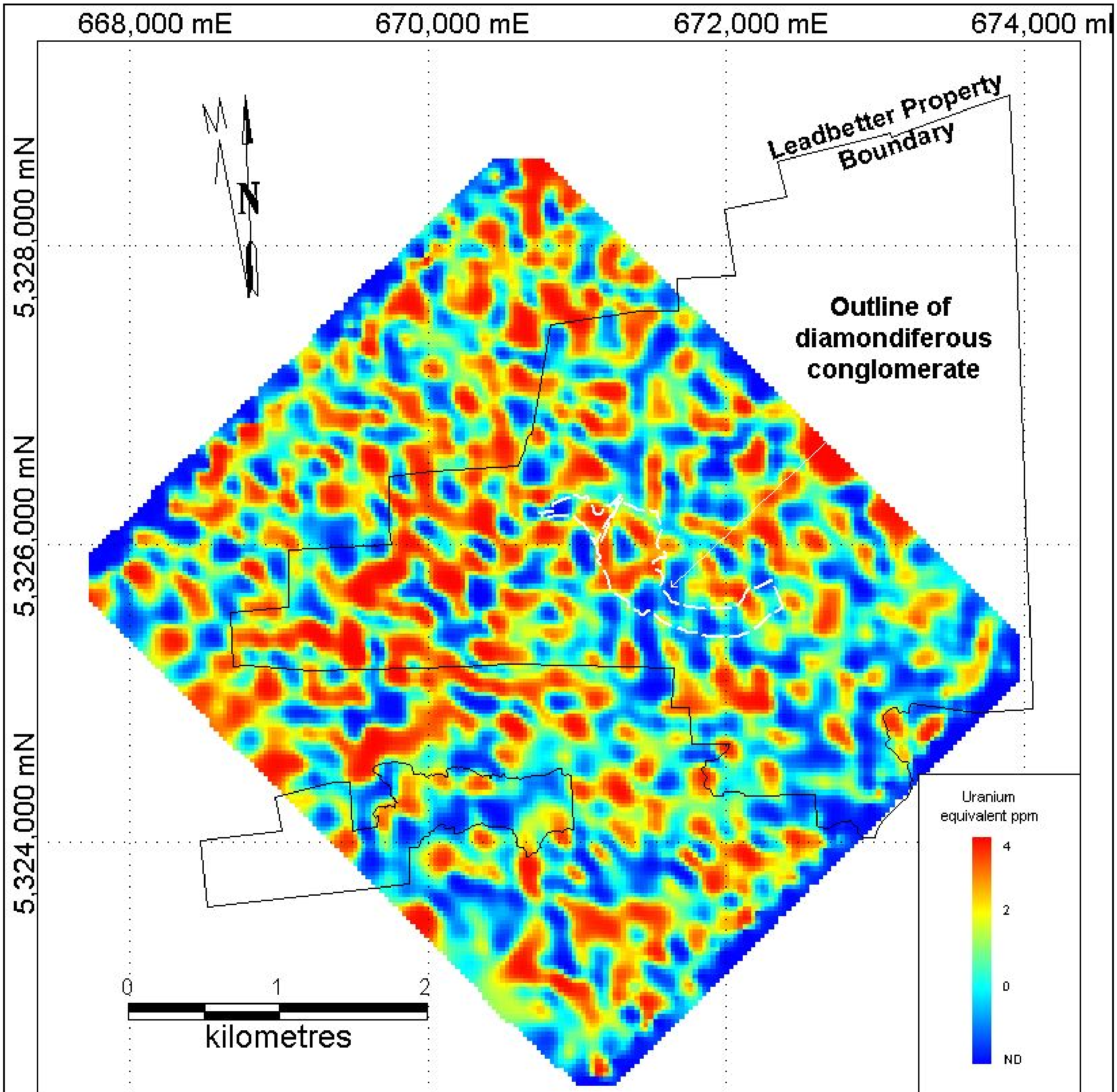
Ressources dia NOR Inc.

AEROMAGNETIC SURVEY

LEADBETTER DIAMOND PROJECT

Chabanel Township
Ontario, Canada

Figure 26.



Note: Spectrometer data from McPhar Geosurveys airborne spectrometer survey file U_final.grd - radiometric uranium

RADIOMETRIC URANIUM
LEADBETTER DIAMOND PROJECT
Chabanel Township
Ontario, Canada

Figure 27.

10.9 Geochemistry and Petrology

As a part of the exploration work on the Leadbetter Project, drill core and rock samples were collected on a systematic and routine basis for both trace element and whole rock geochemical analysis. Analytical work was preformed at Laboratorie Expert Inc in Rouyn-Noranda, Quebec.

Results from 603 whole rock analyses of drill core from conglomerate intersected in 18 drill holes and 46 test pits in the North Sector when plotted on a Jensen volcanic discrimination diagram exhibit a pronounced tholeiitic trend (Figure 28) with the bulk of samples being of andesitic to basaltic composition. This is consistent with the clast composition observed in the conglomerate and clearly reflects the volcanic source terrain underlying the conglomerates, but it is not consistent with conventional diamond host rocks such as kimberlite, and probably does not reflect the composition of the protolith that diamonds in the Leadbetter conglomerate were derived from. The composition of the Leadbetter conglomerates is distinct from those of the diamond-bearing "Wawa volcaniclastic rocks" located to the north of the Leadbetter property. The Wawa volcaniclastic rocks have a calc-alkalic basaltic komatiitic composition. This supports the notion that the diamonds in the Leadbetter conglomerate have a unique and different source compared to that postulated as the source for those diamonds recovered from the Wawa volcaniclastics. The unique source for the Leadbetter diamonds is also supported by the fact that a relatively large number and varied types of diamond indicator minerals are found in the Leadbetter conglomerate in comparison to the lack of such indicator minerals in the Wawa volcaniclastics.

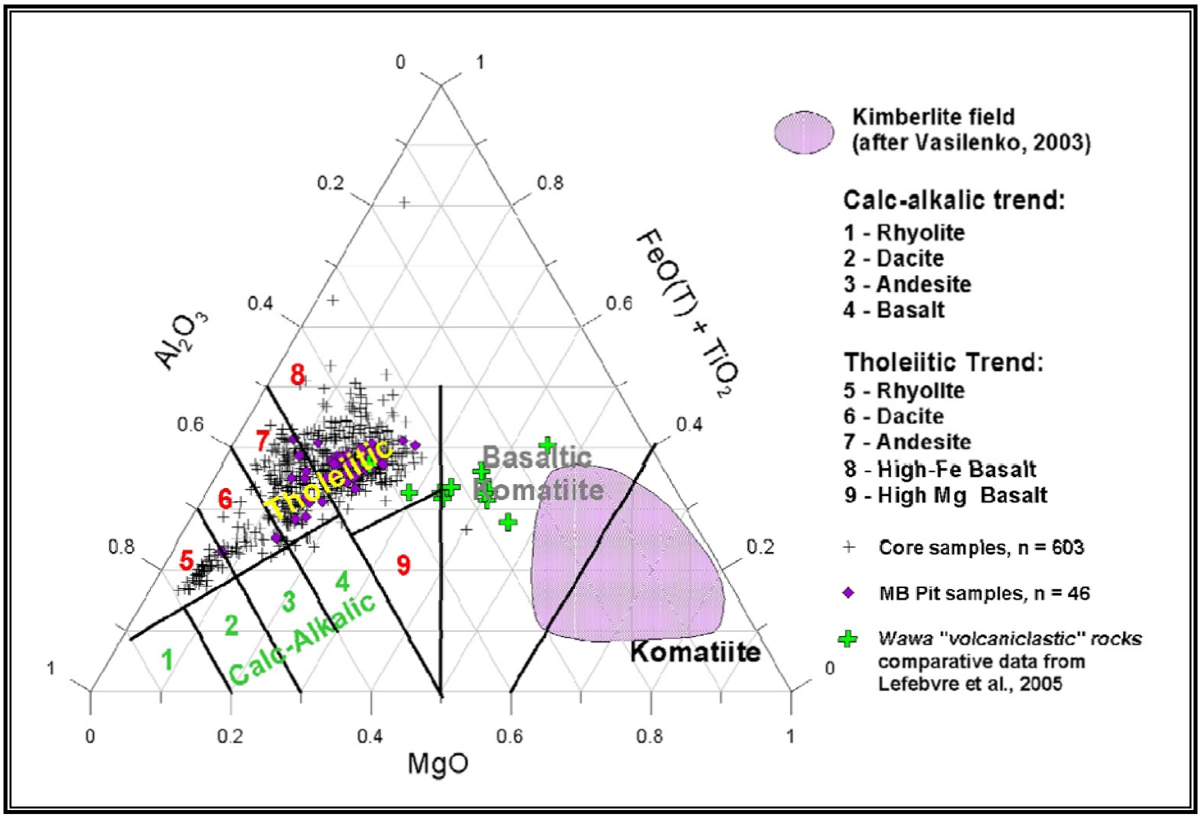


Figure 28. Jensen Volcanic Discrimination Plot – Leadbetter conglomerate

Petrographic studies of Leadbetter conglomerate by Dr Allan Miller, PGeo, have indicated that the matrix of the Leadbetter conglomerate, while characteristically a clastic sediment locally has unusually high proportions of Mg-rich chlorite in some areas and occasional ghost-like “chloritite” clasts. Some of the chlorite–rich clasts have embedded chromite grains (Figure 29). The clasts are indicative of an ultramafic rock and may be indicative of the diamondiferous protolith for the diamonds in the Leadbetter conglomerate. An attempt to characterize the whole rock and trace element geochemistry of the chlorite-rich clasts by micro-analytical techniques may shed some light on the nature of the original rock.

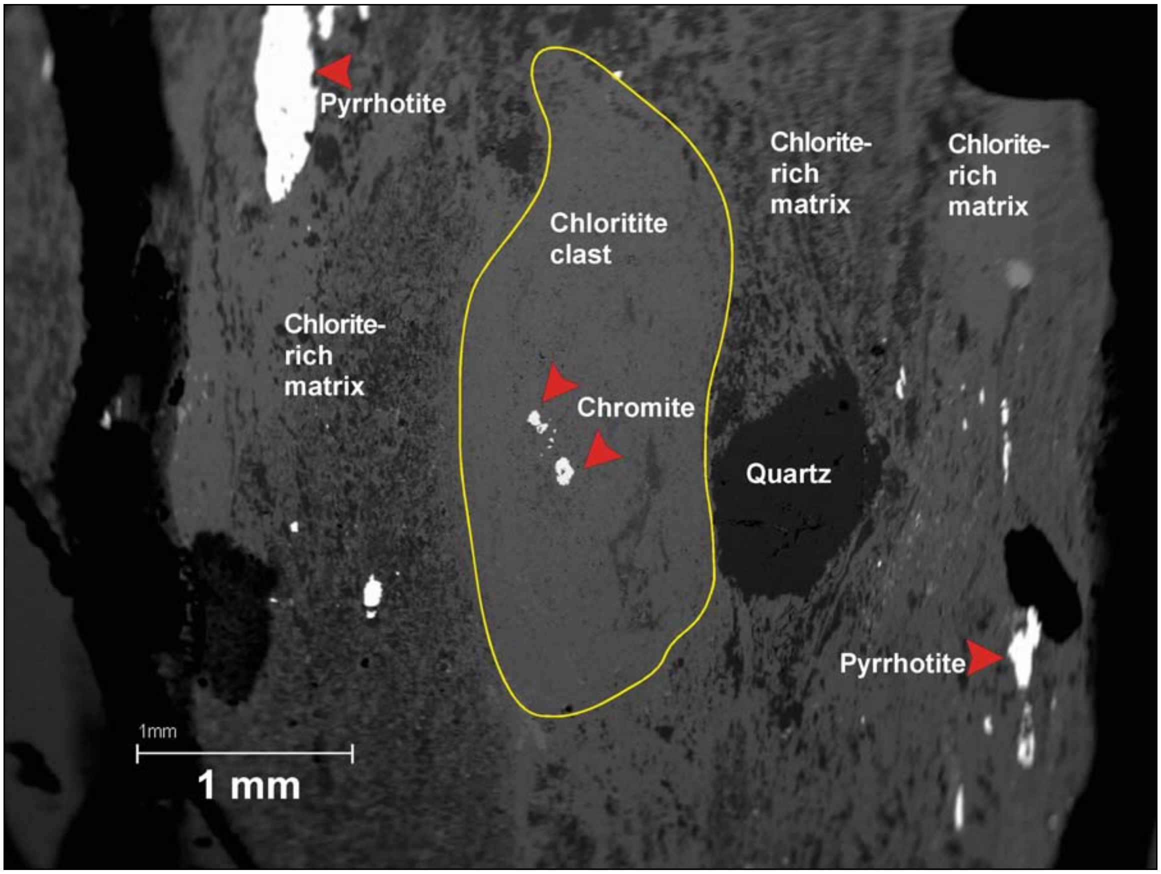


Figure 29. Chloritite clast in matrix of Leadbetter conglomerate
Backscattered electron image – courtesy A.R. Miller & Associates

11.0 Drilling

To date all drilling on the Leadbetter property has consisted of diamond core holes. During the first phase of drilling both NQ (47.6 millimetre core diameter) and BQ (36.5 millimetre core diameter)-sized core drilling was undertaken. The NQ holes were primarily designed to acquired data that could be used for resource estimation, while BQ holes were designed to test areas where there were deemed to be geological problems that drill core might aid in solving. During the last phase of drilling HQ (63.5 millimetre core diameter) sized core drilling was conducted with the intent of having all of the cores processed by causitic fusion to recover diamonds.

Down-hole surveys of NQ and HQ drill holes were conducted on completion of each hole using the *"FLEXIT Smart Tool"* down-hole surveying system, which read inclination and azimuth at 3 metre intervals. Data from the surveys was down loaded into a computer and merged with the drill log database. Drill hole locations have been surveyed by Descarreaux & Dubé, licenced surveyors from Val-d'Or, Québec

At the end of each drill shift boxed drill core is taken to the core storage/logging compound area. The core storage/logging compound is fenced and gated. Only authorized persons are allowed access to the facility. A watch person is on site 24 hours a day. At the core storage/logging compound a technician receives the boxed drill core, which is then opened and cleaned with a brush and water. Drill core in each box is measured and recovery is estimated. Discrepancies, if any, in drill metre blocks are noted and reported immediately to the drillers for rectification. The technicians then measure the magnetic susceptibility using an Exploranium KT-9 Kappameter at 1 m intervals. Next, technicians measure the rock quality designation ("RQD") of the drill core. Aluminium tags (Dymo tape) with hole number, box number and length of core in the box are stapled to the end of each box. The end portion of the first box of each hole is painted in green. The end portion of the last box of each hole is identified by EOH or FIN on the dymo tag and it is painted in red. Boxed core is digitally photographed both dry and wet in groups of 4 boxes with a scale and a sheet identifying hole number, depth interval of the photographed group and core box number. Boxed core is then stored inside the logging facility to await logging. Data acquired by the technician, including digital photographs of drill core, are entered into a computer on site. Data entered into the computer is merged into a commercial core-logging program "Geotic Log".

The core is logged by either priority or by sequence. Initial logging of the drill core maps out gross lithologic contacts of the main units recognized to date on the property. Boundaries are drawn on the core and comments on the units written in summary log sheets.

Detailed logging of the core in *Geotic Log* is then performed. Lithologic subdivisions are finalized, units and subunits are described and any significant alteration, mineralization, structural features and veining are also described in detail. Lithologic subdivisions are determined by significant change in rock type, mineralogy, texture or color. A table identifying clasts in the conglomerate and other significant information is compiled. A table with thin section identification and intervals is also compiled in *Geotic Log*.

11.1 Phase 1 Diamond Drilling

Phase 1 drilling consisted of 4,313.78 metres of NQ wire line diamond drilling in 16 holes and 3,038.83 metres of drilling in 26 BQ-sized holes. The NQ drill holes were drilled in an east-west fence that was laid out obliquely to the attitude of the Leadbetter conglomerate. Consequently intercepts with the diamond-bearing conglomerate ranged between 29% and 42% (averaging 32%) of the true thickness of the conglomerate, i.e. an intersection of 100 metres in a drill hole would be equivalent to a true thickness of approximately 32 metres.

11.2 Phase 2 Diamond Drilling

Phase 2 drilling consisted solely of NQ wire line diamond drilling. A total of 38,370.90 metres were drilled in 92 holes. The drilling pattern was laid out along east-west lines 100 metres apart, with drill holes staggered at 200 metre intervals and as such is regarded as a reconnaissance pattern. The object of the drilling was to test the full extent of the outcrop of the Leadbetter conglomerate units on the property and to test the down dip extent of the units. The results of the program were utilized in the construction of a 3-dimension model of the deposit and in the estimation of a preliminary tonnage for each of the conglomerate units identified to date.

Geological mapping indicates that the Leadbetter conglomerate forms a sinuous body that is truncated on the east by the Mildred Lake fault. Based on the Phase 2 drill results the Leadbetter conglomerate dips moderately to the northeast (45^{o}). The stratigraphic base of the conglomerate sequence is comprised of lenticular keels of a volcaniclastic conglomerate (S1CV) that is overlain by a thicker, more widespread polymictic conglomerate or debris flow (S1C) that appears to thicken to the east. Overlying the unit S1C is a lens of conglomeratic material (S1CO) that is characterized by an abundance of quartzofeldspathic material in the matrix.

11.3 Phase 3 Diamond Drilling

Phase 3 drilling consisted of HQ wire line diamond drilling. A total of 1,809 meters were drilled in 11 holes for resource appraisal purposes. An additional 9 holes were drilled as a part of this program for geotechnical and hydrological purposes. The results of the drilling were successful in that they intercepted the diamondiferous conglomerate horizons as planned.

12.0 Sampling Method and Approach

Sampling on the Leadbetter property has consisted initially of bedrock sample exposures of the diamond-bearing conglomerate in late 2004 (Verley, op cit.). This was followed by Phase 1 diamond drilling that focused on testing an east-west transect approximately 1,350 metres in length across the North Sector. A total of 13 NQ sized drill holes were completed during this phase. In addition, 38 BQ-sized drill holes were completed during Phase 1. These holes were again mainly in the North Sector, however, some test work was conducted in the Central and South Sectors in order to delimit the conglomerate horizons there.

The NQ drill core was logged in detail and sampled. Some of the BQ drill holes were also sent in for diamond recovery by caustic fusion.

12.1 Drill Core Sampling

Drill core samples that are to be processed for diamonds are chosen in relation to the contacts of differing units to differentiate the diamond contents within each unit. Samples are given a number in a sequence and the intervals are measured and entered in the logging program.

The sample interval is generally 3.5 metre in length for split NQ core and 2.5 metre for whole BQ and AWLTK48 core. These lengths have been established on the basis of maximum sample weight accepted at the caustic fusion facilities (8 kg per sample).

All fragmental rocks, sedimentary (e.g.: conglomerate, sandstone, argillite) and volcaniclastic rocks (e.g.: pyroclastics, lahars, tuffs) are sampled.

In the sediments stratigraphically above the diamond-bearing conglomerates and in the volcanics below, 3 to 5 contiguous samples are taken. Otherwise, 3.5 metre long samples from the volcanics and sediments are chosen at the geologist's discretion, usually at intervals of 12.5 metres or greater. Again, at the geologist's discretion, any unusual rock or unit are also sampled for diamond recovery by caustic fusion.

A numbered sample tag is stapled in the core box at the end of every sample as proof of sampling.

Petrographic and/or geochemical samples, of 10 centimetres each, are chosen throughout the core at approximately 5 metre intervals and on both sides of contacts.

Samples for petrography are taken from any unusual lithologies or features observed in the core and are chosen by the logging geologist.

12.1.1 BQ and AWLKT48 Core handling

Petrographic samples are separated from the core with a hammer and chisel or diamond blade saw. They are split along the core axis with a diamond saw (diamond in the blades are certified as synthetic), one half is sent for geochemistry analysis at Laboratorie Expert Inc and the other half (which is identified for microscope observation) sent for thin section preparation. The samples are no more than 7 centimetres in length. Each sample is packaged separately in labelled *Zip Lock* bags. Petrographic samples that are collected for research purposes are not split. A.R. Miller & Associates conducted the bulk of the petrography of core samples. Research on some core samples was conducted as part of a master's thesis undertaken at Wayne State University, Michigan, by Dawn Niedermiller.

Samples collected for diamond recovery by caustic fusion are separated from the core with a hammer and chisel or diamond saw. They are then individually sealed, with sequentially numbered, tamper-proof security seals, in doubled plastic bags, weighed and shipped in large fiber-weave sacks secured by metal strapping on pallets.

All of the BQ and AWLKT48 core samples to be processed for diamond recovery by caustic fusion are sent to the facility of Saskatchewan Research Council in Saskatoon. The remaining core, which is not sampled, is stored on site within the compound.

12.1.2 NQ Core handling

Once the logging has been performed, the NQ core is stored outside, within the compound area pending splitting.

As with the BQ core, NQ samples for petrography are selected, they are then split along the core axis, using a diamond saw (diamond in the blades are certified as synthetic). One half is sent for geochemical analysis at Laboratorie Expert Inc and the other half (which is identified for microscope observation) sent for thin section preparation. In general, these samples are no more than 7 centimetres in length. Each sample is packaged separately in a labelled *Zip Lock* bag. Petrographic samples that are analysed at Wayne State University are collected and split along the core axis and only half of the core is sent out, the other is left in the core box. Petrography of the majority of core samples was conducted by A.R. Miller & Associates.

The samples selected for diamond recovery by caustic fusion are split by diamond saw. One half of the core is sent for caustic fusion processing and the other is either kept in the core archives on site or in some situations sent to a different laboratory for diamond recovery as part of the quality assurance, quality control program. The caustic fusion samples are individually sealed, with sequentially numbered tamper-proof plastic security seals, in doubled plastic bags, weighed and shipped in large sealed rice bags secured by metal strapping on palates.

For each drill hole, at least one sample and a duplicate taken from a sterile source (e.g. diabase dyke) are sent as a quality testing sample at either one of the two caustic fusion facilities.

Some samples, chosen by a senior geologist, are selected from the core archive for quality assurance/quality control testing. These samples are sent to either Saskatchewan Research Council or to SGS Lakefield Research.

The cored diamond-bearing conglomerate is a very competent rock and as such diamond losses, as may occur in a more friable disaggregated rock, are improbable. Core recovery, in most intervals was 100 percent. The drill core samples are relatively small for diamond samples. The "nugget effect" associated with diamonds can effect the results for such small samples. Reliance is placed on the microdiamond (diamonds less than 0.5 millimetres in size) content of the samples and the relationship that these diamonds have to larger diamonds having commercial characteristics. For this type of deposit the relationship between micro- and macrodiamonds (diamonds greater than 0.5 millimetres in size) may not be well resolved. Typically the only way to achieve a higher confidence in the sample results is to take successively larger samples in order to establish a reliable relationship, if one exists. The wide spaced reconnaissance nature of the drilling makes a reliable assessment of the diamond distribution difficult. Further infill drilling will be required in order to increase this reliability.

The diamond host rock on the Leadbetter property is, by nature, not homogeneous. Consequently, variation in diamond content can be expected. The main control effecting this variation is probably sedimentological in nature. That is, primary deposition of the conglomerate and its different facies will probably play the largest role in effecting diamond distribution. Therefore, a clear understanding of these processes will help in determining the distribution of diamonds throughout the conglomerate units. Structural deformation of the volcano-sedimentary succession will also play a role in effecting the diamond distribution. Particularly imbrication of the conglomerate package may thicken the diamond bearing zones. Faulting, shearing and the introduction of hydrothermal fluids in some localized structures may be diamond destructive processes. An understanding of these features and their locations within the deposit will be required in order to advance the project.

Initial sample results, as summarized in Section 10, have demonstrated that there are lean intervals and higher-grade zones within the conglomerate units, based on the recoveries of diamonds from caustic fusion processing. However, because of the wide spaced nature of the drilling further testing by drilling and sampling of in-fill holes will be required in order to determine if there is continuity of the various zones as indicated by the initial drilling. This will be necessary in order to optimise the locations for underground bulk samples.

12.2 Test Pit Sampling

Surface test pit samples, in 2005, of exposures of the Leadbetter conglomerate were selected across the North Sector and into the Central Sector on a spacing that placed samples approximately 35 metres apart. During this campaign 105 samples were collected, some samples were collected from the underlying volcanic package, some from the overlying sediments and some from alluvium, but the majority of samples were from the diamondiferous conglomerate. The objective of the sampling program was to demonstrate the existence of diamonds across the exposures.

The sample sites were initially photographed, then where there was some overburden, cleaned of that. Next the sample sites were outlined in fluorescent orange paint. In the case of samples sites in well-consolidated bedrock, a track-mounted percussion blast-hole drill prepared the sites for blasting in order to break the rock such that it could be excavated. Some samples in weathered bedrock were excavated without the need for blasting. A John-Deere track-mounted excavator was employed to excavate the samples from the test pits. Typically the samples were recovered from the first metre of surface material. The samples were loaded into *megabags,* having a 1 tonne capacity, through a portable steel funnel by the excavator directly upon being excavated. A total of 6 bags were collected at each site. Bagged samples were removed from the steel funnel using a track mounted forklift, placed on pallets, sequentially numbered and sealed with tamper-proof numbered seals. The samples were then loaded on flat-deck trailers, in groups of 24, and shipped to SGS Lakefield Research, in Lakefield Ontario for recovery of diamond by dense media separation. At SGS Lakefield the samples were crushed to minus 6-millimetre size. Reference samples of 50 kilograms of the crushed material were retained from each sample.

The same approach and equipment was used to collect test pit samples in 2006, with the exception that a crusher attachment to the excavator was utilized to break oversized material. These samples were collected from sites in the Central and South sectors that were not sampled during the 2005 campaign. Representative sub-samples, averaging 20 kilograms were collected at each of these sample sites and shipped to Kennecott Canada Exploration Inc's mineral processing laboratory in Thunder Bay, Ontario for recovery of diamonds by caustic fusion. The remaining 6 tonne samples will be processed to recover diamonds by dense media separation techniques in due course. In addition, larger 60 tonne samples were collected by the same methods at 4 sites in the North and Central Sectors. These samples were shipped to Kennecott's Thunder Bay facility where they were processed to recovery diamonds by dense media separation (refer to Section 10.2 for details).

Sampling or recovery factors that could affect the accuracy and reliability of the test pit sample results are essentially the same as those described above for the drill core samples, that is, the nugget effect due to small sample size and particularities of facies or lithology. Taking relatively large samples and increasing sample size for successive samples will help to overcome this. There was some concern that samples collected from surface weathered outcroppings of the Leadbetter conglomerate may have different diamond yields or recoveries than those samples collected in adjacent fresh rock. The effect of weathering of the bedrock on diamond recovery does not appear to be significant.

The test pit samples were believed to be representative of the surface outcropping material, because of the way they were selected and their widespread distribution across the conglomerate units. For these reasons it is unlikely that there were any factors in the field sampling program that may have resulted in sample biases.

13.0 Sample Preparation, Analyses and Security

On site there was no sample preparation work undertaken, other than the splitting of drill core by diamond saw and bagging of resultant samples. Handling of drill core was documented in terms of who was involved in the splitting and bagging operations on a sample-by-sample basis. The sampling records are maintained on site. Numbered, tamper-proof plastic seals are used to secure and identify samples. The samples are held in a fenced and gated compound under 24 hour security prior to shipping by bonded commercial transport to laboratories for diamond recovery.

No aspect of sample preparation was conducted by an employee, officer, director or associate of Dianor Resources Inc.

Diamond recovery from samples was undertaken by caustic fusion, a process that dissolves the diamond host in molten caustic soda. The process is a total recovery, down to the limit of the size of the bottom screen used, for diamond. The majority of core samples were processed at Saskatchewan Research Council's facility in Saskatoon. Duplicate samples of drill core were send to SGS Lakefield Research Ltd in Lakefield, Ontario, were they were also processed by the caustic fusion technique. Both Saskatchewan Research Council and SGS Lakefield are ISO 17025 accredited laboratories for caustic fusion processing. The use of these laboratories as opposed to a single laboratory was in part an aspect of the quality control/quality assurance program to insure reliability of results.

In terms of quality control practices, approximately every fifteenth sample was sent to SGS Lakefield Research as a check against work preformed by SRC. In addition, a duplicate (or double) sample was cut from approximately every fifth sample. Seventy-five percent of the duplicates were sent to SGS Lakefield and the remaining samples were sent to SRC. The results of the processing of duplicate samples (Figure 30) when compared to their primary counter parts show a wide variation in results that does not fit a linear regression well; this is believed to be primarily a result of the particulate nature of diamonds and, for small samples, their apparently random distribution through the rock. Therefore the practice of using duplicate samples should cease, in favor of the more reliable practice of using diamond spikes to monitor recover. Furthermore, "blanks", that is, samples of sterile rock, were inserted into sample runs for approximately every fifteenth sample with one blank going to SGS Lakefield and one to SRC. During the later part of Phase 2 drilling a program was implemented to attach synthetic diamonds onto the drill core samples in order to test the recovery rates of both SRC and SGS Lakefield.

In terms of test pit samples, that is, samples submitted for dense media separation, there was no sample preparation during the 2005 sampling campaign. However, during the 2006 sampling program a jaw crusher attachment on the excavator was utilized to break oversize rock down to minus 6 inch size in order to facilitate handling at Kennecott's Thunder Bay mineral processing facility. The test pit samples from the 2005 sample program were secured in the fenced and gated compound prior to shipping to SGS Lakefield. The 2006 test pit samples, because of their volume were secured in an area behind the compound prior to shipping.

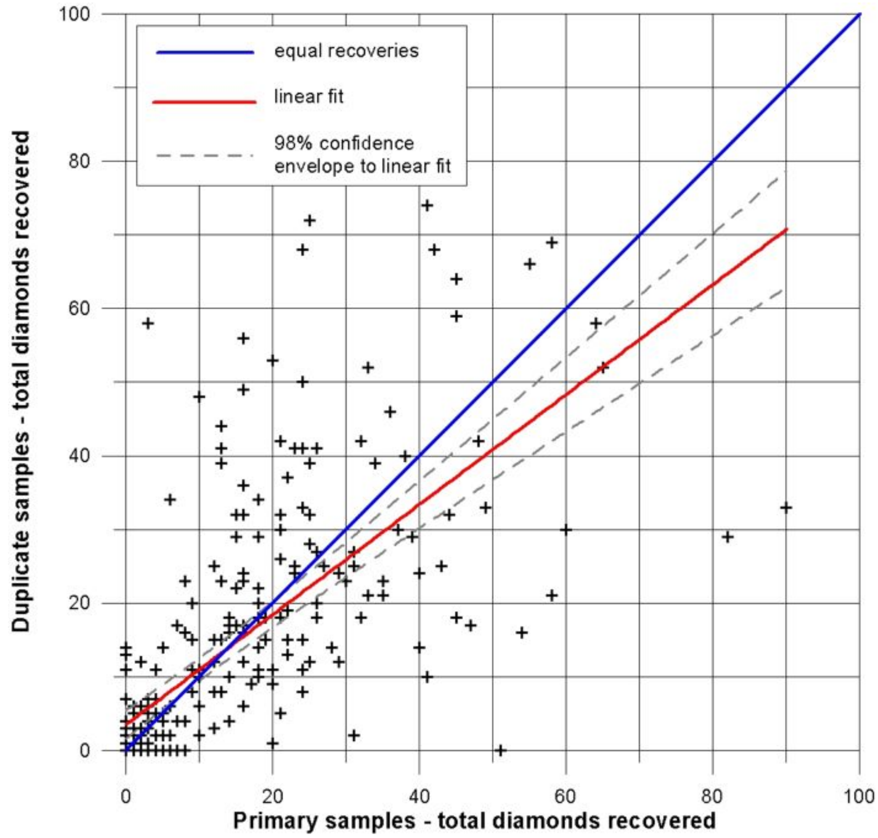


Figure 30. Plot of diamonds recovered from duplicate samples versus primary samples

Reliance was placed on the DMS operators use of a density tracers in their circuits and the recovery of these to provide quality control. During the 2005 DMS processing Dr Rosemarie Khoun, PGeo was on site at SGS Lakefield as Dianor's representative to monitor SGS's quality control. During the 2006 DMS processing Michael Rylatt and Max Couillard of Hatch (Montréal) supervised Kennecott's operation on behalf of Dianor, thereby providing quality assurance for that work.

It is the writer's opinion that sampling, sample preparation, security and analytical procedures were adequate for this stage of exploration.

14.0 Data Verification

The author has examined all of the analytical reports submitted to Dianor from all of the laboratories involved in processing or analysing samples from the Leadbetter property and has verified that the results reported herein correspond exactly to those in the laboratory reports. The writer is satisfied that the results are reliable.

In addition, Christian D'Amours has proceeded to verify each diamond analysis present in the database and verified that it corresponded with each certificate of analysis issued by the processing laboratory. This verification greatly reduces the risk of errors that potentially may occur when electronic data is imported directly into a database.

15.0 Adjacent Properties

There are significant properties adjoining the Leadbetter Diamond project to the north and to the west (Figure 31). There is also one claim internal to the *Leadbetter Extension Property* that is held by others.

The offset northern extension of the Leadbetter conglomerate crops out on property owned by Mori Diamonds Inc., referred to as the Mori East Property. The ground covers an area of approximately 873 hectares in 4 claims. A joint venture agreement exists between Metalex Ventures Inc and Mori Diamonds to which Dianor Resources is a third party. The agreement gives Dianor the right to earn an overall 30% interest in the project by jointly financing the first diamond deposit in the claim units to bankable feasibility plus making payments to Mori Diamonds on a pro-rata basis.

The conglomerate units on the Mori Diamond property extend for a distance of 3 kilometres from the Mildred Lake fault. Preliminary surface sampling of the conglomerate on the Mori Diamonds property indicates that it has diamond concentrations similar to those on the Leadbetter property in some areas. Recovery of diamonds by caustic fusion and attrition milling from 30 surface samples of conglomerate weighing a total of 560 kilograms and submitted to SRC, SGS Lakefield and CF Minerals have returned diamond counts ranging from nil to 70 diamonds per 10 kilograms and averaging 9 diamonds per 10 kilograms. The largest diamond recovered from these reconnaissance samples was a 0.09 carat brown crystal aggregate measuring 2.869 by 2.508 by 1.850 millimetres in size.

Initial drill testing of the conglomerate horizons was undertaken in early 2007. A total of 2,808 metres of NQ drilling were conducted in 13 holes. The results of this work indicated that there are several diamondiferous horizons in the conglomerate package on the Mori Diamonds property. Results of caustic fusion and attrition milling of the core from the 13 holes recovered a total of 5,234 diamonds from 8,078 kilograms of core. The ten largest diamonds recovered were greater than 0.850 millimetres in size, weighing from 1.0583 to 2.6327 milligrams. For all of the diamonds recovered, greater than 52.4 % were coloured, including brown (26.8%), grey (14.0%), yellow (5.5%), green (5.1%) orange (0.8%), purple, amber and black (each 0.1%). One pink diamond was also recovered.

Dianor also had an interest in a 412-hectare property in the vicinity of the Mori Diamonds-Metalex-Dianor ground. The property was subject to a Letter of Intent between Dianor and the property owners, which has since lapsed. The ground covers the northern extension of the Leadbetter conglomerate. Exposures of diamondiferous conglomerate have been identified on the property and traced for a strike length of 1.75 kilometres across the claimed area. Initial sampling, diamond drilling and airborne geophysical surveys have been undertaken by the owners. Total of 3,085.4 metres of NQ diamond drilling have been undertaken by the property owners in seventeen holes on their ground during 2006 and 2007. Detailed results of the drilling have not been made public. However it is understood that both core and surface samples are diamondiferous. In addition, the property owners have conducted test sampling of recent unconsolidated surface alluvial material on their ground. A 3.5 tonne sample of gravel was processed and the concentrate was found to contain 374 diamonds, including a 1.88 carat stone. Gold, rubies and sapphires were also recovered from the concentrate.

A 1.88 carat diamond was recovered by the vendor from alluvium situated on this property. Results of drilling are pending completion of diamond recovery processing by laboratories.

Adjoining the western side of the Leadbetter property is a band of land approximately 10 kilometres long that covers the Magpie River. This land has been alienated from mineral development by the Government of Ontario and set aside as a “Lands-for-Life” recreational area.

Adjoining the west side of the Lands-for-Life recreational area were 223 claims that covered 3,568 hectares and are also under the Mori Diamonds-Metalex-Dianor joint venture arrangement and referred to as the Mori West Property. Conglomeratic units have been identified on this property and initial surface sampling completed in 2006. In early, 2007 three NQ core holes totaling 579.0 metres were drilled on the property to test the thickness and extent of some of the conglomerate units. Results of this work were disappointing with the drilling only recovering 4 diamonds from 194.59 kilograms of drill core.

On April 5, 2006, a claim was staked internal to patented mining claim SSM 18641 of the *Leadbetter Extension Property*. The claim was recorded as claim 3009901 and is owned by Pele Diamond Corp. (50%) and 2098680 Ontario Inc (50%). The claim is approximately 0.48 hectares in area and covers water at the south end of Mildred Lake.

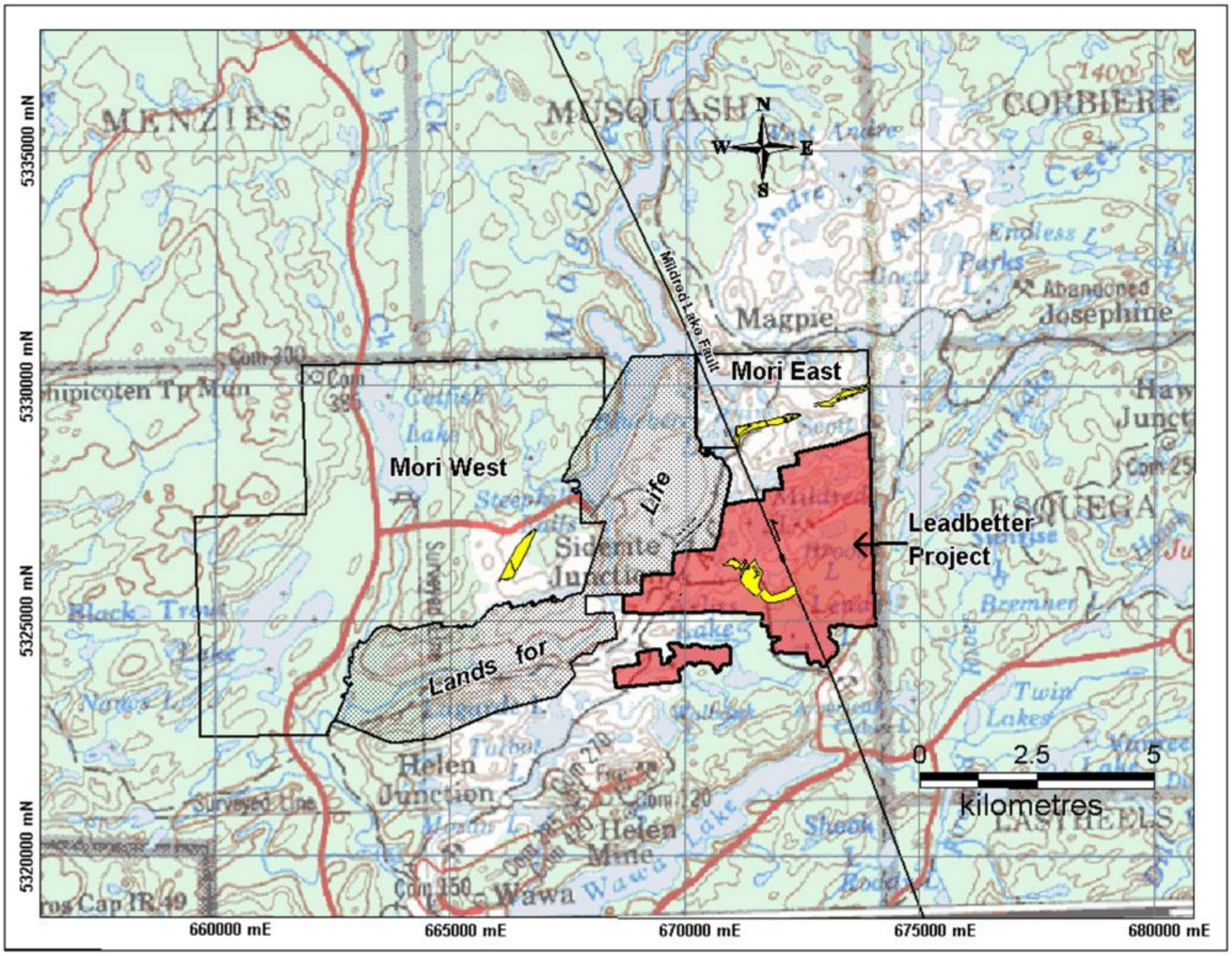


Figure 31. Adjacent Properties

Note: Leadbetter Diamond Project is in Red; the diamondiferous conglomerate is highlighted in yellow.

16.0 Mineral Processing and Metallurgical Testing

Mineral processing of surface samples excavated from the Leadbetter project has occurred in two stages: one in 2005 and the other in 2006. Details of the processing and testing are described in Verley et al., 2007. Results of the processing are summarized in Sections 10.4 and 10.5 of this report.

Recent outcomes of the metallurgical testing (Brenden et al. 2009) were the observations that the diamonds are essentially confined to the matrix material in the conglomerate and the grade of the matrix can average 3 times that of the whole unprocessed conglomerate. Therefore processing technques, such as the “Selfrag” method of disaggregation, that can efficiently separate the conglomerate cobbles and boulders from the diamondiferous matrix could significantly upgrade and reduce the volume of run of mine material going to the DMS plant.

17.0 Mineral Resource and Mineral Reserve Estimates

There have been no mineral resource or mineral reserve estimates made for the Leadbetter project, with the exception of a preliminary tonnage estimate that has been prepared for the diamondiferous conglomerates that are situated on the property. The preliminary tonnage estimate for the conglomerates is discussed in Section 18.0: *Other Relevant Data and Information*.

18.0 Other Relevant Data and Information

Cautionary Note:

The microdiamond results available up to and including December 31, 2006, are considered too preliminary to undertake or model a reasonable grade estimate of the deposit. The diamondiferous lithology (Leadbetter conglomerate and its subunits: S1CV, S1C and S1CO) cannot be placed in a resource or reserve category at this point in time due to the large uncertainty of the grade. The geological model of the Leadbetter conglomerate is based on the continuity of the geology (observed both in outcrop and the diamond drill holes) as well as some analytical results from the sampling of both of these sources. Presently, nothing guarantees that the volume of Leadbetter conglomerate or any part of the volume of Leadbetter conglomerate estimated in this section will one day become a mineral resource or reserve.

The modeling and volume estimation have been conducted by Christian D’Amours, president of Géopointcom. Christian D’Amours is a member in good standing of the Québec Order of Geologists (OGQ) and has 15 years experience in geological modeling and resource estimation for gold and polymetallic ore bodies in Canada and other parts of the world.

The model is based on the interpretation of 143 diamond drill holes (157 intersections) available as of December 31, 2006 and has incorporated a detailed topographic study (elevation lines spaced at 1m intervals). A summary of parameters used in the estimation are found in Table 11. A summary of ranges for the estimated volume and tonnage for each of the diamondiferous conglomerate units is found in Table 12. Figure 32 identifies the location of each drill hole and section lines.

The diamond bearing unit consists of a sequence of conglomerates separated into three sub-units (S1C, S1CO and S1CV). The three sub-units are sufficiently distinct as to permit their identification with a small margin of error and are sufficiently continuous as to permit a reliable correlation from one hole to another for the purpose of modeling.

In plan view the conglomerate envelope has a sigmoidal form oriented at an azimuth of 130° and dip of 45° towards the northeast. The sigmoid can be followed for 1,720 meters along strike and varies in surface width from 150 to 450 meters wide. Figures 33 and 34 represent cross sections oblique to the strike of the conglomerate sequence and illustrate the relationship of the diamond grade for drill core samples and the total stone count normalized to 10 kilograms per each sample.

The total median volume of the sigmoid shaped conglomerate sequence is 200,972,866 m^3 (cubic metres) with the sub-units being broken down as follows; 129,919,900 m^3 for the S1C, 35,968,422 m^3 for the S1CO and 35,084,544 m^3 for the S1CV (Table 12).

Of the 850 density analysis available at the time of the present study, 433 are from sub-unit S1C, 99 from sub-unit S1CO and 59 from sub-unit S1CV. The average of the 591 analysis from the conglomerate sequence is 2.82 g/cm^3. When the averages are calculated by sub-unit there is a slight variation as follows; 2.82 g/cm^3 for the S1C sub-unit, 2.80 g/cm^3 for the S1CO sub-unit and 2.83 g/cm^3 for the S1CV sub-unit. It was important to verify if the slight variance in density was statistically significant and therefore the author used a standard T-test in the case of the S1C and S1CO sub-units and a variation of the test developed by Aspin-Welch known as the Unequal-Variance test for the S1CV sub-unit since the variance in this unit was different than the other two sub-units. The results of these estimations indicate that with a 95% confidence level, the average density for the S1CO is smaller than that for S1C. On the other hand the average density for the S1CV is not different than that for S1C.

As can be seen in Table 12, the sub-unit S1C comprises almost 65% of the total tonnage of the sigmoid shaped DBR.

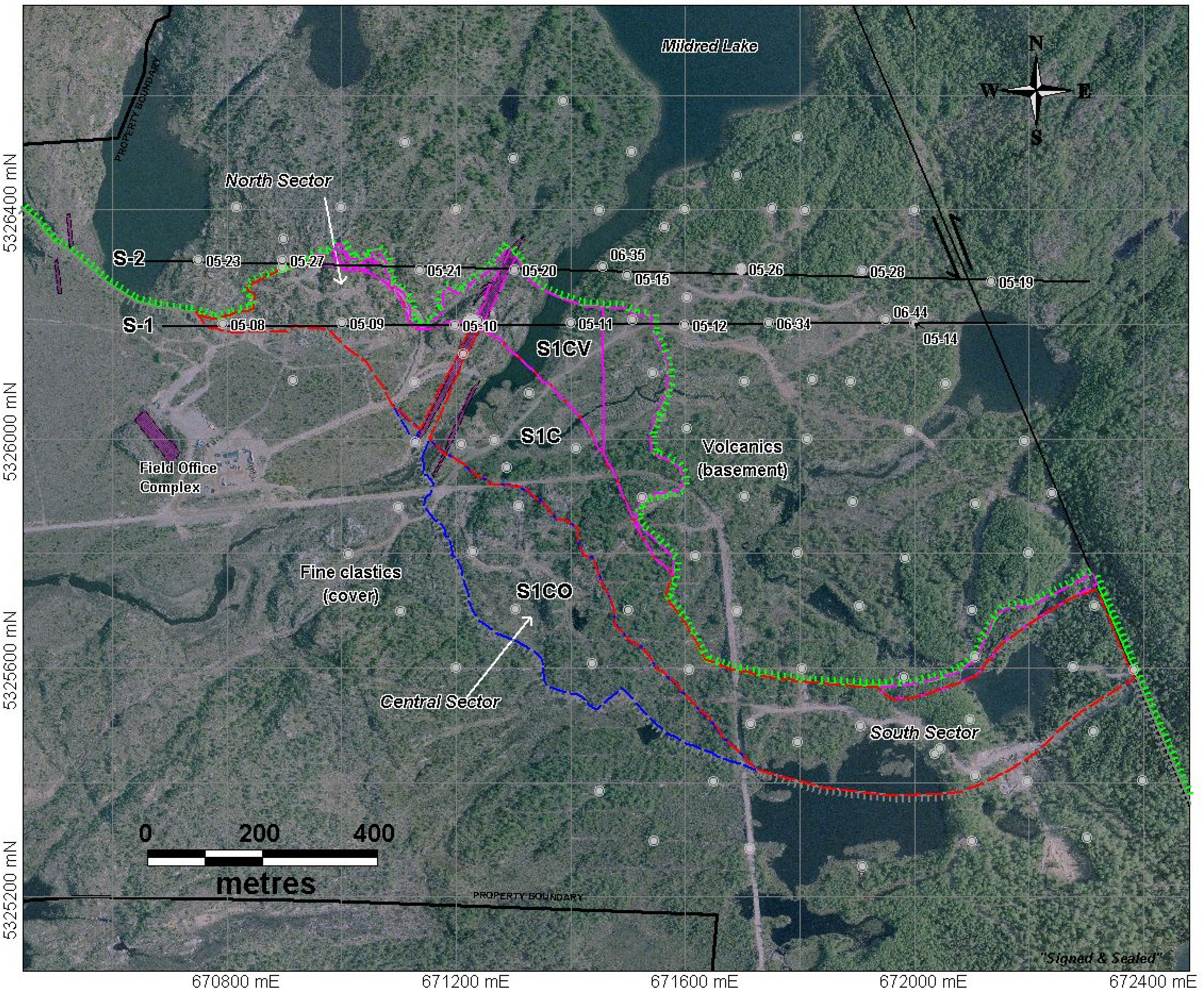
The main factor influencing the precision of the tonnage estimate is the position of the limits of the unit at the extreme northwest and southeast. Considering the drill hole spacing in each of these sectors and the understanding of the geology (surface and drill hole data) the author considers that a band or zone of uncertainty, 30 meters wide, exists along the two extremities (north west and south east) of the sigmoid. The band of uncertainty represents 3% of the total volume. Taking this uncertainty into consideration it is concluded that the total conglomerate sequence envelope contains 566,000,000 ± 17,000,000 tonnes of rock for which the grade remains to be determined.

Table 11. Tonnage Estimate Parameters

Unit S1C Summary	
Specific Gravity (g/cm3)	2.82
Average true width of the envelope (m)	110
Average true width from intersection drill holes (m)	53.4
Number of holes intersecting Unit S1C	87
Number of holes processed for diamond recovery by caustic fusion to date	11
Unit S1CO Summary	
Specific Gravity (g/cm3)	2.80
Average true width of the envelope (m)	60
Average true width from intersection drill holes (m)	46.5
Number of holes intersecting Diamond Bearing Rock	31
Number of holes processed for diamond recovery by caustic fusion to date	4
Unit S1CV Summary	
Specific Gravity (g/cm3)	2.82
Average true width of the envelope (m)	66
Average true width from intersection drill holes (m)	44.5
Number of holes intersecting Diamond Bearing Rock	39
Number of holes processed for diamond recovery by caustic fusion to date	5

Table 12. Volume and Tonnage Estimate Ranges

	Tonnage ranges (metric tonnes)		
Diamondiferous Conglomerate Unit	**High**	**Median**	**Low**
Estimated Volume of S1C (m3)	133,817,500	129,919,900	126,022,300
Estimated tonnage of S1C	**377,375,000**	**366,375,000**	**355,375,000**
Estimated Volume of S1CV (m3)	36,137,000	35,084,544	34,032,000
Estimated tonnage of S1CV	**103,510,000**	**100,510,000**	**97,510,000**
Estimated Volume of S1CO (m3)	37,047,500	35,968,422	34,890,000
Estimated tonnage of S1CO	**102,115,000**	**99,115,000**	**96,115,000**
Total estimated volume ranges all units	207,002,000	200,972,866	194,944,300
Total estimated tonnage ranges all units	**583,000,000**	**566,000,000**	**549,000,000**



LEGEND

Phase 1 NQ Diamond Drill Holes

S-2 Drill Hole Section Line, Refer to Figures 33 - 34

Note: Refer to Figure 6 for Geolgy Legend
Topographic base is from orthophotos georeferenced to NAD 83, zone 16
Refer to Figure 2 for location with respect to property boundaries

Ressources Dianor Inc.

DRILL SECTION LOCATION PLAN

LEADBETTER DIAMOND PROJECT

Chabanel Township
Ontario, Canada

Figure 32.

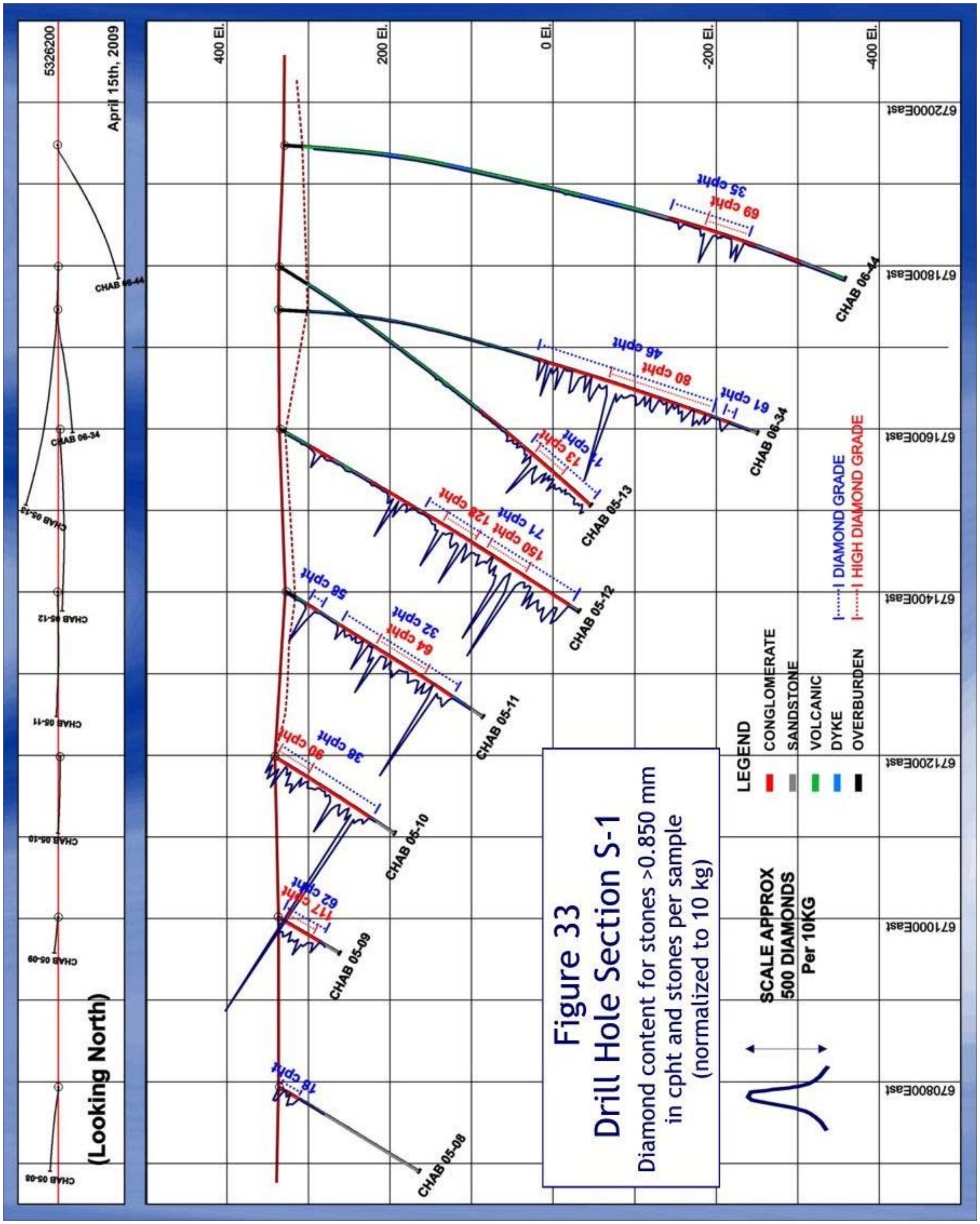


Figure 33
Drill Hole Section S-1
Diamond content for stones >0.850 mm in cpht and stones per sample (normalized to 10 kg)

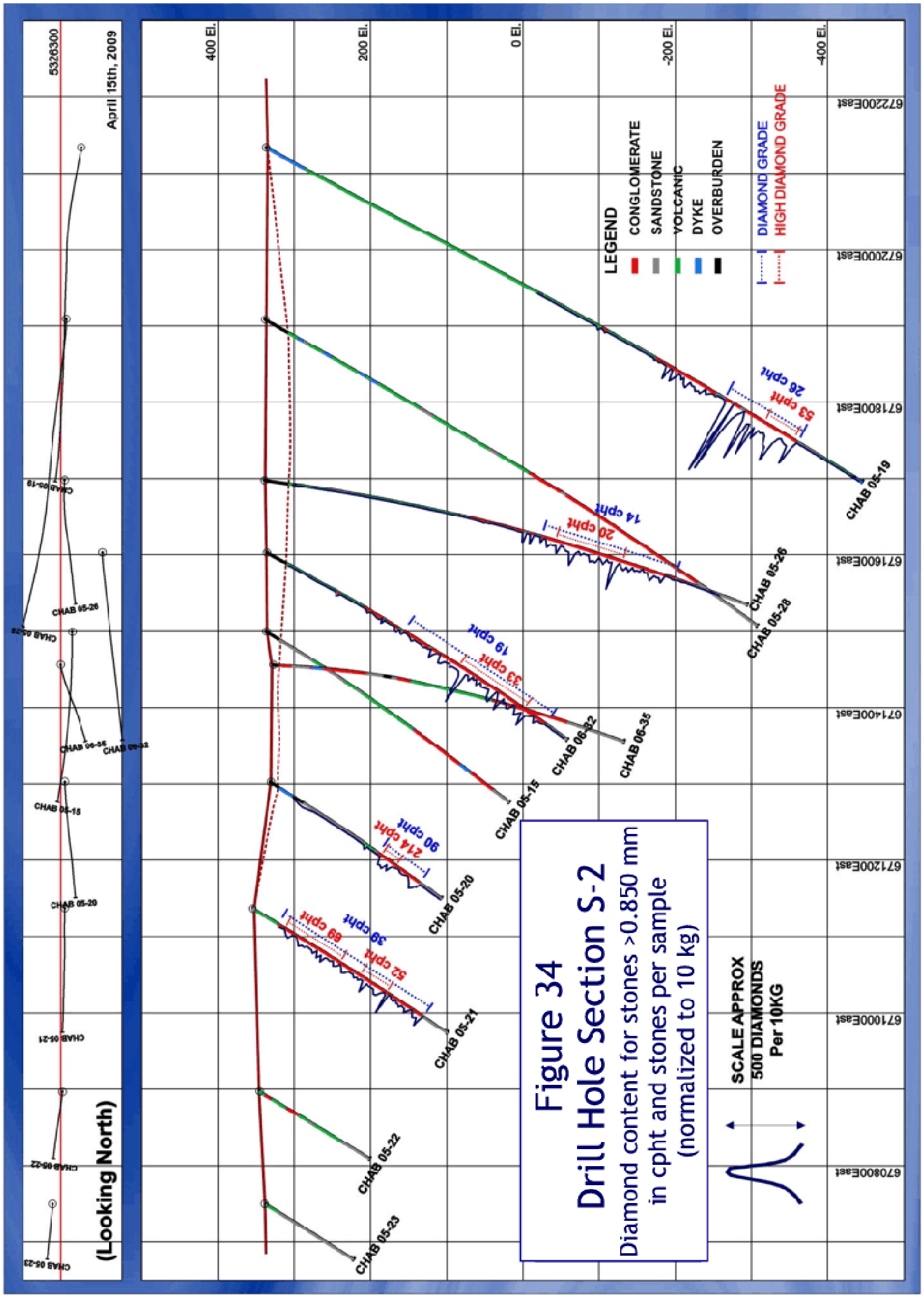


Figure 34
Drill Hole Section S-2
Diamond content for stones >0.850 mm in cpht and stones per sample (normalized to 10 kg)

19.0 Interpretation and Conclusions

The Leadbetter Diamond Project is located 12 kilometres northeast of the town of Wawa in an area where there is excellent infrastructure, good access and a well-trained, competent work force. Mine development in this environment will be low cost.

The Project is focused on testing an Archean age (2.67 billion year old) diamondiferous debris flow. Diamonds are hosted in a conglomeratic sequence interpreted to have formed in a proximal debris flow alluvial fan complex that has been folded and metamorphosed under sub-biotite greenschist conditions. The diamondiferous conglomerates have an exposed strike length of 1.7 kilometres on the property. The sequence dips moderately to the northeast. True thickness of the sequence averages 236 metres. A distinct suite of diamond indicator minerals (garnets, chromite, ilmenite, clinopyroxene, olivine and corundum) exhibiting minor abrasion characteristics occurs in the conglomerate. These minerals along with chlorite-rich clasts in the debris flow matrix suggest that conglomerates formed near a primary diamond source rock

Core drilling a total of 146 holes has allowed a preliminary estimate of the tonnage of the diamondiferous conglomerates to be inferred. The results of this work indicate that the combined conglomerate units are in the order of 566,000,000 ± 17,000,000 tonnes. The main diamond-bearing conglomerate (S1C) is in the order of 366,000,000 tonnes. The preliminary tonnages estimated for the other conglomerate horizons are: 101,000,000 and 99,000,000 for S1CO and S1CV respectively. There is no guarantee that the estimated volume of conglomerates or any part of the estimated volume of conglomerates will one day become a mineral resource or reserve. Detailed sampling and evaluation of the diamonds will be required to estimate an average grade and value for diamonds in the conglomerates.

The results of diamond recovery by caustic fusion from drill core combined with preliminary diamond recovery by DMS techniques from surface samples has been used to estimate and predict, based on probability models, a range of grades for limited sets of data over parts of the known deposit. For the North Sector the preliminary grade forecast, on limited data, range from 19 to 29 carats per hundred tonnes. For the Central Sector grade forecasts are lower, ranging from 11 to 17 carats per hundred tonnes. No data was available to make a forecast for the South Sector. In the writers opinion the preliminary modelling has skewed the expected probability of recovering large stone to the low side because of the fact that much of the material used in the modelling was of low diamond counts. More recent bulk sampling of large 60 tonne samples suggests grades of up to 42 cpht for unit S1C. These estimates have not taken into account high diamond counts ranging from 113.7 to 281.8 cpht internal to the S1C unit which suggest that values in excess of 100 cpht are possible in zones ranging from15.80 to 32.95 metres in true thickness.

Results of the 2007 DMS work conducted on four “60 tonne” samples demonstrated that diamonds up to 1.522 carats occur in the conglomerate in the North Sector. The diamond population appears to be predominantly gem and near gem material with a significant portion of stones in smaller size ranges that are currently in demand in the diamond market. In addition the recent outcomes of metallurgical testing indicate that there maybe pre-concentration methods available to upgrade and reduce the volume of the run of mine material reporting to the DMS plant.

The work program undertaken during this phase of exploration successfully met the original objectives of the project

Further work is recommended in order to test the potential for higher grade portions containing larger diamonds internal to the conglomerate horizons. Once these zones have been defined bulk sampling should be undertaken in order to accumulate sufficient sized parcels of diamonds to initiate valuation studies and develop a resource estimate.

Dianor has received approval for its mine closure plans allowing it to proceed with the recommended 50,000 tonne bulk sampling program, which will consist of the development of 2 underground declines: one testing the North Sector and one the Central Sector.

20.0 Recommendations

A program of further exploration is recommended to continue the evaluation of the Leadbetter project. The next phase of exploration work should focus on several aspects of this deposit, namely;

- Processing of Phase 3 in-fill diamond drill core to recover diamonds in order to better understand the diamond distribution within the conglomerate units.
- Down-hole geophysical surveys of Phase 3 drill holes
- Processing of selected Phase 2 drill holes on one sample per 10 metres basis over S1C intervals
- Continuation of drilling North and Central HQ/NQ
- Bulk sampling of North and Central Sectors
- Expanded testing of alluvial deposits that flank the conglomerate to the south in order to test the diamond potential of this material.
- in conjunction with this work geological studies must attempt to subdivide the conglomerate into differing facies and an attempt to determine the relationships between the different facies and diamond content must be pursued.

The estimated cost for these components is:

20.1 - Phase 1: North Sector Bulk Sampling

- Drill core processing by caustic fusion
    1. HQ, 1,250 m @$1000/m..$1,250,000
    2. NQ, 1,000 m @$600/m..600,000
- Drill core processing by attrition milling 100 m @ $1000/m......................100,000
- Down-hole geophysical surveys 40,000
- Diamond core drilling 4,000 m, NQ @ $120/m 480,000
- Alluvial sampling (10,000 tonnes) & processing (Thunder Bay).............1,975,000
- DMS plant & equipment..$4,601,000
- EPCM, installation & commissioning 2,900,000
- Underground north decline development & alluvials................................4,589,000
- DMS operations 2,643,000
- Diamonds valuation 900,000
- Management & dedicated support team 600,000
- Site preparation, roads, security & surveillance 472,000
- Contingency 1,850,000

Total $23,000,000

Contingent upon the success of this work underground bulk sampling will be required in order to develop a resource estimate for the diamondiferous conglomerates.

20.2 - Phase 2: Central Sector Bulk Sampling Program

- Underground central decline & alluvials $3,533,000
- DMS operations 2,183,000
- Diamond valuation..930,000
- Management & dedicated support team 330,000
- Roads maintenance, security & surveillance 255,000
- Security costs 500,000
- Rehabilitation 400,000
- Contingency 896,000

Total $9,000,000

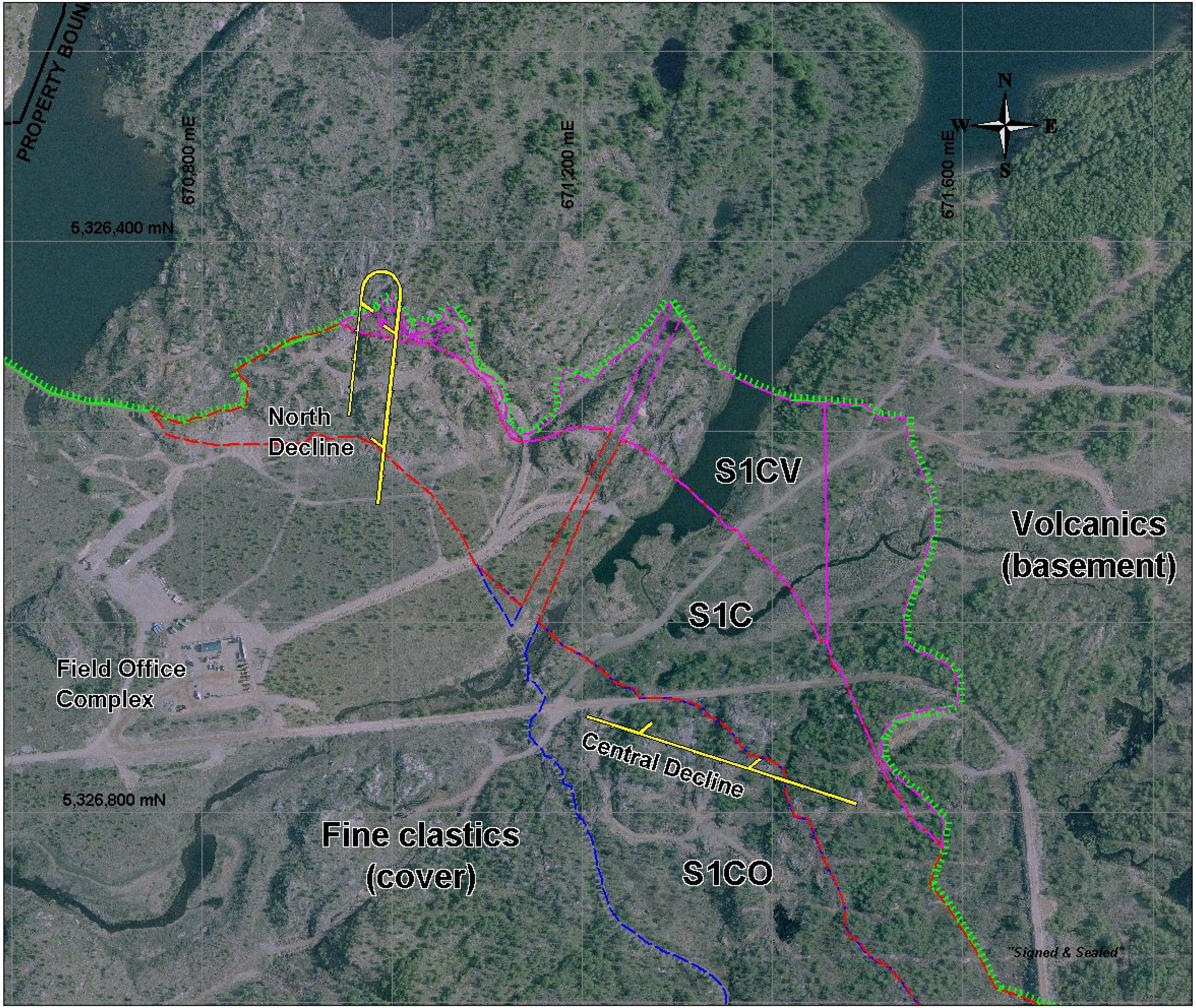
Grand Total Phases 1 & 2 ....$32,000,000

Respectfully Submitted,

Signed "Carl G. Verley"

Carl G. Verley, P.Geo.

Effective Date: September 28, 2009



LEGEND

Location of proposed underground bulk sampling decline, projected to surface

Note: Refer to Figure 8 for Geolgy Legend
Topographic base is from orthophotos georeferenced to NAD 83, zone 16
Refer to Figure 2 for location with respect to property boundaries

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PROPOSED UNDERGROUND BULK SAMPLING DECLINES LOCATION PLAN

LEADBETTER DIAMOND PROJECT

Chabanel Township
Ontario, Canada

Figure 35.

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