

GM 62674

ASSESSMENT REPORT, SUPERIOR DIAMONDS DRILLING PROGRAM, L'ESPERANCE AREA, CLAIM NUMBER 2001210

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Québec 

SUPERIOR DIAMONDS INC.

ASSESSMENT REPORT

**Superior Diamonds Drilling Program
Winter 2006**

L'ESPERANCE AREA, WEST-CENTRAL QUÉBEC

Claim Number 2001210



SUPERIOR *Diamonds Inc.*

GM 6 2 6 7 4

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Vice President Exploration
November 2006*

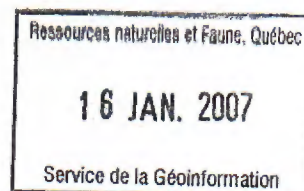


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Drill Hole Section

Drill hole section and log for hole LS06-04, Property 2001210 (back pocket).

Introduction

The Superior craton is one of the largest Archean cratons in the world: half of which is located in Québec. It has long been established that economic diamondiferous kimberlites are concentrated on these cratons (Clifford 1966). The location of economic diamond-bearing kimberlite in Canada appears to be controlled by a number of geologic constraints that are all associated with the Superior craton. These include: a) location of kimberlite within Archean cratons; b) conditions conducive to diamond preservation; c) structural associations; and d) association of diamonds with other types of intrusive rocks (Morris and Kaszycki 1997).

Québec has tremendous potential to host diamond-bearing kimberlite. Moorehead et al. (2000) had identified 4 kimberlite fields (Temiscamingue, Desmaraisville, Otish, Torngat) in Québec. These fields have been tied into major brittle fault zones that facilitate kimberlite emplacement. These fault zones (Temiscamingue, Nottaway, Waswanipi-Saguenay, Témiscamie-Corvette, Kapuskasing) are considered to be under-explored. Several other fault zones have potential to host kimberlite (Figure 1, Moorehead et al. 2000).

Property History

Initially, Superior Diamonds Inc. recognized the potential for diamonds in the Desmaraisville area through evaluation of regional, Québec Government geophysical data, proprietary geophysical data obtained through an agreement with INCO and Lake Shore Gold and regional Québec Government geological data. Subsequently, Superior conducted its own overburden sampling and airborne geophysical surveys and identified several potential kimberlite targets.

After review of all the data, Superior Diamonds Inc. formed a joint venture agreement with Matamec Explorations Inc. and Cambior Inc. in August of 2005 for Superior to explore for diamonds on the Matamec/ Cambior mineral claims, L'Esperance Township, Québec. These mineral claims are located east of the hamlet of Desmaraisville (Figure 2) and are collectively referred to as the "L'Esperance Property."

Claim # CDC 2001210 (Figure 3) is part of the L'Esperance property. One such kimberlite target occurs on this property. This target was drilled in March of 2006. The purpose of this assessment report is to summarize the drill results.

Physiography and Topography

Property 2001210 is located east of the hamlet of Desmaraisville, south-central Quebec (Figure 3). The area of interest straddles Lac Wachigabau, which drains north into Lac Opawica, the difference in elevation between the 2 water bodies being approximately 5

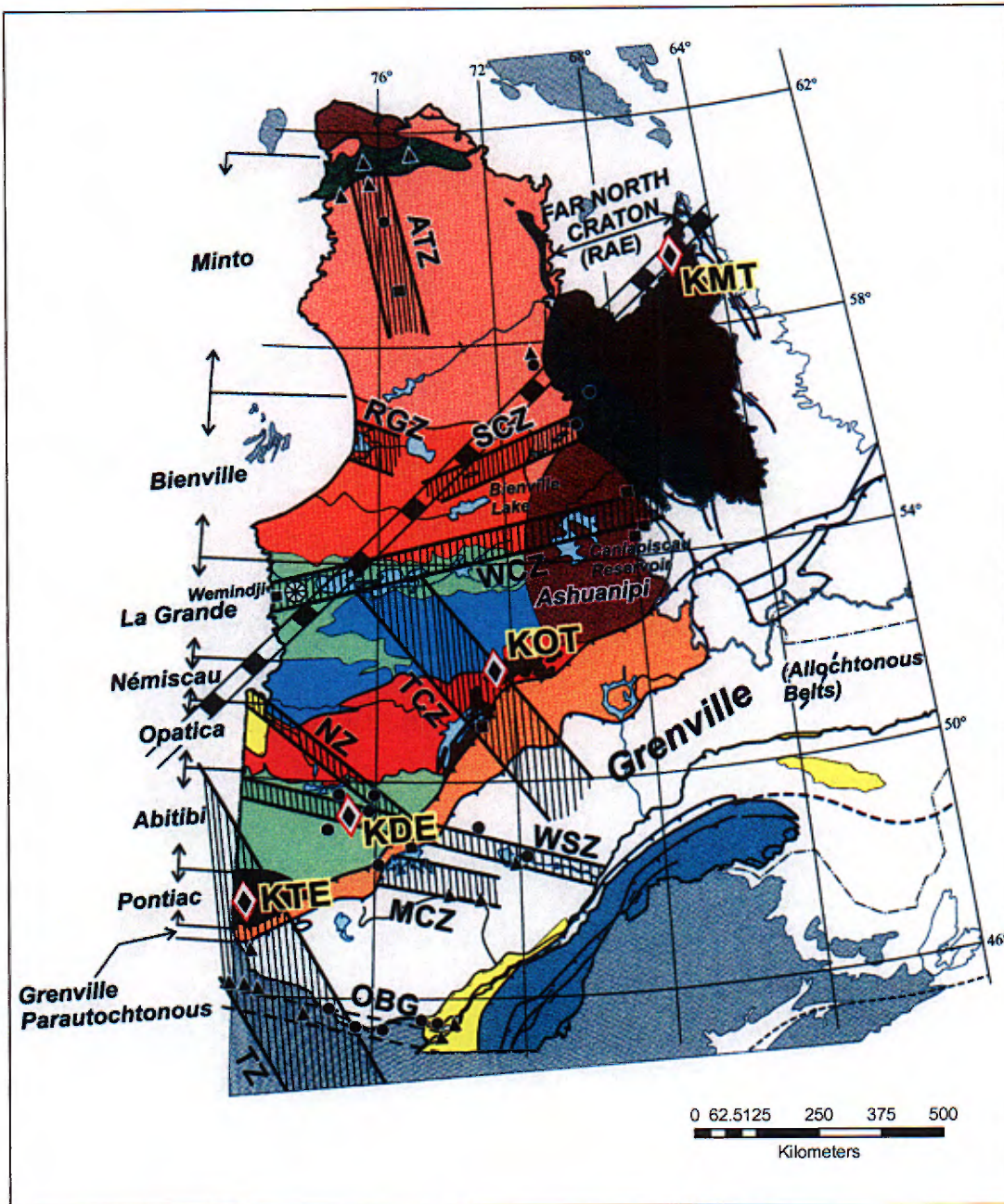


Figure 1. Tectonic subdivisions of Québec and related kimberlite fields.

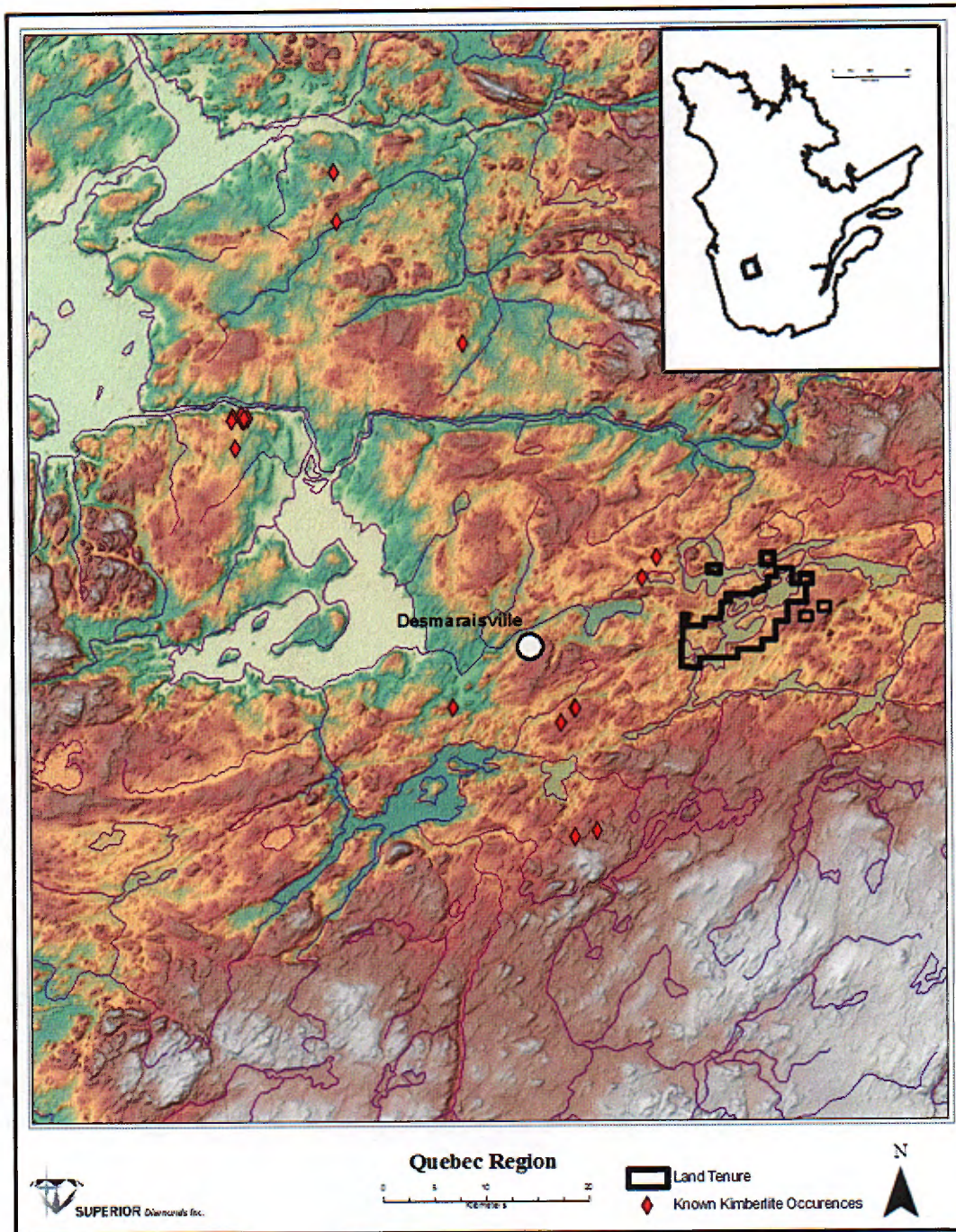


Figure 2. Desmaraisville, Québec. Properties are located east of this hamlet.

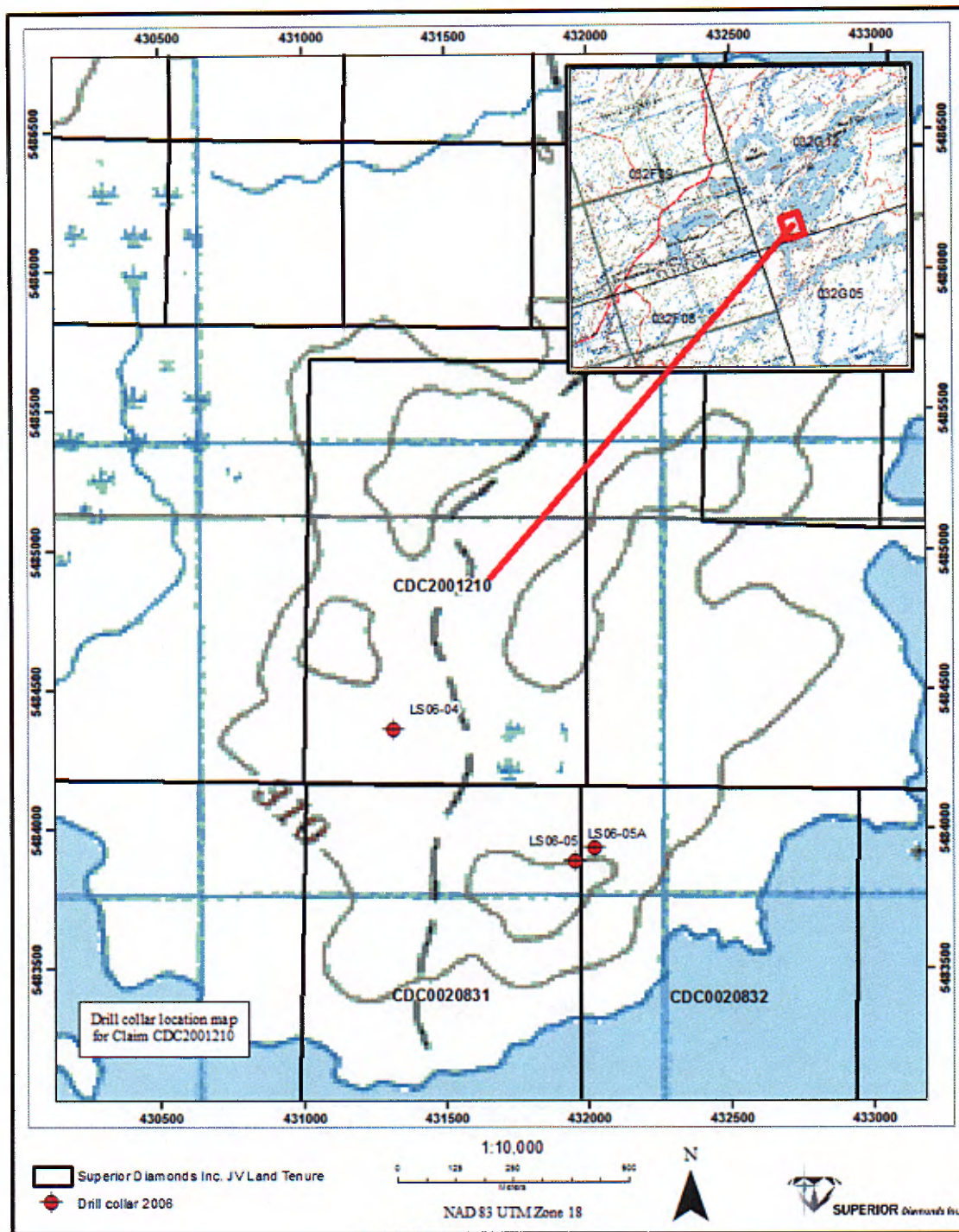


Figure 3. Location of drill hole LS06-04, property 2001210.

feet. The terrane around the lake is relatively flat, rising less than 50 feet from the lake surface.

The area of interest occurs within the Abitibi Uplands of the James Bay Physiographic Region (Bostock 1976). This region is defined by the underlying crystalline Archean rocks that impart a broad rolling surface. Much of the Upland surfaces are mantled by glaciolacustrine materials.

Access and Infrastructure

The area is easily accessed by Highway 113, a paved, all-weather Provincial highway. Extending from this are many tertiary roads constructed to serve the forest industry. In addition, an abandoned rail-bed runs generally northeast to southwest through the property, allowing easy access to a number of important lakes. This property can be accessed by boat from Lac Wachigabau, however, drilling requires helicopter support.

The primary industry in the area is forestry, and as such, there are a number of communities that can provide basic services such as accommodation and fuel for vehicles. The largest of these communities include Lebel-sur-Quévillon to the south and Chapais to the north. However, the First Nation of Waswanipi, and to a lesser degree the hamlets of Miquelon and Desmaraisville are also important service and supply centres.

Vegetation and Climate

The area of interest lies between 990 to 1000 feet above sea level. Vegetation cover consists of a Boreal forest environment. Trees associated with this forest-type include balsam fir, spruce, jackpine and tamarack. Willows and alders grow in sheltered river valleys, and aspen and birch invade logged or burned-over areas (Byers 1981). Most of the soils associated with this type of forest are thin and acidic (Byers 1981).

The average annual temperature for January and July is -15° and $+15^{\circ}$ respectively. The area experiences approximately 800 + mm of precipitation per year of which 160- 280 cm falls as snow (Byers 1981). The ground is usually free of snow from May to mid-November.

Geology

Regional Bedrock Geology

The L'Esperance region lies within the Superior Province of the Canadian Shield. This Province is the largest Archean craton in the world, half of which is located in Québec. This Archean craton is a highly prospective region for kimberlite exploration, meeting all 4 criteria for hosting economic grades of diamond-bearing kimberlite. These include: 1) the presence of an Archean craton; 2) that the refractive, relatively cool and low-density

peridotitic root of the craton has been insulated against reheating and excessive tectonic reworking; 3) the presence of major tectonic structures; and 4) association of diamonds with other intrusive rocks. Four kimberlite fields have been identified in Québec, the Nottaway, Waswanipi-Saguenay Field being one of these (Moorehead et al. 2000).

Associated with the Nottaway, Waswanipi-Saguenay Field is the Nottaway, Waswanipi-Saguenay fault system. Kimberlite often does not occur on major tectonic or geophysical structures. Frequently, however, subsidiary structures associated with the major features exhibit a spatial association with the intrusions and are therefore important (Coopersmith 1993).

Local Bedrock Geology

The property consists generally of 2 bedrock units. The contact between the two is sharp and is oriented northeast to southwest. The southern unit is dominated by granitoid rocks, consisting of granites and diorites with smaller units of migmatite and gneiss. The northern unit consists primarily of intermediate volcanics, with lesser felsic volcanic and sedimentary units. Claim 2001210 overlies the southern unit.

Regional Glacial Geology

During the last glaciation, the property was covered by the Labrador Dome of the Laurentide Ice sheet. Ice flow over the area was controlled by a southern extension of this Dome referred to as the Mistassini Regional Ice divide. Ice flowed southwest off this regional ice divide through much of the Wisconsinan. During deglaciation, there were minor variations in this southwestern flow as the position of this regional ice divide migrated in response to the generally northern retreat of the Labrador Ice Dome (Dyke et al. 1987).

During flow of ice over the area a coarse-grained basal till was deposited. On the property, this material is a thin deposit, usually less than 1 m thick. It is ideal for mineral exploration as its characteristics are of local origin and has a simple erosion-transportation-deposition history.

As the Laurentide ice sheet retreated, glacial meltwaters were trapped between the ice sheet and topographically higher ground to the south. This glacial lake is referred to as Glacial Lake Ojibway (Dyke et al. 1987). At the edge of the ice sheet, glacial meltwater deposited coarse-grained materials. Farther out in the basin, the material is finer grained, often consisting of clays and silts, sometimes varved. These materials are referred to coarse- and fine- grained glaciolacustrine units respectively.

Over the property, coarse-grained material can be found as sheets or fans. This material is less useful as a sampling medium for mineral exploration due to its complicated erosion-

transportation-deposition history. The fine grained glaciolacustrine material is found in low-lying areas and is not a useful medium to sample for mineral exploration as there is little to no granular material associated with it.

During regression of Glacial Lake Ojibway, higher ground was worked by the receding glacial lake waters. On topographically higher ground overburden materials were largely washed off the surfaces of this higher ground, often leaving a very thin, often “patchy” remnant of basal till.

Over topographically low areas, fine-grained glaciolacustrine materials are often covered by swamp, with an associated thick (> 1 m) deposit of organic material.

Local Glacial Geology

Topographically higher ground cuts northeast to southwest across the centre part of this property. Associated with this area is a thin, basal till (≤ 1 m) covering the bedrock surface. North and south of this topographically higher ground the area is flat and is covered by a fine-grained glaciolacustrine deposit (Gouvernement du Québec 1998). The drillhole is collared within this fine grained material, several meters just south of the topographically higher ground.

Field Program Methodology

Drill targets were chosen on the basis of geophysical characteristics, association to heavy mineral trains and bedrock structure.

Drilling was contracted-out to Summit Drilling Services based out of Hanmer, Ontario. The Company followed all environmental rules and regulations, and was monitored by Superior Diamond’s field geologist. All permitting was acquired by Aline LeClerc, a local geologist, registered with the OGQ.

BQ core was acquired for this hole. Hole LS06-04 was vertical hole, drilled 21 m into the target. Borehole information and core observations were entered into a software program called DH Logger and archived at Superior’s exploration office in Sudbury, Ontario.

Drill Hole LS06-04, Property 2001210

The location of Drill Hole LS06-04 is provided on Figure 3. A drill hole section is provided in the back pocket. The drill passed through 6.7 meters of overburden before drilling into a tonalite. The hole was terminated in tonalite at 21 m below overburden surface.

Conclusions and Recommendations

This target is not a kimberlite, it is a tonalite (*see* drill hole log, back pocket).

It is recommended that the geophysics associated with this property be re-evaluated, supported by further overburden sampling to determine the presence and distribution of kimberlite indicator minerals at a property scale. Once this exercise has been completed, additional targets for kimberlite may be defined and an additional drill program considered.

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- Morris, T.F. and Kaszycki, C.A. 1997. Proppector's guide to drift prospecting for diamonds, northern Ontario; Ontario Geological Survey, Miscellaneous Paper 167, 63p.

Apr 25, 2006

**DETAILED LOG
SUPERIOR DIAMONDS INC.**

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Hole Number: LS06-04

Units: METRIC

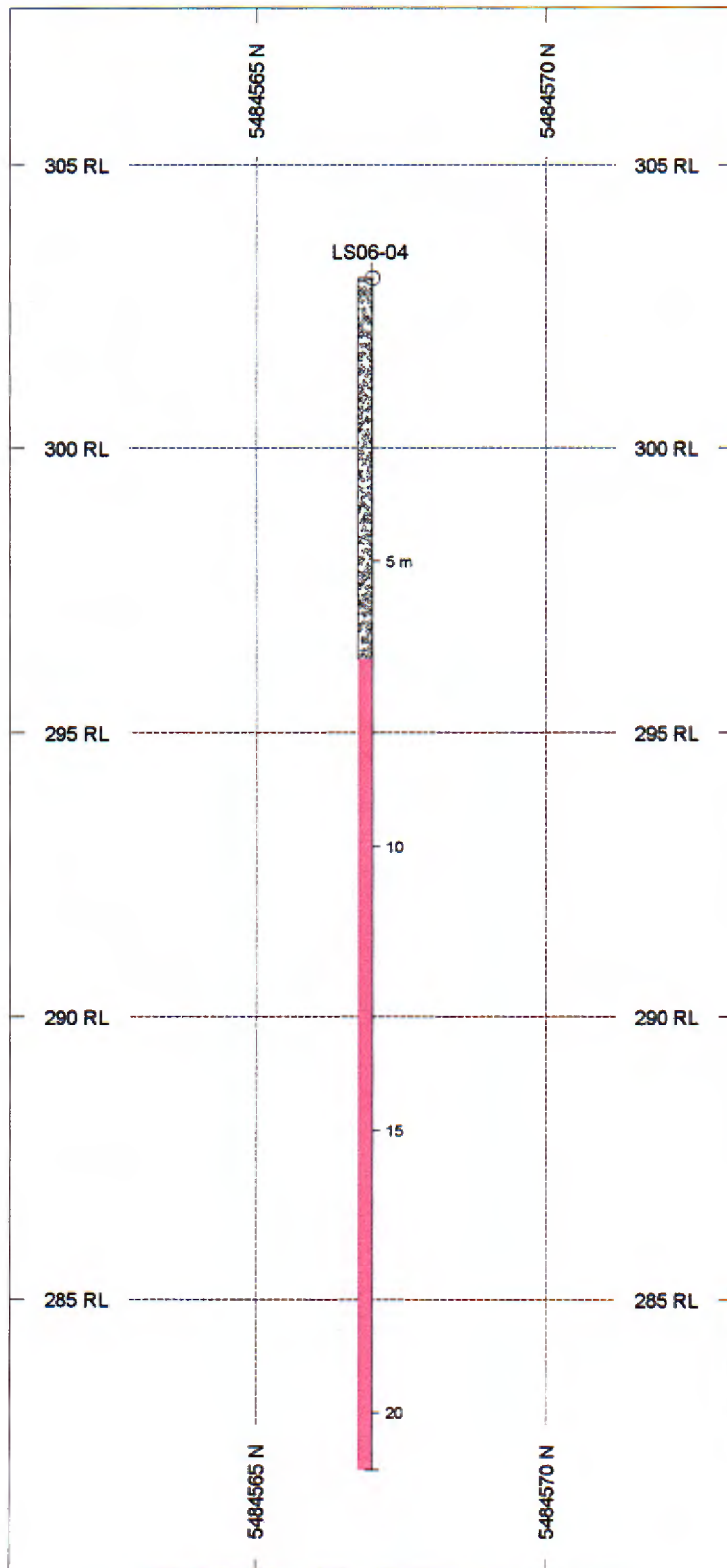
Project Name: L'Esperance	Primary Coordinates Grid: UTM83-18	Destination Coordinates Grid:	Collar Dip: -90.00
Project Number: S82100	North: 5484567.00	North:	Collar Az: 360.00
Location: Surface	East: 431445.00	East:	Length: 21.00
Claim Number:	Elev: 303.00	Elev:	Start Depth: 0.00
Date Started: Mar 14, 2006	Collar Survey: N Plugged: N	Contractor: SUMMIT DRILLING	Final Depth: 21.00
Date Completed: Mar 14, 2006	Multishot Survey: N Hole Size: AWT	Core Storage: ARP Core Farm	
Logged By: Jay E. Jackson	Pulse EM Survey: N Casing: Pulled		



Comments:

Sample Averages**Survey Data**

Depth	Azimuth Decimal	Dip Decimal	Test Type	Flag	Comments	Depth	Azimuth Decimal	Dip Decimal	Test Type	Flag	Comments
0.00	360.00	-90.00	STUP	OK		21.00	360.00	-90.00	STUP	OK	

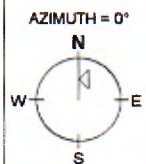
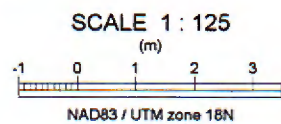
Detailed Lithology		Lithology	Assay Data							
From	To		Sample #	From	To	Length	Au_ppm	Ni_ppm	Mg_pct	Tl_pct
0	6.70	O/B, Overburden Overburden. Boulders of granitic rocks, intermediate to felsic intrusive, and metasedimentary rocks.								
6.70	21.00	9a, Tonalite Fine to medium grained, massive, equigranular, dark grey, siliceous intermediate intrusive (possible tonalite). Trace of fine grained bluish quartz and biograde feldspar phenocrysts throughout. Rare quartz filled hairline fractures cross-cut the unit at high angles to the core axis. Rare trace of blebbly pyrite throughout the unit. Rare trace of pyrite and pyrrhotite within quartz filled fractures. End of hole at 21 meters. Texture 6.70 - 21.00: Type: Fine to medium grained Mineralization 6.70 - 21.00: Type: Pyrite/Pyrrhotite, Style: Vein controlled, % Mineralization: 0.01% : local rare trace Structure 6.70 - 21.00: Structure: Massive,								



ROCK CODES	L/R	PAT	LABEL	DESCRIPTION
rock_type_code	L		9a	Early intermediate to felsic intrusive rocks
			O/B	Overburden

SECTION SPECS:

REF. PT. E, N	431445 m	5484567 m
EXTENTS	12.42 m	27.6 m
SECTION TOP, BOT	307.8 m	280.2 m
TOLERANCE +/-	50 m	



Superior Diamonds Inc.
 L'Espérance, Québec
 DDH LS06-04
 drill hole section