

# GM 6347

2007 DIAMOND DRILL PROGRAM, LESPERANCE PROPERTY

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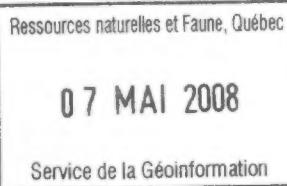
**Québec**



# Lesperance Property

## 2007 Diamond Drill Program

Desmaraisville, Quebec



Sarah A. Johnston

January 7, 2008

GM 6 3 5 4 7

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## **SUMMARY**

A diamond drill program was conducted on the Lesperance Property, located near Desmaraisville, Quebec, between July 23, 2007 and August 28, 2007. The property is a joint venture between Superior Diamonds Inc., Matamec Explorations Inc., and IAMGOLD Corp. on which Superior Diamonds Inc. is currently actively exploring for diamonds. The drill program consisted of 13 holes totaling 2239 m. The purpose of this drill program was to test potential kimberlite targets located at the head of kimberlite indicator mineral (KIM) dispersal trains.

## **LOCATION AND ACCESS**

The property is located approximately 20 km east of the town of Desmaraisville and highway 113, approximately 90 km northeast of Lebel-Sur-Quevillon and 120 km southwest of Chapais (Figure 1). A series of logging roads extending east from highway 113 provide access by truck and ATV, and boats on Lac Wachigabau provide access to the central and eastern portions of the property. The 2007 drilling program was supported by an A-Star helicopter.

## **EXPLORATION PROGRAM**

The diamond drill program consisted of 13 AQ-sized holes totaling 2239 m (Figure 2; Appendix B), that started on July 23, 2007 and finished on August 28, 2007. Summit Drilling Services of Hanmer, ON was contracted to provide drilling services. Drill sites and helicopter pads were cleared by crews supervised by Glen McBride of New Liskeard, Ontario. Water was pumped from nearby lakes and swamps depending on accessibility at each drill site. Casing at each drill site was pulled on completion of the drill hole.

The drill core was boxed by the drillers and flown from the drill site to Desmaraisville for logging. Logging of the drill core by the author recorded variations in lithology, structures, alteration, and sulphide or oxide mineralization, and these logs are contained in Appendix C. Representative samples of resembling kimberlite were transported by Superior Diamonds Inc. to Overburden Drilling Management Inc. in Nepean, ON for an independent third-party interpretation of the lithology. Any intervals resembling kimberlite, and intervals with >1% sulphide, were transported to Superior Diamonds Inc. Sudbury office for storage. Core that was not of immediate interest was neatly stacked in a secure location in Desmaraisville and covered with a polyweave tarp for future reference.

**ANALYTICAL RESULTS**

Biotite-bearing mafic to ultramafic dykes were intersected in 9 of the 13 drill holes and representative samples of the dykes were submitted to Mineral Services Canada Inc. for petrographic examination. The results of the petrographic examinations are shown in Table 1 and Appendix D, with 15 of 17 samples described as evolved kimberlite to ultramafic lamprophyre in composition. Most of the dykes are located west of Lac Wachigabau, in the same area as the kimberlite dykes intersected during the 2006 drill program. A number of dykes are located east of the lake, near the head of a separate KIM dispersal train.

No assaying for gold or base metals was completed during this drill program.

**SUPERVISION**

The diamond drill overburden program were supervised by Superior Diamonds Inc. geologist Thomas Hart (Ordre des géologues du Québec, temporary permit 1201) and by geologist Sarah A. Johnston

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135968

## **FIGURES**

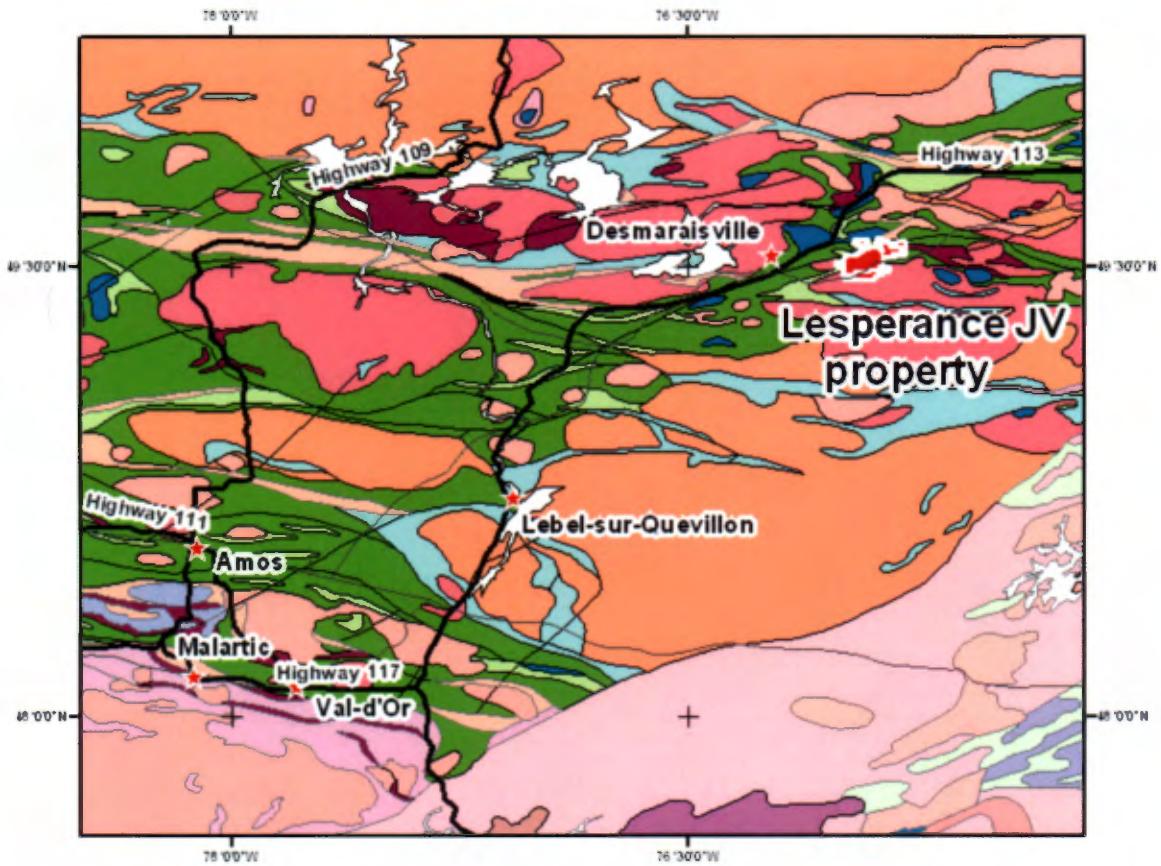


Figure 1: Lesesperance property location map

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SUITE DES PRÉSENTES PAGES STANDARDS**

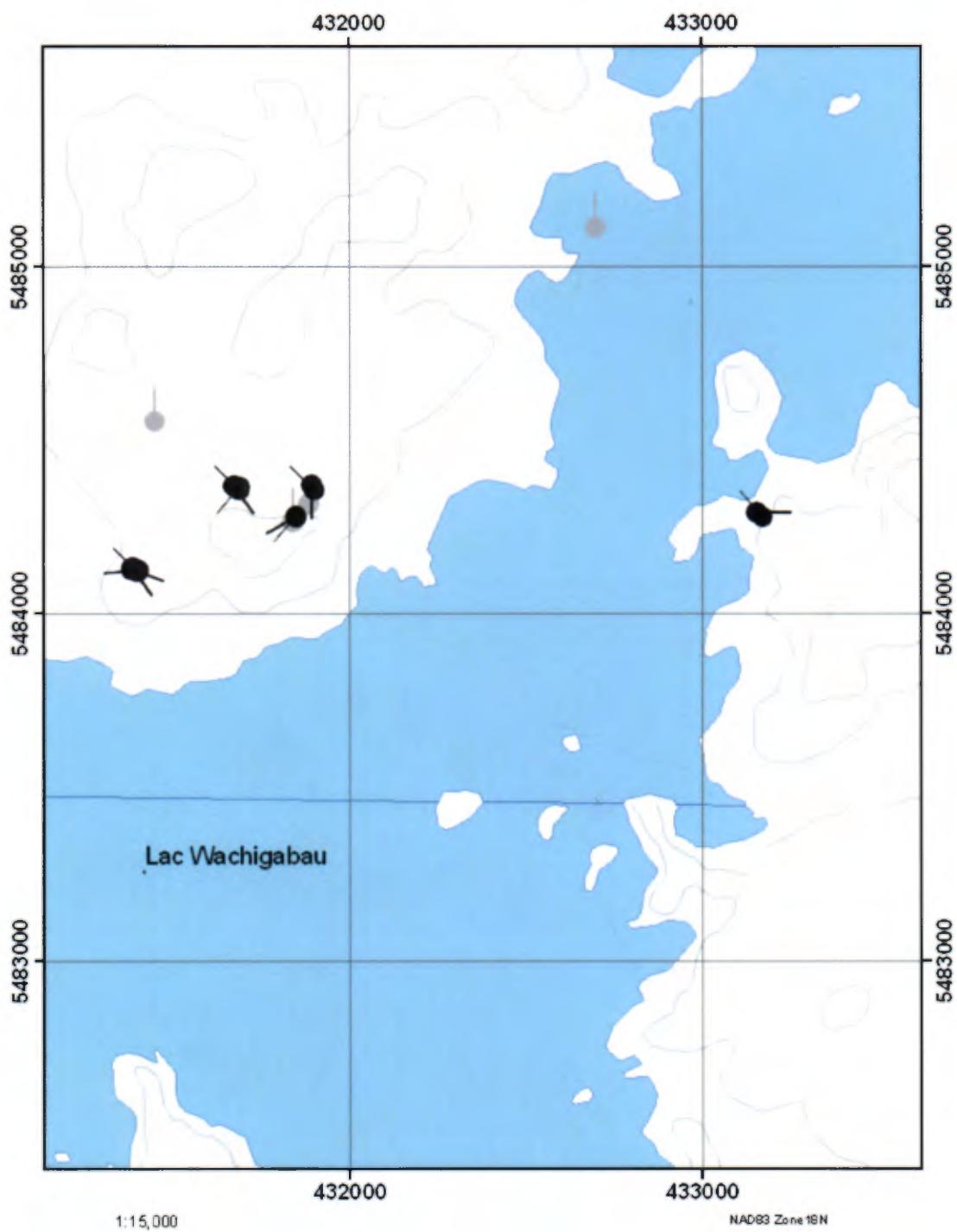


Figure 2: Drill hole collar locations, black symbols are 2007 diamond drill holes, grey are 2006 holes.

**TABLES**

**Table 1 : Petrograph results from Mineral Services report**

Sample Number	Texture	Primary Mineralogy	Classification	Alternative Classification
03-10.95	coherent, uniform, sparsely macrocrystic	OLV, PHL, SPI, CPX, PVK	highly evolved clinopyroxene- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
04-96.60	coherent, segregational, sparsely macrocrystic	OLV, PHL, SPI, CPX, PVK	Highly evolved clinopyroxene- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
06-76.75	coherent, flow banded, sparsely macrocrystic	OLV, PHL, SPI	evolved spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
06-158.34	coherent, porphyritic-globularporphyritic	KFSP, CPX, OLV, SPH	trachyte	n/a
07-63.28	coherent, uniform, sparsely macrocrystic	OLV, PHL, SPI, PVK, APT	evolved spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
08-86	coherent, flow banded, sparsely macrocrystic	OLV, PHL, SPI, CPX, APT	highly evolved clinopyroxene- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
08-116.18	coherent, inequigranular	HBL, BIO, APT, SPI (CPX/MEL/FSP?)	lamprophyre	n/a
08-116.35	coherent, uniform, sparsely macrocrystic	OLV, PHL, SPI, CPX, APT	highly evolved clinopyroxene- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
10-95	coherent, globular segregational, phenocystic	OLV, PHL, SPI, PVK, CAR, SER	evolved perovskite- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
12-39.86A	coherent, uniform, sparsely macrocrystic	OLV, PHL, SPI, PVK, CAR	evolved perovskite- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
12-39.86B	coherent, uniform to globular segregational, sparsely macrocrystic	OLV, PHL, SPI, PVK, CAR	evolved perovskite- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
12-90.83	coherent, uniform, sparsely macrocrystic	OLV, PHL, SPI, PVK, CPX	highly evolved clinopyroxene-, perovskite- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
12-93.52	coherent, uniform, sparsely macrocrystic	OLV, PHL, SPI, PVK, CPX	highly evolved clinopyroxene-, perovskite- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
13-12.15	coherent, uniform to possibly segregational, sparsely macrocrystic	OLV, PHL, SPI, APT	evolved spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
13-17.55	coherent, uniform to possibly segregational, sparsely macrocrystic	OLV, PHL, SPI, MONT, CPX, APT	highly evolved clinopyroxene- and spinel-bearing monticellite phlogopite kimberlite	ultramafic lamprophyre
13-52.4	coherent, uniform, phenocystic	OLV, PHL, SPI	evolved spinel-bearing phlogopite kimberlite	ultramafic lamprophyre
13-168	coherent, flow banded, partly segregational, sparsely macrocrystic	OLV, PHL, SPI, PVK	evolved perovskite- and spinel-bearing phlogopite kimberlite	ultramafic lamprophyre

**APPENDIX A**

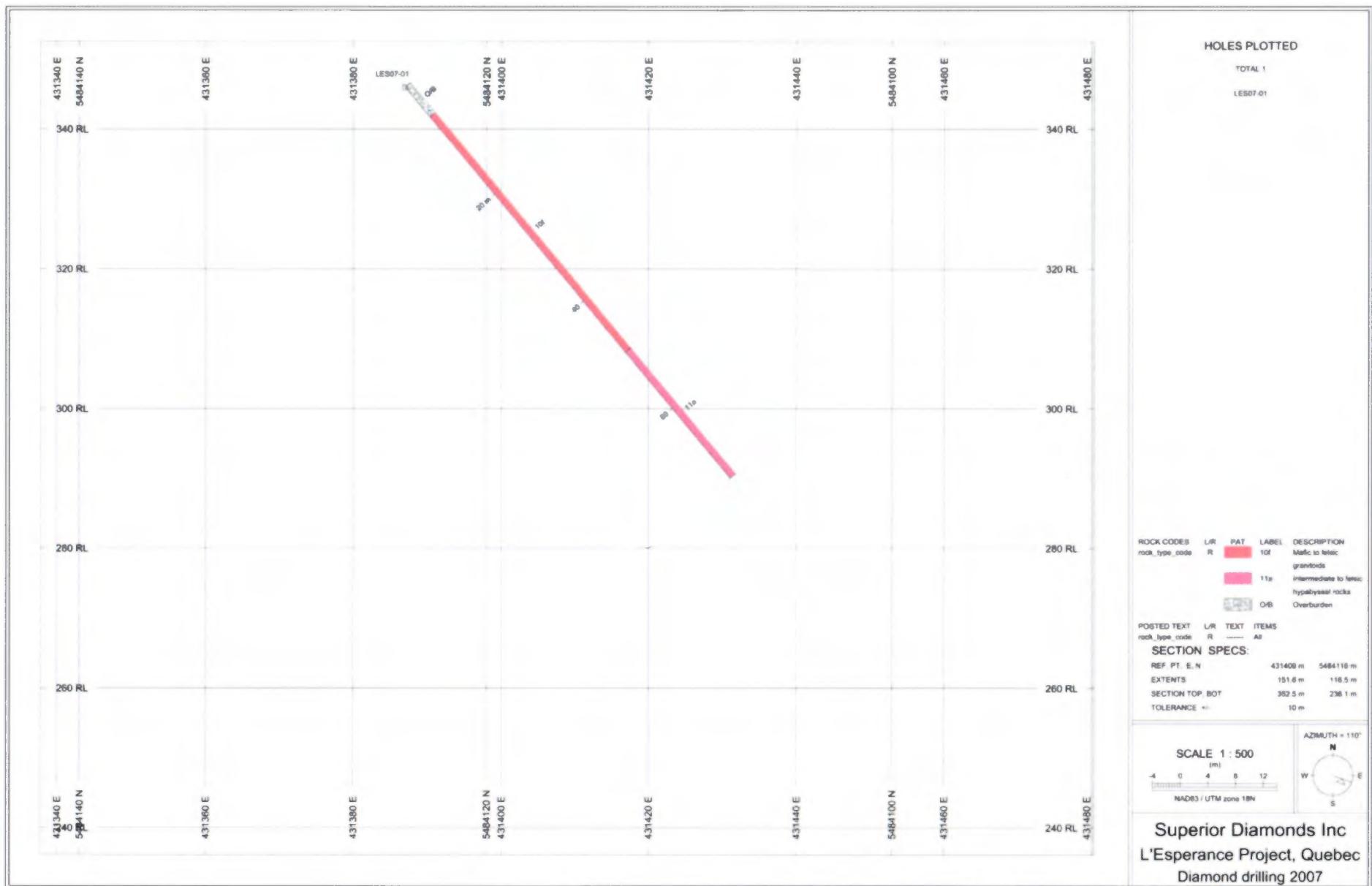
**Drill Plan**

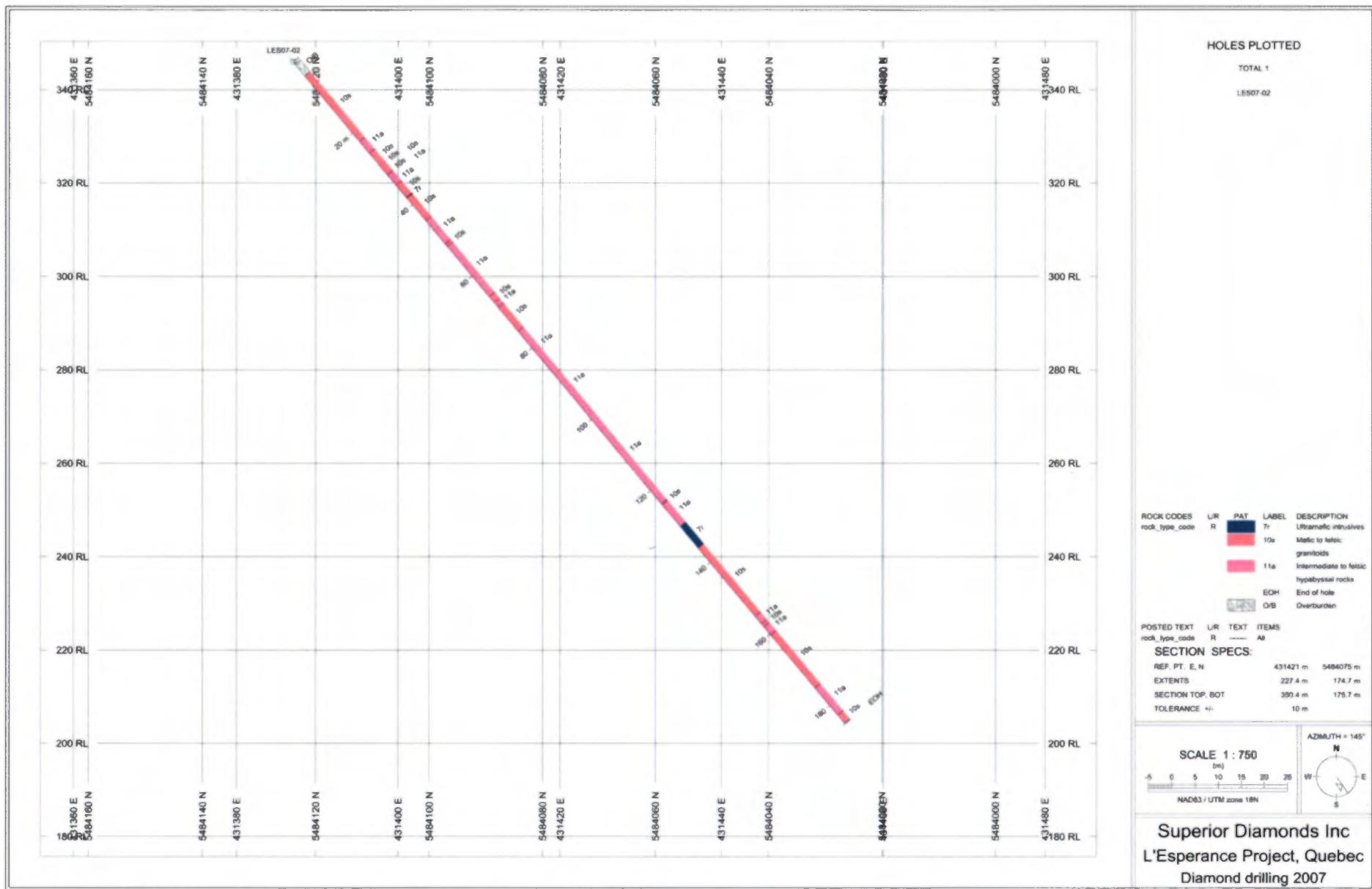
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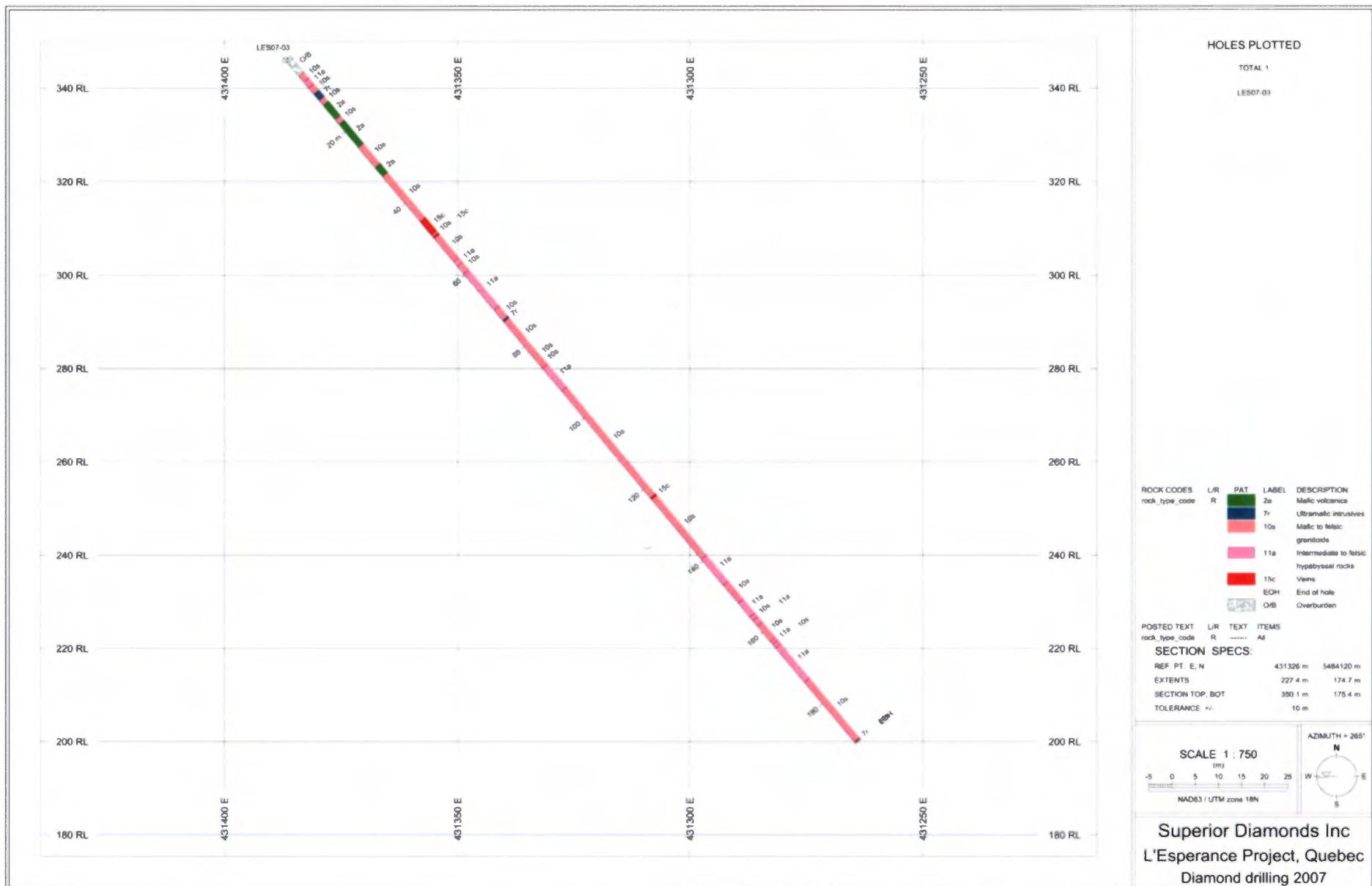
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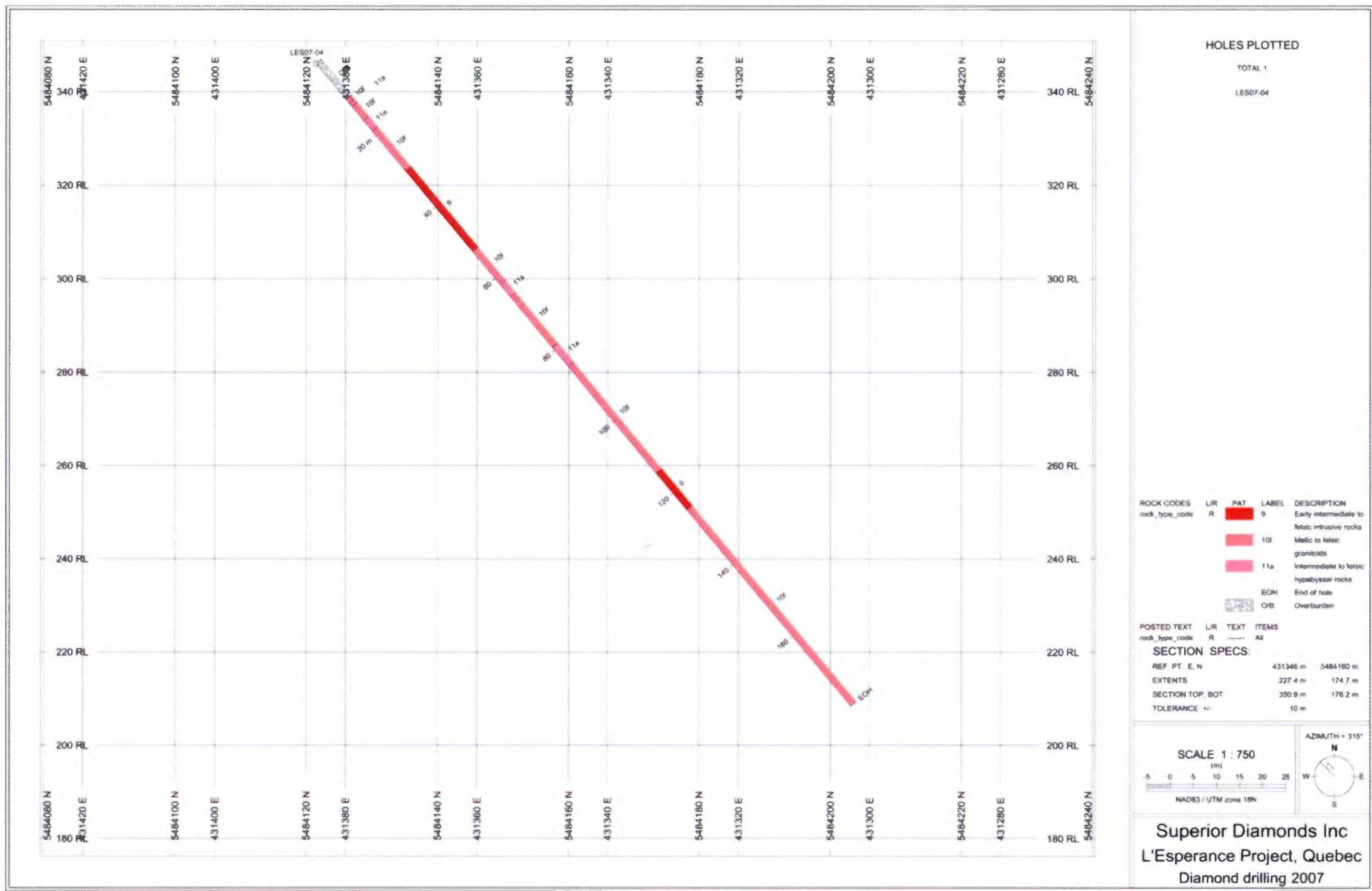
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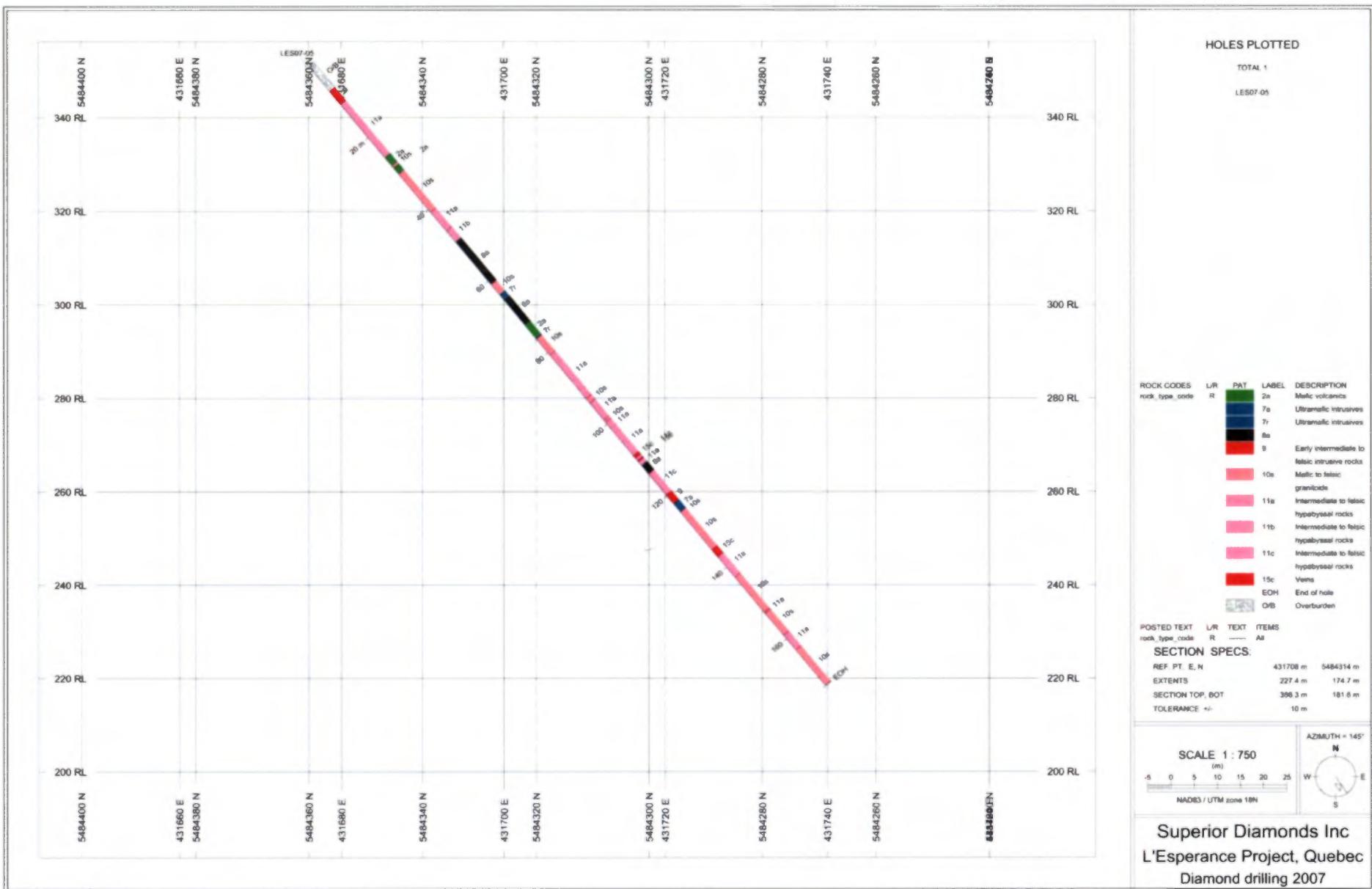
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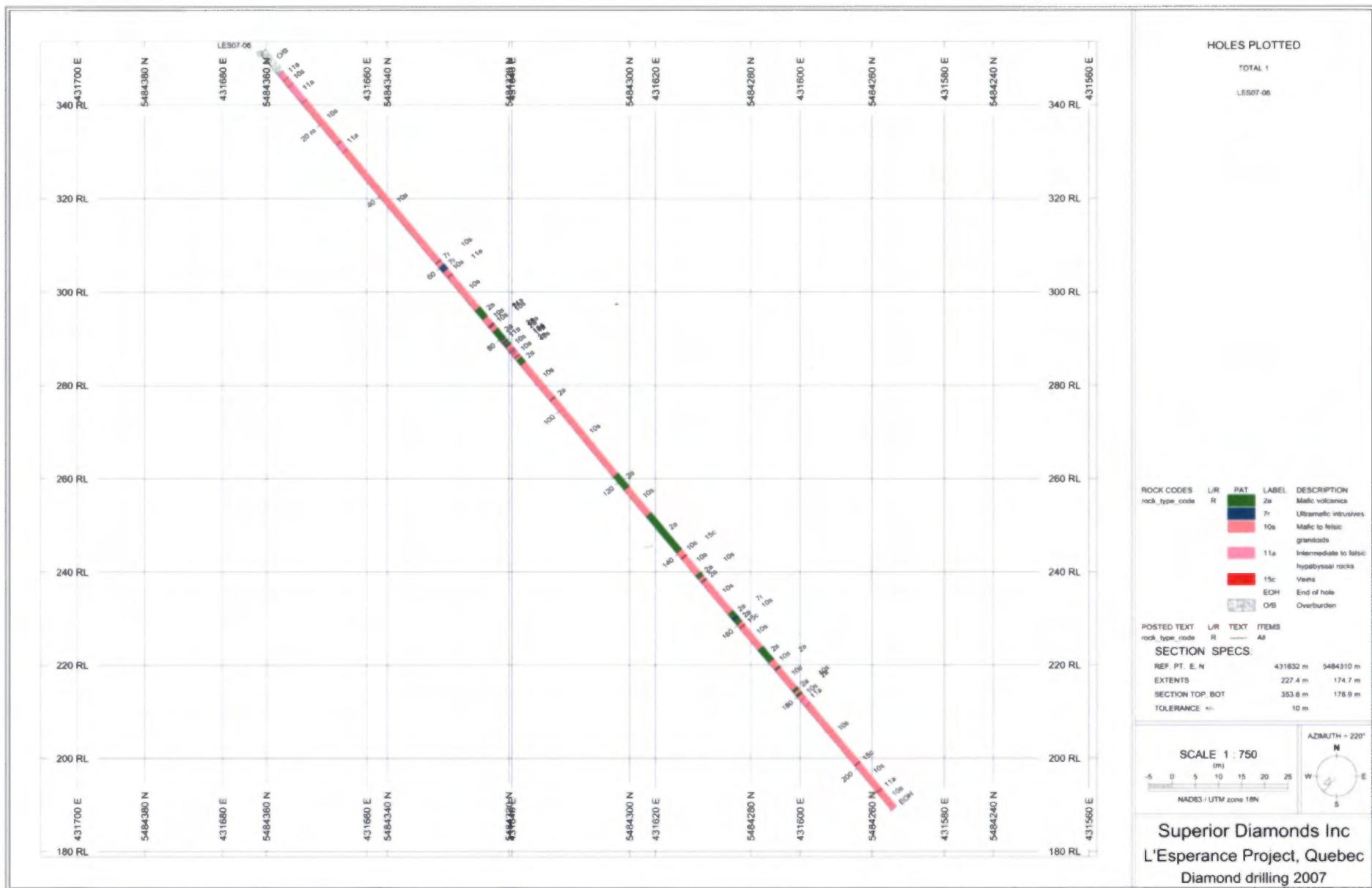


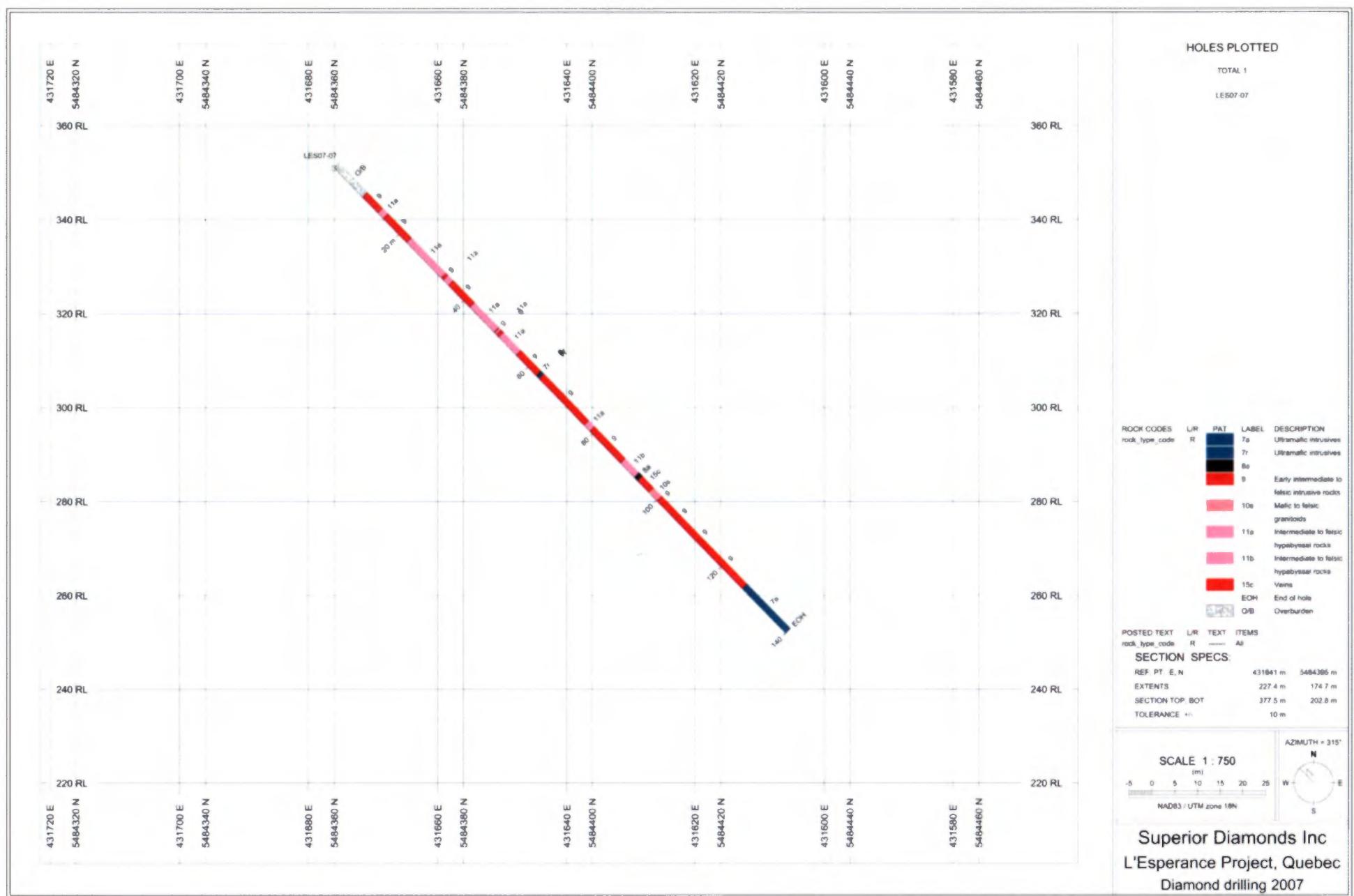


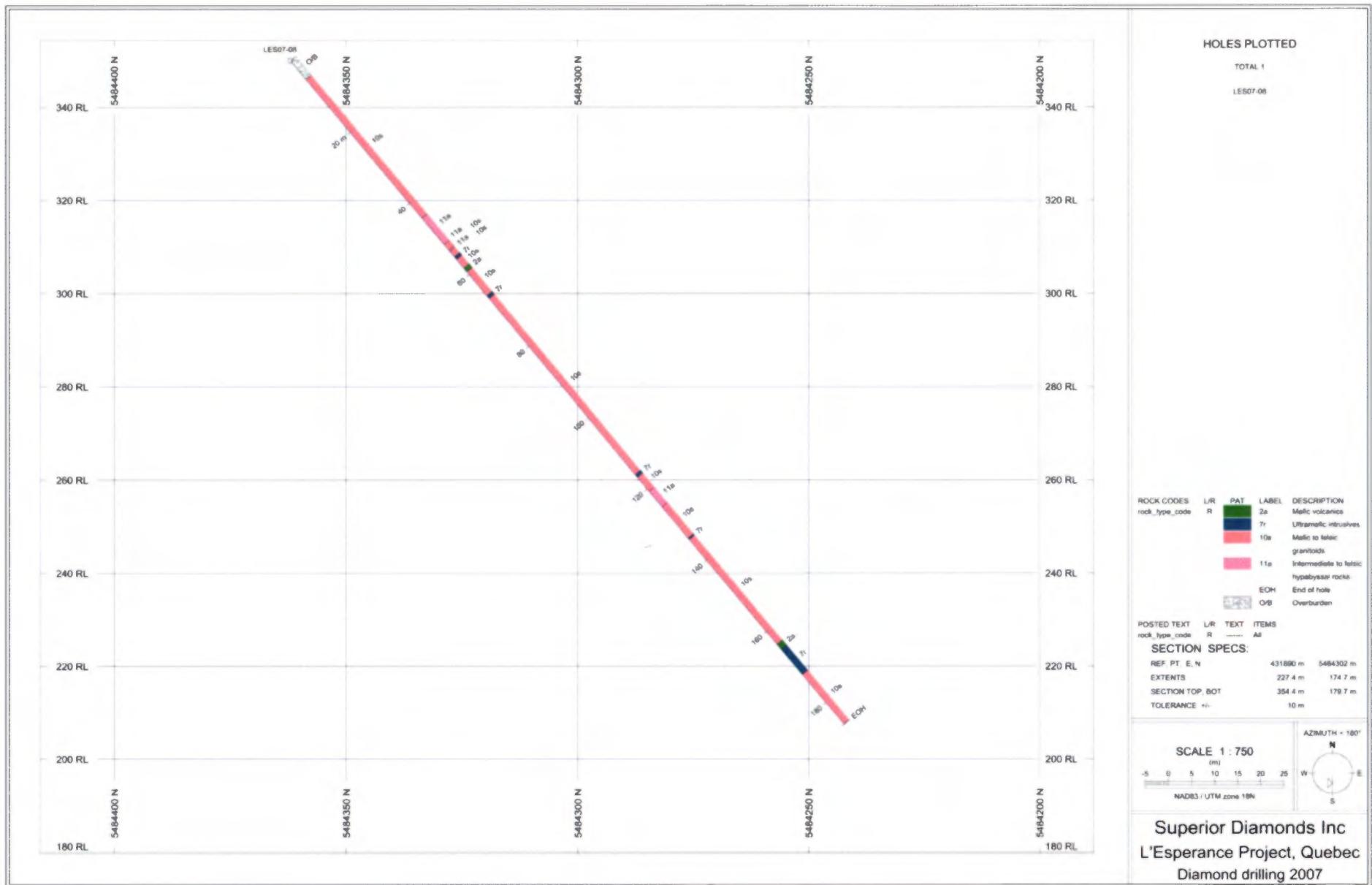


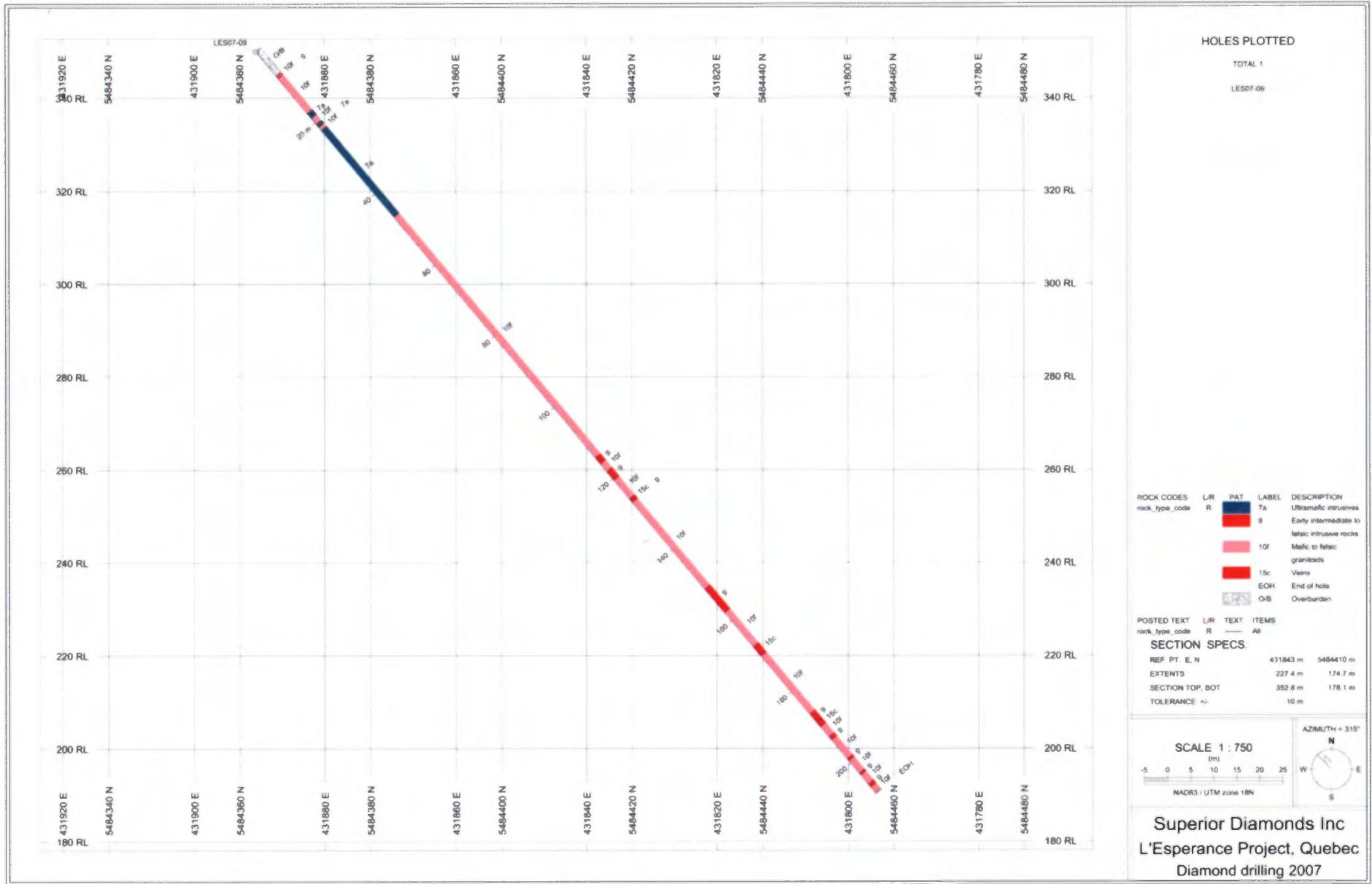


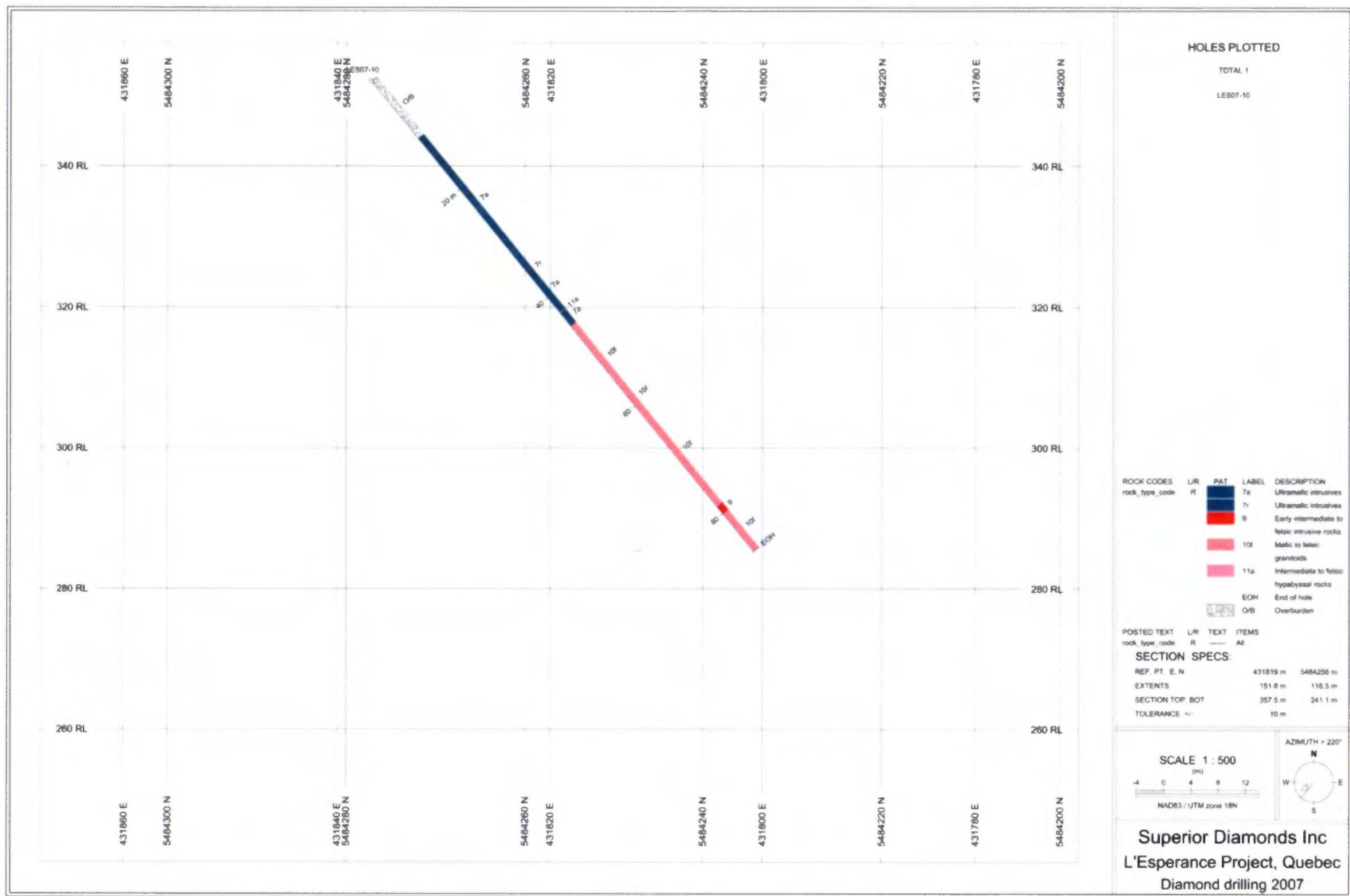


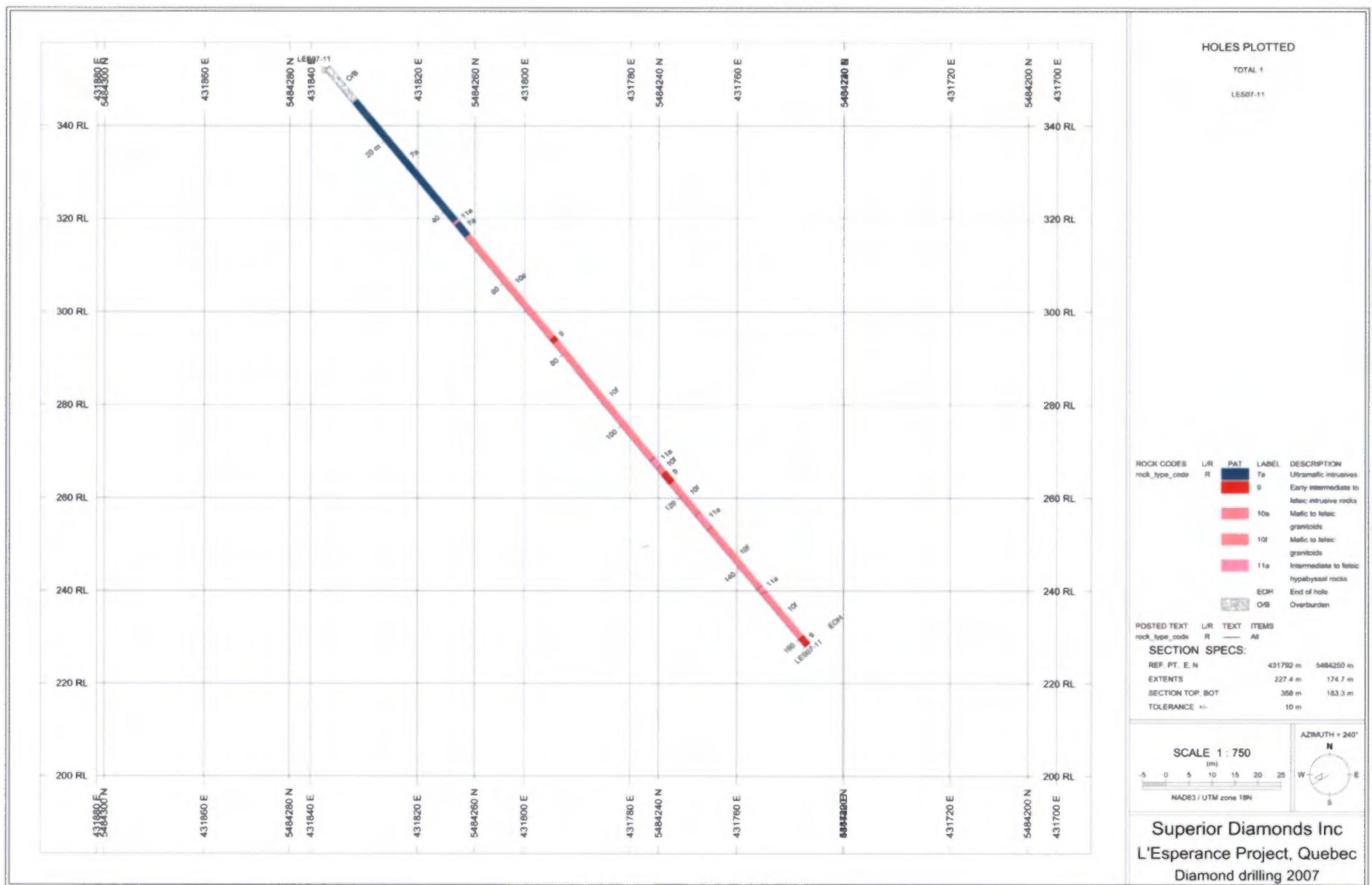


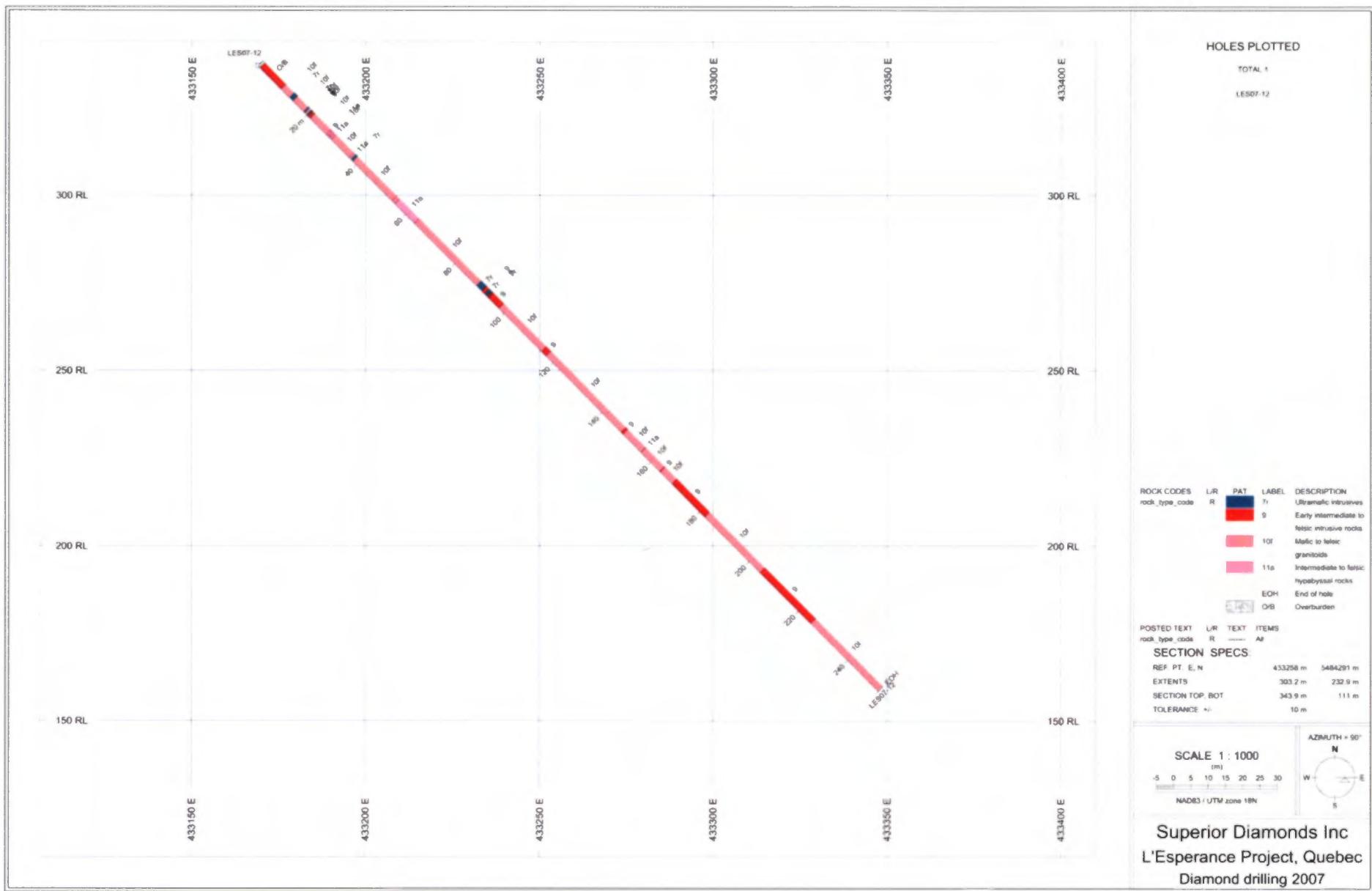


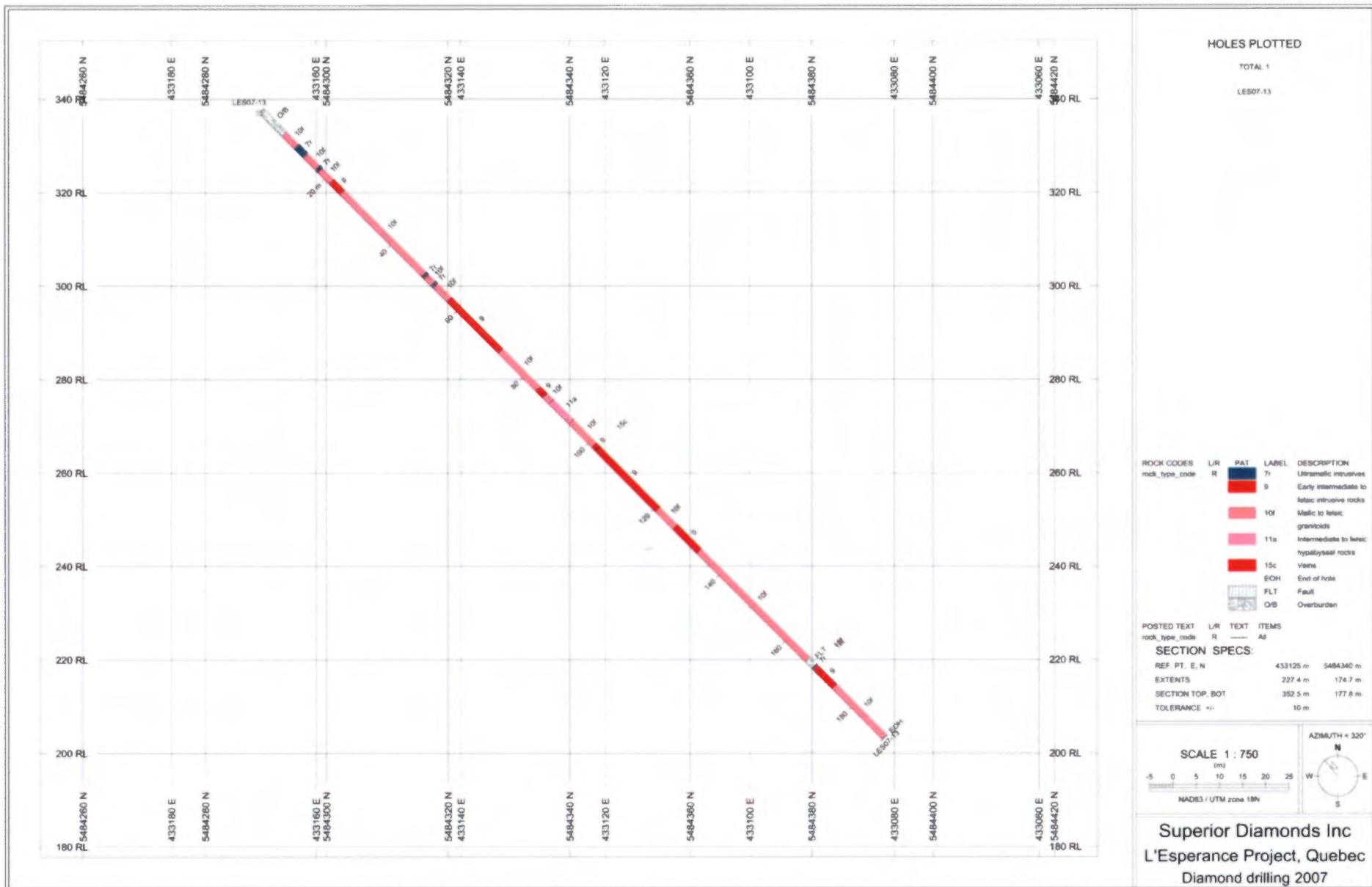












**APPENDIX C**  
**Diamond Drill Logs**

Feb 28, 2008

# DETAILED LOG SUPERIOR DIAMONDS INC.

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Hole Number: LES07-01

Units: METRIC

Project Name:	L'Esperance	Primary Coordinates	Grid: NAD83: <i>JTM, Z18</i>	Destination Coordinates	Grid:	Collar Dip:	50.00
Project Number:	S82100	North:	5484124.00	North:		Collar Az:	110.00
Location:	Surface	East:	431387.00	East:		Length:	73.00
Claim Number:		Elev:	346.00	Elev:		Start Depth:	0.00
Date Started:	Jul 30, 2007	Collar Survey:	N	Plugged:	N	Contractor:	SUMMIT DRILLING
Date Completed:	Aug 01, 2007	Multishot Survey:	N	Hole Size:	AQ	Core Storage:	Mine Site
Logged By:	SARAH JOHNSTON	Pulse EM Survey:	N	Casing:	Pulled		
Comments:							

**Sample Averages**

Detailed Lithology		Lithology	Assay Data							
From	To		Sample #	From	To	Length	Au_ppm	Ni_ppm	Mg_pct	Ti_pct
0	5.54	O/B, Overburden								
5.54	49.49	10f, Monzonite white-grey, mg, qtz-feldsp-bio-hb, sharp contact  <b>Structure</b> 5.54 - 49.49: ----- Foliated, ----- 40 Deg to CA  <b>MINOR INTERVALS:</b> <b>Minor Interval:</b> 8.08 - 17.06 9b, Granodiorite fg, felsic intrusive, subhedral feldsp with a dark fine grained matrix, sharp contacts <b>Minor Interval:</b> 41.41 - 42.26 11a, Feldspar porphyry blue-grey, sm feldsp phenos (20%), sharp contacts								

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-01

Units: METRIC

Detailed Lithology		Assay Data								
From	To	Lithology	Sample #	From	To	Length	Au_ppm	Ni_ppm	Mg_pct	Ti_pct
49.49	73.00	<b>11a, Feldspar porphyry</b> black-grey, epidote veining, sm euh-subbed feldsp phenos (30%), sharp contacts  <b>MINOR INTERVALS:</b> <b>Minor Interval:</b> 61.32 - 61.51 7r, Biotite-phyric / Lamprophyre black with dark green tint, calcite veining, sharp contacts. lower contact faulted <b>Minor Interval:</b> 61.77 - 62.72 7r, Biotite-phyric / Lamprophyre black with dark green tint, calcite veining, sharp contacts. lower contact faulted <b>Minor Interval:</b> 66.06 - 66.72 7r, Biotite-phyric / Lamprophyre black with dark green tint, calcite veining, sharp contacts. lower contact faulted								

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-02**

Units: METRIC

### **Sample Averages**

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SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-02**

Units: METRIC

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Hole Number: **LES07-02**

Units: METRIC

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Hole Number: LES07-03

**Units: METRIC**

### **Sample Averages**

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SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-03

**Units: METRIC**

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Hole Number: LES07-03

Units: METRIC

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Hole Number: LES07-03

Units: METRIC

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Hole Number: LES07-03

Units: METRIC

## Samples

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-04**

Units: METRIC

Project Name:	L'Esperance	Primary Coordinates	Grid: NAD83:	Destination Coordinates	Grid:	Collar Dip:	50.00
Project Number:	S82100	North:	5484124.00	North:		Collar Az:	315.00
Location:	Surface	East:	431387.00	East:		Length:	179.53
Claim Number:		Elev:	346.00	Elev:		Start Depth:	0.00
Date Started:	Aug 07, 2007	Collar Survey:	N	Plugged:	N	Contractor:	SUMMIT DRILLING
Date Completed:	Aug 10, 2007	Multishot Survey:	N	Hole Size:	AQ	Core Storage:	Mine Site
Logged By:	SARAH JOHNSTON	Pulse EM Survey:	N	Casing:	Pulled		

### Sample Averages

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SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-04

**Units: METRIC**

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Hole Number: LES07-04

Units: METRIC

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Hole Number: **LES07-04**

Units: **METRIC**

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SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-04

Units: METRIC

## Samples

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SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-05

**Units: METRIC**

## Sample Averages

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SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-05**

Units: METRIC

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Hole Number: **LES07-05**

**Units: METRIC**

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Hole Number: LES07-05

**Units: METRIC**

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-06

Units: METRIC

### **Sample Averages**

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SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-06**

Units: METRIC

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-06

Units: METRIC

Detailed Lithology		Assay Data								
From	To	Lithology	Sample #	From	To	Length	Au_ppm	Ni_ppm	Mg_pct	Ti_pct
87.17	96.98	<b>10s, Granite</b> mg, qtz-feldsp-bio, sharp contacts								
		<b>Structure</b> 87.17 - 96.98: ----- Foliated, ---- 45 Deg to CA								
96.98	97.12	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sharp contacts								
97.12	118.42	<b>10s, Granite</b> mg, white and black, qtz-feldsp-bio, blue qtz, epidote veining, sharp contacts								
118.42	122.07	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sm plaq veining, sharp contacts								
122.07	129.54	<b>10s, Granite</b> mg, qtz-feldsp-bio, sharp contacts								
129.54	139.68	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sharp contacts								
139.68	141.20	<b>10s, Granite</b> mg, qtz-fldsp-biot, sharp contacts								
141.20	141.41	<b>15c, Quartz vein</b> cg, white, biotite patches, py/po assoc with bio, sharp contacts								
		<b>Mineralization</b> 141.20 - 141.41: ---- Pyrite/Pyrrhotite , -----: Disseminated , - ----- 1% : assoc with biotite								
141.41	146.09	<b>10s, Granite</b> mg, qtz-feldsp-biot, sharp contacts								
146.09	147.02	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sharp contacts								
147.02	147.85	<b>10s, Granite</b> mg, qtz-felsp-biot, sharp contacts								
147.85	148.07	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sharp contacts, sm patches of FP within unit								
148.07	156.90	<b>10s, Granite</b> mg, qtz-feldsp-bio, sharp contacts								
156.90	158.14	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sharp contacts								
158.14	158.61	<b>7r, Biotite-phryic / Lamprophyre</b> dk brown, ol, epidote??, sharp contacts								
158.61	159.81	<b>2a, Mafic volc. massive flow, fine to med</b> fg, blue-grey, massive, qtz-rich, sharp contacts	LES07-06-002	158.34	158.39	0.05				

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-06

Units: METRIC

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SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-06

Units: METRIC

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-06

Units: METRIC

## Samples

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## **DETAILED LOG SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-07**

**Units: METRIC**

Project Name:	L'Esperance	Primary Coordinates	Grid: NAD83:	Destination Coordinates	Grid:	Collar Dip:	45.00
Project Number:	S82100	North:	5484360.00	North:		Collar Az:	315.00
Location:	Surface	East:	431676.00	East:		Length:	140.01
Claim Number:		Elev:	351.00	Elev:		Start Depth:	0.00
Date Started:	Aug 18, 2007	Collar Survey:	N	Plugged:	N	Contractor:	SUMMIT DRILLING
Date Completed:	Nov 20, 2007	Multishot Survey:	N	Hole Size:	AQ	Core Storage:	Mine Site
Logged By:	SARAH JOHNSTON	Pulse EM Survey:	N	Casing:	Pulled		
Comments:							

### **Sample Averages**

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-07

Units: METRIC

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-07

**Units: METRIC**

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SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-08**

Units: METRIC

### Sample Averages

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-08**

Units: METRIC



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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-08**

Units: METRIC

## Samples

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-09

**Units: METRIC**

### Sample Averages

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SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-09**

Units: METRIC

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-09**

**Units: METRIC**

Feb 28, 2008

**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-09**

**Units: METRIC**

| Feb 28, 2008

**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-10**

**Units: METRIC**

Project Name:	L'Esperance	Primary Coordinates	Grid: NAD83:	Destination Coordinates	Grid:	Collar Dip:	50.00
Project Number:	S82100	North:	5484277.00	North:		Collar Az:	220.00
Location:	Surface	East:	431837.00	East:		Length:	87.01
Claim Number:		Elev:	352.00	Elev:		Start Depth:	0.00
Date Started:	Aug 16, 2007	Collar Survey:	N	Plugged:	N	Contractor:	SUMMIT DRILLING
Date Completed:	Nov 18, 2007	Multishot Survey:	N	Hole Size:	AQ	Core Storage:	Mine Site
Logged By:	SARAH JOHNSTON	Pulse EM Survey:	N	Casing:	Pulled		
Comments:							

## Contents.

## Sample Averages

Feb 28, 2008

**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: LES07-10

Units: METRIC

Detailed Lithology		Lithology	Assay Data							
From	To		Sample #	From	To	Length	Au_ppm	Ni_ppm	Mg_pct	Ti_pct
58.63	59.64	<b>10f, Monzonite</b> green and black, mg-cg, alt, sharp contacts								
		<b>MINOR INTERVALS:</b> <b>Minor Interval:</b> 58.8 - 58.91 7r, Biotite-phyric / Lamprophyre brown-black, massive, same as above, sharp contacts <b>Minor Interval:</b> 59 - 59.64 7r, Biotite-phyric / Lamprophyre brown-black, massive, sharp contacts, same as above								
59.64	78.84	<b>10f, Monzonite</b> varying degrees of alt, upper unit is white-pink, lower unit dk grey-pink, green patched, darker unit has blue qtz								
		<b>Mineralization</b> 59.64 - 78.84: ---- Pyrite/Pyrrhotite , -----: Disseminated , - ----- 2%								
		<b>MINOR INTERVALS:</b> <b>Minor Interval:</b> 66.09 - 66.33 9, Early Intermediate to Felsic Intrusives blue-grey, massive, sharp contacts, <b>Minor Interval:</b> 70.54 - 70.74 7r, Biotite-phyric / Lamprophyre brown, fg, massive, same as above, sharp contacts <b>Minor Interval:</b> 77.21 - 77.45 7r, Biotite-phyric / Lamprophyre brown, fg, massive, same as above, sharp contacts <b>Minor Interval:</b> 77.72 - 77.81 7r, Biotite-phyric / Lamprophyre brown, fg, massive, same as above, sharp contacts <b>Minor Interval:</b> 78.14 - 78.31 7r, Biotite-phyric / Lamprophyre brown, fg, massive, same as above, sharp contacts <b>Minor Interval:</b> 78.66 - 78.84 7r, Biotite-phyric / Lamprophyre brown, fg, massive, same as above, sharp contacts								

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**DETAILED LOG  
SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-10**

Units: METRIC

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SUPERIOR DIAMONDS INC.**

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Hole Number: **LES07-10**

**Units: METRIC**

### Samples

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Hole Number: **LES07-11**

**Units: METRIC**

## Sample Averages

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Hole Number: **LES07-11**

Units: METRIC

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# DETAILED LOG SUPERIOR DIAMONDS INC.

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Hole Number: LES07-12

Units: METRIC

Project Name:	L'Esperance	Primary Coordinates	Grid: NAD83:	Destination Coordinates	Grid:	Collar Dip:	45.00
Project Number:	S82100	North:	5484291.00	North:		Collar Az:	90.00
Location:	Surface	East:	433169.00	East:		Length:	252.47
Claim Number:		Elev:	337.00	Elev:		Start Depth:	0.00
Date Started:	Aug 20, 2007	Collar Survey:	N	Plugged:	N	Contractor:	SUMMIT DRILLING
Date Completed:	Aug 26, 2007	Multishot Survey:	N	Hole Size:	AQ	Core Storage:	Mine Site
Logged By:	SARAH JOHNSTON	Pulse EM Survey:	N	Casing:	Pulled		
Comments:						Final Depth:	252.47

**Sample Averages**

Detailed Lithology	From	To	Lithology	Assay Data							
				Sample #	From	To	Length	Au_ppm	Ni_ppm	Mg_pct	Ti_pct
0      9.50	O/B, Overburden										
1.00    54.68	9, Early Intermediate to Felsic Intrusives										
	MINOR INTERVALS:										
	Minor Interval:										
	39.86 - 39.96 7r, Biotite-phyric / Lamprophyre										
	black, fg, sm band of lamp dyke, sharp contacts, hematite alt along contacts										
	Minor Interval:										
	41.36 - 41.61 7r, Biotite-phyric / Lamprophyre										
	same as above										
	Minor Interval:										
	44.1 - 44.23 FLT, Fault										
	Minor Interval:										
	50.99 - 54.68 9, Early Intermediate to Felsic Intrusives										
	blue-grey, fg, massive, feldsp stringers, alt patches- chlor and epidote										
9.50    12.92	10f, Monzonite										
	pink-black, mg, massive, qtz-feldsp-bio, sharp contacts										
12.92    14.24	7r, Biotite-phyric / Lamprophyre										
	black, fg, contact runs parallel to core axis until 13m, massive, sm of phenos										
14.24    18.63	10f, Monzonite										
	white-pink-black, mg, sharp contacts, qtz-feldsp-bio										
18.63    19.10	7r, Biotite-phyric / Lamprophyre										
	monzonite inclusions within lamp dyke, sharp contacts										
19.10    19.82	10f, Monzonite										
	white-black, qtz-feldsp-bio, massive, alt contacts										
19.82    20.28	7r, Biotite-phyric / Lamprophyre										
	black, fg, massive, sm of phenos, sharp contacts, sm band of monzonite at LC										
20.28    20.84	9, Early Intermediate to Felsic Intrusives										
	blue-grey, fg, massive, feldsp filled fractures, sharp contacts										

LES07-12-001    39.86    39.96    0.10

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## Samples

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Hole Number: **LES07-13**

Units: METRIC

## Sample Averages

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**Units: METRIC**

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**Units: METRIC**

## Samples

**APPENDIX D**

**Petrographic Report**