MAR 20080022: SWAMPY LAKE

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JUL 21 2008

Assessment Report "Part B" and "Part C" for the Swampy Lake Property (BF-SL) NTS: 086B 06, 11

Metallic and Industrial Mineral Permit Number 9304060580

Report submitted to: Department of Energy, Coal and Mineral Development Branch 7th Floor Petroleum Plaza North Tower 9945 – 108th Street Edmonton, Alberta T5K 2G6

> prepared by: Diamondex Resources Ltd. P.O. Box 11584 1410-650 West Georgia Street Vancouver, BC V6B 4N8

David Willis, Project Manager

Anna North, Land Administrator

Assessment Report Date: July 1, 2008

Confidential Until: July 1, 2010

ABSTRACT

Diamondex Resources Ltd. ("Diamondex") is a diamond exploration company exploring in the Buffalo Head Hills and Loon River Lowlands of Alberta. This assessment report is being written to satisfy the third and forth year expenditure requirements outlined in section 8(1) of the Metallic and Industrial Mineral Regulations.

During the past two year term Diamondex conducted one ground gravity survey on the Swampy Lake Property, MIMP number 9304060580. This report summarizes the work done and provides the results of this gravity survey.

Company:	Diamondex Resources Ltd.			
MIMP:	9304060580			
Assessment Period:	June 1, 2006 to May 31, 2008			
Location:	North Central Alberta			
NTS:	84B6, 84B11			
Legal Location:	SEC 22, 23, 26, 27 – TWP 86 – RGE 9 – W5M SEC 15, 22 – TWP 87 – RGE 9 – W5M			
Commodity Sought:	Diamonds			

Swampy Lake 2008 Assessment Report, Part B Diamondex Resources Ltd.

PART B - TECHNICAL REPORT

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Swampy Lake 2008 Assessment Report, Part B Diamondex Resources Ltd.

MINERAL ASSESSMENT EXPENDITURE BREAKDOWN BY TYPE OF WORK

Estimated Expenditure (submitting with Statement of Intent to File)
Actual Expenditure (for Part B of Report; Must match total filed in Part A)

Project Name:

Swampy Lake

	AMOUNT
1. Prospecting	\$
2. Geological Mapping & Petrography	\$
3. Geophysical Surveys	
a. Airborne	\$
b. Ground	\$ <u>17,757.14</u>
4. Geochemical Surveys	\$
5. Trenching and Stripping	\$
6. Drilling	\$
7. Assaying & whole rock analysis	\$
8. Other Work:	\$
SUBTOTAL	\$_17,757.14
9. Administration (up to 10% of subtotal)	\$1,775.71
TOTAL	\$_19,532.85
Anna North SUBMITTED BY (Print Name)	July 1, 2008_ DATE

Swampy Lake 2008 Assessment Report, Part B Diamondex Resources Ltd.

1.0 INTRODUCTION

This report is being submitted to satisfy the third and fourth year assessment work requirement of Metallic and Industrial Mineral Permit (MIMP) 9304060580. During the past two years Diamondex Resources Ltd. and its joint venture partners Shore Gold Inc., EnCana Corporation, and Pure Gold Minerals Inc. have incurred \$19,532.85 in expenditures to evaluate 1,353 hectares. On the basis of this work Diamondex will maintain the entire permit.

Diamondex's exploration work for this term consisted of one ground gravity survey. The survey was conducted over a magnetic anomaly delineated by a ground magnetic survey conducted in 2004.

The body of this report is composed of six sections. Following this introductory section, sections two through four describe regional aspects of the property while section five describes specific exploration work. Conclusions based upon the work are outlined in section six. Part C Appendix "B" provides specific details relating to the performed work.

2.0 PROPERTY DESCRIPTION AND ACCESS

The MIMP is located in Alberta approximately 150 kilometers north of the town of Slave Lake and approximately 400 kilometers northwest of Edmonton (Figure 1). The MIMP is divided into two sections. The largest section is approximately 8 kilometers south of Red Earth Creek just east of the junction of Highway 986 and Highway 88. The smaller section is on Crown Land along the Loon River and bordered by Loon River First Nation Reserve Lands. It is located approximately 8 kilometers north-northwest of the larger section of the permit. A permit location map is provided in Part C, Appendix "A".

The permit is located on 1:50,000 NTS map sheets 84B6 and 84B11. The legal locations are township 86, range 9, sections 22 through 27, and township 87, range 9, sections 15 and 22, all west of the 5th meridian. The claims schedule is provided in Table 1.

Table 1: Claims Schedule

MIMP	Hectares	Term Date	Anniv. Date	Holder	%
9304060580	1,353	1 June 2004	1 June 2008	Diamondex	100

All field operations were conducted out of the Red Earth Lodge located at the north end of Red Earth Creek. Field crews stationed at the Red Earth Lodge utilized four wheel drive truck to access the property then walked to the survey site.

3.0 PHYSIOGRAPHY

The permit is located within the boreal forest of the Peace River drainage system. The Loon River and Loon Lake are the major hydrographic features in the immediate area.

The larger portion of the permit is characterized by a black spruce forest within a clear-cut. Elevation of this portion of the permit gently decreases from 571 meters in the southeast to 533 meters in the northwest. The smaller portion of the permit is characterized by the Loon River. Elevation in this portion is consistent at 518 meters above mean sea level.

4.0 PROPERTY GEOLOGY

In this section the property geology is described from surface to basement.

4.1 Surficial Geology

The most recent glaciation in the permit area occurred during the Wisconsin retreat of the Laurentide ice sheet. Glacial drift covers bedrock throughout the area and reaches thicknesses of over 200 metres in the Loon River Lowlands. In the Loon River portion of the permit the dominant surficial sediments are glaciolacustrine in origin. Over the larger permit block, extensive organic deposits overlie moraine and fluted moraine material (Figure 2). Ice flow in northern Alberta was generally toward southwest, but in the permit area indications are that the latest Late Wisconsin ice flowed southward (Paulen et al 2003). A divide may have occurred immediately south of the permit area where ice flow indicators branch to the southeast and southwest.

4.2 Bedrock Geology

Cretaceous-age bedrock in the permit area consists of Dunvegan Formation sandstone. The overlying Smoky Group marine shales occur to the east and west, where they are preserved in the highlands bounding the Loon River basin. Shaftesbury Formation, sandwiched between the Dunvegan and Smoky Group sediments, occurs along the southern and western margin of the lowlands (Figure 3).

4.3 Basement and Structural Geology

Existing data suggest that most of the Western Canada Sedimentary Basin in northern Alberta is floored by granulite terranes with major batholitic complexes (Pana, 2003). Basement geology beneath the permit area comprises the Buffalo Head terrain, which possibly represents an early Proterozoic continental fragment, 2.0 to 2.3 billion years in age.

The northeast-trending, Late Paleozoic to Devonian Peace River Arch is the most significant regional basement structure in north-central Alberta (Figure 4). The arch has a well-documented complex history of uplift and subsidence. Vertical movements totaling several hundred metres occurred along these faults in late Paleozoic time. Conjugate northeast and northwest-trending faults control the basement topography and sedimentation patterns over the arch (Cant, 1988) and may have been influential in localizing kimberlites in the Buffalo Head Hills region.

2

4.4 Kimberlite Potential

There are 40 known kimberlites in the Buffalo Head Hill region. As shown in Figure 5, most of the kimberlites occur to the north of the permit. However, there is one known kimberlite to the south of the permit, such that the permit lies midway between two known kimberlites. Since kimberlites typically occur in clusters, it can reasonably be expected that additional kimberlites remain to be discovered in the region between LL07 and K160. In addition, arrays of kimberlites are often aligned along structural trends, such as the northwest-southeast trend indicated by the kimberlite occurrences between K91 and K252. Based on the numerous known kimberlite occurrences surrounding the permit area, the permit can be considered to be in a reasonably prospective position.

5.0 EXPLORATION WORK

A ground gravity survey was undertaken over the LL005 magnetic anomaly in April of 2008. The magnetic anomaly was picked by Don Fox (consultant to Ashton Mining of Canada) from a 1998 Sander Geophysics regional magnetic survey and given the highest priority ranking. The airborne magnetic anomaly coordinates are 603089E 6260246N (NAD27 UTM 11N). The objective of the survey was to determine if a gravity anomaly coincides with the magnetic anomaly.

MEG Systems Ltd. of Calgary were contracted to conduct the survey. Operations were based out of the Red Earth Lodge, and access to LL005 was by truck. The gravity survey utilized previously cut seismic lines that intersected the magnetic anomaly and no line cutting was required. The survey consisted of 194 gravity stations over 7.2 line kilometers. In total, five east-west and one north-south traverses were conducted. One of the east-west traverses was extended to well beyond the limits of the magnetic anomaly in order to identify the trend of the regional gravity field. A LaCoste-Romberg gravity meter (G-239) was utilized for the survey. Readings are in mGals with a resolution of .01 mGals in ideal conditions. All gravity readings were tied into the national gravity gird for reference. A detailed overview of the gravity survey is given in the MEG Systems Survey Report, provided in Part C, Appendix "B". Summary survey statistics are given in Table 2.

Table 2.	Ground	gravity	survey	summary.

#	Anomaly	Datum	Zone	Easting	Northing	Line Km
1	LL005	NAD27	11	603089	6260246	7.2

6.0 CONCLUSION AND RECOMMENDATIONS

One ground gravity survey was conducted on the permit during the second assessment period. The survey delineated a gravity low that is coincident with a magnetic high revealed in a previous survey. Despite the anomalous nature of the gravity low, it is unlikely to be kimberlite because an ultramafic intrusion would be more dense than the surrounding host material and would be imaged as a gravity high.

Nonetheless, the coincident gravity and magnetic anomalies need to be examined further to determine if an economic mineral deposit exists. As such it is recommended that the exploration expenditures be used to advance the permit.

7.0 CERTIFICATE OF QUALIFICATIONS

I, David Willis, 4216 Graveley Street, Burnaby, British Columbia hereby certify that:

- 1. I am presently employed as Project Manager, Alberta with Diamondex Resources Ltd., 1410-650 West Georgia Street, Vancouver, B.C.
- 2. I am a graduate of the University of Alberta and hold a B.A. Degree in anthropology.
- I am a graduate of the Northern Alberta Institute of Technology and hold a diploma in mineral engineering.
- 4. I have been employed with Diamondex Resources Ltd since 2007.
- I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report, or the omission to disclose which makes the Report misleading.
- 6. That the information in this report is based on work done to evaluate the property, in collaboration with colleagues involved in various aspects of exploration.

DATED at Vancouver, British Columbia, this 1 July 2008.

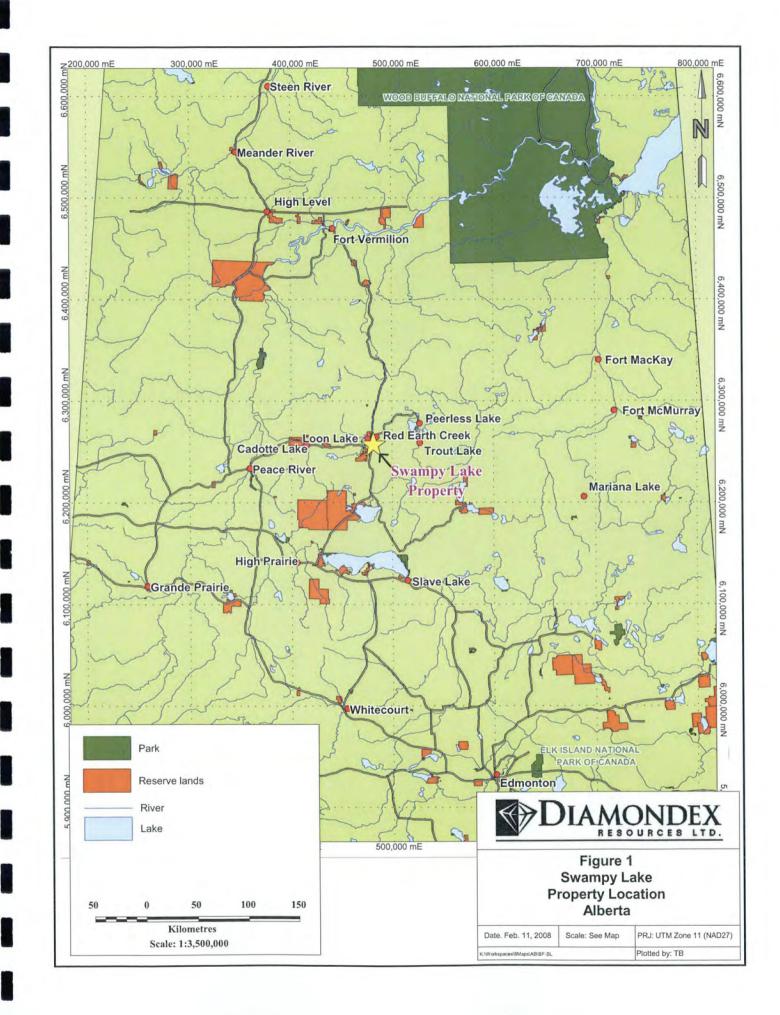
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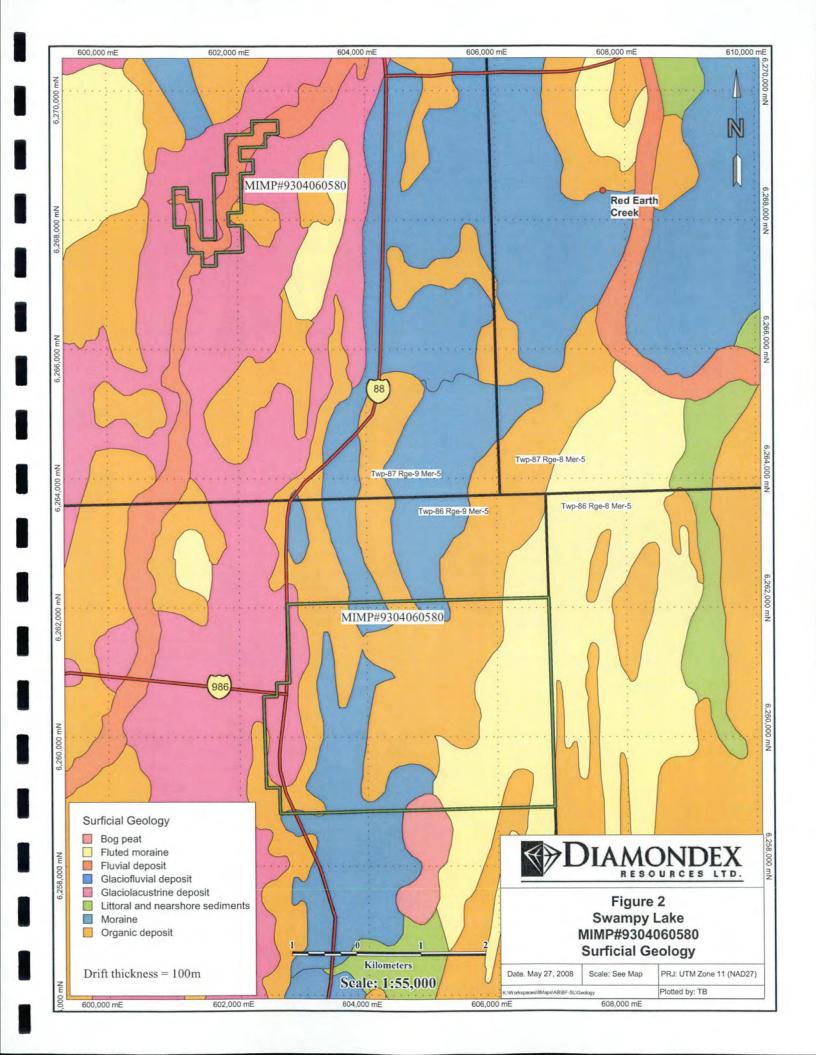
David Willis, B.A., Dip Mineral Engineering

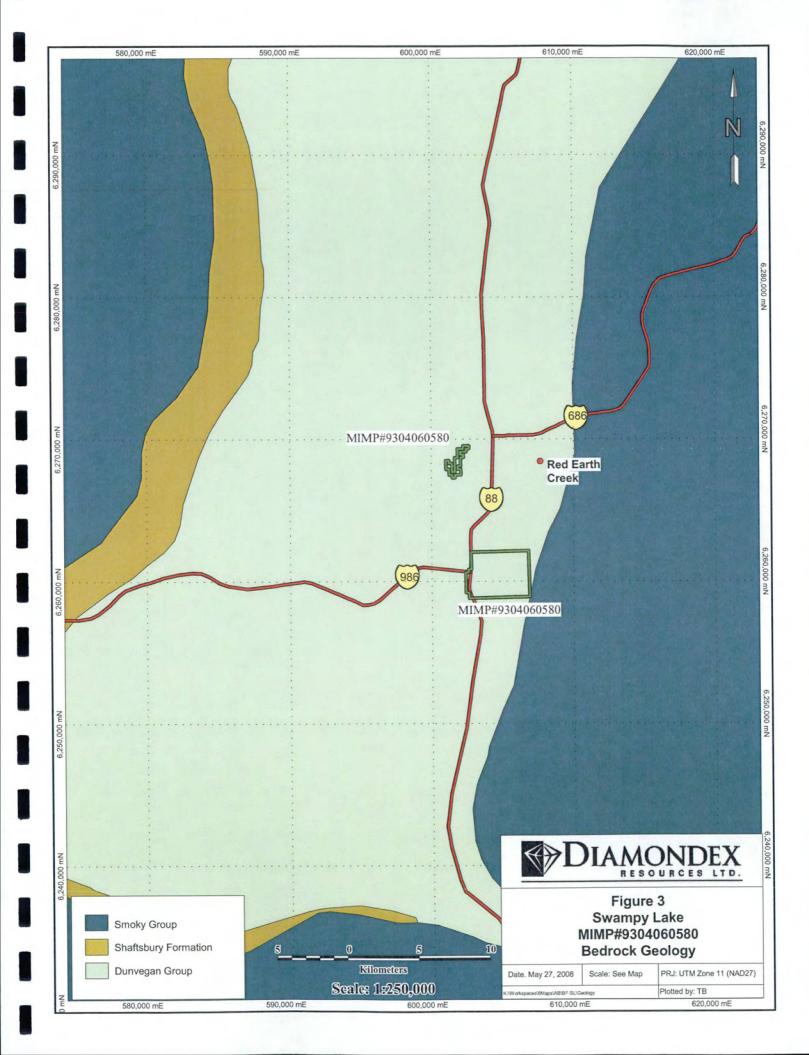
Swampy Lake 2008 Assessment Report, Part B Diamondex Resources Ltd. 5

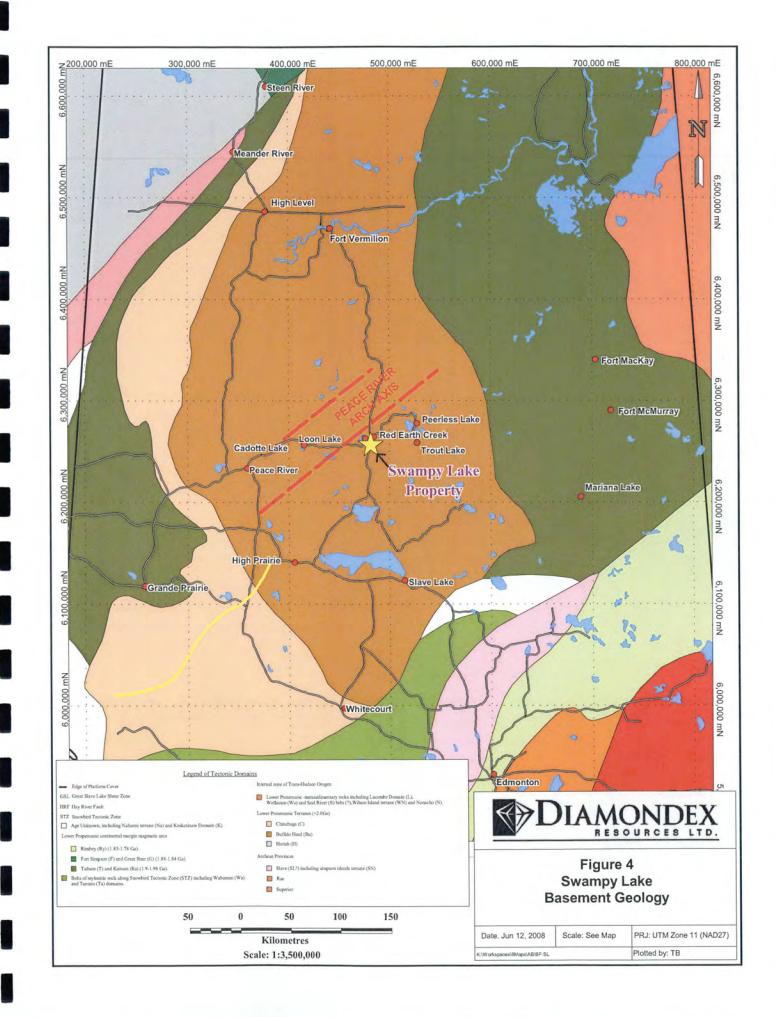
8.0 REFERENCES

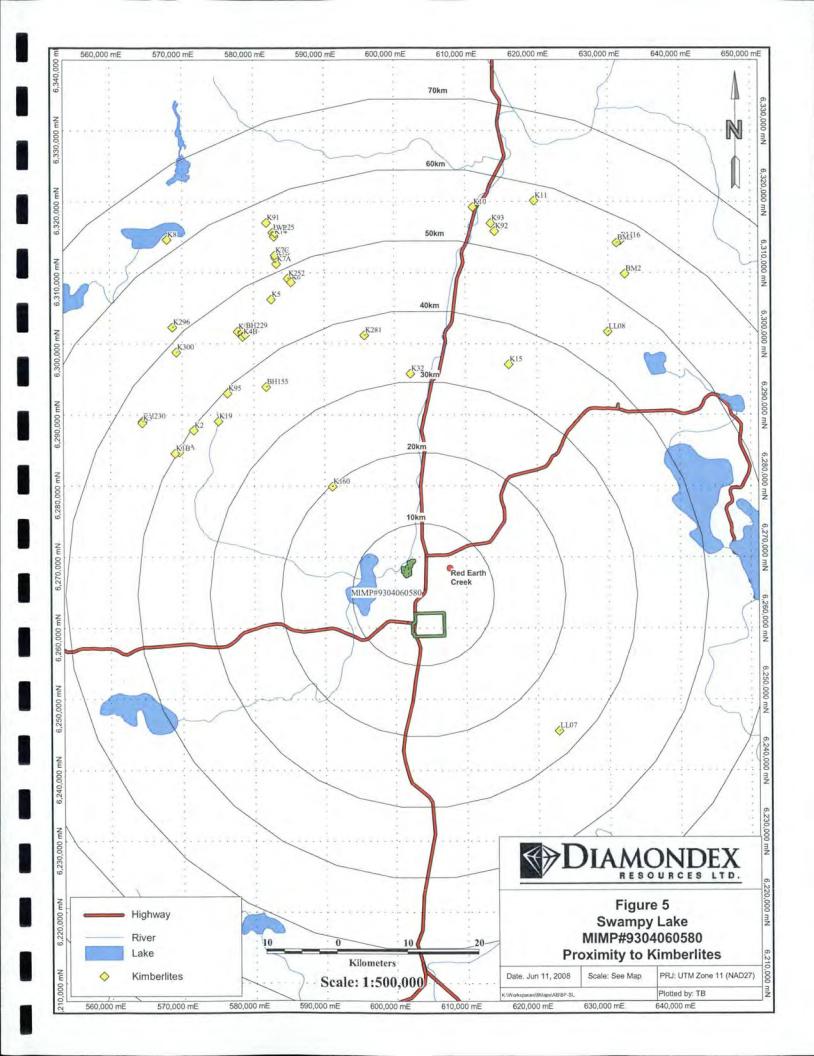
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- Paulen R.C., Pawlowicz J.G., Fenton M.M., Weiss J.A. and Brown B. (2003): Stratigraphy and glacial dispersion studies in the Buffalo Head Hills kimberlite field. Program with abstracts, vol. 28, p. 132, 2003 GAC-MAC-SEG, Vancouver.











PART C - APPENDICES

Appendix "A"	Permit Location Map
Appendix "B"	Geophysical Contractor Report
Appendix "C"	Ground Gravity Survey Location Map
Appendix "D"	Ground Gravity Station Location Map
Appendix "E"	Ground Survey Bouger Gravity Map
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Swampy Lake 2008 Assessment Report, Part C Diamondex Resources Ltd.

APPENDIX "A": PERMIT LOCATION MAP

Swampy Lake 2008 Assessment Report, Part C Diamondex Resources Ltd.

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50 AT	TS Section
LEGEND	¹
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Permit Locati	ion Map
Permit Number 9 Swampy La	
	ke, AB

APPENDIX "B":

GEOPHYSICAL CONTRACTOR REPORT

Swampy Lake 2008 Assessment Report, Part C Diamondex Resources Ltd.







April, 2008 prepared for **Diamondex Resources Ltd.** Vancouver, British Columbia

> prepared by MEG Systems Ltd. April, 2008

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Red Earth Gravity Survey

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Introduction and Production Summary

MEG Systems Ltd. was contracted by Diamondex to conduct a ground gravity survey over known magnetic anomalies south of the town of Red Earth, Alberta (satellite image on title page). The purpose of the work was to collect sufficient data to confirm the location and extent of the anomalies. The location of the project is also shown on the road map in Figure 1.

rin ikes BUFFALO 692 Notikewa HEAD Provincial Bisant HILLS ark Latond Cr 738me Swan L Haid L 586 Peerless Loon Lake Graha Trouto Lubicon R Project ace Lubicon L Riv Area Foot Da al Site F t. Isidore Muskwa L Muskwa Atikameg Gift [750] Utikuma Lake 754 Guy Grouard 746 Hilliard's Bay 1023m Grouard 749 Lesser Slave Lake esser Slave Lake High Prairie Enilda 2 Canyon Joussard Kinuso Driftpile 747 Faust Slave 2 Valleyvie

Figure 1 Project Location

Production Summary

The survey was conducted over a total of 6 days in April 2008. In that time there were 4 days of actual surveying, and two travel days. The total number of stations collected was 194, resulting in an average daily production rate of 48 stations. An additional 25 repeats were collected as quality control. Table 1 shows the distribution of stations over the survey period. One day produced as many as 68 stations, while another produced only 37 stations. This difference was mainly due to the program layout and logistics with 25 meters and 50 meters between stations.

Date	Description	Total
3-Apr	Travel to Red Earth	0
4-Apr	Lines 6260520N and 6260750N	46
5-Apr	Line 6260260N and Highway Extension	37
6-Apr	Line 603000E	68
7-Apr	Lines 6259850N, 603400E, 6260950N	43
8-Apr	Travel to Calgary	0
Total		194

Table 1: Gravity Station Production by Date and Line

During the survey, a local line numbering system was used to keep confusion to a minimum. Both NAD27 and WGS84 UTM grid systems were used for layout. Table 2 lists the equivalent numbers. The NAD27 numbers were given to MEG Systems by Diamondex and the WGS84 numbers reflect where they are approximately positioned when mapped in the WGS84 system. The lines do not run true to grid north or east.

Table 2: Line Number Reference between Survey Systems

Local	NAD27	WGS84
1	6260260N	6260450N
2	6260520N	6260770N
3	6260750N	6261000N
4	603000E	603000E
5	Highway	686 West
6	6259850N	6260100N
7	603400E	603400E
8	6260950N	6261200N

The survey layout is depicted in Figure 2. The local line numbers are used to aid in understanding the location of the lines and the approximate

chronological order of the survey. Line 8 was not a seismic line, but the crew found a cut block and a sparsely treed area at the northern end of the magnetic anomaly where real-time GPS could also be used.

Figure 2 Survey Layout

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6259800							GPS TBM1 *	625980

Area, Access and Logistics

Area

The project is situated 5 kilometers south of the community of Red Earth, adjacent to the main road, Highway 88, on the east side. The area is relatively flat with a slight rise to the east as you go 600 meters or more from the highway. Most of the area is covered in mixed trees: several species of evergreen, and several species of deciduous, mainly Poplar. The lines intersect a few clear cut blocks but only a few stations actually fall in the clear cut areas. Several old cut lines from previous seismic projects run through the area. Spring thaw began before the start of the project and most of the snow had already melted leaving approximately 30 centimeters of snow in areas sheltered from the sun. No standing water was present.

Access

Access to the project from the Red Earth Lodge is a short 2 kilometer drive along the main highway through town, and then 5 kilometers further along Highway 88. The middle East-West line (Line 2) to be surveyed is located approximately 100 meters south of the intersection with Highway 686, which leads to Peace River. The west end of each line begins approximately 50 meters east of the highway. The truck was parked on the side of the highway near the GPS base at the west end of Line 2.

Logistics

The crew traveled from Calgary in an open box pickup truck and brought all the required equipment and personal luggage with them. The trip was approximately 8 hours in duration, including short stops in Red Deer and Westlock. The crew stayed at the Red Earth Lodge at the north end of town where the pavement ends. The lodge is run as an open camp so meals are included with the room. The rooms are furnished with a sizeable work desk, wired internet, and electrical plugs for the battery chargers. The rooms in the 100's wing also have a microwave and minifridge. Bag lunches were provided at breakfast and gasoline was obtained at the local service station.

Initial planning suggested that real-time GPS may not be available in the trees and the chain level method may be required to obtain accurate elevations. As the survey commenced, it became evident that the GPS would work fine and additional lines could be surveyed in the allotted time. With real-time GPS available, survey days were extended from

three to four days, plus the two travel days, and additional lines were added.

The gravity data was tied to the government control located at the Post Office in Peace River from a base loop performed in the Fall 2007 gravity survey for Diamondex. This base loop ties the survey to the Canadian Gravity Standardization Network (CGSN).

All data was processed in the evening with results sent by email to Calgary for mapping and quality control.

Pre-mobilization Period

All necessary contracts were finalized between MEG Systems and Diamondex Resources Ltd. Maps of the survey lines were forwarded to MEG Systems. All necessary GPS survey control benchmarks and gravity network bases were collected. All equipment was collected and checked for proper operation and condition. No shipping was required, since the crew would transport everything by truck during mobilization.

Personnel

MEG personnel forming the on-site crew were Roger McKellar (Gravity Meter Operator), Mark Leduc (GPS Operator), and Brent Daignault (Crew Chief, Chain Level Operator, and Data Processing Tech).

MEG personnel forming the Calgary office were Mike McCombe (President of MEG Systems), and Lunn Johnston (Project Manager).

Mobilization and Demobilization Sequence

April 3 – Crew left Calgary for Red Earth by truck with all equipment. Gravity meter was already on heat. Meter was allowed to stabilize overnight so it would be ready to go the next morning.

April 4 – First day of survey. No additional moves were required for the duration of the survey.

April 7 – Last day of survey.

April 8 - Crew left Red Earth for Calgary by truck with all equipment.

Field Operations

The crew left for the field around 8am each morning. The weather remained good throughout the duration of the project. It snowed heavily on the morning of the first day but at no other time. Daily temperatures fluctuated between -15 Celsius in the mornings to +7 Celsius in the afternoons. The road conditions were excellent since the crew used the main highway.

The survey began with establishing GPS control near the highway at the west end of Line 2. This base was labeled as TBM 1 and was later tied to the ASCM benchmark on the Red Earth Creek Bridge.

The Chain Level survey was not required since the real-time GPS was available in all areas this survey covered.

Line Cutting

No line cutting was required. The survey was conducted on old seismic lines that intersected the magnetic anomalies and were in good to fair condition, as shown in Figure 3. An additional east-west line to the north (Line 8) was surveyed on the last day and was not a seismic line. This line crossed through a cut block and a wet, marshy, sparsely treed area where real-time GPS could be used. As a result of the thin vegetation, line cutting was not required on this line.

Figure 3: Typical View of Line 2, Line 4, Line 6, and Line 8



MEG Systems Ltd.

Page 8

Data Acquisition and Processing

Gravity

Gravity Meter

A single LaCoste–Romberg (G-239) gravity meter was used for the survey. The instrument is equipped with a galvanometer (similar to a analog voltage meter) and standard optics for correct positioning of the Reading Line. The gravity meter has a reading resolution of 0.01 mGal. Under very good conditions, this level of precision is possible. With the soft ground and changing weather conditions, the accuracy would be slightly less, perhaps 0.03 mGal. The L&R gravity meter has a thermostatically controlled and hermetically sealed inner chamber containing a finely crafted steel spring supporting a beam and weight. The mechanical nature of the device produces a small drift in the readings over time due to microscopic stress cracks and strain creep in the metal of the spring. The macroscopic effect is a drift in the readings over time but the drift is linear and predictable.

Gravity Control

During the course of a previous survey in the Fall of 2007, a double ABA base loop was made where A is the temporary gravity base on the concrete walk at the Red Earth Inn (Figure 5), and B is the CGSN Station 9153-1978 at the Peace River Post Office (Figure 4). For daily purposes, the temporary gravity base A was used to determine loop closure. For ease of reference, the Base Loop closures are repeated here and are summarized in Table 3. The daily drift is acceptable and both loops tie to within 0.01 mGals of the correct value for the government station. Note that the linear and predictable nature of meter drift does not degrade the accuracy of readings.

	Station	Time	Drift	Gravity Value
			(mGal)	(mGal)
30-Sep	Red Earth	1253	0.000	981449.00
	Peace River	1551	-0.011	981475.88
	Red Earth	1805	-0.018	981449.00
Duration		5hr 12min		
06-Oct	Red Earth	1507	0.000	981449.00
	Peace River	1639	-0.013	981475.87
	Red Earth	1836	-0.030	981449.00
Duration		3hr 29min		

Table 5. Dase Loop Closure, 2	le 3: Base Loop Clo	ure, 2007
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Table 4 describes the gravity specifications used for the data analysis:

Table 4:	Gravity	Specifications	for]	Data Analysis	5
----------	---------	----------------	-------	---------------	---

Meter Scale Factor	Calibration Table Method, Meter Specific, G-239
Latitude Correction	IGF 1967
GMT Offset	6 hours (daylight saving in effect)
Bouguer Density	1.6 - 2.5 g/cc in increments of 0.1 g/cc
Terrain Correction	Modified Hammer Method, B, and C zones only
Gravity Net Ref.	Peace River, No.9153-1978, g = 981475.870 mGal

Figure 4: Peace River Government Gravity Base



Figure 5: Red Earth Inn Local Gravity Base



Loop Closure

All gravity loops have been summarized in Table 5. The Lacoste and Romberg gravity meter is temperature controlled and G-239; in particular, has a low daily drift rate. In addition, the non-linear tidal effects are computed as part of the gravity data processing. Short duration loops under 4 hours, as recommended in older literature, are obsolete and no longer an issue. Acceptable daily drifts are possible in loops of up to 12 and 16 hours.

Date	Duration	Station Count	Drift	Comment
1.1	(hh:mm)		(mGal)	· · · · · · · · · · · · · · · · · · ·
4-Apr	6:55	47	-0.042	Inn base
5-Apr	5:20	38	+0.043	local base
6-Apr	5:58	69	-0.015	local base
7-Apr	6:30	52	-0.015	Inn base
Average	e Absolute D	rift	0.028	

Table 5: Summary of Gravity Loop Closures

Table 5 shows that the daily loop drift was consistently well below a typical maximum allowable value of 0.05 to 0.08 mGals.

Gravity Data Processing

The data reduction to Bouguer values followed standard methods and formulae; the definitions of such are listed under Gravity Terms at the end of the Appendices.

A table of repeats is listed in the Appendices. The 9 repeated stations and 25 repeat readings show an average difference of 0.0175 mGal, and a standard deviation of 0.0153 mGal. This indicated a solid and well run survey.

Terrain corrections beyond the C zone (53 meters) were not applied due to the generally flat nature of the prospect and the surrounding landscape. A diagram of the Modified Hammer Zones to the D zone is shown in the Appendices. Small variations of 1 to 2 meters in one section of the B and C zones will change the station's Bouguer value by less than 0.02 mGals – well within the accuracy of the survey.

Positional Survey

GPS Instrumentation

MEG Systems provided three Leica System 500 GPS packs capable of realtime layout and positioning. During control setup the base unit was used to establish an initial coordinate and was later adjusted to tie into the ASCM control point on the Red Earth Creek Bridge. The second pack was used as the main rover unit. The third pack was used as a backup for the base and the rover in case of a hardware malfunction. A radio transmitter was used at the main control base to broadcast corrections. This allows the rover pack to collect the coordinates in real-time which reduced post-processing later, and ensured that a good quality solution was achieved while still in the field.

When accurate station stake out is required the real-time method is a requirement.

GPS Control

A temporary benchmark (TBM 1) was established on Line 2 (Line N6260520 in the NAD27 system) near the highway and approximately 20 meters west of the west end of the line (Figure 7). All of the survey was referenced to this single base, which was then tied into ASCM Benchmark 856310, located on the Red Earth Creek Bridge 5 kilometers north of town on the main highway (Figure 6). Table 6 lists the survey coordinates for the two control points.

Table 6 GPS Control Points

TBM No	WGS84 Latitude	WGS84 Longitude	WGS84 UTMX	WGS84 UTMY	Elevation	Geoidal Sep.
	Decimal Degrees	Decimal Degrees	Meters	Meters	Meters ASL	Meters
ASCM	56.578858	-115.307849	603946.979	6271789.300	504.831	-20.035
1	56.4796893667	-115.332511408	602700.170	6260715.850	543.191	-19.895

Figure 6: ASCM Benchmark on Bridge looking North



Data Acquisition and Processing



Figure 7: View of TBM 1

It should be noted that all stations were located relative to the beginning or end of each line. The BOL or EOL positions were located in NAD27 coordinates using a handheld GPS. This position was used as a take-off to locate subsequent stations along the line using a constant spacing of 25 and 50 meters. The NAD27 datum used the Canada Mean transformation which is built into all handheld GPS units. The survey was constrained to follow the pre-existing seismic line so the northing was chosen along the centre of the line to optimize satellite reception. Occasional stations were skidded to avoid obstructions for either the gravity meter or the GPS pack.

Also previously mentioned, a local line numbering system (1 to 8) was used to reduce the confusion that results from using two different UTM grid systems for coordinates. All GPS coordinates were in the WGS84 datum even though the survey plan and BOL – EOL positions were in the NAD27 Canada Mean datum. Table 2 shows a cross-reference list of the line numbers. Final gravity positions and the Bouguer maps used the WGS84 datum.

GPS Data Processing

GPS data can be collected in three different modes: Single Point, Static, and Real Time. The main field base, TMB1, was established by setting it up to collect several hour's worth of static data. At the same time, another unit was set up over the control point on the bridge. Together, these data provided the means for obtaining a correct position for TBM 1. A Single-Point process was run on TBM 1 to obtain preliminary coordinates on the first day, which were adjusted later when the local government benchmark, ASCM 856310 was tied in. An official description sheet for this benchmark appears in the Appendices. No other control points were required for this survey. In Real-Time mode, the GPS base at TBM 1 used a radio to broadcast corrections. The rover pack operated in Real-Time mode to receive the radio corrections. All stations were located with enough open sky to permit adequate real-time surveying, only requiring 5 seconds of observations to compute an accurate 3-D position.

All post-processing was done using Leica's Ski-Pro processing software. All internal coordinates were in the WGS84 datum, and exported as WGS84 latitude and longitude, and WGS84 UTM Zone 11 Northing and Easting coordinates. Table 7 shows the standard parameters describing the WGS84 datum. This datum is geocentric, meaning the center of the Cartesian (XYZ system) is at (0,0,0), or no shift.

Table 7 WGS84 Datum Specification

Ellipsoid Name	WGS84
Semi-major Axis	6378137.0 meters
Semi-minor Axis	6356752.3141 meters
Inverse Flattening	298.257

The output generated by the Leica Ski-Pro software is in a specific format ready to be inserted into the gravity processing stream.

Conclusions

Red Earth Gravity Survey

Conclusions

Due to the delayed schedule, the survey began well into snowmelt. The crew found that exposed areas near the roads and highways were bare of snow and between 30 and 60 centimeters in depth in the trees. Daily temperatures varied between -15 Celsius in the early morning to +7 Celsius by mid-afternoon. As the days past, the snow got wetter and heavier. By the final day of the survey, the afternoon gravity readings were taking longer as the soft ground in the low areas started to thaw. The survey was concluded before any real impediment could affect productivity.

We found it very convenient to stay at the Red Earth Lodge and to drive the short distance to the project area, greatly reducing what is normally a costly helicopter trip in and out each day. The staff at the Lodge was very professional and all the amenities were very satisfactory. The lodge provides an internet connection in each room through a wall jack, so bring your own network cable.

Line cutting was not required since the survey was designed to follow the existing seismic lines in the area from previous years. We were prepared for thick tree cover in some areas, having used the Chain Level system for several projects in the area, but the instrument was not required. Real-time GPS was available on all lines surveyed. In an attempt to survey closer to the anomaly at the north end, an east-west line was surveyed that did not fall on an existing seismic line. Part of this line ran through a timber cut-block and the rest of the line ran through a sparsely treed and marshy area. Additional data could be collected over the anomalies using real-time GPS since extensive areas are similarly exposed.

One temporary GPS base was established near the highway on Line N6260520 and was tied into the Alberta Survey Control Marker at the Red Earth Creek Bridge north of town. The WGS84 datum is native to the GPS system and it was used throughout the survey.

No difficulties were encountered with the gravity data or the meter. All repeat readings were within an acceptable range of 0.07 mGal.

Minimal sightings of wildlife were made to and from the project area. Wildlife included varieties of birds, and squirrels, and a few deer.

All data processing was done on site on a nightly basis. Results were transmitted to the office in Calgary and subsequently to the client. Project plans were modified from the original layout based on these nightly findings. Digital files have been delivered separate to this report. Qualitative colour maps of the Bouguer Gravity and Residual Anomaly appear in the Appendices. Each grid was processed using a density of 2.10 g/cm for quick reference.

Appendices

Red Earth Gravity Survey

Appendices

Daily Reports

Apr 03

The crew drove from Calgary to Red Earth and arrived at the Red Earth Lodge at 1730hr. The crew is impressed with the accommodations here.

Apr 04

The crew was on the move by 0800hr after breakfast was done and equipment loaded into the truck. The GPS base was located near the west end of the middle E-W lines (Line 2). Line 2 was completed to the east, and then the crew crossed over to Line 3, which was 230 meters north of Line 2. Both lines were completed for a total of 46 stations. The weather was snowy and -15, rising to -4. The snow stopped around 1400hr. The snow was knee-deep for most of the length and snowshoes will be used for the remaining survey days. The real-time GPS was successful at all stations. The rest of the survey looks good for real-time GPS as well.

Apr 05

The crew completed the south E-W line (Line 1) today and extended stations west of the central line to the highway, then north to the intersection, and then west for 500 meters along the highway. Total station count for today is 39. The snow on the south line was deeper than on the other two. Walking would have been extremely difficult if not for the snowshoes. The condition of the line was good. All stations were surveyed with real-time GPS. The snow began to melt and get quite soft toward mid-afternoon. Work will be more productive in the mornings while the temperatures are still below freezing.

Apr 06

The crew set up the base and surveyed the N-S line (Line 4) from Line 2 to Line 1 and beyond, doubling back to Line 2. The crew then surveyed from Line 2 to Line 3 and beyond, returning to the base and the truck. A total of 67 new stations were collected. After the gravity survey, the main GPS base was tied into the Survey Monument on the bridge north of Red Earth. All station coordinates now reflect this small adjustment.

April 07

The crew scouted an existing seismic line to the south of the lowest line. There were no other lines visible that were closer. The crew went in from the road and started reading stations from the N-S line eastward using the same station layout as the other E-W lines. This became Line 6. The crew then pushed north on an existing seismic line, much of it on cut blocks reading at a spacing of 100 meters. This became Line 7. Once

Appendices

they intersected the central E-W line, they extended Line 2 an additional 500 meters to the east. Walking back to the new north-running line, they continued north on a well service road to a point approximately 200 meters north of Line 3. There was no seismic line there but the trees were widely spaced and the real-time GPS continued to work well. A line directly west was surveyed back to the N-S line at a spacing of 50 meters. This became Line 8.

April 08

The crew left the Red Earth Lodge in the morning by truck and drove back to Calgary.

Appendices

Alberta Survey Control Marker Description

	SURVEYING AND MAPPING DIVISION Survey Control Marker (ASCM) MASCOT DSS-1	
Norz Datum NAD93 Updated: 1994-05-24		ASCM \$56310
Latitude 56 34 43.07523 dms	Marker Installed 79-01	
Longitude 115 10 28.16472 dms		Tablet Markings 79A2002
Horz Class INTEGRATED . CRDER 4	Date Printed 2007-09-	30
	Last Updated 2004-04-	23 Mapsheet Name FEERLESS LAKE
Vert Datum CVD26 Updated: 1991-06-11 Elevation 506.534 m For		Mapsheet Number 56114 64B
Elevation 506.534 m For	current information call Geod	etic Survey
Vert Class INTEGRATED . SPIRIT LEVELS	(790) 427-3143 FAX: (790)	427-1493 Marker Condition GCOD 02-05-17
		427-1493 Marker Condition GCOD 03-05-17
3TM COORDINATES	ADJACENT MARKERS (calculated	
Scale Factor 0.999900 At Ref Mer 114	ACCH Tablet	Siena Std BEM/ Grid/Glone Astronomic Std T-t
SCALE FACTOR V. FFFFFF AC AC AT INT ALS	To Narkings Ti	Slope Std PPM/ Grid/Slope Astronomic Std T-t stance Dev Order Factor Azimuth Dev Corr
Northing 6273155.016 m	to narkinga at	(m) (cm) (dmg) (s) (s)
bolching earsiss.vie m		
sascing -80364,134 m	2/8846 56114,212 146	12.797 30 58/3 0.999910 322 24 54.90 4.7 -2.47 72.103 34 56/3 0.999973 45 02 27.69 3.9 -2.19 71.696 57 76/3 0.999679 274 46 57.94 6.2 -0.39 09.967 52 86/3 0.99969 274 46 57.94 6.2 -0.39 69.967 52 86/3 0.99969 1270 509.13 6.6 3.56 68.050 31 38/2 0.939910 303 32 01.39 2.9 -2.61
convergence -1 05 29.85 dms	295619 56114.216 163	72.102 38 56/3 0.999973 45 02 27.69 2.9 +2.19
Station Ellipsoid Factor 0.999924	210313 56114.200 176	71.696 57 78/3 0.999909 274 46 57.94 6.2 -0.39
Station Combined Factor 0.999903	75267 56114.276 179	09.967 62 84/3 0.999886 172 05 09.13 6.6 3.58
***************************************	77974 56114.207 210	68.050 31 38/2 0.999910 303 32 01.39 2.8 -2.61
GEOID DATA (GSD95) Updated: 96-01-96	66993 56114.264 215	11.300 60 67/3 0.999650 64 23 00.99 5.2 -0.31
Component Magnitude Std Dev	MARKER TYPE	Updated: 2004-04-23
Meridian Defl,XI(+N) 2.1 # 2 #	BRASS CAP IN CONCEPTE ASUTHE	NT/PIER
Prime Vert Defl.ETA(+E) 4.4 s 2 s	share the short have here the	1 GF 2 M SOUTH OF MARKER.
		1 OF 2 N BOOTH OF MARIAN.
Geoid_Ellip Separation -20.03 m 1 m	MARKER LOCATION	Updated: 2004-04-23
••••••	MARKER LOCATION	updaced: 2004-04-21
COORDINATE HISTORY HOR2 VERT		
	RED EARTH: BR TAB CN BRIDGE	OVER THE LOON RIVER; ALONG HWY #89; 5.0 NM
Originating Project 91164 91164 Fublished \$2-05-08 92-05-06	N OF RED EARTH MOTOR INN AND	TAVERN; TAB IN TOP OF THE SE CONC ABOTMENT.
Fublished \$2-05-08 \$2-05-08	NOTE: DESCRIPTION CAME FROM OF.	GEODETIC SURVEY OF CANADA. 5.4 M EAST OF C/L OF ED T
Revising Project NAD43 92155		
Fublished 94-05-24 92-06-11		
Revising Project		
Published		
Revising Project Fublished		
NON COORDINATE REVISIONS		
1992-02-14 FIRST MARKER LOCATION	MARKER CONDITION COMMENTS	Inspected Updated
DESCRIPTION ENTERED		ITICN 2003-05-17 2004-04-23
2003-03-12 "MAFSHEET NAME" AND/OR "MAFSHEET NO" CHANGED	MARKER REPORTED IN GOOD COND MARKER REPORTED IN GOOD COND	2003-05-17 2004-04-23
"MAPSHEET NO" CHANGED 1992-02-14 INSTALLATION DATE AND TABLET MARKINGS ENTERED	MARKER REPORTED IN GOOD COND	ITICN 1997-12-11 1998-01-16
MARAINGS ENTERED		
	COORDINATE HISTORY COMMENTS	
	HCRE 94-05-24	ALBERTA NADO3 READJUSTMENT
	Nice Farveres	Free and all all and a substant we arrest a
HISTORICAL/OTHER MARKER NAMES	1.000	
	VERT	
NOBD # 79A2002	92-06-11 0.	681 m PREVIOUS GPS ELEV REFLACED BY NGDE VALUE

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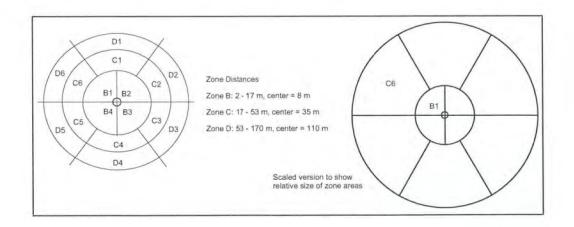
Equipment Supplied by MEG Systems

- Lacoste Gravity Meter G-239
- Leica System 530 GPS, 3 packs with real time radios
- GDD Chain Level System
- Truck rental
- · Misc. including 2-way radios, hand-held GPS

Resources Provided by Diamondex

- Three rooms at the Red Earth Lodge
- Meals at the Red Earth Lodge
- Expenses, including fuel
- Program maps

Inner Terrain Correction Diagram



Appendices

Red Earth Gravity Survey

1					DIFF
1				(mGal)	(mGal)
	1 8	2008-04-05	1013	981442.49	
	2008-04-06	1032	981442.52	0.03	
1 20	2008-04-05	1102	981441.93		
		2008-04-07	1050	981441.93	0.00
2	1	2008-04-04	1036	981442.29	-0.03
		2008-04-07	0820	981442.29	-0.03
		2008-04-07	1400	981442.31	-0.01
		2008-04-04	1519	981442.32	
		2008-04-05	1358	981442.33	0.01
		2008-04-06	0842	981442.33	0.01
		2008-04-05	0838	981442.33	0.01
		2008-04-06	1440	981442.33	0.01
2 8	8	2008-04-06	0856	981442.99	-0.01
		2008-04-04	1109	981443.00	
		2008-04-06	1227	981443.00	0.00
2 23	23	2008-04-04	1222	981442.21	
-		2008-04-07	1110	981442.26	0.05
3	7	2008-04-04	1437	981443.55	
		2008-04-07	1343	981443.55	0.00
3 22	2008-04-04	1317	981441.97		
	-	2008-04-07	1225	981442.01	0.04
4 16	2008-04-06	1120	981441.63		
		2008-04-07	0925	981441.60	-0.03
4 61	2008-04-06	1346	981444.19		
		2008-04-07	1334	981444.20	0.01
Damaat	9		Count	25	
Repeat	9			25	0.0175
Stations			Average Std.Dev.		0.0173

Table of Repeat Readings

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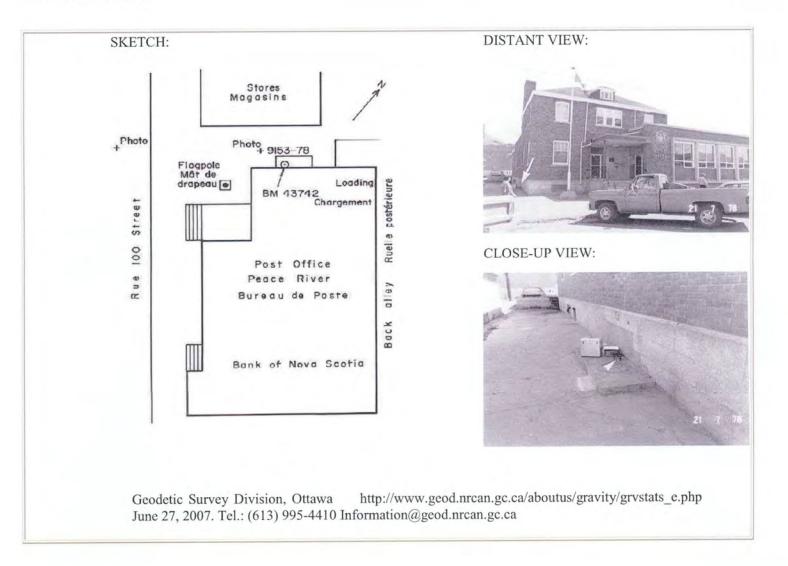
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Gravity Base Station Document

Natural Resources Canada	Ressources naturelles Canada		Canada
Gravity Standard	ization Network (CGSN)		
ON IDENTI 71)	FICATION	STATION COORE	NATES (SCALED)
Ξ	RIVER	Latitude :	N 56° 13' 57"
978		Longitude :	W 117° 17' 19"
		Elevation :	320 m
ON INFORMAT	TION AND LOCATION		
		ide of the Peace River Post Of ninum disc at the station location	
	Canada Gravity Standard ON IDENTI 71) E 978 7: 981475.870 ± spection: 06/200 ON INFORMAT	CanadaCanadaGravity Standardization Network (CGSN)ONIDENTIFICATION71)ERIVER9787: 981475.870 ± .012 mgalspection: 06/2002	Canada Canada Gravity Standardization Network (CGSN) ON IDENTIFICATION 71) STATION COORD E RIVER 978 Latitude : v: 981475.870 ± .012 mgal Elevation : spection: 06/2002 Elevation :

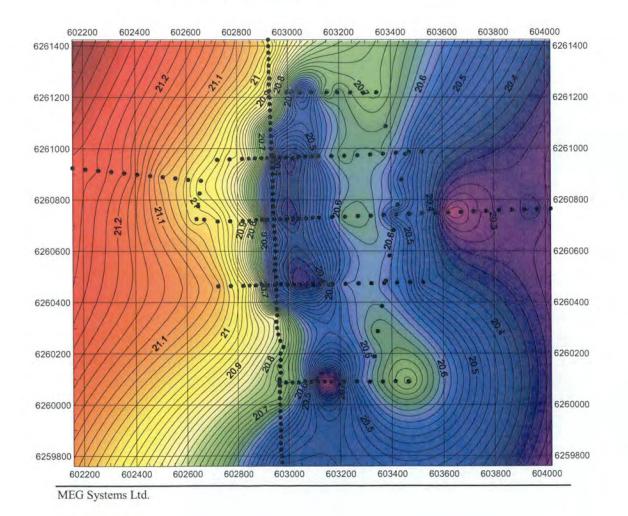
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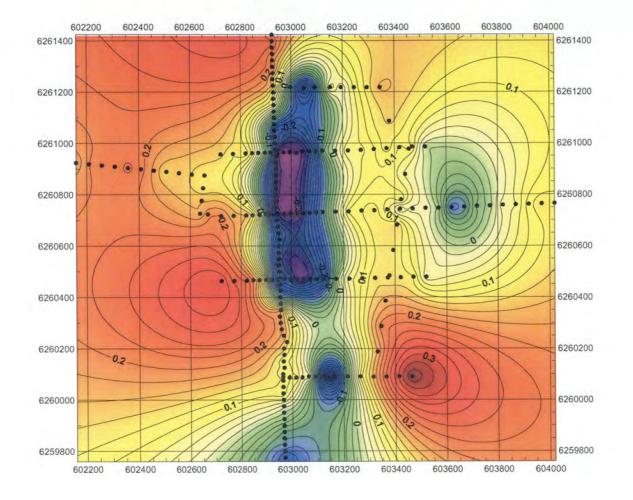


Maps

The Bouguer Gravity maps will be presented as two maps: the Bouguer Anomaly and the Residual Gravity with the regional removed. They should be viewed for qualitative purposes only. All of the following parameters were used for each of the maps. The gravity grid was computed using a linear Kriging method using all points for each grid value. The grid spacing is 10 meters. The regional is computed from a 1st Order Polynomial Fit, also called a sloping plane. The residual map was created by subtracting the regional grid from the Bouguer grid. Rock density used is 2.10 g/cc. There is no variation in terrain to warrant a density study whereby several gravity profiles of a single line are compared in order to choose which one resolves to show the best characteristic view. The map datum is WGS84, but can also be used as NAD83.



Bouguer Gravity Map



Residual Gravity Anomaly Map

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Gravity Data Processing Terms

The data was reduced to Bouguer Gravity Anomaly values in milligals, mGal. All grids are tied to a common gravity base at the Red Earth Inn, and also to the National Grid using the base station located in Peace River. Several densities were used and reported in the digital files but this report shows only results for a density of 2.67 g/cc. Other terms, as used in the processing, are defined below:

Observed Gravity, Go

Field observations corrected for Scale Factor (calibration table adjustment), tides due to the Sun and Moon, instrument drift during the time between base readings, and instrument height.

Theoretical Gravity (Latitude Correction), Gt

A correction applied to account for the effect of latitude, due to the Earths rotation and change in radius from the center of mass. This survey used the IGF1967 formula

 $Gt = 9.78031846 * (1 + 0.0053024 \sin^2 \varphi - 0.0000058 \sin^2 2\varphi)$

Free Air Correction, Gfa

A correction applied to account for station readings taken at various elevations above a common datum, in this case, Sea Level. All GPS heights above the ellipsoid have been converted to Mean Sea Level by applying the Geoidal Separation.

 $Gfa = -0.3086 \text{ mGal} / \text{m}^* \text{ elevation} (ASL)$

Bouguer Slab Correction, Gbs

A correction applied to the rock layer between the station and datum, Mean Sea Level. The equation can handle water and ice layers as well.

Gbs = 2 * pi * .006672 * den * (elev-wdepth-icedepth)

Gbs(water) = 2 * pi * .006672 * wdepth * wden

Gbs(ice) = 2 * pi * .006672 * icedepth * iceden

Inner Terrain Correction, Gtc

A correction applied to the variable ground elevation in the near vicinity of the station. The outer radius of the C-zone is 53.3 meters. Terrain effects beyond this distance are insignificant for this region and this survey. The method used follows the Modified Hammer Zones B and C formulae.

Bouguer Anomaly, Gba

After all corrections are applied the remaining anomaly is understood to be the gravity effect of subsurface density variations of geologic origin. This formula will handle different rock densities using Density(i). (den = 2.0)

Gba = Go - Gt + Gfa - Gbc (water) - Gbc (ice) + Density (i)/den * (-Gbs + Gitc + Gotc) + offset

MEG Systems Ltd.

Description of Data Channels in Bouguer Data Spreadsheet

Column A: Line - 6 digit version of UTM, could be oriented N-S or E-W.

Column B: Station - 6 digit version of UTM, similar to Line.

Column C: Date - YYYY-MM-DD format

Column D: Time – 4 digit version of 24-hour clock, no colon

Column E: Meter – Meter Serial Number, integer

Column F: Operator Name - String

Column G: ComCode: Not used, zero default

Column H: Latitude in decimal degrees, WGS84 datum, Northern Hem.

Column I: Longitude in decimal degrees, WGS84 datum, positive West

Column J: Grid Easting in meters, WGS84 UTM Zone 11

Column K: Grid Northing in meters, WGS84 UTM Zone 11

Column L: Elevation in meters Above Mean Sea Level (Orthometric)

Column M: Leica GPS 3-D Quality, meters

Column N: Water Depth - not used.

Column O: Observed Gravity in milligals

Column P: Latitude Correction (Theoretical Gravity, IGF 1967), mGal

Column Q: Free Air Correction, mGal

Column R: Bouguer Slab Correction for rock, mGal

Column S: Bouguer Slab Correction for Water – not used

Column T: Bouguer Slab Correction for Ice - not used.

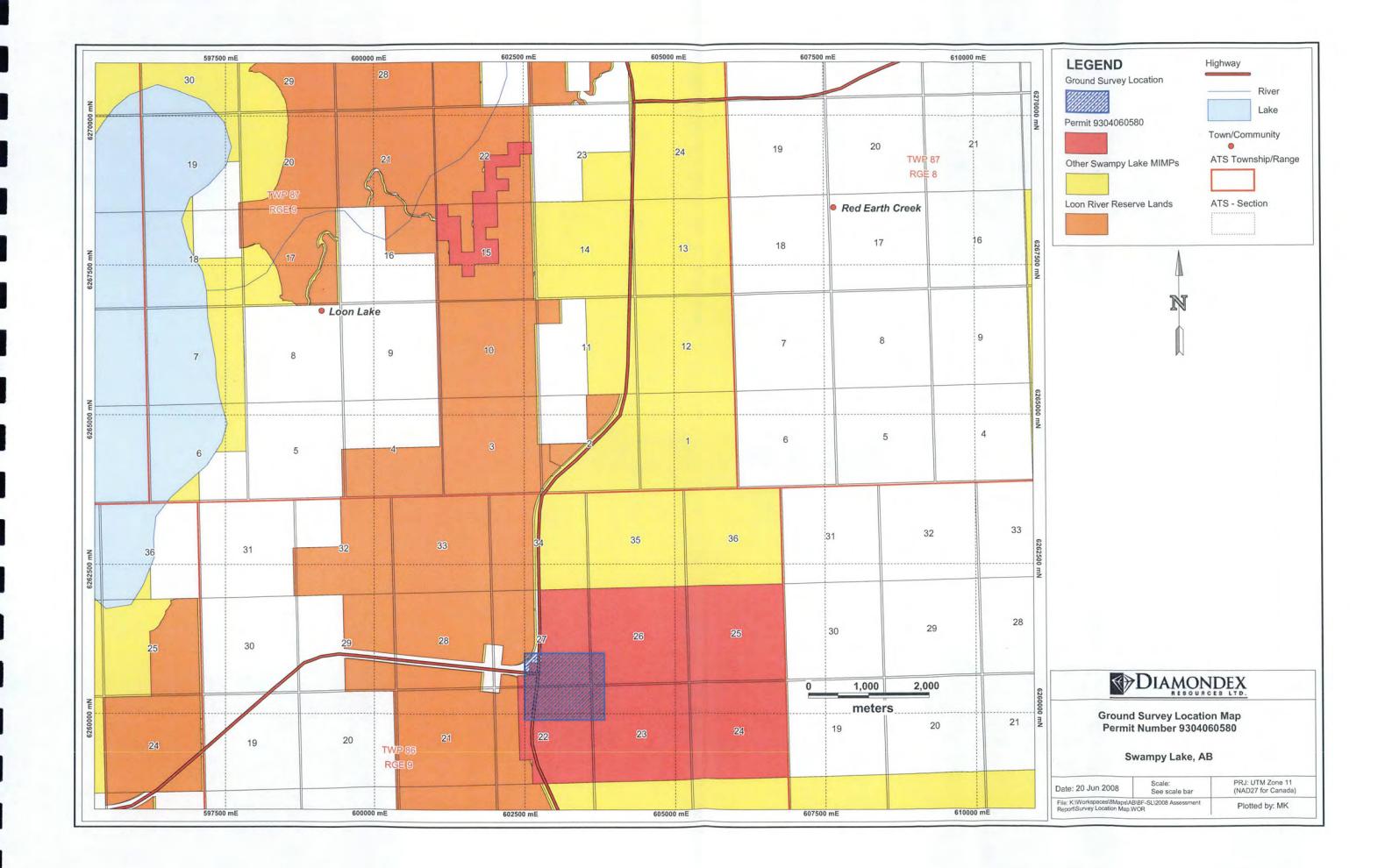
Column U: Inner Terrain Correction - B and C zones, mGal

Column V: Outer Terrain Correction - not used

Column W – AF: Final Bouguer Gravity using 10 different rock densities from 1.60 g/cc to 2.50 g/cc in increments of 0.10 g/cc, mGal

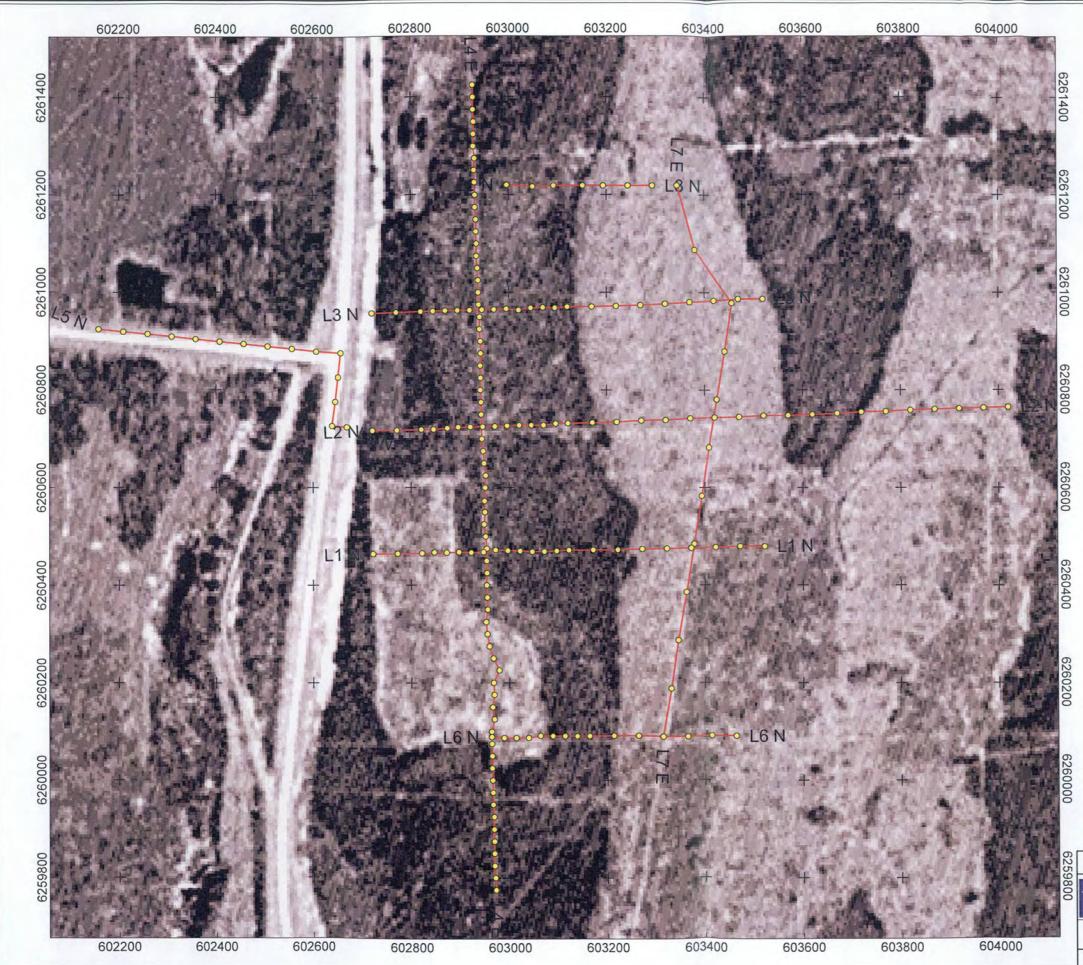
APPENDIX "C": GRO

GROUND SURVEY LOCATION MAP



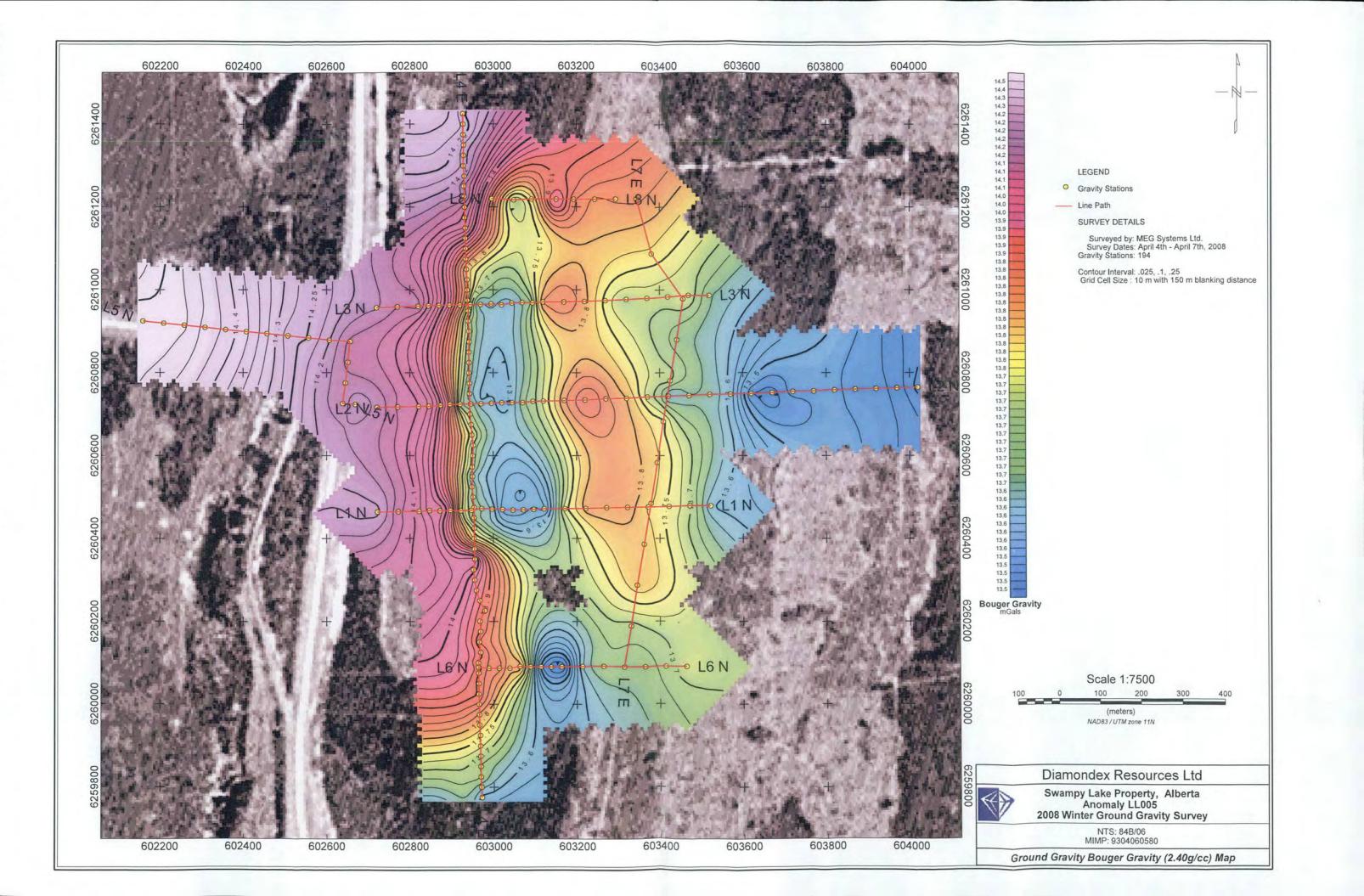
APPENDIX "D":

GROUND GRAVITY STATION LOCATION MAP



			4	
			D	
	LEGEND			
0	Gravity Stations			
	Line Path			
	SURVEY DETA	LS		
	Surveyed by: Survey Dates Gravity Stations	MEG Systems April 4th - April 194	Ltd. 7th, 2008	
100	Scale 7	1:7500 200 300	400	
	(met		400	
	NAD83/UT	M zone 11N		
	Diamondex R	esources L	td	
A	Swampy Lake P	roperty, Alber		
/ :	Anomal 2008 Winter Grou	nd Gravity Sur	vey	
	NTS: 8	34B/06 04060580		

APPENDIX "E": GROUND SURVEY BOUGER GRAVITY MAP



APPENDIX "F":

GROUND GRAVITY DATA CD