## MAR 20000012: DRIFTWOOD

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756736 Alberta Ltd.

#### **1998 – 2000 EXPLORATION OF** THE DRIFTWOOD PROPERTY

NORTH-CENTRAL, ALBERTA

#### **Metallic and Industrial Minerals Permit** 9398030090

**Geographic Co-ordinates** 55°30'00" to 55°35'30"N 114°05'00" to 114°14'00"W

NTS Sheet 83 O/9

2000.05.25

#### Prepared by

A. Hangartner, Prospector

756736 Alberta Ltd. 4011 – 37 Avenue Leduc, Alberta **T9E 6E1** 

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#### 1. SUMMARY

Alberta Metallic and Industrial Minerals Permit No. 9398030090, herein referred to as the Driftwood Property, located northeast of Lesser Slave Lake, Alberta in the central part of the Pelican Mountains, was explored for primary diamond deposits. A number of anomalous areas depicted from a high resolution aeromagnetic (HRAM) survey acquired from Terraquest Ltd. along with areas recommended by Halferdahl & Associates Ltd. were investigated.

756736 Alberta Ltd. explored the area to determine the source or possible sources, of some of the aeromagnetic anomalies. Several topographic circular ovalshaped physiographic features were also investigated.

#### 2. INTRODUCTION

During 1998 and early 2000, 756736 Alberta Ltd. conducted exploration for primary diamond deposits within the Driftwood Property. Exploration activities included the acquisition of high-resolution aeromagnetic data from Terraquest Ltd.; and a brief review of aerial photographs, digital elevation data, and other publicly available information by 756736 Alberta Ltd..

The assessment report herein, describes the exploration conducted at the Driftwood Property during 1998 through early 2000. It has been prepared by 756736 Alberta Ltd, who is the owner of the Metallic and Industrial Minerals Permit No. 9398030090.

#### 3. LOCATION AND ACCESS

#### **Property Location**

The property is located in north-central Alberta, about 325 km northnorthwest of the City of Edmonton and 55 km northeast of the town of Slave Lake. The property extends from 55°30'00" to 55°35'30" north latitude and 114°05'00" to 114°14'00" west longitude, within NTS map sheet 83 O/9.

#### **Property Access**

The property is accessible 45 km northeast along a graveled oil and gas service road leading from Highway 88, 10 km north of the town of Slave Lake (Fig. 3.1). The property is also accessible 45 km west along a winter road leading from Highway 513, 50 km north of the town of Calling Lake. There are several oilfield service roads throughout the exploration area (Fig. 6.1). Seismic line, pipeline, and power-line lines provide all-terrain vehicle or snow-machine access to remote areas of the property.

The closest infrastructure to the area that includes accommodations, food, and vehicles is at Slave Lake, 55 km away.

#### **Property Geology**

The property contains substantial amounts of oilfield culture and the Meradian Forestry Tower and Fire Camp. Economic activities in the area are dominated by logging and timber operations and oil and gas exploration. The property is in the central part of Pelican Mountains within the hydrographic basin of the Driftwood River.

#### 4. EXPLORATION

#### **Work Description**

Between Mar 10, 1998 and Mar 10, 2000, 756736 Alberta Ltd. carried out preliminary ground follow-ups of the Terraquest HRAM fly-by map anomalies (See fig. 4.5) and other features that were identified as meriting investigation by criteria suggested in consultations with Halferdahl and Associates. Several lower intensity HRAM anomalies and some of the circular physiographical features were investigated, flagged and ground magnetic survey follow-ups were done on several of these.

#### **Site Selection**

One first priority target had been identified by Terraquest HRAM in the northwest quadrant that had a relief of approximately 15 nT. Seven second priority targets (See Target Table) and numerous weaker anomalies that also possess near surface sources without any obvious cultural association needed to be investigated from the ground. (Not all kimberlite pipes are magnetic.) The property contained considerable amounts of cultural interference and a great deal of time needed to be set aside for ground de-culturing and locating geographically significant anomalous not shown on the aeromagnetic maps but that perhaps could be confirmed by ground measurements. Raw data processing using Geosoft Software showed that there were several small anomalies that did not have verified cultural sources.

Several sites were chosen to conduct magnetic surveys. Grids were established by flagging north-south-and east-west lines. Stations were measured and positioned using hip chain, compass, and GPS. The size of the grid and the line spacing chosen depended on the terrain and the data available. Magnetic surveys were preformed on grids.

Data collected for each grid was processed at a later date (For data collection methods, processing methods and equipment used see Appendix 2 – Methods of Ground Magnetic Surveying Employed).

# Table 4.1Exploration, Grid Flagging, and MagneticGround Survey Locations, Mar. 1998 - 2000.

Locations of field work preformed by 756736 Alberta Ltd. at the Driftwood Property.

Report		UT	M	Work	Dates	Shown in
Identifi	er	Easting	Northing	Description		Figure
	[1]	676200	6163500	<b>Exploration &amp; Gridding</b>	Apr 15/98	4.1
P7663				Magnetic Grid Survey	Apr 16/98	
	[2]	683200	6156000	Exploration	Apr 17,18/98	
G8356				Gridding	Apr 19/98	4.1
M8356				Magnetic Grid Survey	Apr 20/98	4.2
Tp.75r	1w5			De-culturing flyby data	Apr 21-26/98	
	[2]	681900	6158500	Exploration	Jan 11/00	4.1
G8158				Gridding	Jan 12/00	
M8158				Magnetic Grid Survey	Jan 13/00	4.3
G8056	[2]	680950	6156050	<b>Exploration &amp; Gridding</b>	Jan 14/00	4.1
M8056				Magnetic Grid Survey	Jan 15/00	4.4

- [1] Identified on the Flyby as a primary target by Terraquest Ltd. (1998).
- [2] 756736 Alberta Ltd. Identification from the above source or from physiographical features.

Work: Flagged grid Soil sampled - G

- S

Magnetic grid - M Magnetic Profle - P UTM: 6[39]709 E 61[26]461 N G3926-1 [-#] means that more than one work site exists in the defined UTM work space, 639000 - 639999 to 6126000 - 6126999.

### **Findings**

P7663: Confirmed that the strong readings depicted on the Terraquest HRAM map were likely from a well head. This well head and another 1 km away display stronger readings than those usually observed around other well sites. The data was discarded without any additional processing.

- M8356: The location was a small round hill in an otherwise flat area. The Terraquest HRAM map showed little evidence of an anomaly. Based on the criteria that round physiographical features merited investigation, a magnetic ground survey was conducted (see Fig. 4.2). The result displayed a 10 nT. difference co-incidental with the contours of the hill.
- M8158: The Terraquest HRAM map showed evidence of a small anomaly where there was no obvious attributable culture. The grid started on a small hill above where two creeks merged. This was slightly southwest of the indicated low intensity anomalous area but it was decided that this physiographical feature should be included in the survey. There was a noticeable change in the magnetic ground survey readings (see Fig. 4.3) that revealed a 10 nT. higher reading on the hill than down at the creek crossings. We were getting higher readings toward the northwest where we originally intended to perform the survey but the snow conditions proved too difficult to extend the grid into that area. Extension of the grid and mineral sampling will be conducted at a later date.
- M8056: The Terraquest HRAM map showed evidence of a small anomaly with no obvious attributable culture. The magnetic ground survey results (see Fig 4.4) were rather flat and didn't reveal anything other than lower readings to the west and higher readings to the south. A larger grid would have to be established to localize the anomaly but it doesn't look promising.

#### 5. <u>CONCLUSIONS</u>

The M8356 ground magnetic survey displays a small circular anomaly that warrants further exploration. The grid at M8158 should be expanded to map in the area northeast of the location surveyed and soil samples should be taken from the small creeks before any conclusion is reached. Survey M8056 doesn't display anything of significance with the exception of the magnetic low area appearing off toward the northeast. All small anomalies depicted on the aeromagnetic map should be investigated.

## 6. PERMIT TABULATION

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TABLE 6.1 Cancellations and Amendments				
Claim:	us Active MAIM permit # 9398030090			
Legal Land	Tp.75 - 1W5(sec.19-21;28-33.)	**- Previous Active Area**		
Description:	Tp.76 - 1W5(sec.4-9;16-18.)	Please cancel all areas of the permit that are		
	Tp.75 - 2W5(sec22-27;34-36.)	not listed below under 'Retained Active Area'.		
	Tp.76 - 2W5(sec.1-3;10-15.)	(Fig. 6.1 Property Map - 'Cancelled active permit LSDs.')		
Area:	9216 (ha) Approx.			
See Figure:	Fig. 6.1 Property Map - 'Active A	Area Boundries'.		

Claim:	March 2000 - 2002, Retained Active Area MAIM permit # 9398030090. *
Legal Land	Tp.75 - 1W5(sec.19L14,L15; 21L11-14; 28E,L3,L4,L6,L11,13,L14; 29L1-4,L8,L16;
Description:	30L1,L2,L6,L7,L10,L11,L13,L14; 31E,L11,L13,L14; 32N,L1,L4-8; 33S,L10-15)
	Tp.76 - 1W5(sec.4L2-5,L12-15; 5NW,L4-6,L10; 6SW,L1,L2,L7,L9,L10,L16; 7NE,L11,L14; 8L3,L4,L13;
	9L2,L7; 16L2-4,L6-8,L10,L15; 17NW,L1,L2,L6,L7; 18L2-5,L7,L10,L13-16)
	Tp.75 - 2W5(sec.22L2,L6,L7,L10,L11,L15,L16; 23SW,L1,L2,L9,L11-13,L16; 24L13;
	25L2-4,L6,L7,L10,L11,L14-16; 26L1-4,L6,L11,L14,L15; 27L1-3,L6,L7,L9-11,L13; 34NE,L7,L8,L13;
	35N,SE,L5,L6; 36NW,L2,L3,L5,L6)
	Tp76 - 2W5(sec.1L6-8,L13; 2L2,L3,L7,L10,L11,L13-16; 3L1-4,L7,L8,L13,L16; 10L1,L4,L5,L7-13;
	11L1,L7-11,L16;12L3,L4,L6,L7,L10,L11,L14; 13L1-3,L9,L16; 14L1,L5,L7-12; 15L4,L8-10,L15)
Area:	4384 (ha) Approx.
See Figure:	Fig. 6.1 Property Map - 'Retained active permit LSDs'.

\* The retained area was chosen to cover all locations that the Terraquest Ltd. 1998 HRAM survey displayed as low intensity vertical gradiant anomalies. Other areas were chosen from processing the horizontal gradiant data to form a topographical map of the near surface anomallies. Any that had no attributable surface cultural interference seen on the aerial video made during flyby were retained. The remaining areas were chosen on physical features identified on topographical maps, aerial photographs or from a topographical map produced from the aircraft radar and GPS indicated altitudes data.

## **Distances Gridded and Surveyed**

Total grid line/km = 5

Total ground magnetic survey line/km = 5

#### **Exploration Expenditures**

Total exploration expenditures, Mar. 1998 – Mar. 2000: \$23,556.95 (See Appendix 1, pg. A1) Please allocate this expenditure to the retained area. (See Table 6.1, pg. 6) For a summery of expenditures see Appendix 1 – Statement of Reasonable Expenditures. (A detailed breakdown of dates, activities and equipment used has been retained and is available upon request.)

Metallic and Industrial Minerals Permit No. 9398030090 is privately owned and exploration expenditures are not financed by share holders.

MAIM Permit # 9398030090 is held by 756736 Alberta Ltd., 4011-37 Ave., Leduc, Alberta. This report is being submitted for 756736 Alberta Ltd. by August Hangartner of 756736 Alberta Ltd., 4011-37 Ave., Leduc, Alberta.

## 7. QUALIFICATIONS

Qualifications and work experience of the author of this report:

**Education:** 

Graduate of NAIT, - Electronics Engineering Technology (1970).

Work experience:

Many years experience as a Technical Systems Analyst working with complex computer systems, programming, troubleshooting, interfacing devices, etc.

I have no formal training in Geology. Prospecting is a hobby.

August HangartnerPart time prospector,Leduc, AlbertaMay 25, 2000.

Distribution: Minister of Energy: 2 copies 756736 Alberta Ltd.: 2 copies

#### 8. REFERENCES

Terraquest Ltd. (1998) High resolution aeromagnetic survey.

Lesser Slave Lake project - Blocks B & C; unpublished report dated 1998/04/28 to Halferdahl and Associates Ltd., Edmonton, by Terraquest Ltd., Toronto, 22 pgs., 5 figs., 6 maps.

- 1. 5.0 Data Processing Processing steps and some important concepts that should be highlighted with regard to cultural editing.
- 2. 6.0 Interpretation Techniques and comments offered to assist in the interpretation of the horizontal gradient vectors.
- 3. Contoured Vertical Gradient of RTF and Horizontal Gradient Vectors, Block B, high resolution magnetic survey map.

Halferdahl & Associates Ltd. (1998) Assessment report. 1997 and Early 1998 Exploration of the Lesser Slave Lake Property, North -Central, Alberta dated 1998/05/26, 23 pgs. 11 figs., 6 apps.

- 1. 10. Conclusions Anomalies warrant additional exploration.
- 2. Appendix 2 Location of Anomalies.
- 3. Appendix 2 Selected Physiographic Features.
- 4. Appendix 2 Coincident Anomalies and Physiograpic Features.







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## **APPENDIX 1: STATEMENT OF REASONABLE EXPENDITURES**

METALLIC AND	) INDUSTRIAL MINERALS PERMIT 939803	0090,	DRI	FTWOOD	PROPER	Γ <u>Υ</u> .
EXPLORATION S	ATION SERVICES - 756736 ALBERTA LTD.		Rates		<u>Cost</u>	Total Cost
	Description	Pe	r	Charge	(\$)	(\$)
Salary and Wage	<u>s</u>					
A. Hangartner	<ul> <li>consultations, data processing, drafting,</li> </ul>					
	exploration, ground magnetometer surveys	<b>,</b>				_
	gridding, mineral sampling, reporting	177	hr			
Helper	<b>11</b>	103	hr			
-travel	- trip preparation	13	hr			
(2 per.)	<ul> <li>total travel time for services</li> </ul>	30	<u>hr</u>			• • • • • • •
			Tota	l Cost:	\$10,275.00	\$10,275.00
Field Costs						
-meals & lodging	- total meal expenses for services	30	dy	\$20.00	\$600.00	
(2 per.)	- total accomodations expenses for services	30	nt	\$30.00	\$900.00	
Field Supplies	- cords, batteries, ribbon, hip chain, etc.			\$81.50	\$81.50	
			Tota	I Cost:	\$1,581.50	\$1,581.50
<b>Rental Equipmen</b>	<u>it</u>					
	- truck rental, 1/2 ton	16	dy	\$65.00	\$1,040.00	
	- GSM-19 Magnetometer rental	4	dy	\$54.00	\$216.00	
	- GSM-19 Magnetometer Base Station rental	4	dy	\$54.00	\$216.00	
	- pentium computer system rental	13	dy	\$25.00	\$325.00	
	- data logging device rental	4	dy	\$25.00	\$100.00	
	- global positioning system rental	14	dy	\$25.00	\$350.00	
	- gridding equipment rental	8	dy	\$20.00	\$160.00	
	- lap top CPU pentium	4	dy	\$25.00	\$100.00	
	- quad 6x6 rental	16	dy	\$100.00	\$1,600.00	
	- base global positioning system rental	4	dy	\$10.00	\$40.00	
	- utility trailer rental	16	dy	\$25.00	\$400.00	
	- x-country ski equipment rental	8	dy	\$20.00	\$160.00	
	- office space rental	24	mo	\$20.00	\$480.00	
			Tota	I Cost:	\$5,187.00	\$5,187.00
<b>Subcontracting S</b>	ervices					
	- Terraquest Magnetic Flyby data -	614.4	km	\$9.00	\$5,529.60	
				(GST)	\$387.07	
			Tota	l Cost	\$5 916 67	\$5,916,67
Office Charges B	dministrative Coneral				<i>~-,• •••••</i>	+-,• ••••
vince unarges, A	- nhone internet Fax atc				ቆንደብ ባባ	
	- priorie, memori, raz, etc.	•			4000.00 \$220.00	
	- Onice supplies, paper, link carts.,lamintation	ו ס	man	SO 25	7220.20 \$19 50	
	- 111049	4_	Tota	<del>φ3.23</del>   Cost:	\$596 78	\$596 78
						\$000.10

Above is a summary of reasonable expenditures ascribed from quoted commercial equipment rental rates less 10 or 20%. Many, many more man hours than the summary above indicates were spent on this project, and one could reasonably ascribe some \$50.00 per man hour to work of this nature in professional fees, however, this would be an unreasonable amount to justify considering the qualifications of the exploration teams, therefore, \$30.00 - \$35.00 per man hour and the shortened claimed duration should be more appropriate.

I, August Hangartner, hereby certify that the costs as outlined above for the assessment of metallic and industrial permit 9398030090 were expended as indicated.

Declared before me at the City of Edmonton in the province of Alberta, this 8th day A1 of June, 2000. And when

August Hangartner

Sugene Saldanha A Commissioner for Oaths

of Alberta. My commission expires on the 20th day of March, 2002

#### Appendix 2: Method of Ground Magnetic Surveying Employed.

#### **Collection Method**

The magnetic surveys were preformed using an Overhauser Model GMS-19 Memory Magnetometer carried by the operator devoid of any magnetic materials and other ferrous metals. The operator walked each survey line, recording continuous time and magnetic intensity readings at 3 second intervals. At fixed stations along each survey line, the exact time of arrival and the location of the station were logged for post processing. After the survey lines were finish, a tie-line traversing the grid intersecting the lines at known locations was completed for additional reference.

The base magnetometer, an Overhauser Model GSM- 19 located at a fixed position operating in base mode, recorded continuous time and magnetometer readings at 3 second intervals for post processing diurnal correction. Both units are proton magnetometers with omnidirectional sensors.

#### **Processing Method**

The collected data, base (time and reading), mobile (time, reading and location) and the GPS readings- were downloaded in the field to a Pentium II/266 based laptop processor. The data was then uploaded, via the Internet, for post processing and plotting.

Using a program, written in Microsoft Access on a Pentium II/300 PC processor, variations of the base station were subtracted from the field (or mobile) instrument data to give a data set which varies only with position. The GPS information was used to map the grid and the grid description was used to scale the location of each station. The logged time, location and grid location information were used to correlate measurements with location. The data collected at each station is therefore attributable to local variations in magnetic materials in the underlying rocks. Another Microsoft Access program module was used to process the data collected at 3 second intervals by spacing the readings evenly between the station locations at which they occurred. The addition of the latter process gives a more accurate presentation of what data might be present between stations.

The data was then contoured using Geosoft Oasis Software. The maps produced represent a set of contours joining points of equal magnetic field intensity measurements (i.e. an isomagnetic contour map), which in turn are determined from a grid of equally spaced points between nodes that have been interpolated from the original data.