2.40023

Atkinson Project

Report on Airborne Magnetic And XDS VLF-EM Survey Completed in March 2007 Lipton and Atkinson West Claims

prepared by:

Paul R. J. Nicholls, P.Eng
October 28, 2008

N.T.S. : 32 E/13
Latitude : 49° 50' N
Longitude : 79° 36' W

Survey Flown By Terraquest between February 28 and March 17, 2007
Terraquest Report with maps Delivered January 7, 2008

Stouffville Geological Services Ltd.

Table of Contents

List of Figures (at back of report)

List of Tables

List of Appendices

1.0 Summary

Dentonia Resources Ltd. holds four properties (3680 hectares) in the Detour - Atkinson area of northern Ontario. During March 2007 Terraquest Ltd. completed a high resolution magnetic, and XDS VLF-EM airborne survey over the Lipton and Atkinson West properties. On the Lipton claims the magnetic survey traced magnetite sulphide bearing chemical sedimentary units present on the property and delineated an antiformal structure. The eastern limb of the antiformal structure appears to have been folded and or faulted. On the Atkinson West claims the survey defined a series of magnetic highs on the property . Diamond drilling by previous operators indicate the magnetic highs represent mafic to ultramafic intrusives and magnetite bearing chemical sedimentary units. The magnetic highs are locally offset and contorted which may indicate folding and or faulting.

2.0 Recommendations

Based on the results of the 2007 airborne survey the following recommendations are made:

1) Detailed interpretation of the XDS-VLF data should be completed;

2) Untested conductors that have been outlined on the Atkinson West Property should be tested by diamond drilling in the future;

3) Additional drilling should be completed on the Lipton claims to follow up on Au mineralization intersected in 2006.

3.0 Introduction

The Atkinson Project area is underlain by volcanic rocks of the Abitibi Greenstone Belt. Previous diamond drilling by Amoco Petroleum, Getty Canadian Metals Limited and Better Resources Limited intersected anomalous base and precious metal concentrations in several locations on the claim groups. Significant gold mineralization was intersected in 1996 by Better Resources Limited on the Lipton Claim group (10.7 grams per tonne over a core length of 9.0 metres) within a well developed zone of hydrothermal alteration. In 2004 Dentonia Resources Ltd. optioned the Atkinson properties to further explore this prospective area for gold and or base metal deposits. During March 2007 Terraquest Ltd. completed a high resolution magnetic, and XDS VLF-EM airborne survey over the Lipton and Atkinson West properties. The following report is based on this program and its results.

3.1 Accessibility, and Physiography

The Atkinson project area is located approximately 150 kilometres north-east of Cochrane, Ontario (N.T.S 32E/13) near the border between Ontario and Quebec (Figure 1), and is approximately 20 kilometres south of the past producing Detour Lake Mine. Access to the Detour Lake Mine from Cochrane is via Highway 652. For the airborne survey the plane was based in Cochrane, Ontario.

Topographic relief in the Atkinson Project Area is low ranging between 255 and 275 metres above sea level. The area is predominantly open muskeg with a sparse cover of black spruce and tamarack. Locally the area is well forested with black spruce and poplar. Drainage in the area is to the north.

3.2 Property Description and Location

The 2007 airborne survey was completed on the Lipton and Atkinson West claim groups (Figure 2) located in the Porcupine Mining Division (Claim Maps G-1626 and G-1647). The two properties consist of 28 mineral claims covering an area of approximately 3888 hectares (Table 1). The properties are currently in good standing and are covered by an option agreement between Dentonia Resources Ltd. and R. H. McMillan.

Table 1: Land Status

Claim Group	Claim	Recording Date	Due Date	Claim Units	Work Required	Area (ha)
Lipton	1205417	Sept. 28, 1994	Sept. 28, 2011	12	$4,800.00	192
	1205418	Sept. 28, 1994	Sept. 28, 2009	9	$3,600.00	144
	1205419	Sept. 28, 1994	Sept. 28, 2009	9	$3,600.00	144
	1214303	Sept. 06, 1996	Sept. 06, 2009	9	$3,600.00	144
	1214304	Sept. 06, 1996	Sept. 06, 2009	16	$6,400.00	256
	1214305	Sept. 06, 1996	Sept. 06, 2009	16	$6,400.00	256
	1214306	Sept. 06, 1996	Sept. 06, 2009	6	$2,400.00	96
	1214309	Sept. 06, 1996	Sept. 06, 2009	8	$3,200.00	128
	1214341	Sept. 19, 1996	Sept. 19, 2011	2	$800.00	32
	1214342	Sept. 19, 1996	Sept. 19, 2011	2	$800.00	32
	1214343	Sept. 19, 1996	Sept. 19, 2010	14	$5,600.00	224
	1199716	Apr. 15, 2004	Apr. 15, 2009	9	$3,600.00	144
	1199717	Apr. 15, 2004	Apr. 15, 2009	4	$1,600.00	64
	1199718	Apr. 15, 2004	Apr. 15, 2009	12	$4,800.00	192
	1199719	Apr. 15, 2004	Apr. 15, 2009	9	$3,600.00	144
	4202775	May 1, 2006	May 1, 2010	12	$4,800.00	192
	4202776	May 1, 2006	May 1, 2010	16	$6,400.00	256
	4202777	May 1, 2006	May 1, 2010	6	$2,400.00	96
	4202778	May 1, 2006	May 1, 2010	1	$400.00	16
Atkinson West	1203512	Sept. 28, 1994	Sept. 28, 2011	4	$1,600.00	64
	3009091	Jan. 28, 2004	Jan. 28, 2010	1	$400.00	16
	3009092	Jan. 28, 2004	Jan. 28, 2009	6	$2,400.00	96
	3009093	Jan. 28, 2004	Jan. 28, 2009	6	$2,400.00	96
	3009094	Jan. 28, 2004	Jan. 28, 2009	15	$6,000.00	240
	3009095	Jan. 28, 2004	Jan. 28, 2009	9	$3,600.00	144
	3009096	Jan. 28, 2004	Jan. 28, 2013	6	$2,400.00	96
	3009097	Jan. 28, 2004	Jan. 28, 2009	12	$4,800.00	192
	3009098	Jan. 28, 2004	Jan. 28, 2009	12	$4,800.00	192
Total				243	$97,200.00	3,888

3.3 Previous Work

3.3.1 Regional

Prior to 1959 there was little or no prospecting or exploration activity recorded in the area. In 1959 and in the early 1960's Conwest Exploration, Selco, Kesagami Syndicate, and Rio Tinto conducted limited exploration for base metals. During the early 1970's exploration resulted in the discovery of the Detour Lake Mine by Amoco (1974), and in the discovery of the Selbaie Mine by Selco at approximately the same time. Following the discoveries exploration activity in the area increased with several companies including Noranda, Hudson Bay Exploration, Pennaroya, Dome Mines and Westmin Resources completing extensive programs. In the Atkinson Lake area the most extensive work was completed by Getty Canadian Metals who completed airborne and ground geophysical surveys, and diamond drilling. In 1998 the entire area was covered by a Geotem airborne electromagnetic and magnetic survey completed by the Ontario Government. In the 1989 and 1990 Westmin Resources completed limited geophysical surveys in the Atkinson Lake area; and in 1996 Better Resources Limited tested numerous geophysical targets on several properties which resulted in the discovery of significant gold mineralization on the Lipton lake property (10.7 grams per tonne Au over a core length of 9.0 metres). Follow up drilling was completed on the Lipton claims.

3.3.2 Lipton Property

The earliest work recorded in the area covered by the current Lipton claims was conducted in 1959 by the Kesagami Syndicate who completed drill hole 10 - 1 (possibly near the area of gold mineralization). The precise location of the hole is not known. Hole 10-1 was completed to a depth of 72.5 m (238') and intersected felsic to mafic metavolcanic rocks, iron formation, graphitic units, and metasedimentary rocks. No assays were recorded but trace amounts of magnetite, sphalerite and chalcopyrite were intersected.

In 1959 Conwest Exploration Company completed a ground electromagnetic survey on the area west of Vandette Lake to locate airborne anomalies on the ground. The survey identified several conductive zones which were tested in 1960 by a series of 9 diamond drill holes totalling 1097.6 metres (3600'). The drilling intersected pyrite - pyrrhotite mineralization hosted in graphitic horizons, sulphide magnetite bearing cherts, mafic and felsic volcanic rocks. No assay results were reported.

In 1976 Amoco Petroleum Company completed hole 9-1 approximately 500 m south west of Vandette Lake. The hole was completed to a depth of 215 m (706') and intersected felsic flows and tuffs with anomalous zinc concentrations (0.71% Zn over a core length of 1.5 m) present within graphitic rocks.

During the period 1981 to 1986 Getty Canadian Metals Limited completed airborne and ground geophysical surveys, and 11 diamond drill holes (1910.2 m) in the area currently covered by the Lipton group. Several of the drill holes intersected anomalous Au (up to 5.3 g/t over a core length of 0.5 metres) and zones of anomalous Zn and Cu mineralization (up to 8.5 metres wide).

In 1989 and 1990 Westmin Resources completed line cutting, magnetometer and Max Min II surveys over the area. At this time Westmin Resources sampled core drilled by Getty and whole rock analyses from these samples showed that hole 83-51 intersected high silica rhyolites, and hole 83-30 (west of Vandette lake) intersected Na_2O depleted high silica rhyolites.

In the summer of 1996 Better Resources completed 3 diamond drill holes (487.0 metres) on the Lipton claims to test geophysical targets. Hole 96 - 03 intersected 10.7 grams per tonne Au over a core length of in 9.0 metres hosted within a sequence of felsic tuffs, felsic intrusive rocks, and cherty graphitic chemical sedimentary rocks. In the fall of 1996 a total of 19 diamond drill holes totalling 2140.1 metres were completed as follow up to the significant intersection. The closely spaced drill holes tested an area approximately 80 metres wide along the strike of the mineralized units. In 1997 Better Resources completed a program of line cutting, ground magnetometer and Induced polarization surveys that defined a number of targets.

During the period from March 1, 2005 to May 31, 2005 Dentonia Resources Ltd completed line cutting and a ground magnetometer survey on selected portions of the property. In 2006 Dentonia Resources Ltd. completed 20 diamond drill holes (Table 3, Map 1) totalling 3024.0 metres on the Lipton Property (Nicholls, 2006). The diamond drilling was successful with numerous holes intersecting anomalous concentrations of Au greater than 500 ppb.

Table 2: 2006 Dentonia Resources Ltd. Drill Hole Locations

Number	U.T.M. Co-ordinates		Grid Co-ordinates		Bearing	Dip	Length
	Easting	Northing	Easting	Northing			(m)
L06-1	597429	5526817	0	-200	270	-45	171.0
L06-2	597483	5527218	-60	200	270	-45	150.0
L06-3	597301	5527850	-110	835	235	-45	149.0
L06-4	597223	5527774	-190	760	235	-45	150.0
L06-5	596753	5528233	-655	1220	120	-60	159.0
L06-6	596680	5527925	-725	925	120	-60	147.0
L06-7	596759	5527926	-650	920	120	-60	144.0
L06-8	596853	5527947	-550	937	120	-60	162.0
L06-9	596835	5527903	-575	900	120	-60	150.0
L06-10	596830	5527851	-582	846	120	-60	111.0
L06-11	596798	5527714	-610	710	120	-60	130.0
L06-12	596696	5527829	-720	820	120	-60	129.0
L06-13	596892	5527905	-525	900	na	-90	141.0
L06-14	596841	5527903	-575	900	na	-90	140.0
L06-15	596767	5527902	-650	900	na	-90	140.0
L06-16	596866	5528006	-550	1000	na	-90	150.0
L06-17	596816	5528006	-600	1000	na	-90	161.0
L06-18	596766	5528006	-650	1000	na	-90	161.0
L06-19	596717	5528004	-700	1000	na	-90	182.0
L06-20	596863	5528107	-550	1100	na	-90	197.0
							3024.0

3.3.3 Atkinson West Claims

In 1974 Amoco petroleum completed six diamond drill holes on the current property. The holes intersected mafic and felsic volcanic rocks, graphitic and clastic sedimentary rocks, and mafic intrusive rocks. Hole 6-1 intersected 2.74 g/t Au over a core length of 1.5 metres hosted in graphitic sedimentary rocks.

In 1982 Getty Canadian Metals conducted line cutting, Horizontal Loop electromagnetic (Max Min II), and ground magnetometer surveys over a large area near Atkinson Lake. The survey covered the current Atkinson West property and outlined several conductive horizons. The geophysical surveys were followed up by a program of diamond drilling. The drill holes intersected amphibolites, mafic volcanic tuffs and flows, and graphitic chemical sedimentary units. The graphitic units hosted anomalous concentrations of Zn up to 1.3% Zn over a core length of 1.0 metres.

In 1988 the area was covered by the Ontario Government Geotem airborne electromagnetic survey. Numerous moderate to strong conductors were identified.

In 1989 and 1990 Westmin Resources Limited completed line cutting, geological mapping, and a VLF-EM survey over the central portion of the current claims. No outcrops were located during the mapping.

In 1996 Better Resources Limited drilled hole 96-05 to a depth of 141.6 m to test the conductive horizon to the west of the Au intersected by Amoco. The drill hole intersected mafic volcanic rocks with two intervals of graphitic sulphide bearing cherts. Minor chalcopyrite and sphalerite was present, and the assays for Au were low.

4.0 Geological Setting

4.1 Regional Geology

The Atkinson Project area (Figure 3) is located in the northern portion of the Abitibi Greenstone Belt and is underlain by Archean aged volcanic, sedimentary, and intrusive rocks that have been deformed and metamorphosed from greenschist to almandine-amphibolite rank. The volcanic - sedimentary sequence in the Detour Atkinson Lake Area (Johns, 1982) consists of a basal unit of felsic to intermediate volcanic rocks overlain by a thin clastic sedimentary unit which is in turn overlain by mafic to intermediate flows and pyroclastic rocks. This sequence is capped by a mixed succession of felsic to intermediate volcanic rocks, mafic volcanic rocks, and clastic sedimentary rocks. Graphitic and cherty interflow sediments are common near the breaks between the major units and near the top of the stratigraphic section. The volcanic sedimentary sequence has been intruded by mafic to intermediate intrusive rocks and by later diabase dykes and is surrounded by quartz-monzonite batholiths. Whole rock geochemical analyses completed by Ontario Geological Survey (Johns, 1982) indicate that the mafic volcanic rocks are high iron tholeiitic basalts, and that the felsic volcanic rocks are predominantly calc-alkaline rhyolites and dacites.

Structurally the volcanic sedimentary sequence may have been subjected to two phases of deformation. The best defined feature is an antiformal structure that trends east west south of the Detour Lake Mine. The fold appears to plunge at 35° to 45° degrees to the west. Airborne magnetic results suggest that additional folding and deformation has taken place in the southern portion (Atkinson Lake Area) of volcanic sedimentary belt (Figure 4).

The Archean rocks have been extensively covered by pleistocene age glacial deposits that consist of tills, varved clays, silt, and gravel. The area has been subjected to four periods of ice movement (Veillette, 1989), and associated interglacial periods. The thickness of the glacial overburden in the Atkinson Project area ranges up to approximately 35 metres (Johns, 1982).

4.3 Geological Setting - Lipton Property (Figure 4)

The Lipton claims are completely covered by glacial overburden, and the geology has been interpreted from the geophysical and diamond drill hole data. In the area of Lipton Lake a northerly trending antiformal structure that plunges shallowly to the north has been partially defined.

Mafic volcanic flows and tuffs represent the upper portion of the volcanic stratigraphy. Three different units have been defined by the drilling to date as follows: a) The uppermost unit is generally massive (with minor banded sections) fine to medium grained, medium to dark green grey amphibole rich mafic flow unit. b) The second unit is a garnet bearing and is approximately 80 metres thick. The garnetiferous mafic volcanics consist of massive to banded amphibole feldspar rocks with trace to 20% pink garnets. c) The lowermost mafic unit (up to 70 metres thick) consists of fine to medium grained massive (banded sections) medium to dark green amphibole rich flows and tuffs that contain trace amounts of biotite. All of the mafic units locally contain minor disseminated sulphides, and minor quartz and carbonate veins. The mafic tuffs are commonly fine grained banded amphibolite chlorite rich units that may contain garnets. Thin cherty chemical sedimentary unit with pyrrhotite, pyrite, and magnetite have been intersected within the mafic volcanic sequence. Underlying the mafic volcanic flows and tuffs drilling has intersected a thin (up to 20 metres thick) unit of mixed volcanic rocks. The unit is composed of intermediate to mafic tuff (minor flows) with some felsic tuffs. The tuffs are generally fine grained, banded, grey green to grey brown, quartz feldspar amphibole rocks with variable garnet and biotite

content and minor to trace iron sulphides. Locally cherty and fragmental sections have been intersected. The contact between the intermediate volcanic rocks and the felsic tuffs is marked by a zone (up to 20 metres thick) consisting of chemical sedimentary units and cherty tuffs. The individual chemical sedimentary units (1.0 to 8.0 metres thick) are cherty with variable amounts of graphite, pyrite, pyrrhotite, magnetite, and garnet. Trace amounts of chalcopyrite and sphalerite have been intersected.

The felsic volcanic rocks range from light to medium grey pyroclastic tuff to white massive silica rich rhyolites with quartz eyes up to 3 mm. Felsic tuffs overlying the chemical sedimentary horizon contain abundant biotite, chlorite, amphibole, and garnet that generally occurs as irregular patches. Within the felsic volcanic sequence a second chemical sedimentary unit has been intersected. This unit (up to 20 metres thick) has been intersected approximately 35 metres below the contact with the overlying intermediate rocks and consists of chert, sulphides, and magnetite.

Three distinct types of felsic to intermediate intrusive rocks have intruded the volcanic sequence. A typical feldspar porphyry with a light grey brown quartz feldspar biotite matrix and white feldspar phenocrysts up to 5 mm has been intersected at various positions in the stratigraphy. Near Lipton Lake a fine grained pale green siliceous quartz feldspar rock (green porphyry) with up to 5% small white feldspar phenocrysts has been intersected by numerous drill holes and is usually found in close proximity to the chemical sedimentary horizon. The unit commonly contains trace to 5% pyrrhotite and pyrite, and has a brecciated appearance due to the presence of numerous irregular patches and veins of pink alteration (potassium feldspar). Trace amounts of chalcopyrite and sphalerite may also be present. The volcanic sequence has been intruded by thin near vertical mafic dykes. Along the eastern limb of the antiformal structure a fine grained quartz feldspar biotite rock with clear to grey quartz eyes has been intersected.

4.2 Geological Setting - Atkinson West property

The Atkinson West claims are underlain by an east west trending sequence of volcanic, sedimentary, and chemical sedimentary rocks (Figure 4). The volcanic units range from mafic to felsic in composition. The mafic volcanics are generally massive amphibolite rich units, although some tuffaceous units have been intersected by drilling. Felsic volcanic rocks are generally tuffaceous and may be interbedded with clastic sediments. Quartz rich clastic sedimentary units were intersected in hole 6-3 (Amoco). The graphitic sulphide bearing chert horizon that trends across the southern part of the claim group usually contains trace chalcopyrite and sphalerite (up to 1.3% Zn over 1.0 metre in hole DL-82-10). Hole 6-1 drilled by Amoco in 1974 intersected 2.74 g/t Au over 1.5 metres within this horizon. Felsic volcanic rocks located near the graphitic chert have undergone strong biotite alteration (hole 6-1). The geology to the north of this chemical sedimentary unit has not been defined in detail. Magnetic and conductive zones in the northern eastern portion of the property may represent the western continuation of oxide sulphide facies iron formation horizons intersected by drilling to the east of the property. The volcanic sedimentary sequence has been intruded by thin feldspar porphyry and granitic to dioritic intrusives and dips moderately to the south (50°).

5.0 2007 Program

During March 2007 Terraquest Ltd. completed a high resolution magnetic, and XDS VLF-EM airborne survey (2293 line kilometres). Lines were completed at 50 metres intervals at azimuths of 150° or 330°. Control lines were completed at 500 metre intervals at azimuths of 060° or 240°. Detailed survey and equipment specifications; black and white (1:10,000 scale) maps; and a disk with all the data and maps are provided in Appendix 1. A total of 937.055 line kilometres of the survey was completed over the Lipton and Atkinson West claims with a breakdown of the coverage presented in Table 3.

Table 3: Breakdown of Airborne Survey by Claim

Claim Group	Claim	Line Kilometres	Claim	Line Kilometres	Claim	Line Kilometres
Lipton	1205417	47.977	1214306	21.817	1199717	19.158
	1205418	43.538	1214309	29.301	1199718	50.733
	1205419	35.821	1214341	10.545	1199719	34.691
	1214303	32.255	1214342	10.328	4202775	46.174
	1214304	56.695	1214343	60.151	4202776	62.669
	1214305	50.863	1199716	37.936	4202777	27.812
					4202778	5.276
Atkinson	1203512	15.350	3009093	23.324	3009096	21.005
West	3009091	3.680	3009094	52.882	3009097	42.232
	3009092	21.163	3009095	31.805	3009098	41.875

6.0 Results

6.1 Magnetic Survey (Figures 6 to 11)

The magnetic field in the survey area ranges from 56,758 to 63297 nT. On the Lipton claims (Figures 6 to 9) the magnetic survey has traced the magnetite sulphide bearing chemical sedimentary units (magnetic highs) present on the property and delineated the antiformal structure. The western limb of the antiformal structure is a well defined magnetic high as opposed to the eastern limb which consists of a series of deformed magnetic highs. This complexity may represent folding and or faulting. At the nose of the anticlinal structure (claims: 1205417,4202776,4202778) the magnetic high is broad which indicates that the chemical sedimentary units are flat lying. The broad magnetic low to the west of the clim block represents the mafic intrusive rocks mapped by Johns (1982). A north-westerly trending linear magnetic high crosses this magnetic low and trends onto the property may define a late diabase dyke. On the Atkinson West claims (Figures 10 and 11) the survey has defined a series of magnetic highs on the property . Diamond drilling by previous operators indicate the magnetic highs represent mafic to ultramafic intrusives and magnetite bearing chemical sedimentary units. The magnetic highs are locally offset and contorted which may indicate folding and or faulting.

6.2 XDS - VLF Survey (Figures 12 to 14)

Airborne VLF-EM surveys can detect geological features such as conductors, contacts and faults to a depth of approximately 30 metres due to the frequencies used for the surveys. Based on preliminary inspection, the VLF-EM data is complex and in many cases does not appear to reflect the geological trends as defined by the magnetic survey and by previous drilling and may be mapping variability within the overburden. On the western portion of the Lipton claims and on the eastern portion of the Atkinson West claims the survey data may be defining the geological trends. Detailed interpretation including filtering the data may remove some of the noise provide more information on the bedrock structures.

Respectively Submitted,

Paul R. J. Nicholls, P.Eng.
October 28, 2008

References

Canadian Mines Handbook (1990-91): Northern Miner Press Inc., p.198

Fyon, J. A. et al (1992): Metallogeny of Metallic Mineral Deposits in the Superior Province of Ontario; in Geology of Ontario, Ontario Geological Survey, Special Volume 4, Part 2, p. 1091 - 1174

Johns, G. W. (1982): Geology of the Burntbush-Detour Lakes Area, District of Cochrane; Ontario Geological Survey Report 199, 82p.

Konings, M. H. (1980): Airborne Electromagnetic Survey, Detour Lake Area; report prepared for Western Mines Limited by Questor Surveys Limited

Larson, J. E., Hutchison, R. W. (1993): The Selbaie Zn-Cu-Ag Deposits, Quebec, Canada: An Example of Evolution from Subaqueous to Subaerial Volcanism and Mineralization in an Archean Caldera, Econ. Geol., vol. 88, pp 1460 - 1482

McMillan, R. H, (1991): Atkinson Project - Drilling Proposal

Nicholls, P. R. J. (1997a) Atkinson Project, Report on the 1996 Diamond Drilling Program (Assessment Report)

Nicholls, P. R. J. (1997b) Atkinson Project, Report on Phase II and III Drilling Completed on the Lipton Claims in 1996 (Assessment Report)

Nicholls, P. R. J. (2005) Atkinson Project, Report on Line Cutting and Ground Geophysical Surveys, Completed During 2005, Lipton and Horner Claims (Assessment Report)

Pattison,E. F., Sauerbrei, J. A., Hannila, J. J., and Church, J. F. (1986): Gold Mineralization in the Casa-Beradi Area, Quebec, Canada. in Proceeding of Gold '86 Symposium, Toronto, 1986, pp. 170 - 183

Ontario Geological Survey (1995): The Ontario Drill Hole Database, Data Set 13 (ascii format)

Ontario Geological Survey (1996): Erlis Data Sets 1007 and 1008, Ontario Airbourne Magnetic and Electromagnetic Surveys, Detour Burntbush Abitibi Area

Ontario Government Assessment Files - Drill logs and survey results 1959 to 1986

Pelangio-Larder Mines (1999): Press release

Veillette, J. J. (1989): Ice Movements, Till Sheets and Glacial Transport in Abitibi - Timiskaming, Quebec and Ontario. G.S.C. Paper 89-20, p139 - 154

CERTIFICATION

I, Paul R. J. Nicholls of Stouffville, Ontario, do hereby certify that:

1) I am an independent geologist and have no financial interest in the properties covered by this report.

2) I am a graduate of Queens University, Kingston, Ontario, B.Sc. (1976), and a member of the Association of Professional Engineers of Ontario. I have practised my profession for over 25 years.

3) I am the author of this report which is based on extensive experience in exploring the Detour Lake Area and a review of the exploration data available from various published and unpublished sources

4) I supervised diamond drilling programs completed on the properties in 1996, and reviewed some of the core from the Lipton Property in October 2003.

5) I have reviewed the results of the 2007 Airborne survey completed over the Lipton and Atkinson West properties.

Paul R. J. Nicholls, P.Eng.

October 28, 2008

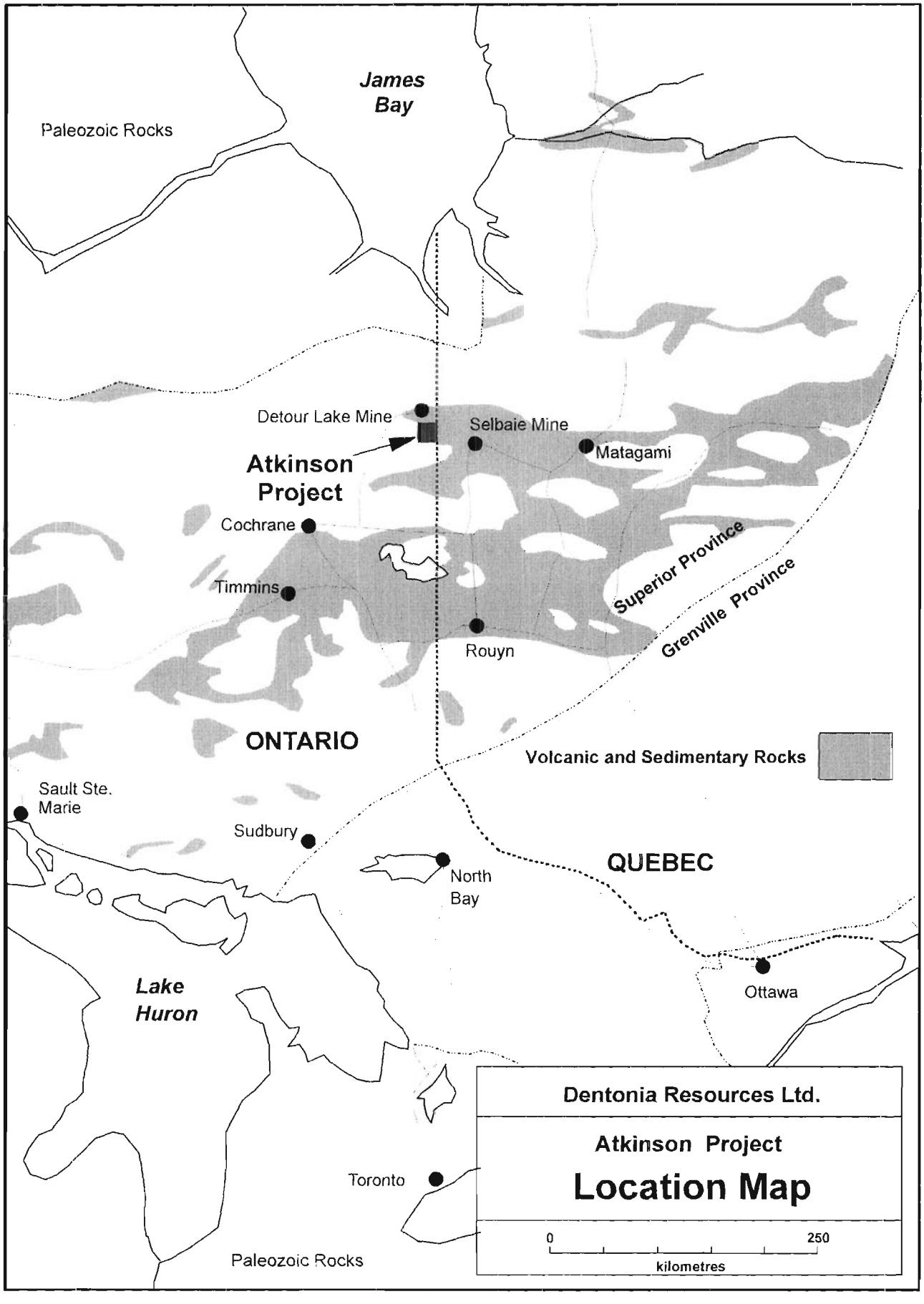
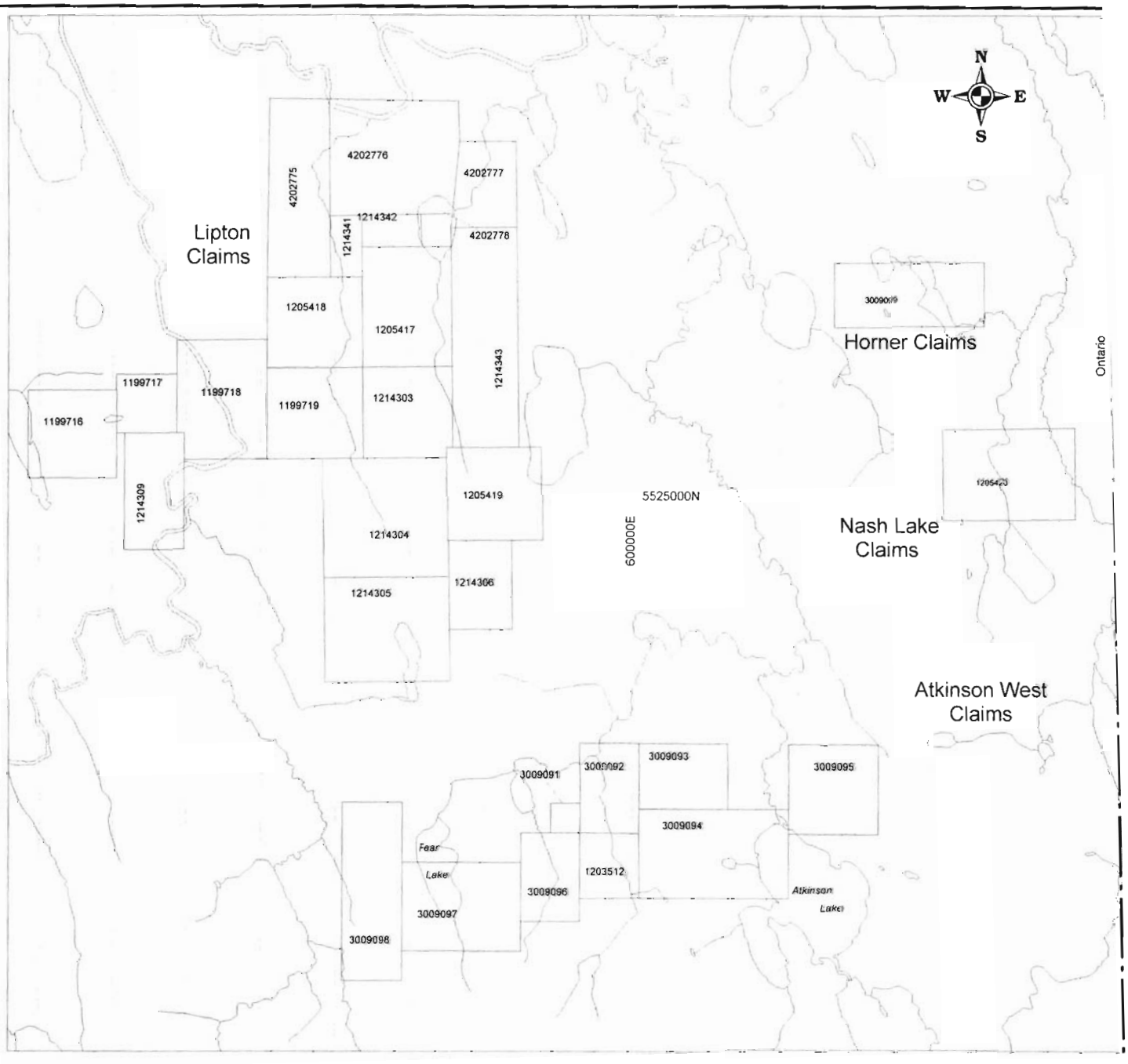

James Bay
Paleozoic Rocks
Detour Lake Mine
Selbaie Mine
Matagami
Atkinson Project
Cochrane
Timmins
Rouyn
Superior Province
Grenville Province
ONTARIO
Volcanic and Sedimentary Rocks
Sault Ste. Marie
Sudbury
North Bay
QUEBEC
Lake Huron
Ottawa
Toronto
Paleozoic Rocks
Dentonia Resources Ltd.
Atkinson Project
Location Map
0
250
kilometres

Figure 1



U.T.M. Coordinates: NAD 83. Zone 17

0 Scale - 1:80,000 5

kilometres

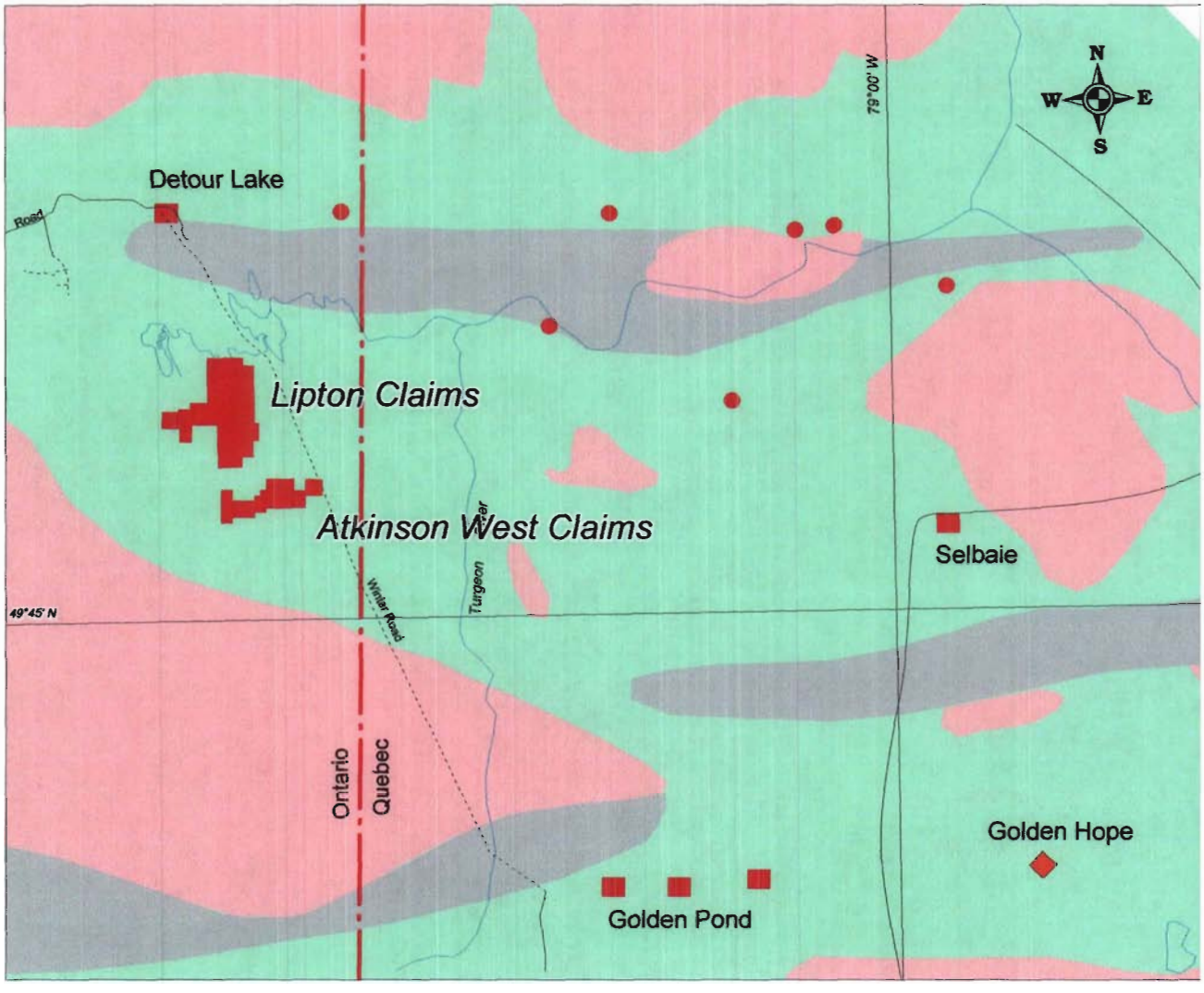
Dentonia Resources Ltd.

Atkinson Project

Land Status

Stouffville Geological Services Ltd. October 2008

Figure 2



LEGEND

- Volcanic Rocks
- Sedimentary Rocks
- Intrusive Rocks
- Mines
- Significant Discovery
- Discovery

0 25

kilometres

Dentonia Resources Ltd.

Atkinson Project

General Geology and Location

Stouffville Geological Services Ltd. October 2008

Figure

Lipton Claims

Horner Claims

Nash Lake Claims

Atkinson West Claims

10.7 g/t Au / 9.0 m

2.74 g/t Au / 1.5 m

Fear Lake

Atkinson Lake

Ontario

Quebec

5530000N

5524000N

5522000N

594000E

597000E

4202775 4202776 4202777 4202778

1214342 1214341 1214303 1214343 1214304 1214306 1214305 1214308

1199716 1199717 1199718 1199719

1205417 1205418 1205419 1205420

3009099 3009093 3009092 3009091 3009094 3009095 3009096 3009097 3009098

N W E S

LEGEND

- DIABASE
- GNEISSIC AND GRANITIC ROCKS
- MAFIC INTRUSIVE ROCKS
- IRON FORMATION
- CLASTIC SEDIMENTARY ROCKS
- GRAPHITIC CHEMICAL SEDIMENTS
- PARACONGLOMERATE
- FELSIC VOLCANIC ROCKS
- MASSIVE RHYOLITE
- MAFIC VOLCANIC ROCKS
- ULTRAMAFIC ROCKS
- Au OCCURRENCE
- Cu - Zn OCCURRENCE
- Au ZONE
- FAULT OR SHEAR ZONE

0 Scale - 1:50,000 2

kilometres

U.T.M. Coordinates: NAD 83. Zone 17

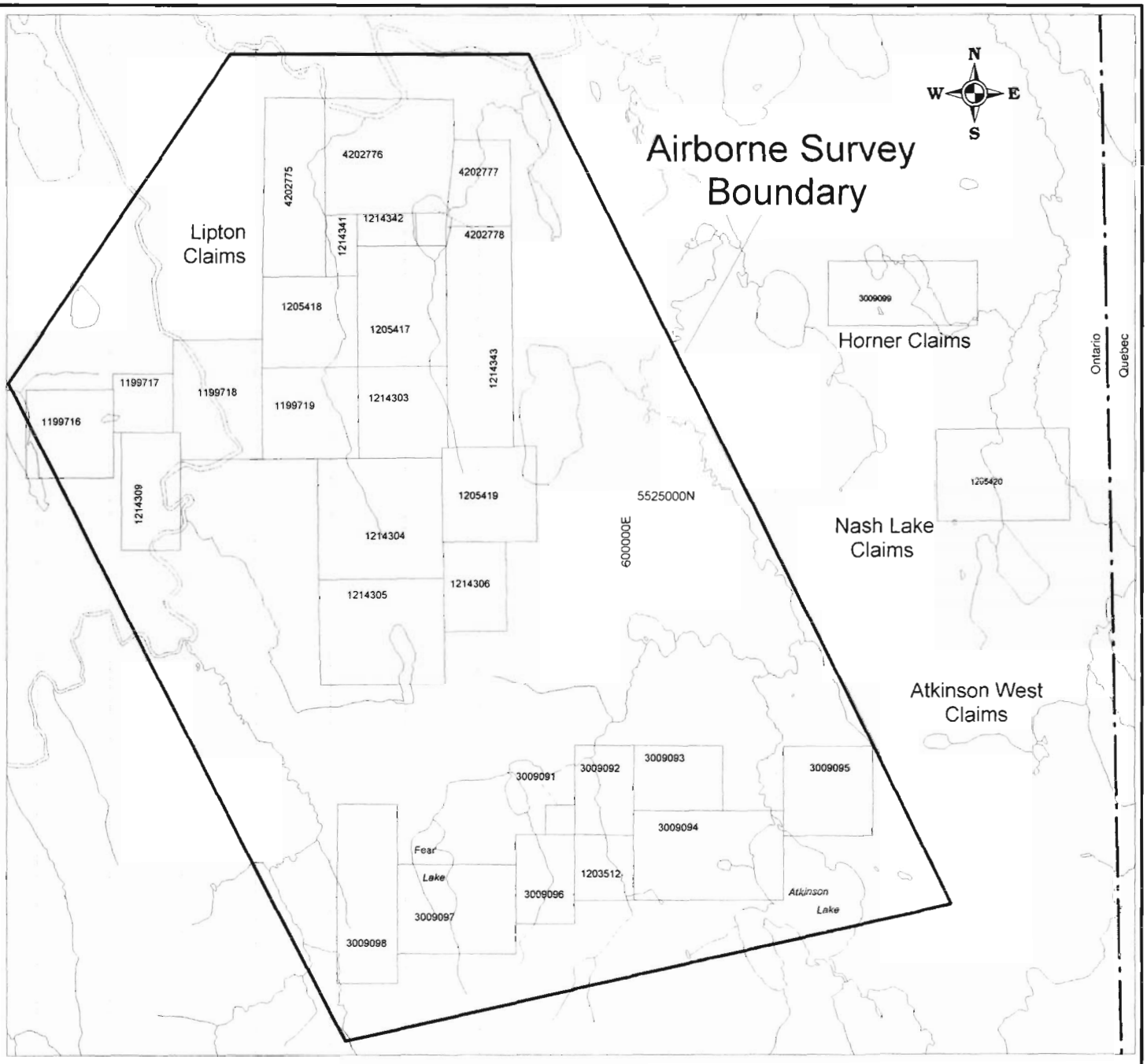
Stouffville Geological Services Ltd. October 2008

Dentonia Resources Ltd.

Atkinson Project

Regional Geology

Figure 4



U.T.M. Coordinates: NAD 83. Zone 17

0 Scale - 1:80,000 5

kilometres

Dentonia Resources Ltd.

Atkinson Project

2007 Airborne Survey Area

Stouffville Geological Services Ltd. October 2008

Figure 5

Detour Lake

Legend (nT)

63300
57600
57400
57200
57100
57000
56800

Magnetic Data contoured at 200 nT intervals (57000 to 61000 nT)

5530000N

594000E

N
W E
S

4202775
4202776
4202777
4202778
1214342
1214341
1205417
1205418
1199717
1199718
1199719
1214303
1214343
1199716

U.T.M. Coordinates: NAD 83. Zone 17

INDEX MAP

NORTHERN SHEET

4202775 4202776 4202777 4202778 1214342 1214341 1205417 1205418 1199717 1199718 1199719 1214303 1214343 1199716 1205419 1214304 1214306 1214308

0 Scale - 1:80,000 5
kilometres

0 metres 1000
Scale 1:25,000

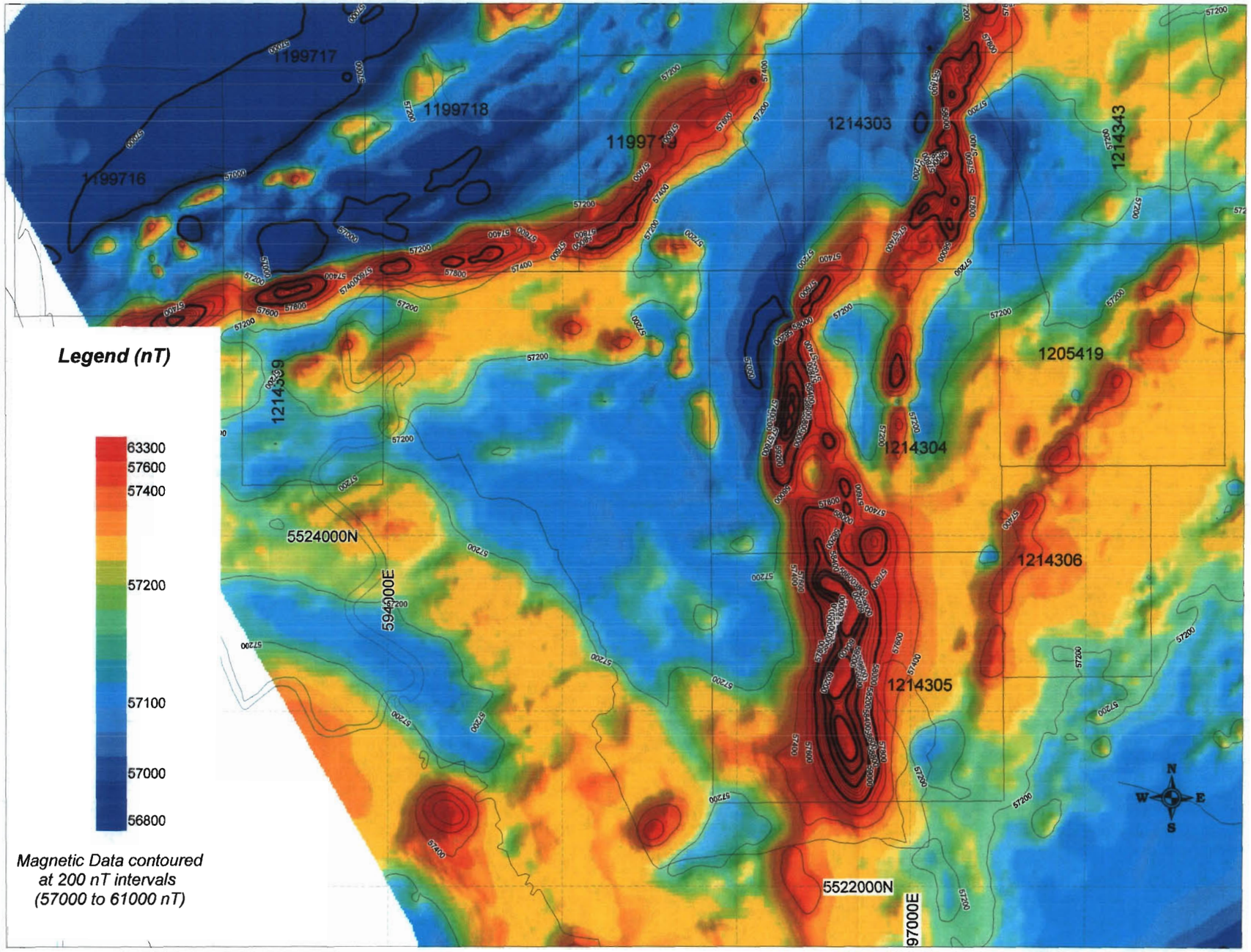
Dentonia Resources Ltd.
Lipton Claims

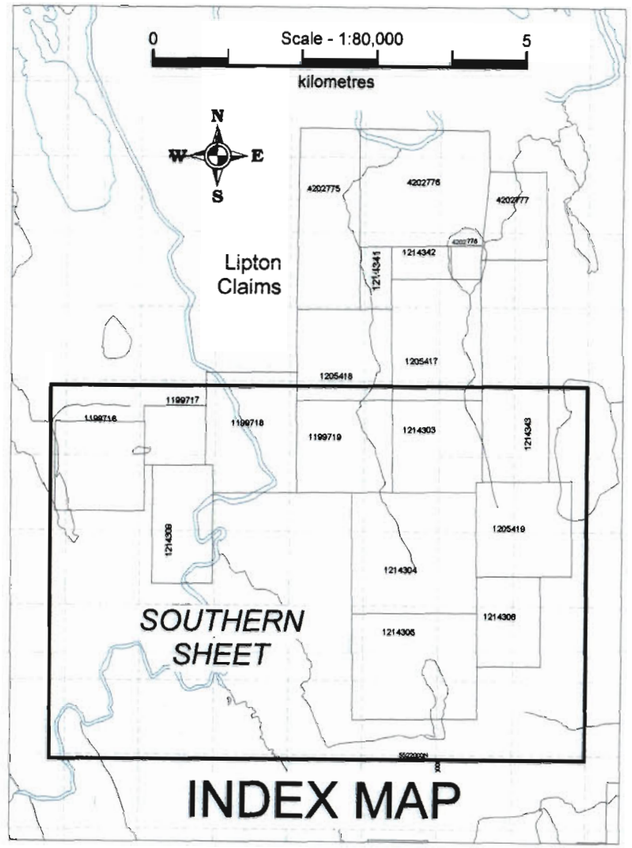
Airborne Magnetic Survey Total Magnetic Intensity

(Northern Sheet)

Stouffville Geological Services Ltd. October 2008

Figure 6





0 metres 1000
Scale 1:25,000

U.T.M. Coordinates: NAD 83. Zone 17

Dentonia Resources Ltd.
Lipton Claims

Airborne Magnetic Survey
Total Magnetic Intensity
(Southern Sheet)

Stouffville Geological Services Ltd. October 2008

Figure 7

Detour Lake

5530000N

594000E

N
W E
S

MI

V

4202775

4202776

4202777

4202778

1214342

1214341

MI

1205418

1205417

1214303

1214343

1199717

1199718

1199719

V

MI

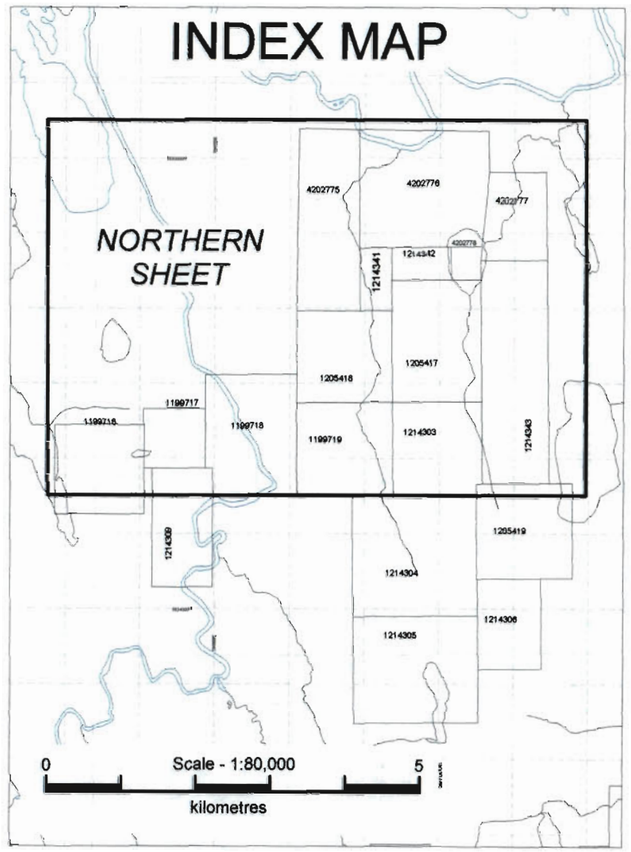
1199716

Interpreted Geology

G	Granitic Intrusives
V	Volcanic Rocks
S	Sedimentary Rocks
MI	Mafic Intrusives
	Iron Formation
	Geological Contact
	Fault
	Diabase Dyke
	Magnetic Highs

U.T.M. Coordinates: NAD 83. Zone 17

INDEX MAP



0 metres 1000
Scale 1:25,000

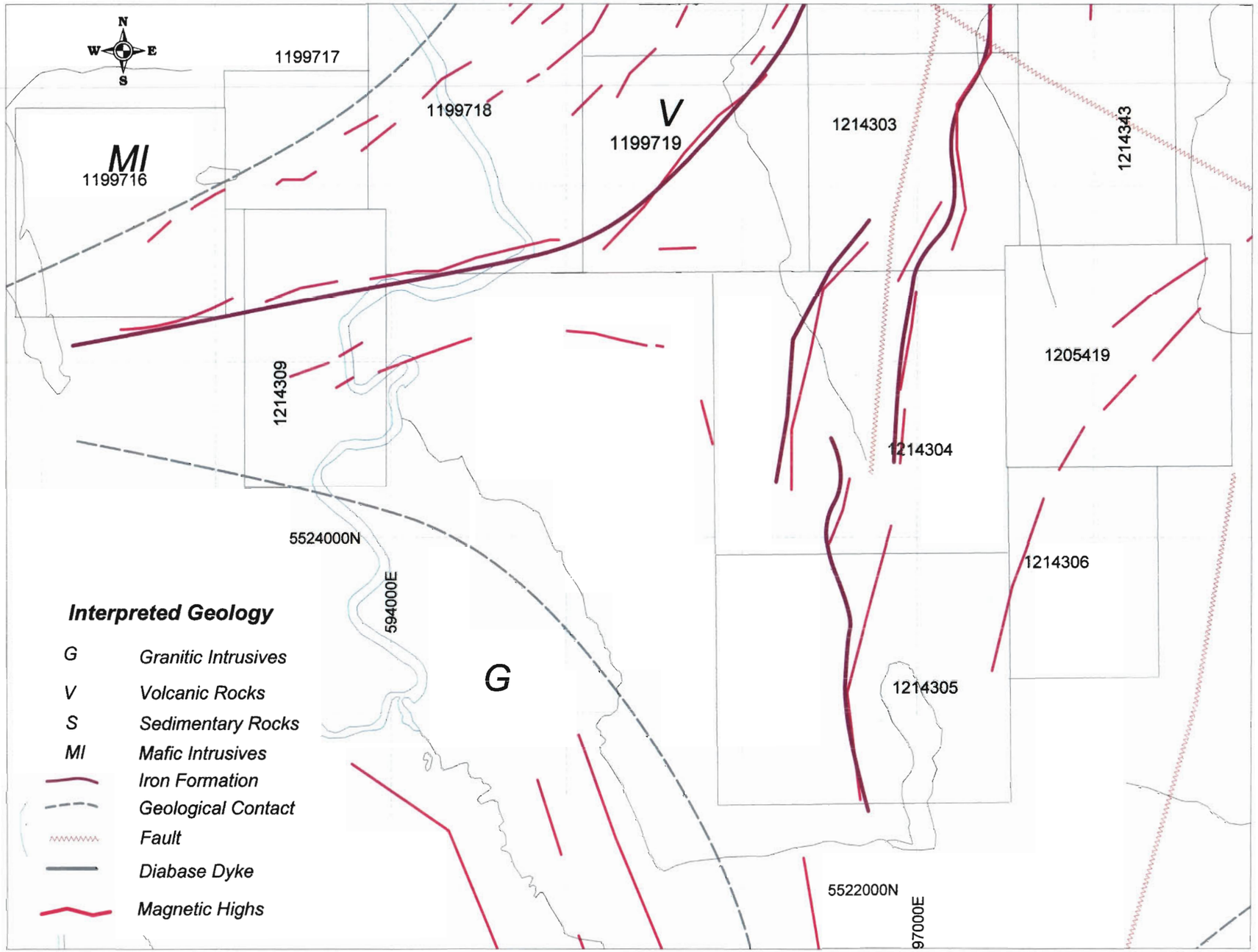
Dentonia Resources Ltd.
Lipton Claims

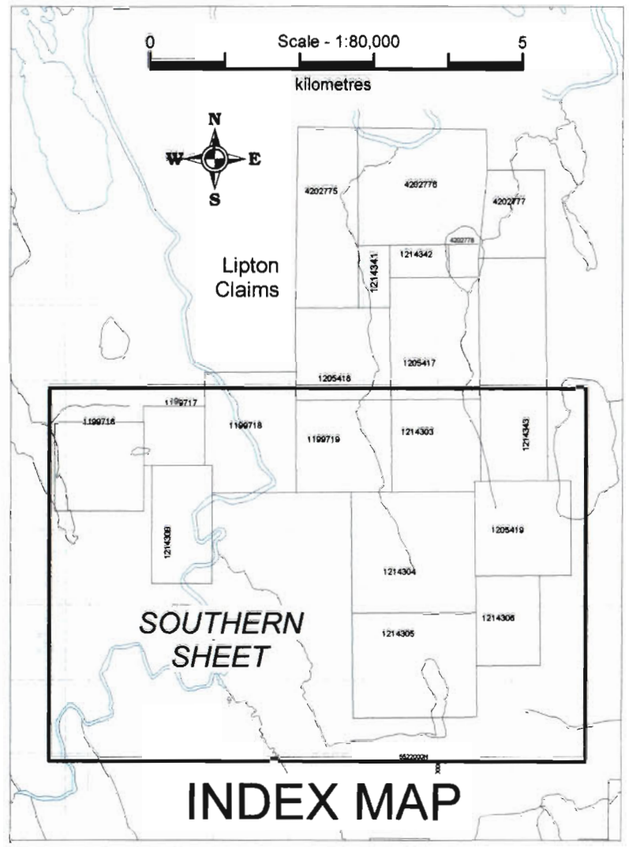
Airborne Magnetic Survey Magnetic Interpretation

(Northern Sheet)

Stouffville Geological Services Ltd. October 2008

Figure 8





0 metres 1000
Scale 1:25,000

U.T.M. Coordinates: NAD 83. Zone 17

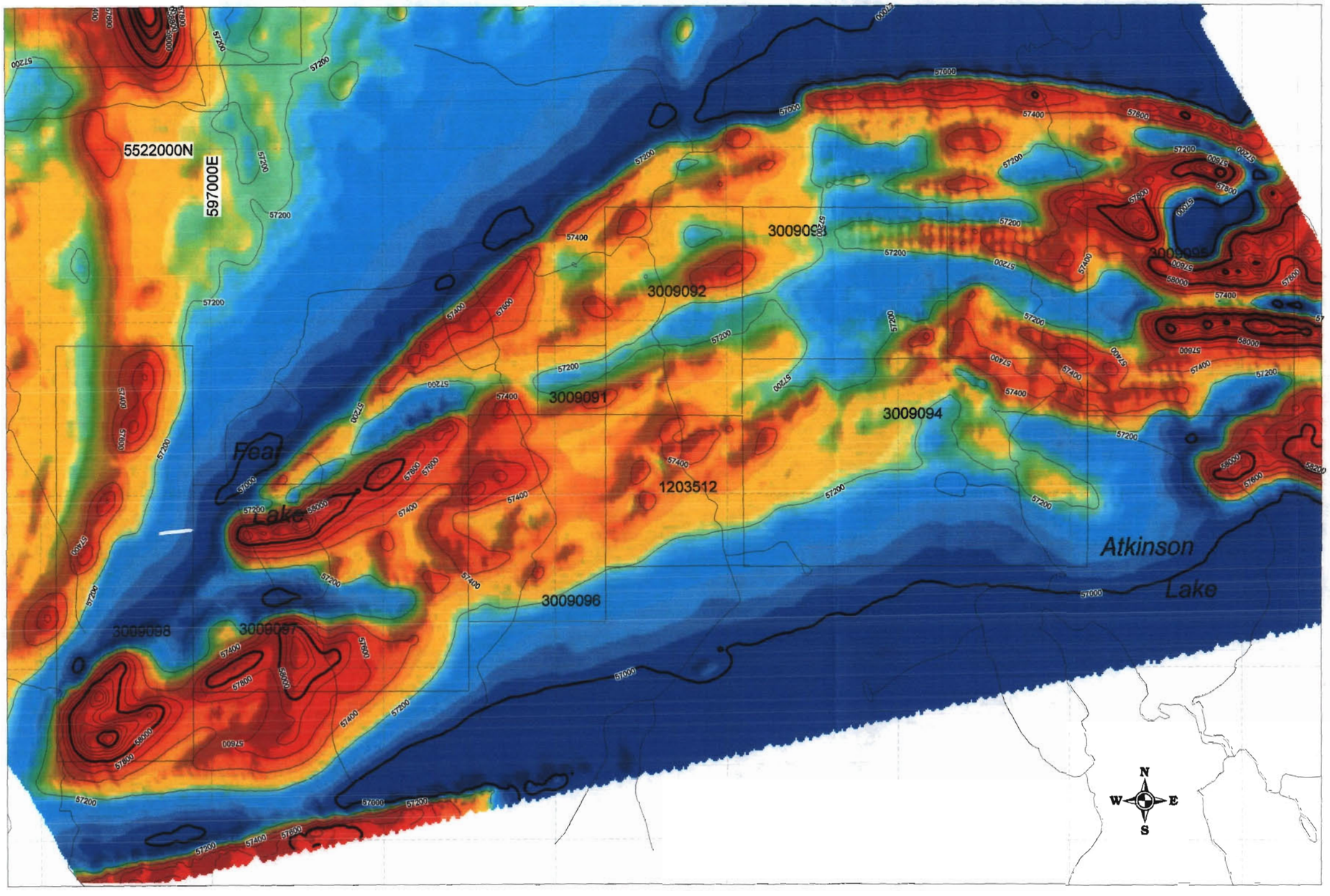
Dentonia Resources Ltd.
Lipton Claims

Airborne Magnetic Survey
Magnetic Interpretation

Southern Sheet)

Stouffville Geological Services Ltd. October 2008

Figure 9



Legend (nT)

63300
57600
57400
57200
57100
57000
56800

Magnetic Data contoured at 200 nT intervals (57000 to 61000 nT)

0 metres 1000
Scale 1:25,000

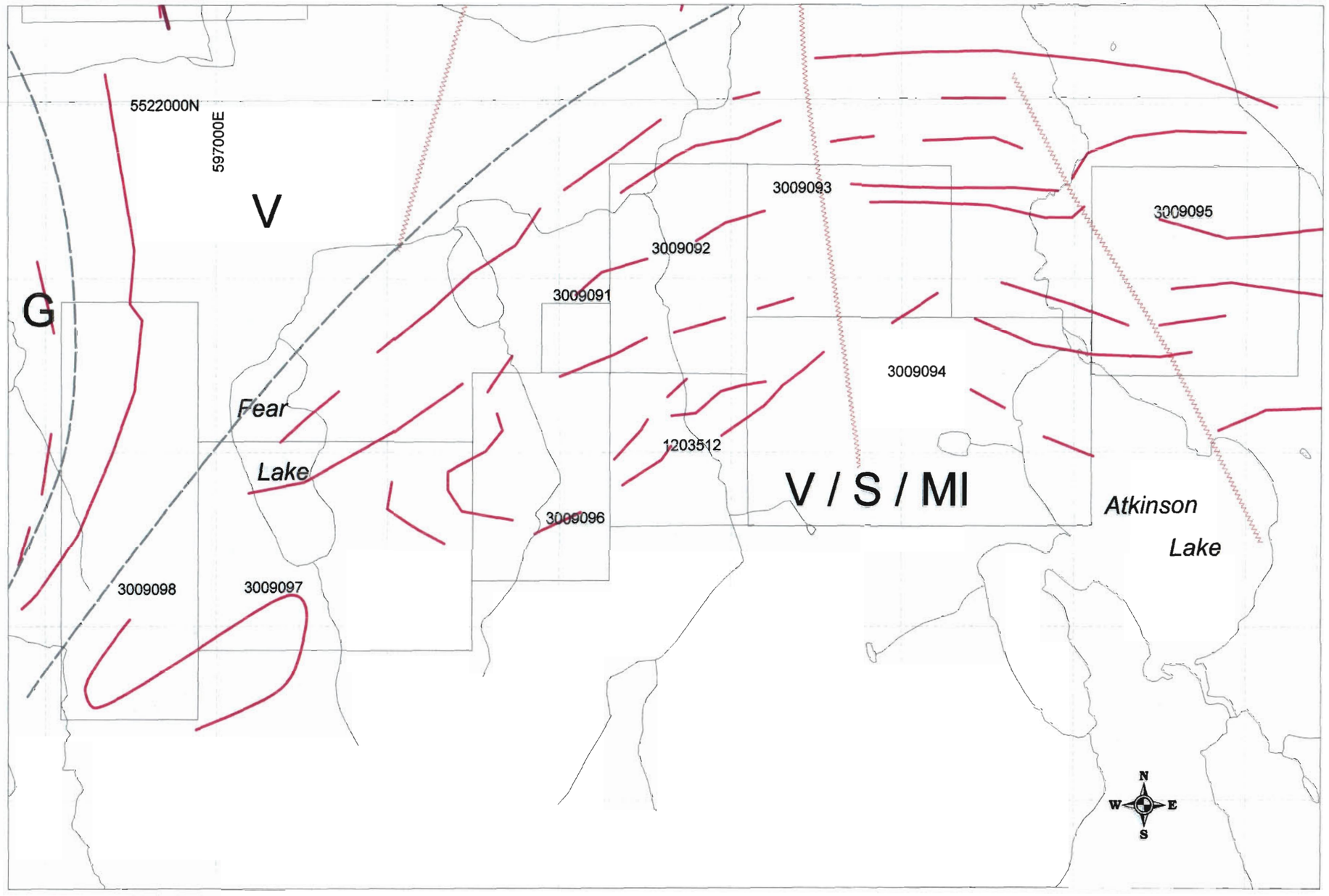
U.T.M. Coordinates: NAD 83. Zone 17

Dentonia Resources Ltd.
Atkinson West Claims

Airborne Magnetic Survey Total Magnetic Intensity

Stouffville Geological Services Ltd. October 2008

Figure 10



Interpreted Geology

G	Granitic Intrusives
V	Volcanic Rocks
S	Sedimentary Rocks
MI	Mafic Intrusives
	Iron Formation
	Geological Contact
	Fault
	Diabase Dyke
	Magnetic Highs

0 metres 1000
Scale 1:25,000

U.T.M. Coordinates: NAD 83. Zone 17

Dentonia Resources Ltd.
Atkinson West Claims

Airborne Magnetic Survey
Magnetic Interpretation

Stouffville Geological Services Ltd. October 2008

Figure 11

Detour Lake

N
W E
S

594000E

5530000N

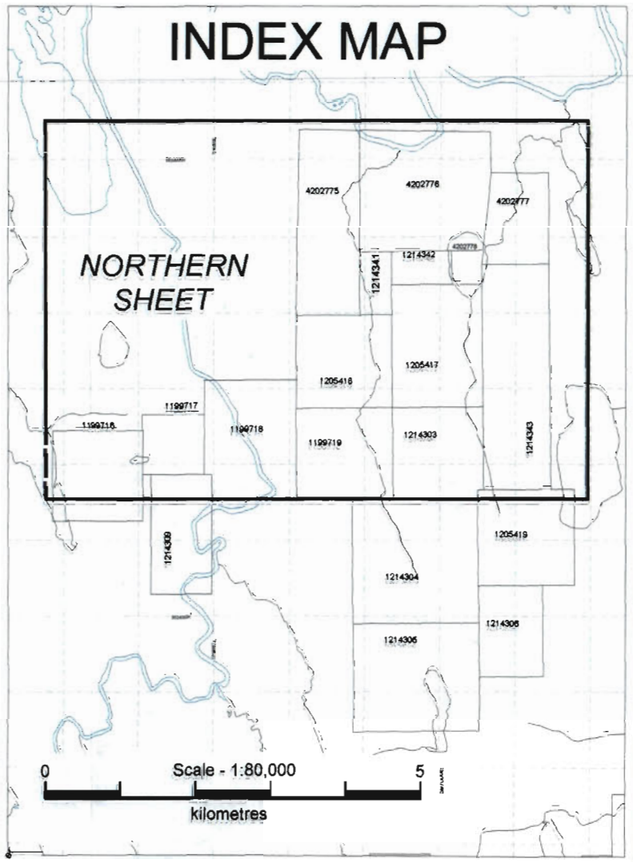
Legend (mv)

110
32.5
-45.2
-123
-201

4202775
4202776
4202777
4202778
1214342
1214341
1205417
1205418
1199717
1199718
1199719
1214303
1214343
1199716

U.T.M. Coordinates: NAD 83. Zone 17

INDEX MAP



0 metres 1000
Scale 1:25,000

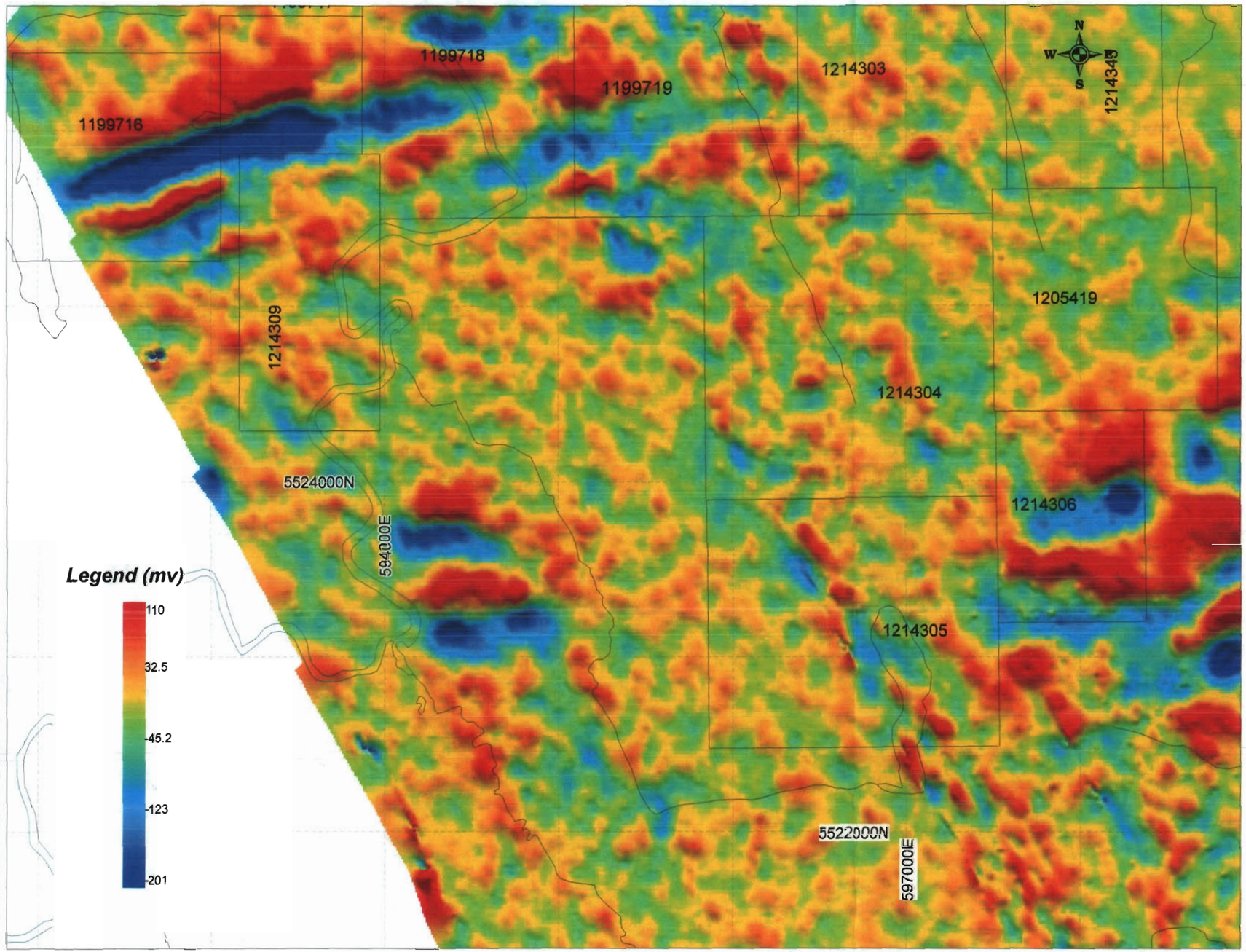
Dentonia Resources Ltd.
Lipton Claims

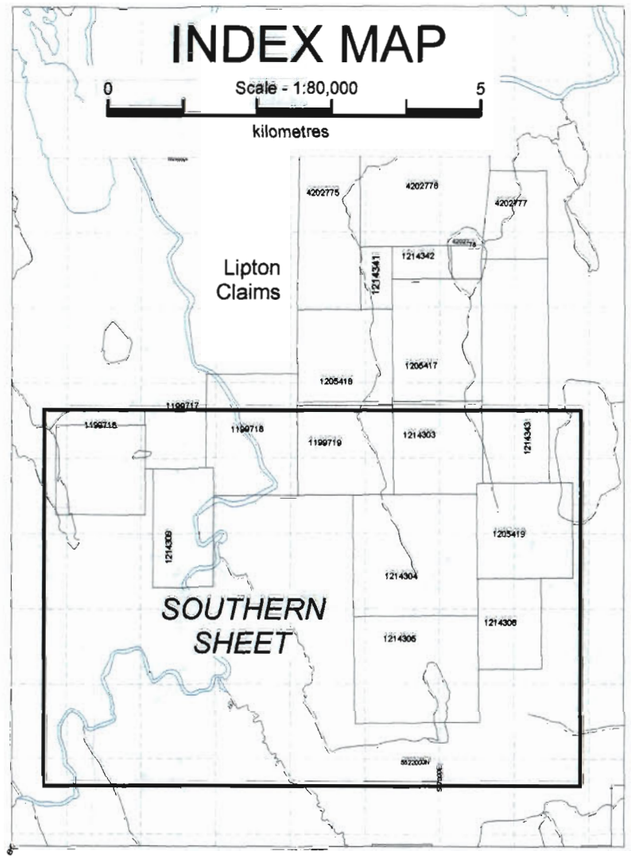
Airborne XDS - VLF Survey Line Component

(Northern Sheet)

Figure 12

Stouffville Geological Services Ltd. October 2008





U.T.M. Coordinates: NAD 83. Zone 17

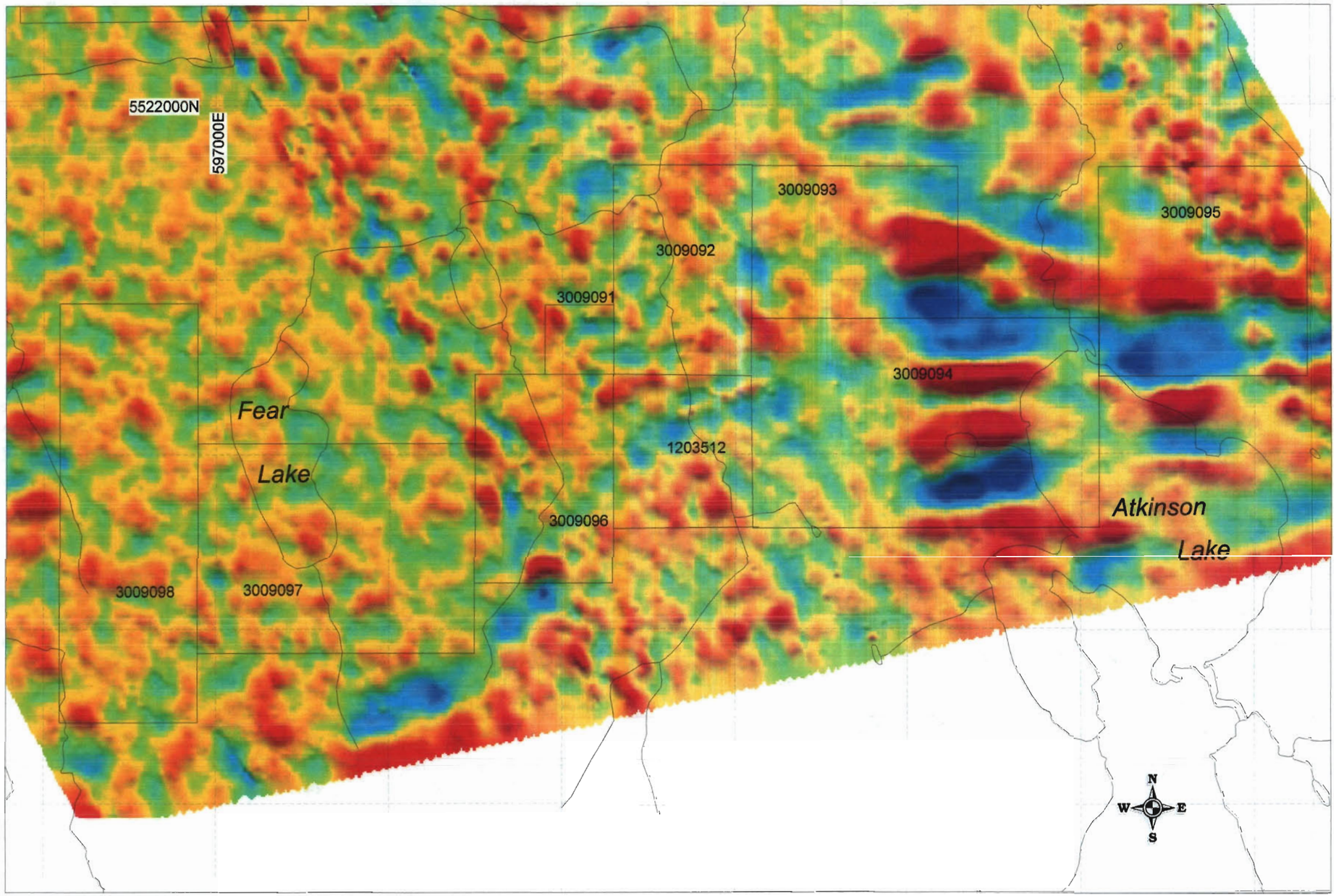
0 metres 1000
Scale 1:25,000

Dentonia Resources Ltd.
Lipton Claims

Airborne XDS - VLF Survey
Line Component
(Southern Sheet)

Stouffville Geological Services Ltd. October 2008

Figure 13



Legend (mv)

110
32.5
-45.2
-123
-201

0 metres 1000
Scale 1:25,000

Dentonia Resources Ltd.
Atkinson West Claims

Airborne XDS - VLF Survey Line Component

U.T.M. Coordinates: NAD 83. Zone 17

Stouffville Geological Services Ltd. October 2008

Figure 14

Appendix 1

Operations Report for Dentonia Resources Ltd; High Resolution Tri-Sensor Magnetic and XDS VLF-EM Airborne Survey, Detour Lake Area Project

Stouffville Geological Services Ltd.

TERRAQUEST LTD.

Operations Report for DENTONIA RESOURCES LTD.

High Resolution Tri-Sensor Magnetic & XDS VLF-EM Airborne Survey

Detour Lake Area Project
Cochrane, Ontario

December 29, 2007

Report #: B-221

Requested by:
Paul Nicholls
DENTONIA RESOURCES LTD.

Prepared by:
Charles Barrie, Managing Partner
Terraquest Ltd.

Table of Contents

1. Introduction

1.1. Executive Summary

This report describes the specifications and parameters of an airborne geophysical survey carried out for:

DENTONIA RESOURCES LTD.
880 – 609 Granville Street
Vancouver, BC
V7Y 1G5

Attention: Mr. Adolf Petancic, President
Phone: 250-682-1141
Email: dentonia@telus.net

The survey was performed by:

Terraquest Ltd.,
2-2800 John Street, Markham
ON, Canada
L3R 0E2

Phone: 905-477-2800 ext. 22
Email: hb@terraquest.ca

The purpose of the survey of this type is to collect geophysical data that can be used to prospect directly for economic minerals that may be characterized by anomalous magnetic or conductive responses. Secondly, the geophysical patterns can be used indirectly for exploration by mapping the geology in detail, including faults shear zones, folding, alteration zones and other structures.

To obtain this data, the area was systematically traversed along parallel flight lines by aircraft, carrying geophysical sensors and recording equipment. The lines are spaced and oriented to intersect the geology and structure so as to provide optimum contour patterns of the geophysical data.

1.2. Survey Location

The survey is located in northern Ontario approximately 120 kilometres northeast of the town of Cochrane, ON just west of the Quebec border and immediately southwest of Lower Detour Lake. Atkinson Lake lies in the southeast corner. The survey area is irregular in shape with five sides. The short dimension (northeast-southwest) is 4.5 kilometers and the long axis (northwest-southeast) is 14 kilometers. The average centre of the survey area is approximately 49 degrees 52 minutes north and 79 degrees 40 minutes west.

2. SURVEY SPECIFICATIONS

2.1. LINES AND DATA

Parameter	Specification	Instrument Precision
Mean Aircraft Speed	66.5 m/sec 240 km/hr	
Sampling Interval	6-8m (10Hz)	
Flight-line Interval	50 metres	+/- 3m
Flight-line Direction	150/330 degrees	
Control-line Interval	500 metres	+/- 3m
Control-line Direction	060/240 degrees	
Aircraft MTC	70 metres	+/- 5m
Mag Sensor MTC	70 metres	+/- 5m

Extra lines were requested in Amendment #1 at an interval of 100 metres oriented parallel to the control lines at a specific location at the north end of the survey, adding approximately 101 line kilometres to the tally.

2.2. SURVEY KILOMETRAGE

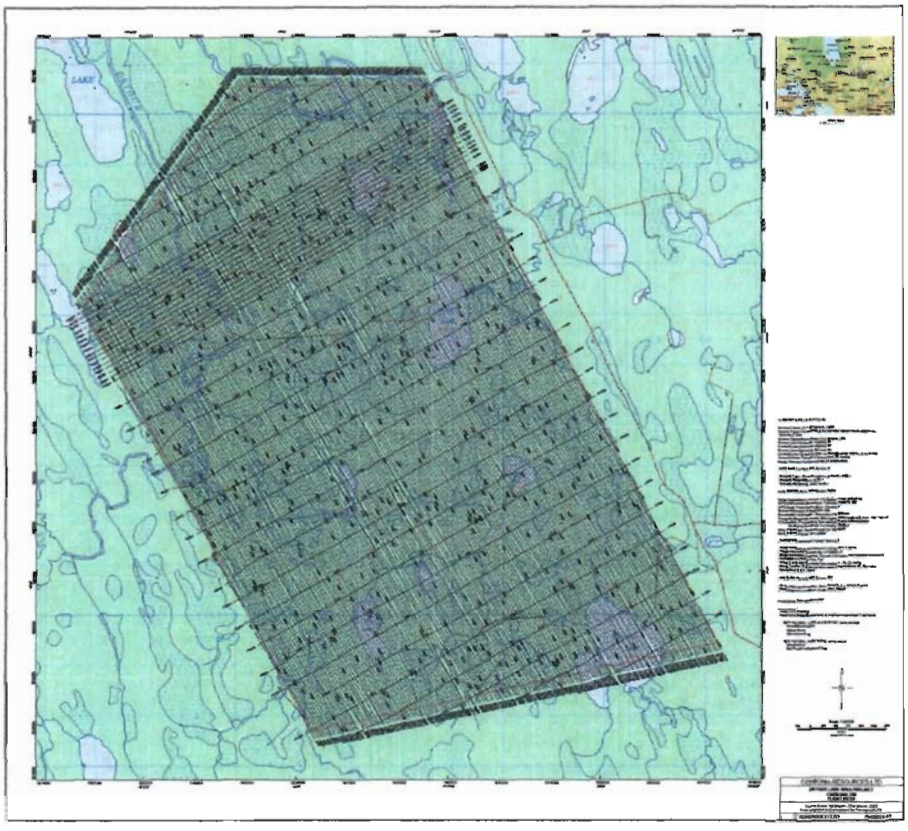
Survey Kilometers:	
Survey Lines	1,991 km
Tie (Control) Lines	302 km
Total	2,293 km

2.3. NAVIGATION SPECIFICATIONS

The client provided a poly file with a survey outline. The following file is the navigation parameter file for each block, and includes the survey corner coordinates (in NAD83 projection zone 17), line spacing, line direction, master line and other navigational parameters.

```
0  NEW AREA FILE Q6231_L.NME
1  Z 17
2    596248.0   5517922.0       AREA CORNER 1
2    591755.0   5526373.0       AREA CORNER 2
2    594282.0   5529960.0       AREA CORNER 3
2    598474.0   5530804.0       AREA CORNER 4
2    598474.0   5530804.0       AREA CORNER 5
2    604246.0   5519674.0       AREA CORNER 6
3    596248.0   5517922.0     1 WAYPOINTS 1
4          191                  NUMBER OF LINES
5         50.0                  SPACING, m.
6    597738.9   5515339.8       MASTER LINE BL
7    588477.8   5531380.4       MASTER LINE TL
8           75                  MAX CROSS TRACK, m.
9      0     0     0            DELTA X/Y/Z
10          1                   LOG FPR EVERY 1 SECS
11 0.9996000000       0.0       0.0 K0, X/Y SHIFT
14         200                  LINES EXTENDED BEYOND AREA
16          10                  FIRST LINE NUMBER
17   596248.0  5517922.0 330.00 MASTER POINT, HEADING
20 WGS-84      6378137.0   298.257223563 22      ELLIPSOID
21          0                   NO EQUATORIAL CROSSING
30         20    9600  N  1  8  RS-232 PORT 2 INCOMING FORMAT
31         20    9600  N  1  8  RS-232 PORT 1 OUTGOING FORMAT
38          0                   METRIC SYSTEM
39          5                   RACE TRACK
41       0.00                   SYSTEM LAG, Sec.
80       0.00                   PLANNED ALTITUDE, units
83          0                   GPS ALTITUDE FOR VERTICAL BAR
85        100                   MAX VERTICAL BAR SCALE
102  UTM                        UTM X/Y SCALE
```

2.4. FLIGHT PLAN



2.5. TOLERANCES - REFLIGHT

1. **Traverse Line Interval**

   Re-flights would take place if the flight line separation of the final differentially corrected flight path is greater than 25 metres from the intended flight path over a distance greater than 1 kilometre.

2. **Terrain Clearance:**

   The aircraft mean terrain clearance was to be smoothly maintained at 70 metres MTC in a drape mode. Re-flights were done if the final differentially corrected altitude

deviated from the specified flight altitude by +/-10m over a distance of 3 kilometres or more if, in the pilot's opinion, it was safe to do so.

3. **Diurnal Variation:**

   Diurnal activity during the survey was limited to 10 nT deviation from a 5 minute chord.

4. **GPS Data:**

   GPS data included at least four satellites for accurate navigation and flight path recovery. There were no significant gaps in any of the digital data including GPS and magnetic data.

5. **Radio Transmission:**

   The aircraft pilot makes no radio transmission that interferes with the magnetic response.

6. **Sample Density:**

   A reflight is required if the sample density along one or more of the survey lines exceeds 10 metres over a cumulative total of 1,000 metres for the magnetic survey, and 100 metres over a cumulative total of 1,000 metres for the radiometric survey.

2.6. NAVIGATION AND RECOVERY

The satellite navigation system was used to ferry to the survey sites and to survey along each line. The survey outline was supplied by the client and was used to establish the survey boundaries and the flight lines.

The flight path guidance accuracy is variable depending upon the number and condition (health) of the satellites employed. The selective availability normally imposed by the military was at a minimum during this period and consequently the accuracy was for the most part better than 10 metres. Real-time GPS correction service provided by Omnistar for South America improves the accuracy to less than 3 metres.

A digital camera recorded the ground image along the flight path with CD-ROM media. A video display screen in the cockpit enabled the operator to monitor the flight path during the survey. The GPS information is displayed along the top of the video image.

3. AIRBORNE GEOPHYSICAL EQUIPMENT

The primary airborne geophysical equipment includes three high sensitivity cesium vapour magnetometers, XDS VLF-EM and a gamma ray spectrometer system. Ancillary support equipment includes a tri-axial fluxgate magnetometer, digital camera, CD recorder, radar altimeter, barometric altimeter, GPS receiver with a real-time correction service, and a navigation system. The navigation system comprises a left/right indicator for the pilot and a screen showing the survey area, planned flight lines, and the real time flight path. All data were collected and stored by the data acquisition system. The following provides summary and detailed equipment specifications:

3.1. EQUIPMENT SUMMARY

Aircraft	King Air 90
Equipment:	
Magnetometers	CS-2 Cesium Vapour
3-axis Magnetometer	Billingsley Magnetics TFM100-LN
Gamma Ray Spectrometer	ASIS / IRIS 256 channel
Gamma Ray Detector Packs	2048 in^3 (33.6 litres) Down (8.4 litres) Up
GPS Receiver	Trimble AG132
Radar Altimeter	King KRA 10A
Barometric Altimeter	Sensym Model 256 or equivalent
Navigation	AgNav Inc. P151
Tracking Camera	NTSC video recorded in AVI format
Magnetic Specifications:	
Lateral Sensor separation	16.12 metres
Longitudinal Sensor separation	10.78 metres
Mag Output Sample Rate	10 Hz (20 hz available with noise increase)
4^{th} difference noise envelope	0.10 from tail stinger
FOM index (Tail)	<1.5 nT
Sensitivity	0.001 nT

3.2. SURVEY AIRCRAFT

Horizontal Gradiometer Equipped King Air 90

The Beech King Air 90 is an ideal platform for carrying out an airborne geophysical survey in these demanding environmental conditions. It is IFR equipped with twin PT6-20 turbines that will ensure reliability at both high ferry speed and slow survey speed. It is equipped with the long-range tanks capable of carrying approximately six hours of fuel.

1. Aircraft Specifications

Manufacturer	Beechcraft
Model	King Air 90
Registration	N87V
Ownership	Dynamic Aviation.
Range	5.4 hours / 1100 n miles
Cruise Speed	200 Knots, 370 Km/hr
Survey Speed	288 Km/hr
Climb	1,220 ft/min
Climb sustained	~ 500 ft/min
Fuel	Jet A with cold weather additive
Fuel Consumption	60 us gal/hr 227 litres/hr
Oil Consumption	3 liter/hr

2. Aircraft Modifications

The aircraft has three seats to accommodate the pilot, co-pilot and operator, the rest have been removed. It is equipped with long-range tanks, heavy-duty tires, cargo door and full avionics.

The aircraft has been extensively modified to support a tail stinger and two wing tip extensions. The transverse separation between the wing tip magnetic sensors is 16.12 meters and the longitudinal separation to the tail sensor is 10.78 meters. Considerable effort has been made to remove all ferruginous materials near the sensors and to ensure that the aircraft electrical system does not create any noise.

3.3. Survey Equipment and Specifications:

1. Data Acquisition System

Data Acquisition System	Records digital data from all sensors (including GPS, MAG, and altimeter)
Model	2410 Pocket PC or laptop
Manufacturer	HP Ipaq
Serial Number	071-1114-00 or equivalent
Memory Card	512 M CF card
Software	SDAS by Kroum VS Instruments Ltd.
Video acquisition	Uses DIVX compression software
Video recording	Via laptop PC via USB capture device

2. Magnetics:

Three high resolution cesium vapour magnetometers, manufactured by Scintrex, mounted in a tail stinger and two wing tips extensions; transverse separation of 16.12 metres and a longitudinal separation of 10.78 metres. The magnetic system is fully compensated post flight for aircraft manoeuvre noise

Sensor Type	Cesium Vapour
Model	CS-2 or CS-3
Manufacturer	Scintrex Ltd.
Resolution	0.001 nT counting at 0.1 per second
Sensitivity	+/- 0.005 nT
Dynamic Range	20,000 to 100,000 nT
Fourth Difference	0.02 nT
Recorded Sample Rate	0.1 seconds
Noise Envelope	0.10nT (Tail Mag)

3. Compensation Sensor

The fluxgate tri-axial magnetometer (which is used for compensation of aircraft motion) is mounted in midsection of the tail stinger and monitors aircraft manoeuvre and magnetic interference.

Sensor Type	Fluxgate
Model	TFM100-LN or equivalent
Manufacturer	Billingsley Magnetics
Description	Low noise miniature triaxial fluxgate magnetometer
Axial Alignment	> Orthogonality > +/- 0.5 degree
Accuracy	< +/- 0.75% of full scale (0.5% typical)
Field Measurement	+/- 100,000 nanotesla
Linearity	< +/- 0.0035% of full scale
Sensitivity	100 microvolt/nanotesla
Noise	< 14 picotesla RMS/–Hz @ 1 Hz

4. Radiometrics System

Radiometrics	Gamma Ray Spectrometer
Model	GRS 410
Manufacturer	Pico Envirotec Ltd.
Crystal Manufacturer	Alpha Spectra
Downwards Volume	2048 in^3 (33.6 litres) Downward
Upwards Volume	(8.4 litres) Upward
Software	Real Time Data Collection
Energy Detection Range	50KeV to 3 MeV
Count Rate	Up to 1000,000 pps communication
Collected Spectrum	256 Channels

5. Flight Path Camera

Type	Video (mounted in belly of aircraft)
Model	VCC-5774
Manufacturer	Sanyo

Element	1/3 inch CCD
Lens	wide angle adaptor typically 4 mm, ~ 60° field of view

6. Digital Imaging System

Digital Imaging System	NTSC image logged onto laptop PC
Model	USB 2000 video capture
Manufacturer	Avermedia
Software	DIVX
Format	AVI multimedia format 640x480 pixel Images can be captured in JPEG.
Media	CD or DVD Disks

7. Radar Altimeter

Type	Radar
Model	KRA-10A
Manufacturer	King
Serial Number	071-1114-00
Accuracy	Plus or Minus 5% at 50 to 2,500 feet
Radar Output	Analog for pilot, converted to digital for data acquisition

8. Barometric Altimeter

Type	Barometric
Model	LX18001AN
Manufacturer	Sensym
Source	coupled to aircraft barometric system

9. Data Acquisition

Data Acquisition	Recording only
Model	IPAQ 2410 Pocket PC
Manufacturer	Hewlett Packard
Operating System	Microsoft Windows Mobile 2003
Processor	Intel PXA270 520 MHz , 128 MB memory
Ports	Serial communication
Display	3.5" transflective colour, Up to 4 fields
Recording Media	removable memory cards Compact Flash type II
Recording Program	SDAS software by Kroum VS Instruments

10. Magnetometer Processor

Magnetometer Processor	Stand alone unit
Model	KMAG4
Manufacturer	Kroum VS Instruments
Input Range	3 ms – 10,000 ms
Sampling	10 ms - 1,000ms
Bandwidth	No input filtering
Resolution	0.005 nT
Ports	Two R232; one to GPS, one to DAS instrument time
Output	Instrument time, GPS and up to 4 magnetic fields in pT

11. Analogue Processor

Analogue Processor	Stand alone module – 2 modules per system
Model	KANA 8
Manufacturer	Kroum VS Instruments
Channels	Each module has 8 differential channels, 24 bit ADC
Video	Video overlay board
Serial Ports	CPU and GPS interfaces
Video Ports	In/out ports
Sampling	Selectable sampling for each input type as required
Analog Inputs	Radar & barometric altimeters, temp, VLF-EM, video

12. Navigation System

Navigation System	
Model	P151
Manufacturer	AgNav Inc.
Operating System	Windows
Microprocessor	CPU Pentium based
Ports	RS232 for all devices
Graphic Display	Colour Screen
Pilot Display	P202: position, left/right, navigational info

13. GPS Differential Receiver

GPS Differential Receiver	
Model	AG 132
Manufacturer	Trimble
Antenna	L1/L2
Channels	12
Position Update	0.2 second for navigation
Correction Service	Real time correction service subscription – Omnistar
Sample Rate	1 second
Accuracy	~ 3 meters

14. XDS VLF-EM System

The XDS VLF-EM System is currently being developed by Terraquest Ltd. and is included along with commercial surveys primarily to test and further develop the system but also to assist the client in their exploration program. It uses 3 orthogonal air-core coils mounted in the pod of the tail stinger, and coupled with a receiver-console, tuned to a range of 22.0 to 26.0 kHz thereby including both Cutler Maine NAA frequency 24 kHz and Seattle WA NLK frequency 24.8 kHz. Recorded parameters are the unfiltered X, Y and Z directions of the VLF-EM field.

VLF / EM	
Model	XDS
Manufacturer	Terraquest Ltd.
Primary Source	Electro-Magnetic field component radiated from government VLF radio transmitter
Parameters Measured	X, Y and Z components, absolute field
Frequency Range	22.0 - 26.0 kHz
Gain	Constant gain setting
Filtering	No filtering

4. Base Station Equipment

4.1. BASE STATION MAGNETOMETER

High sensitivity magnetic base station data was provided by a cesium vapour magnetometer logging onto a computer and with time synchronization from the GPS base station receiver.

The magnetometer was the same as used in the aircraft, a CS-2 magnetometer manufactured by Scintrex. The magnetometer processor was a KMAG manufactured by Kroum VS Instruments and the data logger was an iPAQ PDA by Hewlett Packard. The counter was powered by a 10VAC 50/60hz to 30VDC 3.0 amp power supply with an internal 12VDC fan. The logging software SDAS-1 was written by Kroum VS Instrument Ltd. specifically for the pocket pc hardware. It supports real time graphics with selectable windows (uses two user selectable scales, coarse and fine). Time recorded was taken from the base GPS receiver. Magnetic data was logged at 2Hz. Data collection was by RS232 recording ASCII string and stored on flash card.

Magnetometer Type	Cesium Vapour
Model	CS – 2
Manufacturer	Scintrex
Sensitivity	0.01 nT
Noise Envelope	0.05 nT
Sampling Interval	1 second
Minimum Range	50 -3,500 ft

4.2. BASE STATION GPS RECEIVER

Model	12 channel GPS
Manufacturer	Deluo
Type	L1, C/A code
Antenna	Built in patch
Logging Rate	1 per second
Power	5 VCD taken from iPAQ power supply

5. TESTS AND CALIBRATIONS

5.1. MAGNETIC FIGURE OF MERIT

Compensation calibration tests were performed to determine the magnetic influence of aircraft maneuvers and the effectiveness of the aircraft compensation method. The aircraft flew a square pattern in the four survey directions at a high altitude over a magnetically quiet area and perform pitches (± 5°), rolls (± 10°) and yaws (± 5°). The sum of the maximum peak-to-peak residual noise amplitudes in the total compensated signal resulting from the twelve maneuvers is referred to as the Figure of Merit (FOM) index.

5.2. RADAR ALTIMETER CALIBRATION

A radar altimeter calibration was done over the runway.

6. LOGISTICS

6.1. PERSONNEL

The contractor supplied the following properly qualified and experienced personnel to carry out the survey and to reduce, compile and report on the data:

Field:	Pilots	Jordan Yeo, Weston Thomas
	Operator	Phil Mikkonen
Office:	Senior Geophysicist	Allen Duffy
	Manager	Charles Barrie

6.2. FIELD REPORTING

The aircraft arrived in Cochrane, ON on February 28, 2007. The base station was set up and the FOM and calibration flight was on March 1st. The survey was flown concurrently with another survey to the north such that the traverse lines continued from one survey to the next. The data were separated later for each client.

A gamma ray spectrometer was also on board during this survey; although it was not requested by contract, the data are available for purchase.

The survey was completed successfully in 8 flights N87V200-2007 over a total of 17 days from March 1st to 17th including all tests and calibrations. Poor weather prohibited survey on 7 full days and a few half days. Downtime for aircraft maintenance included 1 full day and for equipment malfunction 2 days.

6.3. BASE OF OPERATIONS

The main base of operations was at Cochrane airport; the ferry distance is 120 kilometres. The base station (combined high sensitivity magnetic and GPS) was set up at the airport as far away from cultural interference as possible. Gear was stored in Wayne's hanger

6.4. ACCOMMODATION

Accommodations for the crew were the responsibility and cost of Terraquest. The crew was housed initially at Thriftlodge but changed to Best Western on March 4th. High speed internet was available and most of the time it was reliable.

7. Data Processing

7.1. DATA QUALITY CONTROL & PRELIMINARY PROCESSING

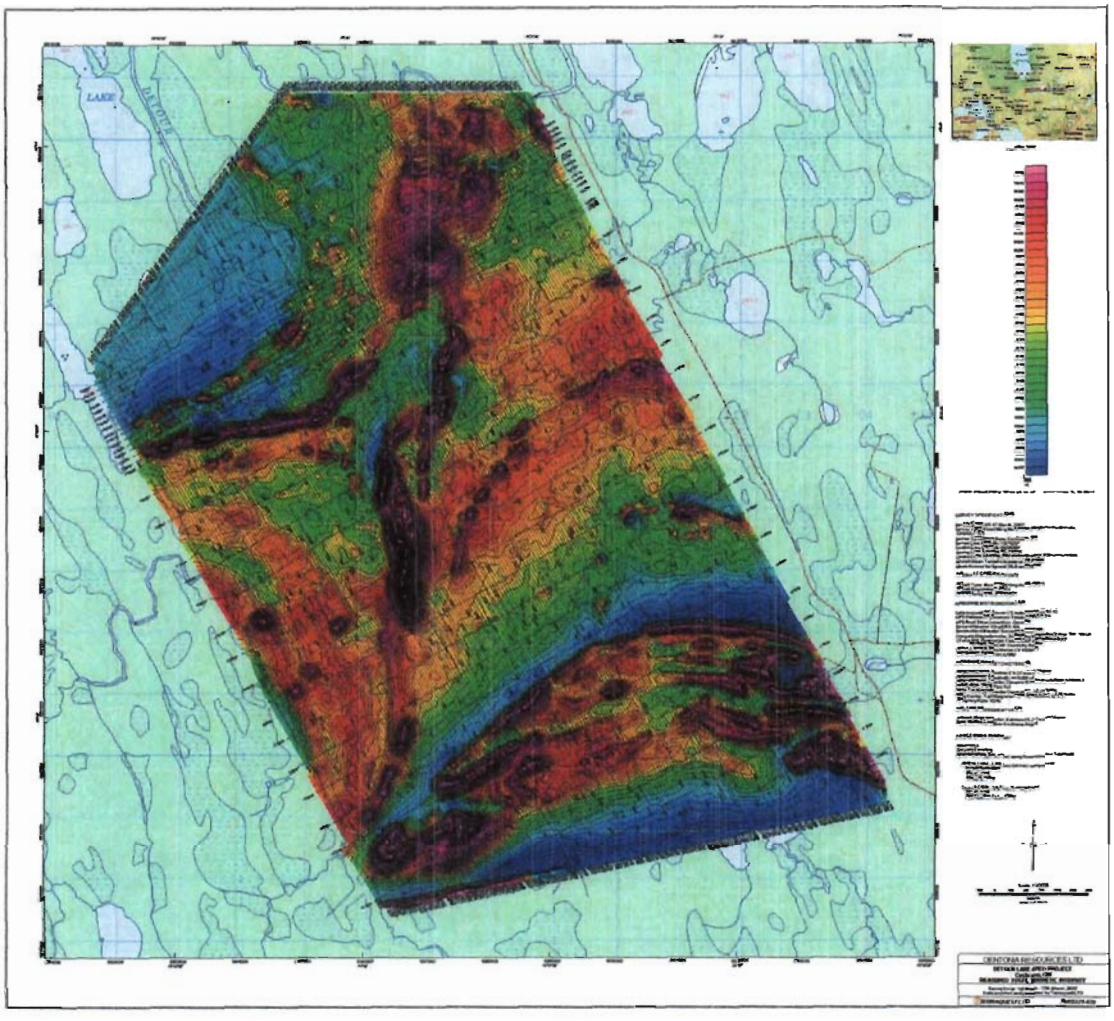
Throughout the data acquisition period, the data were monitored and reviewed thoroughly for quality control and tolerances on all channels. This included any corrections to the flight path, making flight path plots, importing the base station data, creating a database on a flight-by-flight basis, and posting the data. All data were checked for continuity and integrity. Any errors or omission or data beyond tolerances were flagged for re-flight and the crew was notified, ready for their flight in the morning.

Although not requested by contract, Terraquest Ltd. had a gamma ray spectrometer on board during this survey. Despite the presence of snow coverage, preliminary processing of the radiometric data indicates that the results have some integrity. These data are available to purchase.

7.2. FINAL MAGNETIC DATA PROCESSING

In the first step the raw magnetic data was compensated for aircraft motion effects using data from the fluxgate sensor. The lateral magnetic gradient was calculated by subtracting the left wing sensor reading from the right wing sensor reading and dividing the resulting value by the tip-to-tip separation (16.12 metres), yielding the measurement expressed as nT/m. The longitudinal gradient was similarly calculated by subtracting the tail sensor measurement from the average of the wing-tip values normalized by the wing-centre to tail sensor separation (10.78 metres). Both gradients were "DC shifted" by subtracting the median value on a line-by-line basis and converted from aircraft-centric to survey grid orientation by selectively inverting (multiplying by -1) in the south and westbound directions. The gradient data was subsequently verified by generating a Reconstructed Total Field (RTF) grid using the Lateral and Longitudinal data grids as input. The RTF is a coherent, detailed and well leveled product but does not contain the low to lower-mid wavelength components; because the units are pseudo nT it should not be used for quantitative modelling.

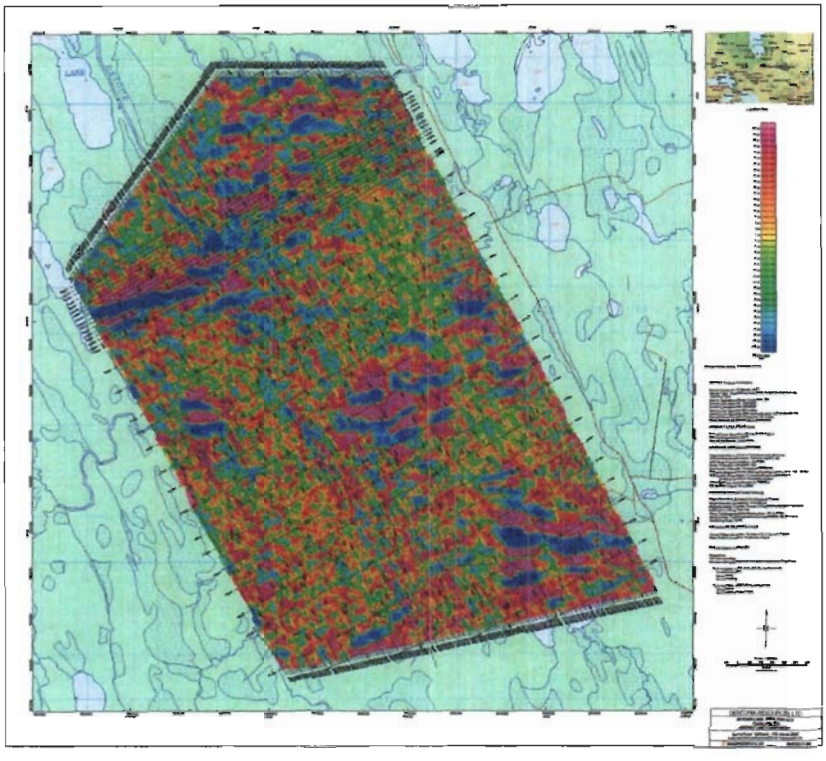
In the final correction process, the compensated tail sensor magnetic data were initially corrected with standard tie-line intersection leveling. Tie line leveled Total Field Magnetic data from the Left Wing, Right Wing and Tail Sensors were subsequently subjected to an enhanced micro-leveling procedure, operating on the regional magnetic component (isolated by removal of the reconstructed Total Field). Leveling in this manner minimizes "damage" to higher frequency geologic anomalies and improves upon residual errors left by traditional tie-line leveling. The vertical magnetic gradient was subsequently calculated from the final processed total magnetic field data grid (originating from the Tail Sensor). The finalized datasets were gridded with minimum curvature procedure with a cell size of 10 metres.

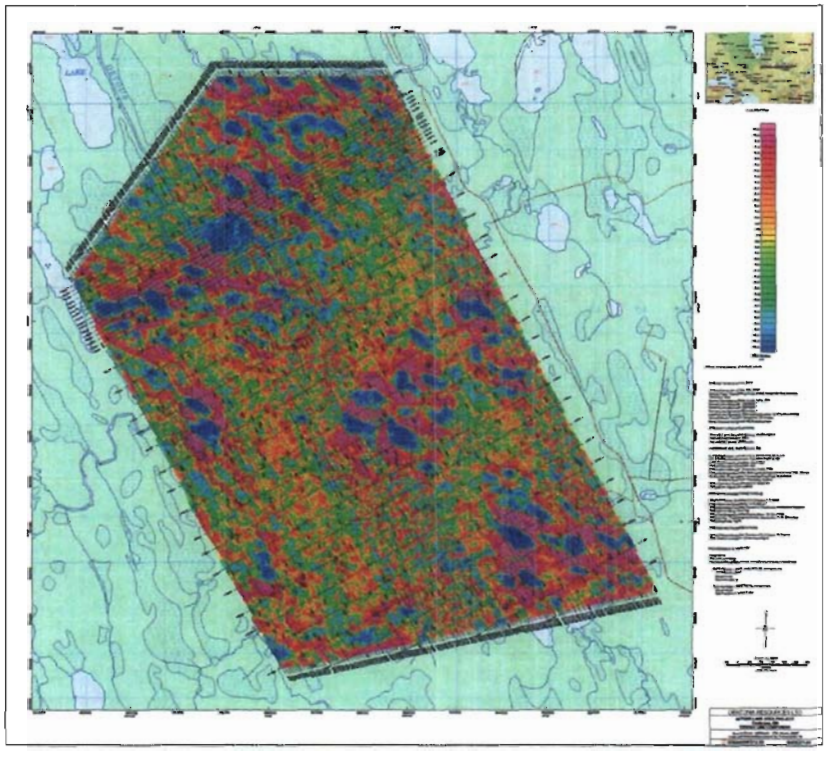


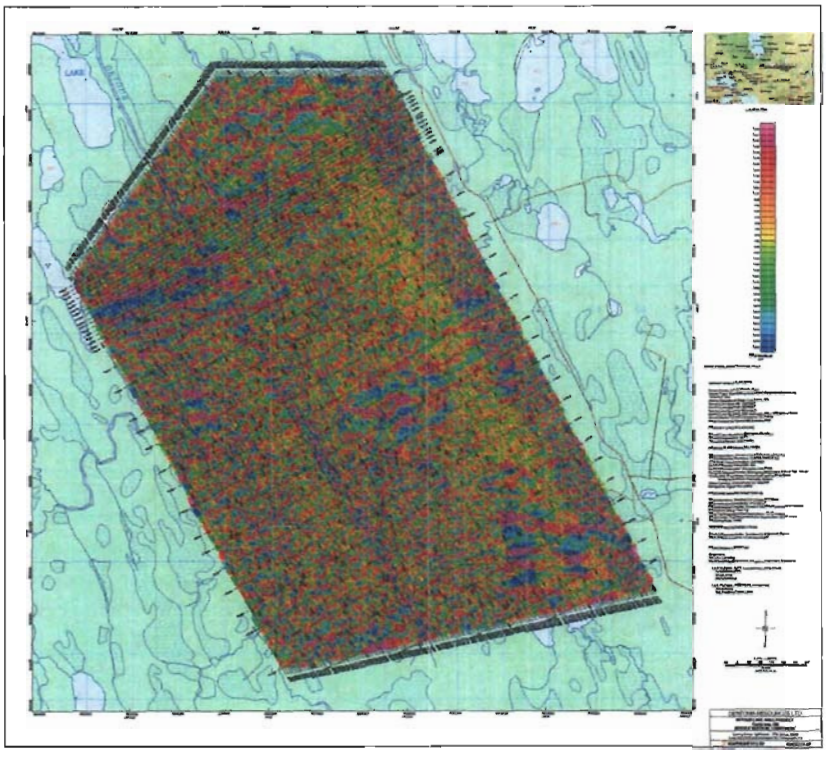
7.3. XDS VLF-EM DATA PROCESSING

The Terraquest XDS system produced relatively consistent line-to-line and flight-to-flight results. The Terraquest XDS-VLF system is currently in the developmental stage and as such only basic processing has been performed on this data. The x, y and z components of the XDS-VLF-EM data in the range of 22.0 to 26.0 kHz (which include Cutler and Seattle transmitter signals), were inverted, normalized, mean leveled and micro-leveled. A 5 point positive Fraser Filter was applied to the vertical field. The data were presented as contour plots with a grid cell size of 10 metres of the a) Line Field (Vcx) coil, b) Ortho Field (Vcp) coil, and c) Vertical Field (Hcp) coil.

The following maps show the Line, Ortho and Vertical components respectively.







7.4. LIST OF FINAL PRODUCTS

Three copies of the following colour maps and two copies of black and white were produced at a scale of 1:10,000 projection NAD 83 UTM zone 17:

- Map 1: Flight Path
- Map 2: Total Magnetic Intensity of Tail Sensor (nT)
- Map 3: Calculated Vertical Derivative of Tail Sensor (nT/m)
- Map 4: Measured Lateral Magnetic Gradient (nT/m)
- Map 5: Measured Longitudinal Gradient (nT/m)
- Map 6: XDS VLF-EM Line Component
- Map 7: XDS VLF-EM Ortho Component
- Map 8: XDS VLF-EM Vertical Component
- Map 9: Digital Terrain Map (metres)

- Digital grid archives on CD-ROM in GEOSOFT
- All GEOSOFT MAP files used to generate the above listed final maps
- Digital Profile Archives on CD-ROM in GEOSOFT GDB format (compatible with 4.1 or higher)

8. SUMMARY

An airborne tri-sensor, high sensitivity magnetic and XDS VLF-EM survey was performed at 70 metre mean terrain clearance, 50 metre line intervals, 500 metre tie line interval, with data sample points at 6-8 metres along the flight lines. A high sensitivity magnetic base station located at the airport in Cochrane, ON recorded the diurnal magnetic activity and reference GPS time during the survey for adherence to survey tolerances.

The data were subjected to final processing to produce the following 1:10,000 scale colour maps with projection NAD83 UTM zone 17: a) total magnetic intensity and calculated first vertical derivative of tail sensor, b) measured lateral and longitudinal magnetic gradients, c) XDS VLF-EM Line, Ortho and Vertical components, d) flight path and e) digital terrain model.

All data have been archived as Geosoft database (GDB) plus all MAP and GRID files used to make the maps.

Respectfully Submitted,

Charles Barrie, M.Sc.
Vice President
Terraquest Ltd.

9. APPENDICES

9.1. APPENDIX I - CERTIFICATE OF QUALIFICATION

I, Charles Barrie, certify that I:

1) am registered as a Fellow with the Geological Association of Canada and work professionally as a geologist,
2) hold an Honours degree in Geology from McMaster University, Canada, obtained in 1977,
3) hold an M.Sc. in Geology from Dalhousie University, Canada, obtained in 1980,
4) am a member of the Prospectors and Developers Association of Canada,
5) am a member of the Canadian Institute of Mining , Metallurgy and Petroleum,
6) have worked as a geologist for over twenty five years,
7) am employed by and am an owner of Terraquest Ltd., specializing in high sensitivity airborne geophysical surveys, and
8) have prepared this operations and specifications report pertaining to airborne data collected by Terraquest Ltd..

Markham, Ontario, Canada

Signed

Charles Q. Barrie, M.Sc.
Vice President, Terraquest Ltd.

9.2. APPENDIX II – DAILY LOG

Date:	February 28, 2007
Weather:	Flyable
Flight numbers:	
Lines Flown:	
Notes:	Mobilizing
	Crew arrived in Cochrane
	Rental truck picked up in Timmins
	Accommodations secured, moving on Sunday March 4
Date:	March 1, 2007
Weather:	Flyable
Flight numbers:	N87V200
Lines Flown:	
Notes:	Wayne's hanger used for base station and storing gear
	FOM and RAT completed
	Base station will not lock
	Tried two sensors each with two cables,Changed sensor location six times
Date:	March 2, 2007
Weather:	Snow storm
Flight numbers:	
Lines Flown:	
Notes:	Base station Testing completed
	Sensors suspect, both base station and spare
	Two sensors shipped from office to Cochrane
Date:	March 3, 2007
Weather:	Snow storm
Flight numbers:	
Lines Flown:	
Notes:	Replacement sensors arrived
	CS3 S/N 0311047, H8
	CS3 S/N 0311047 installed into base station
	Base station tested, Seems to be working OK,
	Suspect sensors shipped from Cochrane to office
Date:	March 4, 2007
Weather:	Flyable
Flight numbers:	N87V201
Lines Flown:	1 to 58 Inclusive
Notes:	Morning flight aborted due too dead battery
	Changed hotels, Best Western is better then Thriftlodge
	Informed first FOM was no good

Date:	March 5, 2007
Weather:	High winds, low visibility
Flight numbers:	
Lines Flown:	
Notes:	H8 tested and is not functioning properly (base station spare)

Date:	March 6, 2007
Weather:	Flyable
Flight numbers:	N87V202 AND N87V203
Lines Flown:	59 to 94 Inclusive
Notes:	N87V202 aborted tail magnetometer did not lock Most likely due to -35°c Temperatures Second FOM completed N87V203

Date:	March 7, 2007
Weather:	Flyable
Flight numbers:	N87V204
Lines Flown:	95 to 105 Inclusive
Notes:	Morning flight not possible due too right engine not starting Afternoon flight aborted due too turbulence and low visibility

Date:	March 8, 2007
Weather:	Flyable
Flight numbers:	N87V205
Lines Flown:	106 to 144 Inclusive
Notes:	Plane grounded in morning due too faulty enunciator panel Enunciator panel repaired in morning

Date:	March 9, 2007
Weather:	Precipitation over grid, high winds and low ceiling
Flight numbers:	
Lines Flown:	
Notes:	Ground test of control surfaces completed Arc from behind instruments observed Test aborted Crew informed that fourth difference noise is extremely high

Date:	March 10, 2007
Weather:	Freezing rain, snow, hail
Flight numbers:	
Lines Flown:	
Notes:	Arcing problem investigated, no solution Magnetometer noise investigated, no solution Cleared to continue production Third FOM required