MAR 20070012: BUFFALO HILLS

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ASSESSMENT REPORT, "PART B" & "PART C"

for the

Buffalo Hills Property (2007)

ASSESSMENT REPORT

&

APPENDICES

report submitted to:

COAL AND MINERAL DEVELOPMENT BRANCH

Ministry of Energy

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Document Date: May 7, 2007

Confidential Until: May 7, 2008

0.1 ABSTRACT

This report is being submitted to satisfy the assessment work requirements outlined in section 8(1) of the Metallic and Industrial Mineral Tenure Regulations. During the past ten months Ashton Diamonds (Canada) Inc. has incurred exploration expenditures totaling $1,792,725.35 to further evaluate diamondiferous kimberlites K6, K14, K91 and BH225. Work being submitted in this report consists of: three ground gravity geophysical surveys, two ground magnetic geophysical surveys, 15 rotary holes, 13 diamond drill holes and four sample pits. All exploration activities took place on 69 contiguous Metallic and Industrial Mineral Permits (MIMPs) in the Buffalo Head Hills Region of Alberta. These 69 MIMPs in combination with nine non-contiguous MIMPs are collectively referred to as the Buffalo Hills Property.

COMPANY:	Ashton Mining of Canada Inc. Ashton Diamonds (Canada) Inc. 3869008 Canada Limited
MIMP:	♦ 9305010852 ♦ 9305031074 to 9305031082 ♦ 9305031084 to 9305031108 ♦ 9307010923 to 9307010935 ♦ 9396060030 ♦ 9396060035, 9396060036 ♦ 9396060038 to 9396060043 ♦ 9396060049 to 9396060052 ♦ 9396060054, 9396060055 ♦ 9396060057 to9396060060 ♦ 9396060066 to9396060068 ♦ 9396060073, 9396060074 ♦ 9396080086 ♦ 9397010063 ♦ 9397030016 to 9397030018 ♦ 9397030022
Assessment Period:	May 1, 2006 to March 31, 2007
NTS:	84B10 to 84B15, 84C09, 84C16, 84F01, 84F08 84G02 to 84G06
Administrative Location:	Northwest Corporate Region 1) Lesser Slave Corporate Area (Lakeshore District) 2) Peace Corporate Area (Area 6 & Area 10)
Geographic Region:	Buffalo Head Hills
Legal Location:	Township 88 to Township 95 Range 4 to Range 14, W5M

ASSESSMENT REPORT, "PART B"
for the
Buffalo Hills Property
May 01, 2006 – March 31, 2007

BREAKDOWN STATEMENT OF PROJECT WORK

Work submitted with this report comprises:

Geophysical Surveying $291, 688.71
43.175 line kilometers of ground gravity surveying
10.65 line kilometers of ground magnetic surveying

Drilling $1,191,417.95
862 metres of rotary drilling in 15 drill holes
1,590 metres of HQ diamond drilling in 13 drill holes

Bulk Kimberlite Sampling $309,618.69
K14 – Estimated 150 tonnes from 3 pits yielding 50 tonnes each.
K6 – Estimated 250 tonnes from a single sample pit.

Project Work Expenditures **Total** **$1,792,725.35**

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1.0 INTRODUCTION

This report summarizes work done on the Buffalo Hills Property that is being applied to satisfy assessment work requirements outlined in section 8(1) of the Metallic and Industrial Mineral Tenure Regulations. The report is divided into eight sections and four appendices. The report summarizes property geology and exploration work performed while the appendices are dedicated to land and exploration data.

2.0 PROPERTY DESCRIPTION & LOCATION

The Buffalo Hills Property consists of 78 Metallic and Industrial Mineral Permits (MIMPs) totaling 382,456.00 hectares (Appendix A). Collectively the permits form a square approximately eight townships east to west by seven townships north to south. MIMPs range in size from 256 hectares to 9216 hectares and can be described by the ATS system as occurring within townships 88 to 95 and ranges 4 to 14. The western boundary of the property is located approximately 89 kilometers northeast of Peace River and the southern boundary is located approximately 157 kilometers north of Slave Lake. The closest community to the property is Red Earth Creek located just outside the southeastern property boundary (Figure 1).

3.0 PHYSIOGRAPHY

The property is characterized by a striking change in relief from the Buffalo Head Hills on the western half of the property to the Loon River Lowlands on the eastern half. The Buffalo Head Hills have a maximum elevation of 820 metres above mean sea level and are covered by a northern boreal forest punctuated by streams and creeks draining into the Loon River Lowlands. The lowlands occur at an elevation of 487 metres above mean sea level and are marked by vast tracts of muskeg. Seismic lines, access roads and clear cuts are common features throughout the property.

4.0 PROPERTY GEOLOGY

Base geological data for the property area is summarized in the following three subsections.

4.1 Surficial Geology

The most recent glacial deposition occurred during the Wisconsin retreat of the Laurentian ice sheet. Two distinct deposit types dominate the property. The first, a fine-grained glaciolacustrine sediment of silt and clay dominates the eastern half of the property while the second, a glacial till blanket, dominates the western half (Figure 2). Drift thickness varies considerably across the property (Figure 3). In general, the thickest depositional sequences (>150 meters) correspond with the glaciolacustrine sediment on the eastern half of the property. The western half is much more variable with drift ranging between 15 and 150 meters. The recorded ice flow directions vary throughout the properties (Figure 2). In general, regional ice flow movement was to the southwest and southeast, however evidence of local movement to the south and west has been noted.

4.2 Bedrock Geology

Three Cretaceous sedimentary formations underlie the property (Figure 4); the Upper Cretaceous Smokey Group, the Upper Cretaceous Dunvegan Formation and the Middle Cretaceous Shaftsebury Formation. The Smokey Group forms the top of the Buffalo Head Hills. Interpreted as a marine foredeep, the Smokey Group is a dark grey shale that is sideritic to calcareous in composition. Underlying the Smokey Group is the older Dunvegan Formation, which is a marine unit of conglomerate, sandstone, siltstone, and shale that is locally expressed in the geology. The oldest unit, the Shaftsebury Formation, underlies the central and the northwestern portions of the property group. Interpreted as a foredeep clastic wedge, it is both marine and non-marine in origin, consisting of deltaic fine-grained quartzose sandstone, a dark gray fossiliferous silty shale and laminated siltstone.

4.3 Basement and Structural Geology

The property is situated on the Early Proterozoic Buffalo Head Terrain. The Peace River Arch is a northeast trending structural feature south of the property. The Arch, characterized by uplift and subsidence, was active in the Late Proterozoic to the Late Cretaceous (Figure 5).

5.0 EXPLORATION WORK

The following sections describe exploration work that is being applied to satisfy the assessment filing requirements on the Buffalo Hills Property. All exploration expenditures are outlined in Part "A" of the report along with a notarized statement of expenditure, a permit maintenance map, a permit maintenance table and notice of designation forms. Work consisted of ground geophysical surveys, drilling and bulk sampling.

5.1 Ground Geophysics

Geophysical work consists of three ground gravity surveys and two ground magnetic surveys. Details for both survey types are outlined in the following two sections. Plots for all surveys are located in Appendix "B".

5.1.1 Ground Gravity Surveys

MEG Systems out of Calgary was contracted to perform ground gravity surveys. The survey program lasted 43 days from October 25 to December 2006. Crews stayed at the Red Earth Inn and were flown by Great Slave Helicopters to the site 55 kilometers away daily.

Survey lines were placed with a compass and differential GPS. Stations were marked at 50 meter intervals along each line. Elevations relative to a base value at each location were measured with a chain level. Cutters were hired from Loon River Cree Contractors to facilitate the survey by clearing the lines of thick vegetation.

A LaCoste-Romberg Model G-239 gravity meter was utilized for the survey. All gravity data are in milligals (mgals). Bouger Gravity values calculated at 2.0 g/cc were made to isolate local

anomalous responses. A gravity base station was established in Red Earth for instrument drift calculations.

A large 40.6 kilometres grid (841 stations) was surveyed over the K14, BH225 and K91 kimberlites. The primary objective for this survey was to gain additional geophysical data on the shape and dimensions of the kimberlites and assess the vicinity for additional kimberlite targets. Survey lines ran east to west and range in length from one to 3.4 kilometers. Lines were spaced at 100 metres for most of the grid. The entire grid dimensions measure approximately 3.0 kilometers north-south by 1.6 kilometres east-west.

Single north-south profile lines were done over kimberlite K5 and anomaly BH336. The K5 profile was 1.6 kilometres (33 stations) and was conducted to obtain additional geophysical data over the kimberlite. BH336 was selected from an Airborne Gravity survey flown in 2004. The profile line was completed to ground verify the airborne target.

Table 1 summarizes the ground gravity surveys.

Table 1: Ground Gravity Survey Summary 2006

#	Anomaly	Datum	Zone	Easting	Northing	Line Km
1.	K14	NAD27	11	582,950	6,315,150	40.6
2.	K91	NAD27	11	581,800	6,317,050	
3.	BH225	NAD27	11	582,670	6,315,680	
4.	KJ2	NAD27	11	585,775	6,310,080	0.975
5.	K5	NAD27	11	582,600	6,306,200	1.6
					Total:	43.175

5.1.2 Ground Magnetic Surveys

Apex Geoscience Ltd. out of Edmonton was contracted to perform ground magnetic surveys over anomalies K82 and BH213. The survey program lasted three days from January 26 to 28, 2007. Survey crews accessed the sites by pickup and snow mobile. Two Gem Systems GSM 19 magnetometers were utilized for the survey, one as the rover magnetometer and the other as a base station. All magnetic values are in nanoteslas (nT) and were corrected daily for diurnal variation. Table 2 summarizes the ground magnetic surveys.

Both K82 and BH213 had been surveyed previously in the late 1990's and K82 was drilled in 1998. The primary objective of the survey program was to re-evaluate K82 and BH213 kimberlite targets and re-establish ground control.

Survey lines at K82 were oriented north to south and vary in length from 250 to 350 metres. Line spacing was primarily 25 metres with furthest east and west lines having 50 metre separation. Stations were marked with flagging at 12.5 metre intervals. The entire grid consists of 304 stations for a total length of 3.825 kilometers. Approximate grid dimensions are 300 metres east-west by 350 metres north-south.

BH213 survey lines were orientated north to south and range in length from 200 metres to 600 metres. Line spacing was consistent at 25 metres over the entire grid and stations were marked at 12.5 metres intervals. The entire grid consists of 563 stations for a total length of 6.825 kilometers. Approximate grid dimensions are 400 metres east-west by 600 metres north-south

Table 2: Ground Magnetic Survey Summary 2007

#	Anomaly	Datum	Zone	Easting	Northing	Line Km
1.	K82	NAD27	11	584,700	6,311,600	3.825
2.	BH213	NAD27	11	583,280	6,318,274	6.825
					Total:	10.65

5.2 Drilling

The primary objective for the 2007 drill program was to further delineate the size and shape of diamondiferous kimberlites K6, K14, K91 and BH225. The drill program was conducted during February and March 2007 and utilized both rotary and hydrostatic drill rigs. Drill data is contained in Appendix "C".

5.2.1 Access & Drill Site Preparation

Access to the drill sites was by winter road. C. Stewart Contracting of High Prairie, Alberta was contracted to prepare access and drill pads. A Caterpillar D-6 bulldozer was used to clear existing right of ways and seismic lines of snow and woody debris. New access routes were cut as close to existing lines as possible and, as with previous Ashton programs, timber avoidance was practiced. Once the access routes were established a grader from BMW Industrial Specialties was contracted to maintain the road.

As with the access routes a Caterpillar D-6 bulldozer was utilized for drill site preparation. New drill sites were located using a GPS and marked with flagging tape. Existing drill sites were utilized where possible. A Linkbelt 290 track mounted hoe contracted from Boisson Contracting Inc. was used for excavating drill sumps.

Cameron Brothers Ltd of Red Earth Creek Alberta hauled water necessary for drill operations. Most water was drawn from local water sources, however during cold weather it was necessary to purchase heated water from Red Earth.

5.2.2 Rotary Drilling

A truck mounted rotary drill rig was contracted from Hill Drilling Ltd. of Thorhild, Alberta. The rotary rig was utilized for vertical overburden drilling and the placement/cementing of steel casing in preparation for diamond drilling. Casing was placed only when kimberlite was intersected. No samples were obtained from the rotary drill holes.

A total of 15 vertical holes were completed for a total distance of 862 metres. Table 3 summarizes the rotary drilling.

Table 3: Rotary Drill Hole Summary 2007

#	Hole ID	Kimberlite	Datum	Zone	Easting	Northing	Length (m)	Dip	Azimuth
1.	RH14-07-01	K14	NAD 27	11	583,096	6,314,900	91.4	-90	n/a
2.	RH14-07-02	K14	NAD 27	11	583,119	6,315,029	50.3	-90	n/a
3.	RH14-07-03	K14	NAD 27	11	583,111	6,315,221	43.6	-90	n/a
4.	RH14-07-04	K14	NAD 27	11	582,761	6,315,211	115.8	-90	n/a
5.	RH14-07-05	K14	NAD 27	11	582,797	6,314,906	42.7	-90	n/a
6.	RH14-07-06	K14	NAD 27	11	582,851	6,315,199	21.41	-90	n/a
7.	RH225-07-01	BH225	NAD 27	11	582,605	6,315,700	47.2	-90	n/a
8.	RH225-07-02	BH225	NAD 27	11	582,505	6,315,696	45.7	-90	n/a
9.	RH6-07-01	K6	NAD 27	11	585,402	6,308,550	33.64	-90	n/a
10.	RH6-07-02	K6	NAD 27	11	585,449	6,308,455	103.6	-90	n/a
11.	RH91-07-01	K91	NAD 27	11	581,858	6,317,201	26.21	-90	n/a
12.	RH91-07-02	K91	NAD 27	11	581,851	6,316,951	39.62	-90	n/a
13.	RH91-07-03	K91	NAD 27	11	581,958	6,317,206	51.82	-90	n/a
14.	RH91-07-04	K91	NAD 27	11	582,101	6,316,686	51.82	-90	n/a
15.	RH91-07-05	K91	NAD 27	11	581,904	6,317,303	97.54	-90	n/a

5.2.3 Core Drilling

A track mounted hydrostatic core rig was contracted from Connors Drilling (now Foraco Drilling Ltd.) of Kamloops British Columbia. A total of 13 HQ3 sized core holes were completed for a total distance of 2110 metres. When the rotary pilot holes are taken into account the total distance cored was 1590 metres.

Drill Core was logged in the Ashton field camp and shipped to Vancouver for storage and possible future analysis. Table 4 summarizes the diamond drill holes completed.

Table 4. Diamond Drill Hole Summary 2007

#	Hole ID	Kimberlite	Datum	Zone	Easting	Northing	Length (m)	Dip	Azimuth
1.	DDH14-07-01	K14	NAD 27	11	583,111	6,315,221	200	-90	n/a
2.	DDH14-07-02	K14	NAD 27	11	582,797	6,314,906	199	-90	n/a
3.	DDH14-07-03	K14	NAD 27	11	582,761	6,315,211	188	-90	n/a
4.	DDH14-07-04	K14	NAD 27	11	582,801	6,315,099	104	-45	270
5.	DDH14-07-05	K14	NAD 27	11	582,953	6,315,048	184	-45	135
6.	DDH14-07-06	K14	NAD 27	11	582,851	6,315,051	244	-45	225
7.	DDH225-07-01	BH225	NAD 27	11	582,605	6,315,700	164	-90	n/a
8.	DDH225-07-02	BH225	NAD 27	11	582,505	6,315,696	200	-90	n/a
9.	DDH6-07-01	K6	NAD 27	11	585,402	6,308,550	81	-90	n/a
10.	DDH91-07-01	K91	NAD 27	11	581,858	6,317,201	189	-90	n/a
11.	DDH91-07-02	K91	NAD 27	11	581,851	6,316,951	74	-90	n/a
12.	DDH91-07-03	K91	NAD 27	11	581,958	6,317,206	152	-90	n/a
13.	DDH91-07-04	K91	NAD 27	11	582,101	6,316,686	131	-90	n/a

5.3 BULK SAMPLING

The primary objective of the bulk sample program was to excavate a significant tonnage of kimberlite and test it for diamonds. A total of four sample pits were excavated during the exploration program, three sample pits at the K14 kimberlite and one pit at the K6 kimberlite. The pits were excavated in areas of kimberlite outcrop or shallow kimberlite subcrop.

A LinkBelt 290 track mounted hoe equipped with riper tooth and bucket was used for the excavation. Excavated material was placed directly into a rented track mounted Hitachi crusher and all crushed material was deposited directly into bulk bags. Bags were sealed with a cable seal, transferred to a tractor trailer and shipped to a storage facility in Port Coquitlam for future processing in a DMS plant. To date no material has been processed.

Table 5: Sample Pit Summary 2007

#	Pit ID	Kimberlite	Datum	Zone	Easting	Northing	Estimated Tonnes
1.	K14-Pit1-07	K14	NAD27	11	582,889	6,315,114	50
2.	K14-Pit2-07	K14	NAD27	11	582,807	6,315,096	50
3.	K14-Pit3-07	K14	NAD27	11	582,871	6,315,262	50
4.	K6-Pit1-07	K6	NAD27	11	585,343	6,308,666	250
						Total:	400

6.0 CONCLUSION

Exploration work conducted on the property during the past 10 months included three ground gravity geophysical surveys, two ground magnetic geophysical surveys, 15 rotary holes, 13 diamond drill holes, and four sample pits. The primary objective of exploration work was to further evaluate known diamondiferous kimberlites K6, K14, K91 and BH225. Ancillary objectives were to gain additional geophysical data over kimberlite K5 and anomalies K82, BH213 and BH336. The total cost for exploration activities amounts to $1,792,725.35.

No other gravity anomalies were derived from the large ground gravity survey over the K14, BH225 and K91 kimberlites and surrounding area. Kimberlite dimensions derived from the gravity survey correspond well with the dimensions obtained from previous magnetic surveys and give no indication of previously unknown lobes or vents extruding from the main kimberlite bodies.

The ground gravity profile over kimberlite K5 illustrates a gravity anomaly that corresponds to the known dimensions of the kimberlite body. Airborne gravity anomaly BH336 was not verified by the ground gravity profile.

Ground magnetic surveys over BH213 and K82 re-established ground control over the previously surveyed anomalies. Anomaly BH213 corresponds with a glaciofluvial feature on the

ground and as such was not deemed to be a priority target. Anomaly K82 indicated that a previous drill hole had been placed correctly and no further work is anticipated at this location.

Delineation drilling at K14 in conjunction with work from earlier programs indicates that K14 has approximate dimension of 400 metres east-west and 350 metres north-south.

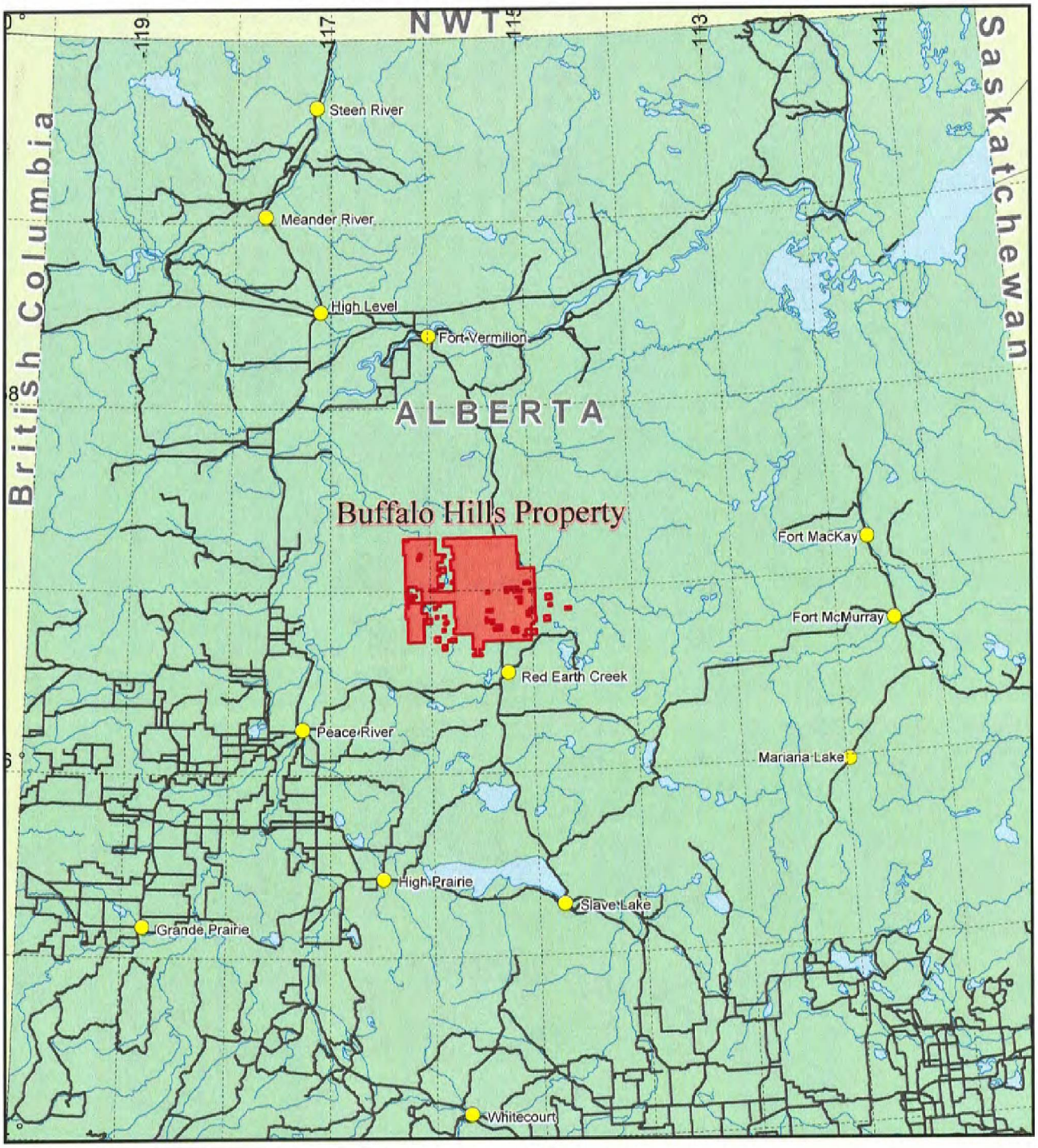
Drill data obtained from K91 in conjuction with work from previous program, confirms the perimeter of the kimberlite falls within the geophysical signature. However, a thin near surface kimberlite horizon intersected at drill hole DDH91-07-02 suggests kimberlite K91 may be discontinuous and consist of a northern and southern lobe.

K6 drilling encountered difficulties due to the presence of gravels and sands within the overburden. Intersected kimberlite was not competent and is most likely eroded kimberlite gravel or talus from the main K6 body. Additional delineation drilling is recommended to confirm the dimensions of K6.

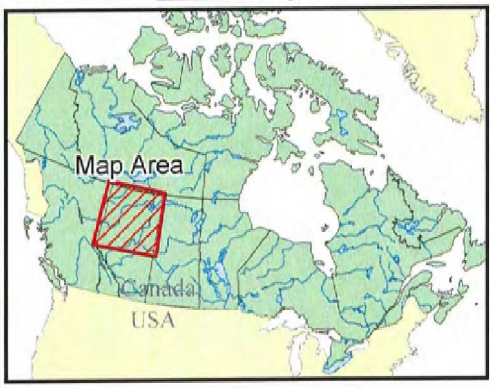
An estimated total of 150 tonnes of kimberlite was removed from three separate pits at K14 and 250 tonnes of kimberlite form one pit at K6. The kimberlite was removed to further evaluate the diamond content of the respective kimberlites. The kimberlite samples are being stored for processing at a future date.

Bulk sample material needs to be processed and results compiled with previous work to evaluate the content and value of diamonds in the K6 and K14 kimberlites. These results, taken together with kimberlite geometry data, can be utilized evaluate the economic potential of each.

The Buffalo Hills Property is host to 38 kimberlites. Additional geophysical anomalies need to be explored and further drilling should be conducted on known kimberlites to determine if there are multiple phases with differing diamond content.



Location Map



50 0 50 100 150

Kilometres

Scale: 1:3,500,000

Legend

- Ashton Property
- Road

Ashton Diamonds (Canada) Inc.

FIGURE 1

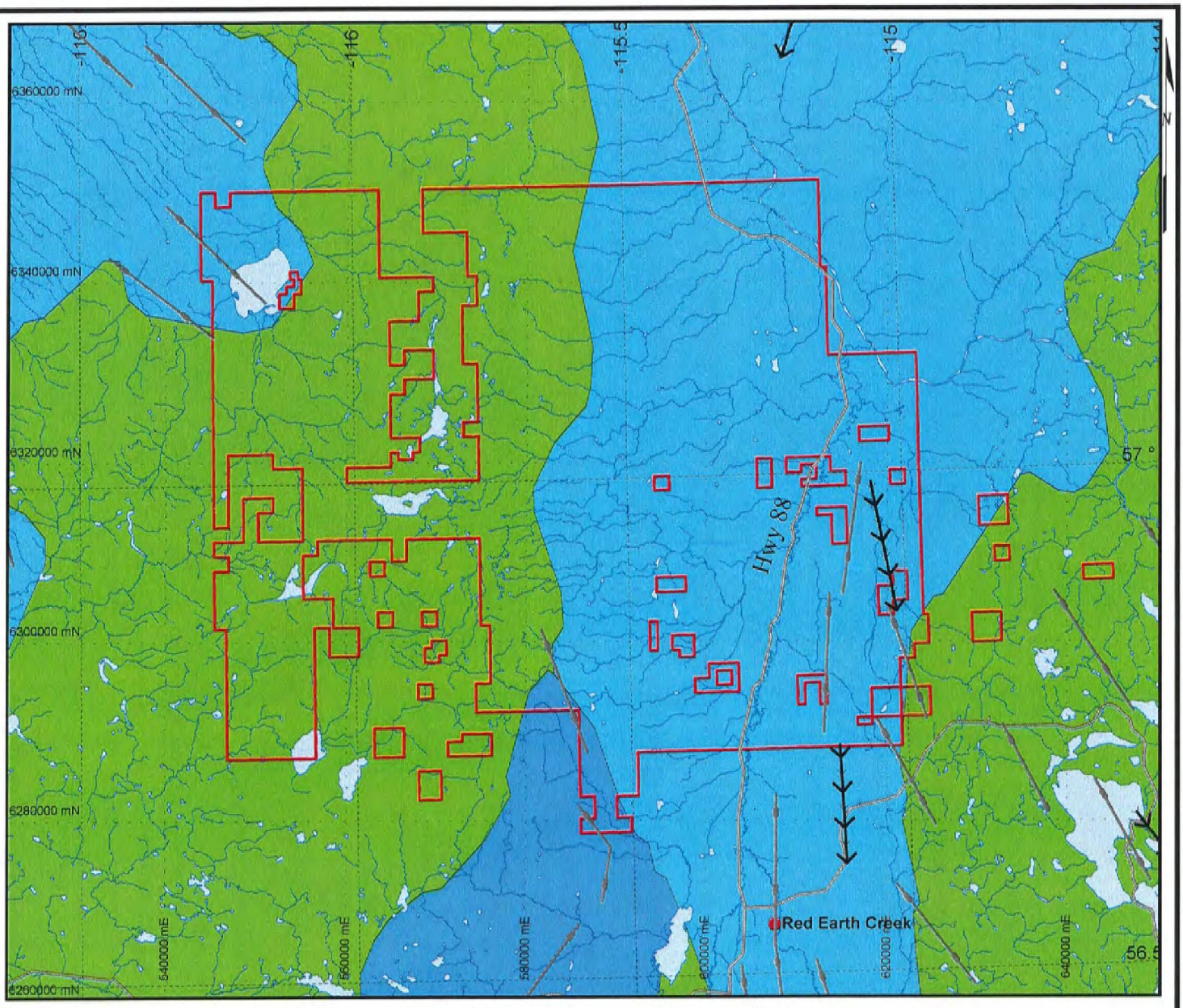
Buffalo Hills Property Location

Apr. 16, 2007

Author: SS

Proj: UTM11 NAD27

J:\Maps\AB\Alberta Assessment\BHillsProperty



10 0 10 20

Kilometers

Scale: 1:650,000

Map Location

Legend

- Coarse Grained (Glacio) Lacustrine
- Fine Grained (Glacio) Lacustrine
- Till Blanket
- Property Outline
- Road
- General Ice Flow (Known)
- General Ice Flow (Unknown)

Citation:
R. J. Fulton
1996: Surficial materials of Canada;
Geological Survey of Canada, Map 1880A.

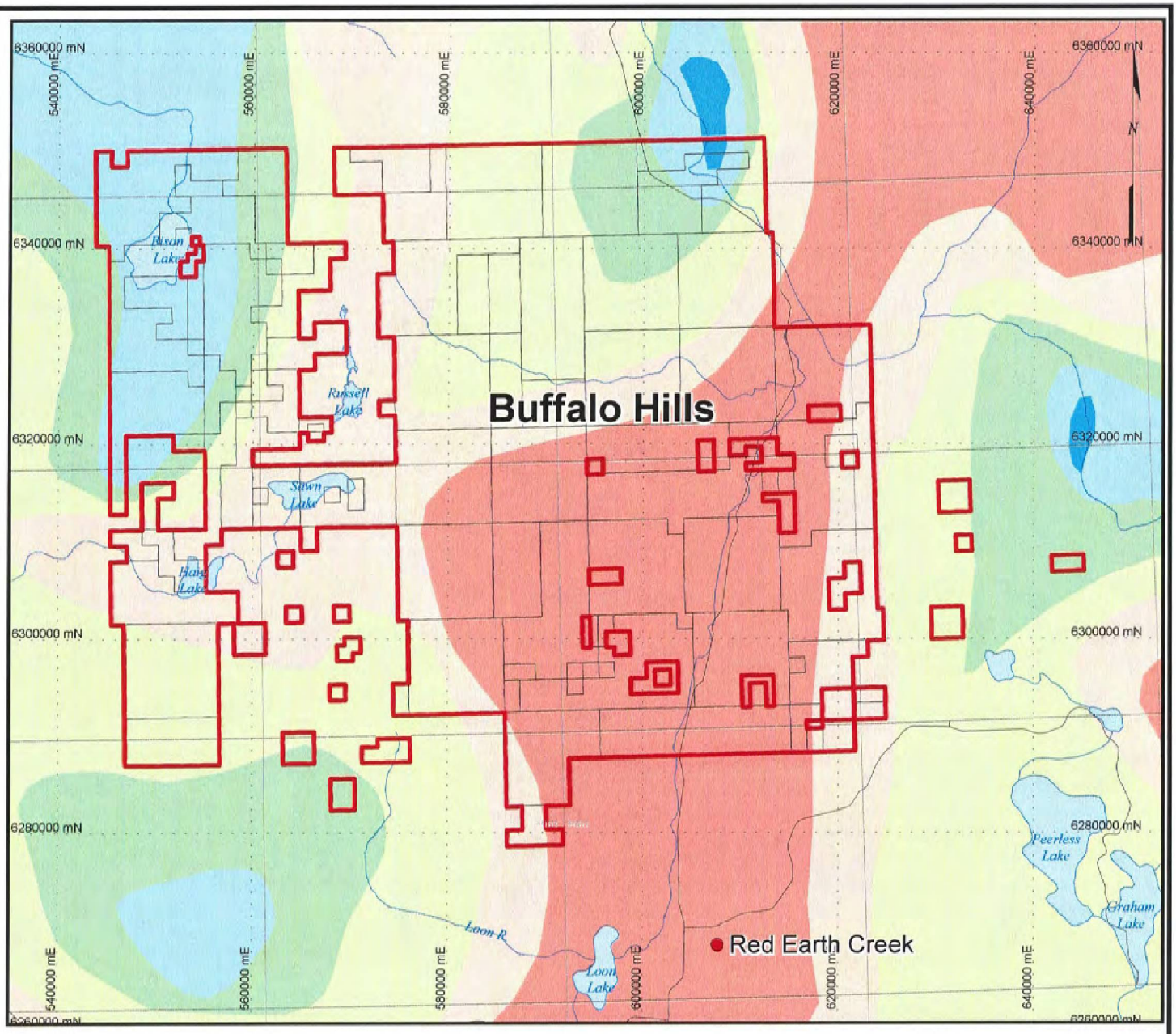
Ashton Diamonds (Canada) Inc.

April 23, 2007
Author: SS
Proj: UTM12 NAD27

Figure 2

Buffalo Hills Property
Surficial Geology

J:\7Maps\AB\Alberta Assessment\Surficial\



Location Map

Legend

- Ashton Property
- Claim
- Road
- NTS Grid 50

Drift Legend

- 0m
- 0 - 15m
- 15 - 45m
- 45 - 90m
- 90 - 150m
- > 150m

Note: Interpreted drift thickness.
Modified from Pawlowicz & Fenton (1995)

12 24 36

Kilometers
Scale: 1:600,000

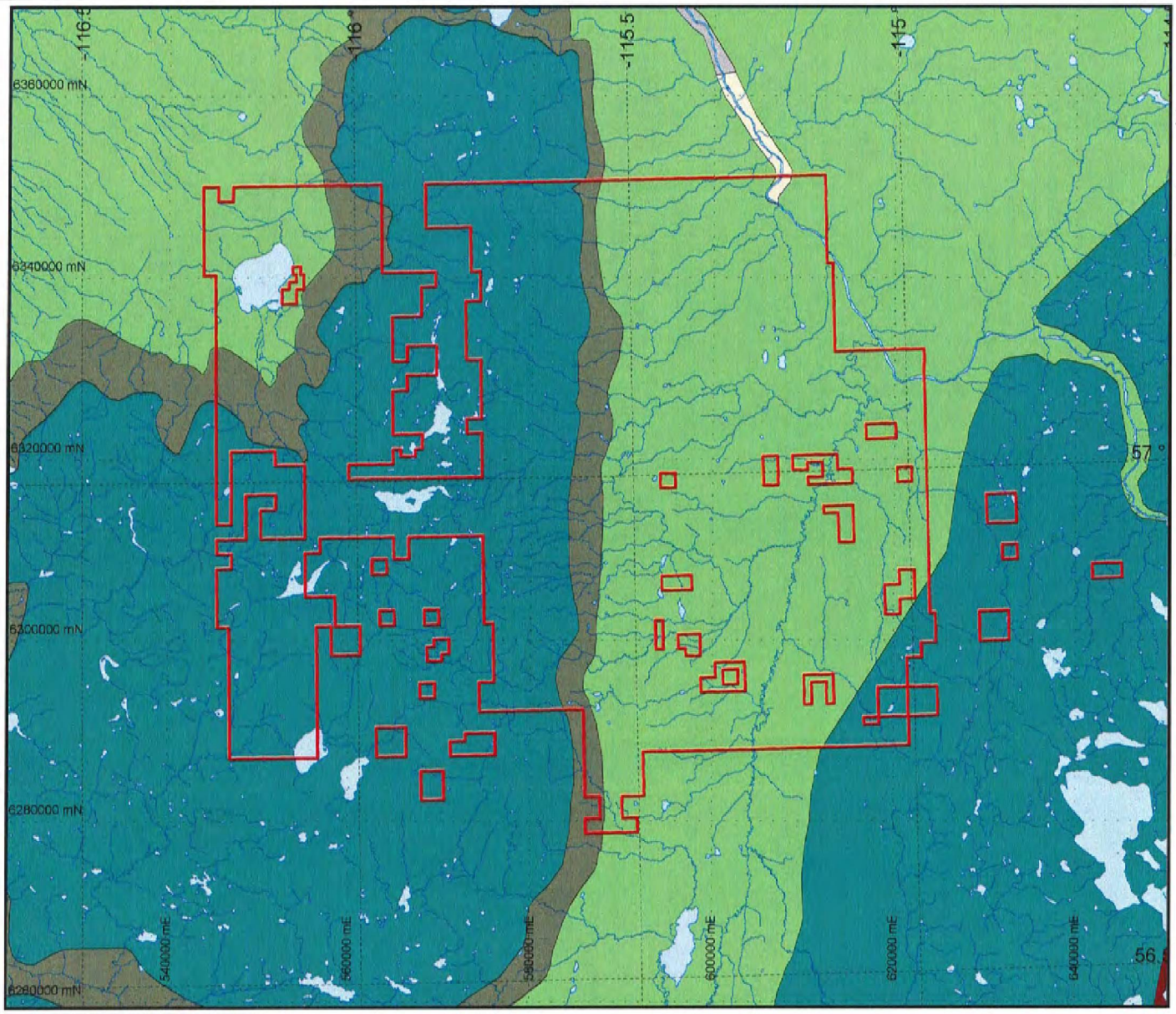
Ashton Diamonds (Canada) Inc.

FIGURE 3

Buffalo Hills Property
Drift Thickness

Apr. 16, 2007
Author: SS
Proj: UTM11 NAD27

J:\Maps\AB\Alberta Assessment\BHills DriftThickness



10 0 10 20

Kilometers

Scale: 1:700,000

Geology modified from Geological Map of Alberta, 1999 Map No. 236;
Alberta Geological Survey - Hamilton, Price, Langenberg

Location Map

Legend

- Property Boundary
- Smoky Group
- Dunvegan Fm
- Shaftesbury Fm

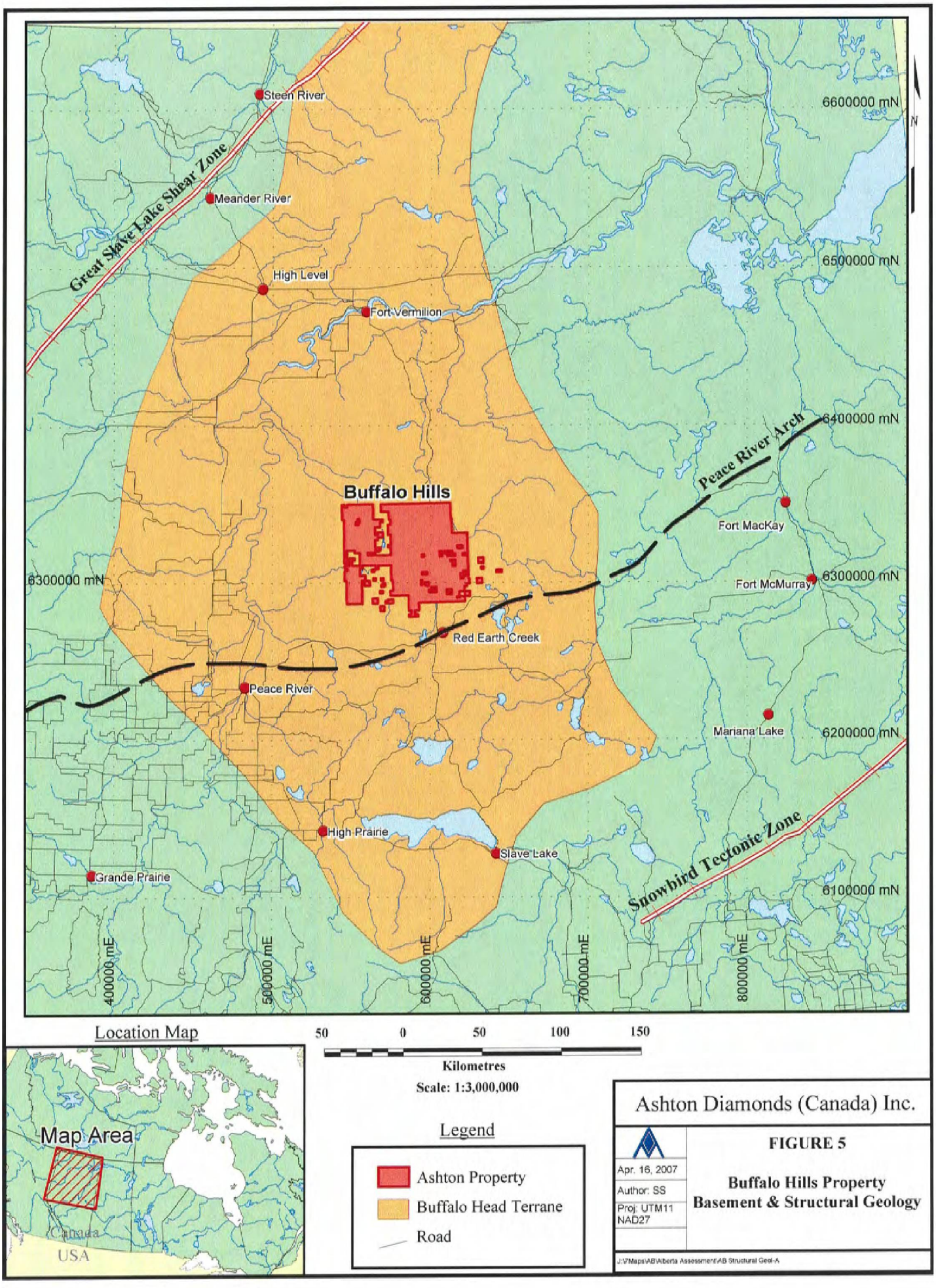
Ashton Diamonds (Canada) Inc.

Figure 4

Buffalo Hills Property
Bedrock Geology

April 16, 2007
Author: SS
Proj: UTM11 NAD27

J:\Maps\AB\Alberta Assessment\Bedrock Geology



Ashton Diamonds (Canada) Inc.

FIGURE 5

Buffalo Hills Property
Basement & Structural Geology

Apr. 16, 2007
Author: SS
Proj: UTM11 NAD27

J:\Maps\AB\Alberta Assessment\AB Structural Geol-A

7.0 REFERENCES

#	Date	Author	Title	Year
1.	MIN20060018	Willis, D, Berry, A.	Assessment Report, "Par B" & "Part C" for the: Buffalo Hills Property (AB001)	2006
2.	MIN20060013	Willis, D	Assessment Report for the Swampy Lake Property 2006	2006
3.	MIN20040018	Ward J., Willis D.	Assessment Report for the Buffalo Hills Property 2004	2004
4.	MIN20020010	Skelton D., Willis D	Assessment Report for the Buffalo Hills Property 2002	2002
5.	MIN20010007	Skelton D., Willis D	Assessment Report for the Loon Lake, Birch Mountain, Rabbit Lake and Muddy River Properties	2001
6.	MIN20000009	Skelton D., Bursey T	Assessment Report, Caribou Mountains (AL06) Property	2000
7.	Min20000002	Skelton D., Bursey T	Assessment Report, Athabasca (AL07), Lesser Slave (AL08), and Whitemud Hills (AL09) Properties	2000
8.	MIN19990010	Skelton D., Bursey T	Assessment Report, Buffalo Hills (AL01), Loon Lake (AL02), Birch Mountain (AL03), Rabbit Lake (AL04) and Muddy River (AL05) Properties	1999
9.	MIN19980015	Skelton D., Bursey T	Assessment Report, Buffalo Hills Property (AL01)	1998

Paulen, R.C., Fenton, M.M. and Pawlowicz, J.G. (2006): Surficial geology of the Peerless Lake Area, Alberta (NTS 84B); Alberta Energy and Utilities Board, Alberta Geological Survey Map 269, scale 1:250 000.

Fenton, M.M. and Pawlowicz, J.G. (1995); Drift Thickness of Alberta, Alberta Energy and Utilities Board, Alberta Geological Survey Map 226, scale 1:2,000,000

Dufresene, M.B., Olsen, R.A., Schmitt, D.R., McKinstry, B., Eccles, D.R., Fenton, M.M., Pawlowicz, J.G., Edwards, W.A.D., and Richardson R.J.H. (1996); The Diamond Potential of Alberta, Alberta Energy and Utilities Board, Alberta Geological Survey Bulletin No. 63

Ross, G.M., Broome, J., Miles, W. (1994); Potential Fields and Basement Structure – Western Canadian Sedimentary Basin. Produced in the Geological Atlas of the Western Canadian Sedimentary Basin. G.D. Mossop and I. Shetsen (comps). Calgary, Canadian Society of Petroleum Geologists and Alberta Research Council , p. 41 – 47.

O'Connell, S.C., (1994); Geological History of the Peace River Arch. Produced in the Geological Atlas of the Western Canadian Sedimentary Basin. G.D. Mossop and I. Shetsen (comps). Calgary, Canadian Society of Petroleum Geologists and Alberta Research Council , p. 431 – 437.

Hamilton W. N., Price M.C., Langenberg, W., Chao, D.K., 1998; Geological Map of Alberta, Alberta Energy and Utilities Board, Alberta Geological Survey, Map 236

8.0 CERTIFICATE OF QUALIFICATION - DAVID WILLIS

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

1. I am presently employed as a Land Administrator with Ashton Mining of Canada Inc. at Unit 116 – 980 West 1st Street, North Vancouver, B.C.

2. I am a graduate of the University of Alberta and hold a B.A. Degree in anthropology.

3. I am a graduate of the Northern Alberta Institute of Technology and hold a diploma in mineral engineering.

4. I have been employed with Ashton Mining of Canada Inc. since 1997.

5. 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.

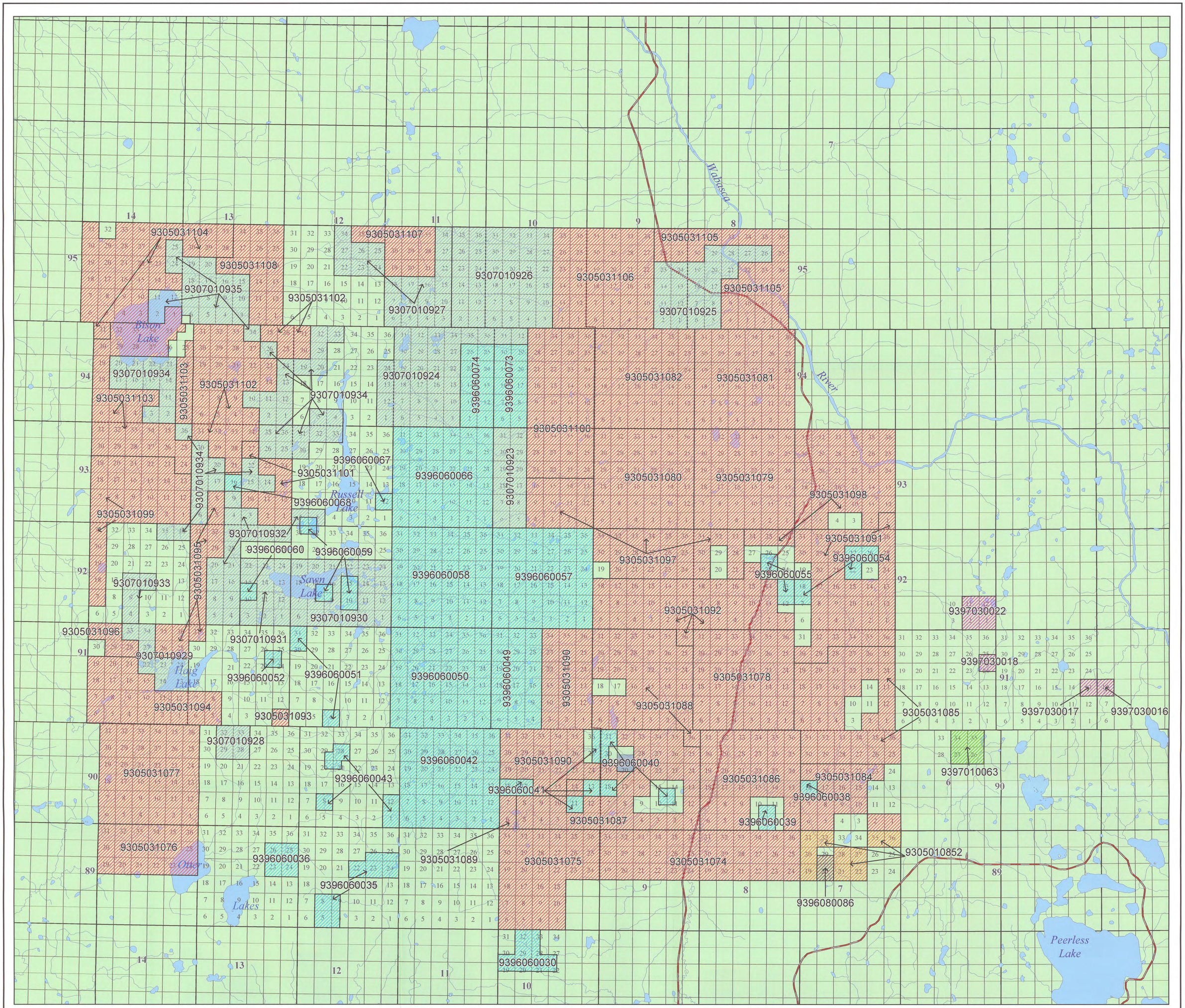
DATED at North Vancouver, British Columbia, this 7th day of May 2007.

ASHTON DIAMONDS (CANADA) INC.

David Willis, B.A., Dip Mineral Engineering

APPENDIX "A" – METALLIC AND INDUSTRIAL MINERAL PERMITS

- MIMP Location Map
- Schedule of Permits



Legend

- Ashton Kimberlites
- Legal Section
- Township\Range

Ashton Claims By Anniversary Date

- 28/01/2007 (1)
- 31/01/2007 (1)
- 11/03/2007 (34)
- 14/03/2007 (4)
- 01/06/2008 (1)
- 18/06/2008 (24)
- 29/08/2008 (1)
- 25/01/2009 (13)

3 0 3 6
Kilometers

Scale: 1:150,000

Ashton Mining of Canada Inc.

March 19, 2007
Author: SS&DW
Proj: UTM18 NAD27

Buffalo Hills Property, Alberta
Permit Retention Map

J:\7Maps\ABA\Alberta Assessment

20070012

Buffalo Hills Property Schedule of Claims

#	Permit Number	Area (ha)	Term Date	Anniversary Date	Permit Holder	Holder %
1	9305010852	2,560.00	28-Jan-05	28-Jan-07	3869008 Canada Limited	100%
2	9305031074	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
3	9305031075	7,680.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
4	9305031076	4,608.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
5	9305031077	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
6	9305031078	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
7	9305031079	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
8	9305031080	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
9	9305031081	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
10	9305031082	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
11	9305031084	4,096.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
12	9305031085	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
13	9305031086	8,192.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
14	9305031087	9,088.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
15	9305031088	8,704.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
16	9305031089	512.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
17	9305031090	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
18	9305031091	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
19	9305031092	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
20	9305031093	256.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
21	9305031094	5,888.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
22	9305031095	3,840.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
23	9305031096	1,024.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
24	9305031097	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
25	9305031098	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
26	9305031099	7,168.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
27	9305031100	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
28	9305031101	2,304.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
29	9305031102	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
30	9305031103	8,888.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
31	9305031104	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
32	9305031105	6,912.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
33	9305031106	9,216.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
34	9305031107	2,816.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
35	9305031108	4,096.00	11-Mar-05	11-Mar-07	3869008 Canada Limited	100%
36	9307010923	3,072.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
37	9307010924	8,192.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
38	9307010925	5,376.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
39	9307010926	9,216.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
40	9307010927	5,632.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
41	9307010928	1,024.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
42	9307010929	2,048.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
43	9307010930	5,376.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
44	9307010931	2,816.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
45	9307010932	4,224.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
46	9307010933	1,024.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
47	9307010934	8,960.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%
48	9307010935	8,384.00	25-Jan-07	25-Jan-09	Ashton Mining of Canada Inc.	100%

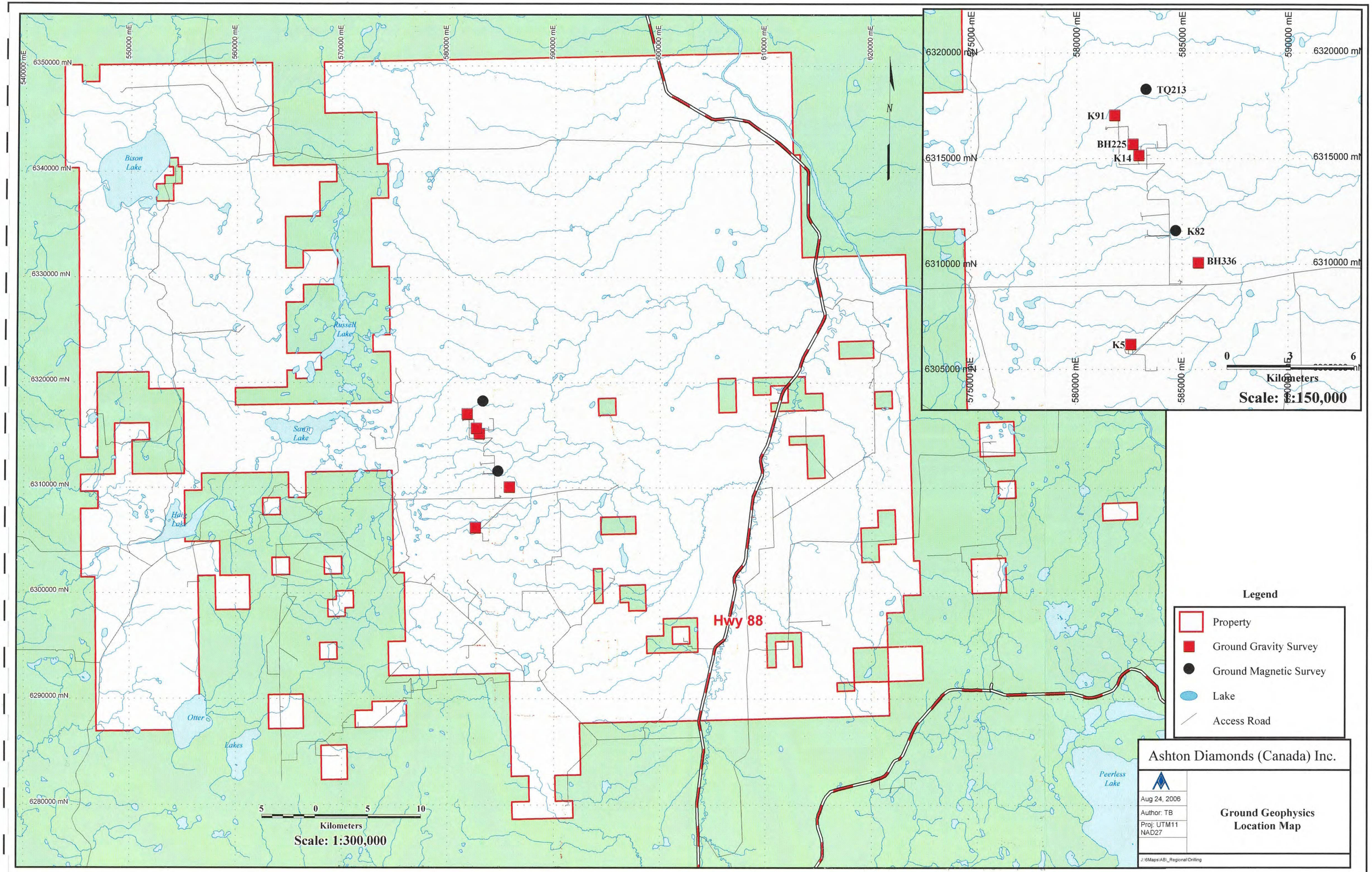
Buffalo Hills Property Schedule of Claims

#	Permit Number	Area (ha)	Term Date	Anniversary Date	Permit Holder	Holder %
49	9396060030	1,472.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
50	9396060035	1,792.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
51	9396060036	1,024.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
52	9396060038	256.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
53	9396060039	384.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
54	9396060040	896.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
55	9396060041	1,280.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
56	9396060042	9,216.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
57	9396060043	1,216.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
58	9396060049	4,608.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
59	9396060050	9,216.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
60	9396060051	640.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
61	9396060052	256.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
62	9396060054	1,152.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
63	9396060055	640.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
64	9396060057	9,216.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
65	9396060058	9,216.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
66	9396060059	896.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
67	9396060060	256.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
68	9396060066	9,216.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
69	9396060067	384.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
70	9396060068	256.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
71	9396060073	2,560.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
72	9396060074	2,560.00	18-Jun-96	18-Jun-08	Ashton Diamonds (Canada) Inc.	100%
73	9396080086	384.00	29-Aug-96	29-Aug-08	Ashton Diamonds (Canada) Inc.	100%
74	9397010063	1,024.00	31-Jan-97	31-Jan-07	Ashton Diamonds (Canada) Inc.	100%
75	9397030016	256.00	14-Mar-97	14-Mar-07	Ashton Diamonds (Canada) Inc.	100%
76	9397030017	256.00	14-Mar-97	14-Mar-07	Ashton Diamonds (Canada) Inc.	100%
77	9397030018	256.00	14-Mar-97	14-Mar-07	Ashton Diamonds (Canada) Inc.	100%
78	9397030022	1,024.00	14-Mar-97	14-Mar-07	Ashton Diamonds (Canada) Inc.	100%

Total: 382,456.00

APPENDIX "B" – GROUND GEOPHYSICS

- Ground Geophysics Location Map, Property Scale
- Ground Gravity; K14, BH225 and K91 Stations
- Ground Gravity; K14, BH25 and K91 Bouger Gravity
- Ground Gravity; BH336 Station Location
- Ground Gravity; BH336 Bouger Gravity
- Ground Gravity; K5 Station Locations
- Ground Gravity; K5 Bouger Gravity
- Ground Magnetics; K82 Station Locations
- Ground Magnetics; K82 Total Field Magnetics
- Ground Magnetics; BH213 Station Locations
- Ground Magnetics; BH213 Total Field Magnetics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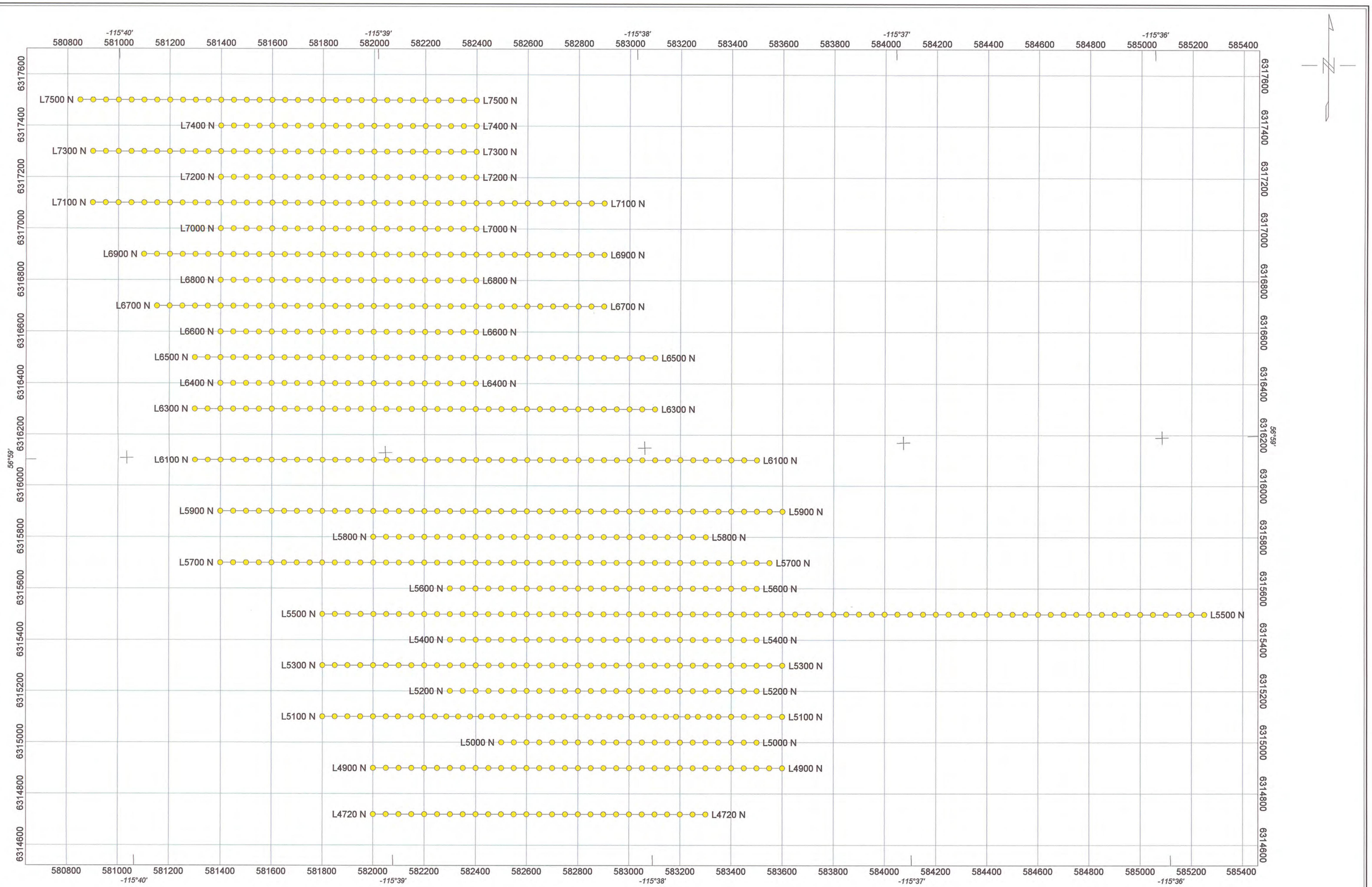
570000 mE
580000 mE
590000 mE
600000 mE
610000 mE
620000 mE
540000 mE
6350000 mN
6340000 mN
6330000 mN
6320000 mN
6310000 mN
6300000 mN
6290000 mN
6280000 mN
Bison Lake
Russell Lake
Sam Lake
Hare Lake
Otter Lakes
Peerless Lake
N
Hwy 88
5 0 5 10
Kilometers
Scale: 1:300,000
TQ213
K91
BH225
K14
K82
BH336
K5
6320000 mN
6315000 mN
6310000 mN
6305000 mN
575000 mE
580000 mE
585000 mE
590000 mE
0 3 6
Kilometers
Scale: 1:150,000
Legend
Property
Ground Gravity Survey
Ground Magnetic Survey
Lake
Access Road
Ashton Diamonds (Canada) Inc.
Aug 24, 2006
Author: TB
Proj: UTM11 NAD27
Ground Geophysics Location Map
J:\6Maps\AB_Regional\Drilling



LEGEND

Survey Line

Station Locations

Scale 1:10000

200 0 200 400 600

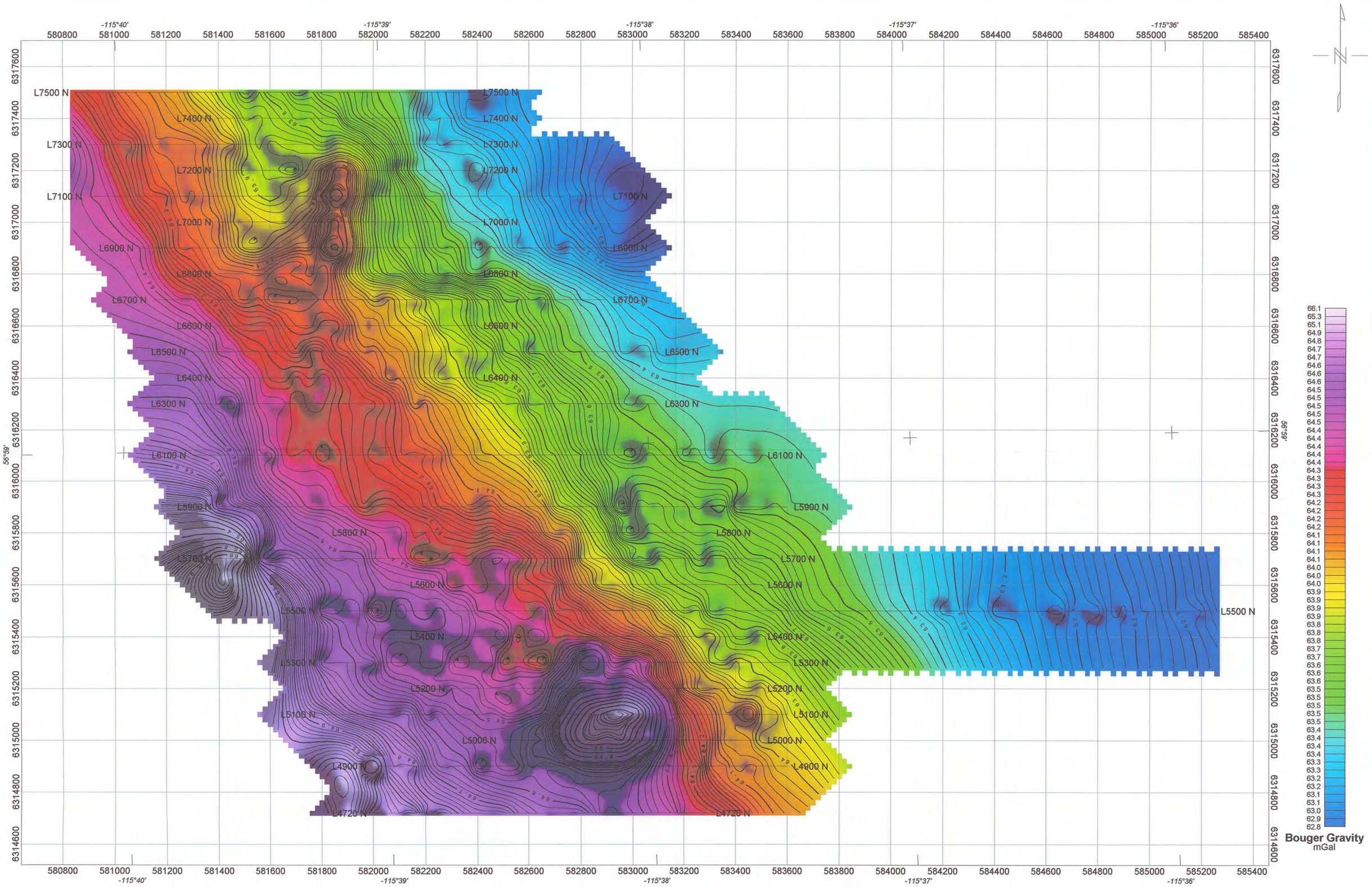
metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Ground Gravity Survey over K14, BH225 and K91
Station Locations
2006 Fall Program

20070012



LEGEND

Survey Line

Contour Interval: 0.02mGal

Scale 1:10000

200 0 200 400 600

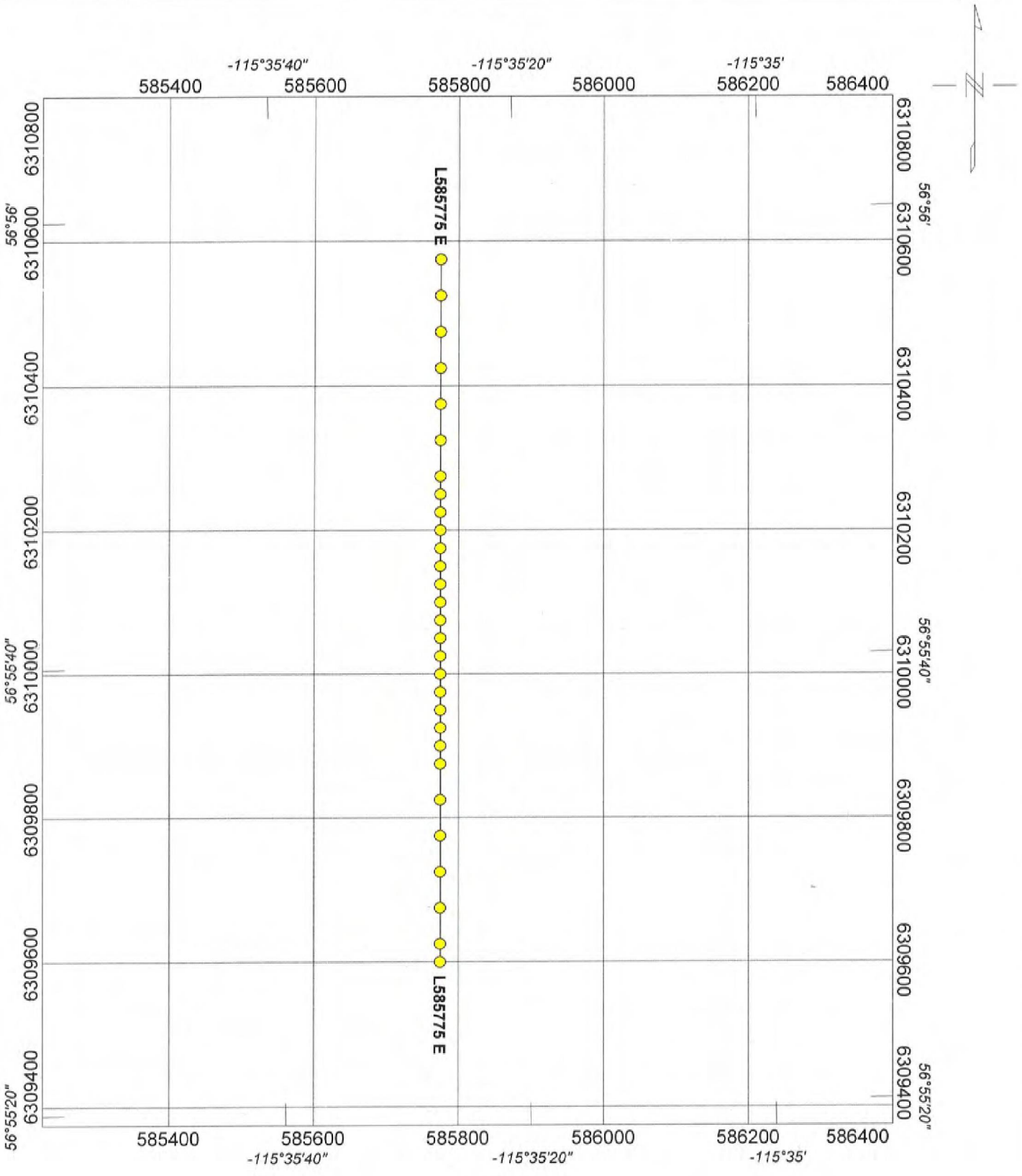
metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Ground Gravity Survey over K14, BH225 and K91
Bouger Gravity (2.00 g/cc)
2006 Fall Program

20070012



LEGEND

Station Location

Scale 1:7500

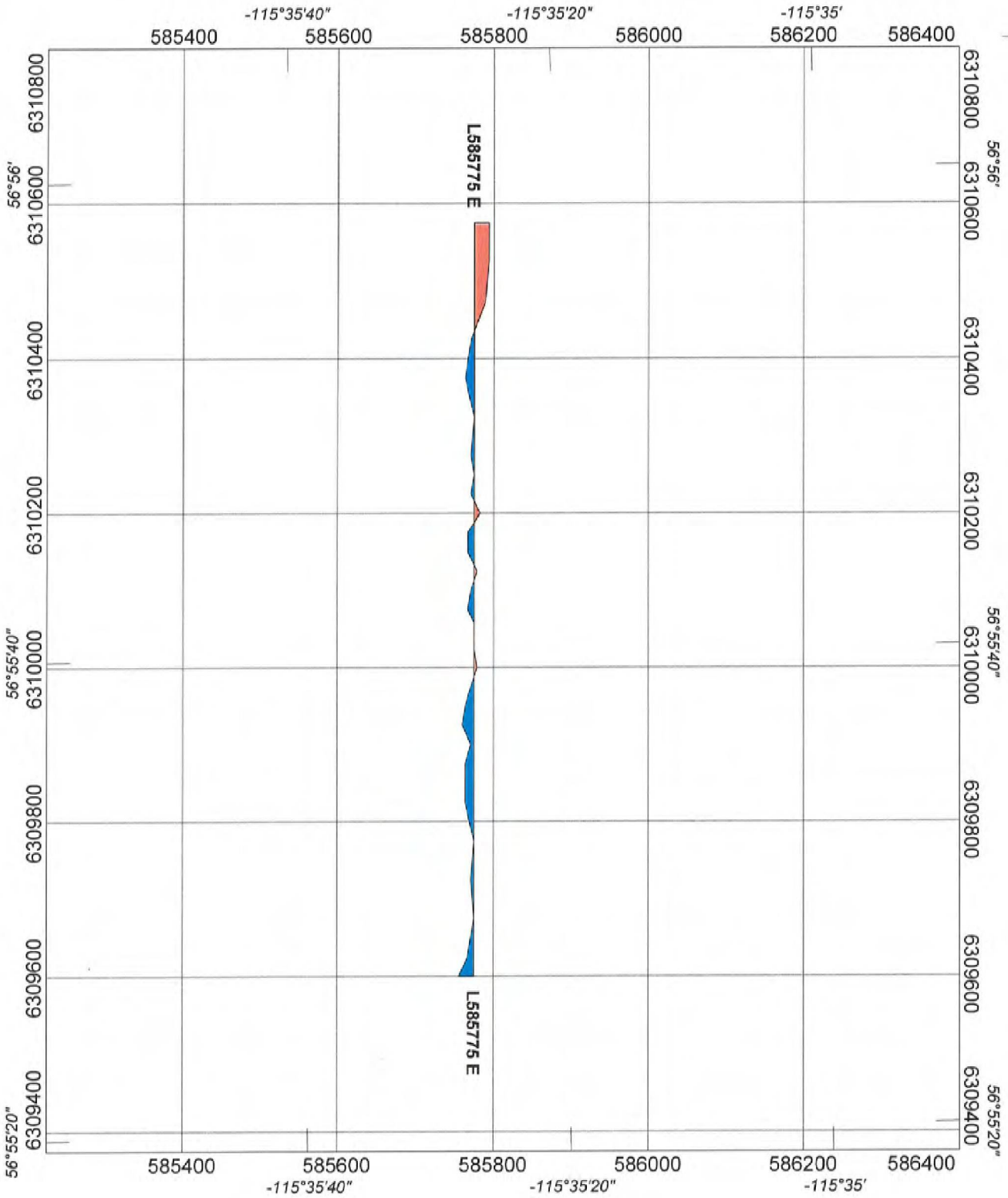
100 0 100 200

metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Ground Gravity Survey over BH336 (KJ-2)
Station Locations
2006 Fall Program



Profile Scale : 0.02 mGal/mm
Profile Base : 62.5 mGal
Profile Direction: Postive UP and RIGHT

Scale 1:7500

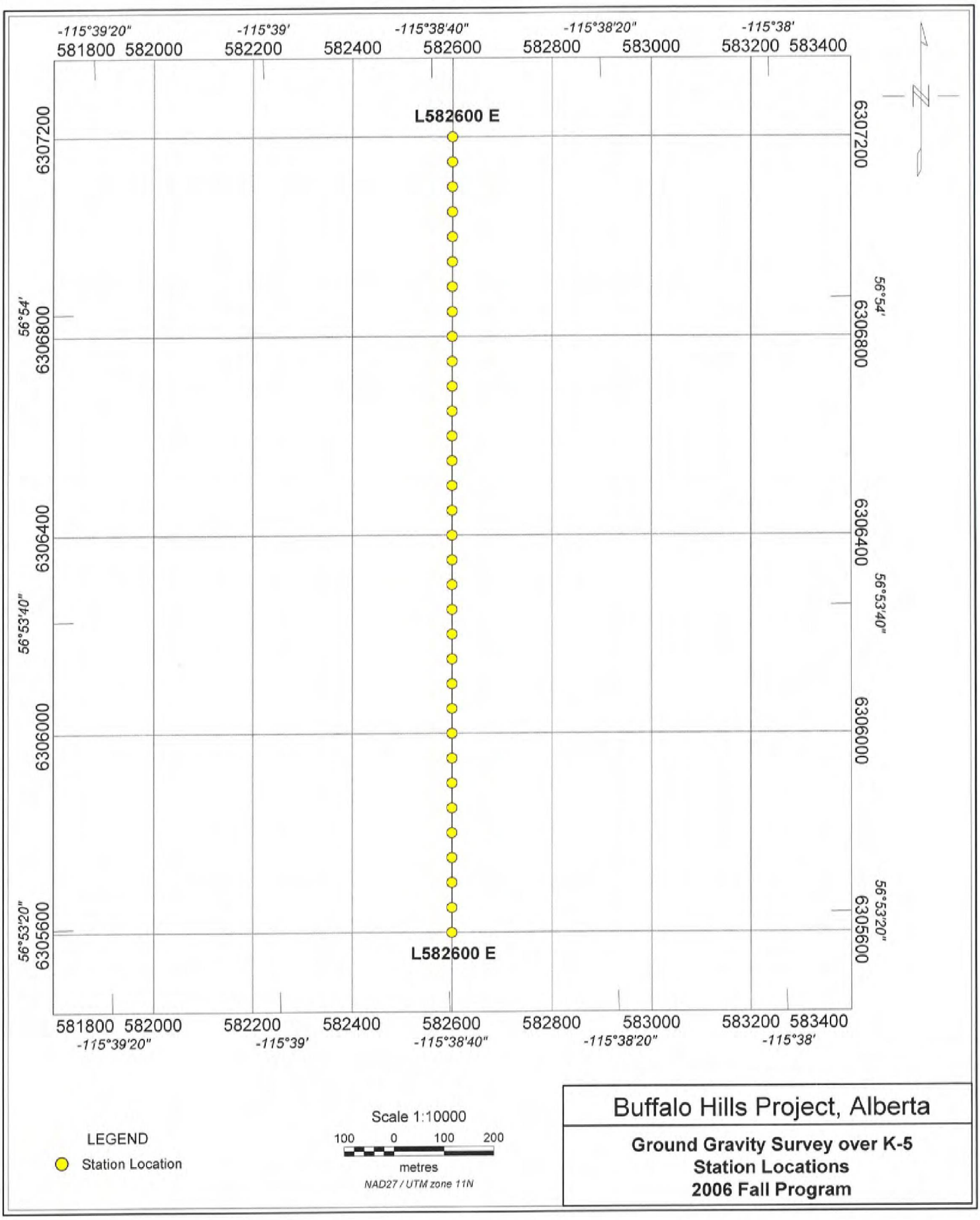
100 0 100 200

metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Ground Gravity Survey over BH336 (KJ-2)
Bouger Gravity (2.00 g/cc)
2006 Fall Program


-115°39'20"
-115°39'
-115°38'40"
-115°38'20"
-115°38'
581800
582000
582200
582400
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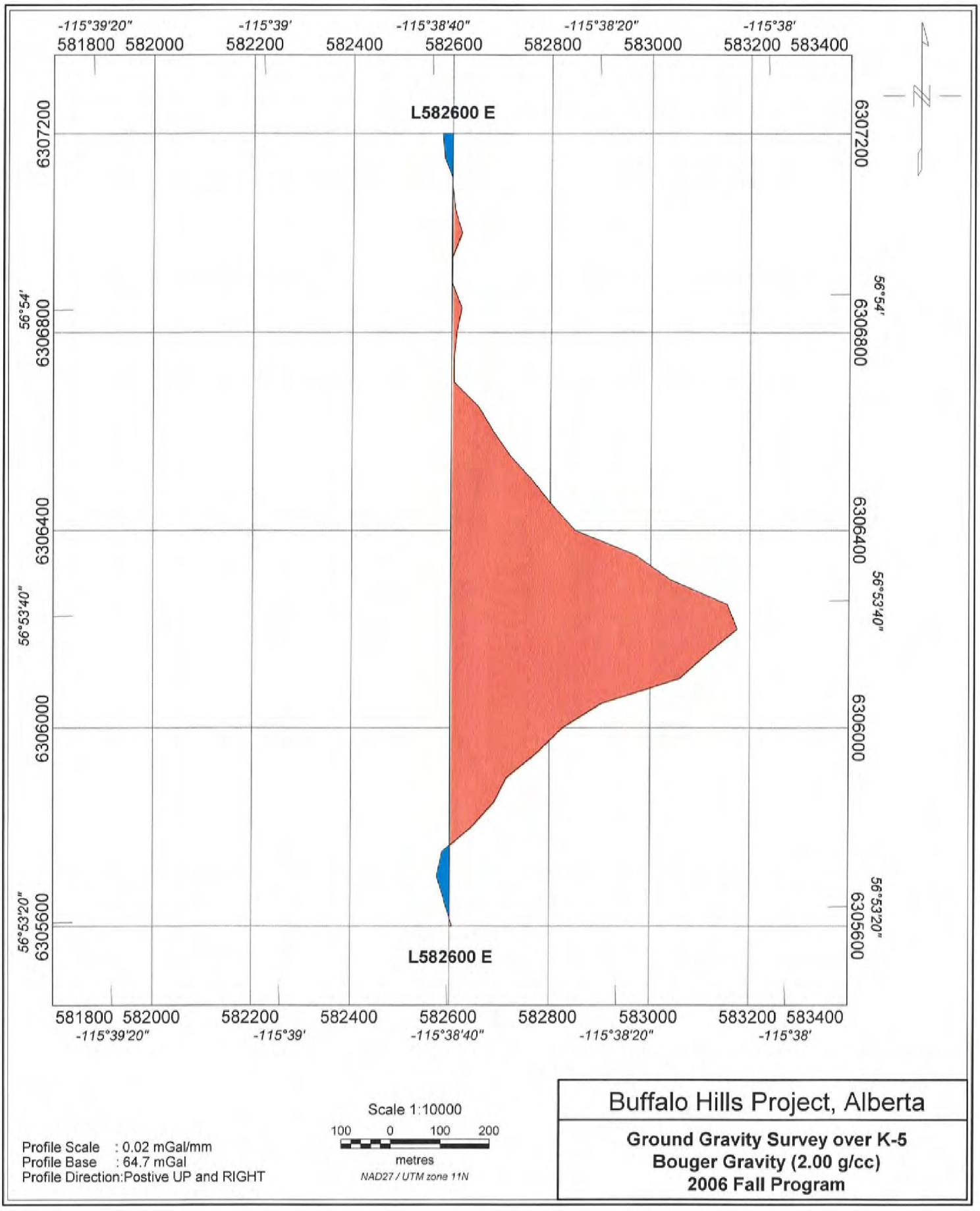
582800
583000
583200
583400
6307200
6306800
6306400
6306000
6305600
56°54'
56°53'40"
56°53'20"
L582600 E
L582600 E
N
Scale 1:10000
100 0 100 200
metres
NAD27 / UTM zone 11N
LEGEND
Station Location
Buffalo Hills Project, Alberta
Ground Gravity Survey over K-5
Station Locations
2006 Fall Program



Profile Scale : 0.02 mGal/mm
Profile Base : 64.7 mGal
Profile Direction: Postive UP and RIGHT

Scale 1:10000

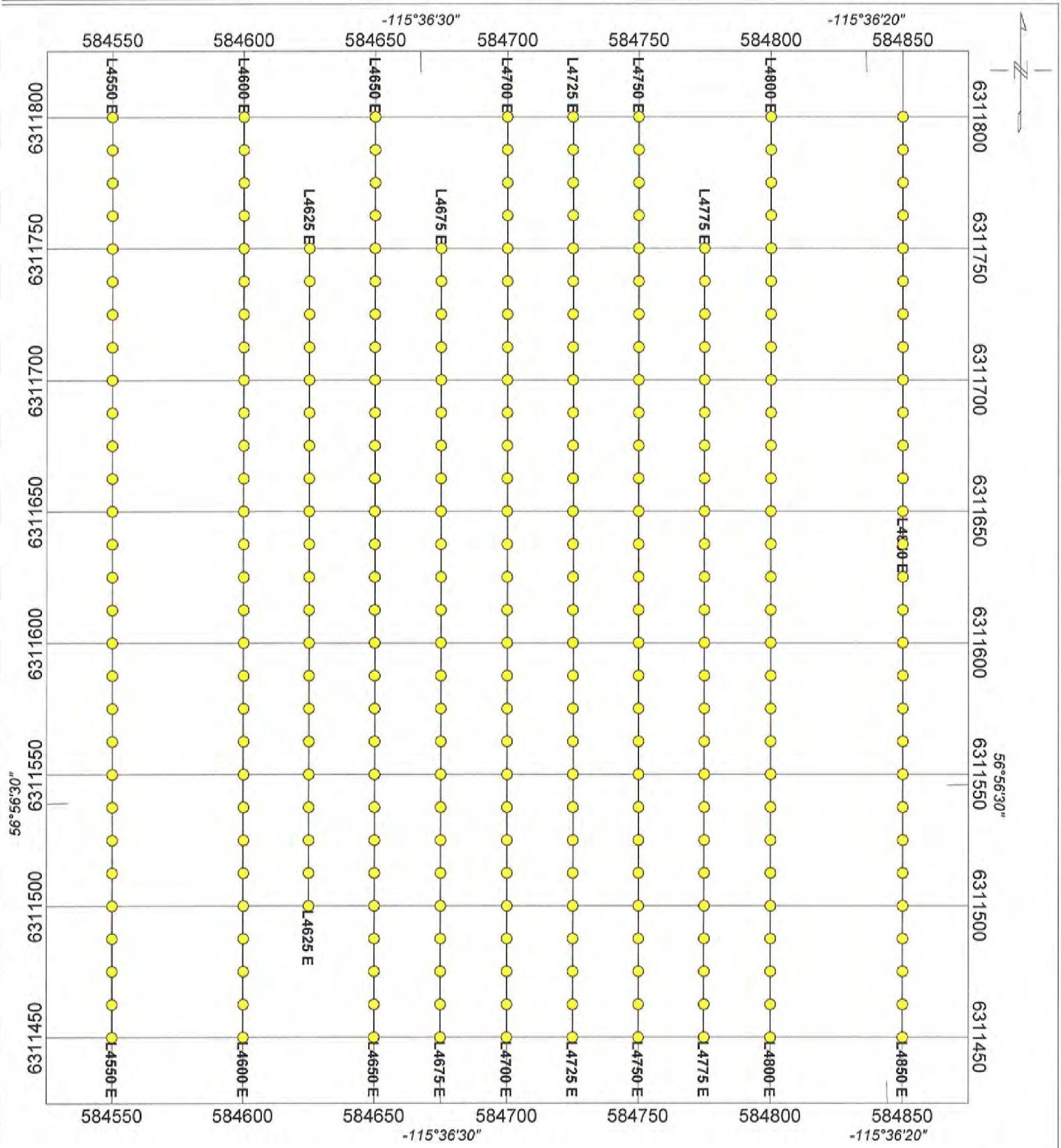
100 0 100 200

metres

NAD27 / UTM zone 11N

Buffalo Hills Project, Alberta

Ground Gravity Survey over K-5
Bouger Gravity (2.00 g/cc)
2006 Fall Program



LEGEND

Survey Line

Station Locations

Scale 1:2000

25 0 25 50

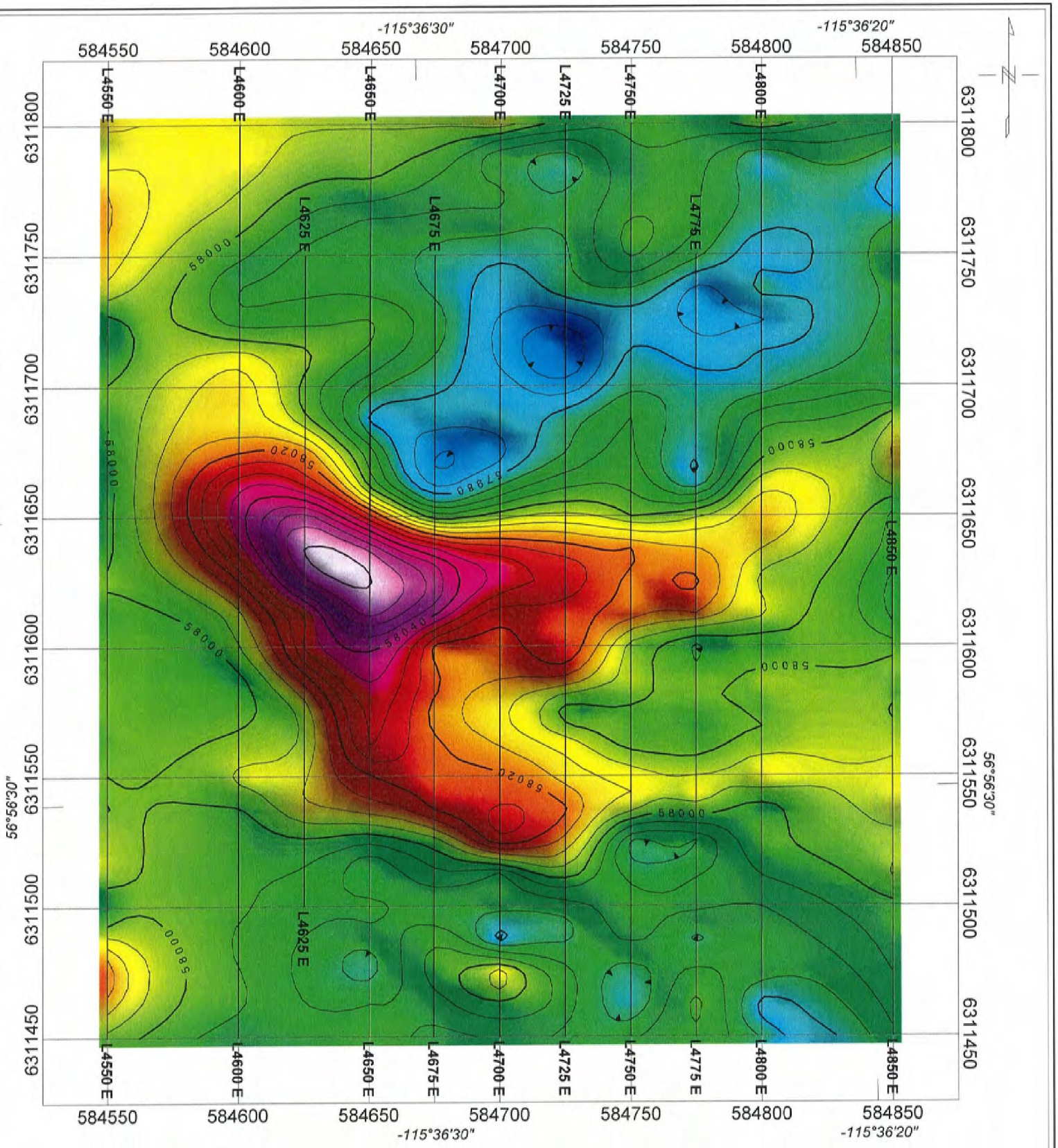
metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Ground Magnetic Survey over K82
Station Locations
2007 Winter Program

Contour Interval: 5, 20 nT



TMI
(nT)

57965 57979 57994 58008 58023 58037 58062

Scale 1:2000

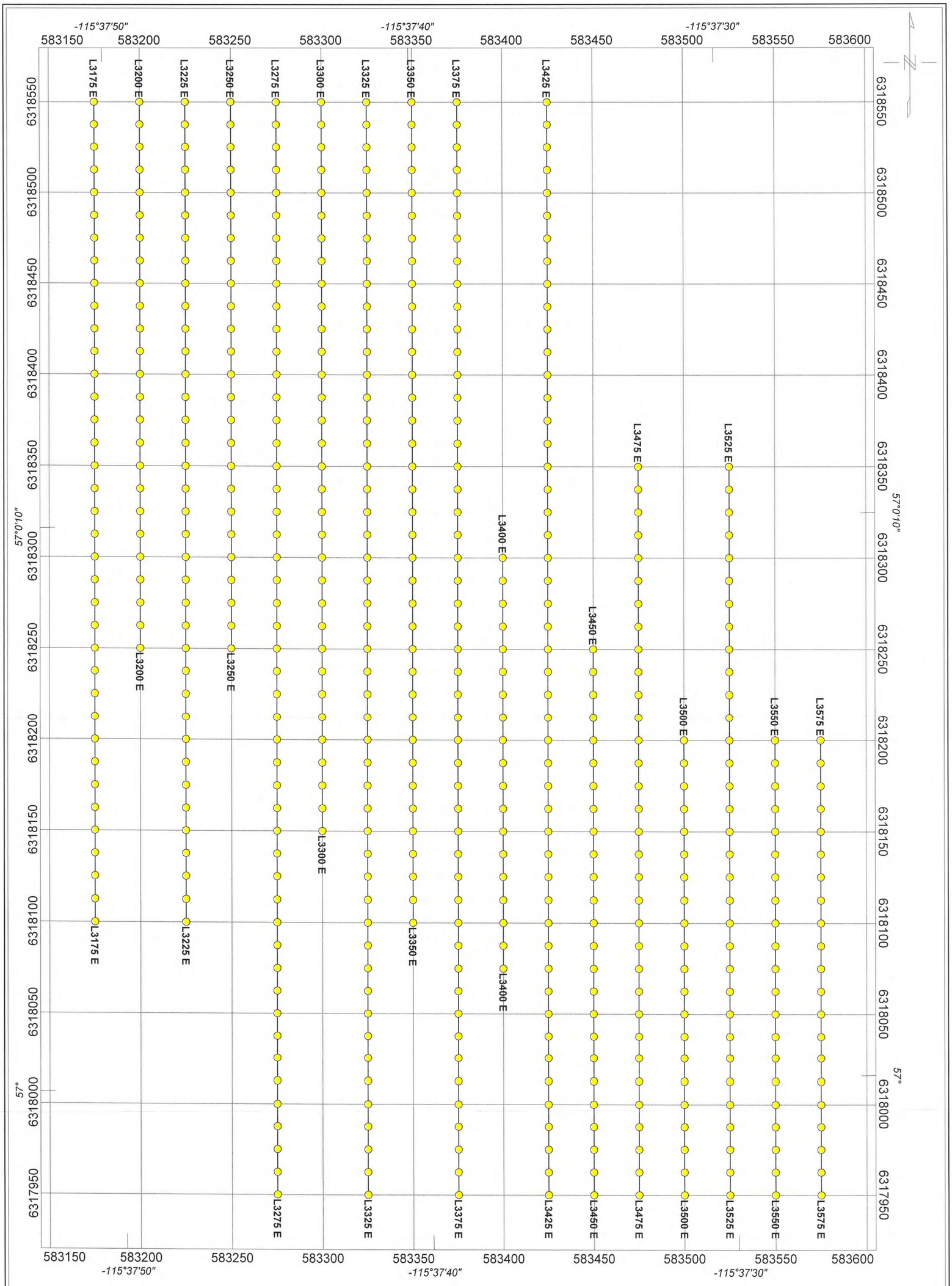
25 0 25 50
metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Ground Magnetic Survey over K82
Total Field Magnetics (nT)
2007 Winter Program

Contour Interval: 5, 20 nT



LEGEND

Survey Line

Station Locations

Scale 1:2000

25 0 25 50 75

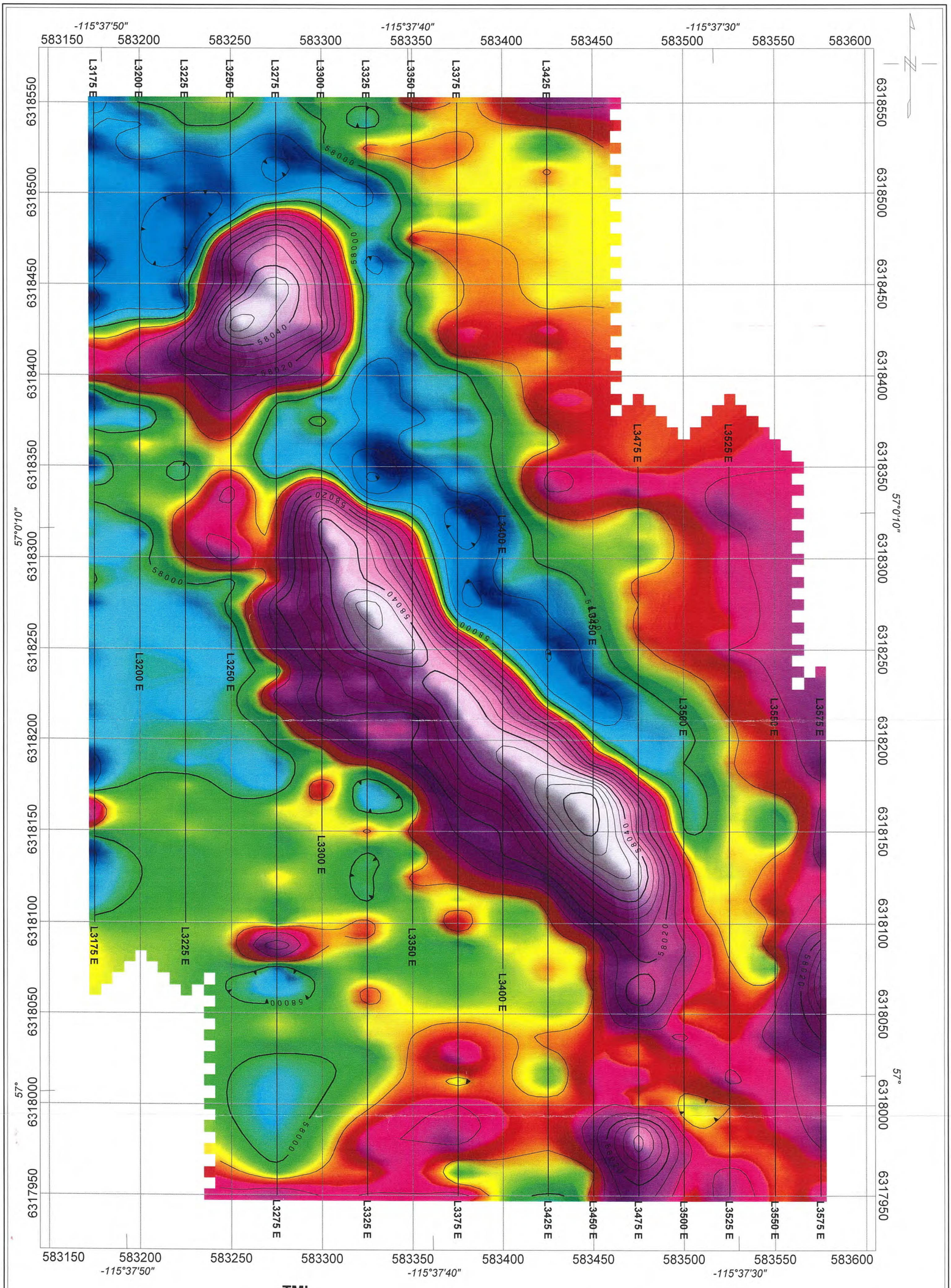
metres

NAD27 / UTM zone 11N

Buffalo Hills Property, Alberta

Anomaly BH213 Magnetic Survey
Station Locations
2007 Winter Program

Contour Interval: 5, 10 nT



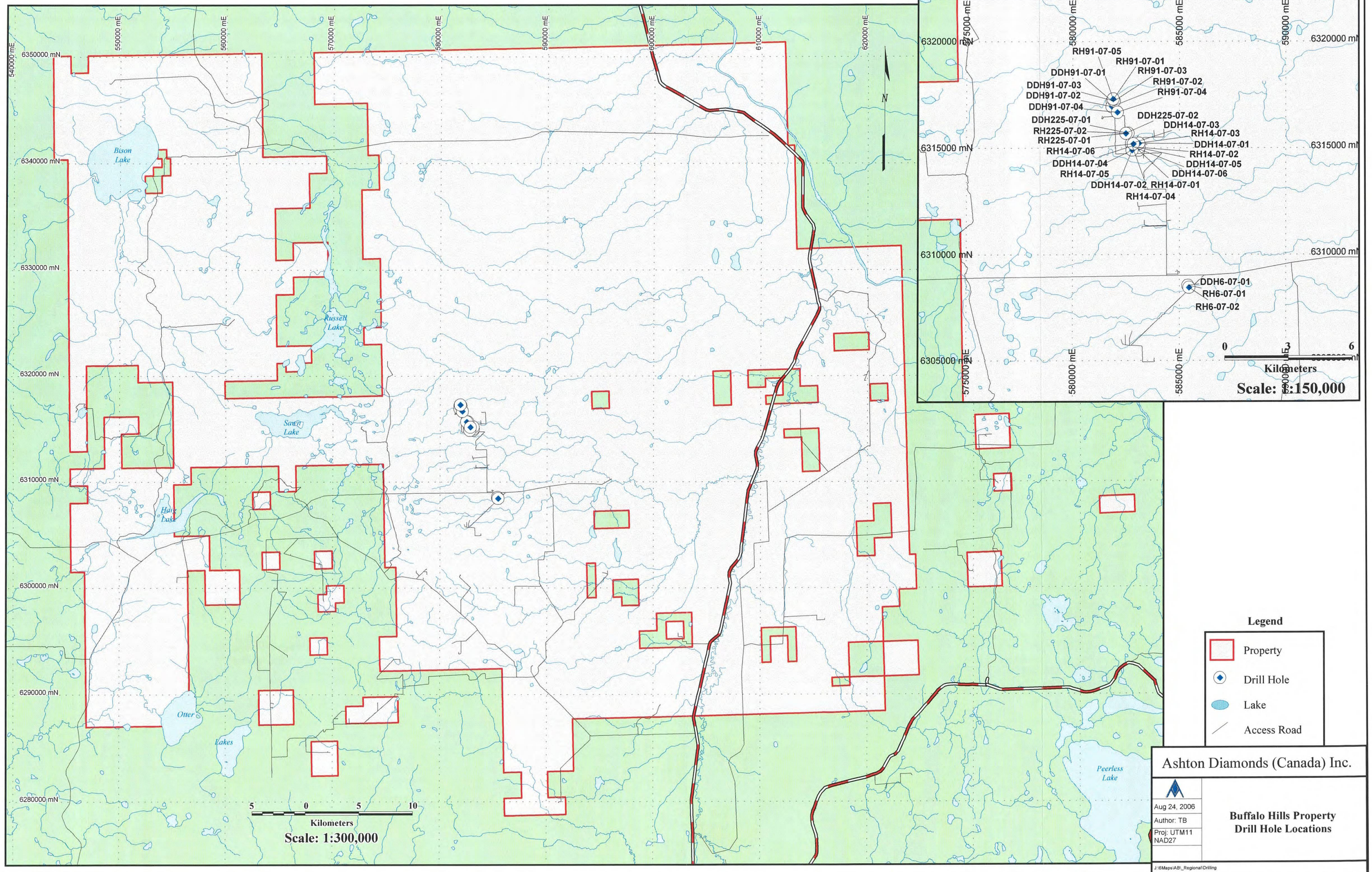
Buffalo Hills Property, Alberta

Anomaly BH213 Magnetic Survey
Total Field Magnetics (nT)
2007 Winter Program

Contour Interval: 5, 10 nT

APPENDIX "C" – DRILLING

- Drill Hole Location Map, Property Scale
- Drill Logs K14
- K14 Drill Cross Sections
- Drill Logs K91
- K91 Drill Cross Sections
- Drill Logs BH225
- BH225 Cross Sections
- Drill Logs K6
- K6 Drill Cross Sections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620000 mE
6350000 mN
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6310000 mN
6300000 mN
6290000 mN
6280000 mN
Bison Lake
Russell Lake
Sawn Lake
Hale Lake
Otter Lakes
Peerless Lake
N
5 0 5 10
Kilometers
Scale: 1:300,000
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6315000 mN
6310000 mN
6305000 mN
575000 mE
580000 mE
585000 mE
590000 mE
RH91-07-05
RH91-07-01
DDH91-07-01
RH91-07-03
DDH91-07-03
RH91-07-02
DDH91-07-02
RH91-07-04
DDH91-07-04
DDH225-07-01
DDH225-07-02
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DDH14-07-01
RH14-07-06
RH14-07-02
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RH14-07-05
DDH14-07-06
DDH14-07-02
RH14-07-01
RH14-07-04
DDH6-07-01
RH6-07-01
RH6-07-02
0 3 6
Kilometers
Scale: 1:150,000
Legend
Property
Drill Hole
Lake
Access Road
Ashton Diamonds (Canada) Inc.
Aug 24, 2006
Author: TB
Proj: UTM11 NAD27
Buffalo Hills Property
Drill Hole Locations
J:\GMaps\AB_Regional\Drilling

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH14-07-01

HOLE-ID	**RH14-07-01**	*Start Date*	19-Jan-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	21-Jan-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	91.4	*Wk Permit*	MME-060017
Easting	583096.42	*Azimuth*	0	*District*	Lesser Slave
Northing	6314899.85	*Dip*	-90	*Legal Desc.*	NW - 12 - 92 - 11 - 5
Elevation	606.4	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole				
Comments	Terminated in mudstone - no coring				

Interval	*Description*
0 to 76.2	**OB** Terminated in mudstone - no coring
76.2 to 91.4	**MUDST**
91.4	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH14-07-02

HOLE-ID	**RH14-07-02**	*Start Date*	21-Jan-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	25-Jan-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	50.3	*Wk Permit*	MME-060017
Easting	583119.04	*Azimuth*	0	*District*	Lesser Slave
Northing	6315028.82	*Dip*	-90	*Legal Desc.*	NW - 12 - 92 - 11 - 5
Elevation	607.26	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole				
Comments	Gravels at 29 to 36m - 6" to 42.7 - Dk Green Kim at 47.2 - Cored thru casing - Lost hole				

Interval	*Description*
0 to 47.2	**OB** Gravels at 29 to 36m - 6" to 42.7 - Dk Green Kim at 47.2 - Cored thru casing - Lost hole
47.2 to 50.3	**PK**
50.3	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH14-07-03

HOLE-ID	**RH14-07-03**	*Start Date*	25-Jan-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	28-Jan-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	43.6	*Wk Permit*	MME-060017
Easting	583111.33	*Azimuth*	0	*District*	Lesser Slave
Northing	6315221.47	*Dip*	-90	*Legal Desc.*	SW - 13 -92 - 11 - 5
Elevation	606.74	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH14-07-01				
Comments	Gravels at 3 to 12m				

Interval	*Description*
0 to 42.4	**OB** Gravels at 3 to 12m
42.4 to 43.6	**VK**
43.6	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH14-07-04

HOLE-ID	**RH14-07-04**	*Start Date*	28-Jan-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	31-Jan-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	115.8	*Wk Permit*	MME-060017
Easting	582760.69	*Azimuth*	0	*District*	Lesser Slave
Northing	6315210.88	*Dip*	-90	*Legal Desc.*	NE - 11 -92 - 11 - 5
Elevation	621.63	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged

Purpose Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH14-07-02

Comments Very deep OB - Sample collected

Interval	*Description*
0 to 114.3	**OB** Very deep OB - Sample collected
114.3 to 115.8	**MUDST**
115.8	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH14-07-05

HOLE-ID	**RH14-07-05**	*Start Date*	31-Jan-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	03-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	42.7	*Wk Permit*	MME-060017
Easting	582797.1	*Azimuth*	0	*District*	Lesser Slave
Northing	6314906.26	*Dip*	-90	*Legal Desc.*	SE - 14 -92 - 11 - 5
Elevation	617.78	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH14-07-03				
Comments	Shallow Mudstone Bedrock				

Interval	*Description*
0 to 33.6	**OB** Shallow Mudstone Bedrock
33.6 to 42.7	**MUDST**
42.7	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH14-07-06

HOLE-ID	**RH14-07-06**	*Start Date*	26-Feb-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	26-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	21.4	*Wk Permit*	MME-060017
Easting	582851.49	*Azimuth*	0	*District*	Lesser Slave
Northing	6315199.08	*Dip*	-90	*Legal Desc.*	SW - 13 -92 - 11 - 5
Elevation	620.83	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole				
Comments	Busted / Alt PK at 14.7 - Casing advanced to competent rock				

Interval	*Description*
0 to 14.68	**OB** Busted / Alt PK at 14.7 - Casing advanced to competent rock
14.68 to 21.41	**PK**
21.41	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH14-07-01

HOLE-ID	**DDH14-07-01**	*Start Date*	27-Jan-07	*Contractor*	Connors
Anomaly	K014	*End Date*	02-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	200.0	*Wk Permit*	MME-060017
Easting	583111.33	*Azimuth*	0	*District*	Lesser Slave
Northing	6315221.47	*Dip*	-90	*Legal Desc.*	SW - 13 -92 - 11 - 5
Elevation	606.74	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	I. Ranger

Purpose Delineate geometry of the K14 body

Comments Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter
Logged: Jan. 30 - Feb. 2, 2007
38 core boxes
Sample No.'s: 24701-24730

Interval	*Description*
0 to 43.5	**OB** Overburden Cased through overburden and collared at top of kimberlite. Brown fragments of overburden. Significant core loss between 43.00-44.00 m.
43.5 to 44	**VK** Volcaniclastic kimberlite Upper contact is broken. Kimberlite cobbles and pebbles are a dark green color, ranging from less than 1 cm to commonly 1-2 cm and up to 5 cm. Largest piece of core (spun) contains common F-M to few C olivines. Olivine is replaced by carbonate and serpentine. Black mineral of possible magnetite in some olivine cores. Angular and broken olivine macrocrysts and minor euhedral olivine phenocrysts present. Olivine is visually estimated at 70%. Juvenile lapilli difficult to discern. Interclast matrix is mottled green, likely cryptocrystalline serpentine.
44 to 50	**MUDST** Mudstone (no bedding) Approximately 50% of core missing up to 47 m. Light brown, angular to rounded fragments of mudstone ranging from less than 1 cm to 5 cm with 20 cm of whole core in unit. Blocky with minor layering.
50 to 60.6	**MUDST** Mudstone (no bedding) Above mudstone grades into a silty, light brown mudstone with layers of orangey-brown alteration, generally less than 1 cm thick, irregular but generally parallel to common jointing at 30 tca throughout. Black and light brown lenses/layers at mm-scale visible on fresh broken surfaces.
60.6 to 74	**SHALE** Shale (bedded or fissile nature) Dark grey and fissile. Fine laminae of alternating light to dark grey, silt- to mud-sized grains. Laminae are generally parallel and less than 5mm. Bedding 24 tca. Good core recovery up to 71.40 m.

74 to 74.3 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Contact marked by broken black shale. Kimberlite is a yellow-brown color, fragile, and breaks easily with common cracking. Overall very fine grained appearance with black shale xenoliths of variable size.

Country rock xenoliths of angular fresh grey limestone (?) and black shale/mudstone commonly less than 1 cm, comprise up to 5%. Few xenoliths of black shale/mudstone up to 2 cm aligned parallel adjacent to below mudstone.

Discrete olivine difficult to discern and fragile. Generally sub/anhedral F commonly <0.5-2 mm to few subhedral to subrounded M, replaced by yellow-brown serpentine and comprise up to 70%. Some are angular and broken or oblong-rounded, phenocrysts not obvious. Trace discrete phlogopite, fresh, honey-brown, <1mm, may be present but due to the nature of the core appear loose on the surface.

Juvenile lapilli difficult to discern but cored and uncored lapilli present, commonly less than 3 mm. Cored lapilli with olivine or black shale cores and grey, irregular to partial selvages less than 1 mm. Uncored irregular to subangular to subrounded to ovoid grey lapilli resemble grey limestone. Few distinct uncored irregular lapilli, less than 2 mm, have F brown mica set in a grey matrix and olivine is not apparent. If present, visual estimate less than 5%.

Inter-clast matrix is light brown, very soft and fine-grained with no reaction to HCl. Visual estimate 20%. Poor to moderate sorting, clast-supported, loosely packed.

74.3 to 75.1 MUDST

Mudstone (no bedding)

Upper contact 30 tca. Fragile. Blocky and massive with zones of angular (1-2 cm) and subrounded (less than 1 cm) breccia clasts where visible. Possible xenolith to OLVK above and below (?).

75.1 to 76.45 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to above kimberlite at 74.50m. Broken and irregular upper contact taken at the base of the brecciated mudstone. Discrete olivine commonly angular and broken. Phlogopite slightly more common. Spinel visible in cored and uncored juvenile lapilli. Trace pyrite less than 1 mm. Possible quartz grains but could be on surface only. Angular black shale xenoliths up to 5 cm, comprise up to 25%. Platy shale appears weakly aligned 40 tca.

76.45 to 76.62 MUDST

Mudstone (no bedding)

Broken upper contact. Broken chips of green kimberlite followed by 14 cm of black mudstone or shale with a sheen and silky feel. Harder than overlying mudstone/shale breccia and overlying shale.

76.62 to 76.78 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Irregular and gradational upper contact between fragmented mudstone (breccia?) and fragile, green kimberlite. Resembles kimberlite at 77.0m but crumbly.

Country rock xenoliths of black mudstone/shale and grey limestone, commonly less than 1 cm and subangular to elongate, comprise up to 5%.

Discrete olivine F-M (0.5-5mm) with few C up to 8mm, and comprise up to 60%. Macrocrysts are light brown-green, serpentinized, round, few are broken with minor jigsaw fit pattern. Subhedral to euhedral phenocrysts are dark green-brown, serpentinized. Spinel rims common and these olivines are included in estimate. Trace discrete phlogopite, fresh, honey-brown, F <1 mm, sub- to euhedral.

Juvenile lapilli are cored and uncored, commonly 0.5-5 mm and comprise up to 15%. Cored lapilli consist of serpentinized olivine or xenoliths (black shale common) with grey, irregular or partial selvages. Uncored, irregular to few amoeboid lapilli with olivine (few poss phenocrysts) set in grey serpentine matrix.

Inter-clast matrix is pale green serpentine, up to 20%. Poorly sorting, clast-supported, loosely packed.

76.78 to 77 SHALE

Shale (bedded or fissile nature)

Similar to 76.45 with more fissile parting, parallel to upper contact at 65 tca. Sharp upper contact. Resembles a 'baked' o

weakly metamorphosed shale. Possible xenolith (?).

77 to 80.6 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Broken upper contact. Kimberlite is fresh, dark green in color, hard and competent with few broken areas. Moderate recovery with some areas coated in drilling mud.

Country rock xenoliths of black mudstone/shale, grey limestone, and altered green basement xenoliths (amphibole?) often with magmatic selvage (olivine, spinel), commonly less than 1 cm with few up to 2cm and angular, comprise less than 5%. Hematite alteration noted in basement xenoliths at 78.7m.

Discrete olivine F-M (<0.5-3mm), replaced by green serpentine, up to 70%. Few broken, larger macrocrysts but generally sub- to anhedral and round. Again, some olivines have spinel rims. Rare euhedral olivine phenocrysts. Trace discrete phlogopite, fresh, honey-brown, F commonly <1 mm but up to 2 mm, subhedral.

Juvenile lapilli are cored and uncored, commonly light and dark grey, 0.5-5 mm, and comprise up to 15%. Cored lapilli consist of serpentinized olivine or common black shale/mudstone, limestone and probably altered basement xenoliths with thin, irregular grey selvages containing phlogopite, spinel and olivine. Uncored, irregular to few amoeboid lapilli, commonly <1mm, of serpentinized olivine, spinel, phlogopite (common in dark grey lapilli but seems very minor in light grey lapilli) set in serpentine matrix. Protruding olivine visible along clearly distinct boundaries. An extreme amoeboid lapilli has serpentinized olivine macro/phenocrysts, spinel set in a grey matrix with several <1mm irregular carbonate filled pockets (possible vesicles).

Inter-clast matrix is mottled pale green serpentine with areas of carbonate infilling, up to 20%. Poorly sorting, clast-supported, loosely packed.

79.25m – Pink red pyrope with kelyphite rim.

79.3m – 1cm irregularly round carbonate patch with F olivine incorporated along boundary. Some limestone xenoliths have similar olivine along margins.

Poor core recovery between:
79.1-80.0m – broken kimberlite and mudstone fragments, spun core 20 cm long.
80.0-80.6m – mud and pebbles of likely green kimberlite
Approx. 80.6-80.75m – kimberlite pebbles and cobbles. Largest piece of core has C olivine otherwise similar to above kimberlite. Probably out of place in core box.

80.6 to 86 MUDST

Mudstone (no bedding).

Poor core recovery from 80.0-80.75m and 83.0-86.0m. Abundant drilling mud between 83.4-84.1m. Brecciated mudstone from 80.60-81.60m with broken upper contact approximately 90 tca. Angular to subrounded clasts ranging from less than 1 cm to 1-4cm cemented together by a fine-grained, light brown mud-like matrix. Trace kimberlite in first 3cm. Irregular upper contact with mudstone breccia. Black, massive, more competent mudstone from 81.60-86.00m but still partially unconsolidated with irregular parting 20-40 tca.

86 to 96.1 SHALE

Shale (bedded or fissile nature)

Similar to shale at 60.60m. Gradational upper contact. Abundant drilling mud coating surface of black shale difficult to remove. Fissile with fine, less than 1mm, light grey laminae parallel to parting where visible. Bedding varies throughout unit:
86.00-87.95m – 45 tca
87.95-88.70m – 85 tca
88.70-91.20m – 75 tca
91.20-95.00m – 85 tca
95.00-96.10m – 80 tca

3 cm of broken shale above kimberlite. Clasts less than 1 cm with carbonate-rich fragments or matrix near contact. Core is broken here, more brecciated shale could be present.

96.1 to 96.54 VK-BED

Volcaniclastic kimberlite with bedding

Sharp upper contact at 72 tca, parallel to lower contact. Kimberlite horizon is narrow and a light brown color. Competent and hard. Sorting of olivine and country rock xenoliths between 2 sets of anastomosing carbonate veinlets parallel to

upper and lower contacts.

Country rock xenoliths of white/grey limestone and subangular black shale, commonly less than 1 cm, comprise up to 5%. Few basement xenoliths commonly with selvages.

Discrete olivine F-M (0.5-3mm) replaced by carbonate or silicified (?creamy white, minor HCl reaction), sub- to anhedral, some broken, comprise up to 70%. Most M olivine have very thin selvages. Trace discrete phlogopite, fresh, brown, F <1 mm, subhedral.

Juvenile lapilli are cored and uncored, commonly less than 5 mm, and comprise up to 15%. Cored lapilli are round to oblong and consist of white, carbonate-replaced olivine or country rock xenoliths with uneven brown selvages of F olivine, phlogopite and spinel in possible serpentine matrix. Uncored, irregular lapilli similar to cored lapilli. Common protruding olivine. Some uncored lapilli are light grey with more F olivine and spinel in grey matrix.

Inter-clast matrix is light brown, soft and reacts readily to HCl (carbonate or alteration?), up to 20%. Moderately to well sorted, clast-supported, loosely packed. One F chrome diopside.

Inversely graded (from top to bottom):
14 cm – coarse to 1cm fine zone above carbonate veinlets
11cm – weakly aligned grains parallel to carbonate veins and contacts
16 cm – coarse to 2 cm fine zone above lower contact.

96.54 to 118.3 SHALE

Shale (bedded or fissile nature)

Similar to shale at 60.60m and 86.00m. Mostly hard and competent with portions coated in light grey drilling mud. Fine laminae appear normal graded under microscope. Bedding 75 to 85 tca.

116.64 – 116.67m – light brown, 3cm horizon of VVF material. No olivine readily observed. Possible kimberlite or ash? Contacts parallel to bedding.

118.3 to 118.5 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Sharp upper contact 90 tca. Kimberlite is altered, yellow-brown in color, competent with shale xenoliths up to 4 cm long. Country rock xenoliths are generally long, thin and shardy (as though cleaving off the bedrock) at 85 tca. Black mudstone/shale xenoliths most abundant, fresh and diluted up to 30%. Grey and beige xenoliths (limestone? basement?) less than 1 cm are less abundant.

Olivine barely visible, F, serpentinized dark brown, broken or elongate, comprise up to 65% in kimberlite, 45% compared to overall country rock dilution. Trace discrete phlogopite, fresh, brown, F <1 mm.

Juvenile lapilli cored with black shale, limestone or altered basement granite. Grey uncored lapilli are irregular to elongate, less than 1 cm, and comprise up to 5%. Phlogopite and olivine visible in larger lapilli.

Inter-clast matrix is yellow brown with moderate reaction to HCl (clays, carbonate, serpentine?), up to 20%. Trace F interstitial pyrite. Moderately sorting, clast-supported, loosely packed.

118.5 to 118.7 SHALE

Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m and 96.54m. Sharp upper contact parallel to bedding 90 tca. Broken but not similar to above shales or 76.78m. Possible xenolith.

118.7 to 120.4 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Sharp upper contact parallel to bedding 90 tca. Kimberlite is a grey color and competent with few broken zones. Abundant white carbonate veinlets less than 1 cm throughout approximately 40 tca.

Country rock xenoliths of angular black shale and beige limestone commonly less than 1 cm with shardy/platy shale xenoliths (3x1cm) near upper contact, comprise up to 15%. Largest shale xenolith is 3cm. Shale more abundant than limestone xenoliths. Few large elongate shards suggest weak alignment parallel to veining but xenoliths less than 1 cm are random under microscope. Veining lines and crosscuts xenoliths (syn- and post-emplacement). Trace, highly altered, green basement xenoliths.

Discrete F olivine as anhedral macrocrysts and euhedral phenocrysts replaced by brown serpentine with minor bright green

chrysotile (?) or carbonate cores, commonly less than 1 mm, comprise up to 60%. Some broken grains. Trace discrete phlogopite, fresh, honey-brown, F <1 mm.

Juvenile lapilli are cored and uncored, commonly less than 5 mm, up to 10%. Cored lapilli with serpentinized olivine or country rock with very thin and uneven selvages. Spinel visible along with protruding olivine. Uncored, irregular to amoeboid lapilli of olivine macro/phenocrysts with spinel rims set in grey serpentine matrix. Few dark grey uncored lapilli with minor phlogopite.

Interclast matrix is light brown (possible serpentine or clay) with few areas of colloform carbonate, up to 15%. Trace interstitial pyrite. Poorly sorted, clast-supported, loosely packed.

In core photo, a piece of kimberlite approx. 20cm in length is out of place and belongs to this kimberlite intersection (broken xenoliths and breakage angle fit together).

120.4 to 125.4 SHALE

Shale (bedded or fissile nature)

Sharp upper contact marked by increased carbonate in kimberlite at 35 tca. First 50 cm of shale is shattered/brecciated, ranging from less than 1 cm up to 4 cm clasts. Clasts show little movement with some jigsaw fit patterns. Similar to shale at 60.60m, 86.00m, 96.54m, and 118.49m. Competent with 10% of unit broken. Bedding 55 tca, to 85 tca to 90 tca towards base of unit. Last 5 cm of shale appears shattered (brecciated) in place with 1-2 cm angular clasts. Olivine not observed but matrix rich in carbonate with patches less than 1 cm in shale clasts.

123.13-123.17m – Yellow-brown kimberlite horizon similar to 118.32m with 4 cm of grey limestone.

125.4 to 137 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Broken upper contact. Poor recovery from 131.5 – 133.3m. Core is hard and competent. Reduced and spun core between 134-135m. Kimberlite is fresh, green in color with subangular to subrounded country rock xenoliths.

Altered basement xenoliths abundant, commonly 1-3 cm, with thin brown selvages of olivine, replaced by carbonate, and spinel in a brown matrix (large cored lapilli). Largest basement xenolith is 4 cm. Granitic xenoliths altered to green or pale blue serpentine with carbonate (platy black mica or amphibole preserved). Fresh, subangular limestone and black mudstone/shale commonly less than 1 cm. Largest limestone xenolith 5x2cm. Basement xenolith included in visual estimate due to abundance. Country rock xenoliths up to 10%.

Discrete olivine F (less than 1mm up to 2mm) replaced by pale green serpentine, up to 60%. Visible phenocrysts and round, irregular or broken macrocrysts nearly blend in with matrix except for distinct white rims. Trace discrete phlogopite, fresh, honey-brown, F <1 mm, subhedral.

Juvenile lapilli are cored and uncored comprise up to 15%. Cored lapilli of olivine or country rock with irregular to round grey selvages. Uncored irregular lapilli, less than 1mm but up to 5mm, of olivine and spinel set in light grey serpentine matrix often with minor carbonate. Some lapilli appear dark grey with olivine macro/phenocrysts, phlogopite, and spinel in serpentine matrix. Both have delicate shapes and protruding olivine, with a good example at 126.55m.

Interclast matrix is pale green serpentine with occasional milky white carbonate areas, up to 15%. Trace pyrite less than 1 mm in matrix. Poorly sorted, clast-supported, loosely packed. One 1cm, heavily serpentinized, brown xenolith with pink garnet (possible mantle xenolith).

128.54-137.00m – First appearance of M olivine macrocrysts up to 5 mm. Gradational transition. Juvenile lapilli as above. A 1cm irregular to round cored lapilli has both protruding olivine and phlogopite. Round uncored lapilli with (olivine, spinel, phl in grey serp/carb matrix) has both protruding and broken olivine along boundary. Trace F phlogopite up to 2mm. Interclast matrix darker green serpentine.

128.6m and 130.8m- Pale pink garnet-rich xenolith altered brown. Selvage not observed and reacts strongly to HCl. Disseminated pyrite in xenolith at 130.8m along with cross-shaped carbonate xenolith or segregation.

134.10m – Round, basement gneiss xenolith up to 5 cm is altered to pale blue. Approximate 5mm thick brown alteration rim resembles selvage but has a thin <1mm irregular magmatic selvage surrounding alteration.

137 to 137.3 SHALE

Shale (bedded or fissile nature)

25cm broken interval of platy, black shale. Contacts not preserved. Possible xenolith.

137.3 to 138.2 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Similar to above at 128.54m. From 137.6 – 138.15m, gradational change in color to dark brown-green with F-M with few C olivine macrocrysts, replaced by serpentine and carbonate. Several broken anhedral macrocrysts. Common spinel rims on olivine macrocrysts. Subangular shale xenolith up to 5cm with carbonate veining at 137.9m

138.2 to 156.6 SHALE

Shale (bedded or fissile nature)

Broken upper contact but base of above kimberlite implies 80 tca. Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, and 120.35m. Competent with good core recovery. Brecciated shale not observed. Bedding varies:
138.4m – 85 tca
139.8m – 67 tca
140.3m – 85 tca
143.0m – 90 tca until 156.6m

156.6 to 156.8 VK

Volcaniclastic kimberlite

Upper and lower contacts are parallel at 65 tca but contacts are irregular and not sharp.Shale is fissile on either side of upper and lower contacts and does not appear brecciated.

Kimberlite horizon is heavily altered, brown in color, with one possible limestone xenolith (2x0.5cm) observed. Possible white olivine macrocrysts and juvenile lapilli but difficult to discern.

156.8 to 186.4 SHALE

Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m and 138.15m. Sharp and parallel upper contact at 65 tca. Moderate core recovery with poor recovery between 167-168m. Reduced core from 179-182m. Drilling mud coated much of this unit and difficult to remove. Bedding 90 tca and at 161.00m is 85 tca.

160.62-160.69m and 161.21-162.26m - Narrow possible kimberlite horizons, similar to 156.6m.

186.4 to 187.6 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Broken upper and lower contacts. Kimberlite is a light brown color, hard and competent with jointing/breakage. Color resembles kimberlite at 96.1m.

Country rock xenoliths with black shale/mudstone most visible, commonly less than 1 cm, angular and fresh. Beige, subangular, silty shale (?) xenoliths common with few up to 2cm, which are different to xenoliths in above kimberlite horizons. Visual estimate less than 5% but some xenoliths blend in color with olivine and matrix.

Discrete olivine F-M, replaced by creamy white carbonate (?), anhedral, range from several M broken macrocrysts to sub- to anhedral F macrocrysts, and comprise up to 50%. Trace discrete phlogopite, fresh, brown, F <1 mm, subhedral.

Juvenile lapilli are cored and uncored, commonly less than 5 mm, and up to 15%. Cored lapilli consist of carbonate replaced olivine or CRX, have uneven but smooth selvages similar to above kimberlites, with or without phlogopite. Uncored, light grey-brown lapilli blend in color with matrix but have sharp boundaries. Irregular to subirregular to round to few amoeboid lapilli with protruding white carbonate-replaced F olivine less than 1mm in grey carbonate matrix.

Inter-clast matrix is beige and reacts readily to HCl, up to 30%. Poorly sorted, clast-supported, loosely packed. VVF matrix with tiny black specks, possible alteration, ash-like or carbonate? Trace VF rusty pyrite in matrix.

187.6 to 187.9 SHALE

Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m, 138.15m and 156.75m. Sharp but irregular and wavy upper contact with 3 cm of subrounded shale xenoliths incorporated into the base of the above kimberlite. Bedding 90 tca.

187.9 to 188 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to above kimberlite at 186.38m.

188 to 189.2 SHALE
Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m, 138.15m, 156.75m and 187.60m. Broken upper contact. Bedding 90 tca.

189.2 to 189.4 OLVK
Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to above kimberlite at 186.38m and 187.90m.

Sharp upper contact at 40 tca. Subangular, shale xenoliths up to 3cm.

189.4 to 189.6 SHALE
Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m, 138.15m, 156.75m, 187.60m and 188.00m. Sharp upper contact at 55 tca (?). Bedding 90 tca.

189.6 to 190.8 OLVK
Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to above kimberlite at 186.38m, 187.90m, and 189.23m. Broken upper contact.Trace pyrite up to 4mm.

190.8 to 191 SHALE
Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m, 138.15m, 156.75m, 187.60m, 188.00m and 189.40m but consists of broken fragments.

191 to 192.1 OLVK
Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to above kimberlite at 186.38m, 187.90m, 189.23m, and 189.60m.

Broken upper contact. Observed few round accretionary lapilli, as described by Boyer (2005), between 5-10 mm with both sharp and diffuse boundaries (Pet required). Brown phlogopite appears concentrically aligned. Poor to moderate sorting.

192.1 to 193.2 SHALE
Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m, 138.15m, 156.75m, 187.60m, 188.00m, 189.40m and 190.80m. Broken upper contact. Bedding 85 tca.

193.2 to 195.9 OLVK
Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to above kimberlite at 186.38m, 187.90m, 189.23m, 189.60m, and 191.00m.Sharp upper and lower contact 90 tca with soft shale. Matrix reacts less to HCl.

195.9 to 200 SHALE
Shale (bedded or fissile nature)

Similar to shale at 60.60m, 86.00m, 96.54m, 118.49m, 120.35m, 138.15m, 156.75m, 187.60m, 188.00m, 189.40m, 190.80m and 192.10m. Bedding 85 tca.

200 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH14-07-02

HOLE-ID	**DDH14-07-02**	*Start Date*	02-Feb-07	*Contractor*	Connors
Anomaly	K014	*End Date*	04-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	199.0	*Wk Permit*	MME-060017
Easting	582797.1	*Azimuth*	0	*District*	Lesser Slave
Northing	6314906.26	*Dip*	-90	*Legal Desc.*	NE - 11 -92 - 11 - 5
Elevation	617.78	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	05-Feb-07
Mapsheet	84B13			*Logged by*	I. Ranger

Purpose Delineate geometry of the K14 body

Comments Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter
20 core boxes
Sample No.'s: 24731-24746

Interval	*Description*

0 to 115 **OB**
Overburden

Cased through overburden and collared into mudstone/shale to 115 m.

115 to 133.1 **SHALE**
Shale (bedded or fissile nature)

Dark grey-black shale, competent and hard, with parallel, fine light grey laminae of silt- to mud-sized grains a few mm's thick. Similar to shale in K14-07-01. Fissile parting 85-90 tca throughout unit. Good core recovery with minor broken areas.

133.1 to 133.2 **VK**
Volcaniclastic kimberlite

Broken upper contact. Kimberlite is a yellow-brown color with fragments up to 5cm. Poor recovery here but resembles kimberlite at 74.0 m in K14-07-01. Country rock xenoliths are elongate shards of black shale, beige-brown silty shale or limestone (no reaction to acid), commonly less than 1 cm, with weak alignment 80 tca. Possible discrete grey olivine but very difficult to discern. Trace discrete phlogopite, fresh, honey-brown, F <1 mm. Many grains appear angular and broken. Grey lapilli with irregular to angular to elongate shapes could be present. Matrix is creamy yellow, soft and washes away easily (clay, alteration or serpentine?). Trace pyrite. Largest coherent kimberlite fragment suggests some sorting.

133.2 to 135.2 **SHALE**
Shale (bedded or fissile nature)

Similar to shale at 115.0m. Broken upper contact followed by 35 cm are broken fragments. Moderate core recovery. Competent core has fissile parting 85 tca. Mud coats last 5 cm of shale above kimberlite contact.

134.85m – 5 cm of fine-grained laminae with microfolding and normal grading.

135.2 to 146.5 **OLPK**
Olivine-rich pyroclastic kimberlite (ol>jl)

Kimberlite is a brown-green to grey-green color. Most of the core is hard and coherent but some areas are segmented in parallel 1-inch discs held together by drilling mud. Lithology difficult to see from 137.15-137.95m, 139.5-140.7m, 141.4-

142.0m but overall color is similar. Sharp upper contact 75 tca with parallel white carbonate veinlets and thin, platy shards of black shale along the contact. One broken juvenile lapilli (5 mm) observed along contact.

Country rock xenoliths of subangular to subrounded black shale, brown limestone or silty shale (?), carbonate, basement rock and white shard-like slivers of carbonate or basement rock (?), commonly less than 1 cm with few xenoliths up to 2cm, comprise up to 5%. Largest xenolith is a 4 cm basement xenolith. Xenoliths randomly oriented but few xenoliths and elongate lapilli, cored by shardy slivers, suggest a 45 tca alignment in some areas (eg. 136.50m, 140.75m). Basement xenoliths commonly rimmed by irregular to partial selvages and altered to a brown serpentine +/- carbonate (?) with black mica or amphibole and/or pale pink garnet. Selvages consist of olivine, spinel +/- minor phlogopite set in a grey matrix with protruding olivine. At 142.4m, a 5cm basement xenolith is altered pale blue and strongly magnetic (trace magnetite).

Discrete olivine F to few M (< 1mm - 5mm) comprises up to 65% and is replaced by grey-green serpentine or less commonly mottled white-grey (no reaction to HCl). Anhedral macrocrysts commonly broken. Euhedral olivine phenocrysts not observed. Olivine outlined in white, many with spinel rims. Trace discrete phlogopite, fresh, honey-brown, F <1 mm with few up to 2mm, sub- to euhedral.

Juvenile lapilli are cored and uncored and comprise up to 10%. Cored lapilli commonly less than 1 cm, with cores of serpentinized olivine, black shale or altered basement xenoliths with grey, round to irregular to partial selvages. Light and dark grey, uncored lapilli are round to irregular to amoeboid in shape with protruding olivine, commonly less than 5mm but up to 1cm and consist of olivine (<0.5mm but occas macrocrysts) and spinel set in a serpentine matrix with tiny black grains with visible phlogopite in dark grey types. Few lapilli have concentric olivine and phlogopite (possible accretionary lapilli described by Boyer (2005)). Round uncored juvenile lapilli (<5mm) more common to 15% at 141.25m. Hematite alteration around some selvages and xenoliths. Minor broken shardy lapilli observed at 143.5m.

Inter-clast matrix is mottled pale brown to green serpentine with white areas (no reaction to HCl) and comprises up to 20%. Trace pyrite (rusty). Pale green, vermiform antigorite associated with heavily altered, creamy white xenoliths with partial selvage. Poor to moderate sorting, clast-supported, loosely packed.

Mantle xenoliths commonly altered:
137.10m – 3cm, ol+opx+pale pink garnet + trace pyrite + black mineral
139.05m – Garnet lherzolite (pale pink garnet, trace black mineral)
145.90m – 2x10cm, (ol+opx+pale pink garnet) with irregular grey selvage, 5mm (altered cpx + pink garnet).

Magmaclast (autolith) observed at:
144.75m – 2cm, dark grey, angular magmaclast with dark green, anhedral olivine less than 1 mm. Angular to phenocrystic olivine set in a dark brown crystalline-looking matrix. Spinel not seen. Several broken olivine along sharply defined boundary.
145.55m – Another dark green-grey magmaclast with black, broken olivine along boundary.

Slight change in matrix color noted at:
138.00m –gradational from brown-green to green
144.00m –lighter pale brown-green (drilling mud?). Brown vermiform antigorite more common.

146.5 to 154.8 SHALE

Shale (bedded or fissile nature)

Similar to shale at 115.0m and 133.20m. Broken upper contact (90 tca?). First 35cm is broken core. Fissile parting 90 tc

154.12-154.20m – Kimberlite similar to below but highly altered. Upper contact is 45 tca and lower contact is steep and wavy/irregular roughly 55 tca.

154.8 to 155.2 VK

Volcaniclastic kimberlite

Sharp upper contact at 45 tca. Kimberlite is a light brown color, similar to kimberlite observed at 186.38m in K14-07-01. Competent and hard with a pitted surface. Olivine, juvenile lapilli, and inter-clast matrix difficult to discern. A grey-white mineral is possibly olivine, either replaced by carbonate or silica. Few, irregular juvenile lapilli, less than 1 cm, observed and contain white olivine less than 0.5mm. Creamy white matrix is soft, washes away easily, and has mild reaction to HCl. Trace pyrite and pale brown, vermiform antigorite to 5mm.

155.2 to 157.3 KSHALE

Shale with kimberlite, olivine and/or phlogopite with bedded or fissile nature

Upper contact steep and sharp but broken. Shale / kimberlite contact suggests 55 tca. Fissile parting of shale 60 tca. This unit consist of kimberlite intervals occurring irregularly with shale (possible kimberlite or shale xenoliths?).

155.4 – 155.55m – Kimberlite (similar to above), steeply dipping with blocky and shardy xenoliths of black shale up to

2cm along upper contact, aligned 55 tca. Lower contact sharp 90 tca. Breccia clasts not observed above or below.

Kimberlite observed at 155.95-155.99m, 156.07-156.12m, 156.16-156.18m with 1x3cm angular shale xenolith, 156.6-156.83m with round shale xenoliths commonly 2-5cm, and 156.93-156.97 m.

157.3 to 158.1 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to kimberlite at 154.75m. Country rock xenoliths of subround to subangular black shale, commonly less than 1 cm, most visible and comprise up to 5%. Anhedral, grey-white olivine commonly less than 1 mm, round to angular and broken, either replaced by carbonate or silica (?), comprises up to 70%. Uncored, irregular to amoeboid juvenile lapilli most visible and similar to above kimberlite, comprise 5% or more. Inter-clast matrix, as above, up to 20%. Trace pyrite and antigorite.

158.1 to 159.7 KSHALE

Shale with kimberlite, olivine and/or phlogopite with bedded or fissile nature

Drilling mud abundant but similar to 155.15m. Fissile parting of shale approximately 60 tca.

158.35-158.38m – narrow kimberlite intersection (similar to above) with upper and lower contacts 85 tca.

159.7 to 159.9 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to kimberlite at 154.75m and 157.30m. Upper contact 45 tca. Possible lower contact is irregular and wavy, incorporating a 10cm rounded shale xenolith.

159.9 to 160.8 SHALE

Shale (bedded or fissile nature)

Similar to shale at 115.00m, 133.20m, and 146.45m but less fissile, some parting at 65 tca. Broken upper contact over 25 cm.

160.8 to 162.5 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to kimberlite at 154.75m, 157.30m and 159.70m. Broken upper contact of 5cm of kimberlite, followed by 5cm of shale (55 tca) before the main kimberlite intersection. Kimberlite is a light brown color with a fresher appearance than similar kimberlite intersections from 154.75m. Competent and hard with few broken areas. Weak preferred orientation 85 tca.

Country rock xenoliths of round to subangular black mudstone/shale most visible with minor beige siltstone or limestone (?), comprise up to 5%. Largest xenolith is 2x3cm, round black shale with late stage carbonate veining. Few elongate (2cm) shale xenoliths observed parallel to lower contact.

Discrete olivine F-M (<0.5-5mm), anhedral with some broken grains, and comprise up to 70%. M olivine is commonly replaced by brown serpentine and white mineral, whereas F olivine is translucent brown. Both are very hard with no reaction to HCl, as though silicified.

Juvenile lapilli are pale creamy white to grey and nearly blend in with the inter-clast matrix, estimated up to 5%. Uncored lapilli most visible, with white olivine less than 1mm in a pale brown matrix. Few protruding olivine observed. Few visible cored lapilli similar to uncored lapilli.

Creamy white interclast matrix similar to above kimberlite (below 154.75m), up to 20%. Trace pyrite and antigorite up to 5mm. Abundant late-stage, parallel carbonate veinlets. Moderate sorting, clast-supported, loosely packed.

162.4m – Anhedral, round C olivine up to 1 cm and uncored juvenile lapilli up to 5mm above lower contact. Red-pink garnet inclusion in an olivine. A 3cm wide white-grey, irregular, very hard and mildly carbonaceous xenolith or magmaclast (?) contains up to 6 round inclusions of red garnet, epidote (? Pistachio-green mineral) and F black mineral.

162.5 to 199 SHALE

Shale (bedded or fissile nature)

Similar to shale at 115.00m, 133.20m, 146.45m and 159.90m. Broken upper contact. Breccia clasts not observed. Fissile parting 90 tca.

199 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH14-07-03

HOLE-ID	**DDH14-07-03**	*Start Date*	06-Feb-07	*Contractor*	Connors
Anomaly	K014	*End Date*	07-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	188.0	*Wk Permit*	MME-060017
Easting	582760.69	*Azimuth*	0	*District*	Lesser Slave
Northing	6315210.88	*Dip*	-90	*Legal Desc.*	NE - 11 -92 - 11 - 5
Elevation	621.63	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	I. Ranger
Purpose	Delineate geometry of the K14 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter Logged: Feb. 7-8, 2007 33 core boxes Sample No.'s: 24747-24757				

Interval	*Description*
0 to 46.4	**OB** Overburden Cased through overburden and collared at top of mudstone/shale.
46.4 to 164.8	**SHALE** Shale (bedded or fissile nature) Dark grey-black mudstone/shale until rock becomes more fissile at 111.75m. Similar to mudstone/shale in K14-07-01 and –02. Good recovery with poor recovery between 155-156m. Fine laminae of alternating light to dark grey, silt- to mud-sized grains. Laminae are generally parallel and a few mm's thick. Bedding between 55-75 tca.
164.8 to 165.5	**RVK** Resedimented volcaniclastic kimberlite Broken upper contact. Kimberlite is a dark grey color and diluted with country rock xenoliths of round to angular carbonate, common grey mudstone and black shale, ranging in size from less than 2mm, commonly 0.5-2 cm. and up to 10cm, comprising up to 55%. Few F olivine, replaced by carbonate and difficult to see, up to 5%. Trace VF to F black and brown mica. Colorless, clear F quartz could be present. Juvenile lapilli are cored and uncored, commonly white, less than 1cm and comprise up to 30%. Lapilli cored with country rock xenoliths or brown mica most visible and sometimes broken. Uncored lapilli are irregular to angular in shape, less than 1 cm and commonly less than 1 mm, resembles white altered olivine but contain mica. Interclast matrix contains mottled grey-white, VVF material of carbonate and/or clays (?) up to 10%, with mild reaction to HCl. Trace VF pyrite in matrix and juvenile lapilli. Poorly sorted, clast supported and well packed. Few country rock xenoliths weakly aligned 75-90 tca.
165.5 to 165.9	**SHALE** Shale (bedded or fissile nature) Similar to above shale at 46.4m. Upper contact is broken. Fissile parting 55 tca.

165.9 to 171 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Broken upper contact. Kimberlite is a grey-white color, hard and competent with few broken up areas. From 167.40-168.50m core is fragile, crumbly and coated in drilling mud.

Country rock xenoliths comprise less than 5% angular black mudstone/shale, carbonate, limestone, and heavily altered basement xenoliths (gneissic, quartz and black minerals), commonly less than 1 cm. Largest xenolith 6cm of round, brown limestone.

Discrete olivine F-C, replaced by carbonate or silica (?) and comprise up to 70%. Grains are hard to scratch with weak reaction to HCl. Anhedral and round to few angular and broken. Trace discrete F phlogopite or brown mica, fresh, honey-brown.

Juvenile lapilli are cored and uncored, commonly grey, less than 5 mm and comprise 5%. Cored (brown-white olivine macrocrysts, CRX) and uncored lapilli (F white olivine) are round to irregular in shape in a creamy white and hard matrix.

Interclast matrix is a hard, creamy white-grey serpentine or clay (?), up to 20%. Trace antigorite and pyrite. Anastomosing white carbonate veinlets throughout. Poor sorting, clast-supported, and loosely packed.

169.00m – white magmaclast (6cm) with brown and white olivine (?) uniformly distributed in creamy white matrix.

171 to 184.8 SHALE

Shale (bedded or fissile nature)

Similar to above shale at 46.4m and 165.48m. Upper contact 45 tca. Fissile parting 70 tca.

184.8 to 185 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Similar to lower portion of above unit at 165.93m. Olivine up to VC grain size. A purple garnet with pistachio green (epidote) rim observed.

185 to 188 SHALE

Shale (bedded or fissile nature)

Similar to above shale at 46.4m, 165.48m, and 170.95m. Upper contact is broken. Poor recovery. Fissile parting 75 tca.

187.8-187.9m – kimberlite similar to above. Upper and lower contacts parallel 75 tca but lacks flow features.

188 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH14-07-04

HOLE-ID	**DDH14-07-04**	*Start Date*	08-Feb-07	*Contractor*	Connors
Anomaly	K014	*End Date*	10-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	104.0	*Wk Permit*	MME-060017
Easting	582801.29	*Azimuth*	270	*District*	Lesser Slave
Northing	6315099.32	*Dip*	-45	*Legal Desc.*	SE - 14 -92 - 11 - 5
Elevation	626.61	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	10-Feb-07
Mapsheet	84B13			*Logged by*	I. Ranger,A.Cloutier

Purpose Delineate geometry of the K14 body

Comments Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter
23 core boxes
Sample No.'s: 24758-24769

Interval	*Description*
0 to 5	**OB** Overburden Clayey yellow-brown overburden with pebbles. Cased through overburden and collared at top of kimberlite.
5 to 5.15	**VK** Volcaniclastic kimberlite Poor recovery and significant core loss between 5-8m. A 15cm piece of grey-colored kimberlite present but appears out of place. Similar to kimberlite at base of main intersection in this hole.
5.15 to 8	**MUDST** Mudstone (no bedding) Poor recovery and significant core loss between 5-8m. Only 20cm of crumbly mudstone present.
8 to 73.7	**OLPK** Olivine-rich pyroclastic kimberlite (ol>jl) Poor recovery over first 3m represented by green kimberlite pebbles and cobbles with visible olivine macrocrysts. Good recovery for remaining unit. Kimberlite is a dark green color, hard and coherent with very little dilution until 73.70m. Country rock xenoliths comprise 2% of angular and white probable basement rock (most visible) and minor fresh black mudstone/shale and grey/light brown limestone, commonly less than 1 cm with few up to 2cm. Largest xenolith is 4cm black mudstone/shale. Basement xenoliths replaced by serpentine and minor carbonate with slight alteration in surrounding kimberlite marked by a pale change in color. Discrete olivine F-M (C) (<0.5-5mm) replaced by pale green serpentine, comprise up to 70%. M to C macrocrysts are fractured with cores of white carbonate and black metallic mineral (magnetite?). Anhedral to subhedral with rare euhedral F olivine. Some round M macrocrysts are broken. Most F olivine has orange rims (serpentine?). Trace discrete phlogopite, fresh, brown, F commonly <2 mm. Juvenile lapilli are dark green similar to the matrix, commonly less than 5 mm, and comprise 8%. Cored (olivine most common, few with CRX) and uncored lapilli typically round to subirregular (few partial selvages) in shape, and comprised of uniformly distributed F serpentinized olivine (<1mm), spinel and mica set in a dark green serpentine matrix, where visible. Some uncored lapilli contain carbonate. Uneven, almost clustered, distribution. At 17.50m, a round, cored lapilli up to 1 cm observed.

Interclast matrix is dark grey-green and likely serpentine with minor interstitial carbonate, up to 20%. Poorly sorted, clast-supported, and loosely packed.

24.45-25.40m: F-M (C) - Gradual transition to a darker green kimberlite observed. Olivine macrocrysts are dark brown with fractures outlined in black and common VVF yellow metallic mineral (pyrite?) within cores of macrocrysts replaced by serpentine and carbonate. Black metallic mineral observed in macrocrysts cores above is not observed, yet this unit is more strongly magnetic (with hand magnet) than kimberlite above. Minor carbonate veins and veinlets (<3mm wide) approximately 45 tca, irregularly throughout unit.

25.40-31.75m: F-M (C) - Similar to kimberlite at 8.00m. Kimberlite has a patchy brown-green to dark green color. Olivine macrocrysts replaced by pale green serpentine but include brown serpentine as seen above at 24.45m. F-M olivine outlined in dark green serpentine with trace black metallic mineral (magnetite?) in cores. Trace chromite observed beginning 26.10m, anhedral/round and less than 3mm. Slivers of carbonate up to 1cm long as country rock xenoliths or lapilli cores. Minor carbonate veinlets. Garnet lherzolite (purple garnet) at 25.70m.

31.75-42.85m: F-C - Gradual transition to M-C macrocrysts containing fresh olivine relics and some traces of VVF black metallic mineral. C olivine more common starting at 38.50m. Altered basement xenoliths up to 1-3cm more common and sometimes contain pale pink garnet. Round, black shale xenolith with carbonate veining (pre-emplacement) up to 7cm. Interstitial carbonate more common. Minor carbonate veinlets. At 33.10m, garnet lherzolite with pale pink garnet and black mineral (alteration or amphibole?), pink-red garnet inclusions in olivine, and rusty red garnet up to 1cm.

42.85-57.70m: F-C - Gradual transition to overall grey-black color with zones of brown staining or alteration as seen at top of hole and 24.50m. Carbonate veining approximately 60 tca. Fresh olivine relics in M-C macrocrysts but alteration similar to 24.45m with trace VVF pyrite (?). Interclast matrix is blue-green serpentine with VF and interstitial carbonate. Round to subround juvenile lapilli as seen above, up to 7mm. Trace lapilli are broken in half. Anastomosing carbonate veins more common and up to 5mm thick. Trace pink-red pyrope with kelyphite rim. VC olivine (or mantle xenolith) with chromite inclusion (1cm) at 49.50m.

57.70-68.80m: F-C (VC) - Gradual transition to VC olivine. Juvenile lapilli similar to above and up to 1.5cm, often round with aligned olivine, phlogopite, and spinel in dark green serpentine. Little to no relic fresh olivine. Trace chromite. Garnet lherzolite up to 4cm at 62.70m. Pale green olivine more visible at 62.90m.

68.80-73.70m: F-C - Similar grey-black kimberlite to above. First appearance of dark grey juvenile lapilli with irregular to amoeboid to partial selvage shapes containing olivine and spinel +/- mica in grey serpentine matrix. Mantle xenoliths (lherzolite +/- garnet) are larger and slightly more common.

73.7 to 86 **OLPK**

Olivine-rich pyroclastic kimberlite (ol>jl)

Change in kimberlite to grey color marked by thick, broken vein containing coarse, colloform quartz crystals within vugs followed by 30cm of intense parallel veining of white carbonate +/- quartz. Zones of broken kimberlite from 77.20-77.70m and 78.50-79.0m with yellow-brown, mud-like coatings, more fragile. Poor recovery from 82.2-86.0m with few competent sections.

Country rock xenoliths comprise 2% of angular fresh black mudstone/shale, carbonate and altered white probable basement rock, commonly less than 1 cm with few mudstone xenoliths up to 4cm. Largest xenolith is 4cm black mudstone/shale.

Discrete olivine F-C are white-grey and very hard, replaced by silica (?), minor carbonate +/-dark green serpentine, comprise up to 60%. Some M to C macrocrysts are broken. Trace discrete phlogopite, fresh, brown, F commonly <1 mm.

Juvenile lapilli are grey, commonly less than 2 mm and up to 1cm, and comprise 13%. Cored (olivine or CRX) and uncored lapilli typically round to irregular to amoeboid in shape, and comprised of F olivine, spinel +/- mica set in a grey (serpentine?) matrix.

Interclast matrix is pale grey to light brown serpentine or clay (?), up to 25%. Parts of the matrix, olivine macrocrysts and CRX appear pale pink due to hematite. Trace pyrite up to 5mm. Trace antigorite. Trace pink-red pyrope with kelyphite rim. Poorly sorted, matrix-supported, and loosely packed.

74.60m – Altered lherzolite up to 7cm, oblong.
80.0m – White magmaclast (4cm) of olivine, spinel. Broken olivine not observed along edge. Altered basement xenolith (3cm) with thin selvage.

86 to 104 **SHALE**

Shale (bedded or fissile nature)

Poor recovery of black mudstone over first 1.5m, with minor broken zones. Coherent black shale with minor fissile parting 65-80 tca.

104 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH14-07-05

HOLE-ID	**DDH14-07-05**	*Start Date*	11-Feb-07	*Contractor*	Connors
Anomaly	K014	*End Date*	15-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	184.0	*Wk Permit*	MME-060017
Easting	582953.3	*Azimuth*	135	*District*	Lesser Slave
Northing	6315048.23	*Dip*	-45	*Legal Desc.*	NW - 12 -92 - 11 - 5
Elevation	616.91	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	I. Ranger
Purpose	Delineate geometry of the K14 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter Logged: Feb. 12-15, 2007 41 core boxes Sample No.'s: 24770-24793				

Interval	*Description*
0 to 16	**OB** Overburden Clayey yellow-brown mud with pebbles/cobbles. Cased through overburden to 55ft.
16 to 150.8	**OLPK** Olivine-rich pyroclastic kimberlite (ol>jl) Broken upper contact. Poor recovery to 19m followed by moderate recovery to 22m. After 22m, kimberlite is hard, coherent and a uniform grey-black color with minor dilution. Xenoliths of white basement rock (granite and/or gneiss) most visible. Poor recovery between 148-150.8m. Country rock xenoliths are angular to subround and comprise 5%. White basement rock (quartz, plagioclase, mica) ranges from fresh to partially altered with green serpentine rims to fully altered (serpentine, carbonate) with slight change in color to surrounding kimberlite up to 2cm. Few xenoliths have round to partial, pale to dark green selvages (grey olivine with black rims, phlogopite). Minor fresh light brown limestone > shardy white slivers of randomly oriented carbonate (?) >> black mudstone/shale. Commonly 1-2cm, few 2-4 cm, up to 8cm. Largest xenolith is 11cm of angular basement gneiss (mica) altered to serpentine/carbonate. Discrete olivine F-C replaced by brown-grey serpentine with fine black rims, comprise up to 65%. VVF metallic yellow mineral (pyrite?) present in cores or outlining grains. Some M-C macrocrysts are broken. Olivine >2mm are orangy-brown, replaced by carbonate, serpentine with a VVF uniformly disseminated black mineral (magnetite?), up to 21.50m and in weathered or altered (?) zones up to 31m. Olivine <2mm are serpentinized green or rusty orange. Trace discrete brown mica (phlogopite), fresh, F commonly <1 mm. Juvenile lapilli difficult to discern and dark green similar to the matrix and K14-07-04. Commonly less than 5 mm but up to 1.5cm and comprise 10% or more. Cored (olivine most common, few with CRX) or uncored lapilli mainly defined by concentrically aligned olivine (< 0.5mm, grey with black rims), phlogopite +/- spinel set in dark green serpentine (accretionary appearance). Generally, lapilli appear clustered as touching round to subround lapilli and better defined in interstitial carbonate-rich areas. At 26.0m, olivine macrocryst in accretionary lapilli is outlined in colloform carbonate. At 57.45m, variation in matrix color from dark to light green along rim (possible composite lapilli). Interclast matrix is dark green to blue-green and likely cryptocrystalline serpentine with minor interstitial carbonate, up to 20%. Areas of white carbonate segregations visible macroscopically. Poorly sorted, clast-supported, and loosely packed. Trace F chromite (31.90 m) and pyrope with kelyphite rim (pink, purple, common orange-red). Few VC olivine (dunite?)

with inclusions of pink-red and dark green/purple garnet (27.90m) or chromite (48.0m). Garnet lherzolite with pale pink garnet (up to 3cm at 34.4m).

37.20m – First appearance of light green lapilli (<1cm) and more common at 48m. Similar VF grey olivine with black rims and VVF metallic yellow mineral in a light green serpentine matrix with F carbonate blebs. Protruding olivine along boundary.

90.00-150.80m – Size and frequency of indicator minerals and mantle xenoliths increase up 2-3%. Common VC olivine (dunite?) with pyrope/chromite/chrome diopside inclusions. Rare amphibole-bearing dunite and strained opx+gt+CD xenolith at 99.6m. Relic cores in C olivine from 99.6-131.5m. Few anastomosing carbonate veins up to 3mm at 85m along with more common 3-5cm altered basement, limestone and mantle xenoliths. Carbonate veining more frequent after 128.5m.

135.5-150.80m – Gradual transition to minor VC olivine.

Metallic minerals observed at:
132.65-136.30m – Few anhedral and magnetic black grains up to 5mm and rimmed by rusty red hematite-like alteration.
142.05m – Altered 3cm magnetic xenolith of green serpentine, carbonate, brown mineral and interstitial magnetite (?).
143.2-143.4m – Two soft, bronze-colored grains up to 8mm.

Magmaclasts observed at:
30.50m, 34.30m, and 52.10m – Grey-green, 1-4 cm, subround to subangular magmaclasts with F-VF grey olivine +/- mica in dark green matrix +/- carbonate, with defined boundary (protruding or broken olivine not observed).
57.70m and 141m – Light grey, 2cm magmaclast with F olivine macro/phenocrysts +/- mica in mottled grey-green matrix with minor carbonate and altered F country rock xenoliths (?). Few protruding olivine along boundary.

150.8 to 159.6 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Similar to above kimberlite at 15.50m but gradual transition to darker grey-black color. Carbonate veining nearly disappears. Country rock xenoliths similar to above but decrease significantly to 1%. Largest xenolith is 1.5cm round limestone.

Discrete olivine F-C (VC) comprise up to 70% and is replaced by brown serpentine with white carbonate cores, trace VF black metallic mineral (magnetite?) and VVF bronze mineral (similar to above) along fractures or in cores. Olivine appears magnetic. Weak 45 tca alignment of macrocrysts. Minor fresh relic cores. Trace discrete F phlogopite.

Juvenile lapilli less common to 2% and are dark green similar to the matrix and above kimberlite. Interclast matrix is dark green and likely serpentine, up to 25%. Poorly sorted, clast-supported, and loosely packed.

Trace pink red pyrope with kelyphite rim (5mm). Mantle xenoliths (garnet lherzolite) few and small (~cm).

159.6 to 162.9 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Gradual transition to variable green-blue to brown kimberlite. Carbonate veining common and anastomosing. Country rock xenoliths comprise 10-15% of round to subangular, highly altered probable basement rock (gneiss) and fresh light brown limestone, commonly 1-3 cm. Largest xenolith is 8cm limestone.

Discrete olivine F-C (VC) replaced by brown-black likely serpentine, comprise up to 60%. Fractures outlined in light brown +/- carbonate visible in M-VC macrocrysts. F grains altered to pale brown serpentine and carbonate often with spinel rim. Relic cores in C macrocrysts. Trace discrete phlogopite, fresh, brown, F commonly <2 mm.

Juvenile lapilli are dark green similar to the matrix, commonly less than 5 mm, and comprise 5%. Cored (olivine most common, few with CRX) with round to partial selvages or uncored lapilli are irregular to amoeboid in shape, and comprised of uniformly distributed F black olivine and spinel.

Interclast matrix is dark green and likely serpentine with very minor interstitial carbonate, up to 20%. Poorly sorted, clast-supported, and loosely packed. Trace pink-purple pyrope up to 1cm. Few altered lherzolite, some with garnet 5cm above lower contact. Few C elongate olivine aligned to lower contact. No flow features observed.

162.9 to 165.8 MUDST

Mudstone (no bedding)

Sharp upper contact 65 tca. Parallel carbonate/serpentine veining to contact. Poor recovery in first 60cm followed by 1m of abundant mud coatings. Up to 2m from above contact, coherent brown-black mudstone is very hard with anastomosing carbonate veinlets.

165.8 to 183.1 SHALE

Shale (bedded or fissile nature)

Gradual transition to fissile parting 50 –65 tca. Poor core condition after 168.70m due to new helper on drill. Core is mixed up, very fragmented and depths required correction. Parallel, fine light grey laminae of silt- to mud-sized grains a few mm's thick present.

183.1 to 184 OLVK

Olivine-rich volcaniclastic kimberlite (ol>jl)

Broken upper contact (approx 90 tca). Kimberlite is grey-light brown in color. Country rock xenoliths comprise 10% of angular to subround, altered probable basement rock, fresh and common black mudstone/shale, carbonate and limestone, commonly less than 1 cm, 1-2cm, up to 5cm.

Discrete olivine F (M) replaced by pale green-grey serpentine +/- carbonate, comprise up to 60%. Spinel rims common, along with broken grains. Trace discrete F brown mica.

Juvenile lapilli are grey to light brown, commonly less than 1 mm up to 1cm, and comprise 10%. Cored (olivine most common, few with CRX) and uncored lapilli are irregular in shape, and comprised of serpentinized olivine with spinel rims set in a grey matrix. Protruding olivine visible.

Interclast matrix is soft, light brown clay, serpentine or alteration (?), up to 20%. Poorly sorted, clast-supported, and loosely packed. Trace pyrite. Common possible blue-green antigorite.

184 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH14-07-06

HOLE-ID	**DDH14-07-06**	*Start Date*	15-Feb-07	*Contractor*	Connors
Anomaly	K014	*End Date*	19-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	244.0	*Wk Permit*	MME-060017
Easting	582850.86	*Azimuth*	225	*District*	Lesser Slave
Northing	6315050.7	*Dip*	-45	*Legal Desc.*	NW - 12 -92 - 11 - 5
Elevation	618.37	*Core Size*	HQ3	*MIM Permit*	93960600058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	A.Cloutier
Purpose	Delineate geometry of the K14 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 55 core boxes Sample No.'s: 24801-24823				

Interval	*Description*
0 to 14.5	**OB** Overburden No overburden in the core box, collared in kimberlite
14.5 to 118	**OLPK** Olivine-rich pyroclastic kimberlite (ol>jl) The kimberlite is generally dark green in color with slightly lighter and darker patches, hard, competent and show little country rock dilution (5-3%). Xenoliths, ranging in size from 5mm to 15 cm (majority 0.5 -3 cm) are distributed uniformly throughout the unit. Olivine macrocrysts are dark green to black, serpentinised and compose approximately 25% of the unit. Minor calcite veining (<3mm) oriented 50-70 TCA appear irregularly throughout the unit. Country rock xenoliths comprise 3-5% of this unit. A gradual diminution in xenolith content at depth is observed. Most xenoliths are angular to subrounded, white, granitic and gneissic basement rock with minor subangular fresh black/brown mudstone/shale and light brown limestone. Some basement xenoliths are partially serpentinised, green, some show thin selvage. Most xenoliths are 5mm to 3 cm in size with the biggest being a 15 cm piece of limestone. The kimberlite matrix adjacent to xenoliths rarely displays alteration (pale change in color) from desegregation of xenoliths. Discrete olivines are F- C and mostly replaced by green serpentine. A few macrocrysts are broken but mostly sub to anhedral. Olivines comprise up to 70% of this unit. Traces of fine euhedral grains were observed. Most olivine macrocrysts show fractures with carbonate infilling. A VF yellowish metallic mineral can also be observed in the olivine macrocrysts throughout the unit but is less common after 50m depth. Few fresh olivine cores are observed from 30m. Trace discrete phlogopite, fresh, honey-brown, F commonly <1 mm but up to 2 mm. Juvenile lapilli are commonly dark green and similar to the matrix, commonly less than 5 mm, and comprise 15% of the unit. Cored lapilli consist of serpentinized olivine and few country rock xenoliths with thin, rounded to subrounded selvages (phl, spl, olv sometimes visible). Uncored lapilli have rounded to subrounded shapes with rare protruding olivines, commonly <2mm, and consist of serpentinized olivine, phlogopite and traces of spinel in a dark green serpentine matrix. Few cored lapilli show concentric distribution of selvage material. Lapillies have an uneven distribution in this unit Inter-clast matrix is dark green and likely serpentine with slight color changes throughout the unit, up to 20%. Poorly sorted, clast-supported, and loosely packed. Rare interstitial calcite and calcite slivers appear randomly in the unit. Traces of indicator minerals, mostly pink-red garnets and some chromite were observed randomly throughout the unit. Occurrence of mantle xenoliths, mostly lherzolite (+/ - garnet), is more frequent at depth.

14.5-18m: F-M (C) – Gradual transition from green to darker green kimberlite probably due to surface weathering and alteration. Most olivine macrocrysts are yellowish white to orange, serpentinised, fractured, rounded and contain carbonate. VF black metallic mineral (magnetite?) observed in the olivine grain fractures (possible secondary alteration giving high magnetic susceptibility measurements). This interval is composed of mostly broken core (biggest piece is 25 cm).

45.1m: Bronze metallic mineral, 1cm in size, soft and diffused on edges of kimberlite (no precise contact). Rounded mantle xenolith (lherzolite) 3 cm from bronze mineral. Xenolith is 3 cm long (opx, cpx, Ol).

47.4-47.8: Broken fractured core

52.4m: Rounded chromite, 2mm in size in lherzolite (opx, cpx, ol) mantle xenolith.

60.6m: Magma clast autolith (?) rounded, 4cm sharp contact made evident by calcite rim and different color from surrounding kimberlite. Magma clast is kimberlite composed of black to dark green serpentinised, anhedral to subhedral F – C olivine 30%, common F phlogopite. The matrix 50% is brown and very rich in carbonate (20%). No xenolith or lapillies were observed.

94.2m: Magma clast as above, subrounded, 2 cm in size.

118 to 126.4 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Transition Zone

Upper contact gradual, lower contact characterised by color change (green-grey to light grey), and fracture zone.

The beginning of the unit is same as above and undergoes a gradual change at depth. Xenolith content decreases to 1% at the end of this unit and xenolith description resembles above unit. The unit is composed of hard competent rock except near the lower contact where the core is broken and fractured from 125.95m to 126.4m.

Fine to coarse olivines are anhedral to subhedral with some fine euhedral crystals. Part of the coarse olivines are altered but most have fresh cores, abundant fine to medium olivines are fresh. Olivine macrocrysts have a clear white alteration, probable silicification by unit below, no reaction to HCL. A VF black mineral infill's the fractures of the olivines. Olivine macrocrysts are coarser and more frequent at depth.

Juvenile Lapilli are grey-green in color and have mostly rounded to irregular shapes at depth, commonly less than 2 mm, up to 1 cm, and comprise 13% of the unit. Cored lapilli consist of partially silicified?/serpentinised olivine with fresh cores and few country rock xenoliths with thin, rounded to irregular selvages (phl, spl, olv sometimes visible). Uncored lapilli have rounded to irregular shapes at depth with unfractured protruding olivines, commonly <2mm, and consist of partially silicified?/serpentinised olivine with fresh cores, traces of phlogopite and traces of spinel. Few cored lapilli show concentric distribution of selvage material.

Inter-clast matrix is serpentine, dark green to pale green-grey at depth. Traces of pyrite up to 3mm are present. Poorly sorted, clast-supported, and loosely packed.

Lower contact is marked by a compact series of mm size quartz veins covering 10 cm at 70 TCA and broken core.

Black mm size tar seams with liquid tar, at 120.1m, 120.4m, 121.1m, 122.3m, 122.75m, 123.05m and 123.5m are observed. The seams range from 25 TCA to 60 TCA.

Mantle xenoliths, mostly lherzolite (+/- garnet) has been observed in this unit

126.4 to 141.2 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Broken upper contact. Upper contact characterised by color change from dark grey to light grey and intense parallel veining (1mm thick) of white quartz in the first 20 cm. Small zones of broken core as well as a larger zone from 134.4 to 136m are observed in this unit. Some of the fractures contain tar seams. This unit is composed of competent and fractured rock except for the main fracture zones and from 140.4 to 141.15 where the kimberlite is very friable, highly altered and has a mud-like texture. Fractures within the unit are random ranging from 90 to 0 TCA. The matrix and olivines are whiter at depth.

Country rock xenoliths comprise 2% of angular fresh black mudstone/shale and white basement rock, commonly <2cm with the largest xenolith being a 4 cm piece of mudstone.

Discrete olivine F-C are white-grey, hard, replaced by silica(?), +/- dark green serpentine and make up 60% of this unit.

Some M-C macrocrysts are broken. Traces of discrete phlogopite, fresh brown, F commonly < 1mm. Traces of <2mm pyrite is observed.

Juvenile lapilli are grey-green to grey, commonly less than 2mm and up to 1cm and comprise 13% . Cored olivine and CRX and uncored lapilli are typically round to irregular in shape and comprised of F olivine, spinel, mica set in a grey (serpentine?) matrix.

Inter clast matrix is pale grey serpentine or clay (?) up to 25%. Poorly sorted, clast supported and loosely packed.

Few mantle xenoliths were observed in the unit, mostly Lherzolite +/- garnet. They are rounded and mostly altered to serpentine and range from 1cm to 4 cm.

Traces of indicators are observed in the core, 1 chrome diopside at 127.15m and a few pink-red garnets

141.2 to 202.2 SHALE

Shale (bedded or fissile nature)

Shale and mudstone recovery varies within this unit, some was washed away during drilling (between 151m– 160m, 163-166m, 184-187m runs). Mostly brown to dark brown coherent shale with minor fissile parting 35 to 45 TCA. Millimetre size bedding of clay with some silt and fine sand compose this unit.

202.2 to 213.5 OLPK

Olivine-rich pyroclastic kimberlite (ol>jl)

Sharp upper and lower contact at 41 TCA characterised by change in lithology from shale to kimberlite to shale. This unit is mostly composed of competent rock except between 207.4 and 208m where the core is broken.. There seems to be a very subtle alignment of clasts and olivines at approximately 45 TCA. The matrix and olivines are pale green. The xenoliths are generally < 2cm mudstone, shale and basement rock.

Country rock xenoliths comprise 4% of subangular to rounded fresh black mudstone/shale and white to altered basement rock, commonly <2cm with the largest xenolith being a 6 cm piece of mudstone. Most xenolith show a +/- 3mm brown/black alteration rim with diffuse contact in the kimberlite (serpentine?) surrounding them.

Discrete olivine F-M are pale green, 50% of this unit and most seem broken. They are subhedral to anhedral and all serpentinised. Traces of discrete phlogopite, fresh brown, F commonly < 1mm. Traces of <2mm pyrite is observed.

Juvenile lapilli are grey-green to grey, commonly less than 2mm and up to 1cm and comprise 5%. Cored olivine and CRX and uncored lapilli are typically round to irregular in shape and comprised of F olivine, mica set in a grey to green serpentine matrix.

Inter clast matrix is pale grey to light green serpentine or clay (?) up to 30%. Poorly sorted, clast supported and loosely packed.

Few mantle xenoliths were observed in the unit, mostly Lherzolite +/- garnet. They are rounded and mostly altered to serpentine and range from 1cm to 5 cm at 205.1m.

Traces of indicators are observed in the core, a few pink-red garnets and chrome diopside.

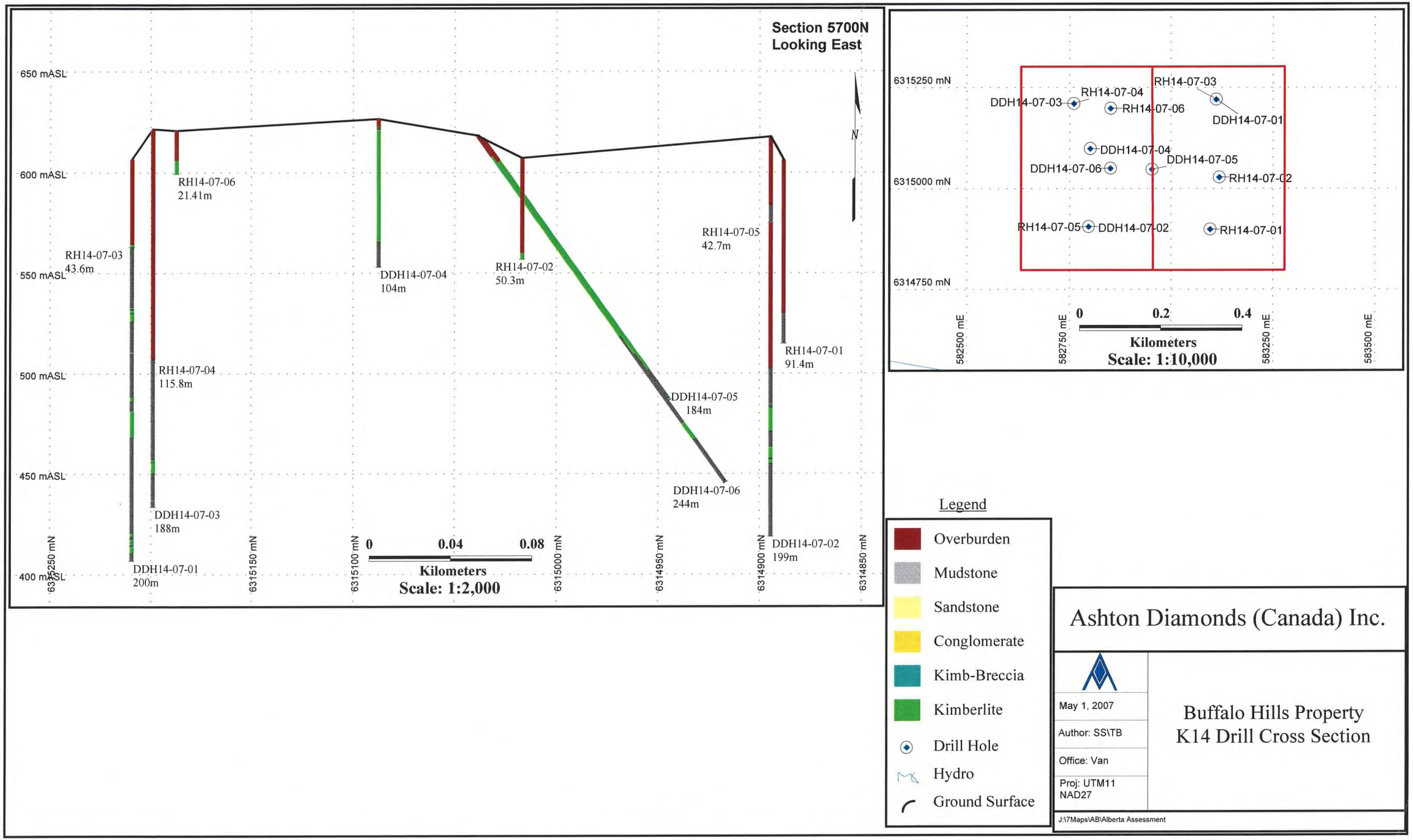
213.5 to 244 SHALE

Shale (bedded or fissile nature)

Shale and mudstone recovery varies within this unit, some was washed away during drilling. Mostly brown to dark brown, black coherent shale with minor fissile parting 35 to 45 TCA. Millimetre size bedding of clay with some silt and fine sand compose this unit.

244 EOH (m)

Apr/16,/2007



Ashton Diamonds (Canada) Inc.

May 1, 2007

Author: SS\TB

Office: Van

Proj: UTM11
NAD27

Buffalo Hills Property
K14 Drill Cross Section

J:\7Maps\AB\Alberta Assessment

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH91-07-01

HOLE-ID	**RH91-07-01**	*Start Date*	14-Feb-07	*Contractor*	Thorhild
Anomaly	K091	*End Date*	16-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	26.2	*Wk Permit*	MME-060017
Easting	581857.94	*Azimuth*	0	*District*	Lesser Slave
Northing	6317201.15	*Dip*	-90	*Legal Desc.*	SW - 23 -92 - 11 - 5
Elevation	645.19	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged

Purpose Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH91-07-01

Comments Cemented in Kimberlite

Interval	*Description*
0 to 23.16	**OB** Cemented in Kimberlite
23.16 to 26.21	**OLPK**
26.21	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH91-07-02

HOLE-ID	**RH91-07-02**	*Start Date*	16-Feb-07	*Contractor*	Thorhild
Anomaly	K091	*End Date*	17-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	39.6	*Wk Permit*	MME-060017
Easting	581850.64	*Azimuth*	0	*District*	Lesser Slave
Northing	6316951.37	*Dip*	-90	*Legal Desc.*	SW - 23 -92 - 11 - 5
Elevation	647.24	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH91-07-02				
Comments	Cemented in Kimberlite				

Interval	*Description*
0 to 36.58	**OB** Cemented in Kimberlite
36.58 to 39.62	**PK**
39.62	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH91-07-03

HOLE-ID	**RH91-07-03**	*Start Date*	17-Feb-07	*Contractor*	Thorhild
Anomaly	K091	*End Date*	19-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	51.8	*Wk Permit*	MME-060017
Easting	581958.28	*Azimuth*	0	*District*	Lesser Slave
Northing	6317205.71	*Dip*	-90	*Legal Desc.*	SW - 23 -92 - 11 - 5
Elevation	640.81	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH91-07-03				
Comments	Cemented in GF boulders - Lots E and P pyropes in chips				

Interval	*Description*
0 to 48.77	**OB** Cemented in GF boulders - Lots E and P pyropes in chips
48.77 to 51.82	**OB**
51.82	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH91-07-04

HOLE-ID	**RH91-07-04**	*Start Date*	24-Feb-07	*Contractor*	Thorhild
Anomaly	K091	*End Date*	26-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	51.8	*Wk Permit*	MME-060017
Easting	582100.54	*Azimuth*	0	*District*	Lesser Slave
Northing	6316685.76	*Dip*	-90	*Legal Desc.*	SE - 23 -92 - 11 - 5
Elevation	640.03	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH91-07-04				
Comments	Casing Cemented into mudstone				

Interval	*Description*
0 to 44.2	**OB** Casing Cemented into mudstone
44.2 to 51.82	**MUDST**
51.82	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH91-07-05

HOLE-ID	**RH91-07-05**	*Start Date*	19-Feb-07	*Contractor*	Thorhild
Anomaly	K091	*End Date*	21-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	97.5	*Wk Permit*	MME-060017
Easting	581904.15	*Azimuth*	0	*District*	Lesser Slave
Northing	6317302.51	*Dip*	-90	*Legal Desc.*	SW - 23 -92 - 11 - 5
Elevation	642.55	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole				
Comments	Into mudstone bedrock under 87m O/B - No casing placed				

Interval	*Description*
0 to 86.87	**OB** Into mudstone bedrock under 87m O/B - No casing placed
86.87 to 97.54	**MUDST**
97.54	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH91-07-01

HOLE-ID	**DDH91-07-01**	*Start Date*	25-Feb-07	*Contractor*	Connors
Anomaly	K091	*End Date*	28-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	189.0	*Wk Permit*	MME-060017
Easting	581857.94	*Azimuth*	0	*District*	Lesser Slave
Northing	6317201.15	*Dip*	-90	*Legal Desc.*	SW - 23 - 92 - 11 - 5
Elevation	645.19	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Delineate geometry of the K91 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 38 core boxes Sample No.'s: 24850-24860				

Interval	*Description*
0 to 21.7	**OB** Overburden Casing collared and cemented in kimberlite at 21.7m, some kimberlite and basement rock cobbles are in cement.
21.7 to 108.6	**JLPK** Juvenile Lapilli-rich (JL>Ol) Pyroclastic Kimberlite Cased in kimberlite. 15-20% of the core is broken throughout the unit, medium RQD. Kimberlite color varies a lot in this unit, from yellow-green (near fractures) to olive green to green. Probable cause of these colors could be from water alteration since the entire interval seems to have more or less the same primary mineral composition. Most of the core is hard and competent except close to fractures where it can sometimes be more brittle, soft and even reduced to gravel. No preferred orientation was observed for the fractures. The unit has very little country rock dilution (1%). A variation of grain size (F-M-C) can be observed in meter scale intervals although no clear bedding can be discerned. The unit is mostly massive with no preferred orientation although some local intervals show a very subtle 45 TCA (37.2m – 38m) grain and xenolith orientation. Country rock xenoliths comprise traces to 1% of the unit, up to 3 % at depth. Most xenoliths are mudstone-shale fragments, elongate to angular, 0.2 to 1 cm with the biggest being subangular and 10 cm at 54.1m. Subrounded to subangular limestone xenoliths are also present scattered throughout the unit. Some very rare basement rock xenoliths are observed, most less than 1cm in size. Most xenoliths look fresh, some have a thin mm size alteration aureole, probably serpentinised. Few xenoliths show selvage and are kernels to lapilli. Olivine F-M (some C) usually 0.5 mm to 5 mm comprise 70% of this unit although most of the olivines are within lapilli. Olivines are more or less serpentinised pending on the secondary alteration induced by water(?). Some intervals have fresh olivine core but all have been serpentinised to an extent. Macrocrysts are mostly anhedral to subhedral, Some round M-C macrocrysts are broken or sometimes fractured. Traces of phlogopite, fresh, brown, F commonly <2mm are observed. Rare spinel are observed in the unit <0.2 mm. Juvenile lapilli constitute most of the unit. Most olivines in the unit are rimmed by some amount of selvage. The lapillies are grey and some are dark green, most are irregular to amoeboid but some are rounded. Some are uncored with rare protruding olivine. Most olivines are cored olivine, and trace CRX. Most cored lapilli seem to have a side with no or very little selvage. Most lapilli contain a mix of F-M anhedral to subhedral fresh to partially serpentinised olivine, subhedral to euhedral F phlogopite and some VF spinel. The lapillies are between 0.5 to 5 mm with some cored lapillies up to 2 cm. Lapillies are present throughout the unit. The lapilli groundmass is serpentinised and traces of carbonate are present. There seems to be no difference between morphology and mineralogy between grey and green lapilli.

Kimberlite groundmass is yellow-green to green to dark bluish green. Yellow-green kimberlite is observed adjacent to fractures and throughout this unit. The yellow tint could be due to water alteration as the primary mineralogy and proportions of lapilli and xenoliths are similar to the rest of the unit. Green kimberlite matrix is less altered, has less altered olivine (some fresh and partially serpentinised) and is also cryptocrystalline serpentine. Some blue-green groundmass is also observed locally but alteration type is unknown. Most of the groundmass contain carbonate but some local zones posses up to 20% interstitial carbonate. Poorly sorted, clast-supported, and loosely packed.

Trace F chromite throughout the unit
Very common red and less common peach, pink garnets are observed throughout this unit. An average of 1 in every 10-15cm of core is observed visually. Approx. 1/4 of the garnets do not posses a kelyphite rim. Some garnets form the core of lapillies. Biggest garnet is 1.3 cm at 30.7m

Traces of a VF black mineral is found throughout the unit (magnetite?).
Traces of <2mm pyrite are observed throughout the unit, more common at depth. Some pyrite replacement of rare clastic xenoliths.

Mantle xenoliths, mostly peridotite (some lherzolites?), are observed in trace amounts. The mantle xenoliths are mostly finned grained and do not posses garnets as big as what is visible in the core. The mantle xenoliths are rounded and rarely posses a selvage rim.

Millimetre size tar seams are rare but observed in this unit.

Rare mm calcite veins are seen in this unit.

Most fractures are coated by a brown VF mineral (serpentine?).

21.7-22.9m: Yellow green kimberlite dominate this interval, Mostly F-M some C serp. Ol. Are mostly to completely Serpentinised

22.9 – 25m.4m: Green kimberlite
25.4 – 31m: Yellow green kimberlite dominate this interval, Mostly F-M some C serp. Ol. are mostly to completely Serpentinised

31-32.8-m: Mostly Brocken, soft, heavily altered Yellow-green Kimberlite rubble.
32.8 – 34.4m: Yellow-green kimberlite, F-M Ol
34.6-34.9m: Green kimberlite F-M
35-35.3m: Yellow-green Kimberlite
35.3 – 35.7m: Green Kimberlite
35.7-41m: Yellow-green kimberlite
37.5 – 38m: Preferred orientation of clasts at 30TCA
41-42.7m: same as above except 1-2nn carbonate segregation present
42.7-44.2m: same as above except no carbonate segregation
44.2-47.7m: Yellow-green kimberlite, F-C Olivine
45m: A 4cm mantle xenolith (peridotite?)
47.7-47.9m: Yellow-green kimberlite F-M
47.9-51.5m: Yellow-green and green kimberlite zones, approx 10-40 cm alternating, F-M, 1-2 mm carbonate segregation present.
51.6-52.5m: as above except no carbonate segregation, brittle soft kimberlite
52.5-55m: Yellow-green kimberlite, some olivine macrocrysts are altered to a orange color
55-55.6m: Green kimberlite
55.6 – 71m: Yellow -green and green kimberlite zones, approx 10-40 cm alternating F-M
71-79.8m: Yellow-green and green kimberlite zones, approx 10-40 cm alternating F-C
79.8 – 85.3 m: Green kimberlite, F-M
85.3-88.4m: Green kimberlite, F-C from 87, 1-2 mm calcite segregations in the matrix
88.4 – 107.6m: Green kimberlite, F-M

108.6 to 155 JLPK

Juvenile Lapilli-rich (JL>Ol) Pyroclastic Kimberlite

Same as above except very altered and fractured core, some of the kimberlite is altered to clay. Biggest piece of core is 18cm throughout the interval RQD is 0. There seems to be more country rock xenolith in this unit 2-3%.

Common red garnets and some peach garnets have been observed throughout this unit. Traces of VF pyrite segregation <2mm have been observed in the core.

Some Millimetre size tar seams with no preferred orientation are observed throughout this unit.

107.6-110.2m: Same as above except RQD is 0, biggest piece of kimberlite is 10cm.

110.2-115.35m: 40cm recovery, highly altered, very soft and crumbly yellow-green to rusty yellow-orange kimberlite pieces partially altered to clay, carbonate rich (reacts to HCL). Olivines and lapillies barely distinguishable but impossible to determine mineral composition and proportions. Juvinile lapillies are all grey.

115.35-124.7m: As 21.7 – 107.6 except kimberlite is bleached, Juvinile lapillies are all grey and matrix is white-grey. Olivine are white and hard (silicified?) matrix is carbonate rich. F-M olivine. This interval has an RQD of 0 but pieces of core are competent. Red and some peach garnets are still visible, most have keliphyte rim.

124.7 – 125m: rusty orange, altered to clay kimberlite. Appears to be the same as 110.2 – 115.35m except softer. Some preservation of serpentinised olivine and of clasts (mudstone) is observed.

125 – 128m: Very poor recovery, missing 2 meters of core, following measurements are approximate. From 125 – 125.3m as 115.35 – 124.7m and from 125.3 – 125.8m, As 124.7 to 125m from 127.7 to 128m, as previous except grey colored. Some preservation of serpentinised olivine and of clasts (mudstone) is observed.

128 – 140m: As 115.35 – 124.7m Some kimberlite altered to mud in this interval, last 10cm is yellow-white kimberlite.

140 – 145.5m: As 124.7 – 125m Kimberlite mostly altered to clay but some more competant but crumbly pieces of core are observed. 2 red garnet with kelyphite rim at 141m

145.5 – 149m: Same as 110.2 – 115.35m except green and mostly altered to mud.

149 – 152m: As 21.7 – 189 except kimberlite is dark-green, no reaction to HCL (no carbonate) only some F olivine are still fresh still have fresh cores. Lapillies are dark grey-green and hard to distinguish from matrix. Olivine fractures show a VF yellow mineral (pyrite). Core is hard and competent but very fractured (RQD is very low). Some red garnets with kelyphite rims observed.

152-155m: Poor recovery (2 m missing) all kimberlite rubble, as above except altered grey-green. Biggest piece is 7 cm.

140 – 155m: no reaction to HCL

155 to 189 SHALE

Shale (bedded or fissile nature)

Mostly brown to dark brown shale, black with minor fissile parting from 65 to 85 TCA at depth. Millimetre size bedding of clay, some silt and fine sand compose this unit. Some fish scales are present.

189 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH91-07-02

HOLE-ID	**DDH91-07-02**	*Start Date*	28-Feb-07	*Contractor*	Connors
Anomaly	K091	*End Date*	02-Mar-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	74.0	*Wk Permit*	MME-060017
Easting	581850.64	*Azimuth*	0	*District*	Lesser Slave
Northing	6316951.37	*Dip*	-90	*Legal Desc.*	NE - 23 -92 - 11 - 5
Elevation	647.24	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Delineate geometry of the K91 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 8 core boxes Sample No.'s: 24861-24864				

Interval	*Description*
0 to 37.8	**OB** Overburden First 35 cm in first box is cement, cased in kimberlite.
37.8 to 42.5	**JLPK** Juvenile Lapilli-rich (JL>Ol) Pyroclastic Kimberlite Cased in kimberlite. 80% of the core is broken throughout the unit, very low RQD, very poor recovery, 1.5 m of core un-recovered (grinded) throughout the interval. Very rubbly. Kimberlite color varies from yellow green to green. Probable cause of these colors are from water or surface alteration since all of the interval seems to have more or less the same primary mineral composition. Most of the core is hard and competent but broken. No preferred orientation was observed for the fractures. The unit has 10% country rock xenoliths. Country rock xenoliths comprise 10% of the unit. Most xenoliths are mudstone-shale and limestone fragments elongate, subrounded to angular, 0.2 to 1 cm with the biggest being subangular limestone and 7 cm at 42 m. Some very rare basement rock xenoliths are observed, less than 1cm in size. Most xenoliths look fresh, some have a thin mm size alteration aureole, probably serpentinised. Very few xenoliths show selvage and are kernels to lapilli. Few xenoliths are rimmed by calcite. Olivine F-M (some C) usually 0.5 mm to 3 mm comprise 70% of this unit although half of the olivines are within lapilli. Olivines are fresh to partially altered to serpentine. Macrocrysts are mostly anhedral to subhedral, Some round M-C macrocrysts are broken or sometimes fractured. Traces of phlogopite, fresh, brown, F commonly <2mm are observed. Rare spinel are observed in the unit <0.2 mm. Juvenile lapilli constitute 40% of the unit. Half of the olivines in the unit are rimmed by some amount of selvage. The lapillies are grey - green, most are irregular to ameboid but some are rounded. Some are uncored with rare protruding olivine. Most Juvenile lapillies are cored olivine, and trace CRX. Most cored lapilli seem to have a side with no or very little selvage. Most lapilli contain a mix of F-M anhedral to subhedral fresh to partially serpentinised olivine, subhedral to euhedral F phlogopite and some VF spinnel. The lapillies are between 0.5 to 5 mm with some cored lapillies up to 1.5 cm. Lapillies are present throughout the unit. The lapilli groundmass is serpentinised and traces of carbonate are present. Kimberlite groundmass is yellow-green to green. Yellow-green kimberlite is observed adjacent to fractures and throughout this unit. The yellow tint could be due to water alteration as the primary mineralogy and proportions of lapilli and xenoliths are similar to the rest of the unit. Green kimberlite matrix is less altered, has less altered olivine (some fresh and partially serpentinised) and is also cryptocrystalline serpentine. Groundmass does not react to HCL. Poorly sorted, clast-supported, and loosely packed.

Trace F chromite throughout the unit
Very common red and less common peach and pink garnets are observed throughout this unit. An average of 1 in every 10 cm of core is observed visually. Most garnets show kelyphite rim. some garnets form the core of lapillies. Biggest garnet is 0.9 cm at 41.9m

Traces of <2mm pyrite are observed throughout the unit

No Mantle xenoliths observed.

Bottom contact to mudstone is missing, grinded core?

42.5 to 74 MUDST

Upper contact is missing because of poor recovery.

Overall medium recovery, some material was washed, grinded away. Massive dark brown to grey mudstone composed mostly of clay, some silt. Bedding is rare and faint, measured between 75 TCA and 80 TCA

42.5 – 51.6m: Mostly Massive mudstone, mostly dark brown, some grey bedding at 46.6m 70 TCA some rare slivers of rusty yellow silt within the mudstone. Parting is rare and not very well developed. Mudstone breaks in concoidal angular pieces with no obvious orientation.

51.6 – 59m: Mix of above and beds of rusty-yellow silt 51.9 – 52.05m – rusty yellow silt bed 80 TCA. 52.8 – 52.88m rusty yellow silt bed 75 TCA.

59 – 74m: Massive grey mudstone, Some traces of serpentine and mica (phlogopite?) in some rare thin <3mm silt slivers (kimberlite derived?).

74m: EOH due to broken core barrel

74 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH91-07-03

HOLE-ID	**DDH91-07-03**	*Start Date*	02-Mar-07	*Contractor*	Connors
Anomaly	K091	*End Date*	05-Mar-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	152.0	*Wk Permit*	MME-060017
Easting	581958.28	*Azimuth*	0	*District*	Lesser Slave
Northing	6317205.71	*Dip*	-90	*Legal Desc.*	SE - 23 -92 - 11 - 5
Elevation	640.81	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Delineate geometry of the K91 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 21 core boxes Sample No.'s: 24865-24875				

Interval	*Description*
0 to 53	**OB** Overburden First 40 cm of box is cement and 1 granite boulder. Cased in till (granite boulder) but very close to bedrock (kimberlite). Hit bedrock (kimberlite) at 53m.
53 to 80.2	**JLPK** Juvenile Lapilli-rich (JL>Ol) Pyroclastic Kimberlite Core is very broken and altered throughout this unit which makes observation of mineral proportion generalized from a few intact pieces of core. Biggest piece is at 63.7m and measures 19 cm. Core RQD is very low thru this unit, mostly rubbly, recovery is as follows: 53 – 62m: 70% lost, grinded or washed core 62 – 74m: 10% lost, grinded or washed core 74 – 80.2m: 70% lost, grinded or washed core Kimberlite color varies from yellow-orange-green to grey to green. Probable causes of these colors are from water or surface alteration since the entire interval seems to have more or less the same primary mineral composition. Half of the core is hard and competent but broken. Some material is weathered to a muddy, sandy texture. No preferred orientation was observed for the fractures, xenoliths, olivines or juvenile lapillies. The unit has 10% country rock xenoliths. Country rock xenoliths comprise 10% of the unit. Most xenoliths are mudstone-shale and limestone fragments elongate, subrounded to angular, 0.2 to 1 cm with the biggest being elongate shale and 6 cm at 70.95 m. Some very rare basement rock xenoliths are observed, less than 1cm in size. Most xenoliths look fresh, some have a thin mm size alteration aureole, probably serpentinised. Very few xenoliths show selvage and are kernels to lapilli. Olivines F-M (rare C) usually 0.2 mm to 4 mm comprises 40% of this unit although more than half of the olivines are within lapilli. Olivines are partially to completely altered to serpentine, light green to green. Macrocrysts are mostly anhedral to subhedral, Some round M-C macrocrysts are broken or sometimes fractured and have carbonate in the fractures. Coarser olivines are observed in the last 3 m of this unit. Traces of phlogopite, fresh, brown, F commonly <2mm are observed. Rare VF spinel are observed in the unit <0.2 mm. Juvenile lapilli constitute 50% of the unit. Half of the olivines in the unit are rimmed by some amount of selvage. The lapillies are grey - green, most are irregular to amoeboid but some are rounded. Some are uncored with rare protruding olivine. Most Juvenile lapillies are cored olivine, and trace CRX. Most cored lapilli seem to have a side with no or very little selvage. Most lapilli contain a mix of F-M anhedral to subhedral fresh to partially serpentinised olivine, subhedral to euhedral F phlogopite and some VF spinel. The lapillies are between 0.5 to 5 mm with some cored lapillies up to 2 cm.

Lapillies are present throughout the unit. The lapilli groundmass is serpentinised and traces of carbonate are present.

Kimberlite groundmass is rusty yellow-green to light grey to green. Rusty yellow-green kimberlite is observed adjacent to fractures and throughout this unit. The yellow tint could be due to water alteration as the primary mineralogy and proportions of lapilli and xenoliths seem similar to the rest of the unit. Green kimberlite matrix is less altered, has less altered olivine (common partially serpentinised) and is also cryptocrystalline serpentine. Groundmass usually reacts to HCL. Poorly sorted, clast-supported, and loosely packed.

Very common red and less common orange, pink garnets are observed throughout this unit. An average of 1 or more in every 10 cm of core is observed. Most garnets show keliphyte rim. some garnets form the core of lapillies.

Traces of <2mm pyrite are observed throughout the unit

Mantle xenoliths are common in this unit, Peridotire and Lherzolite +/- chrome diopside and garnet, usually rounded, <2cm.

Bottom contact to sandstone is missing, grinded core?

Few 1mm to 5mm quartz-carbonate veins are observed throughout the unit, no preferred orientation.

53 – 62: Rusty yellow-green
62 – 65.6: green- light grey
65.6 – 70.7:Yellow-green
70.7 – 80.2: Green going to light green-grey

Data in DTH sheet is averaged on what is visible in less altered core, assumed that it is all the same unit and proportions

80.2 to 80.4 SANDST
Sandstone

This unit is made of hard, consolidated and broken sandstone. Upper contact to kimberlite is missing or broken. This unit is identified by a few pieces of core which might be a big xenolith or consolidation and cooked sand from next unit or Dunvagan(?) sandstone. Sandstone is composed of fine to medium grains, from 0.1 to 0.3 mm grains of mostly quarts although some mafic minerals (serpentine, micas, amphiboles) are also visible (15%). No bedding is observed, grains seem to be oriented 0 TCA but difficult to tell and piece is broken (8cm X 6cm X 3cm). Reacts strongly to HCL (carbonate rich)

80.4 to 92 SANDST
Sandstone

Very poorly consolidated medium to fine grained sand to silt. Sand seems to be composed mostly of quarts, mica (some phlogopite) and some mafic minerals (serpentine amphiboles). Overall aspect of sand is intermediary to more mafic bands (15-50% mafic). Beds, 90 TCA ranging from 1mm to 10 cm are observed throughout this unit. Material is graded from medium-fine sand at the top to silt at bottom of unit.

80 – 83m: 40% lost, grinded or washed core Medium – fine sand
83 – 89m: 50% lost, grinded or washed core Fine sand - silt
89 – 92m: 5% lost, grinded or washed core silt - clay

92 to 152 MUDST
Mudston, massive, no distinct bedding.

Upper contact is gradual, massive dark brown to grey mudstone composed mostly of clay, some silt. Bedding is rare and faint, measured between 75 TCA and 90 TCA. Beds mostly have an uneven surface. Parting is rare and not very well developed. Mudstone mostly breaks in concoidal to angular pieces with no obvious parting. Some traces of serpentine and phlogopite (?) in some rare thin <3mm silt slivers (kimberlite derived?). Very rare calcite segregation observed, some fish scales in the mudstone.

152 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH91-07-04

HOLE-ID	**DDH91-07-04**	*Start Date*	05-Mar-07	*Contractor*	Connors
Anomaly	K091	*End Date*	07-Mar-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	131.0	*Wk Permit*	MME-060017
Easting	582100.54	*Azimuth*	0	*District*	Lesser Slave
Northing	6316685.76	*Dip*	-90	*Legal Desc.*	SE - 23 -92 - 11 - 5
Elevation	640.03	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Verify continuity between K91 and BH225				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 16 core boxes Sample No.'s: 24876-24881				

Interval	*Description*
0 to 53	**OB** Overburden Cased in mudstone at 53m. cement in the casing (the first 2 boxes were discarded at camp, only cement) down to 53m.
53 to 58.7	**MUDST** Mudstone, massive, no distinct bedding. Massive, moderately consolidated dark brown – grey mudstone composed of clay and silt. Seems brecciated or made of mudballs. No good parting is observed Last 10 cm of unit is coarser grained, silty to fine sand.
58.7 to 59	**SANDST** Sandstone This unit is made of hard, consolidated and broken sandstone. Upper contact is broken, not preserved. Sandstone is composed of fine to medium sand, from 0.1 to 0.3 mm grains of mostly quarts although some mafic minerals (green mineral serpentine(?), micas, amphiboles) are also visible (5-10 %). No bedding is observed, grains seem to be oriented 0 TCA but difficult to tell. Reacts strongly to HCL (carbonate rich). Well sorted, clast supported. Part of the Dunvagan formation?
59 to 79	**SANDST** Sandstone Unconsolidated medium to fine grained sand to silt. Sand seems to be composed mostly of quarts, mica (some phlogopite) and some mafic minerals (serpentine? amphiboles). Overall aspect of sand is intermediary to more mafic bands (5-30% mafic). Beds, 90 TCA ranging from 1mm to 10 cm are observed throughout this unit. Material is graded from medium-fine sand at the top to silt at bottom of unit. Lower contact gradual from fine sand to silt to clay at depth. 70.9-71: Sandstone as above
79 to 116	**MUDST** Mudstone, massive, no distinct bedding. Upper contact is gradual, massive dark brown to grey poorly consolidated mudstone composed mostly of clay, some silt. Bedding and parting is rare and faint at the top of the unit and becomes more developed at depth, measured between 80 TCA and 90 TCA. Beds mostly have an uneven surface on the top and flat surface at depth. On the top of this unit,

mudstone mostly breaks in concoidal to angular pieces with no obvious parting but gradually beaks at well developed bedding planes. Some traces of green mineral and micas in some rare thin <3mm silt slivers (kimberlite derived?).Some fish scales in the mudstone.

116 to 131 SHALE

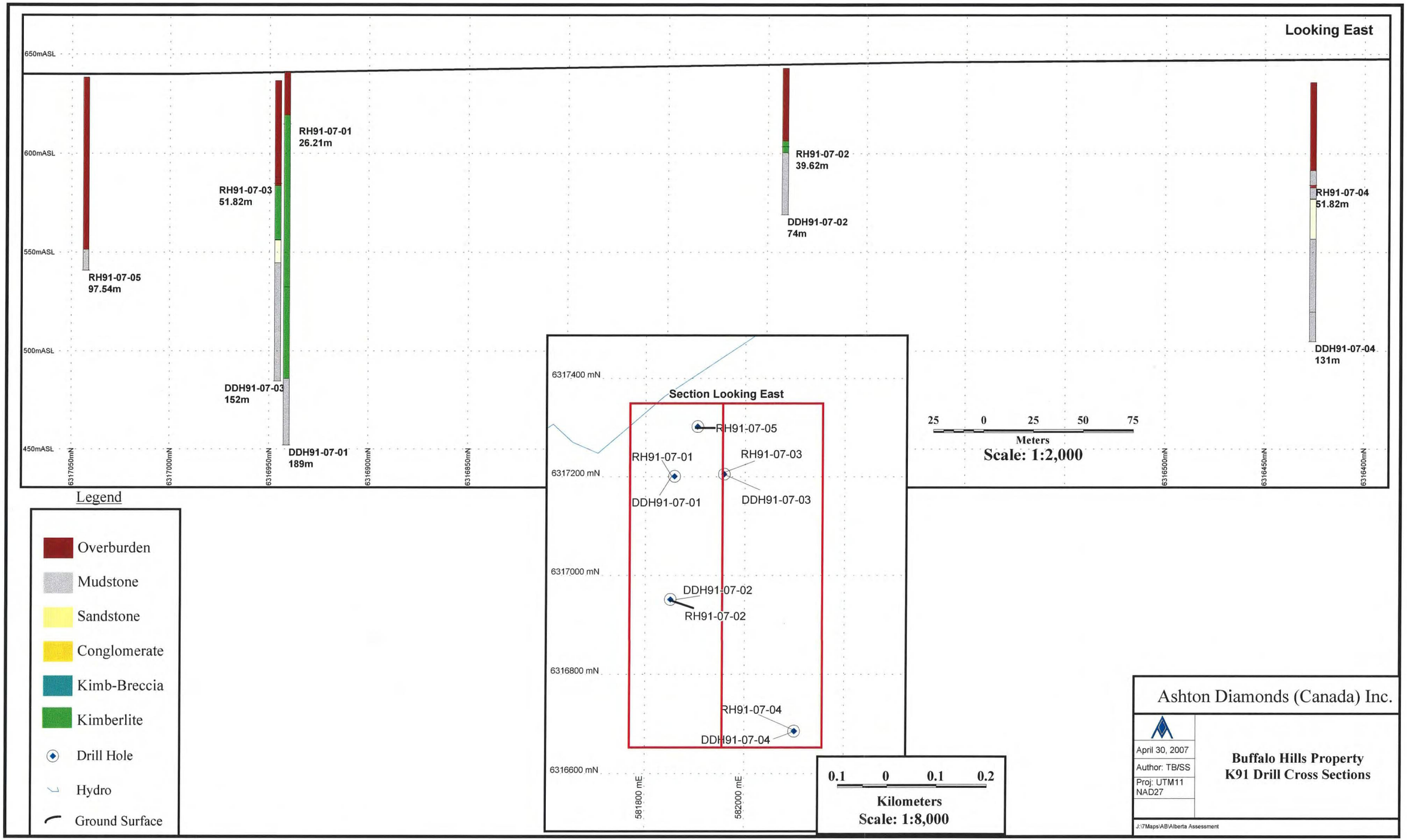
Shale (bedded or fissile nature)

Mostly brown to dark brown shale, black with minor fissile parting from 80 to 90 TCA. Millimetre size bedding of clay, some silt and fine sand compose this unit. Some fish scales are present.

131m: EOH due to broken rods, lost 90 m of rods in hole.

131 EOH (m)

Apr/16,/2007


Looking East
650mASL
600mASL
550mASL
500mASL
450mASL
RH91-07-01
26.21m
RH91-07-03
51.82m
RH91-07-05
97.54m
DDH91-07-03
152m
DDH91-07-01
189m
RH91-07-02
39.62m
DDH91-07-02
74m
RH91-07-04
51.82m
DDH91-07-04
131m
6317050mN
6317000mN
6316950mN
6316900mN
6316850mN
6316500mN
6316450mN
6316400mN
25 0 25 50 75
Meters
Scale: 1:2,000
Section Looking East
6317400 mN
6317200 mN
6317000 mN
6316800 mN
6316600 mN
RH91-07-05
RH91-07-01
RH91-07-03
DDH91-07-01
DDH91-07-03
DDH91-07-02
RH91-07-02
RH91-07-04
DDH91-07-04
581800 mE
582000 mE
0.1 0 0.1 0.2
Kilometers
Scale: 1:8,000
Legend
Overburden
Mudstone
Sandstone
Conglomerate
Kimb-Breccia
Kimberlite
Drill Hole
Hydro
Ground Surface
Ashton Diamonds (Canada) Inc.
April 30, 2007
Author: TB/SS
Proj: UTM11
NAD27
Buffalo Hills Property
K91 Drill Cross Sections
J:\7Maps\AB\Alberta Assessment

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH225-07-01

HOLE-ID	**RH225-07-01**	*Start Date*	03-Feb-07	*Contractor*	Thorhild
Anomaly	BH225	*End Date*	05-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	47.2	*Wk Permit*	MME-060017
Easting	582605.4	*Azimuth*	0	*District*	Lesser Slave
Northing	6315699.93	*Dip*	-90	*Legal Desc.*	SE - 14 -92 - 11 - 5
Elevation	622.51	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged

Purpose Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH225-07-01

Comments Nice yellow ground kim at 43.3

Interval	*Description*
0 to 43.3	**OB** Nice yellow ground kim at 43.3
43.3 to 47.2	**OB**
47.2	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH225-07-02

HOLE-ID	**RH225-07-02**	*Start Date*	12-Feb-07	*Contractor*	Thorhild
Anomaly	K014	*End Date*	14-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	45.7	*Wk Permit*	MME-060017
Easting	582504.52	*Azimuth*	0	*District*	Lesser Slave
Northing	6315695.56	*Dip*	-90	*Legal Desc.*	SE - 14 -92 - 11 - 5
Elevation	628.56	*Core Size*	WaterWell	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged

Purpose Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH225-07-02

Comments Cemented in O/B

Interval	*Description*
0 to 45.7	**OB** Cemented in O/B
45.7	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH225-07-01

HOLE-ID	**DDH225-07-01**	*Start Date*	19-Feb-07	*Contractor*	Connors
Anomaly	BH225	*End Date*	21-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	164.0	*Wk Permit*	MME-060017
Easting	582605.4	*Azimuth*	0	*District*	Leser Slave
Northing	6315699.93	*Dip*	-90	*Legal Desc.*	SE - 14 -92 - 11 - 5
Elevation	622.51	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Delineate geometry of the BH225 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 29 core boxes Sample No.'s: 24824-24833				

Interval	*Description*
0 to 50.9	**OB**
50.9 to 65	**RVK-BED** Re-sedimented Volcaniclastic kimberlite with bedding Upper contact is into competent rock. Core is crumbly and heavily broken. This unit is characterised by rusty yellow-grey (limonite?) RVK, some fine grained olivine ? (<2mm) and very little xenolith content. Chaotic bedding, sometimes graded, broken, with no preferred orientation is common thru the unit and range in thickness from 5mm to 10 cm. The unit has a grainy texture, looks like sandstone. Lower contact is marked by gradual change in texture, color and rock hardness. Some pieces of core are light grey, more competent and less altered at the end of this unit (silicified?). This unit could be a debris flow? Country rock xenoliths or clasts comprise 1% of this unit. Xenoliths are rounded to angular, mostly mudstone and shale. Most xenoliths are < 5mm in size with the biggest being a 1 cm piece of shale. No visible alteration surrounding the xenoliths. The mineralogy of this unit is unclear, a closer look at the mineral composition is needed to determine if this unit could be a sandstone (high % of quartz?). Some grains look like they might be silicified olivines? Trace discrete phlogopite, fresh, honey-brown, F commonly <1 mm but up to 2 mm are observed. Traces of juvenile lapilli are observed. Most are cored, rounded to irregular and show a slightly green selvage. The lapillies have undergone silicification and limonite(?) alteration as the matrix. They are <2mm in average, bigger was 5mm. Some rare uncored lapilli are rounded to irregular with broken olivine. Inter-clast matrix comprise 39% of the unit, it is creamy yellow (limonite?) to white with no reaction to HCL (silicified). Clast-supported, and loosely packed. Grain size throughout unit is mostly <2mm Rare tar seams observed throughout the unit 51.7 – 52: Competent mudstone rubble- mudstone breccia, xenolith? 61.6m Small 1cm piece of wood 64.9 - 65m bedding with larger olivine macrocrysts (> 3mm).

65 to 71.5 RVK-BED

Re-sedimented Volcaniclastic kimberlite with bedding

Upper contact is gradual, change from competent light grey sandstone-like RVK to dark grey with rusty yellow patches (alteration to limonite?) poorly consolidated kimberlitic ash-sand? and possibly other lithologic material. Core is about 50% fractured/broken.

Composition of this unit is hard to establish because of the muddy texture of the core. Some mm size olivines and traces of euhedral phlogopite <2mm are present. Olivines if present, are clear-white but impossible to characterise shape and %. Most grains in this interval are F to VF and/or altered. Ash-like to sandstone-like texture. Debri flow?

Grain size throughout unit is mostly <2mm

Traces of mudstone are present.
Some chaotic, mm to cm size bedding is present indicating possible debris flow.

71.5 to 80.3 RVK-BED

Re-sedimented Volcaniclastic kimberlite with bedding

Upper contact is gradual from dark grey poorly consolidated to lighter grey, hard sandstone-like texture.

This unit resembles light-grey intersections of the top unit. Chaotic bedding, sometimes graded, with no preferred orientation is common thru the unit and range in size from 2mm to 10 cm thick. The unit has a grainy texture, looks like sandstone. Lower contact is marked by change in texture, color and rock hardness, contact and some core is missing, 85% of this unit is broken core.

Country rock xenoliths comprise 1% of this unit. Xenoliths are rounded to subangular, mostly mudstone and shale. Most xenoliths are < 5mm in size with the biggest being a 2mm piece of shale. No visible alteration surrounding the xenoliths.

The mineralogy of this unit is unclear, a closer look at the mineral composition is needed to determine if this unit could be a sandstone (high % of quartz?). Some grains look like they might be silicified olivines? Could be upwards of 25% Olivine, need confirmation by thin section.

Trace discrete phlogopite, fresh, honey-brown, F commonly <1 mm but up to 2 mm are observed.

5% of juvenile lapilli are observed. Most are cored, rounded to irregular and show a slightly grey selvage. The lapillies have undergone silicification(?) like the matrix. They are <2mm in average, bigger was 5mm. Some uncored lapilli are broken, rounded to irregular with some broken olivine.

Inter-clast matrix comprise 34% of the unit, it white with no reaction to HCL (silicified?). Clast-supported, and loosely packed.

Grain size throughout unit is mostly <2mm

80.3 to 85.2 VK

Volcaniclastic Kimberlite

Upper contact missing (lost core). This unit is light green-grey composed of F Olivine in a poorly consolidated, heavily altered matrix (very muddy). Grainy texture.

Country rock xenoliths comprise 1% of this unit. Xenoliths are rounded to subrounded, mostly mustone and shale. Most xenoliths are < 3mm in size.

Fresh and altered olivine make up 25% of the unit. 20% of the olivines are green, angular F and VF shards and seem to be part of fractured 2 mm macrocrysts. Clear and white olivines are rounded anhedral, <2mm. Traces of phlogopite, fresh, honey-brown F commonly <1mm but up to 2mm are observed.

Interclast matrix comprise30% of this unit, is white, sometimes brown, with no reaction to HCL (silicified?) clast supported and loosely packed.

Not possible to distinguish bedding or lapilli because of the highly altered and muddy nature of this unit.

Grain size throughout unit is mostly <2mm

85.2 to 88 MUDST

Mudstone, massive, no distinct bedding.

Upper contact is sharp, at 90 TCA. This unit is composed of clast supported dark brown brecciated mudstone with traces of yellow-brown kimberlite material between some clasts. The matrix is clay. 80% clasts, 20% matrix.

88 to 114.5 JLPK

Juvenile Lapilli-rich (JL>Ol) Pyroclastic Kimberlite

The kimberlite is green in color, homogeneous throughout the unit except from 88 to 90.8 where it is slightly pale due to alteration, hard, competent, mostly broken and show little country rock dilution (1%). Xenoliths, ranging in size from 5mm to 3 cm (majority 0.5 -1 cm) are distributed uniformly throughout the unit. Olivine macrocrysts are pale green/white, serpentinised and compose approximately 8% of the unit. A slight preferred orientation of olivines and xenoliths is measure at approximately 45 TCA throughout the unit. Fresh mudstone, not unlike previous unit is observed at an near the upper contact of this unit as xenoliths in the kimberlite. Slightly more and bigger mudstone clasts at the end of this unit. The unit is very fractured/broken up, low RQD.

Country rock xenoliths comprise 1% of this unit. Most xenoliths are angular to subrounded, mudstone, shale and minor white, granitic and gneissic basement. The xenoliths are mostly fresh in the core an altered to serpentine at the edge. Most xenoliths are 5mm to 1cm in size with the biggest being a 6 cm piece of mudstone.

Discrete olivines are F- M (C) and partially replaced by green serpentine. A few macrocrysts are broken but mostly sub to anhedral. Olivines comprise up to 70% of this unit. Most olivine macrocrysts show fractures, no carbonate infilling. Fresh olivine cores and F grains are common. Trace discrete phlogopite, fresh, honey-brown, F commonly <1 mm but up to 2 mm.

Juvenile lapilli are commonly dark green and green-grey, commonly less than 2 mm, and comprise approximately 45 % of the unit. Cored lapilli consist of partially serpentinised olivine and rare country rock xenoliths with thin, rounded to subrounded selvages (phl, spl, olv sometimes visible). Uncored lapilli have rounded to irregular shapes with rare protruding olivines, commonly <2mm, and consist of partially serpentinised olivine, phlogopite and traces of spinel in a green, green-grey serpentine matrix. Few cored lapilli show concentric distribution of selvage material. Lapillies have an even distribution in this unit but seem more common in the last 2 m.

Inter-clast matrix is light green and likely serpentine, up to 20-30 %. Poorly sorted, clast-supported, and loosely packed.

Mantle xenoliths were observed in this unit, mostly Lherzolite +/- chromite and some dunite.

Tar seams observed throughout the unit.

114.5 to 140.1 SHALE

Shale (bedded or fissile nature)

Mostly brown to dark brown to black shale, with minor fissile parting 75 to 90 TCA. Millimetre size bedding of clay, some silt and fine sand compose this unit.

140.1 to 140.5 JLVK

Juvenile Lapilli-rich (JL>Ol) Pyroclastic Kimberlite

Upper contact is sharp, at 75 TCA into grey (silicified?) lapilli rich kimberlite.

15% xenolith are mudstone, angular to rounded, from <05 to 6 cm, commonly 0.5 – 1 cm, no alteration rim

10% Discrete rounded to subrounded olivines are between 1-3 mm, white, fractured , completely silicified (?) Traces of phlogopite commonly <1mm, euhedral to subhedral.

Juvenile lapilli, both core by olivine or mudstone and uncored make up 55% of this unit. Lapillies are 0.5mm to 1 cm, white, rounded to subrounded with rounded olivines and subhedral phlogopite.

20% Matrix is grey to white, silicified?

Xenoliths and matrix seem to be oriented at 45 TCA.

Unit is too altered and small to confirm if it is a JLPK

140.5 to 152.5 SHALE

Shale (bedded or fissile nature)

Mostly brown to dark brown shale, black with minor fissile parting 85 to 90 TCA. Millimetre size bedding of clay with some silt and fine sand compose this unit.

152.5 to 152.8 VK

Volcaniclastic Kimberlite

Upper contact is sharp, at 90 TCA into grey (silicified?) xenolith rich, kimberlite.

30% xenolith are mudstone, angular to rounded, from <05 to 6 mm, commonly 0.5 – 2 cm, no alteration rim

Olivine and lapilli relicts seem to be present although because of intense matrix alteration, it is impossible to discern discrete olivines and lapillies. Traces of phlogopite are observed in the matrix and what appears to be lapillies.

20% Matrix is grey, silicified (?) does not react with HCL

Xenoliths and matrix seem to be oriented at 70 – 90 TCA.

Unit is too altered and small to confirm if it is a JLPK

152.8 to 164 SHALE

Shale (bedded or fissile nature)

Mostly brown to dark brown shale, black with minor fissile parting 85 to 90 TCA. Millimetre size bedding of clay with some silt and fine sand compose this unit.

164 EOH (m)

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH225-07-02

HOLE-ID	**DDH225-07-02**	*Start Date*	21-Feb-07	*Contractor*	Connors
Anomaly	BH225	*End Date*	25-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	200.0	*Wk Permit*	MME-060017
Easting	582504.52	*Azimuth*	0	*District*	Lesser Slave
Northing	6315695.56	*Dip*	-90	*Legal Desc.*	SE - 14 -92 - 11 - 5
Elevation	628.56	*Core Size*	HQ3	*MIM Permit*	9396060058
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Delineate geometry of the BH225 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 41 core boxes Sample No.'s:24834-24849				

Interval	*Description*
0 to 56	**OB** Overburden, Clay till 5 % pebbles, cobbles and granules, mostly basement rock, rounded to subrounded in a dark grey clay to silt matrix. Poorly sorted First 2 ½ boxes are cement to immobilize the casing. First 2 boxes were discarded at camp and were not sent to Vancouver. Casing collared in overburden at 50 m.
56 to 104	**MUDST** Mudstone, massive, no distinct bedding. Upper contact is visually hard to distinguish, only difference is that there is no clasts in the mudstone compared to the till. It is possible to determine this by feeling the grit with a pocket knife, if there is no grit, it's mudstone. The mudstone is massive dark brown-grey, composed mostly of clay, some silt+ fine sand. Bedding is sometimes observed but irregular and hard to distinguish, mm to cm size ranging from 75 to 90 , most around 85 TCA.
104 to 149.2	**JLPK-BED** Juvenile Lapilli-rich (JL>Ol) Pyroclastic Bedded Kimberlite Upper contact broken, no change in the mudstone or kimberlite close to the contact. 40% of the core is broken throughout the unit, low RQD. Kimberlite is dark green to green-grey, hard with very little country rock dilution. Fine grained volcaniclastic textures can barely be discerned. A variation of grain size (F-C) in what appears to be poorly defined bedding with beds ranging from 5 cm to >1m can be observed. This chaotic bedding is variable, irregular and does not always coincide with general grain orientation. This could be the result of various magma pulses or magma convection with differing grain size mixing during the same emplacement event. (see picture at 136.2 5m) Country rock xenoliths comprise traces to 1% of the unit. Most xenoliths are mudstone fragments, elongate to angular, 0.2 to 1 cm with the biggest at 3 cm. Some very rare basement rock and limestone xenoliths are observed, less than 1cm in size. Most xenoliths look fresh, some have a thin mm size alteration aureole, probably serpentinised. Some <5mm basement xenoliths are completely serpentinised. Discrete olivine F-M (trace C) with ½ fresh, ½ partially replaced by serpentine. Olivines comprise 65% of this unit although most of the olivines are within lapilli. Some coarse grained olivines in the coarser intervals seem more serpentinised than smaller olivine in finer grained intervals. Macrocrysts are mostly anhedral to subhedral, Some round M macrocrysts are broken or sometimes fractured. From 140 m, olivines get more serpentinised at depth but some are still fresh. Biggest Olivine is 1cm at 127.5m VF spinels are visible as inclusions in olivine and some in the lapillies. Traces of

phlogopite, fresh, brown, F commonly <2mm are observed.

Juvenile lapilli constitute most of the unit. Most olivines in the unit are rimmed by some amount of selvage. The lapillies are grey and some are dark green (2 populations?). Both are rounded to irregular, some are uncored with rare protruding olivine. Most olivines are cored olivine, sometimes CRX. Most lapilli contain a mix of F-M anhedral to subhedral fresh to partially serpentinised olivine, subhedral to euhedral F phlogopite and some VF spinel. Grey lapillies have less to no phlogopite while the green lapillies seem to have an average of 5%, up to 15%. The lapillies are between 0.5 to 3 mm with some cored lapillies up to 2 cm. Lapillies are present throughout the unit. The groundmass is serpentinised and traces of carbonate are present.

Interclast matrix is green to light green-grey and likely cryptocrystalline serpentine with minor interstitial carbonate, up to 30%. Poorly sorted, clast-supported, and loosely packed.

Trace F chromite throughout the unit, no other indicators or mantle xenoliths visible.

Traces of a VF black mineral is found throughout the unit (magnetite?).

Traces of <2mm pyrite are observed throughout the unit.

Millimetre size tar seams are very common throughout the unit.

106.8-108.4m: Zone of carbonate veins with a few mm to cm size veins. The thickest vein is at 108.3 m where a 5cm thick silicified (?) carbonate vein, 30 TCA is observed (no reaction to HCL). Veins are between 5 – 40 TCA.

104 – 126.5m: F-M (C) Olivine
126.5 – 129m F-C Olivine
129 – 149.2 F-M (C) Olivine

147.9 – 148.05: last piece of intact core before contact with mudstone, matrix is light grey (silicified?) and most olivine are serpentinised. Matrix makes up 50 % of this interval.

149.2 to 190.1 SHALE

Shale (bedded or fissile nature)

Upper contact is broken and 1 m core has been grinded between 149.2 m to 152m. Core is in bad shape, very muddy to 152m where the core is more competant.

Mostly brown to dark brown shale, black with minor fissile parting changing gradually from 65 TCA to 85 TCA. Millimetre size bedding of clay, some silt and fine sand compose this unit. Some fish scales are present.

190.1 to 190.4 VK

Volcaniclastic kimberlite

Upper contact is sharp, at 90 TCA into grey / white, heavily altered (silicified?) kimberlite.

3% xenolith are mudstone, angular to rounded, commonly from 0.5 – 6 mm, no alteration rim

Olivine and lapilli relicts seem to be present although because of intense matrix alteration, it is impossible to discern discrete olivines and lapillies. Traces of phlogopite are observed in the groundmass and in what appears to be lapillies.

30% Matrix is grey, silicified (?) does not react with HCL

Some xenoliths and matrix seem to be oriented at 70 – 90 TCA.

One 2.5 cm clast which has been altered by pyrite is observed at 190.25m

Unit is too altered and small to confirm if it is a JLPK

190.4 to 192.4 SHALE

Shale (bedded or fissile nature)

Mostly brown to dark brown shale, black with minor fissile parting at 85 TCA. Millimetre size bedding of clay, some silt and fine sand compose this unit. Some fish scales are present.

192.4 to 192.6 VK

Volaniclastic Kimberlite

Upper contact at 65 TCA, bottom contact at 85 TCAAs above (190.1m – 190.4m) except groundmass is darker colored, less olivine rich (15%) and 2 large mudstone xenoliths (10 cm and 5 cm) are in the middle of the unit. Less Olivine than previous unit. Traces of pyrite (<2mm) in this unit.

Unit is too altered and small to confirm if it is a JLPK

192.6 to 200 **SHALE**

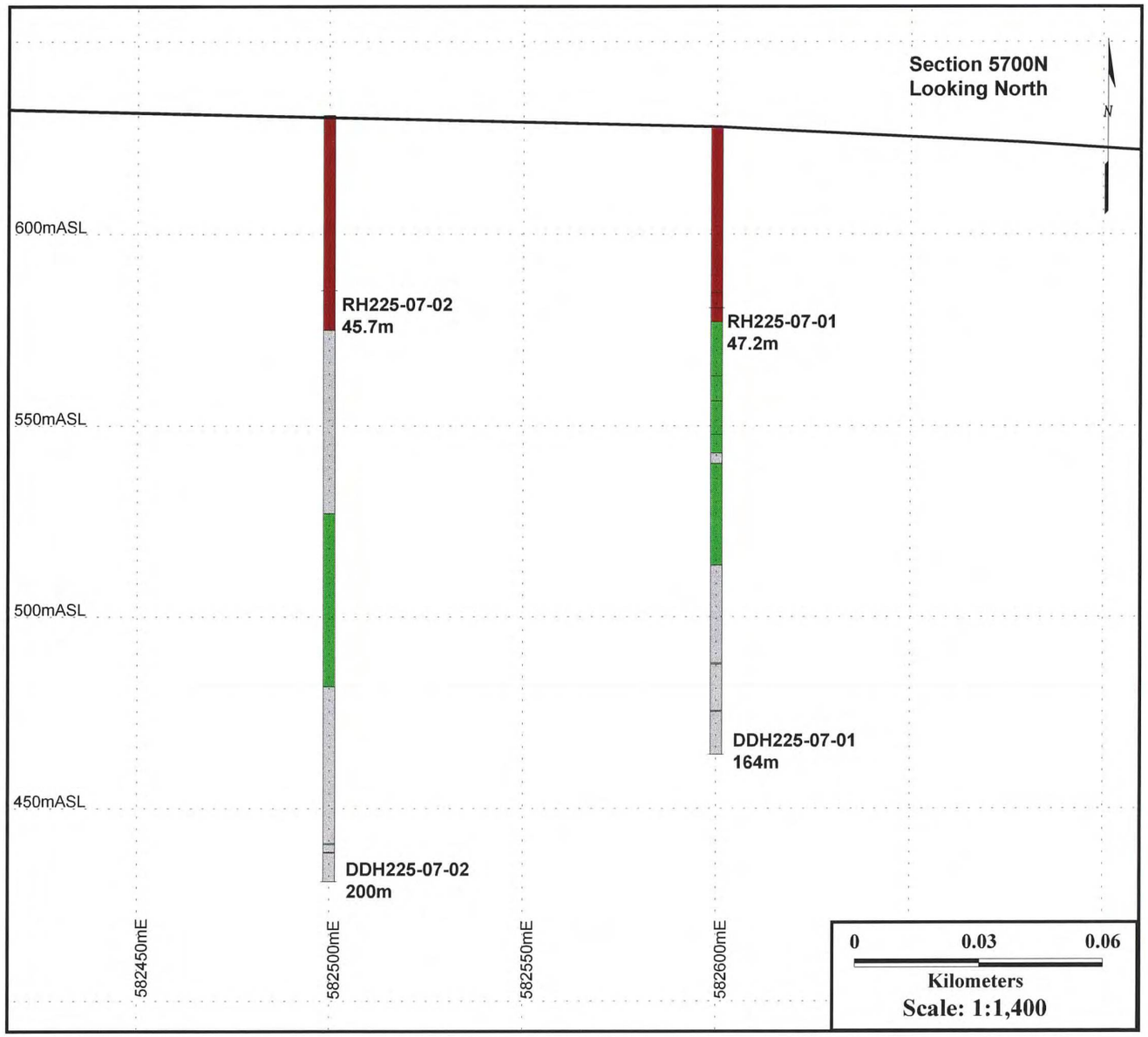
Shale (bedded or fissile nature)

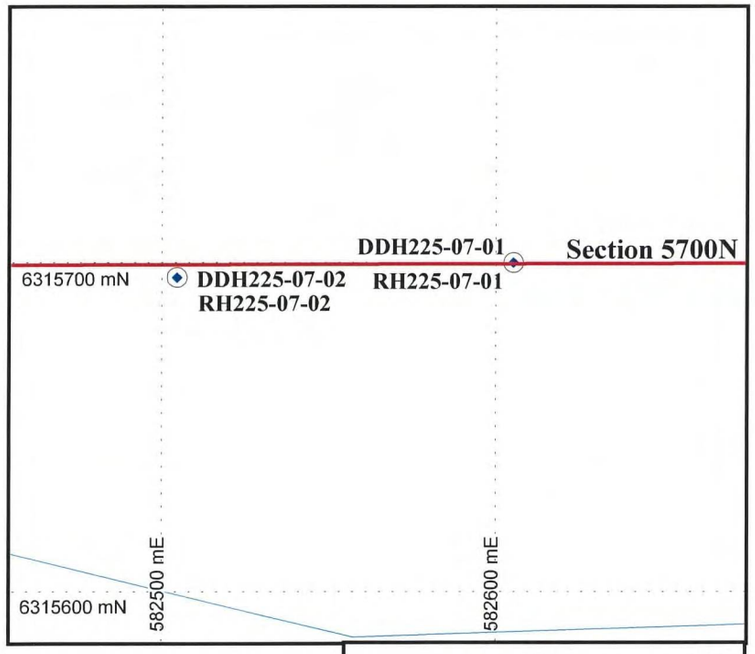
Mostly brown to dark brown shale, black with minor fissile parting at 85 TCA. Millimetre size bedding of clay, some silt and fine sand compose this unit. Some fish scales are present.

2 Small kimberlite beds as described above at 194.48m – 194.56m and 198.5m-198.51m

200 **EOH (m)**

Apr/16,/2007





Legend

- Overburden
- Mudstone
- Sandstone
- Conglomerate
- Kimb-Breccia
- Kimberlite
- Drill hole
- Hydro
- Ground Surface

Ashton Diamonds of (Canada) Inc.

April 30, 2007
Author: TB/SS
Proj: UTM11 NAD27

Buffalo Hills Property
BH225 Drill Cross Sections

J:\7Maps\AB\Alberta Assessment

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH6-07-01

HOLE-ID	**RH6-07-01**	*Start Date*	26-Feb-07	*Contractor*	Thorhild Drilling
Anomaly	K006	*End Date*	28-Feb-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	33.6	*Wk Permit*	MME-060019
Easting	585402.34	*Azimuth*	0	*District*	Lesser Slave
Northing	6308550.43	*Dip*	-90	*Legal Desc.*	NE - 19 -91 - 10 - 5
Elevation	574.75	*Core Size*	WaterWell	*MIM Permit*	9396060049
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole. Re-drilled with hole DDH6-07-01				
Comments	Solid dark green PK at 33.6m				

Interval	*Description*
0 to 29.97	**OB** Solid dark green PK at 33.6m
29.97 to 33.64	**PK**
33.64	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for RH6-07-02

HOLE-ID	**RH6-07-02**	*Start Date*	28-Feb-07	*Contractor*	Thorhild
Anomaly	K006	*End Date*	03-Mar-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	103.6	*Wk Permit*	MME-060019
Easting	585448.57	*Azimuth*	0	*District*	Lesser Slave
Northing	6308454.73	*Dip*	-90	*Legal Desc.*	NE - 19 -91 - 10 - 5
Elevation	574.89	*Core Size*	WaterWell	*MIM Permit*	9396060049
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Not Logged
Purpose	Water well drilled - In case of kimberlite discovery, hole was redrilled with Core hole				
Comments	FG Black Kim at 97.5m under competent black shale				

Interval	*Description*
0 to 93.27	**OB** FG Black Kim at 97.5m under competent black shale
93.27 to 97.5	**Shale**
97.5 to 103.6	**PK**
103.6	**EOH (m)**

Apr/16,/2007

Ashton Mining of Canada Inc.
Diamond Drill Hole Summary Log for DDH6-07-01

HOLE-ID	**DDH6-07-01**	*Start Date*	07-Mar-07	*Contractor*	Connors
Anomaly	K006	*End Date*	10-Mar-07	*JV*	BH
Property	BUFFALO HILLS	*Length (m)*	81.0	*Wk Permit*	MME-060019
Easting	585402.34	*Azimuth*	0	*District*	Lesser Slave
Northing	6308550.43	*Dip*	-90	*Legal Desc.*	NE - 19 -91 - 10 - 5
Elevation	574.75	*Core Size*	HQ3	*MIM Permit*	9396060049
UTM Zone	11	*Geologist*	A. Berry	*Date Logged*	
Mapsheet	84B13			*Logged by*	Cloutier
Purpose	Delineate geometry of the K6 body				
Comments	Magnetic susceptibility measured by an Exploranium KT5 Magnetic Susceptibility Meter 12 core boxes Sample No.'s: 24882-24884				

Interval	*Description*
0 to 30	**OB** Overburden Cemented to 33 m, collared in overburden in what appears to be kimberlite gravel? The unit is mostly composed of grey clay till with 8% cobbles, pebbles, 5% sand, 35% silt, 52% clay. Cobbles, pebbles are subangular to rounded, mudstone, limestone and basement rock (gneissic, granitic) usually 0.5 cm to 3 cm (up to 43 cm). A few kimberlite boulders are observed throughout the unit. 33m – 45m Very poor recovery (25%) and 0 RQD. Material in core box resembles kimberlite gravels and sands. (could be more competent rock shattered and rounded by the drill). Many clasts show carbonate accretion, possibly filled fractures. Most kimberlite pebbles and cobbles are light green to yellowish green, some bigger pieces are dark green and show many 0.5 cm – 1.5 cm juvenile lapillies and f-m olivine. Biggest piece is at 42.5 m and measures 15 cm. 45 – 76.6m: Till as mentioned above, good recovery (95%) . A few kimberlite boulders observed and described below: 64.6 – 64.9m: Green JLPK boulder with 8% xenoliths, Subangular-subrounded, basement rock + mudstone+limestone. 10% rounded to subrounded Juvenile Lapillies, Mostly 0.5 – 1 cm cored with thick selvage, some uncored. 55% F-M serpentinised mostly anhedral Ol grains. 23% matrix, carbonate rich 70.8 – 71.45: Green JLPK boulder with trace xenoliths (<0.5 cm) mudstone. Mostly F-M anhedral and subhedral Olivine grains All olivine show a very thin (<0.1 mm) rim, alteration or selvage (lapilli?). 5% Uncored subrounded to irregular lapillies < 3mm. 30% matrix, carbonate rich (reacts to HCL). 73.6 – 74.03, Brown-grey limestone boulder, reacts strongly to HCL, some calcite veins. 75 – 81 This interval has an RQD of 0 and is mostly rubble. It is a mix of kimberlite pebbles, cobbles, boulders and shale in the same rubbly state. Kimberlitic material in this interval is varied from macrocrystic OLPK to JLPK with different textured kimberlite pieces suggesting that they are not insitu. The kimberlitic material is intermixed is what appears to be cooked serpentinised friable shale. Biggest piece of core is a 14 cm piece of light green-grey highly altered kimberlite. The last 1.8 m is composed of 65% cooked (?) black shale and 35% kimberlite. This interval could be part of bedrock although it is very broken and fractured and has been turned into rubble by the drilling. Pieces of core are rounded to subangular. Kimberlite pieces between 79.2 – 81m is grey-green PK. 1% subangular to subrounded xenoliths (mudstone and basement rock) <1cm. Olivines are serpentinised, Mostly <5mm, rounded, anhedral to subhedral, some euhedral. F-M olivine, All olivine show a very thin (<0.1 mm) rim, alteration or selvage (lapilli?). 5% Uncored subrounded to irregular lapillies < 5mm. 30% matrix, carbonate rich (reacts to HCL). Carbonate in matrix is visible and compose 1-3% of the kimberlite 81m: EOH , too rubbly, sandy, had to abandon hole

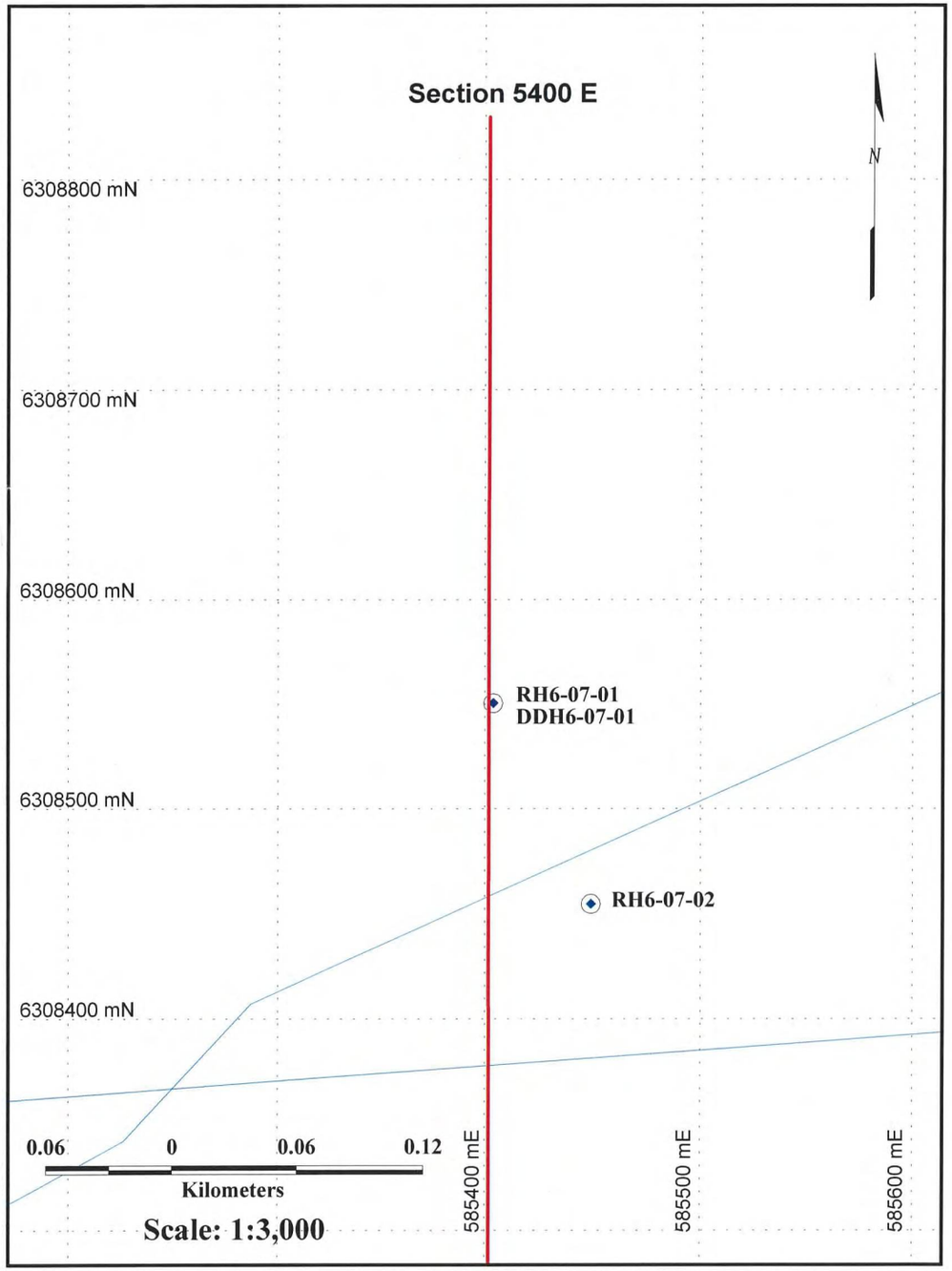
30 to 45 **VK**

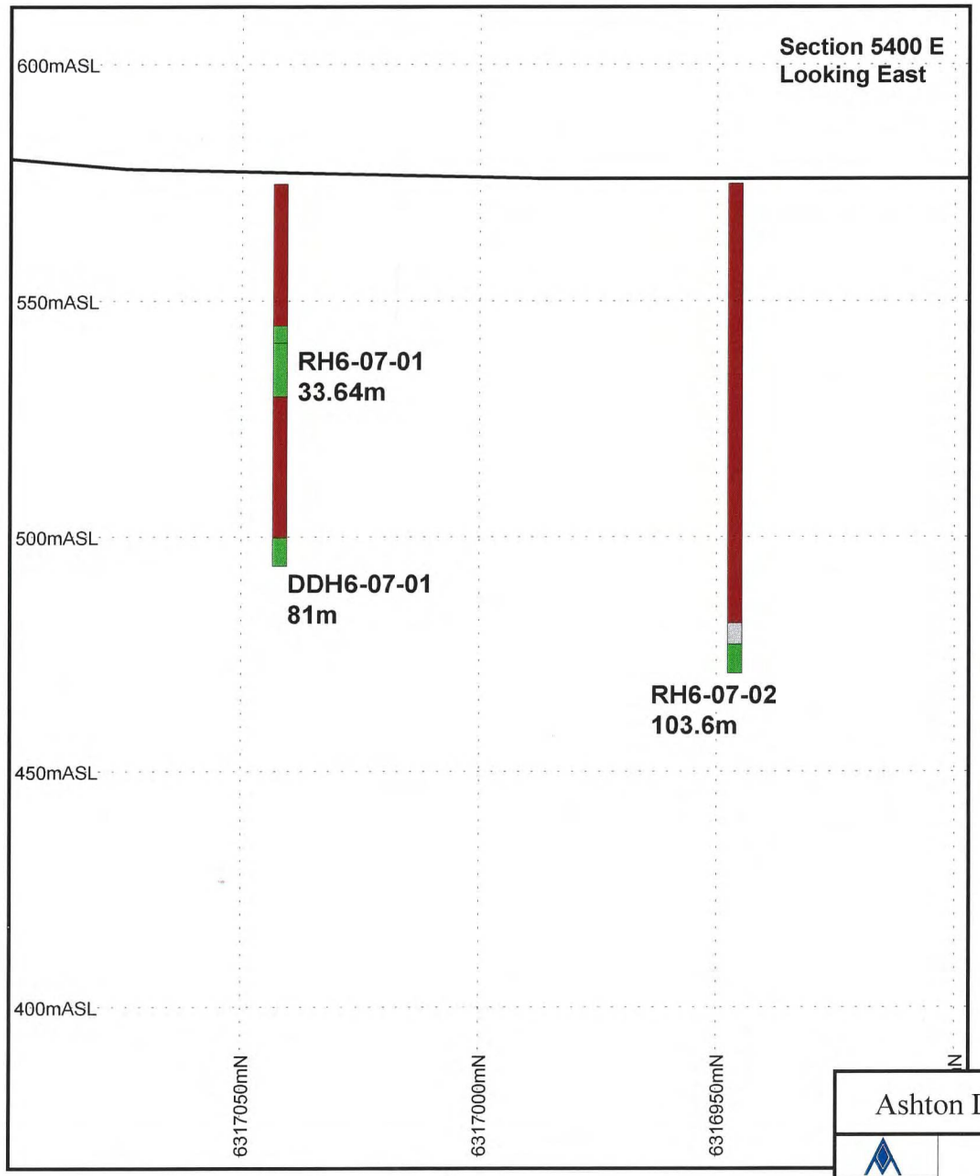
45 to 75 **OB**

75 to 81 **VK**

81 **EOH (m)**

Apr/16,/2007





Legend

- Overburden
- Mudstone
- Sandstone
- Conglomerate
- Kimb-Breccia
- Kimberlite
- Drill Hole
- Hydro
- Ground Surface

Ashton Diamonds (Canada) Inc.

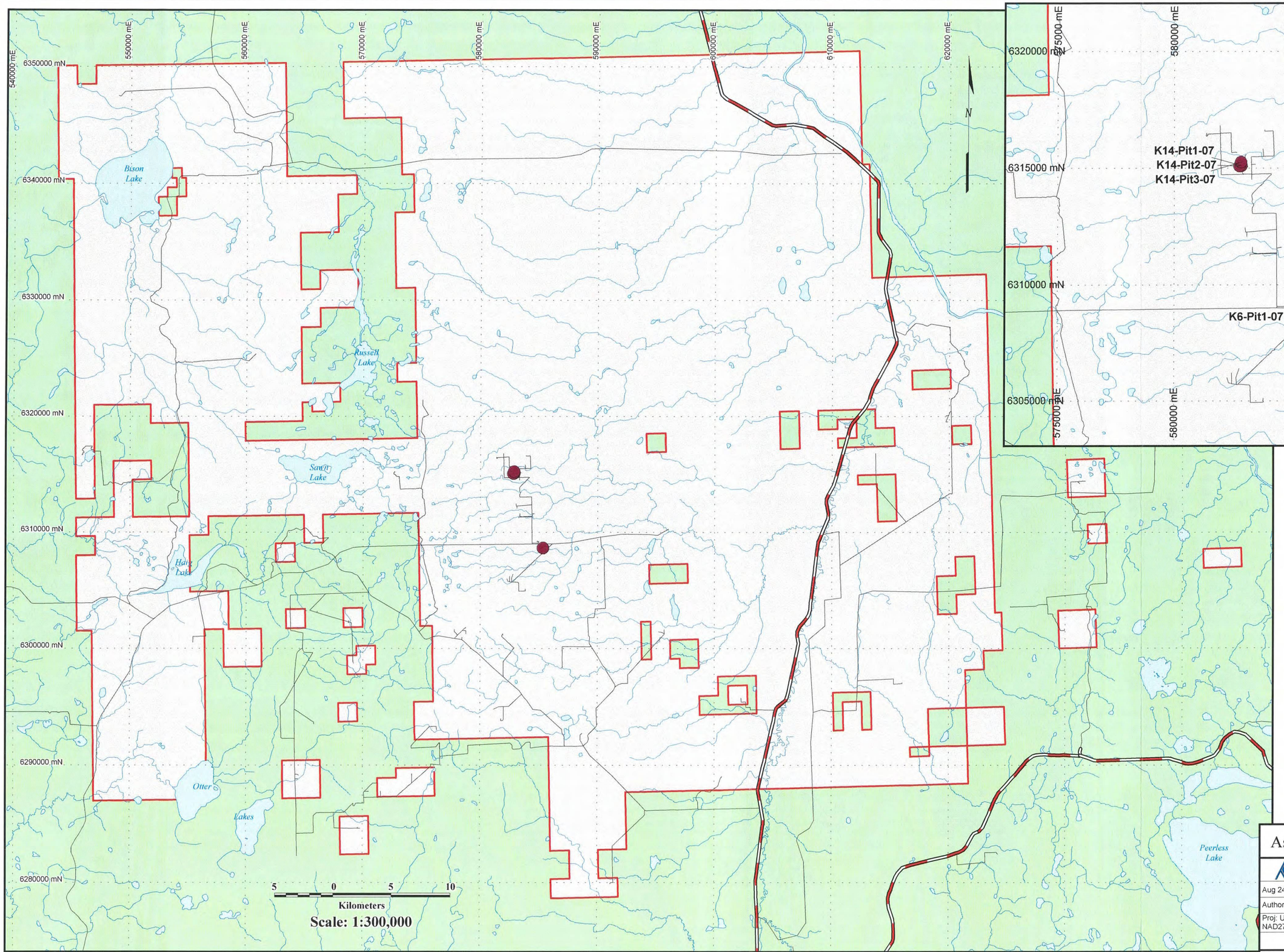
April 30, 2007
Author: TB/SS
Proj: UTM11 NAD27

Buffalo Hills Property
K6 Drill Cross Sections

J:\7Maps\AB\Alberta Assessment

APPENDIX "D" – BULK SAMPLE

- Pit Location Map, Property Scale
- K14 Bulk Sample Pit Location
- K6 Bulk Sample Pit Location



Legend

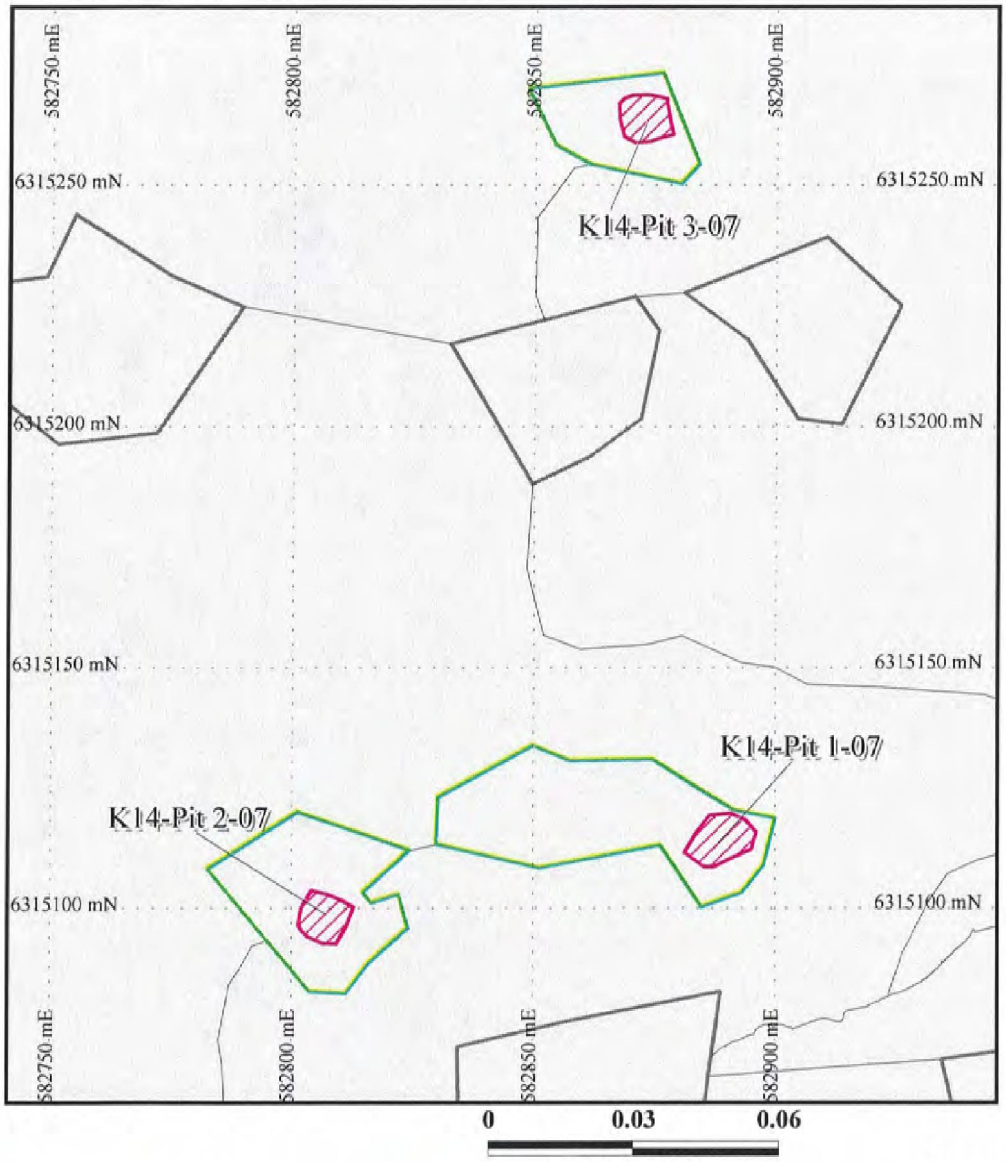
- Property
- Pit Location
- Lake
- Access Road

Ashton Diamonds (Canada) Inc.

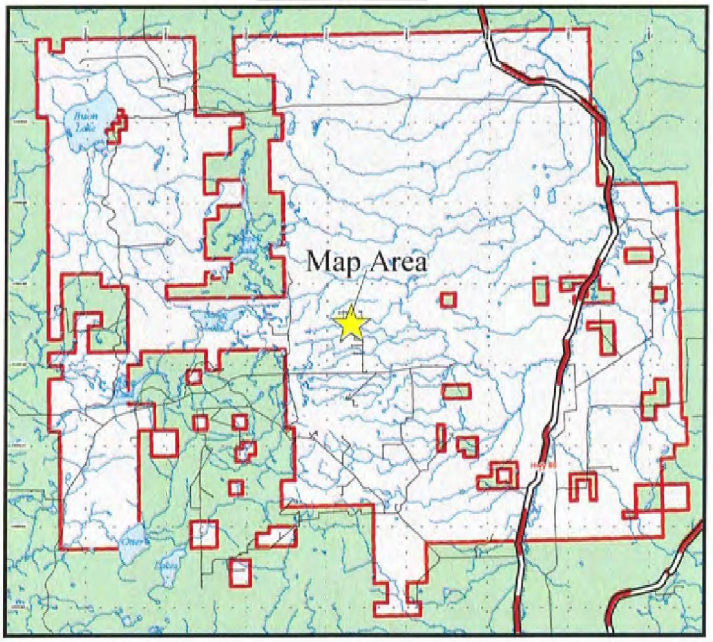
Aug 24, 2006
Author: TB
Proj: UTM11 NAD27

Buffalo Hills Property
Pit Locations

J:\GMaps\AB_Regional\Drilling



Location Map



Legend

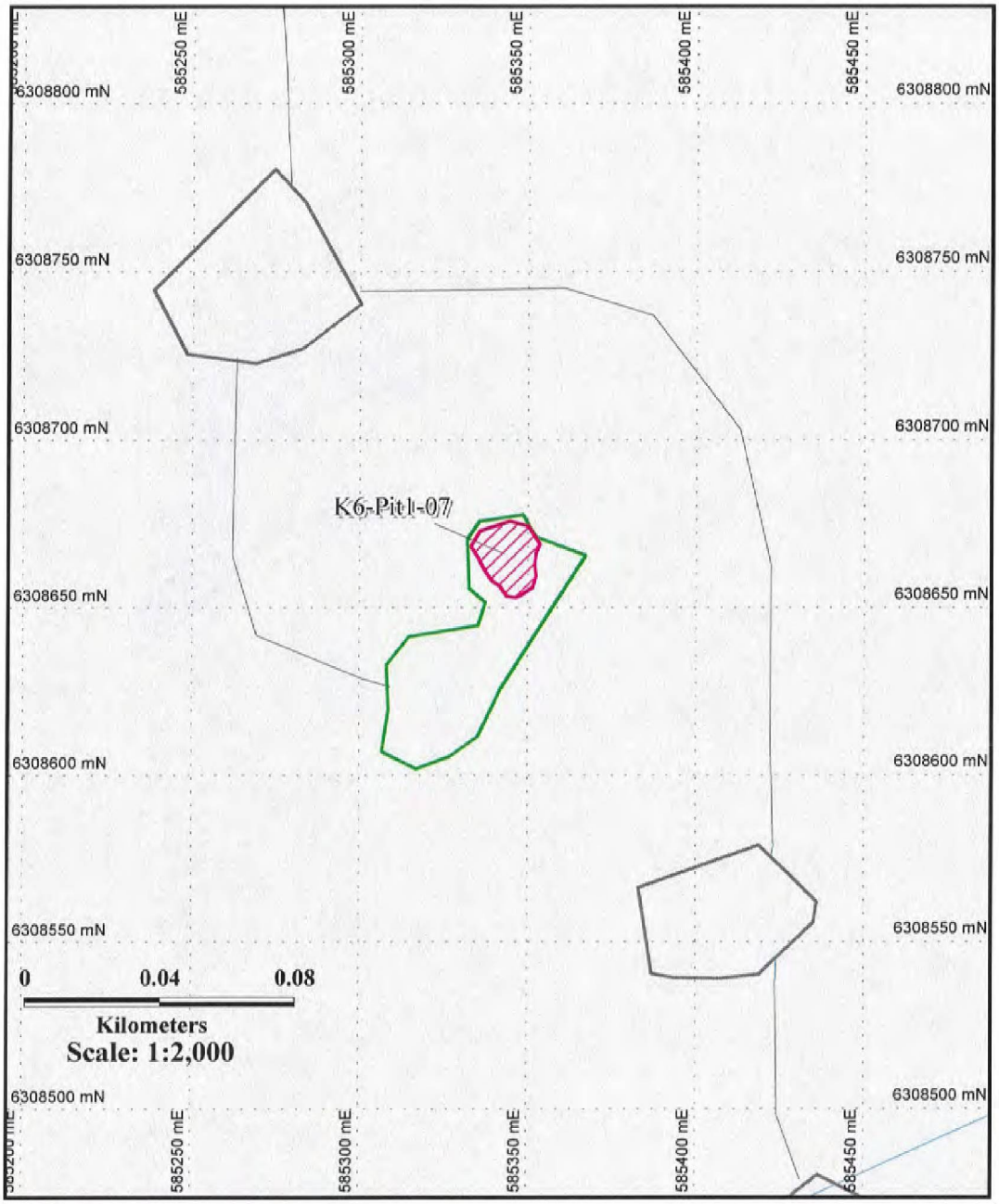
- Drill Pads
- Bulk Sample Collection Area
- Bulk Sample Pit
- Property Outline
- Hydro
- Access Road

Ashton Diamonds (Canada) Inc.

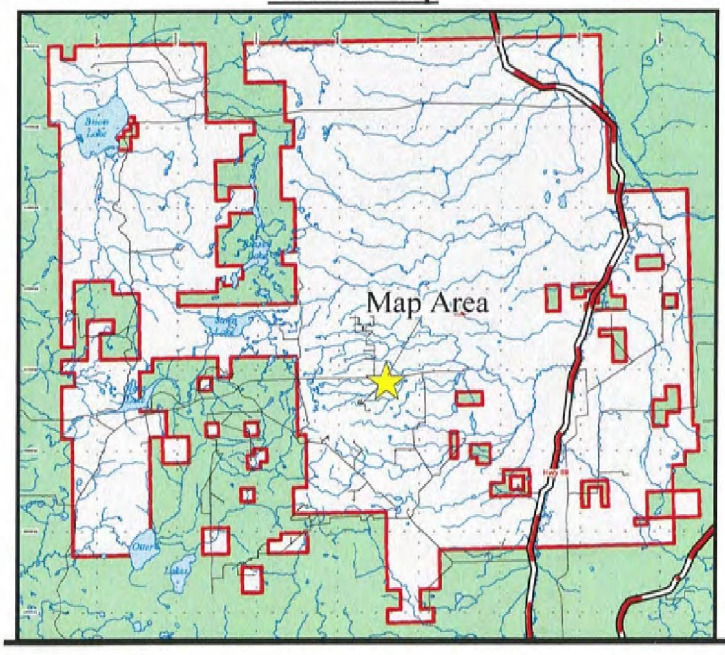
April 17, 2007
Author: SS/TB
Proj: UTM11 NAD27

Buffalo Hills Property
K14 Bulk Sample Pit Location

J:\7Maps\AB\Alberta Assessment\Drill Hole Location2



Location Map



Legend

- Drill Pads
- Bulk Sample Collection Area
- Bulk Sample Pit
- Property Outline
- Hydro
- Access Road

Ashton Diamonds (Canada) Inc.

April 17, 2007	**Buffalo Hills Property**
Author: SS/TB	**K6 Bulk Sample Pit Location**
Proj: UTM11 NAD27	

J:\7Maps\AB\Alberta Assessment\Drill Hole Location3