**GEOPHYSICAL SURVEYS REPORT** 

on the

## BUTT URANIUM RARE EARTH PROPERTY

BUTT TOWNSHIP DISTRICT OF NIPISSING ONTARIO

FOR

2.45460

**GRIFTCO CORPORATION** 

JUN 1 6 2010

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GEOSCIENCE ASSESSMENT OFFICE

prepared by: Dan Patrie Exploration Ltd. L.D.S. Winter, P.Geo. 7 June 2010

#### **TABLE OF CONTENTS**

1.	Introduction	3	
2.	Property 2.1 Property Description 2.2 Location, Access and Infrastructure	3 3 4	
3.	Geology	5	
4.	Instrumentation and Work Done	6	
5.	Results 5.1 Magnetometer Survey 5.2 Induced Polarization Survey	8 8 9	
6.	Summary and Conclusions	13	
7.	Recommendations		
8.	Personnel		
9.	Expenditures	15	
	References Certificate of Qualification	16 17	

#### **LIST OF FIGURES**

- Figure 1: Location Map
- Figure 2: Claims Map
- Figure 3: Regional Geology
- Figure 4: Property Grid
- Figure 5: Induced Polarization (IP) Chargeability Anomalies

#### LIST OF MAPS

Map 1: Total Magnetic Intensity Survey – Contoured Readings 1:5 000 8 pseudosections 1:5 000

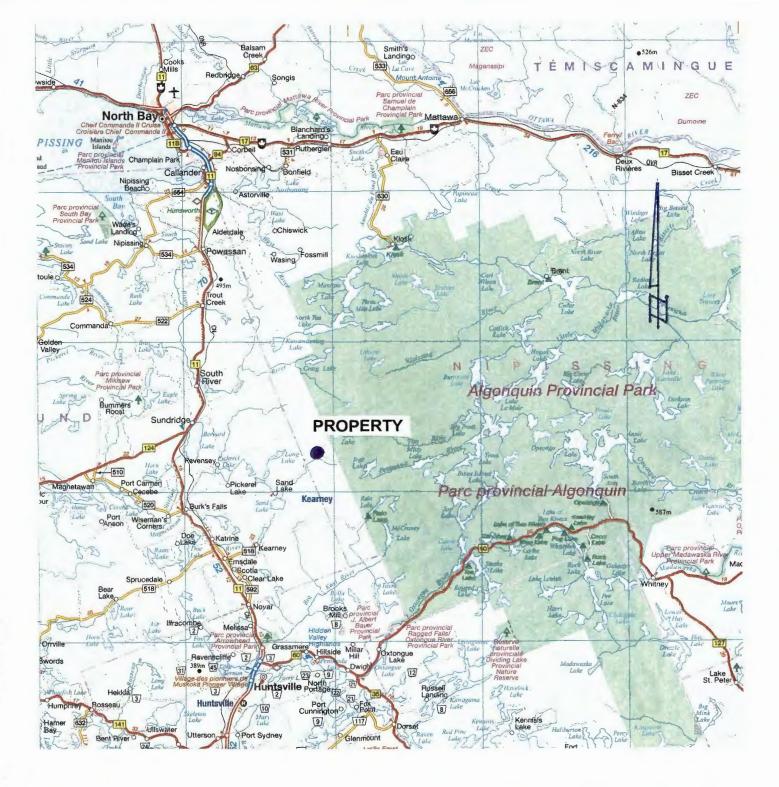
#### 1. INTRODUCTION

Griftco Corporation (Griftco or the Company) holds 10 claims containing 88 units and covering 1408 ha in Butt township, District of Nipissing, Ontario at 79°-5.8'W longitude, 45°-42.5'N latitude (Figure 1). The claims are held under option from Dan Patrie Exploration Ltd. (DPEL) and were acquired for their potential to host uranium and rare earth mineralization of economic interest. Between 6 April and 20 April 2010 the Company carried out line cutting and a magnetometer survey followed by an Induced Polarization (IP) survey on part of the Property. The following report describes the work carried out on the subject claims and the results obtained.

#### 2. PROPERTY

#### 2.1 PROPERTY DESCRIPTION

The Butt Uranium Rare Earth Property ("the Property") is comprised of 10 unpatented contiguous mining claims containing 10 units and covering 1408 ha as listed in Table 1 and as illustrated in Figure 2. The Property is located within the Butt township claim map area (M-0064). The claims are held in the name of Dan Patrie Exploration Ltd. and the Property is under option to Griftco Corporation by an agreement dated 8 January 2010.



### FIGURE 1 GRIFTCO CORPORATION

#### BUTT URANIUM RARE EARTH PROPERTY

**Location Map** 

Scale 1:750 000

June 2010

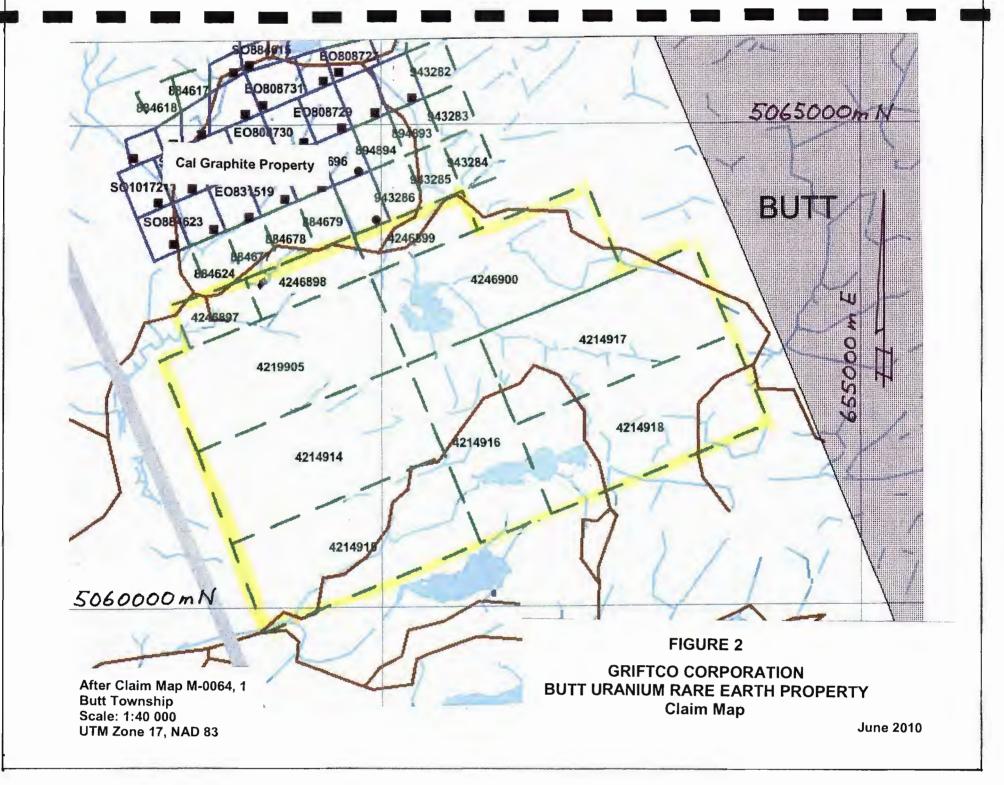
TABLE 1 GRIFTCO CORPORATION				
Township	Claim Number	Claim Due Date	Units	Area (ha)
Butt	4214914	2010-Jul-25	12	192
Butt	4214915	2010-Jul-25	12	192
Butt	4214916	2010-Jul-25	8	128
Butt	4214917	2010-Jul-25	12	192
Butt	4214918	2010-Jul-25	12	192
Butt	4219905	2010-Jul-25	12	192
Butt	4246897	2011-May-12	2	32
Butt	4246898	2011-May-12	3	48
Butt	4246899	2011-May-12	3	48
Butt	4246900	2011-May-12	12	192
TOTAL			88	1408

#### 2.2 LOCATION, ACCESS AND INFRASTRUCTURE

The Property is located approximately 50 km north-northeast of Huntsville, Ontario at 79°-5.8'W longitude, 45°-42.5'N latitude and centred at UTM, NAD 83, Zone 17 co-ordinates 650000mE; 5062500mN (Figure 2).

Access to the Property is by road from Provincial Highway #11 at Elmsdale, Ontario about 20 km north of Huntsville. From Elmsdale, Provincial Highway 518 leads east to Kearney (10 km) then proceed north from here an additional 10 km to Sand Lake. From Sand Lake to the Property is about 12 km on the Forestry Tower Road. A number of logging roads provide good access to all sections of the Property.

4



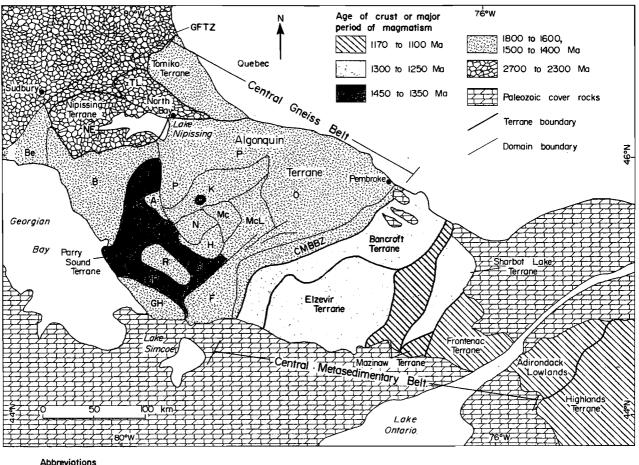
Algonquin Park is immediately east of the Property and the Cal Graphite Property is immediately to the north (Figure 2).

#### 3. GEOLOGY

The Butt Uranium Rare Earth Property is located within the Kiosk domain of the Algonquin Terrain of the Central Gneiss Belt of the Western Grenville Province, Ontario (Figure 3). The central Gneiss Belt and the Central Metasedimentary Belt are the 2 major subdivisions of the Grenville Province in Ontario.

The Central Gneiss Belt consists mainly of upper amphibolite and local granulitefacies, quartzo-feldspathic gneisses chiefly of igneous origin with subordinate paragneiss. The dominant structural trend is northeasterly, however, northwesterly trends occur along Georgian Bay. The Central Gneiss Belt consists of a variety of Archean to Mesoproterozoic crustal segments, all of which have been affected by the "Grenville Orogeny". Rocks of 3 main ages are present. North of the French River, reworked Archean and Paleoproterozoic gneisses of the Nipissing Terrane are intruded by Mesoproterozoic (1700 to 1350 Ma) plutonic rocks, with granitic and monzonitic rocks predominant. The bulk of the Central Gneiss Belt (Algonquin and Tomiko terranes) consists of Mesoproterozoic gneisses (1800 to 1600 Ma) intruded by 1500 to 1400 million-year-old granitic and monzonitic plutons that may represent an extension of the Eastern Granite-Rhyolite Province across the Grenville Front. The Parry Sound Terrane consists of mafic to intermediate rocks extracted from the mantle at about 1450 to 1350 Ma.

Distinctive lithotectonic terranes, some further sub-divided into domains, have been identified within the Central Gneiss Belt. The terranes and domains are distinguished by differences in rock types, internal structure, metamorphic grade, geologic history and locally by geophysical signature. They are bounded by zones of intensely deformed layered rocks traceable for tens of kilometres.



ADDrevi	dions				
A	Ahmic Domain	GH	Go Home Domain	NE	Nepewassi Domain
в	Britt Domain	н	Huntsville Domain	0	Opeongo Domain
Be	Beaverstone Domain	к	Kiosk Domain	P	Powassan Domain
CMBBZ	Central Metasedimentary Belt	Мс	McCraney Domain	PS	Parry Sound Domain
	Boundary Zone	McL	McClintock Domain	R	Rosseau Domain
F	Fishog Domain	MR	Moon River Domain	S	Seguin Domain
GFTZ	Grenville Front Tectonic Zone	N	Novar Domain	TL	Tilden Lake Domain
			•		



#### **FIGURE 3**

#### **GRIFTCO CORPORATION**

#### **BUTT URANIUM RARE EARTH PROPERTY Regional Geological Framework**

June 2010

After: OGS, Geology of Ontario Part 2, p. 720

The Algonquin Terrane consists of quartzo-feldspathic gneisses of plutonic and supracrustal origin characterized by a complex pattern of structural domains. Thus, the Algonquin Terrane is an area of Mesoproterozoic, polycyclic rocks, consisting of a number of domains (domains and subdomains). The southern and western parts of the Algonquin Terrane have been subdivided into the Britt, Ahmic, Kiosk, Rosseau, Go Home, Huntsville, Novar, McClintock doamins interpreted to represent the lowest portion of a stacked succession of thrust sheets in this region. Large folded sheets of gneissic granites with primary isotopic ages in the 1500 to 1400 million year range occur in all these domains. Rocks of this age are common in the Eastern Granite-Rhyolite Province and the Algonquin Terrane and probably represent a section of Mesoproterozoic crust (1800 to 1600 Ma) extensively injected by granitic magmas of the Eastern Granite-Rhyolite Province. (Central Gneiss Belt, Grenville Province, Part 2, Section 19, Geology of Ontario, Easton, 1992).

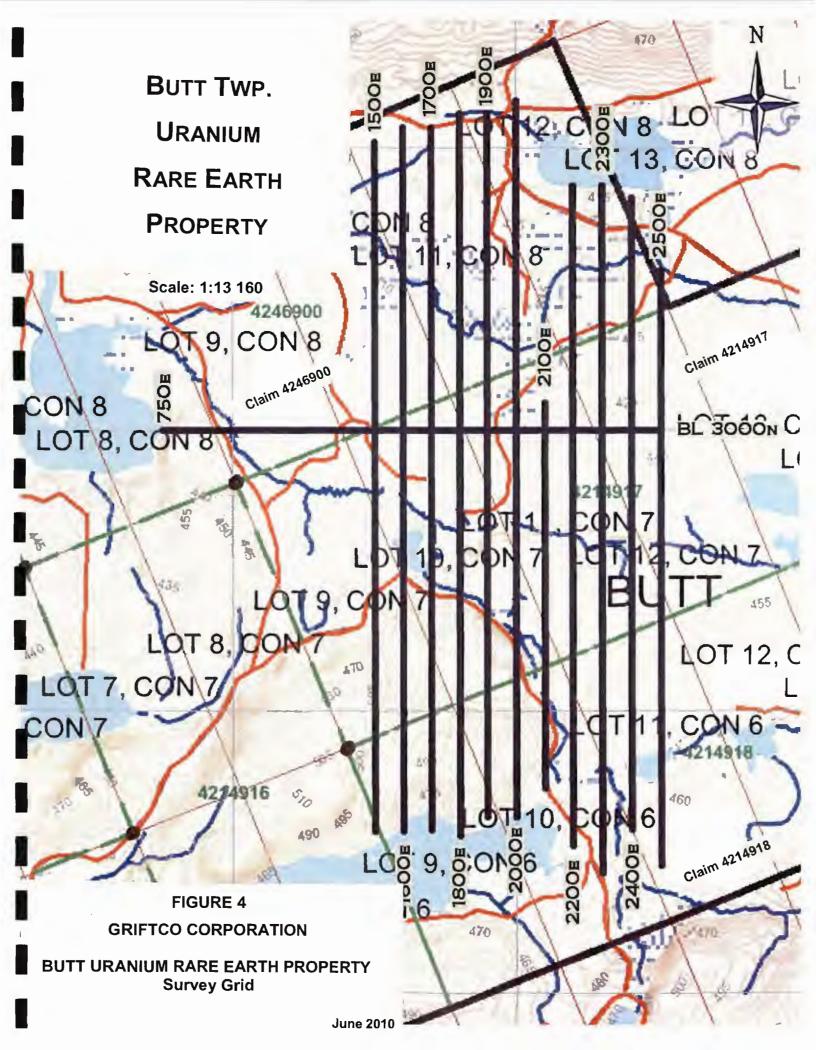
The Butt Uranium Rare Earth Property which lies within the Kiosk domain, is underlain by mafic, quartzo-feldspathic and metapelitic units at the amphibolite to granulite grade of metamorphism. In turn these units host radioactive pegmatite dykes which host allanite, uraninite, pyrochlore, columbite and other rare earth and uranium-bearing minerals (Ferguson, 1971; Hewitt, 1967).

#### 4. INSTRUMENTATION AND WORK DONE

Line cutting was carried out on the Property between 6 April and 17 April 2010 inclusive by DPEL with 27 line-km being cut.

Between 17 April and 20 April 2010 inclusive, a program of geophysical surveying along the previously cut lines at 100 m spacings was carried out over part of the Property (Figure 4). A total field magnetometer survey with readings being taken at 25 m intervals was carried out over 27 line-kilometres (Map 1).

The survey was carried out using 2 Scintrex Envi magnetometer units. The Envi Mag has the capability to measure the total field combined with an Envi



Magnetometer as a base station for correcting magnetic diurnal drift. These are total field magnetometers which measure the magnetic field through the use of proton processional effects caused by the interaction of a magnetic field with a spin aligned, proton rich fluid.

An instrument accuracy precision and resolution of 0.1 nt may be obtained with these instruments under ideal conditions. While in gradient mode which was not done at this time, the unit has the means of measuring both the total field and the gradient of the total field with two sensors simultaneously. In gradient mode, the instrument sharply defines the magnetic responses determined by the total field. It individually delineates closely spaced anomalies rather than collectively identifying them under one broad magnetic response. Also, when doing a gradient survey the instrument enables one to conduct a gradient survey during a magnetic storm because the technique of simultaneously measuring with the two sensors cancels out the effects of diurnal magnetic variations.

Microprocessors contained in these instruments allow for the collection of the readings along with the time and its position in digital form suitable for downloading to a computer for date processing.

A total of 27 km of magnetic readings were taken along the lines at 100 m apart with 25 m station intervals. The field measurements were corrected for diurnal variations of the earth's magnetic field by direct subtraction of the base station readings from the reading taken at the same moment in the field units. The corrected data was downloaded to a computer for plotting. The results are presented in Map 1.

A total of 17 km of induced polarization readings were taken on the Butt Property grid with an "a" spacing of 25 m and with 6 levels being read (N = 6). The IP survey was a time domain pole-dipole survey and it was carried out with a Walcer 9000 transmitter in combination with a Honda 18 HP motor generator and a Scintrex IPR-12 receiver. The motor generator and transmitter were stationary on the end of the

7

line being read with the current being transmitted through a wire with an electrode into the ground for contact. A second wire and electrode (the live electrode) was moved along the line being surveyed as per the survey protocol. At all times, the transmitter man, live electrode man and receiver personnel were in radio contact. Ahead of the live current electrode was a crew of men with electrodes at 25 m intervals. These electrodes are connected to the receiver where the receiver operator obtains and records the readings. The data is downloaded from the receiver at the end of the day to a computer where the resistivity and chargeability are calculated and plotted using pseudosections and/or maps using Geosoft software.

The geophysical surveys were carried out by Dan Patrie Exploration Ltd., Massey, Ontario an experienced geophysical contractor. The survey personnel are listed in Section 8. The IP survey was performed between 17 April and 20 April 2010 (inclusive).

#### 5. <u>RESULTS</u>

#### 5.1 MAGNETOMETER SURVEY

In an earlier report on the Property the writer (Winter, 2009) wrote, "The total field magnetic readings taken on the Butt Township Property indicate that the property is divided into 2 magnetic domains along a line trending approximately  $330^{\circ}$  (N60°W). To the northeast of this line, the magnetic readings are generally low and vary between approximately 55000 nT to 55500 nT with scattered, more elevated values to a maximum of approximately 56000 nT. Two trends appear to be present,  $330^{\circ}$  and  $060^{\circ} - 070^{\circ}$  with the  $330^{\circ}$  trend being more noticeable. The southwestern part of the Property has in general a higher magnetic susceptibility with values generally in the 55600 nT to 56200 nT range".

The current survey was done in the eastern part of the earlier survey area and shows the pattern originally reported, i.e., higher magnetic values to the south and

lower values to the north with the boundary between the 2 domains trending about 330° (northwest-southeast) (Map 1).

For the current survey, the highest values occur in an irregular pattern in the southern 25% of the grid. Here values are generally in the range of 55300 nT to occasionally over 55800 nT. Apart from the overall 330° trend, two other general trends are apparent, east-west and northeasterly.

North of the baseline at 30+00N (UTM northing 5063000mN) the magnetic readings are generally less than 55250 nT and range to lows in the 55100 nT range. Some high values to a maximum of 56048 nT occur at the northern end of L22+00E between 38+00N and 39+00N (Map 1).

In summary, it is considered that the magnetic values indicate the presence of two magnetic domains, one to the north where the magnetic susceptibilities of the rocks are lower (55250 nT to 55100 nT) and one to the south where magnetic values range from about 55300 nT to over 55800 nT. Three overall magnetic trends are present, northwesterly (330°), east-west and northeasterly.

#### 5.2 INDUCED POLARIZATION (IP) SURVEY

A total of 17 line-km were surveyed during the IP survey with the results for each pseudosection summarized in Table 2. Pseudosections for partial lines from 17+00E to 25+00E and the baseline are provided in the pockets of the report (8 pseudosections). Figure 5 is a plan map, compiled from the pseudosections which shows diagrammatically the location of and the trends of the main zones of increased chargeability.

In general the background chargeability values range from <0 mV/V to 5 mV/V to 10 mV/V. Zones of increased chargeabilities range up to 66 mV/V, however, most anomalous values are in the 20-30 m V/V range i.e., the areas of increased chargeability are in the order of 2 x to 6 x background. The areas of increased

chargeability show, in general, two types of patterns.

Figure 5 shows the zones of increased chargeability interpreted from the pseudosections (n = 1). From about 29+00N to 34+00N on lines 17+00E to 25+00E the interpreted IP zones show combined northeast to east-west trends with the northeasterly trend being dominant. In the southern part of the grid, the IP zones have a dominant northwest trend; 19+00E to 25+00E and 17+00N to 24+00N.

Resistivities are variable. In some cases increased chargeabilities occur with increased resistivity while in other cases low resistivities are associated with higher chargeabilities.

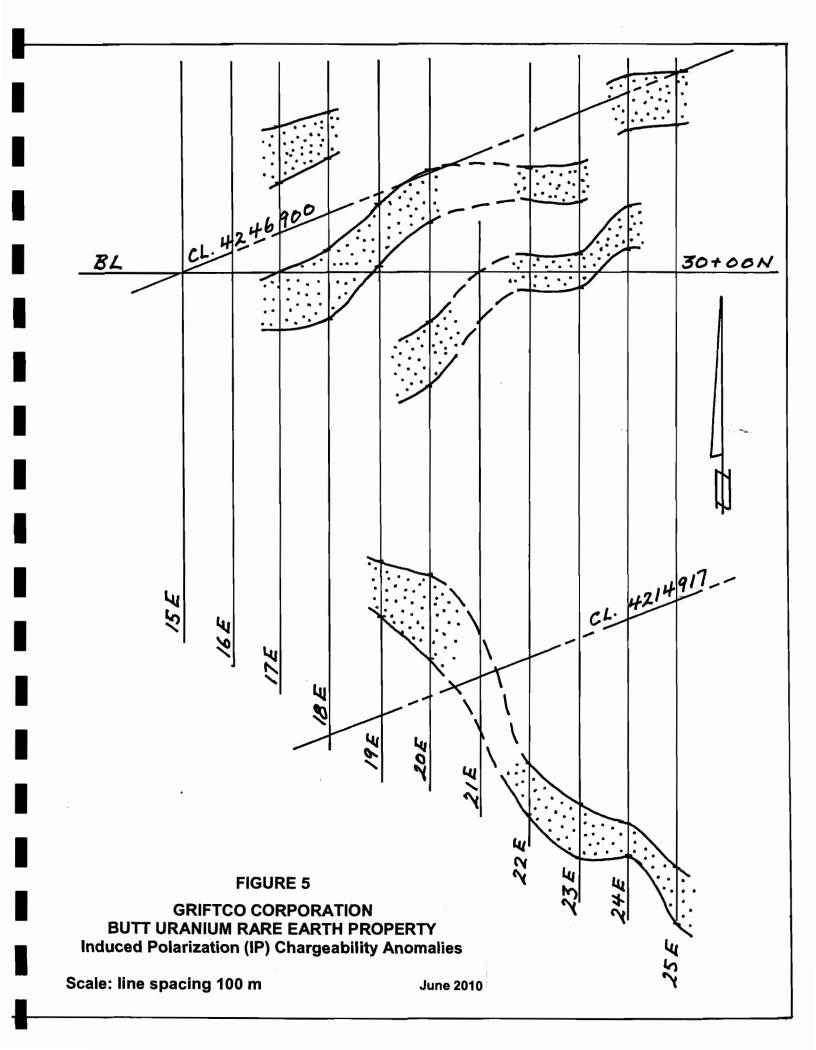


	TABLE 2   GRIFTCO CORPORATION   BUTT URANIUM RARE EARTH PROPERTY   ZONES OF ANOMALOUS CHARGEABILITY				
		CHARGEABIL	ITY VALUES		
LINE	STATION	BACKGROUND mV/V	ANOMALY mV/V	COMMENTS	
17+00E	From end of line (30+00N) to 33+50N	<0 to 5	>5 to 26	Broad zone at south end of line with 2 more anomalous sections at 30+00N and 32+50N. Coincident with hig resistivity 2 x to >14 x background.	
18+00E	From end of line (30+00N) to 33+50N	<0 to 5	>5 to 34	Broad zone at south end of line with one more anomalo section at 30+00N. Coincident with high resistiv 2 x to 20 x background.	
	40+00N to north end of line	<0 to 5	>5 to 9	Increasing chargeability with increasing resistivity at north end of line.	
19+00E	From end of line (20+00N) to 24+00N	<0 to 10	>10 to 20	Broad zone of increased chargeability with highest values at 23+50N. Variable resistivity.	
	28+00N to 31+50N	<0 to 10	10 to 28	Broad zone of increased chargeability with 2 more anomalous sections at 28+75N and 31+00N. Section at 31+00N has highest chargeabilities. Section at 28+75N shows higher resistivities while that at 31+00N shows lower resistivities.	
	41+00N			Increasing chargeability and resistivity at end of line.	
20+00E	22+00N to 24+00N	<0 to 10	10 to 30	Broad zone of increased chargeability. In general coincident, high resistivity.	
	28+00N to 32+50N	<0 to 10	10 to 20	Broad zone of increased chargeability separated into northern and southern section. Southern section a 29+00N has higher associated resistivities.	

22+00E	19+00N to 22+00N	<0 to 10	10 to 32	Broad zone of increased chargeability with 2 more anomalous sections at 19+00N - 20+00N and 22+00N with coincident increased resistivity.
	30+00N to 32+00N	3 to 10	10 to 24	200 m wide zone of increased chargeability, increasing with depth. In part low and in part higher resistivity.
23+00E	17+00N at south end of line to 19+00N	0 to 10	10 to 32	200 m wide zone of increased chargeability with coincident high resistivity.
	30+00N to 35+00N	<0 to 10	10 to 23	Broad irregular zone of increased chargeability with generally low resistivity except for a small zone at 33+00N - 34+00N of higher values.
24+00E	18+00N at south end of line to 22+50N	4 to 10	10 to 19	Broad zone of increased chargeability below n = 3 with associated high resistivity.
	26+00N to 34+00N	3 to 10	10 to 34	Broad zone of increased chargeability with 3 narrow sections of more anomalous values at 26+00N, 27+50 to 29+00N and 31+50N to 34+00N. The first 2 sections show increased resistivity whereas the 3rd section has low resistivity.
25+00E	17+00N at south end of line to 18+00N	0 to 10	10 to 17	Modest increase in chargeability with low resistivity.
	26+00N to 33+00N	3 to 8	8 to 12	Modest irregular increase in chargeability with high resistivity.
	33+00N to 34+00N	1 to 10	10 to 66	Approximately 100 m wide zone of high chargeability with associated low resistivity. This zone contains the highest chargeability values obtained during the survey.

#### 6. SUMMARY AND CONCLUSIONS

A total field magnetometer survey was carried out on 27 line-km of cut lines spaced at 100 m in the eastern part of the Property. An earlier survey (Winter, 2009) indicated two magnetic domains on the Property, one with lower magnetic susceptibilities to the north and one with higher magnetic susceptibilities to the south with the boundary between the 2 domains trending northwest-southeast (330°). This overall pattern also shows up in the current survey with the general boundary between the 2 domains being at about 30+00N (UTM 5063000mN). In addition to the 300° trend, two other trends, east-west and northeasterly are also present.

The IP survey chargeability results show 2 main zones of anomalous chargeabilities/interest. The first area lies at and north of the baseline (29+00N to 34+00N) and from 17+00E to 25+00E. Within this area, anomalous zones show northeasterly and east-west trends. The second area of anomalous values lies from 17+00N to 24+00N and between 19+00E and 25+00E, in the southeastern part of the grid.

Previous work in the 1950's identified a number of radioactive showings, for the most part hosted in pegmatite dykes. Some of these reported showings lie adjacent to the anomalous chargeability zones, however, for other showings there appears to be no correlation.

In summary, the magnetometer survey returned similar results to the earlier survey (Winter, 2009) and within the area surveyed confirmed the presence of two magnetic domains, an area of low magnetic susceptibility to the north and an area of higher magnetic susceptibility to the south. Three general trends or patterns are indicated by the magnetic survey, northwesterly (330°), northeasterly and east-west.

The IP survey identified two areas of anomalous chargeability values, one in the north-central part of the grid and one in the southeastern part of the grid. The IP anomalies also show the same 3 trends as shown by the magnetic survey.

At this point, there is no apparent direct correlation between the IP anomalies and areas of known radioactivity.

#### 7. <u>RECOMMENDATIONS</u>

At this point, it is considered to be important to determine, if possible, what is the cause of the increased IP chargeability and if there is any relationship between areas of known radioactivity and the IP and/or magnetic survey results. To this effect, it is recommended that;

- 1. the Property be geologically mapped and,
- 2. all showings be cleaned out, mapped and sampled.

Based on the prospecting and sampling work from the 1950's, it is considered that the Property has considerable potential to host uranium and rare earth element (REE) mineralization of economic interest. Once the recommended mapping and sampling are completed, the results can be correlated with the geophysical survey results and then a comprehensive evaluation program can be implemented.

#### 8. <u>PERSONNEL</u>

The surveys were carried out by Dan Patrie Exploration Ltd., Massey, Ontario using the following personnel.

Mike Faulkner, Walford, Ontario Gab Roy, Elliot Lake, Ontario Mike Whalen, Walford, Ontario. Bronson Ede, Sudbury, Ontario Andy Desjardins, Espanola, Ontario Tyler Gagan, Espanola, Ontario Cliff Moffatt, Sudbury, Ontario Matt Mandigo, Massey, Ontario Brent Patrie, Val Therese, Ontario.

#### 9. **EXPENDITURES**

# TABLE 3GRIFTCO CORPORATIONBUTT URANIUM RARE EARTH PROPERTYEXPLORATION EXPENDITURES APRIL 2010

1.	Line cutting: 27 km @ \$650/km	\$ 17,550	
2.	Magnetometer Survey: 27 km @ \$150/km		
3.	IP Survey: a = 25 m; n = 6: 17 km @ \$1600/km 27,2		
4.	Two mobilization trips; one for line cutting and		
	one for geophysical surveys @ \$1600 each		3,200
5.	Data Processing/printing maps		
6.	Report (6 copies)		2,600
	-	Total	\$ 56,600

The expenditures were made on three (3) claims in the following proportions:

4246900	33.3%
4214917	42.6%
4214918	<u>24.1%</u>

Total 100.0%

L.D.S. Winter, P.Geo.

7 June 2010

#### **REFERENCES**

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The Grenville Province and the Proterozoic History of Southern and Central Ontario; p. 715-754, The Central Gneiss Belt, in Geology of Ontario, Part 2, MNDM.

2. Ferguson, S.A., 1971

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3. Hewitt, D.F., 1967

Uranium and Thorium Deposits of Southern Ontario, ODM, Mineral Resources Circular No. 4, p. 47.

4. Marmot, C. and Johnston, M., 1987

Mineral Deposits Studies in the Huntsville-Parry Sound-Powassan Area – A Progress Report, OFR 5647, OGS, Mines & Minerals Division.

5. Winter, L.D.S., 2009

Magnetometer Survey Report on the Butt Township Property, Butt Twp., Dist. of Nipissing, Ontario <u>for</u> Dan Patrie Exploration Ltd., 11 pages, 4 Figures, 2 Maps.

#### L.D.S. Winter

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#### CERTIFICATE OF AUTHOR

I, Lionel Donald Stewart Winter, P. Geo. do hereby certify that:

- 1. I am currently an independent consulting geologist.
- I graduated with a degree in Mining Engineering (B.A.Sc.) from the University of Toronto in 1957. In addition, I have obtained a Master of Science (Applied) (M.Sc. App.) from McGill University, Montreal, QC.
- 3. I am a Life Member of the Canadian Institute of Mining, a Life Member of the Prospectors and Developers Association of Canada, a Registered Geoscientist in Ontario and in British Columbia (P.Geo.).
- 4. I have worked as a geologist for a total of 50 years since my graduation from university.
- 5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6. I am the author responsible for the preparation of the Geophysical Survey Report titled "Geophysical Surveys Report on the Butt Uranium Rare Earth Property, District of Nipissing, Ontario" and dated June 7, 2010 (the "Technical Report").

L.D.S. Winter, P.Geo.

