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ASSESSMENT REPORT

ON THE

BT 1-11 CLAIMS

PRINCE GEORGE MINING DIVISION BRITISH COLUMBIA

LAT 54° 03' N LONG 121° 36' W

N.T.S. 93 I 4

FOR

26BT RESOURCE DEVELOPMENT CO. LTD.

BY

W. L. KELSCH, P. GEOPH (ALBERTA)

&

S. JAIN, P. GEOPH (ALBERTA), P. GEO. (B.C.)



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INTRODUCTION

Claim Data

The B.T. Properties are presently held in the name of 26BT Resource Development Co. Ltd. They were originally staked by Brendan A. Gordon on behalf of Malcolm T. MacDonald, one of the principals of the Company.

<u>Claim Name</u>	Tenure Number	Anniversary Date
B.T. 1-4	313837-313840	October 8, 1993
B.T. 5,6	313845-313846	October 8, 1993

These were then sold to the company.

B.T. 7, 8, 9, 10 and 11 were acquired on behalf of the company in 1993. Details are as follows:

B.T. 8-10	323096-323098	December 21, 1994
B.T. 7,11	323202-323203	December 29, 1994

Location & Access

The property lies north of the Fraser River and south of the West Torphy River. The centre of the claims is about 6 kilometres N.N.E. of Sinclair Mills. Access to the claims is by old logging roads (Fig 1). The claims lie between the elevation of 700 meters and 1690 meters in generally rugged terrain. Devil's club and windfall trees make the claims difficult to transverse.

<u>History</u>

Two of the principals of the company entered the area north and east of MacGregor in 1989. This was based on projections of the trends seen in the configuration of the North American Continental mass as demonstrated by Government gravity and magnetic maps. Later, while studying reports and maps in the Provincial offices in Prince George, the magnetic feature shown on Aeromagnetic Map 1536 G of the Geophysics Division of Mines and Technical Surveys was noted. Subsequent sampling along Creeks Crossing the old logging road north of Sinclair Mills yielded unusually high amounts of magnetite. The decision to stake the area at the north west end of Bearpaw Ridge was then made and carried out in 1992. After the interpretation of a detailed aeromagnetic survey in 1993 (Appendix 1), additional areas surrounding the claims were staked. 9 holes were drilled to the depth of 100' on the claims in October 1994 which are being evaluated.

Geology

No geology was perused other than the examination of the paper titled "Alkaline Ultrabasic Rock in British Columbia" by J. Pell, open file 1987-17. Percentage of magnetic material in the analysis shown in table 3 of the paper for Bearpaw Ridge does not account for the magnetic contrasts demonstrated on Map 1536 G. Chemical analysis of two surface samples showed 22 and 25% of Iron Oxide and 4.34 and 5.00% Titanium Oxide. This indicates the probable concentration of these minerals on the ridge (Appendix 2).

Geophysics

The aeromagnetic survey conducted in 1993 (Kelsch and Jain, 1993, assessment report for BT 1-6) was interpreted in detail (Appendix 1). To represent large anomalies accurately maps in Appendix 1 were plotted in colour. However, to conform with the Mineral Tenure Act only the black and white contour maps are included here. Although large gradients on the data break the continuity of contours in some places, maps illustrate the interpretation quite well. The interpretation in the report suggests that the magnetic anomaly of several thousand NannoTeslas can only be explained by large concentration of magnetite. A drilling program was recommended in addition to staking additional area.

Drilling

9 holes were drilled to a depth of 100 ft and cored (Figure 2). Core diameter was 43 mm $(1 \ \%)$. Hole 7 did not hit the hard rock till it reached the bottom. Susceptibility was measured at 1 ft intervals on the cores and analyzed for the magnetite content (Appendix 3). The analysis indicated a magnetite content of up to 25% in the holes and 44% in the boulder specimens collected during the field visit. The holes were drilled to determine the source of magnetic anomaly and not for details of local geology. Therefore, no logging was done. Mineral analysis of the cores will be done later this year. No obvious metals have been noted in the cores, Appendix 4 gives further details.

FUTURE WORK

The samples from the cores will be assayed for Fe_2O_3 and T_iO_2 and a mineral analysis will be done on some of the cores. If the assays are encouraging, deeper holes will be drilled at best locations suggested by the magnetic data. These locations will probably be accessed by helicopter.

INTERPRETATION AND CONCLUSION

Detailed interpretation of aeromagnetic data (Appendix 1) and a preliminary examination of the cores from eight holes drilled on the prospect (Appendix 3) suggests probable existence of Iron and Titanium rich ores. The grade and quantity of the ore will be established by assaying the cores and further drilling where magnetic anomaly is stronger.

W.L. Kelsch, P. Geoph



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References

Pell, J., 1987, Alkaline Ultrabasic Rock in British Columbia, Open File 1987-17

Kelsch, WL, Jain, S, 1993, Assessment report on the BT 1-6 claims, Prince George Mining Division, British Columbia



CALGARY ALBERTA

FIGURE 1



APPENDIX 1

26BT RESOURCE DEVELOPMENT COMPANY LTD.

AEROMAGNETIC PROCESSING AND INTERPRETATION REPORT: PRINCE GEORGE AREA

By: Sudhir Jain, Ph.D., P. Geo., P. Geoph. & Jeff Thurston, M. Sc.

December 2, 1993

COMMONWEALTH GEOPHYSICAL DEVELOPMENT COMPANY, LTD. SONISEIS house 6620 Crowchild Trail S.W. Calgary, Alberta T3E 5R8 Phone: (403)246-9190 Fax: (403)242-9670

INTRODUCTION

26 BT Resource Development Co. Ltd. staked an area covering the western end of Bearpaw Ridge centered on latitude 54°04°N and longitude 121°38°W. The staking was based on an old magnetic field map 1536G in the files of Department of Mines, British Columbia and the discovery of a substantial amount of magnetite in a creek sand sample. To define the magnetic anomaly, 26 BT engaged Geonex Aerodat to conduct a helicopter survey with mean terrain clearance of 100 m.

Data were acquired in February of 1993 over an area of 12 km X 13 km. The survey comprises 321 line kilometres, with east-west traverse lines spaced 500 m apart and two north south tie lines. In addition to the total-field map with variable contour interval, Geonex also supplied maps for vertical gradient of the magnetic field and total field VLF-EM. The VLF-EM map is not relevant for magnetite exploration and was not interpreted. The magnitude of the magnetic field anomaly is so high that vertical gradient map does not provide much meaningful information. The details of acquisition and preliminary processing are included in the report submitted by Geonex (Kelsch W.L, and Jain S, 1993, Assessment report on the BT 1-6 claims, Prince George Mining Division, British Columbia).

PROCESSING FOR INTERPRETATION

Processing of the data was delayed several times because of positioning errors in the flight lines.

After five attempts, acceptable data were received on November 26, 1993. The interpretation processing included the following steps:

- 1. Plot all flight lines on the map to check data tape, and for a base for profile interpretation (Figure 1).
- 2. Source inversion for all profiles using a Werner-deconvolution-based program MAGDEP. To estimate sources at various depth levels, data were interpreted with window length 135, 225, 435, 675, 1170, 2325, 3465, and 5985 m. Sources located within 100 m intervals were grouped together. Werner deconvolution and MAGDEP are described in the paper "An automatic method of the interpretation of magnetic profiles" (Jain, 1976, Geophysics, V 41, No 3, p 531-545).
- 3. Grid and plot the total-magnetic field at a fixed contour interval of 125 NT. The map shows a major high (magnitude upto 4500 NT) accompanied by a major low of 1500 NT to the north (Figure 2).
- 4. Plot the total-magnetic field reduced to the pole (RTP) to minimize the bipolarity of the magnetic field and to locate the anomalies vertically above their sources. This was done after removal of the International Geomagnetic Reference field (IGRF) model.
- 5. Plot ground elevation map computed by subtracting radar elevation from barometric elevation, to check for location errors. Final map shows no measurable location errors (Figure 4).
- 6. Plot radar altimeter map to show deviation from desired terrain clearance and to estimate the probable effect of these deviations on the total field. The map shows significant deviations in terrain clearance but they do not correspond to any magnetic anomalies. In any event, the most serious deviations are noted in quiet magnetic areas (Figure 5).

The tie lines are not properly levelled. Therefore, the magnetic data is based on traverse lines alone. We attempted to compute a second-vertical derivative map of the RTP grid. However, the data are dominated by wavelengths shorter than the spacing between flight lines, and a meaningful second derivative map could not be obtained.

INTERPRETATION

Total magnetic field map done with constant colour interval has significantly different appearance than the variable interval map made by Aerodat. The variable-contour-interval map magnifies relatively weak anomalies and gives an exaggerated view of the aerial extent of the anomaly. For our interpretation, constant interval maps were used. The total-magnetic field map is dominated by an elliptical high oriented in the NW - SE direction and its companion low to the north. The total magnitude of the anomaly from peak to trough is 5,700 NT. There are local anomalies with relative amplitudes of 1000 NT, and less than 500 m in aerial extent.

The total magnetic field has an inclination of 72 degrees and declination of 20 degrees east. For these parameters, the observed total field is bipolar and each source is represented by a high along the southern edge and a low along the northern edge. To locate the anomaly vertically above the sources, the magnetic field was reduced to magnetic north pole after removing the IGRF from the observed magnetic field. As expected, this process moved anomaly northwards and substantially reduced the negative rim to the north of the anomaly. The negative rim around strong anomalies after reduction to the pole suggest a relatively thin source close to the surface. The profile data were also processed with MAGDEP to identify the lateral and vertical location of the sources as well as the susceptibility contrast. As indicated earlier, the profiles show positive anomalies as high as 1,000 NT with wavelength of the order of 250 - 500 m. These anomalies are from highly susceptible sources (susceptibility contrast up to 1 cgs) and located on or very close to the ground surface. MAGDEP depth estimates range from 0 - 300 m below the surface. However, the depth estimates from MAGDEP are not entirely accurate because no allowance has been made for the flight level not being horizontal. The sharpness of anomalies indicates that the source is on or very close to the surface. The depth estimates from MAGDEP2D range from 200 - 300 m below the surface and are inaccurate for the same reason as those from MAGDEP (Figure 6).

The final source bodies (Figure 7) are quite well outlined on MAGDEP2D by the gradient. MAGDEP2D is the modificaton of MAGDEP for the gridded data and works on interpolated profiles in the same way as described in the paper on MAGDEP referenced above. Note that there is a probable extension of the magnetic body to the southwest where susceptibility is less and the ore is likely to be quite poor. A close examination of the maps and the profiles shows four major ore bodies which are on or very close to the surface and very highly magnetic. The interpretation overlay shows the location of these bodies and identifies places where samples must be collected to quantify the ore reserves in the prospects. Two of the marked places are identified for deep test because magnetic field is low at these points. It is of some importance to know if the low is due to poor magnetite content or due to the presence of thicker overburden.

ORE RESERVE ESTIMATE

It is not possible to estimate the ore reserve with confidence without any knowledge of succeptibility contrasts. The range of susceptibility for magnetite ore is from .05 to .5 cgs units. An anomaly of 1000 NT over 500m (as observed on many profiles) can be caused by a 250 * 250m ore body located with its top surface 200m below the flight plane and thickness of 3m to 30m thick for susceptibility ranging from .5 to .05 cgs units. To obtain a crude estimate, I assume 50 percent magnetite content and a density of 5 gms/cc. With these parameters, an ore body with an area of one square kilometer and an average thickness of one meter contains 5 million tons of magnetite. Four main ore bodies on this prospect have an area of 19, 3.3 and 1 sq kms, and probably contain 130 million tons per meter thickness. For a susceptibility of .2 cgs units, the ore body is at least 30m thick. This indicates a probable reserve estimate of 3.9 billion tons, the reserve estimate is an incredible magnitude.

RECOMMENDATIONS

The anomaly magnitude and admittedly crude estimates show that several decades of magnetite ore could be present in the prospect area. The prospect is located within five kilometers of road, rail and river transport and other basic products needed for steel manufacture are also located nearby. Thus, in addition to export possibilities, the prospect could turn out to be very significant for Canadian steel industry and the economy of Prince George region.

The area to the west and south east of that already staked for 26BT needs to staked as soon as possible to control all possible magnetite ore bodies in this area. A surface sampling program followed by shallow coring at proposed locations should be undertaken next summer.

Respectfully submitted,

Commonwealth Geophysical Development Company, Ltd.

M. Sc.

December 2, 1993.

Sudhir Jain Ph.D., P. Geo., P.







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Profile Locations



-121 30 00



SCALE 1 TØ50000 CØNTØUR INT. 10.00 FIGURE 5 Radar altimeter map for the survey 26BT Resource Ltd., Radar Altimeter

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59	5999000. 5999000.	9
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	_5997000.	
	_5996000.	
	_5995000.	Commonwealth
	_5994000.	Geophysical
	5993000.	Explanation
	_5992000.	250 m 50 m 10 m
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	_5990000.	
	_5989000.	SONISEIS house
	_598 8 000 .	6620 Crowchild Trail SH Calgary, Alberta, Canada, T3E 5R8 Ph(403)246-9190, FAX(403)242-9670
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26BT Resource Ltd., Ground Elevation

-121 30 00





-121 45 00

-0.50.0 0.5 1.0 1.5 -0.5 0.0 0.5 1.0 MILES

FIGURE 2 Total magnetic field (Nanno Teslas) SCALE 1 TØ50000 CØNTØUR INT, 100.00 26BT Resource Ltd., Total Field



-121 30 00

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APPENDIX 2

November 24, 1994

REPORT ON FIELD TRIP TO 26BT CLAIMS

Lorne Kelsch and Malcolm McDonald visited the claims from May 21-23, 1994. The main purpose of the trip was to collect surface samples for geological evaluation. The secondary purpose was to scout the access to the potential drill sites and also to check the corner posts.

The accessible part of the terrain is generally covered be a thin layer of soil. The vegetation is thick. Devil's club and mosquitoes are plentiful and they make the work quite difficult. In spite of these problems, several surface samples were obtained. The majority of these samples were from glacial erratics which had not moved very far from their original location. The magnetic susceptibility of these samples ranged from .001 to .250 emu. Two of the samples were analyzed chemically by Terramin Research Labs Ltd (Figure 1). The analysis showed 22 and 25% Iron Oxide and 4.34 and 5% Titanium Oxide in these samples. These are encouraging figures and strongly support the test drilling of the prospect.

The access was established to ten drill sites which are not the best locations from magnetic anomaly map but which will provide good general information on the prospect. It was found that some of the corner posts in the southwest quadrant were damaged. This will be investigated in future visits.

In conclusion, the visit provided encouragement for further work on the prospect and pointed out the access to ten sites to be drilled as soon as the necessary permits were obtained.

Respectfully submitted Lorne Kelsch 19

FIGURE 1

lob1:	93-160
	10 100

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Pro	iec	t:	

1

Sample	SiO2	A1203	CaO	Нg0	Na20	K20	Fe203	11 Nn D	Ti 02	LOI	Total
Number	7.	X	X	%	%	۲	%	7	%	X	7
93-2	37.9	10.0	13.850	9.882	0.949	0.151	22.45	0.182	4.34	•	99.67
93-3	34.7	8.7	9.982	13.513	0.325	0.245	- 27.60	0.219	5.00		99.23

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APPENDIX 3

November 24, 1994

REPORT ON FIELD TRIP TO 26BT CLAIMS AND MAGNETIC SUSCEPTIBILITY OF THE CORES

A field trip was made to 26BT claims from October 15-23, 1994. The purpose of the trip was to locate the sites, supervise the drilling and examine the cores. Nine 100' holes were drilled and cores recovered by Falcon Drilling of Prince George under contract to 26BT. One of the holes encountered deep glacial drift and no hard rock. Magnetic susceptibility was measured at 1' interval for the cores and two boulders found near one of the holes. The location of the holes is given in Figure 1. The magnetic susceptibility logs are plotted in Figure 2. The susceptibility was measured by a susceptibility meter purchased by 26BT for this purpose. The meter, model KT-9 is manufactured by Exploranium Radiation Systems.

We are aware of two studies relating magnetic susceptibility to magnetite content. Note that a lower susceptibility does not rule out iron ore since Hematite is only weakly magnetic and hematite rich ore have low susceptibility. Gaucher (Geophysics, vol 30, no 5, pp 762-782, 1965) presented the equation between magnetite content (by volume) V and susceptibility K as follows:

K = (0.3 + V) * V.

This equation was derived empirically for magnetite ores in northern Quebec. Bath (Geophysics, vol 27, no 5, 00627 - 650, 1962) similarly computed the relationship for Biwabik Iron formation in Minnesota. The relationship derived for Biwabik iron ores is:

к=0.00116v^{1.39}.

We used both equations to plot magnetite content for the holes. The equation given by Gaucher had to be modified to avoid negative volume content. The magnetite content logs are given in Figures 3 and 4. Both equations show several sections on many of the holes where magnetite content is more than 20%. In some holes, there is indication of better magnetite content near the bottom. Following table gives the average susceptibility for the hole and average magnetite content for the hole with both equations:

		Magnetite Content		
Hole No.	<u>Susceptibility</u>	Gaucher	Bath	
1	.045	21	14	
2	.020	15	8	
3	.041	20	13	
4	.066	25	18	
5	.012	14	5	
6	.029	18	10	
7 Bottom only	.023	16	8	
8	.018	15	7	
9	.012	13	5	
boulder	.215	44	43	

Interpretation and Evaluation

The equation for Biwabik ores provides smaller magnetite content than the one for northern Quebec. However, both equations suggest presence of mine grade ore in many holes. These results are most encouraging particularly considering that the hole locations were governed by accessibility and were not optimal from the magnetic anomaly. There are many stronger anomalies on the map which need to be tested. As stated earlier, these calculations do not include any Hematite ore which may be present.

The selected samples are currently being prepared for chemical and mineralogical analysis. The assays will establish a magnetite/susceptibility relationship for the area which will enable better estimation of magnetite content in the field. The assays will also show if Hematite, Titanium and Vanadium are present in economic quantities.

Future Work

If a relationship between average magnetite content and magnetic field could be established, one could estimate magnetite reserve without extensive drilling. Next round of drilling will endeavour to establish such a relationship and test major anomalies to 300' with heliportable drill.

Respectfully submitted,

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Lorne Kelsch, P.Geoph. (AB)

Sudhir Jain, P. Geo. (BC), P. Geoph. (AB)

OFESSIO PROVINCE OF S. JAIN BRITISH COLUMBIA

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Magnetic content (percent volume)



Susceptibility in emu * 10^3



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Magnetic content (volume percent)



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APPENDIX 4

Drill hole and core information

Hole diameter	1 ¾ " 43 mm	
Inclination	90°	
Azimuth	n.a.	
Minerals noted	no obvious metals noted, detailed analysis planned.	
Number of holes	9	
Total hole depth	900' 274.1 m	
Total length of core	710' 216.3 m	
Location of cores	7203 Keewatin Street S.W., Calgary, AB, T2V 2M6	
Collar elevation of holes (estimated from topo map)	1	3620′
	2	3700'
	3	4080′
	4	3990'
	5	3630'
	6	3880'
	7	2810'
	8	2695'
	9	2490'

STATEMENT OF COSTS (1994)

Xrx

A. Staking Costs	
- 50 Claims at \$100.00	\$ 5,000.00
- 36 Claims at \$140.00	5,040.00
- Helicopter Costs	2,800.00
- Recording Fee	860.00
TOTAL EXPENSES:	\$ <u>13,700.00</u>
B. Exploration Costs, drilling	
- Drilling (See Falcon Drilling Invoice)	\$35,105.00
- Materials & Supplies (See Falcon Drilling Invoice)	1,607.98
- Mobilization & Demobilization (See Falcon Drilling Inv.)	2,662.50
- Travel & Accommodations (See Falcon Drilling Invoice)	900.00
- Freight Charges (See Cdn. Freightways Invoice)	548,05
TOTAL EXPENSES:	\$ <u>40,823.53</u>
C. Other Exploration Costs	
- Mineral Work Fees, 6 blocks at \$200.00	\$ 1,200.00
- Cash Mineral Work Fees, 3 blocks at \$2000.00	6,000.00
- Geological Field Trips, 17.5 days at \$200.00	3,500.00
- Gas for Field Trips	815.07
- Groceries for Field Trips	190.40
- Interpretation by Commonwealth Geophysical	3,000.00
· - Aeromag map from GSC	275.00
- Susceptibility Meter, cost of purchase	2,033.00
TOTAL EXPENSES:	\$ <u>17,013,47</u>
D. Sample Analysis	\$ <u>41.40</u>
	ф 41 40