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The Association of Professional Engineers, Geologists and Geophysicists of Alberta

NEW BLUE RIBBON RESOURCES LTD. AND GRIZZLY GOLD INC.

ASSESSMENT REPORT LITTLE LEGEND PROPERTY

NORTHEASTERN ALBERTA

Metallic and Industrial Minerals Permit 9398090062

Geographic Coordinates

51°58' N to 52°15' N 115°15' W to 115°35' W

NTS Sheets 84 H/3 and H/6

2000 12 29

by

J.R. Dahrouge, B.Sc., P.Geol.

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TABLE OF CONTENTS

1.	Prope 1.1 1.2 1.3 1.4	erty Property Location Statement of Expenditures Cancellations and Amendments Allocation of Expenditures	1 1 3 3 3
2.	Introdu	luction	4
3.	Summ 3.1 3.2	nary Summary Recommendations	4 4 5
4.	Regio	nal Geology	5
5.	Explor 5.1 5.2 5.3	ration Airborne Geophysical Survey Ground Magnetometer Survey Diamond Drilling	9 9 10 11
6.	Refere	ences	12
		LIST OF ILLUSTRATIONS	
Table Table Table Table	1.1 Pr 1.2 Sta 1.3 La 1.4 All	roperty Description and Location of the Little Legend MAIM Permit tatement of Expenditures ands Retained llocation of Expenditures	1 2 3 3
Table	5.1 Su	ummary of Ground Magnetic Targets	10
		LIST OF ILLUSTRATIONS	
Fig. 1	.1	Property Location and Metallic and Industrial Minerals Permit 9398090062	F1
Fig. 5 Fig. 5 Fig. 5 Fig. 5 Fig. 5	.1 .2 .3 .4 .5	Aeromagnetic Anomalies and Total Magnetic Field. Grizz Grid Ground Magnetic Survey, Total Magnetic Field Pooh Grid Ground Magnetic Survey, Total Magnetic Field Care Grid Ground Magnetic Survey, Total Magnetic Field Yogi Grid Ground Magnetic Survey, Total Magnetic Field	(in pocket) F2 F3 F4 F5
		LIST OF APPENDICES	
Apper	ndix 1:	Aeromagnetic Anomalies	A1
Apper	ndix 2 :	Statement of Qualifications	A4

<u>Page</u>

PROPERTY

1.1 PROPERTY LOCATION

1.

The Little Legend Property encompasses a single township about 120 km northwest of Fort McMurray, Alberta (Fig. 1.1). It is centered upon 57°15' north latitude and 113° 10' west longitude, within NTS sheets 84 H/3 and H/6, northeastern Alberta.

Metallic and Industrial Minerals (MAIM) Permit 9398090062 is registered in the name of Grizzly Gold Inc. On October 23, 1998 New Blue Ribbon Resources Ltd. entered into an option agreement with Grizzly Gold Inc., whereby New Blue Ribbon Resources Ltd. may acquire up to 85 per cent of the Little Legend Property (NBL, 1998).

TABLE 1.1 PROPERTY DESCRIPTION AND LOCATION OF THE LITTLE LEGEND PROPERTY MAIM PERMIT (Fig. 1.1)

Permit	Date	Expiry	Land Description	Approx.
Number	Issued	Date	(Tp-RW5)	Size (ha)
LITTLE LEGEND 9398090062	09-30-1998	09-30-2000	95-20W4 (Sec. 1-36)	9,216

According to Balzer and Dufresne (1999, p. 3)

"The Little Legend Property may be accessed via several northwest and southwest trending cut lines. The cut lines are accessible using quads during the summer and fall, and snow mobiles during the winter. Helicopter access is limited to suitable landing locations. Two small airfields are located 12 km and 21 km northeast of the property near Legend and Namur lakes, respectively. The Namur Lake airstrip is better suited to accommodate fixed-wing aircraft. Accommodation, food and supplies are best obtained in Fort McMurray, about 120 km southeast of the property. Limited lodging, supplies and fuel may be available in Fort Mackay, 90 km to the east. Accommodation and food can also be obtained at all year round gas plant camps at Paramount-Legend located about 12 km east of the property and at Cabre-Ells, about 51 km east-northeast of the property.

The Little Legend Property lies within the Birch Mountains Uplands physiographic zone (Hackbarth and Natasa, 1979). Elevation in the immediate vicinity of the Little Legend Property ranges from 640 to 780 m above sea level (asl), rising to the northwest as the crest of the Birch Mountains is approached. Numerous tributary creeks and streams drain the property and eventually join the Dunkirk River, which passes through the property along the east border. The southern limit of the zone of discontinuous permafrost passes south of the Little Legend Property in an east-west direction. Permafrost has been noted at higher elevations in the muskeg areas (Hackbarth and Nastasa, 1979). Average annual temperatures range from -22°C in January to 16°C in July. The majority of the area is covered by boreal forest comprised of spruce and jack pine. Small, northwest to southeast elongated muskegs and ponds are common in low-lying regions."

INTRODUCTION

During 1998 to early 2000, New Blue Ribbon Resources Ltd. (NBL) conducted exploration at the Little Legend Property for primary diamond deposits. Exploration activities included the acquisition and review of high-resolution aeromagnetic data (HRAM), and ground magnetometer surveys. Several sites were permitted for drilling and a drill rig mobilized to the area during the early part of 2000. The lack of a high-quality magnetic target, based upon ground geophysics, prevented drilling during the term of the issued exploration permit.

This assessment report describes exploration conducted on the Little Legend Property and is based on publically available information and work conducted by Dahrouge Geological Consulting Ltd. It has been prepared at the request of Larry Kryska, president of NBL.

3.

2.

SUMMARY

3.1 SUMMARY

Within the central parts of the Legend Kimberlite Cluster, the MAIM Permit which constitutes the Little Legend Property was explored for primary diamond deposits.

During the spring of 1998, Spectra Exploration Geoscience Corp. (Spectra) conducted a high-resolution aeromagnetic survey, on behalf of Montello Resources Ltd. (Montello) and Redwood Resources Ltd., on the surrounding Legend Property. During the later part of 1998, NBL acquired approximately 600 line-km of aeromagnetic data from Montello, which covered the Little Legend Property. The aeromagnetic data was levelled by Spectra for NBL, and subsequently reviewed by Dahrouge Geological Consulting Ltd. and by Apex Geoscience Ltd.

During the later part of 1999 and the early part of 2000, field work was conducted by Dahrouge Geological Consulting Ltd. This work included four ground geophysical grids, permitting for diamond drilling, and the mobilization of a diamond drill rig to the area. The four ground geophysical surveys failed to identify a distinct geophysical target characteristic of kimberlite. A high-priority target within the southwest part of the property was not examined due to poor access.

· _ _

3.2 RECOMMENDATIONS

Although the ground geophysics conducted to date has failed to define a distinct geophysical target characteristic of kimberlite, at least two high-priority (Table 5.1: 4 and 7) and numerous medium- to low-priority targets remain. The remaining high- and low-priority targets should be examined by means of ground geophysical (magnetometer) surveys. If any of the targets produces a geophysical signature characteristic of kimberlite, they should be drill tested.

4.

REGIONAL GEOLOGY

Balzer and Dufresne (1999, p. 5 to 12) provide the following, exhaustive description of regional geologic setting,

"Precambrian

The Little Legend Property lies near the eastern edge of the Western Canadian Sedimentary basin within the northern segments of the Peace River Arch (PRA). However, Precambrian rocks are not exposed within the Namur Lake region (NTS 84H). The basement underlying the PRA is comprised of several terranes including the Buffalo Head and the Chinchaga, both of which were accreted between 1.8 and 2.4 billion years (Ga) ago and collectively form the Buffalo Head Craton (Ross et al., 1991, 1998). Due to their relatively stable history since accretion, the Buffalo Head and Chinchaga terranes are currently the focus of extensive diamond exploration in northern Alberta.

The basement underlying the Little Legend Property borders the Buffalo Head Terrane and has been interpreted to be part of the Talston Magmatic Zone (Figure 2). The Taltson Magmatic Zone (TMZ) is a 2.0 to 1.8 Ga aged terrane that represents a magmatic arc related to collisional orogeny during the Proterozoic. It is unclear whether the TMZ represents a deep-seated thermal welt between two distinct protocontinents or a discreet thin-skinned thrust slice that has been emplaced over the top of the basement of the Rae Subprovince, as has been proposed for the Trans-Hudson orogenic belt in Saskatchewan (Hainal et al., 1993). The TMZ is characterised by a highly corrugated internal fabric comprised of extremely high relief, north to northwest trending sinuous magnetic anomalies. The Little Legend property is underlain by the western portion of the TMZ with much lower magnetic relief and a somewhat indistinct magnetic pattern relative to typical TMZ terrane. Villeneuve et al. (1993) indicate that the western boundary of the TMZ is not obvious based upon geophysical data and has been placed using zircon ages from a couple of basement drill cores. The basement beneath the Little Legend property may belong to the eastern "Utikuma Belt" of the BHT as the western portion of the TMZ. The BHT is an area of high positive magnetic relief with a north to northeasterly fabric (Villeneuve et al., 1993). Ashton Mining of Canada Inc.'s (Ashton) diamondiferous kimberlites are underlain by basement of the BHT. Part of the Churchill Structural Province (Rae Subprovince), the BHT may represent either Archean crust that has been thermally reworked during the Hudsonian (Proterozoic) Orogeny (Burwash et al., 1962; Burwash and Culbert, 1976; Burwash et al., 1994) or an accreted Proterozoic terrane that may or may not have an Archean component (Ross and Stephenson, 1989; Ross et al., 1991; Villeneuve et al., 1993). Precambrian rocks intersected in drill core from the BHT comprise felsic to intermediate metaplutonic rocks, felsic metavolcanic rocks and high-grade gneisses (Villeneuve et al., 1993). The presence of numerous eclogitic garnets, eclogitic pyroxenes and chromium-bearing corundums in association with kimberlites or related intrusions in northern Alberta may indicate the presence of a significant volume of accreted and subducted oceanic basalt and sedimentary protolith in the lower crust and/or upper mantle beneath the BHT. Seismic refraction and reflection studies indicate that the crust in the Namur Lake region is likely between 35 to 40 km thick, a trait favourable for the formation and preservation of diamonds in the upper mantle (Dufresne et al., 1996).

Phanerozoic

Overlying the basement in the Namur Lake region is a thick sequence of Phanerozoic rocks comprised mainly of Cretaceous sandstones and shales near surface and Mississippian to Devonian carbonates and salts at depth (Glass, 1990). Bedrock exposure within the permit block is limited primarily to river and stream cuts and topographic highs. Table 2 shows the upper units found in the region. Further information pertaining to the distribution and character of these and older units can be obtained from well log data in government databases and various geological and hydrogeological reports (Green et al., 1970; Hackbarth and Nastasa, 1979; Glass, 1990; Mossop and Shetson, 1994).

SYSTEM	GROUP	FORMATION	AGE* (MA)	DOMINANT LITHOLOGY
PLEISTOCENE			Recent	Glacial till and associated sediments
TERTIARY			6.5 to Recent	Preglacial sand and gravels
UPPER CRETACEOUS		Lea Park	80 to 83	Bioturbated silty-shale
	Smoky	Kaskapau	88 to 92	Shale, silty-shale and ironstone; includes the Second White Specks unit
		Dunvegan	92 to 95	Sandstone and siltstone
	Fort St. John	Shaftesbury	95 to 98	Shale, bentonites, Fish-Scale Member
LOWER CRETACEOUS	Colorado	Pelican	98 to 100	Glauconitic sands, siltstone, mudstone and conglomerate
		Joli Fou	100 to 103	Shale, glauconitic sandstone and bentonite

TABLE 2 GENERALIZED STRATIGRAPHY NAMUR LAKE AREA

*Ages approximated from Green et al. (1970), Glass (1990), Dufresne et al. (1996) and Leckie et al. (1997).

Underlying the near surface Cretaceous units in the Namur Lake area is a thick succession of Devonian to Mississippian carbonates, calcareous shales and salt horizons (Mossop and Shetson, 1994). Several of the Devonian carbonate units are part of the Grosmont Reef Complex, a large structure that extends in a northwesterly direction from east of Lesser Slave Lake to the N.W.T. (Bloy and Hadley, 1989). The Grosmont Reef Complex is likely the result of tectonic uplift along this trend during the Devonian. This structure, in conjunction with the PRA, may have played a significant role in the localisation of faults and other structures that could have provided favourable pathways for kimberlite volcanism.

In general, the Cretaceous strata underlying the Little Legend Property is composed of alternating units of marine and nonmarine sandstones, shales, siltstones, mudstones and bentonites. The oldest documented units exposed in the vicinity of the permit area belong to the Smoky Group, a sequence of Upper Cretaceous, calcareous and noncalcareous shales (Figure 3). However, older units from the base of the Fort St. John and/or the top of the Colorado groups, such as the Shaftesbury Formation, may be exposed in river and stream cuts.

The Colorado Group is Lower Cretaceous in age and contains numerous formations, including the Joli Fou and the Pelican, which are correlative with the Peace River Formation of the Fort St. John Group further west (Dufresne et al., 1996). The Joli Fou Formation is comprised of shale with interbedded, bioturbated to glauconitic sandstones and minor amounts of bentonite, pelecypod coquinas, nodular phosphorite and concretionary layers of calcite, siderite and pyrite (Glass, 1990). The Pelican Formation disconformably overlies the Joli Fou Formation and is gradational with the overlying Shaftesbury Formation (shales of the Colorado Group). The Pelican Formation is comprised of glauconitic sands, interbedded siltstone and mudstone with minor amounts of conglomerate. Coalified plant fragments and bioturbated sandstones are locally abundant.

The Shaftesbury Formation is lower Upper Cretaceous in age and is comprised of marine shales with fish-scale bearing silts, thin bentonitic streaks and ironstones. The upper contact is conformable and transitional with the Dunvegan Formation, where the Dunvegan Formation is present. The Shaftesbury Formation may be exposed along river and stream cuts. Evidence of extensive volcanism during deposition of the Shaftesbury Formation exists in the form of numerous bentonitic horizons throughout the formation, especially within and near the Fish Scales horizon (Leckie et al., 1992; Bloch et al., 1993). The deposition of the Shaftesbury Formation is also chronologically correlative with the deposition of the Crowsnest Formation volcanics of southwest Alberta (Olson et al., 1994; Dufresne et al., 1995) and with kimberlitic volcanism near Fort B la Corne in Saskatchewan (Lehnert –Thiel et al., 1992; Scott Smith et al., 1994)

Deltaic to marine, feldspathic sandstones, silty shales and laminated carbonaceous siltstones, characterise the Dunvegan Formation. The Dunvegan Formation in the Birch Mountains region is shaley, thin and often discontinuous. As a result, it may or may not be present within the Namur Lake area. Where present, the unit is conformably overlain by shales of the Kaskapau Formation of the Smoky Group. It should be noted that the Ashton pipes exist just above or near the contact between the Kaskapau and the Dunvegan formations (Dufresne et al., 1998).

The LaBiche Formation is a frequently incorrectly used term correlative to units of the Shaftesbury Formation and other formations within the Smoky and Colorado groups (Glass, 1990). In the Namur Lake area, the LaBiche Formation is equivalent to the Smoky Group and Lea Park Formation. The Smoky Group is Upper Cretaceous in age and is comprised of thinly bedded, marine, silty shale with occasional ironstone and claystone nodules and thin bentonite streaks. The group is divided into three formations: (a) a lower shale unit, Kaskapau, which includes the Second White Specks marker unit (SWS); (b) a middle sandstone, named the Bad Heart; and, (c) an upper shale, Puskwaskau, which contains the First White Specks marker unit. Bedrock exposures in the Little Legend Property are likely comprised of the Kaskapau Formation, in particular, the SWS or lower, since most of the upper portions of the Smoky Group have been eroded away during tectonic uplift, possibly associated with uplift of the PRA. The Kaskapau Formation contains abundant ammonite fossils and concretions. In addition, foraminifera are present in the lower arenaceous units (Glass, 1990). Exposures of the Smoky Group are generally limited to river and stream cuts, topographic highs, and regions with thin drift veneer. In the Namur Lake region, the SWS is unconformably overlain by the Lea Park Formation. The top of the SWS also culminates with evidence of a significant increase in volcanism, based on the volume and number of bentonite units in the vicinity. It is conceivable that this volcanism may have been in conjunction with or a prelude to gradual uplift and non-deposition of the missing Smoky Group formations. There is strong evidence of volcanism associated within the depositional time span of the Smoky Group in the vicinity of the PRA (Auston, 1998; Carlson et al., 1998). Ashton's recently discovered Buffalo Head Hills kimberlites yield emplacement ages of 86 to 88 Ma (Auston, 1998; Carlson et al., 1998). In addition, recently discovered kimberlites in the Birch Mountains by Kennecott Canada Exploration Inc. (Kennecott) in a joint venture with Montello Resources Ltd. (Montello) and Redwood Resources Inc. (Redwood) are reported to yield emplacement ages of about 82 Ma (Northern Miner, 1998).

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The youngest bedrock unit in the Namur Lake area is the Lea Park Formation of Upper Cretaceous age. Marine in origin, the Lea Park Formation is comprised of light grey shale and pale grey, glauconitic, silty-shale with ironstone concretions. Preliminary micropaleontology conducted by the Geological Survey of Canada (GSC) on drill cores from the Birch mountains area indicates a time gap of 4 to 8 million years between the Lea Park Formation and the top of the underlying SWS Formation. This time gap, combined with the evidence of regolithic material incorporated in the lag deposit capping the SWS in boreholes situated to the east, indicates that significant uplift and erosion may have occurred between the end of the SWS and the deposition of the overlying Lea Park shales and siltstones (Dufresne et al., In Preparation).

Quaternary

Data and information about the surficial geology in central to northern Alberta is sparse and regional in nature. Prior to continental glaciation during the Pleistocene, most of Alberta, including the Namur Lake region, had reached a mature stage of erosion. Large, broad paleochannels and their tributaries drained much of the region, flowing in an east to northeasterly direction (Dufresne et al., 1996). In addition, fluvial sand and gravel was deposited preglacially in these channels.

During the Pleistocene, multiple southwesterly and southerly glacial advances of the Laurentide Ice Sheet across the region resulted in the deposition of ground moraine and associated sediments (Figure 5 in Dufresne et al., 1996). The advance of glacial ice may have resulted in the erosion of the underlying substrate and modification of bedrock topography. Dominant ice flow directions within the Little Legend Property appear to be topographically controlled, following the southwest trend of the Birch Mountains. In addition, topographic variations may have locally channelled ice flow towards the south to south-southeast. Glacial sediments infilled low-lying and depressional areas, draped topographic highs and covered much of the Namur Lake area as veneers and/or blankets of till and diamict. Localised pockets of deposits from glacial meltwater and proglacial lakes likely infilled areas of low relief.

Glacial ice is believed to have receded from the area between 15,000 and 10,000 years ago. After the final glacial retreat, lacustrine clays and silts were deposited in low-lying regions along with organic sediments. Rivers previously re-routed due to glaciation, re-established easterly to northeasterly drainage regimes similar to that of the pre-Pleistocene. Extensive colluvial and alluvial sediments accompanied post-glacial river and stream incision.

The majority of the Little Legend Property is covered by drift of variable thickness, ranging from 45 m to likely over 150 m (Pawlowicz and Fenton, 1995a,b). Drilling by Kennecott on the adjacent Legend Property intersected drift ranging from approximately 120 m northwest and west of the Little Legend Property to over 80 m just east of Blue Ribbon's property (Montello Resources Ltd., 1998a,b). Drift thickness may be thinner locally, in areas of higher topographic relief. As an example, one of the kimberlites drilled by Kennecott was intersected beneath only 12.2 m of overburden. Unfortunately, local drift thickness for the Little Legend property can not be easily delineated due to the sparsity of publicly available data for the region. Limited general information regarding bedrock topography and drift thickness in northern Alberta is available from the logs of holes drilled for petroleum, coal or groundwater exploration and from regional government compilations (Mossop and Shetson, 1994; Pawlowicz and Fenton, 1995a,b; Dufresne et al., 1996).

Structural Geology

In north-central Alberta, the PRA is a region where the younger Phanerozoic rocks, which overlie the Precambrian basement, have undergone periodic vertical and, possibly, compressive deformation from the Proterozoic into Tertiary time (Cant, 1988; O'Connell et al., 1990; Dufresne et al., 1995, 1996). This pattern of long-lived, periodic uplift and subsidence has imposed a structural control on

the deposition patterns of the Phanerozoic strata in northern Alberta. In addition, this periodic movement has resulted in a rectilinear pattern of faults that not only is responsible for structurally controlled oil and gas pools, but may have provided potential pathways for later deep-seated intrusive kimberlitic magmas.

During the mid-Cretaceous and Early Tertiary, compressive deformation occurred as a result of the orogenic event that eventually led to the formation of the Rocky Mountains. The PRA was emergent during this period resulting in the reactivation of many prominent basement faults. The Phanerozoic rocks beneath the Little Legend Property lie along the northeastern edge of the axis of the PRA and are underlain by and proximal to basement faults related to the Grosmont Reef Complex, which formed over the Grosmont High (Bloy and Hadley, 1989; Dufresne et al., 1996). There is strong evidence that basement faults that have manifested themselves in the overlying Phanerozoic sedimentary succession may have controlled the emplacement of the Mountain Lake Kimberlite and the Buffalo Head Hills kimberlites west of the Little Legend Property (Dufresne et al., 1996; Leckie et al., 1997). It is unclear whether the kimberlites discovered to date in the Birch Mountains by Kennecott and its joint venture partners surrounding Blue Ribbon's Little Legend Property show any spatial relationship to structures in the underlying basement and/or Phanerozoic succession. However, structures observed on the Little Legend Property resulting from tectonic activity associated with movement along the PRA, the Grosmont High, or even along contacts between different basement terranes could be pathways for kimberlitic volcanism."

5.

EXPLORATION

5.1 AIRBORNE GEOPHYSICAL SURVEY

During the spring of 1998, Spectra Geoscience Corp. (Spectra) conducted a high-resolution aeromagnetic survey, on behalf of Montello Resources Ltd. (Montello) and Redwood Resources Ltd., on the surrounding Legend Property. The survey was conducted at about 100 m above ground level, with 200-m spaced east-west flight lines and 1,000 to 1,200-m spaced north-south ties lines. During the later part of 1998, NBL acquired approximately 600 line-km of aeromagnetic data from Montello, for the Little Legend Property. The aeromagnetic data was levelled by Spectra for NBL, and subsequently reviewed by Dahrouge Geological Consulting Ltd. and by Apex Geoscience Ltd. (Fig. 5.1).

Based upon a review of the flight line profiles, Apex Geoscience Ltd. identified a total 116 prospective high-frequency magnetic anomalies. Of the 116 anomalies, 78 were within the boundaries of the Little Legend Property (Appendix 1). Several medium- to high-priority targets not associated with drainage or culture were recommended for ground geophysical surveys.

144 million (1997)

5.2 GROUND MAGNETOMETER SURVEY

During the later part of 1999 and early part of 2000, Dahrouge Geological Consulting Ltd. selected nine targets for ground geophysical surveys (Fig. 5.1 and Table 5.1). Due to time limitations and ground access, only four targets (Care, Grizz, Pooh and Yogi) were gridded and surveyed, as follows:

Target	UTM Coordina	UTM Coordinates (NAD 83)				
Number	Easting	Northing	Geophysics			
1. Grizz (80)	369,720	6,350,000	Yes			
2. Pooh (72)	371,050	6,350,440	Yes			
3. Care (-)	371,700	6,350,550	Yes			
4. (41 or 44)	366,680	6,344,340	No			
5. (73)	369,880	6,345,420	No			
6. (52)	365,790	6,343,240	No			
7. (49)	365,150	6,343,550	No			
8. Yogi (-)	368,040	6,348,460	Yes			
9. (33)	368,555	6,345,604	No			

TABLE 5.1 SUMMARY OF GROUND MAGNETIC TARGETS

(1) Number in brackets corresponds to geophysical target of Balzer and Dufresne (1999; Appendix 1).

For each target, after a baseline was surveyed on a particular grid, grid cross-lines were established at 100 m intervals and on each cross-line, stations were chained by topofil and marked with flagging at 25 m intervals. At 12½ m stations along each cross-line, a magnetometer reading was collected using a GEM System GSM-19 integrated Overhauser effect proton precession magnetometer. The magnetic readings were corrected for terrestrial field magnetic variation using a stationary GSM-19 base-station. The corrected magnetometer data was processed, gridded, contoured, and used to generate Figures 5.2 through 5.5.

5.3 DIAMOND DRILLING

During the later part of 1999 and early 2000, Lorrnel Consultants Ltd. obtained drill permits on behalf of NBL for the nine target locations defined in Table 5.1. In anticipation of the proposed program, Aggressive Diamond Drilling Ltd. of Kelowna, B.C. mobilized a drill rig and associated supplies to the Paramount-Legend Camp, located about 12 km east-southeast of the property. Unfortunately, drilling had to be delayed for an additional season for the following reasons:

1) lack of available accommodations for the drill crew at the Paramount-Legend Camp,

2) poor-quality of ground geophysical targets surveyed to date; and

3) early spring break-up and March expiry of drill permits.



Edmonton, Alberta 2000 12 29

REFERENCES

6.

- Balzer, S.A. and Dufresne, M.B. (1999) Qualifying Report, Little Legend Property, Northern Alberta; Prepared for New Blue Ribbon Resources Ltd. by Apex Geoscience Ltd., March 1999; 24 p., 9 fig., 2 appendices.
- Bloch, J., Schroder-Adams, C., Leckie, D.A., McIntyre, D.J., Craig, J. and Staniland, M. (1993). Revised stratigraphy of the Lower Colorado Group (Albian to Turonian), Western Canada; Bulletin of Canadian Petroleum Geology, vol. 41, no. 3, pp. 325-348.
- Bloy, G.R. and Hadley, M.G. (1989). The development of porosity in carbonate reservoirs. Canadian Society of Petroleum Geologists, Continuing education Short Course.
- Burwash, R.A., Baadsgaard, H., and Peterman, Z.E. (1962). Precambrian K Ar dates from the western Canada Sedimentary Basin. Journal of Geophysical Research, 67, pp. 1617-1625.

Burwash, R.A. and Culbert, R.R. (1976). Multivariate geochemical and mineral patterns in the Precambrian basement of Western Canada. Tectonophysics. vol. 20, pp. 193-201.

Burwash, R.A., McGregor, C.R. and Wilson, J.A. (1994). Precambrian basement beneath the Western Canada Sedimentary Basin; In G.D. Mossop and I. Shetsen (eds.), Geological Atlas of the Western Canada Sedimentary Basin, published jointly by the Canadian Society of Petroleum Geologists and the Alberta Research Council, Ch. 5, pp. 49-56.

Cant, D.J. (1988). Regional structure and development of the Peace River Arch, Alberta: A Paleozoic failed-rift system?; Bulletin of Canadian Petroleum Geology, 36:284-295.

- Dufresne, M.B., Eccles, D.R., McKinstry, B., Schmitt, D.R., Fenton, M.M., Pawlowicz, J.G. and Edwards, W.A.D. (1996). The Diamond Potential of Alberta; Alberta Geological Survey, Bulletin No. 63, 158 pp.
- Glass, D.J. (1990). Lexicon of Canadian Stratigraphy, Volume 4. Western Canada, including Eastern British Columbia, Alberta, Saskatchewan and Southern Manitoba; Canadian Society of Petroleum Geologists.
- Green, R., Mellon, G.B. and Carrigy, M.A. (1970). Bedrock Geology of Northern Alberta. Alberta Research Council, Unnumbered Map (scale 1:500,000).
- Hackbarth, D.A. and Natas, N. (1979) The hydrogeology of the Athabasca oil sands area, Alberta; Alta. Res. Council, Bull. No. 38.

- Hajnal, Z., Green, A., White, Cloves, R., Lewry, J. and Luces, S. (1993). Seismic signature of the Trans-Hudson Orogene. In GAC-MAC Joint Annual Meeting, May 17-19, Edmonton, Alberta, unpublished Program with Abstracts, p. A-38.
- Leckie, D.A., Kjarsgaard, B.A., Peirce, J.W., Grist, A.M., Collins, M., Sweet, A., Stasiuk, L., Tomica, M.A., Eccles, R., Dufresne, M.B., Fenton, M.M., Pawlowicz, J.G., Balzer, S.A., McIntyre, D.J. and McNeil, D.H. (1997). Geology of a Late Cretaceous Possible Kimberlite at Mountain Lake, Alberta - Chemistry, Petrology, Indicator Minerals, Aeromagnetic Signature, Age, Stratigraphic Position and Setting; Geol. Surv. Can., Open File 3441, 202 p.
- New Blue Ribbon Resources Ltd. (1998) Property Acquision Near Recent Kimberlite Discoveries In Alberta; corporate press release dated Monday, October 26, 1998.
- O'Connell, S.C., Dix, G.R. and Barclay, J.E. (1990). The origin, history and regional structural development of the Peace River Arch, Western Canada; Bulletin of Canadian Petroleum Geology, 38A:4-24.
- Ross, G.M. and Stephenson, R.A. (1989). Crystalline Basement: The Foundation of Western Canada Sedimentary Basin; In B.D. Ricketts (ed.) Western Canada Sedimentary Basin, A Case History; Canadian Society of Petroleum Geologists, Calgary, Alberta, pp. 33-45.
- Ross, G.M., Parrish, R.R., Villeneuve, M.E. and Bowring, S.A. (1991). Geophysics and geochronology of the crystalline basement of the Alberta Basin, western Canada; Canadian Journal of Earth Sciences, vol. 28, pp. 512-522.
- Ross, G.M., Theriault, R. and Villeneuve, M. (1998). Buffalo Head Terrane and Buffalo Head Craton; What's the difference and does it matter?; Calgary Mineral Exploration Group, 7th Annual Calgary Mining Forum, p. 19-20.
- Villeneuve, M.E., Ross, G.M., Theriault, R.J., Miles, W., Parrish, R.R., and Broome, J. (1993) Tectonic Subdivision and U-Pb Geochronology of the Crystalline Basement of the Alberta Basin, Western Canada; Geological Survey of Canada Bulletin 447, 86 p.



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APPENDIX 1:

AEROMAGNETIC ANOMALIES

Note:

All aeromagnetic anomalies as selected by Balzer and Dufresne (1999) UTM co-ordinates are NAD 27

Anomaly	Line	Fiducial	UTM		Approximate		
Number			Easting	Northing	Magnetic Intensity (nT)		
				<u> </u>			
16	L2490	7867	366691	6351264	3 to 31⁄2		
17	L2560	4172	366530	6349877	21/2 to 3		
18	L2570	5370	366228	6349722	3½ to 4		
19	L2580	6535	366400	6349486	4		
20	L2590	4232	366342	6349313	4		
21	L2600	5430	366139	6349071	4		
22	L2620	1832	366570	6348660	3		
24	L2630	3046	366754	6348479	5 to 6		
25	L2640	4264	366871	6348256	4 to 5		
30	L2720	2959	366910	6346665	3		
31	L2730	4166	366907	6346431	3		
32	L2760	7846	364236	6345969	21/2		
33	L2780	10196	368621	6345387	3 to 4		
35	L2820	3005	364811	6344745	2½ to 3		
36	L2830	4162	367612	6344428	2½ to 3		
38	L2840	5312	368127	6344239	3 to 3½		
39	L2840	5358	364521	6344364	21/2		
40	L2850	6505	365587	6344065	2½ to 5		
· 41	L2850	6523	367035	6344036	2½ to 6		
42	L2820	6538	368295	6343998	2½ to 5		
43	L2860	7704	368160	6343843	4 to 5		
44	L2860	7720	366880	6343866	3		
45	L2860	7737	365563	6343919	4 to 5		
46	L2890	3004	367666	6343439	7 to 8		
47	L2880	3029	365673	6343488	3 to 4		
48	L2880	2040	634896	6343544	4 to 5		
49	L2890	4329	365246	6343318	5		
50	L2890	4337	365902	6343290	21/2		
51	L2890	4360	367784	6343209	4		
52	L2900	5527	365861	6343105	3		
53	L2900	5534	365340	6343125	5		
54	L2920	7844	369445	6342546	21/2		
55	L2930	9050	366247	6342490	21/2		
56	L2930	9056	366732	6342512	3		
57	L2930	9088	369508	6342382	3		
58	L2940	10189	369252	6342178	3½ to 4		
72	T5440	7148	371133	6350284	5		
73	T5450	8470	369920	6345258	21/2		
74	T5450	8508	369797	6342267	21/2		
75	T5460	8802	368873	6344504	21⁄2		
76	T5470	10128	368114	6349664	4		
77	T5480	10492	366790	6342436	2½ to 3		
78	T5490	11927	365810	6343047	4		

APPENDIX 1:

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CONTINUED

Anomaly	Line	Fiducial	UTM		Approximate
Number		•	Easting	Northing	Magnetic Intensity (nT)
					· · · · · · · · · · · · · · · · · · ·
80	L2560	4212	369723	6349793	10 to 11
82	L2460	4268	366579	6351846	2 to 21⁄2
83	L2460	4319	370690	6351709	2 to 21⁄2
84	L2510	10252	36612	6350888	2 to 21⁄2
85	L2520	3061	366564	6350640	2
86	L2530	574	366558	6350452	. 2
87	L2550	3003	366516	6350068	2½ to 3
88	L2690	10262	369680	6347168	2
89	L2690	10305	366309	6347280	2
90	L2690	10312	365719	6347300	2
91	L2710	1860	373463	9346614	2
92	L2720	2991	364200	6346749	2
93	L2800	592	368127	6344959	2 to 3
94	L2820	2956	368620	6344621	2
95	1 2820	2964	367981	6344641	- 1¼
96	1 2820	2977	367003	6344665	2 to 3
97	1 2830	4128	364881	6344511	2100
08	1 2830	4143	366061	6344503	2/2
90	1 2830	4150	366618	634471	216 to 2
100	12830	4130	368431	6244412	2/2 to 3
100	1 2840	417Z	360602	6244412	272103
101	L2040	5293	309002	6244173	2
102	L2040	5334	300425	6244291	2
103	L2050	7749	304000	6344 (20	Z 11/
104	L2000	1796	304041	0343944	1 1/2
105	L2870	1700	304043	0343750	
100	L2070	1/90	303050	0343730	1 1/2 10 2
107	L2070	1022	307742	0343007	
108	L2870	1829	368305	6343647	21/2 10 3
109	L2870	1867	371508	6343522	$2 to 2\frac{1}{2}$
110	L2870	1878	3/243/	6343501	2 to 2 ¹ / ₂
111	L2880	3016	366732	6343458	21/2
112	L2880	3050	364107	6343529	2
113	L2890	4403	371536	6343101	21/2
114	L2900	5458	3/1460	6342926	2
115	L2900	5504	367709	6343046	2½ to 3
	Anomolies ou	tside of the pr	operty but wit	thin the geoph	ysical dataset
1	L2350	537	369384	6353970	5
2	1 2360	1786	369386	6353920	5 to 6
2	1 2370	2913	369344	6353576	4 to 5
<u>л</u>	1 2370	2010	368442	6353596	5 to 7
т 5	1 2380	A151	368664	6353387	5 to 7
5	1 2380	4222	375250	6252185	4 to 5
7	1 2200	5010	375210	6352047	+ i0 J
י פ	1 2400	5212	364855	6252160	2
U	L2400	0+00	004000	0000100	4

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Anomaly	Line	Fiducial	U [_]	ГМ	Approximate
Number			Easting Northing		Magnetic Intensity (nT)
9	L2400	6594	375400	6352814	3
10	L2410	7566	374946	6352586	4
11	L2420	1963	374280	6352422	21/2
12	L2420	1968	373888	6352433	2
13	L2430	472	374795	6352245	3
14	L2440	1812	370346	6352164	21/2
15	L2470	5373	374967	6351389	2
23	L2620	1930	374873	6348382	3
26	L2670	7945	362988	6347808	3 to 4
27	L2690	10347	363163	6347380	21/2
28	L2690	10363	361845	6347443	21/2
29	L2710	1726	362078	6346979	21⁄2 to 3
34	L2780	10262	363270	6345586	2
37	L2830	4248	374889	6344217	4
59	L2950	11401	367257	6342039	31/2
60	L2960	604	367808	6341814	1½
61	L2960	612	367235	6341842	21⁄2 to 3
62	L2960	623	366374	6341863	2
63	L2970	1825	365268	6341662	31/2
64	L2970	1830	365677	6341635	4 to 5
65	L2970	1840	366553	6341616	21/2
66	L2980	3011	367721	6341443	4
67	L2980	3028	366372	6341485	4 to 5
68	L2990	4222	366542	6341244	5 to 7
69	L2990	4235	367612	6341209	3 to 4
70	L3000	5388	Not plotted	Not plotted	3 to 4
71	L3000	5403	Not plotted	Not plotted	5 to 7
79	T5530	3283	362114	6350224	21/2
81	L2910	6478	362764	6342983	>10
116	L2950	11431	369794	6341958	2

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APPENDIX 2: STATEMENT OF QUALIFICATIONS

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J.R. Dahrouge obtained degrees in geology and computing science from the University of Alberta, Edmonton in 1988 and 1994, respectively. He has more than ten years of experience in mining exploration. He is a member of the Canadian Institute of Mining and Metallurgy and is registered as P. Geol. in the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

J.R. Dahrouge does not hold any direct or indirect interest in the metallic and industrial minerals permits which are the subject of this report.

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TABLE 1.2

STATEMENT OF EXPENDITURES FOR MAIM PERMIT 9398090062 LITTLE LEGEND PROPERTY

	-1 ·				
5.5C., P.GB	DI.				
days	project supervision, reporting, meaning acquisition and target second	¢		\mathbf{Y}	
uaya	· · · · · · · · · · · · · · · · · · ·	*			
B.Sc. (Genlo	arist)			(
dave aven	nrenaration for field work field work (geophysics) and travel between				
aays	between February 13 to 24, 2000				
dava		s		$ \rangle$	
uaya		*		/	
M.Sc. (Geol	(ngist)				
davs	acquire DEM's, review property geology, and target selection			/	
davs		\$			
· ·		-		_	
assistant					
days	drafting of maps and figures			1/	/
days		\$		V	
				Ŝ	8,781,7
comnodati	on				
	accommodations (motel)	\$	87.47		
	groceries and restaurants	\$	11.48		
•	•			5	98.9
on				-	
Fuel:	For Truck and SkiDoo's	\$	115.97		
Vehicles:	4x4 truck 885 km @ 0.381/2	ŝ	340 73		
				\$	456
nd instrume	ant Rental			•	
	Magnetometer, SkiDoo, and Trailer Rental	\$	7 427 00		
	Radio Rental	\$	78.39		
				\$	7 505 3
				•	.,
	Aggressive Diamond Drilling Ltd Rig Mobilization	\$	17,731,92)	
	Lomell Consultants - Drill Permitting	\$	1.228.50		-
	-			15	18,960.4
यङ				•	
	APEX Geoscience Ltd HRAM target selection	\$	6 278 74 🛛	5	
	APEX Geoscience Ltd Field work, examine target '80'	ŝ	3,210.00 1	5.	
	Montello Resources Ltd HRAM data	\$	7 000 00		
	Spectra Expl. Geoscience Corp Level HRAM data and maps	ŝ	3.070.90	/	
	Whalen Resources Ltd Field work - gridding	\$	1.125.00	/	
				\$	20 684 6
				•	20.004.0
	Air Photos, Base map(s), and Map Reproductions	\$	274.29	١	
	Courier and Shipping	Š	20.88	\	/
	Digital Elevation Data	\$	428.00	10	/
	Long distance telephone	\$	48.26	/ -	
				\$	771.4
	· ·				
				\$	57,259.2
New Blue Rib	bon Resources Ltd., hereby certify that the costs outlined above ware expended				
nent of metal	lic and industrial minerals perprint 9398090062				
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		.			
	Stry Kryska New Rive Dibbon Denouroan 11-				
	B.Sc., P.Geo days days B.Sc. (Geolo days days M.Sc. (Geol days days assistant days days assistant days days commodati	B.Sc., P.Geol. days project supervision, reporting, HRAM data acquisition and target selection days days B.Sc. (Geologist) gays days between February 13 to 24, 2000 days secondation days secondation days secondation days secondation days days assistant days days days seconmodations (motel) groceries and restaurants on seconmodations (motel) groceries dayt days days days days days days accommodations (motel) groceries and restaurants on secondations (motel) groceries days days days	B. Sc., P. Geed. tays project supervision, reporting, HRAM data acquisition and target selection days \$ B. Sc. (Geologist) days preparation for field work; field work (geophysics) and travel between between between February 13 to 24, 2000 \$ M.Sc. (Seologist) days sequire DEM's, review property geology, and target selection days \$ assistant days drafting of maps and figures \$ days days \$ \$ scommodation accommodations (molei) \$ \$ accommodations figures \$ \$ en Fuel: For Truck and SkiDoo's \$ \$ Pret: For Truck and SkiDoo, and Trailer Rental \$ \$ adjoreseive Diamond Drilling Ltd Rig Mobilization \$ \$ Lomeil Consultants - Drill Permitting \$ \$ \$ Aggressive Diamond Drilling Ltd Rig Mobilization \$ \$ \$ Apgressive Diamond Drilling Ltd Rig Mobilization \$ \$ \$ Apgressive Diamond Drilling Ltd Field work, grading \$ \$ \$ Apgressive Diamond Drilling Ltd Rig Mobilization \$ \$	B.Sc. P. Geol. days project supervision, reporting, HRAM data acquisition and target selection days preparation for field work; field work (geophysics) and travel between between February 13 to 24, 2000 days coupier DEM's, review property geology, and target selection days coupier DEM's, review property geology, and target selection days commodations (motel) groceries and restaurants <u>5</u> , 11.49 off Fuel: For Truck and SkiDoo's <u>5</u> , 11.49 off Struck BBS km (§0,0.89% nd instrument Rental Aggressive Diamond Drilling Ltd Rig Mobilization Lonell Consultants – Drill Permitting <u>5</u> , 17,731,92 ZE APEX Geoscience Ltd Field work, cartine target: 80' Mhatelo Resources Ltd Field work, grading <u>5</u> , 307,030 Vinition Spectre Expl. Geoscience Corp Level HRAM data and maps Whatelo Resources Ltd Field work, grading <u>5</u> , 307,030 Starter Resources Ltd Field work, grading <u>5</u> , 274,29 APEX Geoscience Ltd Field work, grading <u>5</u> , 1228,50 APEX Geoscience Ltd Field work, grading <u>5</u> , 307,030 Whatelo Resources Ltd HRAM data S, 274,20 Air Photos, Base map(s), and Map Reproductions Courier and Shipping Dight Elevation Data Long distance telephone <u>5</u> , 493,26 Hew Blue Ribbon Resources Ltd., hereby certify that the costs outfined above were expended send of metalific and industrial minimate perpfill <u>5</u> , 320,0002	B.Sc. P. Geol. days project supervision, reporting, HRAM data acquisition and target selection days preparation for field work; field work (geophysics) and travel between between February 13 to 24, 2000 days course february 13 to 24, 2000 S = 7,427 S = 11.49 S = 11

NOTARY PUBLIC IN AND FOR THE

PROVINCE OF ALBERTA - RICHARD B. HAJDUK JON 12/2001



SYMBOLS

HRAM target (Table 5.1) ..

HRAM target (high, medium, low priority) (Appendix 1, Balzer & Dufresne (1999))

Total magnetic intensity contour (interval = 1 nT)

Highway with number

All weather or dry weather gravel or dirt road .

Trail or cut line

MAIM Permit boundary

Oil or gas well ...

Ground magnetic survey area

NOTES

1) Map compiled from 1 : 20 000 scale digital bas supplied by Spatial Data Warehouse Ltd., Calgo

2) UTM grid is based on North American Datum, 1 UTM grid zone: 11U.

3) To accompany assessment report dated 2000/

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ase maps 84H/3NE and 84H/6SE gary, Alberta.
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