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ASSESSMENT REPORT FOR EXPLORATION CONDUCTED ON THE LEGEND PROPERTY, NORTHEAST ALBERTA

Metallic and Industrial Mineral Permits:
9302090598 to 9302090605, and 9303040865

Geographic Coordinates

57°7'7" N to 57°22'50" N
112°44'33" W to 113°34'54" W

NTS Sheets
84 H/2, H/3, H/6 and H/7

2005 01 06

by

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MINING GEOLOGY
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January 6, 2005

Coal and Mineral Development Unit
Alberta Department of Energy
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Re: **Reproductions**

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Yours very truly,
DAHROUGE GEOLOGICAL

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1. SUMMARY

The Legend Property is located in northeastern Alberta, about 120 km northwest of Fort McMurray. The property is held by Dahrouge Geological Consulting Ltd. in trust for Blue Diamond Mining Corporation. The MAIM permits which constitute the Legend Property have been explored for the presence of kimberlite and potential diamond deposits.

Past exploration activities have included the acquisition and review of high-resolution aeromagnetic data, and ground magnetometer surveys. A drill rig was mobilized to the area during 2002 and remains on site.

In early 2004, permits were acquired and two geophysical anomalies of interest, the Lammasu and Argonaut, were the targets for a proposed drill program. Due to difficulties with equipment and the initiation of early spring-breakup, the program had to be terminated.

2. INTRODUCTION

During the spring and summer of 2004, Canadian Mine Services was retained by Blue Diamond Mining Corporation (Blue Diamond) to conduct a proposed drilling program. Dahrouge Geological Consulting Ltd. (Dahrouge Geological) obtained the required permits on behalf of Blue Diamond and completed initial plans for the drill program. This assessment report describes the work conducted in 2004 involving MAIM (Metallic and Industrial Minerals) permits 9302090598, 9302090599, 9302090600, 9302090601, 9302090602, 9302090603, 9302090604, 9302090605, and 9303040865 near Fort McMurray, northeast Alberta. It includes information on the planning and initiation of the proposed drill program. Larry Kryska, President for Blue Diamond Mining Corporation, authorized this work.

3. GEOGRAPHIC SETTING

The Legend MAIM permits encompass an area about 120 km northwest of Fort McMurray, within northeastern Alberta (Figs. 3.1 and 3.2). Fort McMurray is a community of more than 55,000 and is the supply and services centre for the Alberta tar sands. It is located at the confluence of Athabasca and Clearwater rivers in Northeastern Alberta, about 437 km by paved highway from Edmonton.

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

> "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.
>
> ...Legend Property lies within the Birch Mountains Uplands physiographic zone (Hackbarth and Natasa, 1979). Elevation in the immediate vicinity of the...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 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."

At Fort McMurray, mean annual snowfall is 47.2 inches, and mean annual precipitation is 16.32 inches. River breakup generally occurs in the third week of April.

For ease of geographic reference, informal names have been applied to MAIM permits, creeks, rivers and other unnamed features on published maps.

4. PROPERTY, EXPLORATION AND EXPENDITURES

4.1 METALLIC AND INDUSTRIAL MINERALS PERMITS

In 2002, Dahrouge Geological Consulting acquired the Legend permits. MAIM permits 9302090598, 9302090599, 9302090600, 9302090601, 9302090602, 9302090603, 9302090604, and 9302090605 are registered in the name of Jody R Dahrouge. MAIM permit 9303040865 is registered in the name of 877384 Alberta Ltd., a subsidiary of Dahrouge Geological Consulting Ltd.

Based on exploration conducted in 2004, the MAIM permits will be reduced as summarized in Table 4.1.

TABLE 4.1 DESCRIPTION OF MAIM PERMITS

Permit Number	Comm. Date	Expiry Date*	Land Description (Tp-RW4)	Size (Ha)
			Current Permit Areas	
9302090598	Sept. 4, 2002	Sept. 4, 2004	94-18W4 (Sections: 1-36)	9216
9302090599	Sept. 4, 2002	Sept. 4, 2004	94-19W4 (Sections: 1-36)	9216
9302090600	Sept. 4, 2002	Sept. 4, 2004	95-18W4 (Sections: 1-36)	9216
9302090601	Sept. 4, 2002	Sept. 4, 2004	95-19W4 (Sections: 1-36)	9216
9302090602	Sept. 4, 2002	Sept. 4, 2004	96-19W4 (Sections: 1-24; 26-35)	8960
9302090603	Sept. 4, 2002	Sept. 4, 2004	96-20W4 (Sections: 1-36)	9216
9302090604	Sept. 4, 2002	Sept. 4, 2004	96-21W4 (Sections: 1-36)	9216
9302090605	Sept. 4, 2002	Sept. 4, 2004	96-22W4 (Sections: 1-36)	9216
9303040865	April 11, 2003	April 11, 2005	95-22W4 (Sections: 1-36)	9216
			Total:	82 688
			Reduced Permit Areas Based Upon This Report	
9302090598	Sept. 4, 2002	Sept. 4, 2006	94-18W4: 29NW,L10,L15;31-33; 34NW,L5-L7,L10,L15	1008
9302090599	Sept. 4, 2002	Sept. 4, 2006	94-19W4: 5L14-L16;8SE,L3,L6; 13L13,L14;14SE,L3,L6,L9-L11; 24W;25N,SW;26N;27L9,L16; 32NE,L11, L14;33N;34-36	1792
9302090600	Sept. 4, 2002	Sept. 4, 2006	95-18W4: 4W,L2,L7,L10,L15;8L16; 9W,L2, L7,L10,L15;16SW,L2,L7; 17S,L10-L12	672
9302090601	Sept. 4, 2002	Sept. 4, 2006	95-19W4: 3;4SE;9N;10S;16W;20E; 21W;29L2,L7,L10,L15;32L2,L7, L10,L13,L14	1104
9302090602	Sept. 4, 2002	Sept. 4, 2006	96-19W4: 5L3,L4;6L5-L8;15L13, L14;19L15,L16;22L3,L4;30SE	256
9302090603	Sept. 4, 2002	Sept. 4, 2006	96-20W4: 1L5-L8;2L5-L8;3L7,L8, NW;4N;9;10W;15NE,SW, L11, L14;16S;17S,NW;18N;19; 20SW;22L1-L3,L6,L7,L10,L11, L14,L15;27L2,L3,L6,L7;30; 32;36NE,L6- L8,L11,L14	2528
9302090604	Sept. 4, 2002	Sept. 4, 2006	96-21W4: 10N;11N;12N;13S;14S, L12;15;16N;17N;18N; 19S; 22L1,L2	1456
9302090605	Sept. 4, 2002	Sept. 4, 2006	96-22W4: 13N;14L13-L16;15L14-L16;22SE,L3,L6,L9,L16;23S,NW; 24S;26W;27L1,L8,L9,L16;34L1, L8;35SW	976
9303040865	April 11, 2003	April 11, 2005	95-22W4: 16N;17N;18NE;19SE; 20S;21S	640
			Total:	10 432

*Report deadline is December 4, 2004 plus 30 days

4.2 PREVIOUS EXPLORATION

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 Little Legend Property and surrounding area. 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, Blue Diamond acquired approximately 600 line-km of aeromagnetic data from Montello. The aeromagnetic data was levelled by Spectra for Blue Diamond, and subsequently reviewed by Dahrouge Geological and by Apex Geoscience Ltd. (Apex). From early 1998 to late 1999, Kennecott Canada selected magnetic anomalies of interest; those that fall within the Legend Property are included in Figure 4.1.

Based upon a review of the flight line profiles, a total of 116 prospective high-frequency magnetic anomalies were identified at the Little Legend Property. Several medium- to high-priority targets not associated with drainage or culture were recommended for ground geophysical surveys.

During the later part of 1999, and early parts of 2000 and 2002, Dahrouge Geological selected twelve targets for a ground geophysical survey on, and in the close proximity to, the Little Legend Property. For each target, after a baseline was surveyed on a particular grid (500 m by 400 m), 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, and contoured.

Apex conducted limited ground geophysical surveys at the Legend Property in the fall of 2000, in the same manner as the surveys completed by Dahrouge Geological. Interest was focused in locating collar locations over targets that were previously flown with detailed, close-spaced helicopter magnetic and electromagnetic surveys.

In anticipation of a proposed drill program, Canadian Mine Services mobilized a drill rig to the Legend Property and initiated set up. Drilling began in April, 2002 but was halted due a lack of water required to reach significant depth (Dufresne, 2003). The drill is currently on site to be used in a future drilling program.

4.3 2004 EXPLORATION

In early 2004, Dahrouge Geological submitted preliminary plans to Alberta-Pacific and Alberta Sustainable Resource and Development. Drill permits were obtained on behalf of Blue Diamond for two target locations defined by ground geophysics, Lammasu and Argonaut (Figs. 4.2 and 4.3).

Canadian Mine Services was retained by Blue Diamond with the intention to create new roads along existing northwest and southwest trending cut lines leading to the drill targets. In anticipation for the proposed drill progam, a road use agreement was made in February, 2004 involving Paramount Energy Operating Corp. (Paramount) and Blue Diamond. The agreement allowed Canadian Mine Services to travel winter roads operated by Paramount to reach desired cut lines. Once access was constructed, diamond drill holes were to be completed on the Lammasu and Argonaut geophysical anomalies.

In March of 2004, Canadian Mine Services initiated the clearing of cut lines with the use of a D4 CAT. The CAT completed plowing along the cut lines to the drill site (Fig. 4.4); due to warm weather and spring break-up, conditions for continued equipment use became unsafe. Unfortunately, the drilling program had to be abandoned and delayed for an additional season.

On May 26 of 2004, Jody Dahrouge accompanied Larry Kryska on a visit to the property. A fixed-wing aircraft was taken to the Paramount-Legend Camp. From the camp, a helicopter was used to access the Lammasu and Argonaut target areas. Ground conditions were inspected and previously suggested cut line access routes were reexamined.

4.4 EXPLORATION EXPENDITURES

During 2003 and 2004, exploration expenditures for MAIM Permits 9302090598, 9302090599, 9302090600, 9302090601, 9302090602, 9302090603, 9302090604, 9302090605, and 9303040865 totalled $52,293.18 (Appendix 1).

TABLE 4.2 ASSIGNMENT OF EXPENDITURES

MAIM Permit	Expiry Date	Required Expenditures	Assigned Expenditures
9302090598	September 4, 2004	$5,040	$5,040
9302090599	September 4, 2004	$8,960	$8,960
9302090600	September 4, 2004	$3,360	$3,360
9302090601	September 4, 2004	$5,520	$5,520
9302090602	September 4, 2004	$1,280	$1,280
9302090603	September 4, 2004	$12,640	$12,640
9302090603	September 4, 2006	$24,960	$402.10
9302090604	September 4, 2004	$7,280	$7,280
9302090605	September 4, 2004	$4,880	$4,880
9303040865	September 4, 2004	$3,200	$3,200
		$52,160	$52,562.10

5. GEOLOGY

Balzer and Dufresne (1999, p. 5 to 12) provide the following 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 (BHT) and has been interpreted to be part of the Talston Magmatic Zone. 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 (Hajnal 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).

TABLE 5.1 GENERALIZED STRATIGRAPHY NAMUR LAKE AREA

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

*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. 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 à 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).

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."

J. Tanton, B.Sc., G.I.T.

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

Edmonton, Alberta
2005 01 06

6. REFERENCES

Aravanis, T. (1999) Legend Property Assessment Report; Kennecott Canada Exploration Inc., 23 p., 14 app., 5 fig., 7 tables.

Auston, J. (1998) Discovery and Exploration of the Buffalo Hills Kimberlites, North-central Alberta; Mineral Exploration Group, 7th Calgary Mining Forum, April 8-9, 1998, p. 24.

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.

Carlson, S.M., Hiller, W.D., Hood, C.T., Pryde, R.P. and Skelton, D.N. (1998) The Buffalo Hills Kimberlite Province, North-central Alberta, Canada; unpublished abstract by Ashton Mining of Canada, April 1998.

Dufresne, M.B. (2003) Assessment Report for Exploration Conducted on the Little Legend Property and Surrounding Area, Birch Mountains, Northeastern Alberta; ass. rept. for MAIM Permit 9398090062; Prepared for Blue Diamond Mining Corporation by APEX Geoscience Ltd.,33 p., 6 app., 9 fig., 3 tables.

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.

Dufresne, M.B., Olson, 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. (1995) The Diamond Potential of Alberta: A Regional Synthesis of the Structural and Stratigraphic Setting, and Other Preliminary Indications of Diamond Potential. MDA Project M93-04-037, Alberta Research Council Open File Report 1994-10.

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.

Lehnert-Thiel, K., Loewer, R., Orr, R.G. and Robertshaw, P. (1992) Diamond-bearing Kimberlites in Saskatchewan, Canada: The Fort à la Corne Case History; Exploration Mining Geology, *Journal of the Geological Society of CIM*, vol. 1, pp. 391-403.

Montello Resources Ltd. (1998a) Phoenix Kimberlite Diamondiferous. Unpublished corporate news release dated November 12, 1998.

Montello Resources Ltd. (1998b) Kimberlites Intersected, Two Additional Pipes. Unpublished corporate news release dated November 30, 1998.

Mossop, G. and Shetsen, I. (eds.) (1994) Geological Atlas of the Western Canada Sedimentary Basin. Calgary, Canadian Society of Petroleum Geologists and Alberta Research Council, + 510 pp.

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.

Olson, R.A., Dufresne, M.B., Freeman, M.E., Eccles, D.R. and Richardson, R.J.H. (1994) Regional Metallogenic Evaluation of Alberta; Alberta Geological Survey, Open File Report 1994-08.

Pawlowicz, J.J. and Fenton, M.M. (1995a) Bedrock Topography of Alberta. Alberta Geological Survey, Energy and Utilities Board, Map 226, scale 1:2,000,000.

Pawlowicz, J.J. and Fenton, M.M. (1995b) Drift Thickness of Alberta. Alberta Geological Survey, Energy and Utilities Board, Map 227, scale 1:2,000,000.

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. 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., 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.

Scott Smith, B.H., Orr, R.G., Robertshaw, P. and Avery, R.W. (1994) Geology of the Fort à la Corne Kimberlites, Saskatchewan; Extended Abstract, The Sixteenth CIM Annual General Meeting, Vancouver, British Columbia, October 11 to 15, 1994, Paper No. 68.

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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Legend Property, ALBERTA

Fig. 3.1 Location Map

NM 2005.01

102
101
100
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93

BIRCH MOUNTAIN PROVINCIAL PARK

I.R. 174A

I.R. 174A

NAMUR LAKE

BURNT LAKES

9302090602
9302090605
9302090604
9302090603
9302090601
9302090600
9303040865
9302090599
9302090598

SYMBOLS

- Legend Property (Current)
- Legend Property (Reduced)
- Park/Protected Area
- Indian Reservation

NOTES
Compiled from 1:1,000,000-scale Alberta digital map

SCALE 1:25,000

0 5 10

KILOMETERS

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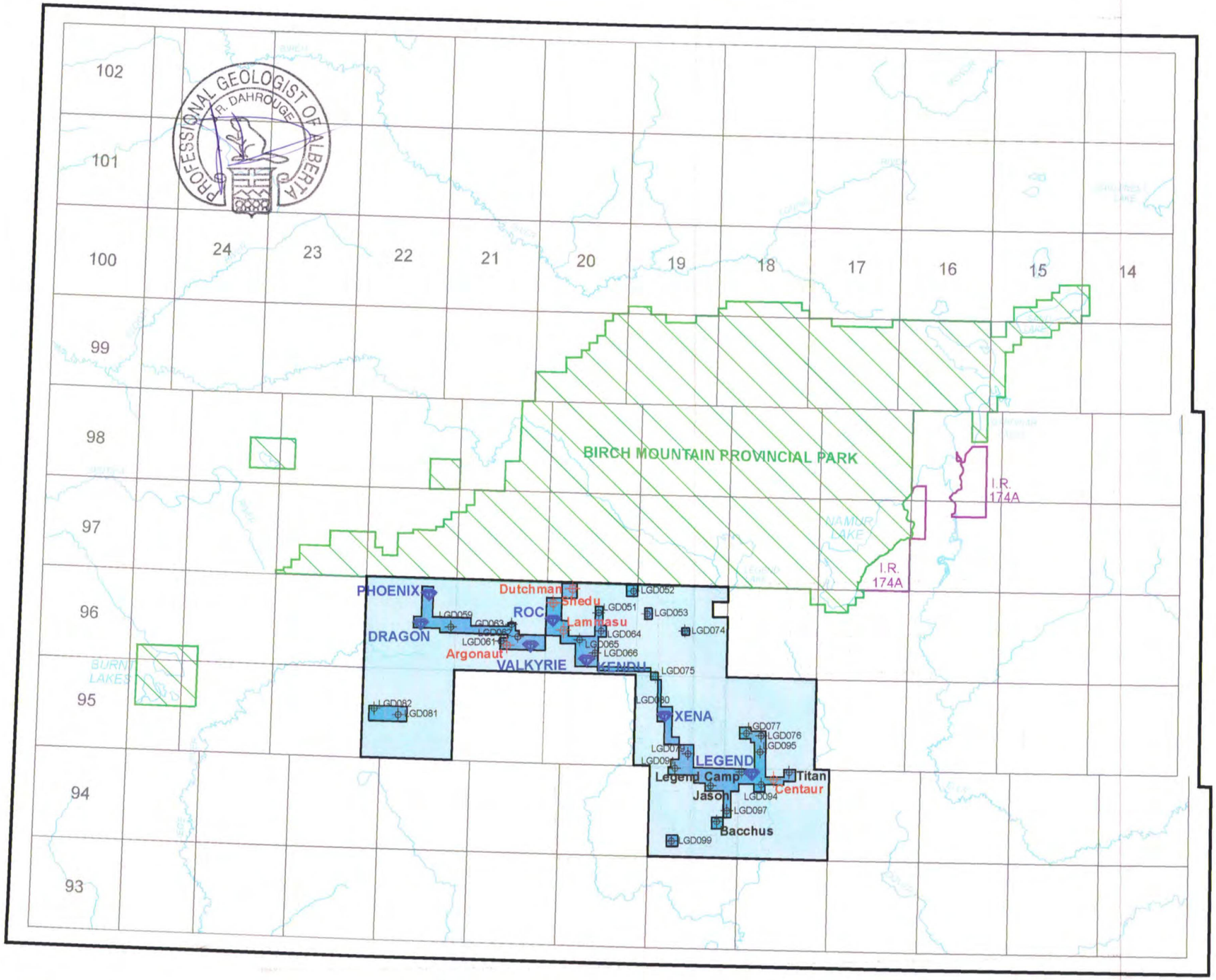
Edmonton, Alberta

Legend Property, ALBERTA

Fig. 3.2 Property Map

RW 2005.01



N

SYMBOLS

- Legend Property (Current)
- Legend Property (Reduced)
- Park/Protected Area
- Indian Reservation
- Kimberlite
- Priority Drill Target
- Aeromagnetic Target

NOTES
Compiled from 1:1,000,000-scale Alberta digital map

SCALE 1:25,000

0 5 10

KILOMETERS

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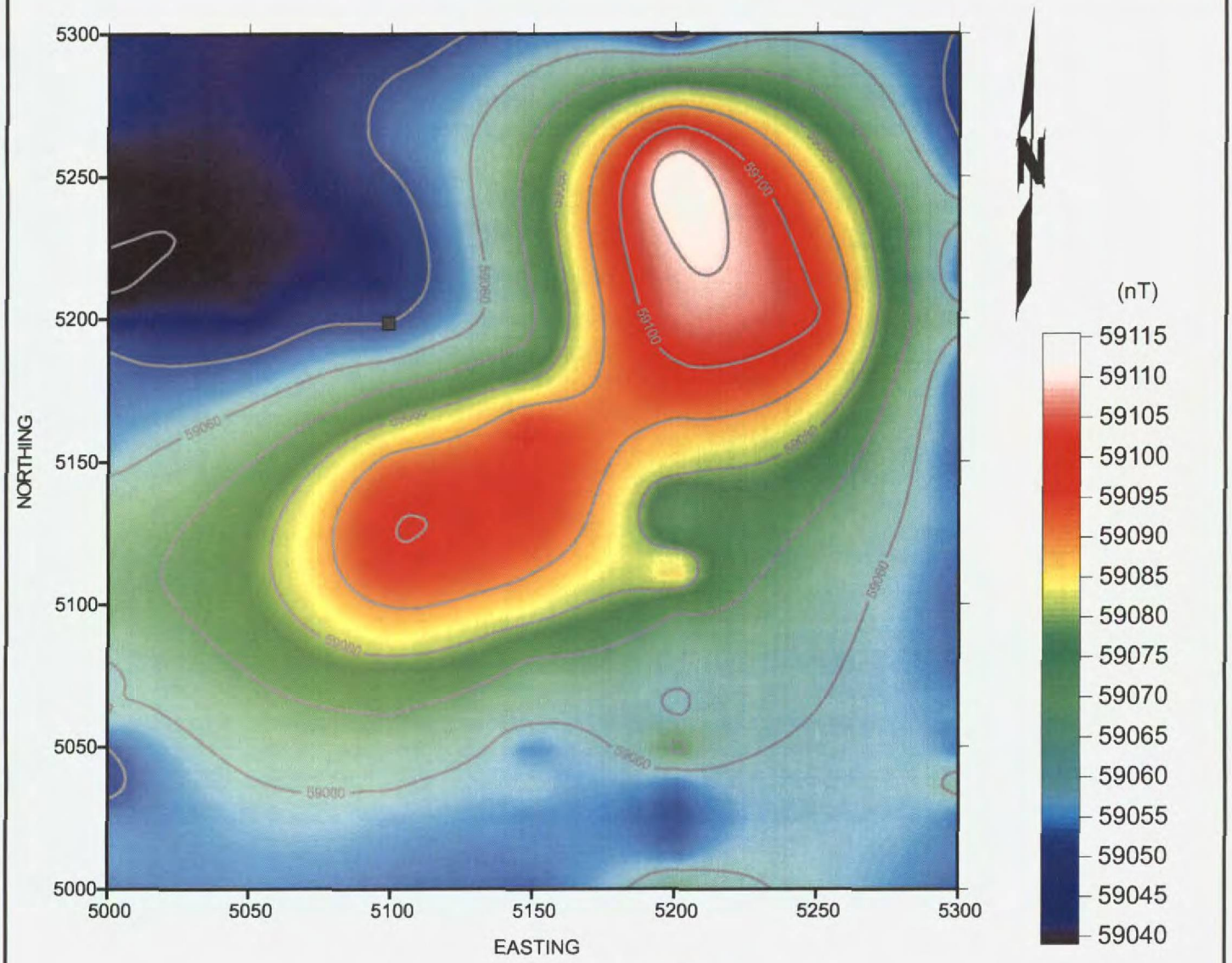
Edmonton, Alberta

Legend Property, ALBERTA

Fig. 4.1 Geophysical Targets

RW 2005.01



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J.R. DAHROUGE

SCALE 1:1500

0 50 100

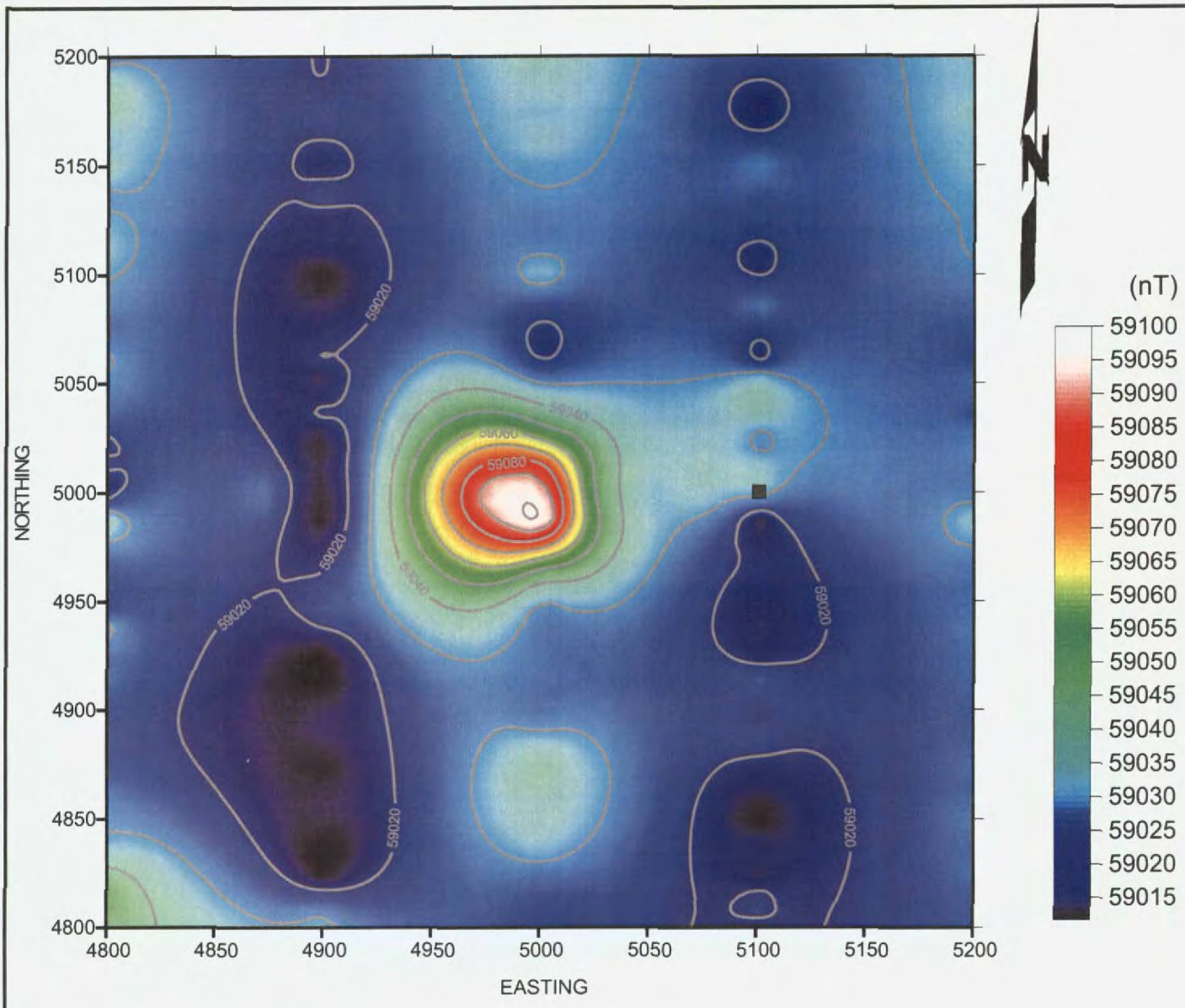
METERS

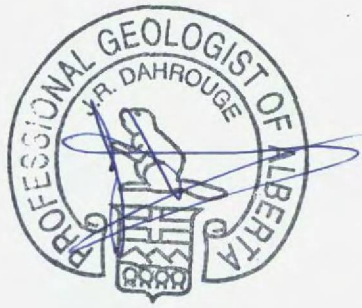
SYMBOLS

59060 Isomagnetic Contour
Contour Interval 10 nT

■ UTM Coordinate (Nad27)
366087E 6356262N

BLUE DIAMOND MINING CORP.
DAHROUGE GEOLOGICAL CONSULTING LTD. Edmonton, Alberta
Legend Property, ALBERTA
Fig. 4.2 Lammasu Target
RW 2005.01





SYMBOLS

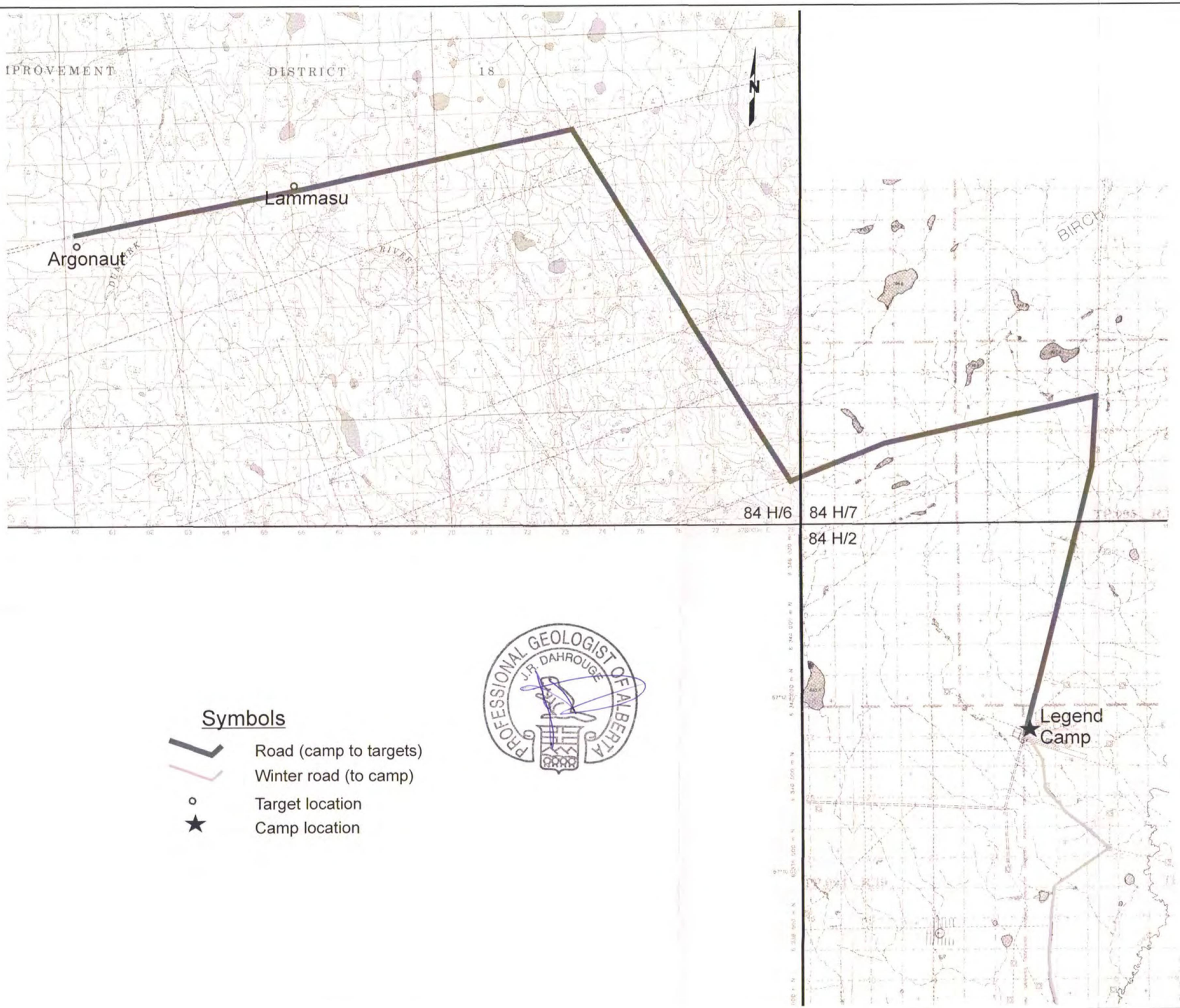
59060 Isomagnetic Contour
Contour Interval 10 nT

UTM Coordinate (Nad27)
360197E 6354866N

SCALE 1:2000

0 50 100
METERS

BLUE DIAMOND MINING CORP.
DAHROUGE GEOLOGICAL CONSULTING LTD. Edmonton, Alberta
Legend Property, ALBERTA
Fig. 4.3 Argonaut Target
RW 2005.01



Symbols

- Road (camp to targets)
- Winter road (to camp)
- Target location
- Camp location

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J.R. DAHROUGE

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Legend Property, ALBERTA

Fig. 4.4 Target Access Map

NM 2005.01

APPENDIX 1: STATEMENT OF EXPENDITURES FOR METALLIC AND INDUSTRIAL MINERALS PERMITS 9302090598 THRU 9302090605, AND 9303040865

Note: Total expenditures for Aircraft Charter, Helicopter Charter and Canadian Mine Services were provided by Larry Kryska of Blue Diamond Mining.

a) Personnel

J. Dahrouge, B.Sc., P.Geol. (Geologist)
3.1 days planning field work, preparing report, travel to Legend Property May 26
3.1 days @ $ [redacted] $ [redacted]

W. McGuire, (Draftsman, Field Assistant)
0.8 days prepare figures and maps
0.8 days @ $ [redacted] $ [redacted]

R. Wolbaum, B.Sc. (Geologist)
1.5 days preparing figures and maps
1.5 days @ $ [redacted] $ [redacted]

J. Tanton, B.Sc. (Geologist)
4.4 days planning for field work, organize drill contractor, permit applications, report writing
4.4 days @ $ [redacted] $ [redacted]

$ 4,135.56

b) Food and Accommodation

Meals	$ 37.94	
		$ 37.94

c) Transportation

Aircraft:	Aircraft Charter (Northern Aircare; May 26, 2004)	$ 2,452.44
Helicopter:	Helicopter Charter (Yellowhead Helicopters; May 26, 2004)	$ 2,629.63
		$ 5,082.07

d) Instrument Rental n/a

e) Drilling

Canadian Mine Services (Edmonton)	$ 43,000.00	
		$ 43,000.00

f) Analyses n/a

g) Report

Reproduction and assembly	$ 55.00	
		$ 55.00

APPENDIX 1: CONTINUED

h) Other

Courier	$ 8.01	
Plots and Maps	$ 58.85	
Permits	$ 165.00	
Photocopying	$ 3.53	
Toll Charges	$ 16.14	
		$ 251.53

Total $ 52,562.10

I, Jody R. Dahrouge, hereby certify that the costs outlined above were expended for the assessment of metallic and industrial minerals permit 9302090598 THRU 9302090605, and 9303040865.

[redacted]

Jody R. Dahrouge, B.Sc., Sp.C., P.Geol.

Commissioner for Oaths

JACK LAMOUREUX
COMMISSIONER FOR OATHS
COMMISSION EXPIRES
MAY 21, 2005

APPENDIX 2: HIGH-RESOLUTION AEROMAGNETIC TARGETS, LEGEND PROPERTY (see Fig. 4.1)*

Note: * All targets as identified by Kennecott Canada Exploration Inc. (Aravanis, 1999)

Anomaly	AKA	X	Y	NTS	Tp	Rge	Sec	Mer	Size (m)
Phoenix	LGD001	351503	6360569	84H/06	96	22	26	W4	500X350
Roc	LGD002	365063	6357498	84H/06	96	20	19	W4	300X300
Dragon	LGD005	350750	6357380	84H/06	96	22	15	W4	200X200
Xena	LGD006	376847	6347377	84H/06	95	19	20	W4	400X400
Dutchman	LGD007	367104	6360850	84H/06	96	20	32	W4	
Valkyrie	LGD008	362339	6355367	84H/06	96	21	11	W4	
Kendu	LGD018	368561	6353407	84H/06	96	20	4	W4	400X200
Lammasu	LGD019	366189	6356306	84H/06	96	20	17	W4	
Shedu	LGD020	364736	6359143	84H/06	96	20	30	W4	
Legend	LGD028	386178	6340641	84H/02	94	18	31	W4	400X200
LGD051	LGD051	369911	6358363	84H/06	96	20	27	W4	
LGD052	LGD052	373691	6360645	84H/06	96	20	36	W4	
LGD053	LGD053	375155	6358210	84H/06	96	19	30	W4	
LGD059	LGD059	353882	6357080	84H/06	96	22	13	W4	
Argonaut	LGD060	360186	6354850	84H/06	96	21	10	W4	150X150
LGD061	LGD061	359528	6355289	84H/06	96	21	10	W4	100X100
LGD062	LGD062	361013	6355836	84H/06	96	21	14	W4	150X100
LGD063	LGD063	360492	6356836	84H/06	96	21	15	W4	100X100
LGD064	LGD064	370113	6356363	84H/06	96	20	15	W4	150X100
LGD065	LGD065	367804	6355415	84H/06	96	20	16	W4	200X150
LGD066	LGD066	369466	6353969	84H/06	96	20	10	W4	150X150
LGD075	LGD075	375906	6351551	84H/06	95	19	32	W4	
LGD076	LGD076	387403	6344954	84H/02	95	18	16	W4	500X100
LGD077	LGD077	385713	6345223	84H/02	95	18	17	W4	200X200
LGD079	LGD079	379462	6343052	84H/02	95	19	3	W4	
LGD081	LGD081	348124	6347498	84H/04	95	22	16	W4	200X200
LGD082	LGD082	345721	6347966	84H/05	95	22	19	W4	150X200
LGD091	LGD091	377973	6341486	84H/03	94	19	32	W4	2900X100
Jason	LGD092	381948	6339571	84H/02	94	19	26	W4	350X100
Centaur	LGD093	388817	6340145	84H/02	94	18	33	W4	300X100
LGD094	LGD094	387385	6339585	84H/02	94	18	29	W4	300X200
LGD095	LGD095	387271	6343195	84H/02	95	18	4	W4	
Titan	LGD096	390568	6340889	84H/02	94	18	34	W4	
LGD097	LGD097	383729	6336898	84H/02	94	19	24	W4	400X100
Bacchus	LGD098	382576	6335732	84H/02	94	19	14	W4	200X200
LGD099	LGD099	377654	6333696	84H/03	94	19	5	W4	200X100
Legend Camp	LGD103	385176	6341069	84H/02	94	18	31	W4	100X100

APPENDIX 3: STATEMENT OF QUALIFICATIONS

The field work described in this report was supervised by Jody Dahrouge.

J.R. Dahrouge is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. He obtained degrees in geology and computing science from the University of Alberta, Edmonton in 1988 and 1994, respectively. He has more than 10 years of experience in mineral exploration. He is a member of the Canadian Institute of Mining and Metallurgy and is registered as P. Geol. with the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

J. Tanton is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. She obtained a degree in geology from the University of Alberta, Edmonton in 2003 and has been employed in the mineral exploration industry since. She is registered as a Geol. I.T. with the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.