MAR 20100013: SHUNDA MOUNTAIN

Received date: Jul 19, 2010

Public release date: Jun 10, 2011

GRAYMONT WESTERN CANADA INC.

2009 EXPLORATION AND FIELDWORK WITHIN THE SHUNDA MOUNTAIN METALLIC AND INDUSTRIAL MINERALS PERMIT, WEST-CENTRAL ALBERTA

PART B

Metallic and Industrial Minerals Permit
9308050833

Geographic Coordinates

52°20' N to 52°34' N
115°44' W to 116°14' W

NTS Sheet 83 C/9

Owner and Operator:	MAIM Permit 9308050833 Graymont Western Canada Inc. 190, 3025 - 12 Street N.E. Calgary, AB, T2E 7J2
Consultant:	Dahrouge Geological Consulting Ltd. 18, 10509 - 81 Avenue Edmonton, Alberta T6E 1X7
Authors:	J. Klarenbach, B.Sc., P.Geol. P. Kluczny, B.Sc., P.Geol.
Date Submitted:	July 19, 2010

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1. SUMMARY

During July, 2009, the northern part of Brazeau Range, north of Nordegg and within Metallic and Industrial Minerals (MAIM) Permit 9308050833, was explored for high-quality carbonate rocks. Exploration conducted in 2009 was a follow-up to previous exploration conducted in the area.

Access and outcrops were mapped, and a total of 15 rock samples were collected within the Shunda Mountain Permit, representing approximately 17 m of stratigraphy. Samples were sent to a laboratory for whole-rock analysis.

Throughout this report attitudes of bedding and other planar features are given as A°/B° SW, where A° is the azimuth of the strike and B° is the amount of dip in the direction indicated (right-hand rule). A magnetic declination of 16°17' east was used. Where bedding was not evident, stratigraphic thicknesses were calculated using orientations from adjacent units. Where more than one bedding orientation was measured, the mean orientation is used.

2. INTRODUCTION

The 2009 exploration within the Shunda Mountain Permit was conducted by Dahrouge Geological Consulting Ltd. (Dahrouge), on behalf of Graymont Western Canada Inc. (Graymont). This assessment report describes the exploration conducted within MAIM Permit 9308050833, which encompasses northern parts of Brazeau Range of the Alberta Foothills. Bob Robison, exploration manager for Graymont Western U.S. Inc., authorized this work.

The objectives of the 2009 exploration were to expand on the previously explored areas, and to locate and better define carbonate units throughout the property. This report includes information on the geology and quality of carbonates encountered while mapping and sampling outcrops within the permit area.

3. GEOGRAPHIC SETTING AND ACCESS

3.1 LOCATION AND ACCESS

MAIM Permit 9308050833 encompasses areas within the northern part of Brazeau Range, surrounding and including Shunda Mountain and the western part of Coliseum Mountain, within west-central Alberta (Fig.'s 3.1 & 3.2).

The Shunda Mountain Permit is accessed by traveling north from Highway 11 along Upper Shunda Road, past the relatively new Nordegg North subdivision. Upper Shunda Road continues north through the property, within the valley between Shunda and Coliseum

mountains. It leads around and up Shunda Mountain to the Baldy Fire Lookout. A gate at the base of Shunda Mountain blocks truck access but ATV's provide excellent access to the top of the mountain. ATV's may also be utilized to explore cut lines that cross-cut and spur off the lower sections of Upper Shunda Road.

3.2 INFRASTRUCTURE

Accommodations, food, fuel and other necessary services are available in Rocky Mountain House or Nordegg. The local economy is primarily based on agriculture, forestry, and energy-based industries.

Rocky Mountain House, with a population of about 7,000, is accessed by traveling 67 km west of Red Deer along the David Thompson Highway (Highway 11), and then 12 km north along Highway 22.

The Hamlet of Nordegg is about 85 km west of Rocky Mountain House, along Highway 11 (Fig. 3.2). Nordegg has a population of about 100.

3.3 TOPOGRAPHY, VEGETATION AND CLIMATE

The Shunda Mountain Permit is included in the Eastern-Slope Montane Forest Ecological Region, and lies within the Rocky-Clearwater District of the Alberta Forest Reserve. In the subalpine zone, vegetation consists of stunted subalpine fir and Englemann Spruce, and alpine foliage above the treeline. Vegetation in areas of rugged limestone outcroppings is generally sparse, and commonly consists of junipers, other low brush, and grasses. Below the treeline, vegetation consists of dense stands of Aspen, Lodgepole Pine, White Spruce, and less frequent stands of Douglas Fir.

The property is comprised of northwest-trending ridges cut by north- and northeast-trending valleys and drainages. Elevations range from approximately 1,570 m in the valley between Shunda and Coliseum mountains to about 2,050 m atop Shunda Mountain. The property is cut by a number of drainages, including spurs of Shunda Creek, and Dog Creek, which trends north and parallels Upper Shunda Road.

Climate is sub-alpine with average summer temperatures of 20° to 25°C and winter temperatures of -15° to -20°C, with extremes of 35° C and -40°C. Rainfall averages about 35 cm per year; snowfall averages 35 to 45 cm with the majority falling in December and January.

3.4 FIELD OPERATIONS

Field operations were conducted by a four-person geological crew from Dahrouge Geological Consulting Ltd., based in a hotel in Rocky Mountain House.

Transportation to and from the property was by four-wheel-drive truck. ATV's were utilized to explore access and outline carbonate outcrops within the property.

Garmin GPSmap 60Cx instruments were used to mark outcrop locations and record access information. Compasses were set at a magnetic declination of 16°17' east.

4. PROPERTY, EXPLORATION AND EXPENDITURES

4.1 PROPERTY SUMMARY

Graymont Western Canada Inc. acquired MAIM Permit 9308050833 (Shunda Mountain) in the spring of 2008 to cover Paleozoic limestones in the northern part of Brazeau Range, north of Nordegg (Fig.'s 3.2 and 4.1). The Shunda Mountain Permit encompasses 1,888 hectares and is contiguous to the Nordegg North MAIM Lease (9410010457), covering Shunda Mountain and the western part of Coliseum Mountain.

Based on the 2009 exploration and compilation of previously collected data in the area, the Shunda Mountain Permit will be reduced (Section 4.3, Fig. 4.1).

4.2 2009 EXPLORATION SUMMARY

On July 12th, 2009, Dahrouge Geological Consulting Ltd., on behalf of Graymont Western Canada Inc., conducted exploration for carbonate lithotypes within west-central Alberta. The work was undertaken to determine and identify the location and extent of carbonate units in the permit area.

Carbonate outcrops were examined and a total of 15 samples were collected (Fig. 4.2). Geological observations were recorded, including lithologic information, measurements of structural elements, and other pertinent details (Appendix 2). A solution of 6% HCl was used to assess carbonate quality in the field, and rock samples were shipped to Central Lab of Graymont Western U.S. Inc. in Utah for analyses (Appendix 3). In some instances, interval thicknesses were determined by measuring outcrops perpendicular to bedding, where it could be identified. Field maps were completed on 1:20,000 and 1:30,000 scale map sheets and concentrated on areas surrounding and including Shunda Mountain, along the northern part of Brazeau Range.

4.3 EXPLORATION EXPENDITURES

Expenditures for 2009 totaled $7,246.55 (Appendix 1). The Shunda Mountain Permit (MAIM Permit 9308050833) will be amended. Excess expenditures are to be assigned to a future exploration period of the Shunda Mountain Permit. The reduced area will include:

Land Description (Mer-Rg-Tp)	Reduced Size (Ha)
5-15-041: 2NW; 3NE, L14; 8L9, L13-L16; 9N; 10N, SE, L3, L6; 15SW, L1, L2; 16S, NW, L9, L10; 17; 18L9; 20L1-L4	1,232

Expenditures are allocated to MAIM Permit 9308050833 as follows:

MAIM Permit	Assessment Period	Expiry Date	Required Expenditures*	Assigned Expenditures
9308050833	Years 1 & 2	May 22, 2010	$6,160.00	$6,160.00
	Years 3 & 4	May 22, 2012	$12,320.00	$1,086.55
				$7,246.55

* Based on reduced area of 1,232 Ha

5. GEOLOGY

5.1 STRATIGRAPHY

At Brazeau Range, carbonate lithologies are known to occur within both Paleozoic and Mesozoic sequences (Table 5.1, Fig. 4.2).

Paleozoic limestones encountered within the Shunda Mountain Permit were from the Upper Devonian Palliser Formation, Upper Devonian to Lower Carboniferous Banff Assemblage, and the Turner Valley, Shunda and Pekisko formations of the Lower Carboniferous Rundle Assemblage. Mesozoic rocks of the Fernie Group were also noted within the permit area.

Brief stratigraphic descriptions of the various units are provided herein (Pana and Dahrouge, 1998). A detailed review of the regional stratigraphy is provided by Stott and Aitken (1993), Mossop and Shetsen (1994), Halbertsma (1994), and Richards et al. (1994).

TABLE 5.1 GENERALIZED PALEOZOIC STRATIGRAPHY OF FOOTHILLS AND FRONT RANGES, WEST-CENTRAL ALBERTA*

System or Subsystem	Stratigraphic Unit		
	Assemblage Group	Formation	
		S	N
Jurassic	Fernie Group		
Lower Carboniferous	Rundle Assemblage	Mount Head	
		[1]Livingstone	Turner Valley
			Shunda
			Pekisko
	Banff Assemblage	Banff	
		Exshaw	
Upper Devonian		[1]Palliser	
		Alexo	
	Fairholme Group	Southesk	Mounthawk
		Cairn	
Cambrian		Pika	
		Eldon	
		Stephen	
		Cathedral	

* Compiled from Mackenzie 1969, Richards et al. 1994, Switzer et al., 1994., and Holter, 1994.
Fairholme Group of Mackenzie (1969) is partly equivalent to the Woodbend Group (Switzer et al., 1994).
[1]Current limestone production (from Holter, 1994)

5.1.1 Palliser Formation

In west-central Alberta, the Lower to Middle Famennian Palliser Formation consists mainly of outer shelf and basinal carbonates of the Sassenach Basin (Halbertsma, 1994). The Palliser Formation is divisible into the Morro and overlying Costigan members, separated by an unconformity. The Morro Member comprises a lithologic suite dominated by carbonates with significant lateral facies variations. The Costigan Member consists of open-marine fossiliferous limestones and shales, with local evaporitic sedimentation. Within the Foothills and Front Ranges of Alberta, limestones of the Palliser Formation vary from less than 180 m to more than 270 m in thickness (Holter, 1976).

The Palliser Formation is overlain by shales of the Exshaw Formation, and siliciclastics and carbonates of the Banff Formation.

5.1.2 Banff Assemblage

In west-central Alberta, the Exshaw, Banff and Yohin formations comprise the Banff Assemblage (Richards et al. 1994). The Upper Famennian to Lowermost Tournaisian Exshaw Formation is dominated by fine-grained siliciclastics deposited in an euxinic basin to shallow-neritic environment. Large thicknesses of Exshaw shales are generally recessive and therefore are commonly poorly exposed in outcrop. In general, the Lower to Upper Tournaisian Banff Formation unconformably overlies the Exshaw. The Banff Formation is a heterogeneous association of carbonates and fine-grained siliciclastics deposited on poorly differentiated carbonate platforms. Westward, the uppermost Banff Formation grades laterally into the Rundle Assemblage.

5.1.3 Rundle Assemblage

The Lower Carboniferous Rundle Assemblage extends from MacKenzie Mountains in the Arctic, south through the Peace River Embayment to southeastern British Columbia. In west-central Alberta, it comprises shallow-marine platform and ramp carbonates, which prograded westward over deeper water shales and carbonates of the Banff Assemblage. The lower Rundle Assemblage is subdivided into the transgressive carbonate Pekisko Formation, and two regressive successions of restricted-marine carbonates and subordinate anhydrite assigned to the Shunda and Turner Valley formations (Richards et al. 1994). The Turner Valley Formation extends from east-central British Columbia to southwest Alberta. According to Richards et al. (1994), the Turner Valley Formation thickens to the southwest and for most of its length is 50 m to 120 m thick. The type section near Turner Valley is 152 m thick and divisible into four beds.

Earlier work by Douglas (1958), and MacQueen and Bamber (1968) indicate that the eastern peritidal sequences of the uppermost Pekisko, Shunda and lower Turner Valley grade south and southwestward into the more open-marine sequence of the Livingstone Formation (Table 5.1).

The upper Rundle Assemblage includes the transgressive Mount Head Formation.

5.1.4 Fernie Group

The Fernie Group includes all but the uppermost Jurassic strata of western Alberta and eastern British Columbia. Although treated as a Group, the Fernie is divided into a number of members and informal units with uncertain mutual relations and continuity. The Fernie Group

thickens gently and irregularly west and southwest.

Outcrops of the Fernie Group, noted within the Shunda Mountain Permit, consist of large thicknesses of shale and calcareous sandstones with minor conglomerate.

5.2 STRUCTURE

In the Front Ranges and Foothills of west-central Alberta, Paleozoic and Mesozoic strata are repeated along several major thrust faults. Displacements along these faults are interpreted to be tens of kilometres. Within individual thrust sheets, regional-scale folds exhibit a spatial relation to their leading edges. Near Nordegg, the main structural discontinuity is the northwest- to southeast-trending Brazeau Thrust. The leading edge of the thrust sheet is folded into the asymmetrical to recumbent Brazeau Anticline (Fig. 4.2).

As previously indicated by Pana and Dahrouge (1998; p. 11),

> "North of Nordegg the main structural elements within Brazeau Range include Brazeau Anticline, and Coliseum Fault, which is a splay from the Brazeau Thrust... North of Highway 11 the asymmetrical Brazeau Anticline trends northwesterly; one limb dips gently to moderately to the southwest and the other steeply northeast to overturned. Local faults and folds are present on both limbs."

6. RESULTS

One day was spent checking property access and outlining carbonate outcrops in detail. The 2009 exploration concentrated on defining stratigraphic unit locations and contacts within easily accessible parts of the permit.

Carbonate lithologies of the Palliser, Banff, and Pekisko formations were examined and sampled within Brazeau Range, near Shunda Mountain (Fig. 4.2). A total of 15 isolated intervals were examined and sampled, representing more than 17 m of stratigraphy (Appendix 2). Where bedding could not be identified, stratigraphic measurements were taken based on the previously determined regional trend or deduced from surrounding measurements where possible.

One high-quality Pekisko Formation sample (68656) was collected from a resistant limestone outcrop of the Gap Member along Upper Shunda Road near the base of Shunda Mountain (Fig. 4.2). The sample consisted of medium- to dark-brownish-grey fresh, homogeneous, very-fine- to fine-grained, lime packstone. The sample assayed 98.17% $CaCO_3$, 1.33% $MgCO_3$, and 0.17% SiO_2.

Three isolated samples (68642, 68643 & 68654) of the Banff Formation were taken along a cutline that crosses Upper Shunda Road, within the valley between Shunda and Coliseum mountains (Fig. 4.2). Samples 68642 and 68643 were taken along the northeast portion of the

cutline, about 850 m and 700 m respectively, from Upper Shunda Road. Both samples were medium-brown to very-dark-grey, homogeneous and indescript mudstones. Sample 68642 was strongly dolomitic with 40.15% $MgCO_3$; sample 68643 was thinly bedded and assayed slightly dolomitic with 3.70% $MgCO_3$ and moderately to strongly siliceous with 11.31% SiO_2. Sample 68655 was collected about 1.7 km from Upper Shunda Road along the southwestern part of the cutline, and consisted of dark-grey, very-fine- to medium-grained, crinoidal wackestone and packstone. The sample was moderately dolomitic and siliceous with 80.44% $CaCO_3$, 9.96% $MgCO_3$, and 6.17% SiO_2. The Banff Formation is not generally a high-quality carbonate unit of interest.

The majority of the outcrops visited in 2009 were within the Palliser Formation. The analyses were quite variable as samples were collected from various members of the formation. Sample 68644, collected about 500 m northeast along the cutline from Upper Shunda Road, and sample 68653, collected along the same cutline just over 1 km southwest of Upper Shunda Road, were taken from the upper part of the Palliser Formation. Both samples consisted of moderately to well-bedded, dark-grey, micritic to medium-grained, crinoidal lime wackestone, and assayed similarly. Sample 68644 contained 93.16% $CaCO_3$, 1.50% $MgCO_3$, and 2.54% SiO_2 and sample 68653 contained 93.22% $CaCO_3$, 3.06% $MgCO_3$, and 2.21% SiO_2.

The majority of the Palliser Formation samples were collected within lower elevations of the property and stratigraphically lower parts of the formation. These samples were all dolomitic to some extent, ranging from 13.13% to 45.39% $MgCO_3$. The samples were consistently low in silica, all containing less than 1.61% SiO_2. Various lithologies comprised the lower Palliser, including mudstone, wackestone, and packstone. The units were consistently dark-grey and/or medium-brown and commonly had a fetid odor; nearly all of the weathered outcrop surfaces exhibited an irregular pockety texture.

The upper part of the Palliser Formation generally consists of high-calcium limestone; however, the assays do not remain high-quality over significant thicknesses. Due to the consistently low silica values, the lower Palliser rocks in the area may have potential for significant tonnages of high-quality dolomite. The 2007 drilling, conducted to the south within the Nordegg Permit, indicated elevated levels of SiO_2 within the lower Palliser. Therefore, more exploration would be required to adequately test the dolomite potential in the Shunda Mountain Permit.

7. CONCLUSIONS

Carbonate units of the Pekisko, Banff, and Palliser formations were examined and measured along the northern part of Brazeau Range near Shunda Mountain. A total of 15 discrete intervals were sampled and described in detail. Based on the samples collected in the 2009 exploration and overall property assessment, the permit will be reduced.

Access roads and trails were noted, which provide excellent access within the central parts of the property.

Future exploration will expand on work already conducted in the area, confirming or redefining past geological interpretations and determining the potential for high-calcium limestone and/or high-quality dolomite within the permit area.

8. REFERENCES

Dahrouge, J.R. and Halferdahl, L.B. (1995) 1994 and Early 1995 Exploration for High-Calcium Limestone in West-Central Alberta, unpublished rpt. for Continental Lime Ltd., Halferdahl and Associates Ltd., 53 p., 67 fig., 24 app.

Dahrouge, J.R. (2003) 2003 Exploration and Fieldwork within the Nordegg Metallic and Industrial Minerals Permit, West Central Alberta; Ass. Rpt. on MAIM Permit 9396010038 for Graymont Western Canada Inc., Dahrouge Geological Consulting Ltd., 12 p., 4 fig., 3 app.

Dahrouge, J. and Tanton, J. (2006) 2005 Exploration and Fieldwork within the Nordegg Metallic and Industrial Minerals Permit, North Brazeau; Ass. Rpt. on MAIM Permit 9396010038 for Graymont Western Canada Inc., Dahrouge Geological Consulting Ltd., 13 p., 4 fig., 3 app.

_____ (2006) 2006 Exploration and Fieldwork within the Brazeau Range Metallic and Industrial Minerals Permit, West-Central Alberta; Ass. Rpt. on MAIM Permit 9302090596 for Graymont Western Canada Inc., Dahrouge Geological Consulting Ltd., 9 p., 3 fig., 2 app.

Douglas, R.J.W. (1956) Nordegg, Alberta; Geol. Surv. Can. Paper 55-34.

_____ (1958) Chungo Creek map-area, Alberta; Geol. Surv. Can. Paper 58-3.

Erdman, O.A. (1950) Alexo and Saunders map-areas, Alberta; Geol. Surv. Can. Mem. 254.

Halbertsma, H.L. (1994) Devonian Wabamun Group of the Western Canada Sedimentary Basin, in Geological Atlas of the Western Canada Sedimentary Basin. Mossop, G.D. and Shetsen, I. (compilers); Can. Soc. Petr. Geol. and Alberta Res. Coun., p. 221-250.

Holter, M.E. (1976) Limestone Resources of Alberta; Alta. Res. Coun. Econ. Geol. Rept. 4.

Holter, M.E. (1994) A Review of Alberta Limestone Production, Marketing, Distribution and Future Development Possibilities. Alta. Geol. Surv., EUB, Open File Rept. 1994-15., 95 p., 57 fig.

Kluczny, P. and Tanton, J. (2008) 2007 Exploration and Fieldwork within the Brazeau Range Metallic and Industrial Minerals Permits, West-Central Alberta; Ass. Rpt. on MAIM Permits 9396010038 and 9302090596 for Graymont Western Canada Inc., Dahrouge Geological Consulting Ltd., 17 p., 4 fig., 4 app.

MacKenzie, W.S. (1966) Upper Devonian Stratigraphy in the Vicinity of Mountain Park, Alberta, *in* Eighth Ann. Field Trip Guidebook, Edm. Geol. Soc., p.19-29.

Mackenzie, W.S. (1969) Stratigraphy of the Devonian Southesk Cairn carbonate complex and associated strata, eastern Jasper National Park, Alberta. Geol. Surv. Bull. 184.

MacQueen, R.W., and Bamber, E.W. (1968) Stratigraphy and facies relationships of the Upper Mississippian Mount Head Formation, Rocky Mountains and Foothills, south western Alberta; Bull. Can. Petr. Geol., v. 16, p. 225-287.

Matthews, J.G. (1960) Preliminary report on the Nordegg limestone deposit; Alta. Geol. Surv., Alta. Res. Coun. Internal Rept. (not available for consultation).

Mountjoy, E.W., Price, R.A. and Lebel, D. (1992) Geology and structure cross-section, Mountain Park, Alberta. Geol. Surv. Can., Map 1830A, scale 1:50000.

Mossop, G.D. and Shetsen, I. (1994) Geological Atlas of the Western Canada Sedimentary Basin, G.D. Mossop and I. Shetsen (comps.); Can. Soc. Petr. Geol. and Alberta Res. Coun.

Pana, D. and Dahrouge, J. (1998) 1994, 1995 and 1997 Exploration of the Northern Part of Brazeau Range; Ass. Rpt. on MAIM Permit 9396010038 for Continental Lime Ltd., Dahrouge Geological Consulting Ltd., 20 p., 9 fig., 23 app.

Richards, B.C., Barclay, J.E., Bryan, D., Hartling, A., Henderson, C.M. and Hinds, R.C. (1994) Carboniferous Strata of the Western Canada Sedimentary Basin *in* Geological Atlas of the Western Canada Sedimentary Basin. G.D. Mossop and I. Shetsen (compilers), Can. Soc. Petr. Geol. and Alberta Res. Coun., p. 221-250.

Switzer, S.B., Holland, W.G., Christie, S.D., Graf, G.C., Hedinger, A.S., McAuley, R.J., Wierezbicki, R.A and Packard, J.J. (1994) Devonian Woodbend-Winterburn Strata of the Western Canadian Sedimentary Basin *in* Geological Atlas of the Western Canada Sedimentary Basin. G.D. Mossop and I. Shetsen (compilers), Can. Soc. Petr. Geol. and Alberta Res. Coun., p. 165-202.

Stott, D.F. and Aitken, J.D. (1993) Sedimentary Cover of the Craton in Canada, D.F. Stott and J.D. Aitken (ed.); Geol. Surv. Can. Geology of Canada, no. 5., pp. 202 - 271.

9. STATEMENTS OF QUALIFICATIONS

I, Jocelyn Klarenbach, residing at 130 Rue Marquet, Beaumont, Alberta, do hereby certify that:

- I am a geologist of Dahrouge Geological Consulting Ltd., Suite 18, 10509 - 81 Ave., Edmonton, Alberta, T6E 1X7.
- I am a 2003 graduate of the University of Alberta, Edmonton, Alberta with a B.Sc. in Geology.
- I have practiced my profession as a geologist continuously since 2003.
- I am a registered Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, member M67719.
- I hereby consent to the copying or reproduction of this Assessment Report following the one-year confidentiality period.
- I am a co-author of the report entitled "2009 Exploration and Fieldwork within the Shunda Mountain Metallic and Industrial Mineral Permit, West-Central Alberta" and accept responsibility for the veracity of technical data and results.

Dated this 19th day of July, 2010.

[redacted]

Jocelyn Klarenbach, B.Sc., P.Geol.

APEGGA M67719

I, Patrick Kluczny, residing at 14815 - 39 Ave., Edmonton, Alberta, do hereby certify that:

- I am a geologist of Dahrouge Geological Consulting Ltd., Suite 18, 10509 - 81 Ave., Edmonton, Alberta, T6E 1X7.
- I am a 2006 graduate of the University of Alberta, Edmonton, Alberta with a B.Sc. in Geology.
- I have practiced my profession as a geologist continuously since 2006.
- I am a registered Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, member M81985.
- I hereby consent to the copying or reproduction of this Assessment Report following the one-year confidentiality period.
- I am a co-author of the report entitled "2009 Exploration and Fieldwork within the Shunda Mountain Metallic and Industrial Mineral Permit, West-Central Alberta" and accept responsibility for the veracity of technical data and results.

Dated this 19th day of July, 2010.

Patrick Kluczny, B.Sc., P.Geol.

APEGGA M81985

APPENDIX 1: COST STATEMENT FOR THE 2009 EXPLORATION AT THE SHUNDA MOUNTAIN PERMIT

a) **Personnel**		$ 4,636.80
b) **Food and Accommodation**		$ 485.08
c) **Transportation**		$ 905.09
d) **Instrument Rental**		$ 20.79
e) **Drilling**	n/a	-
f) **Analyses**		$ 442.50
h) **Other** (Software Rental, Data, Field maps, Courier & Shipping)		$ 97.51
Total		$ 6,587.77
Administration (10%)		$ 658.78
Total + Administration		$ 7,246.55

[redacted]

J. Klarenbach, B.Sc., P.Geol.

Edmonton, Alberta
July 19, 2010

APPENDIX 2: 2009 SAMPLE DESCRIPTIONS AND ASSAY RESULTS FROM THE SHUNDA MOUNTAIN AREA

Notes: Stratigraphic thicknesses are based on measured attitudes of bedding listed below, with appropriate interpolations. Attitudes are strike and dip (right-hand rule).
Most samples consist of chips at 30 cm intervals. UTM coordinates are NAD83, Zone 11N. Sample locations are shown in Figure 4.2.
Stratigraphy Abbreviations: Pal - Palliser Formation, B - Banff Formation, Pek - Pekisko Formation

Sample	Strat. Unit	Strat. Thick. (m)	Description	$CaCO_3$ (%)	$MgCO_3$ (%)	SiO_2 (%)	Al_2O_3 (%)	Fe_2O_3 (%)	$SrCO_3$ (ppm)	MnO (ppm)	P_2O_5 (ppm)
Isolated Sample: (561319 E, 5820458 N)											
68642	B	1	**Dolomudstone**, medium-brown weathered, medium-greyish-brown fresh, micritic to fine-grained, homogeneous and indescript, weak reaction with HCl, no clear bedding surfaces	57.85	40.15	1.38	0.19	0.15	204	53	<100
Isolated Sample: (561211 E, 5820401 N)											
68643	B	3	**Slightly Dolomitic Lime Mudstone**, tan and light-grey weathered, very-dark-grey and medium-brown fresh, cryptocrystalline, homogeneous and indescript, good reaction with HCl, thinly bedded (1-10 cm), beddings (wavy): 293°78°NE, 288°69°NE	79.26	3.70	11.31	1.39	0.58	1568	156	389
Isolated Sample: (561038 E, 5820310 N)											
68644	Pal	1	**Crinoidal Lime Wackestone**, dark-grey weathered and fresh, micritic to medium-grained, crinoid ossicles, fetid odor, moderate to strong calcite veining up to ½ cm wide, very good reaction with HCl, moderately resistant, moderately bedded & benched, bedding 298°58°NE	93.16	1.50	2.54	0.34	0.27	475	163	<100
Isolated Sample: (560651 E, 5820117 N)											
68645	Pal	1¼	**Strongly Dolomitic Lime Mudstone and Minor Oolitic Lime Packstone**, dark-grey weathered and fresh, micritic to fine-grained, abundant round grains in packstone - ooids, majority mud-rich, fetid odor, good and very good reaction with HCl, penetrative joint sets: 063°83°S & 318° /85°NE, moderately bedded (20-40 cm), bedding 310°08°NE	84.94	13.13	0.81	0.16	0.11	351	38	102
Isolated Sample: (560611 E, 5820094 N)											
68646	Pal	¼	**Calcareous Dolomudstone**, dark-grey weathered, mottled dark-grey and medium-brown (near weathered surfaces) fresh, micritic, homogeneous and indescript, bedding forms outcrop surface - very flat and slightly wavy, bedding 172°01°W	71.03	26.18	1.58	0.37	0.20	213	63	<100
Isolated Sample: (560523 E, 5820024 N)											
68647	Pal	1½	**Dolomudstone**, medium-brown weathered, dark-grey and medium-brown fresh, pockety texture to weathered surface, very-fine-grained to fine-grained, crystalline dolomite (bioclasts?), fetid odor, very weak reaction with HCl, powder fizzes, no reliable bedding surfaces	53.38	44.99	1.01	0.17	0.12	111	61	<100

Isolated Sample: (560498 E, 5820006 N)												
68648	Pal	1½	**Dolomudstone**, same as 68647, weak reaction with HCl	53.33	45.39	0.71	0.14	0.13	123	53	<100	
Isolated Sample: (560118 E, 5819655 N)												
68649	Pal	1½	**Dolomudstone**, dark-grey and medium-brown weathered - variable, pockety texture to weathered surface, dark-grey and medium-brown fresh, micritic to very-fine-grained, minor calcite veining, highly variable reaction with HCl: very weak to very good, moderately bedded (10-30 cm), bedding 091?06°S	55.74	41.90	1.61	0.28	0.15	135	128	<100	
Isolated Sample: (560044 E, 5819594 N)												
68650	Pal	1	**Dolomudstone (Sst/Silty?)**, dark-grey and medium-brown weathered, pockety texture to weathered surface, medium- to dark-brown fresh, micritic to very-fine-grained, homogeneous and indescript, moderate to strong calcite veins, no reaction with HCl but powder fizzes, moderately bedded, bedding 065?14°SE	55.33	43.12	0.92	0.17	0.14	111	177	<100	
Isolated Sample: (559808 E, 5819382 N)												
68653	Pal	2½	**Slightly Dolomitic Crinoidal Lime Wackestone**, dark-grey weathered and fresh, micritic mud with medium- to coarse-grained bioclasts, dominantly crinoid ossicles, minor brachiopods, good reaction with HCl, well-bedded, bedding 117?16°SE	93.22	3.06	2.21	0.33	0.23	422	126	<100	
Isolated Sample: (559321 E, 5818963 N)												
68654	B	2	**Strongly Dolomitic, Mud-rich Crinoidal Lime Wackestone and Packstone**, dark-grey weathered and fresh, very-fine-grained to medium-grained, minor coarse-grained, dominantly crinoid ossicles, good to very good reaction with HCl, well-bedded, bedding 098?23°S	80.44	9.96	6.17	0.73	0.41	692	158	287	
Isolated Sample: (560028 E, 5819658 N)												
68655	Pal	grab	**Dolomudstone**, medium-grey weathered, medium-brown fresh, homogeneous, micritic, indescript, fetid odor, carbonaceous material and flecks noted, very weak reaction with HCl, powder fizzes well, indeterminate bedding	54.11	43.37	1.55	0.32	0.14	150	69	<100	
Isolated Sample: (560286 E, 5820880 N)												
68656	Pek	grab	**Lime Packstone**, light-grey weathered, medium-brownish-grey fresh, some dark-brownish-grey, homogeneous, very-fine-grained to fine-grained throughout, indeterminate grains - ooids(?), moderate calcite veining, rare calcite nodule, fetid odor, good reaction with HCl, indeterminate bedding	98.17	1.33	0.17	0.03	0.05	482	24	<100	

Isolated Sample: (560589 E, 5820172 N)

68657	Pal	grab	**Dolopackstone**, light-grey and tan weathered, medium-brown and tan fresh, indescript, difficult to sample - smooth outcrop surfaces, packstone had weak reaction with HCl, mudstone had no to very weak reaction with HCl, powder fizzes well, indeterminate bedding	57.03	41.38	0.79	0.14	0.10	120	53	<100

Isolated Sample: (560533 E, 5819819 N)

68658	Pal	½	**Strongly Dolomitic Lime Packstone**, medium-grey weathered, medium- to dark-brownish-grey fresh, very-fine-grained to medium-grained, rare very-coarse-grained (gastropods?), crinoids and shells noted, majority of bioclasts indeterminate, distinct mottling - bioturbation(?), weak thin calcite veinlets, moderate to good reaction with HCl, bedding forms outcrop surface, bedding 160°09°W	83.44	15.34	0.66	0.14	0.13	306	42	<100

APPENDIX 3: ANALYTICAL LABORATORY INFORMATION AND TECHNIQUES

Name and Address of the Lab:

Graymont Western US Inc., Central Laboratory.
670 East 3900 South, Suite 200
Salt Lake City, Utah, 84107

Statement of Qualifications:

Jared Leikam obtained a B.S. in Chemistry from the University of Utah in the class of 2003. Jared started working for Graymont in February of 2004 and has been working with the ICP Spectrometer for two and a half years, under the direct supervision of Carl Paystrup (Lab Supervisor).

Vonda Stuart obtained a B.S. in Chemistry from Weber State University in 2004. Vonda started with Graymont in August of 2007 and started working in the ICP Lab the following September.

Sample Preparation, Procedures, Reagents, Equipment, etc.:

For the ICP sample preparation, 0.5 grams of the sample is mixed with 3 g of lithium carbonate. The sample and the lithium carbonate are then fused together in a muffle furnace at 850°C. Following the fusion process, th e samples are dissolved in 1:1 HCl; a total of 40 mL 1:1 HCl is used in the dissolving process. The samples are then diluted to 200 mL and spiked with 10 ppm Co. Cobalt is used as an internal standard. At this point the samples are ready for analysis on the Perkin Elmer, Optima 7300V.

Mesh Size Fraction, Split and Weight of Sample:

Upon receiving the samples, the prep room technician riffles and then splits the stone down to a manageable size (roughly 200 g). The stone is then dried in an oven at 120°C. Once the samples have been dried they get pulverized to a -200 mesh size. A split of this pulverized material is then sent for testing in the main part of the lab.

Quality Control Procedures:

The ICP spectrometer is calibrated with two certified reference materials prior to analyzing a batch of samples. A batch typically contains 96 samples. Every 12^{th} sample in a batch is a certified limestone reference sample. In addition to the 8 reference samples imbedded in the batch, there are 2 limestone reference samples analyzed at the beginning and at the end of the batch to ensure the accuracy of our Na and P numbers. Every element being analyzed in a sample is backed up by data from the certified reference materials. We also use an internal standard (10 ppm Co) to further ensure the quality and accuracy of the analysis.

GRAYMONT WESTERN CANADA INC.

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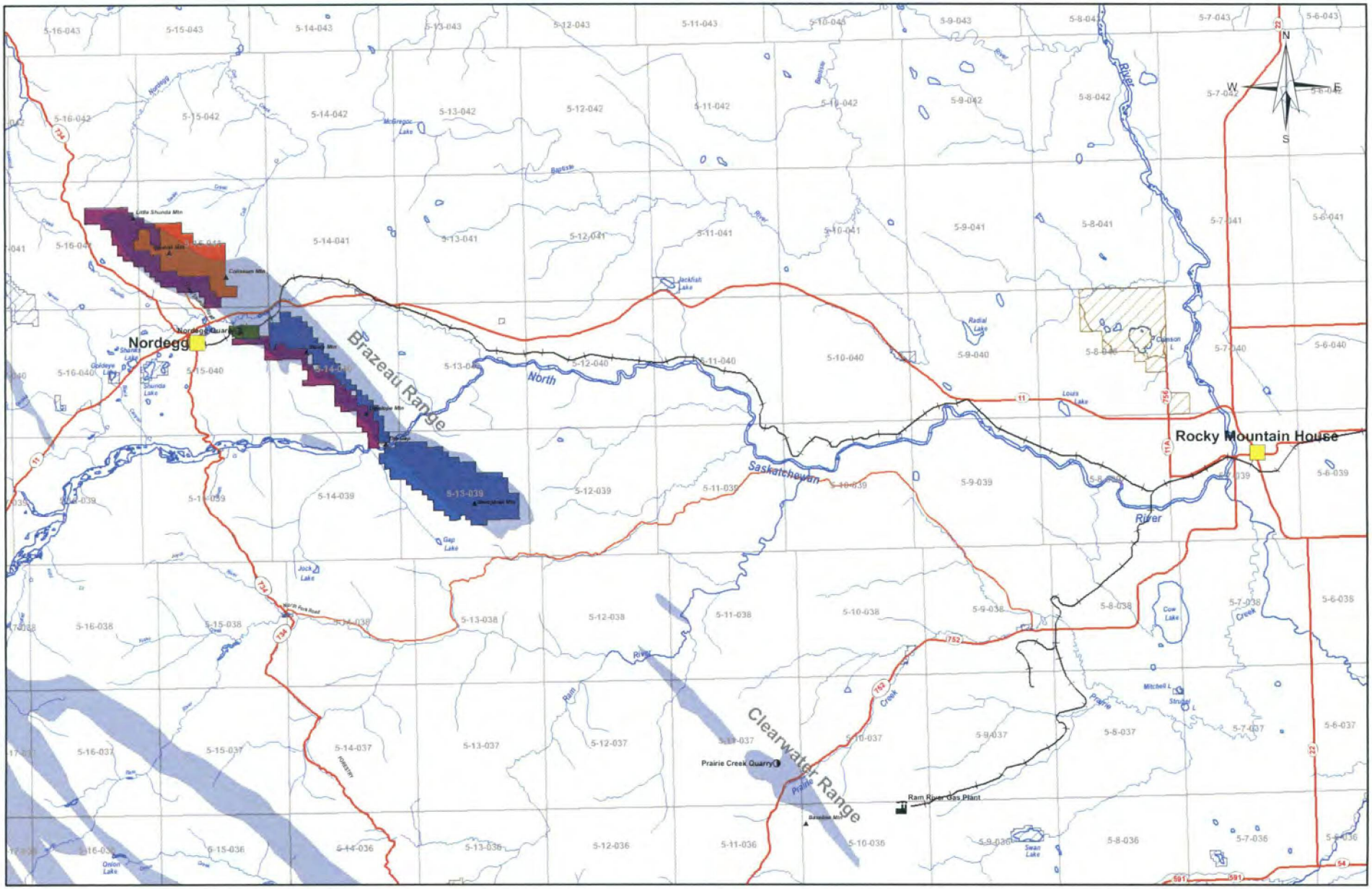
Edmonton, Alberta

BRAZEAU RANGE,
WEST-CENTRAL ALBERTA

Fig. 3.1
Property Location

WM 2010.01



Legend

Graymont Land Holdings

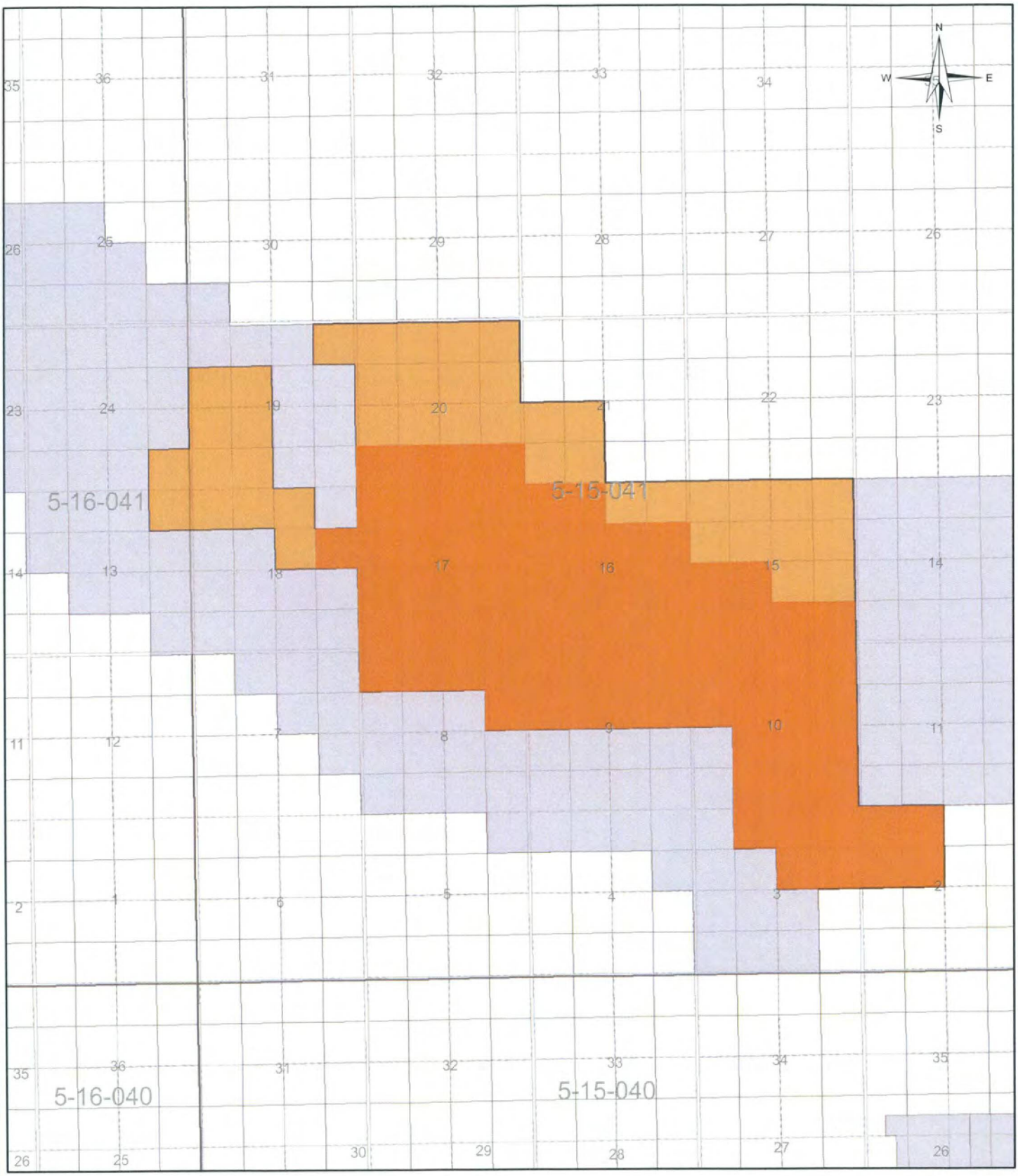
GRAYMONT WESTERN CANADA INC.

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

SHUNDA MOUNTAIN PERMIT
WEST-CENTRAL ALBERTA

Fig 3.2
Access Map

WM 2010.05



Legend

Land Holdings

- Shunda Mountain (9308050833)
- Other

Kilometres

0 1 2 3 4

1:50,000

Coordinate System: UTM NAD83, Zone 11N

NOTE: Faded portions are lands to be surrendered

GRAYMONT WESTERN CANADA INC.

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

BRAZEAU RANGE
WEST-CENTRAL ALBERTA

Fig. 4.1
Shunda Mountain Permit

WM 2010.05

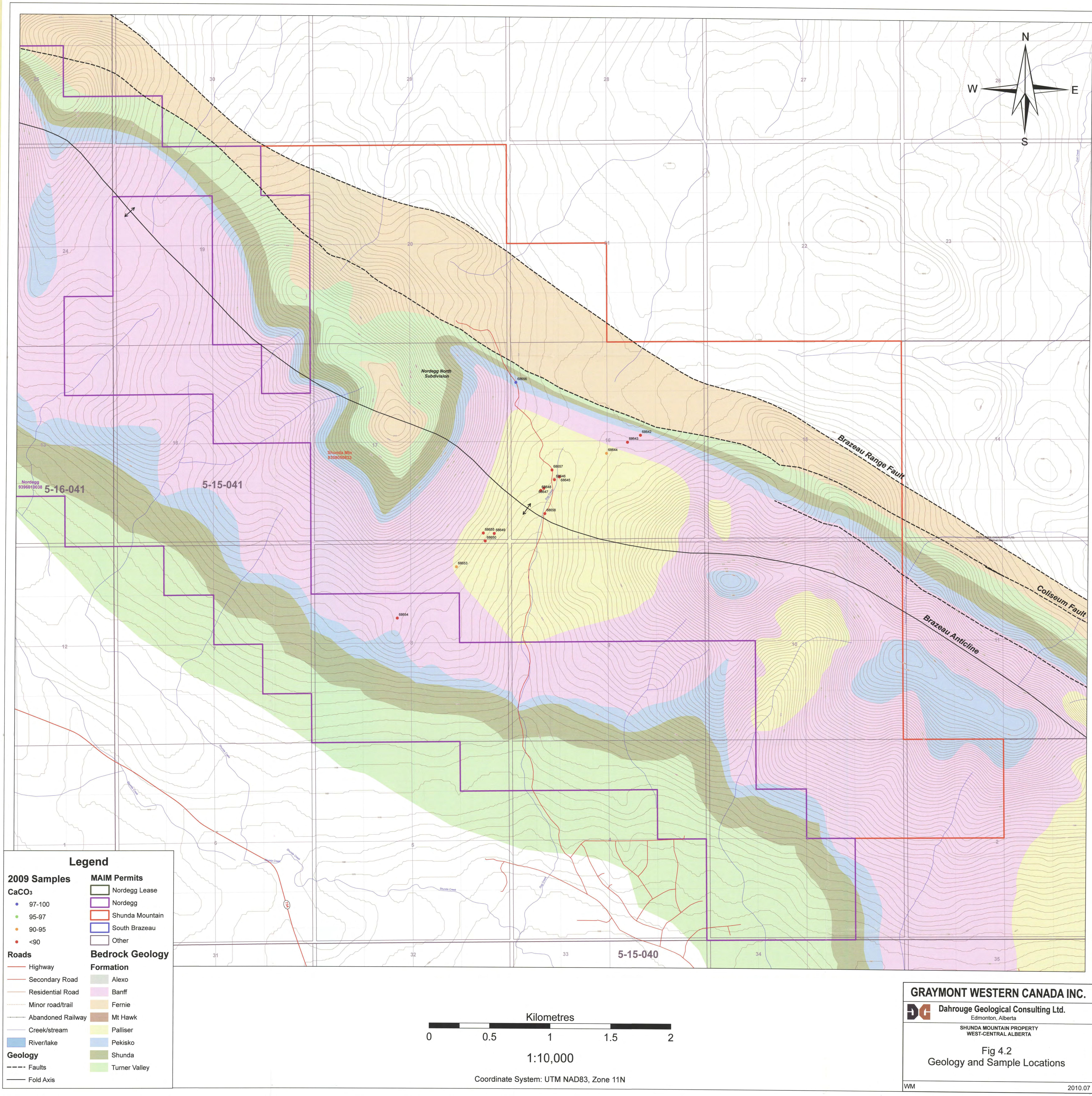


Fig 4.2
Geology and Sample Locations