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BC Geological Survey

Assessment Report
Title Page and Summary

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NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2009

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event No. 4466282

PROPERTY NAME: Bonanza Lake Property

CLAIM NAME(S) (on which the work was done): NIM 19-22

COMMODITIES SOUGHT: Limestone

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Nanaimo

NTS/BCGS: 92L07, 92L10

LATITUDE: 50 ° 27 ' 30 " **LONGITUDE:** 126 ° 49 ' 45 " **(at centre of work)**

OWNER(S):
1) Graymont Western Canada Inc.
2)

MAILING ADDRESS:
190, 3025 - 12 Street NE
Calgary, AB. T2E 7J2

OPERATOR(S) [who paid for the work]:
1) Graymont Western Canada Inc.
2)

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190, 3025 - 12 Street NE
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PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Carbonates, limestone, Triassic, Vancouver Group, Quatsino Formation

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
2009: Ass. Rpt. 30565; 2000: Ass. Rpt. 26386; Ass. Rpt. 26136

Next Page

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)	1:20,000		16,622.56
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	16,622.56

GRAYMONT WESTERN CANADA INC.

2009 EXPLORATION AND FIELDWORK ON THE BONANZA LAKE PROPERTY

SOUTH OF BEAVER COVE, BRITISH COLUMBIA

Nanaimo Mining Division

NIM 19-22

Geographic Coordinates
50° 28' N
126° 50' W

NTS Sheets 92 L/7 and 10

Owner & Operator: Claims NIM 19-22
Graymont Western Canada Inc.
190, 3025 - 12 Street NE
Calgary, Alberta T2E 7J2

Consultant: Dahrouge Geological Consulting Ltd.
18, 10509 - 81 Avenue
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Date Submitted: April 1, 2010

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1. INTRODUCTION

Examination of the Nimpkish Lake area for high-calcium limestone commenced in 1993. Based on this exploration, Ecowaste Industries Ltd. (Ecowaste), a wholly-owned subsidiary of Graymont Western Canada Inc. (Graymont), acquired claims in 1993, 1994, and 1999. Claims NIM 1, and NIM 4 to 13, were staked to cover high-calcium limestone deposits of the Quatsino Formation east of Nimpkish Lake. Exploration in the 1990's included surface mapping and sampling, and a ground magnetometer survey. A drill program was conducted in 2000, involving the completion of 22 drill holes. Following a period of relative inactivity, Graymont staked additional claims, NIM 14 and 15, in the Fall of 2007, and NIM 16 in the Spring of 2008. Due to promising results obtained in a sampling program conducted in May of 2008, claims NIM 17 and 18 were acquired in July, 2008. Following another successful exploration program conducted in the Fall of 2008, the Bonanza Lake Property was staked, comprised of claims NIM 19 through 22. In addition, all of the Ecowaste claims were converted to the property of Graymont in 2007 for consistency of their B.C. properties.

Dahrouge Geological Consulting Ltd. (Dahrouge) and Graymont carried out a brief prospecting program within the Bonanza Lake claims in June, 2009. A total of 4 samples were collected and analyzed to compare the limestone quality in the Bonanza Lake area to the Nimpkish Lake area. A significant amount of time was spent outlining outcrop areas and access roads, and identifying the frequency and concentration of Tertiary dykes within and near the property. This report describes the 2009 property visit and provides an interpretation of the results. The 2009 exploration was authorized by Bob Robison of Graymont Western Canada Inc.

A statement of work has been filed with respect to the exploration described in this report (event number 4466282).

1.1 GEOGRAPHIC SETTING

1.1.1 Location and Access of the Bonanza Lake Claims

The Bonanza Lake Property is within the Insular Belt near the northern end of Vancouver Island, southwestern British Columbia. It lies east of Nimpkish Lake and south of Beaver Cove, about 46 km southeast of the town of Port Hardy, 15 km southeast of the town of Port McNeill, and 5 km south of Beaver Cove (Fig. 1.1).

Port Hardy, with a population of about 5,000, is about 450 km from Victoria via Highways 1 and 19 (Fig. 1.2). Port Hardy is serviced by daily air transport from Vancouver and has facilities and services expected for a community of its size. The regional economy, and that of the local communities, is primarily based on lumber, fishing, and tourism.

Port McNeill, with year-round facilities, is about 40 km southeast of Port Hardy via Highway 19. It is located on Broughton Strait, near the north end of the inside passage of Vancouver Island. It has a population of about 2,700 and is a service centre for the forestry and fishing industries, with several motels and restaurants.

From Port McNeill, the Bonanza Lake Property is accessed by driving easterly and southeasterly along paved Highway 19 (Island Highway). About 8 km from the Port McNeill turnoff along Highway 19, Beaver Cove Road turns east towards Telegraph Cove. Approximately 11 km from the Highway along Beaver Cove Road, a gravel logging road provides southern access at a T-intersection. A southeasterly fork, about 1 km along the gravel road, roughly parallels the railway tracks and provides access to claim NIM 20. In addition, there are abundant logging roads and spurs that provide excellent access to the claims and surrounding area.

The network of logging roads that traverse the Bonanza Lake Property and area are owned and maintained by Western Forest Products Ltd. and Lemare Lake Logging. Access to the roads and other surface rights are not restricted; however, contacting the companies prior to utilizing the roads is highly recommended.

1.1.2 Topography, Vegetation and Climate

Topography in the Bonanza Lake area is characterized by north-trending ridges and knobs of moderate relief cut by small valleys (Fig. 1.3). Elevations in the Bonanza Lake claims range from 20 m along Tsulton River up to about 860 m within claim NIM 21. Many of the ridges have been clear-cut logged within recent years. Portions that have been logged more than 10 years ago are covered by decomposing slash and a very thick cover of secondary growth. The remainder of the property is covered with mature forest. Forest vegetation is variable and consists of tall stands of Alder, Balsam, Cedar, Hemlock, Douglas Fir, Poplar, and Spruce. Spruce and Cedar are predominant in areas of lower relief with poor drainage, while Douglas Fir and Hemlock are more common in areas with well developed drainage. Tree cover is widely spaced with fairly open undergrowth. Near impenetrable underbrush is formed locally by Alder and Salal, or by immature Cedar and Spruce in areas of recent logging.

The area is considered part of the coastal rainforest climatic zone with generally mild and wet conditions. Temperatures rarely exceed 25°C during summer months and less than -20°C during winter months. Precipitation is considered heavy throughout the region, with average annual precipitation of between 500 and 610 cm. Most precipitation occurs during winter months, however heavy and prolonged rainfall during summer months is not uncommon.

1.2 PROPERTY

The Bonanza Lake Property consists of a total of 4 contiguous claims, NIM 19-22 (Table 1.1, Fig. 1.4). The claims were staked in February, 2009 through the BC Mineral Titles' online staking system.

TABLE 1.1: LIST OF BONANZA LAKE CLAIMS

Claim Name	Tenure Number	Record Date	Current Expiry Date	Expected Expiry Date
NIM 19	598752	2009 02 05	2010 02 05	2011 12 31
NIM 20	598753	2009 02 05	2010 02 05	2011 12 31
NIM 21	598754	2009 02 05	2010 02 05	2011 12 31
NIM 22	598755	2009 02 05	2010 02 05	2011 12 31

1.3 HISTORY AND PREVIOUS INVESTIGATIONS

In 1993, Dr. Stanley Krukowski of Continental Lime Inc. recognized the potential for deposits of high-calcium limestone within the vicinity of Nimpkish Lake. Several claims were staked on the northeast side of Nimpkish Lake in the latter part of 1993. Subsequently, 104 samples (Krukowski, 1993) were collected from the extensive network of roads within the western part of the property and several in the vicinity of Noomas rail crossing.

In 1999, a total of 125 surface samples were collected from 17 sample sections and an area of approximately 7 km^2 was geologically mapped at a scale of 1:7,500. Additional work during 2000 included 22 NQ-sized diamond drill holes, totalling 2,464.3 metres, to assess the quarriability of the Centre Ridge area on the NIM 4 claim. As Dahrouge and Pana (2000) and Gidluck and Stabb (2000) provide detailed descriptions of the exploration and results, the information is not repeated herein. In 2008, the Nimpkish Claims were explored again, including some initial prospecting of the eastern (Bonanza) belt of Quatsino Formation (Klarenbach and Kluczny, 2009).

1.4 PURPOSE OF WORK

The work described in this report was undertaken as a followup to exploration in the Nimpkish Lake area to provide information on the quality and extent of limestone within and surrounding the Bonanza Lake area. Outlining outcrop areas and access roads and identifying Tertiary dykes were secondary objectives. The work focused on the recently acquired property and surrounding area.

1.5 SUMMARY OF WORK

In June 2009, Dahrouge Geological Consulting Ltd. and Graymont Western Canada Inc., conducted exploration for carbonate lithotypes within and surrounding the Bonanza Lake Property. Exploration consisted of acquiring rock samples from both the Bonanza Lake and Nimpkish Lake properties for comparative purposes, outlining outcrops and potential access roads, and identifying the concentration and frequency of Tertiary dykes.

A total of 4 samples were examined and collected at 4 different locations from the Bonanza and Nimpkish Lake claims (Fig. 1.3). Samples were collected by chipping outcrops perpendicular to defined or assumed bedding. Bedding was commonly difficult to see due to the very-fine-grained homogeneous nature of the limestone. Where bedding was uncertain or had been obscured by structure, stratigraphic thicknesses were calculated using orientations from adjacent units. Where more than one bedding orientation was measured, the mean orientation was used.

Geological observations were recorded, including lithologic information, measurements of structural elements, and other pertinent details (Appendix 4). A solution of 6% HCl was used to assess carbonate quality in the field. Samples were shipped to Graymont's lab in Salt Lake City, Utah for preparation and analyses by standard ICP techniques, and LOI. Analytical procedures are described in Appendix 2 and assay sheets are provided in Appendix 3.

Field maps were completed on 1:10,000 and 1:20,000 scale map sheets and concentrated on the Bonanza Lake claims. A magnetic declination of 18½° east was used. Areas with abundant or highly concentrated Tertiary dykes were noted and marked (Fig. 1.3).

Personnel were based in a motel in Port McNeill. Access to and from the property was by a rented four-wheel-drive vehicle. Access throughout the property was by SUV where possible, and by hiking where necessary. Notes were compiled regarding access and current road status, as roads in the area are commonly rehabilitated and overgrown or reactivated for logging purposes.

2. REGIONAL GEOLOGY

The Insular Belt of the Pacific Margin comprises several discrete terranes of disparate origin, the largest of which are Alexander and Wrangellia terranes (Gabrielse et al., 1991). The Wrangellia Terrane is a complex of Paleozoic through Cenozoic volcanic arc, oceanic, and clastic wedge assemblages comprising the modern Pacific Continental Margin from Vancouver Island northward to Queen Charlotte Islands. It is disrupted by northwesterly trending, dextral, transcurrent faults, westerly verging thrust faults, plutonic rocks, and anticlinoria.

Within the Insular Belt of southwestern British Columbia, high-calcium limestone has been noted in the Mount Mark Formation of the Sicker Group, and the Quatsino and Parsons Bay formations of the Vancouver Group (Table 2.1).

TABLE 2.1 STRATIGRAPHY OF THE NORTHERN PART OF VANCOUVER ISLAND *

Period	Stratigraphic Unit			
	Group	**Formation**	**Lithology**	**Approx. Thick. (m)**
Tertiary	-	Tertiary Volcanics and Sediments		305
	-	Tertiary Intrusions	Quartz diorite	-
Cretaceous	Nanaimo		clastics, coal	125
	Queen Charlotte		clastics, coal	305 - 1050
	-	Longarm Formation	clastics	60 - 400
	-	Pacific Rim Sequence	clastics	-
Jurassic	-	Island Intrusions	Granitic intrusives	-
	Vancouver	Bonanza	volcanics	305 - 5650
Triassic	Vancouver	Harbledown	clastics and tuffs	
		Parsons Bay[1] - Sutton	calcareous clastics and limestone	305 - 710
		Quatsino[2]	limestone	30 - 750
		Karmutsen	volcanics	3000 - 6100
		Sediment Sill Unit	clastics and volcanics	750
Pennsylvanian	Buttle Lake°	Mount Mark (Buttle Lake)	limestone	215

* Modified after Muller et al. (1974) and Fischl (1992)
° Formerly of the Sicker Group (Massey and Friday, 1988)
[1] Equivalent to the Sutton Formation of western Vancouver Island (Jeletzky,1970)
[2] In part, previously mapped as Sutton Formation on southern Vancouver Island and equivalent to the Marble Bay Formation of Texada Island (Fischl, 1992)

2.1 STRATIGRAPHY

2.1.1 Mount Mark (Buttle Lake) Formation

The Pennsylvanian Mount Mark Formation of the Buttle Lake Group (Massey and Friday, 1988) conformably overlies and grades into the Cameron River Formation of the Sicker Group (Table 2.1). The Mount Mark Formation is equivalent to the Buttle Lake Formation (Massey and Friday, 1988). It consists of massive, fine- to coarse-grained, crinoidal limestone beds with minor argillaceous and chert interbeds. Significant outcrops of Mount Mark Formation are found within the Cowichan uplift of southeastern Vancouver Island, near Tofino along the west coast, within the Buttle Lake Uplift between 50 to 100 km southeast of Nimpkish Lake, and along the southern part of Texada Island. It obtains thicknesses of 150 m near Buttle Lake and up to 300 m within the Cowichan uplift.

2.1.2 Quatsino Formation

The Upper Triassic Quatsino Formation of the Vancouver Group paraconformably overlies and is interbedded with volcanic and limestone litho-types of the Karmutsen Formation. The Karmutsen Formation includes basaltic and andesitic flows, tuffs, agglomerates, and breccias, with minor interbedded limestone (Hoadley, 1953). The Karmutsen is widely exposed along the southwest Pacific margin (Muller et al., 1974).

Extensive outcrops of the Quatsino Formation are known from Texada and Vancouver islands. Within the northern part of Vancouver Island, the formation is exposed along three parallel belts (Fig. 2.1):

Belt *	Length	Location
(West) Quatsino-Tlupana	165 km	from Quatsino Sound to Tlupana Inlet
(Central) Nimpkish	39 km	east and south of Nimpkish Lake
(East) Bonanza	30 km	west of Telegraph Cove to Bonanza Lake

* After McCammon (1968)

The Quatsino Formation attains a maximum thickness of 760 m at a location immediately south of Alice Lake, within the western belt (Fischl, 1992). Near Nimpkish Lake, within the central belt, Coffin and Soux (1988) reported a drill intersection thickness of about 135 m for the lower part of the Quatsino Formation. Within northern Vancouver Island, the Quatsino is divisible into lower and upper parts (Hoadley, 1953 and Muller et al., 1974). The lower part, with highly variable thickness (Table 2.2), is characterized as a thick-bedded to massive, brownish-grey to black, fine-grained to microcrystalline limestone (Muller et al., 1974) and includes a few thin interbeds of andesite or basalt (Hoadley, 1953).

TABLE 2.2 MEASURED THICKNESS OF THE QUATSINO FORMATION FROM THE NORTHERN PART OF VANCOUVER ISLAND

Location	Quatsino Formation *		
	Lower Part Approx. Thick. (m)	Upper Part Approx. Thick. (m)	Description
Western Belt			
Alice Lake	488	302	- immediately south of Alice Lake
Klaskino	25	49	- along north side of Klaskino Inlet (50°18'50", 127°51'50")
Central Nimpkish Belt			
Tsulton Property°	~ 135	-	- opposite halfway Islands on Nimpkish Lake
Eastern Belt			
Beaver Cove	76 +	140	- along a tributary of Tsulton River south of Beaver Cove (50°29'50", 126°53'20")

* Modified after Muller et al. (1974)
° After Coffin and Soux (1988; Appendix 2)

The upper part of the Quatsino Formation consists of thin-bedded limestone with black calcareous siltstone interbeds and laminations. Upwards, laminae and interbeds of calcareous black shale increase in frequency and thickness. Toward the top of the unit, the limestone is increasingly dark-grey or black, due to increasing quantities of carbonaceous matter (Hoadley, 1953). Bedding and color banding is distinctive and well preserved. Locally the upper part contains abundant ammonites and pelecypods (Muller et al., 1974).

Toward central and southern Vancouver Island, the Quatsino Formation thins considerably and is complicated by intense faulting and folding. According to Fischl (1992), it is less than 75 m thick at Cowichan Lake, about 40 km south of Nanaimo.

On Texada Island, the Quatsino Formation is divisible into a northern and southern belt. The northern belt is up to 3 km wide by 13 km long and the southern belt, which is located on the southwest coast, is up to 6 km long. Based on chemical composition, Mathews and McCammon (1957) divided the northern belt into three members, each up to 200 m thick. The lowermost member is composed predominantly of high-calcium limestone; the middle member is predominantly high-calcium limestone with some dolomitic interbeds; the upper member is dominantly dolomite and dolomitic limestone.

2.1.3 Parsons Bay Formation

The Parsons Bay Formation of the Vancouver Group conformably overlies and is interbedded with limestones of the underlying Quatsino Formation. The lower part consists of light-grey limestone with laminae and thin interbeds of calcareous black shale (Muller et al., 1974). The Parsons Bay Formation has a similar distribution to the Quatsino Formation. Near Alice Lake, it is up to 610 m thick and is only about 60 m thick near Beaver Cove (Muller et al., 1974).

Along the west-central part of Vancouver Island, near Checleset Bay, the Parsons Bay Formation includes a massive limestone unit between 18 and 27 m thick within its upper part, which was termed the 'Sutton Limestone Formation' by Jeletzky (1970). Near Smith Cove, on the southern side of Quatsino Inlet, the Sutton Formation is divisible into upper and lower members. Jeletzky (1976) described the Upper Limestone Member as predominately quite pure, grey, well-bedded limestone up to 45 m thick.

2.2 INTRUSIONS

2.2.1 Island Intrusions

Within the northern part of Vancouver Island, Jurassic dykes, sills, stocks, and batholiths are widespread. The Island Intrusions (Eastwood, 1965), which have invaded all rock types, are medium- to coarse-grained and range in composition from gabbro to quartz monzonite. Typically elongate in a northwesterly direction, they form narrow 3 km to 8 km wide northwesterly trending belts separated by Upper Triassic volcanic and sedimentary rocks (Hoadley, 1953). The intrusive belts are up to 80 km in length and show a pronounced decrease in size towards the western part of Vancouver Island. Localized recurrent folding of the Quatsino Formation, along northwesterly axes, was accompanied by emplacement of andesitic sills and dykes (Carlisle, 1972). According to Hoadley (1953),

> "The fact that the lineation is more or less parallel with the general fold structure of the invaded rocks indicates that the intrusions were associated with orogenic disturbances, and that they were intruded at about the time the invaded rocks were folded. They were probably guided in part by contemporaneous faults."

Intense metamorphism associated within the emplacement of large scale batholiths and stocks is common. Most bodies exhibit well developed intrusive breccias within marginal zones. Within a few kilometres of the intrusive bodies, limestone lithotypes can be strongly contorted, fractured, and jointed, cut by numerous dykes, and altered to calc-silicate minerals. Skarn mineralization is common; however, it rarely results in the complete alteration of limestone bodies (Eastwood, 1965).

Smaller stocks, sills, and dykes genetically related to the Island Intrusions generally exhibit limited metamorphism and sharp contacts with the surrounding country rock. However, these intrusive bodies are most abundant within the contact aureole of the larger batholiths.

2.2.2 Nimpkish Intrusions

The Nimpkish Batholith is an irregular-shaped intrusive situated between Nimpkish Lake southeasterly to Woss Lake, where it is in tectonic contact with the Vernon Batholith. Muller et al. (1974) include the Bonanza Batholith along the eastern shore of Bonanza Lake and several smaller plutons in the vicinity of Beaver Cove within this group. These intrusives are evident throughout the entire Vancouver Group.

Contacts of the Nimpkish Batholith are highly irregular and include a large number of small sills and dykes (Gunning, 1932b), which are

> "...frequently much contorted, fractured, and sheared near the intrusive and in a number of places are silicified and mineralized with pyrite, pyrrhotite and calcite. In a few places, and particularly where the granodiorite intrudes limestone, contact metamorphic silicates, magnetite, and copper, iron or zinc sulphides are quite extensively developed."

2.2.3 Tertiary Intrusions

Small Tertiary stocks to medium intrusive bodies, commonly as dykes, sills and small plutons, are exposed throughout the entire length of Vancouver Island. These rocks vary widely in size, texture, and mineralogical composition and include medium- to coarse-grained granite porphyry, diorite porphyry, gabbro, and finer-grained dacitic rocks.

According to Hoadley (1953), the Tertiary intrusions are most commonly dark-green to black, diabasic gabbro dykes, which vary in width from a few centimetres up to 5 m. Furthermore (Hoadley, 1953),

> "where these dykes occur in Vancouver Group rocks they are almost impossible to distinguish in the field from dykes associated with the Triassic volcanic rocks."

Near Port Alberni, Massey and Friday (1989) note that these intrusives occur as dykes up to 3 m wide and are commonly found along fault zones, which may have acted as conduits for emplacement.

2.3 STRUCTURE

The northern part of Vancouver Island is dominated by north to northwesterly trending anticlinoria, which are flanked by fault blocks with outward dipping stratigraphy. The region is cut by steep normal or strike-slip vertical faults. Detailed accounts of regional structure are available in Hoadley (1953) and Muller et al. (1974).

The main structural elements of the Nimpkish Lake Block from northeast to southwest are Bonanza Fault, Nimpkish Syncline, and Nimpkish Fault. Bonanza and Nimpkish faults define the respective eastern and western boundaries of Nimpkish Block. Both structures have variable amounts of displacement and are in part defined by valley lineaments.

3. PROPERTY GEOLOGY

3.1 STRATIGRAPHY AND LITHOLOGY

As only initial prospecting work has been performed on the Bonanza Lake claims, a detailed description of the property geology is not yet possible. During the 2009 exploration, three lithological units were identified on the property: the Karmutsen, Parson's Bay and Quatsino formations. Similar to the Nimpkish Lake area, the Karmutsen Formation comprises incompletely metamorphosed basaltic and andesitic flows, tuffs, agglomerates, and breccias, with minor interbedded limestone (Hoadley, 1953). The high-quality Bonanza Lake limestone occurrences are part of the Quatsino Formation of the Vancouver Group. The Parson's Bay Formation generally consists of low-quality, light-grey limestone with laminae and thin interbeds of calcareous black shale.

Throughout the property, a number of predominately northerly trending, near vertical, dark-green to black mafic dykes, are presumably part of the Tertiary suite of intrusives. The dykes seem to increase in abundance and frequency south of the property.

3.2 RECENT SEDIMENTS AND WEATHERING

Much of the region is covered by a veneer of unconsolidated glacial sediments, which range in thickness up to several metres. Within upland areas, bedrock exposures are common. It is expected that within major valleys such as at Bonanza Lake and Tsulton River, unconsolidated sediments may be tens of metres thick.

Surficial weathering has resulted in a weathering profile that varies from a few centimetres up to several metres thickness. Many of the erosional (topographic) features appear elongate along the pre-existing structural trend. Locally, the bedrock surface is highly irregular.

4. RESULTS OF 2009 EXPLORATION

The exploration program was conducted in order to compare the limestone quality and quarriability of the Bonanza Lake Property to the Nimpkish Lake area. Secondary objectives included outlining outcrop areas, examining the access, and identifying the frequency and concentration of Tertiary dykes and sills within Quatsino Formation limestones.

The 2009 groundwork concentrated on/near the claims NIM 19-22 and was the first exploration program within these claims. Limestone outcrops were examined and sampled at 4 different locations in both the Bonanza and Nimpkish Lake areas (Fig 1.3). Visible dykes/sills were rarely identified on the property; however, they seem to increase in concentration and frequency to the south and become very abundant about 5 km south of the property. This may or may not be related to the increase in outcrop exposures to the south.

During the program geological observations were recorded, including lithologic information, measurements of structural elements, and other pertinent details (Appendix 4). A solution of 6% HCl was used to assess carbonate quality in the field. In some instances, interval thicknesses were determined by measuring outcrops perpendicular to bedding, where it could be identified.

Samples from the 2009 program were shipped to Graymont’s lab in Salt Lake City, Utah for preparation and analyses by standard ICP techniques, and LOI (Appendices 2 and 3). Overall, the limestone quality of the eastern belt of Quatsino limestones near Bonanza Lake are comparable to the high-quality samples collected near Nimpkish Lake. The sample collected near the northern end of the Bonanza Lake claims returned values of 97.29% $CaCO_3$, 0.52% $MgCO_3$ and 0.72% SiO_2, which is quite similar to the average of 96.36% $CaCO_3$, 1.40% $MgCO_3$ and 0.97% SiO_2 from the Nimpkish Lake samples collected in 2009.

5. DISCUSSION AND CONCLUSIONS

Within the Bonanza Lake and Nimpkish Lake areas, intervals of the Upper Triassic Quatsino Formation were tested by measuring and sampling stratigraphic sections. A total of 4 samples were collected; as distinct stratigraphic markers are difficult to identify within the Quatsino Formation, it is very likely only a portion of the lower part of the formation was sampled. In addition, the area was examined in detail with an attempt to identify the presence of dykes/sills, as they will present a challenge to any future development of limestone in the area.

The carbonates examined on the Bonanza Lake Property were high-quality limestones and are similar to the high-quality Quatsino Formation outcrops in the Nimpkish Lake area. Analyses from both areas returned values in excess of 95% $CaCO_3$ with relatively minor amounts of $MgCO_3$ and SiO_2.

Dykes and/or sills do not appear to be prevalent within the Bonanza Lake Property; however, there is a pronounced increase in concentration and frequency of dykes just a few kilometres south of the property. A detailed magnetic survey will be required in order to verify the presence/absence of intrusives within the property.

The excellent quality and ideal logistical location of carbonates of the Quatsino Formation in the Bonanza Lake Property warrant further examination. The claims are located within a few kilometres of a railway and potential loading terminals on Beaver Cove, and therefore have excellent quarriability potential. The next phase of exploration should consist of detailed geologic mapping, limestone sampling, and a detailed magnetic survey to assist with the identification of intrusives.

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

P. Kluczny, B.Sc., Geol. I.T.

Edmonton, Alberta
2010 04 01

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LEGEND

- ○ Provincial capital
- ● Other populated places
- Trans-Canada Highway
- Major road
- Ferry route
- International boundary
- Provincial boundary

GRAYMONT WESTERN CANADA INC.

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

NORTHERN VANCOUVER ISLAND,
SOUTHWESTERN BRITISH COLUMBIA

Fig. 1.1 Location Map

JK 2009.11

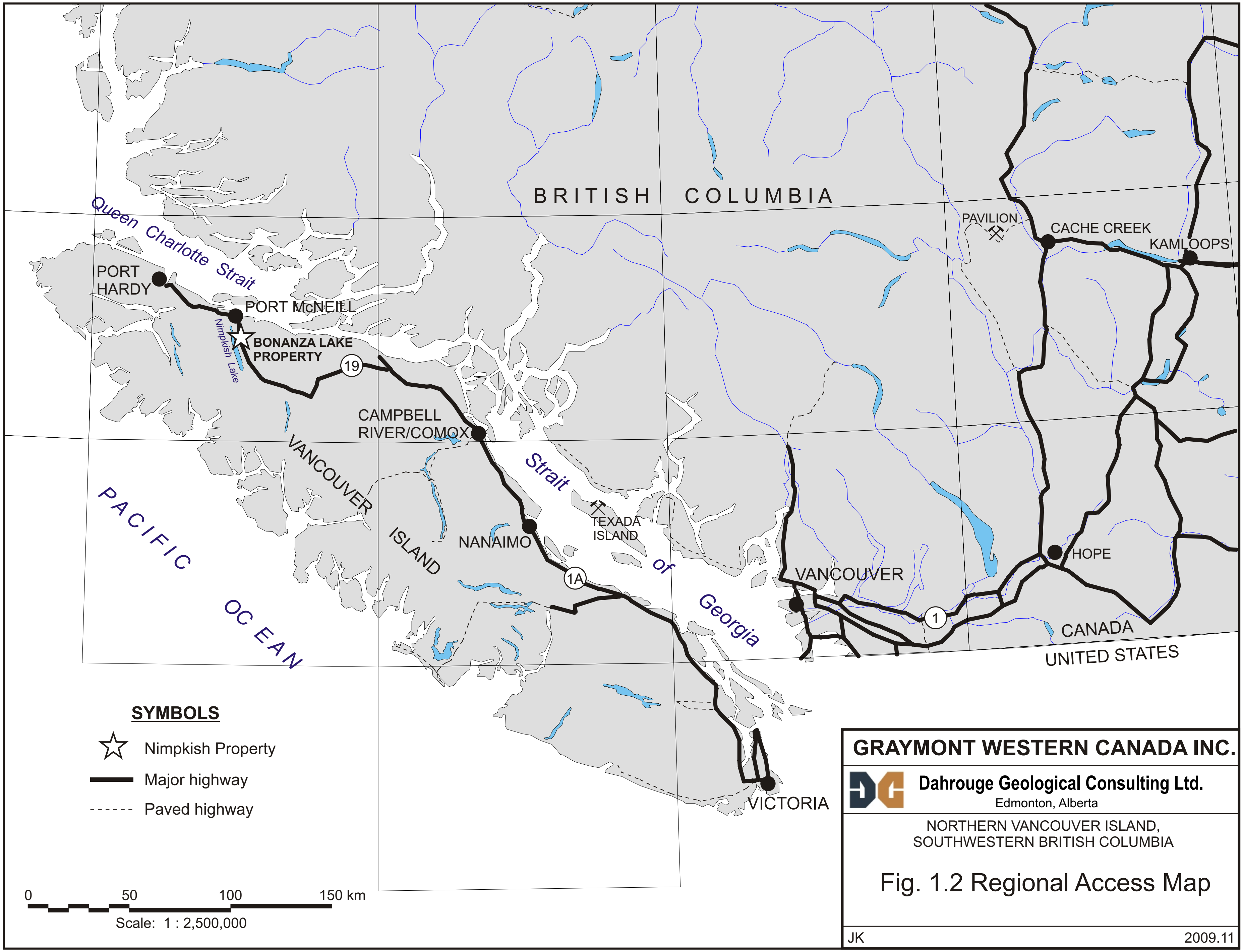
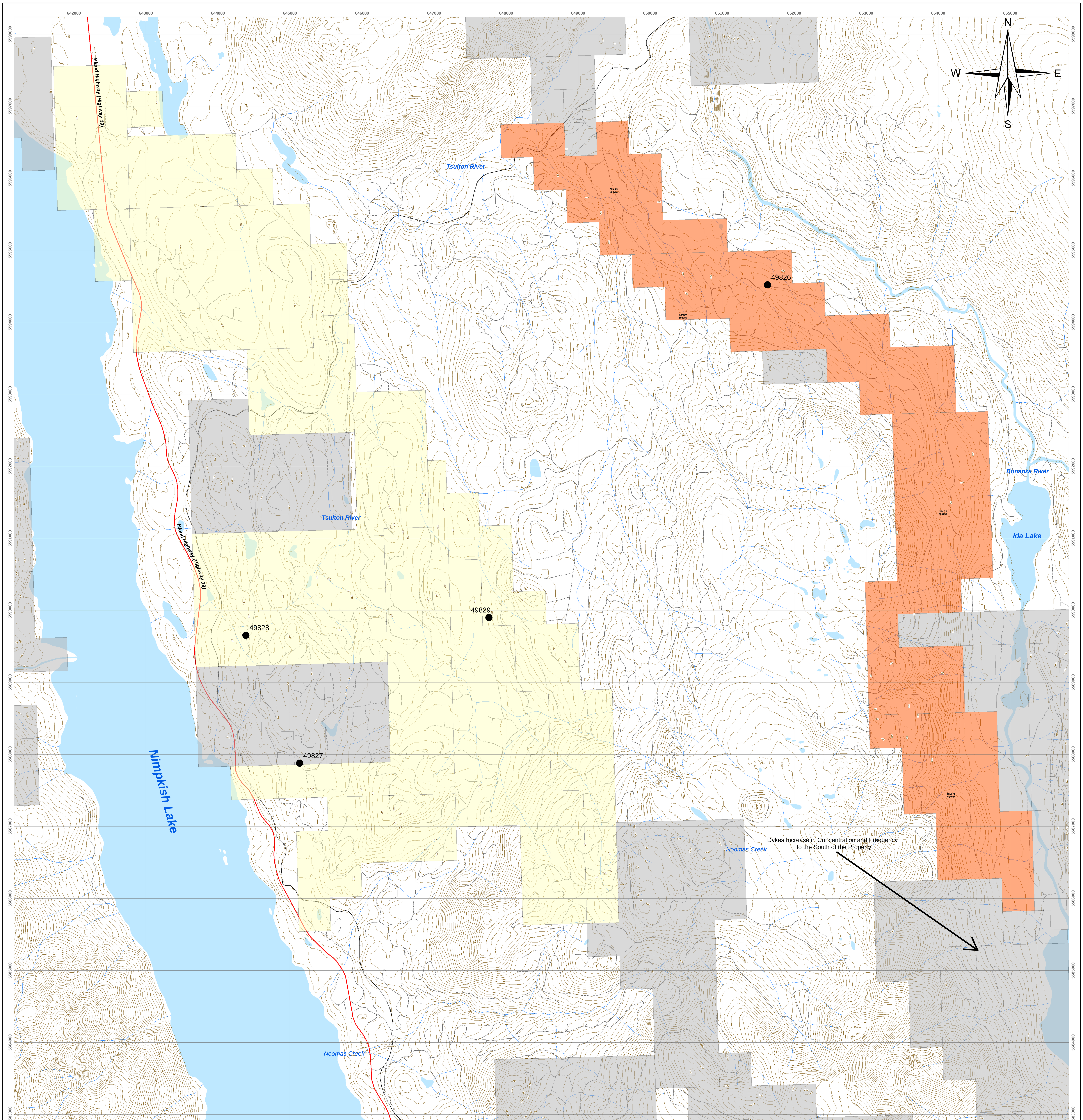


Fig. 1.2 Regional Access Map

F2



Legend

- ● 2009 Samples
- Major Road
- Forestry Roads
- Railway
- Topographic Contours (20 m)
- Creek/stream
- Waterbody

Mineral Tenures

- Bonanza Lake Property
- West Nimpkish Property
- Other

Kilometres

0 1 2 3 4

1:20,000

Coordinate System: UTM NAD83, Zone 9N

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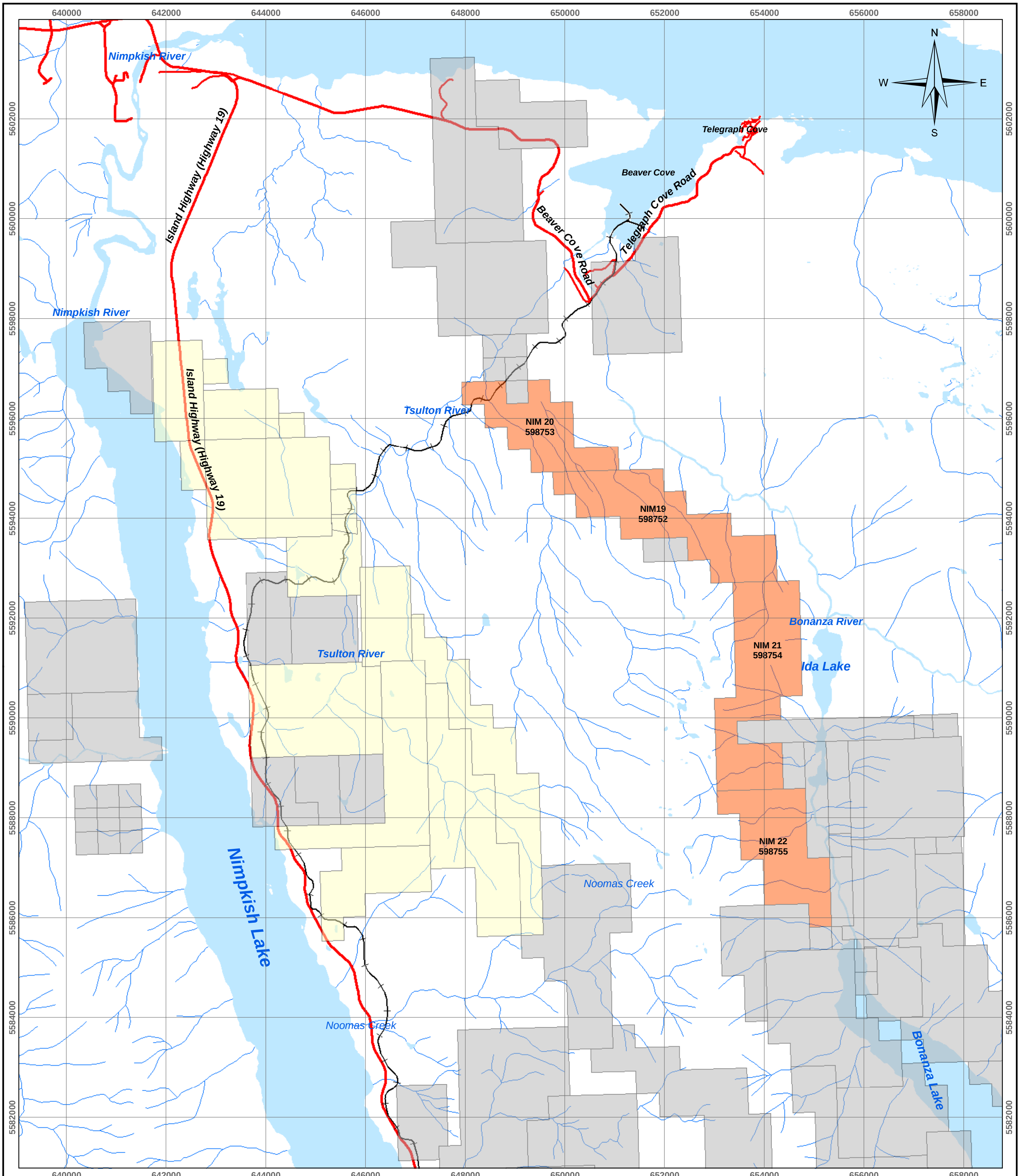
Edmonton, Alberta

BONANZA LAKE PROPERTY
NORTHERN VANCOUVER ISLAND

Fig. 1.3
2009 Exploration

WM 2010.03



Legend

- Railway
- Major Road
- Waterbody
- Creek/stream

Mineral Tenures

- Bonanza Lake Property
- West Nimpkish Property
- Other

Kilometres

0 1 2 3 4

1:100,000

Coordinate System: UTM NAD83, Zone 9N

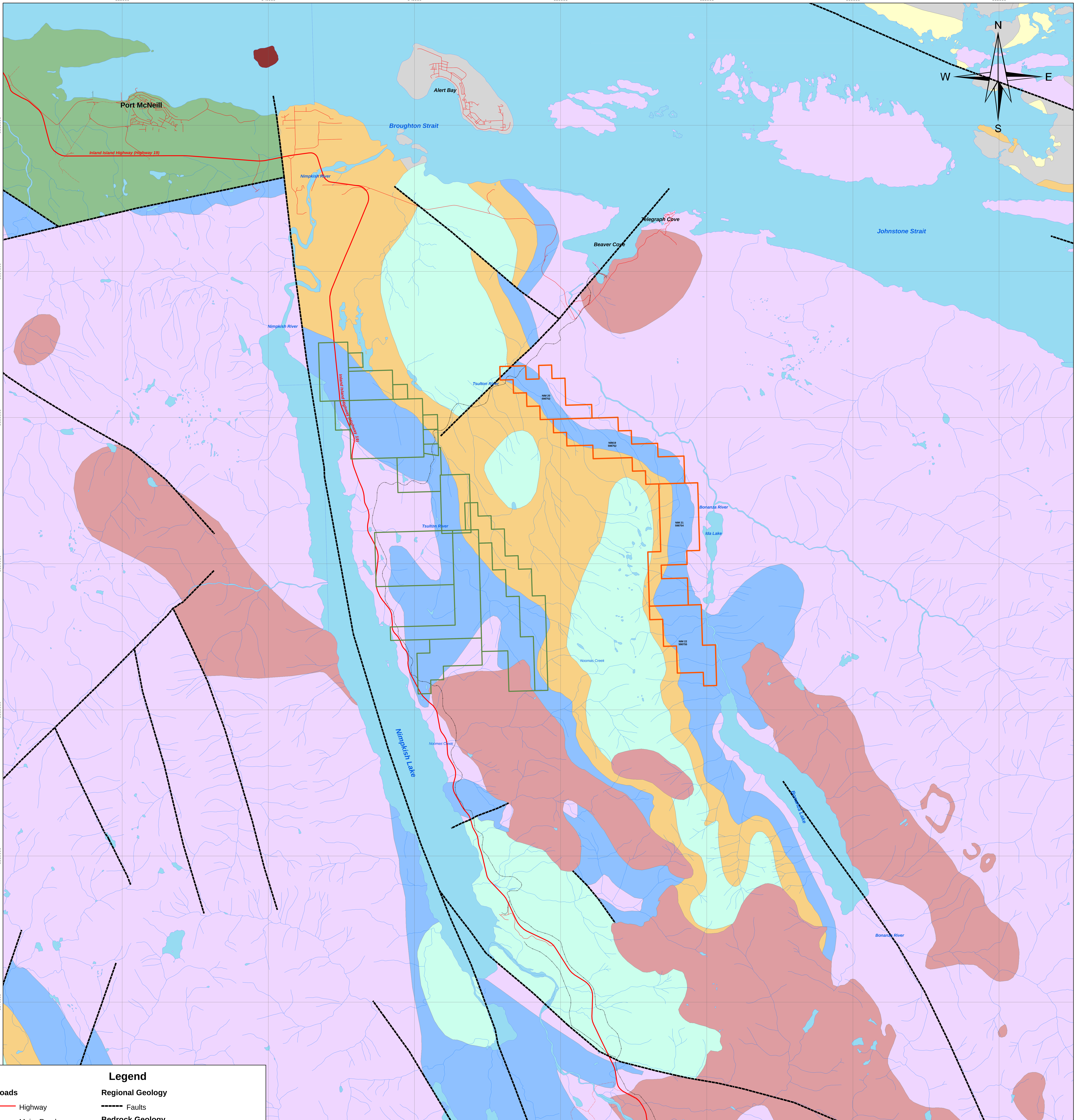
GRAYMONT WESTERN CANADA INC.

Dahrouge Geological Consulting Ltd.
Edmonton, Alberta

BONANZA LAKE PROPERTY,
NORTHERN VANCOUVER ISLAND

Fig. 1.4
Claim Map

WM 2010.03



Legend

Roads

- Highway
- Major Road
- Minor Road
- Trail
- Railway
- Creek/stream
- Waterbody

Mineral Tenures

- Bonanza Lake Property
- West Nimpkish Property

Regional Geology

- Faults

Bedrock Geology

- Alert Bay Volcanics
- Bonanza Group
- Bonaza Group - Harbledown Formation
- Island Plutonic Suite
- Nanaimo Group - Suquash Sequence
- Vancouver Group
- Vancouver Group - Karmutsen Formation
- Vancouver Group - Parson Bay Formation
- Vancouver Group - Quatsino Formation
- Unnamed

Kilometres

0 2 4 6 8

1:50,000

Coordinate System: UTM NAD83, Zone 9N

Regional geology data from GeoFile 2005-02: Digital Geology Map of British Columbia

GRAYMONT WESTERN CANADA INC.

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Edmonton, Alberta

BONANZA LAKE PROPERTY
NORTHERN VANCOUVER ISLAND

Fig. 2.1
Regional Geology

WM 2010.01

APPENDIX 1: ITEMIZED COST STATEMENT

a) Personnel

J. Dahrouge, geologist						
0.40	days		project planning & supervision			
0.40	days	@	$ 595.00	$	238.00	
J. Klarenbach, geologist						
3.00	days		field work and travel June 23-25			
8.30	days		project planning & preparations, reporting			
11.30	days	@	$ 545.00	$	6,158.50	
D. Anderson, geologist						
4.00	days		field work and travel June 22-25			
4.00	days	@	$ 500.00	$	2,000.00	
P. Kluczny, geologist						
6.40	days		project planning & preparations, reporting, create maps			
6.40	days	@	$ 485.00	$	3,104.00	
W. Miller, assistant						
4.60	days		project planning & preparations, data entry and compilation			
4.60	days	@	$ 340.00	$	1,564.00	
						$ 12,826.50

FIELD WORK SUMMARY:
Bonanza Lake Prospecting

Claims NIM 19 through 22; 1604.5 hectares
4 rock samples collected, prospecting area for dykes, outcrop exposures & access
Field Personnel: D. Anderson, J. Klarenbach

b) Food and Accommodation

5	man-days	@	$ 97.36	accommodations	$	486.78	
7	man-days	@	$ 41.28	meals	$	288.99	
							$ 775.77

c) Transportation

Flights:	Airfare to/from Victoria/Campell River	$	1,027.22	
Vehicles:	SUV Rental (JK & DA)	$	379.74	
	Taxi	$	77.53	
	Parking	$	96.00	
	Fuel	$	117.19	
				$ 1,697.69

d) Instrument Rental	Software (ArcGIS)	$	457.05	
				$ 457.05

e) Drilling n/a

f) **Analyses**				Central Lab of Graymont Western U.S. Inc. (4 rock samples)			
4	samples	@	$ 4.50	preparation fee	$ 18.00		
4	samples	@	$ 25.00	sample analysis	$ 100.00		
						$	118.00
g) **Other**							
				Courier and Shipping	$ 55.03		
				Disposable Supplies	$ 343.16		
				Phone Charges	$ 0.56		
				Prints/copies	$ 32.55		
				Plots	$ 316.25		
						$	747.56
Total						$	16,622.56

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

Edmonton, Alberta
April 1, 2010

APPENDIX 2: 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 120ºC. 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.

APPENDIX 3:

ANALYTICAL RESULTS FOR THE 2009 SAMPLES BY

CENTRAL LABORATORY OF GRAYMONT WESTERN US INC.

10/Can Geo/Stone

Sample		% CaCO3	% CaO	% MgCO3	% MgO	% Fe2O3	% Al2O3	ppm SrCO3	ppm MnO	% SiO2	ppm BaO	ppm K2O	ppm Na2O	ppm P2O5	ppm TiO2	% S	% LOI	% Total
Bonanza Lake	49826	97.29	**54.51**	0.52	**0.25**	0.106	0.113	4624	78	0.72	55	205	66	691	65	0.081	43.46	99.82
Bonanza Lake	49827	97.44	**54.60**	0.56	**0.27**	0.103	0.089	3584	81	0.84	10	100	28	<100	47	0.001	43.33	99.61
Bonanza Lake	49828	96.38	**54.00**	0.63	**0.30**	0.261	0.269	858	373	1.54	4	733	78	<100	142	0.013	43.09	99.69
Bonanza Lake	49829	95.26	**53.38**	3.03	**1.45**	0.120	0.042	935	91	0.52	3	24	34	<100	35	0.006	43.83	99.45

APPENDIX 4: 2009 SAMPLE DESCRIPTIONS AND ASSAY SUMMARY FROM THE BONANZA LAKE AREA

Notes: Stratigraphic thicknesses are based on measured attitudes of bedding listed below, with appropriate interpolations.
Attitudes are strike and dip (right-hand rule). Samples are listed in numerical order.
Most samples consist of chips at 30 cm intervals. UTM coordinates are NAD83. Station locations are shown in Figure 1.3.

Sample	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 Station (UTM 651632E, 5594519N)										
49826	3	**Mud-Rich Lime Wackestone**, tan and medium-grey weathered, dark-grey fresh, micritic, minor cryptocrystalline, relatively massive, sulfur smell, visible calcite-replaced shell fragments & brachiopods, other unidentifiable fossils up to 2 cm, breaks easily, minor calcite veining and milky white calcite nodules (<1 cm), very good reaction with HCl	97.29	0.52	0.72	0.113	0.106	4624	78	691
Isolated Station (UTM 645134E, 5587879N)										
49827	3	**Lime Mudstone**, dark-grey and buff weathered, light- to dark-grey fresh, micritic, relatively homogeneous aside from color differences, very good reaction with HCl	97.44	0.56	0.84	0.089	0.103	3584	81	<100
Isolated Station (UTM 644387E, 5589654N)										
49828	3	**Lime Mudstone**, medium-grey weathered, dark-grey fresh, minor but distinct orange weathering in lines - don't follow laminae orientations, slight brownish tint common, cryptocrystalline to micritic, homogeneous, moderately fractured, good reaction with HCl, possible bedding 308°/27° NE, fault contact to south 262°/32°N	96.38	0.63	1.54	0.269	0.261	858	373	<100
Isolated Station (UTM 647763E, 5589900N)										
49829	3	**Lime Mudstone**, whitish-grey and medium-brown-grey weathered, medium- to dark-grey fresh	95.26	3.03	0.52	0.042	0.120	935	91	<100

APPENDIX 5: STATEMENT OF QUALIFICATIONS

The field work described in this report was supervised by Jocelyn Klarenbach.

J. Klarenbach 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 P.Geol. with the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.

P.J. Kluczny is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. He obtained a degree in Geology from the University of Alberta, Edmonton in 2006 and has been employed in the mineral exploration industry since. He is registered as a Geol. I.T. with the Association of Professional Engineers, Geologists, and Geophysicists of Alberta.