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ROCHER DEBOULE PROPER	TY C. Me
Rocher Deboule Range Omineca Mining Division British Columbia NTS 93M/4 Latitude 55° 10' North Longitude 127° 38' West	FEB 1 3 2008 FILE NO
For	BC Geological Survey Assessment Report 29677
ROCHER DEBOULE MINERALS C By: A.A. Burgoyne, P.Eng., M.Sc. Burgoyne Geological Inc. 548 Lands End Road North Saanich, BC, V8L 5K9 Andris Kikauka, P.Geo. Geo-Facts Consulting 406 - 4901 East Sooke Road Sooke, BC, VOS 1NO	CORP.
December 18, 2007 Note: Appendix D-K ammended May 22, 2008 A. Kikauka Rocher Deboule Property, British Columbia Burgoyne Geological Inc. Geo-Facts Consulting	

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#### 1.0 Summary

The Rocher Deboule gold-silver-copper-(zinc-lead-cobalt) property ("the Property") in the Omnicea Mining Division, Rocher Deboule Range, is located 8 kilometres south of Hazelton, British Columbia. This is an old mining property and historical underground mine production is recorded from the 1916-1918 and 1952 periods for the Rocher Deboule Mine and intermittently from 1918 through 1928 and 1940-1941 for the Victoria Mine. The Rocher Deboule Mine produced 47,825 tonnes and 139.72 kilograms gold, 2627.5 kilograms of silver, 2,819,810 kilograms of copper and minor lead and zinc. The Victoria Mine produced 81.65 tonnes and 10.14 kilograms of gold, 20,254.5 kilograms of arsenic, 954.5 kilograms of molybdenum and 2235.5 kilograms of cobalt.

The Property consists of 33 mineral tenures totalling 9896 hectares within the Omineca Mining Division. Rocher Deboule Minerals Corp. owns the Property as to 100%.

The Property lies on the northwestern margin of a Late Cretaceous granodiorite pluton intruded into upper Jurassic sediments and upper Cretaceous volcanics where a series of precious-base metal quartz-sulphide veins have had historical mine production. All of the defined mineral showings described in detail, on the Rocher Deboule Property, comprise vein fillings of shear zones, normally in close proximity to the margin of the Rocher Deboule intrusive stock. These mineralized shears closely parallel one set of orthogonal joint pattern caused by the cooling of the stock. The veins all strike in a northeasterly to easterly direction and dip approximately 55 degrees to the north. The veins are found over significant lengths of shear zone, up to 1500 metres, and 200 metres depth, and are locally of very high grade. Economic mineralization, as defined by historical mining on the Rocher Deboule mine, occurred over short strike lengths of 30–75 metres and was concentrated in near vertical shoots

Based on the host lithologies and mapped alteration assemblages, the Rocher Deboule Property is classified as a high sulfidation, intrusive (sediment) hosted, epithermal gold – silver – base metal vein-shear deposit.

The economic potential and Property merit is to be found not only in the historical quartzsulphide veins but also in mineralization and alteration that has copper-gold porphyry and/ or iron oxide-copper-gold (IOCG) affinities and potential. It must be stressed that the vein systems known on the Rocher Deboule Property could be part of a much larger hydrothermal system that are indicative of a porphyry copper (gold) system laterally or possibly at depth. Hydrothermal vein systems, like Rocher Deboule, can be outboard of a typical hydrothermally altered defined porphyry copper (gold) system.

Exploration at the Rocher Deboule and Victoria mines covers the period commencing in the early 1900's through to 2007. Data that is reliable and documented on the Rocher Deboule mine falls into three general periods including the early1950's, 1987- 1990 and 2001-2007. Exploration work by Rocher Deboule Minerals Corp. in 2001-2002, 2004, and 2007 was directed at confirming favourable surface exploration results defined by Southern Gold Resources Ltd. in 1987 and 1988.

Exploration since 1952 has focussed on definition of the known gold-silver-copper quartzsulphide veins on the Rocher Deboule Property. Underground channel sampling results by Western Uranium Cobalt Mines Ltd. in 1952 and Southern Gold Resources Ltd. in 1987 and 1988 defined several areas underground and on surface where potential economic copper and gold-silver vein mineralization is present. Surface geological mapping, geochemical soil (in-situ gold, copper and arsenic) and geophysical (electromagnetic and magnetic) exploration survey also define the surface expression of the veins and provide good exploration targets for further follow-up, including drilling, to expand the known and potential new veins.

Finally, little is mentioned of inter-vein mineralization and alteration in the reports reviewed. Further surface geological mapping should not only focus on the known vein style mineralization and its definition and extensions but on the recognition and definition of hydrothermal alteration of large tonnage, albeit, low grade bulk tonnage porphyry copper (gold) and/or iron oxidecopper-gold style mineralization in veins, disseminations and breccias.

It is the writers opinion that the character and favourable underground and surface sampling results for precious and base metals obtained to date by Rocher Deboule Minerals Corp., Southern Gold Resources Ltd., Western Cobalt Uranium Mines Ltd., and others, are of sufficient merit to warrant a two-phase exploration program on the Property consisting of core drilling, geological mapping, trenching, core drilling, and litho-geochemical sampling, and road improvement followed by additional diamond drilling, and further geological mapping are proposed. Prior to commencement of field work, a detailed evaluation of the Fugro airborne geophysical survey, done in 2007, should be completed. The object of this proposed geological fieldwork is to test the Rocher Deboule No. 1, No. 2 and No. 4 veins, and Victoria No. 1 vein. A concurrent program of drilling, hand trenching, geological mapping and rock chip sampling is required to outline further extensions of other known mineral occurrences and veins including Highland Boy, Cap, and Golden Wonder.

A Stage One portion totalling \$232,500 is recommended. Assuming favourable Phase One results, a Phase Two program of \$350,000 recommended.

## 2.0 Introduction & Terms of Reference

Rocher Deboule Minerals Corp. ("Rocher Deboule") commissioned Burgoyne Geological Inc. ("BGI") and Geo-Facts Consulting to initiate a comprehensive review and evaluation of all pertinent geological, exploration, mining, and other data that is available on the company's Rocher Deboule gold-silver-copper-zinc-lead-uranium-tungsten property ("the Property") in the Omnicea Mining Division, Rocher Deboule Range 8 kilometres south of Hazelton, BC. This is an old mining property and historical underground mine production is recorded from the 1916-1918 and 1952 periods. The Property lies on the northwestern margin of a granodiorite pluton intruded into sediments and volcanics where a series of precious-base metal quartz-sulphide veins have had historical mine production. The economic potential and Property merit is to be found in the quartz-sulphide veins and in the mineralization and alteration that has copper-gold porphyry and iron oxide-copper-gold (IOCG) potential.

This Property was evaluated during November and December 2007. The writers have conferred with Mr. Larry Reaugh, President of Rocher Deboule Minerals Corp. and conducted extensive technical discussions and review of the data. Mr. Andris Kikauka, P.Geo., a Director of Rocher Deboule, completed mineral exploration on the property for Rocher Deboule in October 2001 and May 2002 (Kikauka 2002) and in June and August 2004 (Kikauka 2004). Mr. Kikauka, as internal QP, was also responsible for the 2007 core diamond drilling and sampling program on the property. A review and evaluation was made of all published data and some unpublished reports including old mining production and "reserve" reports, Government geological and mining reports, assessment reports and press releases. A variety of plans, maps, including extensive underground coverage from the 1916-1917 and 1952 mining periods form the basis for this report.

Mr. Kikauka, P.Geo. is the internal QP for the Rocher Deboule property. Mr. Kikauka was on the property during July and September 2007 to supervise the drilling and sampling program. The mineral claim ownership records were checked at the Minerals Title office of the BC Ministry of Mines and Energy in Victoria, BC. This 43-101 report is an update of an earlier one completed in February 2006 by Burgoyne (2006).

This Report is a summary of findings and is planned to meet the Technical Report requirements for NI 43-101. It is understood that this document will be filled with the TSE Venture Exchange and possibly the BC Securities Commission and will become a public document.

The reports used in preparing this Technical Report are given in **Item 20.0 References** and are noted when quoted in this report; however, some of the more important technical reports referenced by the writers include those of Burgoyne (2006), Sutherland Brown (1960), Quin (1987), Quin (1989), Kikauka (2002), Kikauka (2004) and Jasper (1952) and Fugro Airborne Surveys Corp. (2007).

All currency values are expressed in Canadian dollars unless otherwise indicated. The metric system of weights and measurements are used where possible; however, much of the historic exploration and mining data is in Imperial measurements and they may be used but, if so, the metric equivalent units are indicated or bracketed where feasible.

#### 3.0 Reliance on Other Experts

An informal review of mineral title and ownership, of the claims comprising the Rocher Deboule property, of Rocher Deboule Mineral Corp. was completed through checking the records of the Mineral Title Branch, Ministry of Mines and Energy for British Columbia. However, there has been no formal legal mineral title and ownership review as this is outside the expertise of the writers. The mineral tenure data was supplied by Ms. Terri Piorun of Rocher Deboule Minerals Corp. The Company also provided the information on environmental liability in **Item 4.0.** The authors disclaim responsibility for such information in these aforementioned items.

This report is based on an extensive technical review and discussion of information that was available. This report is believed to be correct at the time of preparation. It is believed that the information contained herein will be reliable under the conditions and subject to the limitations herein.

Burgoyne Geological Inc. and Geo-Facts Consulting have exerted a normal engineering standard of due diligence in the preparation of this report, both in regards to technical detail and in property descriptions and title. All data contained within this report are believed to be correct and complete at the time of writing. All conclusions drawn from the data are based on technical judgments in consultation with experienced professionals. There is nothing material, known to the writers, regarding the Rocher Deboule Property that is not included or referred to in this report.

# 4.0 Property Description & Location

The Rocher Deboule Property lies at the north end of the Rocher Deboule Range in central British Columbia at a latitude of 55 degrees, 10 minutes north and a longitude of 127 degrees, 38 minutes west on NTS Map Sheet 93M/4E and is 8 kilometres south of Hazelton, the Canadian National Railway and Provincial Highway 16 (Yellowhead). The eastern and southern portions of the property are located in the Juniper Creek drainage basin. Note **Figure 4-1**.

Access to the Rocher Deboule mine involves using a 4-wheel drive road up Juniper Creek from Skeena Crossing whereas the Victoria mine is reached via an un-maintained road southwest of Seeley Lake Provincial Park. Access is described in detail in **Item 5.1**.

The below information on mineral tenures was provided by Terri Piorun of Rocher Deboule Minerals Corp. The Property consists of thirty three (33) adjoining mineral tenures that aggregate in total 9698 hectares within the Omineca Mining Division. The tenure numbers, claim names, whether purchased or staked, their expiry dates and areas are given in **Table 4-1**. The location of the mineral tenures is illustrated in **Figure 4-2**. The mineral tenures rights do not include ownership of surface rights.

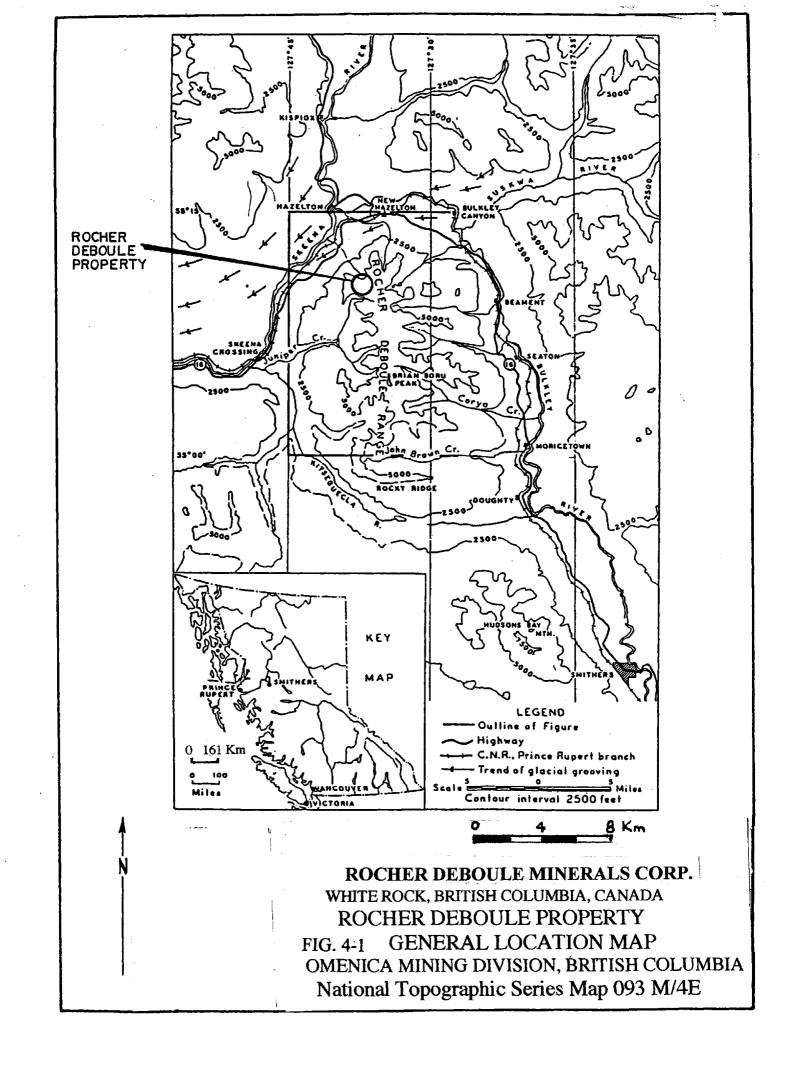
Those mineral tenures that have been purchased by Rocher Deboule Minerals Corp. include:

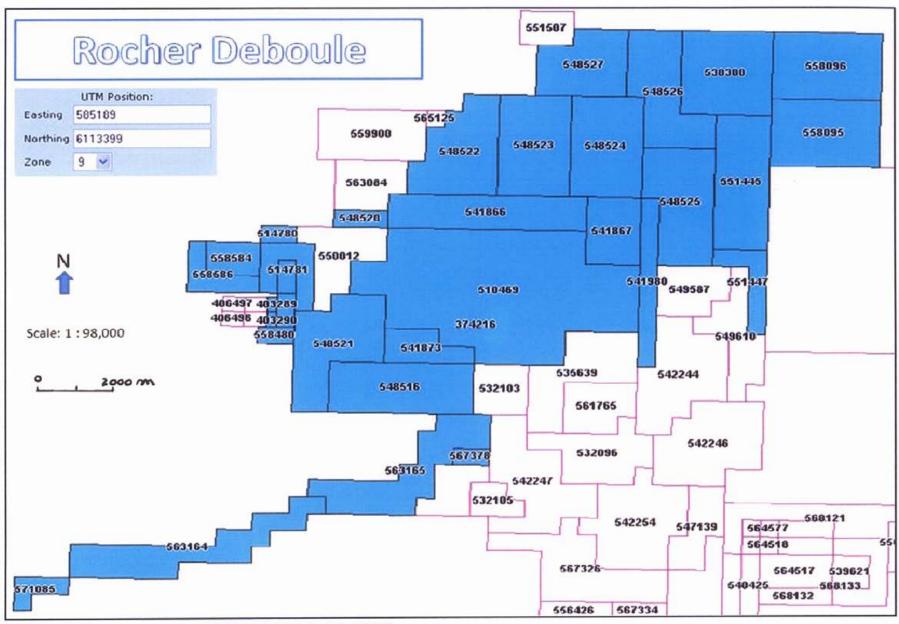
- Mineral tenure 374216 was purchased from James Matthew Hutter in June 2007 for a 100% interest for \$50,000 and 50,000 shares of Rocher DeBoule Minerals Corp.
- Mineral tenure 538388 was purchased from David Agustin Heyman in February 2007 for a 100% interest for \$5,000 and 40,000 shares of Rocher DeBoule Minerals Corp.
- Mineral tenures 403289, 303290, 514180, 514781 and 514929 were purchased from Stephan Bjorn Soby in August 2007 for a 100% interest for \$5,000 and 40,000 shares of Rocher DeBoule Minerals Corp.

The authors are not aware of any potential environmental liabilities that affect the Property other than the small amount of tailings and waste rock that were mined historically at the Rocher Deboule, Highland Boy and Victoria mines; these tailings and waste dumps, for the most part, have been overgrown by native vegetation and are not recognizable. When A. Kikauka examined the portals in early September 2002, there was no water flowing out of the adits. Rocher Deboule has informed the writers that they are not aware of any environmental problems. During the writers site visits limited water was draining out of most of the adit portals on Rocher Deboule. There are, as is usual, on many of these old mining properties the presence of unfenced and caved adits. The location of adits and underground workings is illustrated on **Figures 10-1** and **10-2** for the Rocher Deboule mine and **Figure 10-10** for the Victoria mine.

# TABLE 4-1 MINERAL TENURES - ROCHER DEBOULE PROPERTY

Tenure Number		Claim Name	Staked/Purchased	Map No.	Good To Date	Status	Area (Hc)
374216	Mineral	RDB (Hutter)	Purchased	093M012	2012/jul/31	GOOD	25.0
403289	Mineral	STU	Purchased	093M012	2008/feb/06	GOOD	25.0
403290	Mineral	PID	Purchased	093M012	2008/feb/06	GOOD	25.0
510469	Mineral		Staked	093M	2012/jul/31	GOOD	1736.7
514780	Mineral	GOLDEN WONDERS	Purchased	093M	2008/feb/06	GOOD	36.9
514781	Mineral	HIDDEN WONDER	Purchased	093M	2008/feb/06	GOOD	147.8
514929	Mineral	LOST WONDERS	Purchased	093M	2008/feb/06	GOOD	36.9
538388	Mineral	OLD DALEY WEST (Heyman)	Purchased	093M	2012/jul/31	GOOD	461.3
541866	Mineral	ROCHER DEBOULE	Staked	093M	2012/jul/31	GOOD	406.2
541867	Mineral	RDB	Staked	093M	2012/jul/31	GOOD	221.6
541873	Mineral	RDB2	Staked	093M	2012/jul/31	GOOD	147.9
541980	Mineral	RD3	Staked	093M	2012/jul/31	GOOD	184.8
548516	Mineral	MADDIE3	Staked	093M	2012/jul/31	GOOD	443.7
548520	Mineral	MADDIE4	Staked	093M	2012/jul/31	GOOD	55.4
548521	Mineral	MADDIE5	Staked	093M	2012/jul/31	GOOD	443.6
548522	Mineral	MADDIE6	Staked	093M	2012/jul/31	GOOD	424.6
548523	Mineral	MADDIE7	Staked	093M	2012/jul/31	GOOD	443.0
548524	Mineral	MADDIE1	Staked	093M	2012/jul/31	GOOD	443.0
548525	Mineral	MADDIE2	Staked	093M	2012/jul/31	GOOD	443.2
548526	Mineral	MADDIE9	Staked	093M	2012/jul/31	GOOD	405.9
548527	Mineral	MADDIE10	Staked	093M	2012/jul/31	GOOD	332.1
551445	Mineral	MADDIE11	Staked	093M	2012/jul/31	GOOD	443.1
551447	Mineral	MADDIE14	Staked	093M	2012/jul/31	GOOD	129.3
558095	Mineral		Staked	093M	2012/jul/31	GOOD	443.0
558096	Mineral		Staked	093M	2012/jul/31	GOOD	442.8
558480	Mineral	PYTHON	Staked	093M	2012/jul/31	GOOD	37.0
558484	Mineral	PYTHON1	Staked	093M	2012/jul/31	GOOD	37.0
558584	Mineral	PYTHON2	Staked	093M	2012/jul/31	GOOD	110.8
558586	Mineral	PYTHON3	Staked	093M	2012/jul/31	GOOD	110.8
563164	Mineral		Staked	093M	2008/jul/19	GOOD	444.1
563165	Mineral	RDM1	Staked	093M	2008/jul/19	GOOD	425.5
567378	Mineral	DEFAULT NAME	Staked	093M	2008/oct/03	GOOD	37.0
571085	Mineral	RD CREEK	Staked	093M	2008/nov/30	GOOD	74.0
							9896.0





**ROCHER DEBOULE MINERALS CORP.** 

FIGURE 4-2 MINERAL TENURES ROCHER DEBOULE PROPERTY OMINECA MINING DIVISION, BC

# 5.0 Accessibility, Climate, Local Resources, Infrastructure & Physiography

#### 5.1 Access

The Rocher Deboule property lies at the north end of the Rocher Deboule Range in central British Columbia at a latitude of 55 degrees, 10 minutes north and a longitude of 127 degrees, 38 minutes west on NTS Map Sheet 93M/4E and is 8 kilometres south of the community of Hazelton, the Canadian National Railway, and Provincial Highway 16 (the Yellowhead) in the Skeena River valley. Note **Figure 4-1**.

The eastern and southern portions of the Property are located in the Juniper Creek drainage basin.

The historic mine workings of the former Rocher Deboule mine and the southern parts of the property are reached via a 4-wheel drive road that leaves Provincial Highway 16 at Skeena Crossing, 19 kilometres southwest of Hazelton, BC. This access road is a maintained logging road for 1 kilometre and then branches off to follow Juniper Creek to the old Rocher Deboule mine site, a distance of about 14.5 kilometres. The Juniper Creek road is heavily overgrown with alder and washed out is several places and will require improving by use of a bulldozer to be maintained to 4-wheel drive standards. The Victoria mine site area, located about 400 meters north of the Rocher Deboule mine site is best reached from the west via an unmaintained 4-wheel drive road that leaves Highway 16 just southwest of Seeley Lake Provincial Park and climbs up the western slopes of the Rocher Deboule Range to approximately 400 meters below the lowest adit on the old Victoria mine site. This road also provides access to the eastern part of the Rocher Deboule property. Foot trails provide access on the property.

#### 5.2 Physiography

The Rocher Deboule Range of mountains is rugged with deeply incised valleys. Slopes are steep to precipitous with large areas covered in talus and bare rock; higher elevations have steep bluffs. The Property can be best described physiographically as one of mountainous topography at a stage of early maturity. The higher peaks and ridges are sharp crested, commonly serrated and have cirque glaciers and permanent snowfields. The terrain can impede access to certain areas and the talus obliterates outcrop at lower elevations. Within the Property elevations range, from 365 meters at the western side, to 1200 meters at the center, over a horizontal distance of about four kilometers.

#### 5.3 Flora and Fauna

Vegetation on the Property is sparse. The areas with significant tree cover include the area immediately south and west of the Rocher Deboule mine site, the lower slopes of Armagosa Creek and on the western parts of the Property. The tree cover is principally pine and juniper with some alder.

Fauna in the area include deer and moose; cougars, black bear, wolf, coyote, and wolverine Represent carnivorous animals.

#### 5.4 Climate

The Rocher Deboule Range is located on the eastern edge of the much larger Coast Mountain Range resulting in a mix of coastal and interior British Columbia weather patterns. Climate in the Hazelton area is described, as semi-arid and annual precipitation is less than 51 centimetres per year. Since there are heavy snow accumulations in winter, the recommended exploration work season for high elevations is between July and September. Lower elevation zones can be explored from May through October. It should be noted that accumulation of deep snow at higher elevations could result in a heavy spring runoff. With the onset of summer, snow melting is rapid and by July most of the Property is snow free, apart from isolated areas of permanent snowfield. The summer months tend to be dry and hot, though Pacific coastal storms occasionally reach this far inland. Year round access to the Rocher Deboule abandoned mine site is possible with a program of snow clearing and avalanche control in some slide sensitive zones on the steep slopes adjacent to the roads, from December to April.

#### 5.5 Infrastructure & Local Resources

The main towns in the area are Hazelton, in the Skeena River valley, population 2000, and Smithers, population 8000, in the Bulkley River valley; these communities are located 8 kilometres south and 51 kilometres southwest of the Property, respectively. Commercial jet aircraft service Smithers. These communities offer a full service, supply, and infrastructure base. The procurement, when required, of adequate mining and development personnel should not present a problem. The Canadian National Railway, Provincial Highway 16 (the Yellowhead), and a major electrical grid service these communities and others all along the Skeena River.

As numerous annual streams are present on the Property water supply should not be a problem.

### 6.0 History

The Rocher Deboule Property covers the former Rocher Deboule mine, the Victoria mine, Highland Boy, Great Ohio, Cap, Golden Wonder, Three Hills, and Daley West workings and veins. Each of these previous operations or exploration/development targets is individually discussed below.

# 6.1 Rocher Deboule & Victoria Mines

### **Rocher Deboule Mine**

#### 1910 - 1952

The following historic description of production of the Rocher Deboule mine is from Sutherland Brown (1960) who completed a geological mapping and compilation of the underground workings, which are illustrated in **Figure 10-1 and 10-2.** The Rocher Deboule property was located in 1910 by Sargeant and Munroe of Hazelton, BC, which was acquired, in 1911, by Rocher Deboule Copper Company of Salt Lake City, Utah. Development on the property was done under lease by the Montana Continental Development Company, a company owned by the principals of Rocher Deboule Company. Ore was mined and shipped from the upper part of the No. 4 vein from April 1915, until February 1916, when the property reverted to its owners. Development work, previously neglected, was done on the No. 2 and No. 4 veins and by 1917 a 3100-foot (945 metres), known as the 1201, was driven from the bottom of the valley of Juniper Creek to intersect all known veins. Production in 1917-18 was largely from the No. 2 vein and was much less than in the previous two years, although the copper-gold grade was good. The mine was closed in October 1918, because of a lack of developed ore and a drop in copper price.

In 1929 Aurimont Mines Limited who mined and shipped some ore leased the property. In 1930 Hazelton Copper Mines Limited again leased the property but no production was done. The property remained inactive until 1950 when it was acquired by Western Uranium Cobalt Mines Ltd. whose initial interest was a means of access to the adjacent Victoria mine; the company immediately began to investigate Rocher Deboule as a source of copper and precious metal ore and as a prospect for uranium-cobalt. In 1950 a slide that blocked the portal of the 1200 level was cleared, the upper levels were rehabilitated and construction of a camp was begun. A 100-ton/day mill was put in operation in May 1952, and shut down in November of the same year because the grade was lower than expected. Part of the mill equipment was moved to the nearby Red Rose tungsten mine which was owned by the same company. Note Section 15. After the Red Rose mine was closed in 1954, equipment from both mines was sold. Production recorded from Rocher Deboule mine is given in Table 6-1.

YEAR	TONS	GOLD (Oz.)	SILVER (Oz.)	COPPER (Lb)	LEAD (Lb)	ZINC (Lb)
1915	17,000	1,418	21,893	2,788,000		
1916	16,760	1,184	16,738	1,753,225		
1917	2,889	781	7,987	714,871		
1918	3,184	832	16,247	635,870		
1929	72	10	2,972	6,120	751	7,219
1952	12,814	267	18,640	305,498		
TOTAL.	52,719	4,492	84,477	6,203,584	751	7,219
Metric	Tonnes: 47,825	Kg: 139.72	Kg: 26,27.53	Kg: 2,819,810	Kg: 341.4	Kg: 3,281.4

#### TABLE 6-1 ROCHER DEBOULE MINE PRODUCTION

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The mineralization is contained in a group of parallel veins striking in the order of north 75 degrees east and dipping about 55 degrees north into the mountain. The main veins are numbered from Nos. 1 to 4 from south to north and are illustrated on **Figure 10-1**. The outcrop elevations are in the order of 1372, 1454, and 1631 metres. A fifth vein, No. 2a, of similar strike but flatter dip occurs between No. 2 and No. 3. No. 2 and No. 4 veins are the only veins significantly developed and are the ones from which all production has occurred.

The veins are developed by three main crosscut levels include the 1200 (elev. 1270 metres), 1000 (elev. 1350 metres), and 300 (elev.1570 metres). The upper part of the No. 4 vein is developed by the 300 Level and a winze leading down to a flooded 500 Level and to the 100-adit Level above. There is no development between the 500 Level and the 950 Level; the 950 Level accesses the No, 2 at outcrop by a short adit. The lower part of the No. 4 vein is reached by the long 1201 crosscut. No. 2 vein is developed by long drifts on the 1200 and 1000 Levels and three small sublevels, 950, 1050, and 1300; the 1300 are connected by winze to the 1200 Level. The small No. 2a vein is reached by a crosscut on the 1000 level, and No. 3 vein is followed by a drift on the 1200 level. In total there are over 1585 metres of crosscuts, approximately 915 metres of drifts on No. 4 vein, 1067 metres on No. 2 vein and 395 metres on all other veins. The amount of vertical development is small compared to the horizontal.

#### 1987-1990

Southern Gold Resources Ltd acquired the property in 1987and performed surface geological mapping at 1:2500 scale, and underground mapping and sampling on the No. 2 and 4 veins. Additional surface exploration consisted of geochemical soil surveys for gold, silver, arsenic, lead, zinc and copper, geophysical ground magnetic, and VLF electromagnetic surveys, all at a 1:2500 scale, over an area of approximately 1 square kilometre that was centred on the known strike and dip extensions of the known veins (No. 1 through 4) that have been developed and mined on the property. The results of these surveys are available through Assessment Reports and are reported in some detail in this report. Southern Gold also completed reconnaissance talus fines sampling on the eastern side of the property

Further exploration work is reported for 1988 and possibly 1990 (George Cross News Letter 1990). Southern Gold Resources Ltd. completed underground drilling on the Rocher Deboule No. 2 vein and underground rehabilitation and sampling of the No 4 vein in the period of 1987 and 1988. During 1988 Southern Gold completed an underground diamond drilling program in the order of 894 meters over 14 holes from the 1200 level to test the No. 2 vein

# Victoria Mine

#### 1917-1941

The Victoria mine was first developed and mined by New Hazelton Gold-Cobalt Mines Ltd. between 1917 and 1926 who shipped carloads of hand sorted ore in 1918 and 1926, the successor company, Aurimont Mines Limited, mined and shipped another car load in 1928. In the period of 1940-1941 the then owner, R.C. McCorkell, made three further shipments. In 1949 Western Uranium Cobalt Mines Limited, the then owners of the Rocher Deboule Mine, cleaned out the workings, extended the No. 2 and 00 adits, and started the No. 3 adit, but shipped no ore. Production from the Victoria No. 1 vein is given in **Table 6-2**.

#### TABLE 6-2

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# TABLE 6-2 VICTORIA MINE PRODUCTION

YEAR	TONS	GOLD Oz./Ton	SILVER Oz./Ton	ARSENIC %	MOLYB- DENUM %	COBALT %	ZINC %
1918	26.6	1.24	*	8.98	0.96	1.18	*
1926	22.0	4.65	+	42.3	*	4.6	*
1928	23.0	6.25	*	37.9	3.4	3.76	*
1940	7.7	2.18	0.2	6.6	*	2.6	Nil
1941	7.3	2.02	0.2	6.1	*	1.4	0.6
1941	3.4	3.92	0.3	33.3	*	*	4.4
TOTAL	Tons 90.0	326 oz		44,560 lb.	2,100 lb	4,918 lb.	
Metric	Tonnes:81.6	10,139 grams		9803 Kg	955 Kg	2235 Kg	

\* Not available

The workings consist of five adits, one raise and sub-level, and a number of open cuts. All of the underground workings are on the No. 1 vein, the most northerly of three 080 trending and dipping 60 north, parallel veins; these veins comprise the main showings at the Victoria Mine. **Figure 10-10** is a plan of a chain and compass survey compiled by Southerland Brown (1960) and Stevenson (1949). The results are reported on **Table 10-10**. **Figure 10-10** illustrates the workings on the No. 1 vein from the lowest adit, No. 3, at elevation 1576 metres to the highest adit, No.00, at about 1799 metres, and No. 1 open cut on the ridge at 1860 metres. Open cuts No. 2 & No. 4 are further east on the serrated ridge top. Workings on No. 2 and No. 3 veins consist of a few open cuts.

#### 1978 - 1983

The following description is for historical drilling completed by Arber Resources Inc., DeGroot Logging, and Southern Gold Resources Ltd.

The Victoria mine was inactive until 1978 when Arber Resources Inc. constructed an access road to the 1,265-metre elevation and rehabilitated two adits at the 1,605 metres and 1768 metres elevations. At the same time DeGroot Logging were working on adjacent ground, not under lease to Arber Resources, and conducted an unsuccessful diamond drilling program of 12 holes over 1670 metres in 1981 and 1983 on the No. 2 vein. This drilling by Plecash (1982) and Plecash (1983) was done over a relatively small surface area. Drill holes were drilled southerly but several were also drilled near vertical in an effort to intersect the vein at depth. The bulk of the drilling was done in 1981 and most of these holes were not assayed nor analysed. The three holes done in 1983 were analysed for gold, silver, copper, nickel, cobalt and arsenic. The assays did not reveal any significant economic values for metals except there were some elevated arsenic values. Multi element trace metal analysis procedure, such as Induced Couple Plasma, which would have helped in alteration mapping and modelling, was not done.

#### 1987-1990

It appears that Southern Gold in the No. 2 adit area did some limited surface sampling work.

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Here a "porphyry" zone is reported grading 30.5-g/t gold and 0.35% cobalt over 2.44 metres (George Cross News Letter 1990).

#### 6.2 Highland Boy 1917-1921

The Highland Boy is located 2 km east of the Rocher Deboule veins. Butte-Rocher Deboule Copper Company Ltd first prospected the property in 1912. Two east-west trending quartz-sulphide fissure veins occur on the Highland Boy area from 1,768-1,980 metres elevation. The southernmost fissure vein zone is traced west along surface to the No. 4 Rocher Deboule Vein. These veins are reportedly continuations of vein shears on the Rocher Deboule and certainly are part of the same set.

The Delta Copper Company of Edmonton secured the property in 1917 and shipped 68 tonnes to the Ladysmith smelter, which returned 4,770 kilograms of copper, 124.4 grams gold and 1,088 grams silver. (Annual Reports, Minister of Mines, B.C.: 1912, 1913, 1916, 1917, 1918, 1920, 1921).

#### 6.4 Great Ohio

Sargent and Munroe staked the Great Ohio in 1910. Quartz fissure veins with variable chalcopyrite-pyrite-galena-sphalerite are hosted in porphyritic granodiorite. An adit, at elevation 1,372 metres explores 3 parallel shear zones in the porphyritic granodiorite trending 055 degrees and dipping 65-70 degrees northwest.

# 6.5 Cap

The Cap showing is located on the lower westerly slopes of the Rocher Deboule Range at an elevation of about 670 metres. The showings were investigated mainly between 1914 and 1918 with some further work done in the late 1920's. In 1917 a shipment of 26.3 tonnes of sorted ore yielded: 933 grams gold, 7838 grams silver, and 1534 kilograms of copper. The showings consist of a main vein-shear that trends north 70 degrees east and dips +70 degrees to the north. The vein has a 23-metre adit crosscut leading to a 29-metre drift, which connects, with a shaft that extends 6 metres below the drift. Another small shaft is 60 metres southwest of the first and a 60 metre adit is a further 120 metres southwest. There are a number of overgrown open cuts, which were observed by the writer during the site visit.

# 6.6 Golden Wonder

The showing is on a large rock drumlin on the bench northwest of the Rocher Deboule Range. It is 7.3 kilometres southwest of South Hazelton at about 396 metres elevation. It is 0.8 kilometres from Highway 16. The showings were first investigated about 1912, but not much work was done until 1917 and 1918. The workings consist of a shaft 30.5 metres deep on top of the knoll, a shallower shaft a 100 to 150 metres west and a number of open cuts. Kindle (1954) reports of sacked ore and two ore piles. At the north end of the rock drumlin, 305 metres northeast of the main shaft, a shear zone striking North 70 degrees west and dipping 75 degrees south and up to 1.2 metres wide is exposed in a series of open cuts for a few hundred metres.

# 6.6 Three Hills

These showings are between South Hazelton and Skeena Crossing on elevation (335 metres). The terrain is flat and drift-covered except for a number of rock drumlins on which the showings are found. The showings are about 300 meters southeast of the Highway 16 at about the same

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elevation. The main showing consists of a small rock drumlin about 35 metres wide and about two or three times as long, that rises some 7 metres above the adjacent drift-covered area. This area has a shallow trench cut out of the surficial rock across the centre of the drumlin. The trench strikes north 30 degrees west and is approximately at right angles to the trend of the drumlin.

During 1955 and 1956 the property was under option to Silver Standard Mines

#### 6.7 Daley West

This showing is located 3.2 kilometres south of New Hazelton on the east side of Mission Creek at 400 to 700 metres elevation. No work appears to have been done on the showings since the original investigations of 1916 although limited work in 1981 reports grab sampling - note **Item 7.10**.

The showings are defined by two caved adits of 72 and 47 metres in length driven by the Spokane Rocher Deboule Mining and Copper Company in 1916. The workings expose a silicified shear zone with small amounts of vein quartz that strikes north 20 degrees east and dips 65 degrees northwest.

#### 6.8 Historical Mineral Resources

The historical resource estimates discussed below are not compliant with either National Instrument 43-101 or CIM standards and the Issuer should not treat them as current resources/reserves.

#### 1951-1952 Historical Resource Estimates

The following 1951-1952 information below, on three historical "reserve" estimates, is given for information purposes only. Although such estimates were considered relevant, at the time, they are not today due to changing economics and mining methods. The estimates are not considered reliable or relevant today and the writer has not classified the historical estimates as current mineral resources/reserves.

As the Rocher Deboule Mine has a production history there is substantial documentation on sampling and "ore reserves" up to March 1952. Sutherland Brown (1960) gives a good discussion of the different estimates as based on Holland (1952b). Prior to the post May 1952 production there were four separate "ore reserve" estimates and studies; they are reported in their original Imperial units and include:

- The first estimate by A.L. Clark, Managing Director and Consulting Engineer estimated the "ore reserve" of the No. 2 vein to be 200,000 tons at a of grade 4.1% copper. 0.4 ounces per ton gold and 4 ounces per ton silver. This was done sometime in the spring of 1951. This estimate was done without any sampling as indicated by Walker (1952); consequently the "ore reserve" is not considered credible or relevant by the writers.
- The second by Hill and Legg (1951) in November 1951, Consulting Engineers of Vancouver who collected about 100 samples on the 1200 Level east and west of the main winze. They defined, in No. 2 vein, an "ore body" in the order of 130 feet west of the winze and 145 feet east of the winze to have a mining width of 4 feet and grade 0.28 ounces per ton gold, 7.2 ounces per ton silver, 2.74% copper, 0.15% cobalt and 0.07% tungsten. They reported

11,050 tons in two ore shoots. This estimate was the only credible one accepted by the BC Department of Mines in 1952 as given by Walker (1952).

- The third estimate by Kohanowsk (1951) in December 1951 calculated, on the basis of twelve samples, 315,000 tons of "indicated and reasonably assured ore" on the No. 2 vein having a content of about 4% copper. This estimate assumed "ore" for 850 feet east of the winze on 1200 level, to extend as much as 350 feet below 1200 level, to extend to a height from 225 to 370 feet above 1000 level, and included a very large tonnage of ore in the sedimentary rocks extending as much as 500 feet beyond the granodiorite contact. Southerland Brown believed that on the basis of present knowledge (1960), these assumptions are not warranted. Holland (1952a) also was highly critical of the estimate. The writer does not consider this estimate relevant.
- A fourth study by J.E. Merrett and A.R.C. James of the BC Department of Mines who in March 1952 collected eighty samples on the 1000 Level, 12-4w raise, 12-11w raise and the 1200 level. These samples did not indicate any further ore shoots on 1200 Level (other than that defined by Hill and Legg), and all ore reserves were entirely within No. 2 vein. They did not define any "proven or probable ore" for No. 4 vein above the 300 Level.

These estimates were reviewed in detail by the BC Department of Mines in June 1952 and the only acceptable estimate considered, is the one made by Hill and Legg. During 1952 (post May) in the order of 12,814 tons were mined from the Rocher Deboule mine to produce 305,498 pounds of copper, 18,640 ounces of silver, and 267 ounces of gold. No information is forthcoming as to dilution or mill recovery.

#### 1987-1990 Historical Resource Estimate by Southern Gold

Southern Gold Resources Ltd. completed underground drilling on the Rocher Deboule No. 2 Vein in 1988. These results formed the basis for a resource estimate (Quin 1989). Quin reports that simple "reserve estimates" were made on the No. 2 vein, based on the 1988 underground diamond drilling and on the 1988, and 1987, and historical underground sampling that is detailed in Item 10. The block model (polygon) method of calculation was used, taking a maximum 7.62 meter (25 feet) distance from a drill hole, drift, or raise. Where two samples were closer than 7.62 meters the separating distance was split equally to limit the area of influence of each sample. In all cases where the width of the sample was less than 1.22 meters (4 feet), copper, gold, and silver values were diluted to a 1.22 meter minimum width. This led to a width-weighted average for each grade for each block based on the diluted width of each sample. The dimensions of each block was calculated from longitudinal sections, sample positions and the average diluted width of all samples within the block. A density factor was estimated on the based on the percentage of copper present. It was assumed that all the copper occurred as chalcopyrite and that an equal percentage of sulphides were present as pyrite and pyrrhotite. The remaining gangue was assumed to be equal percentages of hornblende and quartz.

Three types of "reserves" were utilized and they included drill indicated, drift indicated and Inferred based on drill intercepts, drift sampling, and inferred mineralization, respectively. In addition an estimate was made for additional potential.

The estimate resulted in total "indicated and inferred reserve" of 55,000 tonnes averaging 2.69% copper, 207.5 grams per metric tonne silver (6.06 oz/ton), and 3.50 grams per tonne gold (0.102

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oz/ton). These "reserves" are in fact a resource and tonnages are given in **Table 6-3**. These "reserves" are found in two separate areas of the Rocher Deboule mine. The resource consist of the "Drilled Area Reserve" at the western end of the 1200 Level which contribute about 40% and those in the Upper Levels down dip of the 1000 Level and in the more eastern parts of the mine.

TABLE 6-3
SOUTHERN GOLD HISTORICAL RESOURCE TONNAGE
(from Quin 1989)

Category	Metric Tonnes
Drilled Area - Drill Indicated	10,541
Drilled Area - Drift Indicated	5,437
Drilled Area- Less Mined - Old Stopes	(2167)
Upper Levels – Drift Indicated	33,379
Sub Total	47,190
Drilled Area - Inferred	7,558

Quin (1988) also estimated a potential (resource) of a further 70,000 metric tonnes in the mine with about 19,000 tonnes in the vicinity of the 1200 Level at its west end and 51,000 tonnes in the Upper Levels of the mine.

The above information on historical "resource" and "reserve" estimates is given for information purposes only. These estimates do not meet CIM and 43-101 standards. The estimates are not considered reliable or relevant today and the writer has not classified the historical estimates as current mineral resources/reserves.

BC Minfile Report gives ... " unclassified reserves at Victoria [Mine] are 1,000 tonnes grading 42.55 g/t Au, 2.84 g/t Ag, 2% cobalt". This estimate is not compliant with CIM or 43-101 standards and is not relevant. The information should be treated as historical information only.

# 7.0 Geological Setting

# 7.1 Regional Geology

The Rocher Deboule Range was first mapped by Sutherland Brown (1960) in the late 1950's at a scale of 1:63,360 and is a good map to use for location and definition of both property and regional lithologies and structures. Later in 1977 and 1978 Richards (Richards 1978), (Richards 1980) completed an updated regional geological map at a scale of 1:250,000 and refined the relative ages and correlation of the different lithologic units. Richards map defines the area of the Rocher Deboule Range to be underlain by late Jurassic to early Tertiary successor basin assemblages of the Bowser Lake, Skeena, and Sustut Groups, containing locally significant thickness of volcanic rocks. Granodioritic intrusions, from large stocks to abundant dykes, are assigned to the late Cretaceous Bulkley Intrusions. These intrusions are closely related to most of the mineral occurrences in the area. The regional and district geology respectively, is illustrated in **Figure 7-1** and **Figure 7-2**. The Southerland Brown map of **Figure 7-2** is more detailed for the area but is less up to date with respect to relative ages of the units.

Southerland Brown's geological mapping on the west side of the Rocher Deboule Range, and in the vicinity of the Rocher Deboule mine defines the Brian Boru Formation which consists of varicoloured porphyritic andesitic flows and breccias, tuffs, minor volcanic sandstone and conglomerate. This formation was originally given a Lower Cretaceous age by Southerland Brown but is defined to be Upper Cretaceous (uKB) age by Richards. Underlying the Brian Boru Formation are Upper Jurassic Bowser Lake Group (uJB) sedimentary rocks of the "Lower Bowser Lake subdivision". These rocks consist of greywacke, shale, siltstone, and homfelsic equivalents, and minor conglomerate and coal. The east side of the Rocher Deboule stock intrudes the Bowser Lake Group sediments (uJB) and volcanics of the Brian Boru Formation (uKB) which strike northerly to north-easterly and dip generally westerly to north-westerly although variations occur. The Rocher Deboule stock is composed of porphyritic granodiorite, quartz monzonite, and dioritic dykes. The uJB Brian Boru Formation is in fault contact with sediments of uKB where the westerly-located uKB rocks have been down dropped.

# 7.2 Property Geology

The geology of the Rocher Deboule Mine and area along with the location of the Victoria Mine, Highland Boy, Great Ohio, Cap, Golden Wonder, Three Hills, and Daley West vein workings are described below. District geology and locations of the various workings are illustrated on **Figure 7-2**.

The Rocher Deboule Property lies on the western margin of the Rocher Deboule stock with the southern and western areas being underlain by Upper Jurassic-Lower Cretaceous Bowser Lake Group. The following description is taken from Quin (1987). The Rocher Deboule stock underlies about 70 square kilometres of the northern part of the Rocher Deboule Range. The stock is an elongate pluton oriented north 25 degrees west. It is a composite of two domes with a connecting saddle. The details of the walls of this stock are readily apparent in the vertical exposures that the rugged relief offers, and the roof is exposed along parts of the central spine of peaks. The stock is asymmetrical; the eastern side has a gentler slope than the western side.

The main part of the stock is composed of porphyritic granodiorite, a light grey mottled rock in which tabular phenocrysts of plagioclase and dark hornblende and biotite are set in a faintly pink

Rocher Deboule Property, British Columbia Burgoyne Geological Inc. Geo-Facts Consulting

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matrix. In general the porphyritic granodiorite is very homogeneous. Inclusions in the porphyritic granodiorite are ubiquitous forming a reported 1% of the rock in the main mass and from 2% to 4% near the roof contacts. Some of the inclusions are up to 12 metres long.

The second rock type of the Rocher Deboule stock is a fine-grained, buff coloured, biotite quartz monzonite that forms the northernmost part of the stock

The structure of the stock is important in exploration of the property. The stock is clearly intrusive and the granodiorite cuts cleanly across the fold structure of the Bowser Lake Group with no apparent deformation of the older rocks. Neither in general the granodiorite is neither foliated nor lineated. Jointing throughout the granodiorite is pronounced, regular, and patterned and the contacts of the two domes and their intervening saddle are important in the distribution of these joints. There are three sets of joints, of which the two most prevalent include one parallel to the contact and one normal to the contact and making a horizontal trace on the contact surface. This second set is referred to as cross-joints. The third set and least developed is radial, normal to the first two, and dips vertically. Note **Item 7.3**. Sutherland brown suggests that the lack of foliation, the lack of evidence of intense forceful intrusion, and the fit of the pattern to the shape of the stock, indicate that cooling contraction caused the joints. The stock is dated at 72 million years.

The principal other rock types within the Property are sandstones and siltstones of the Lower Bowser Lake Group (uJB) that appear to represent a northerly pro-grading deltaic assemblage, the debris comprising principally of volcanic clasts. Much of the sediments have undergone thermal metamorphism forming a biotite hornfels rim to the Rocher Deboule stock. Deformation of the Bowser sediments is related to major block faulting and intrusion of the pluton. Block faulting is thought to have uplifted the Rocher Deboule Range, exposing the pluton to erosion, while persevering sediments in the valleys to the north and west. As a result of the intrusion of the Rocher Deboule stock, the sediments consistently dip to the west.

Minor rock types several types of dykes, all younger than the pluton; from oldest to youngest they include:

- Aplites and pegmatites.
- Granitoid dykes of a quartz monzonite composition, including the Rocher Dyke in the Rocher Deboule mine, which is up to 30 metres wide.
- Porphyritic andesite dykes.
- Felsite dykes of aphanitic texture.
- Late fine-grained dark, often aphanitic biotite-lamprophyres and basalts.

The surface geological mapping done by Quin (1987) is restricted to that of the Rocher Deboule mine and is illustrated in **Appendix A**. Reconnaissance geological mapping was completed in 2001-2002 by Kikauka (2002).

#### 7.3 Rocher Deboule Mine

The following description is, in part, from Sutherland Brown (1960). Note **Figure 10-1 and 10-2**. The mine is on the western periphery of the northern dome of the Rocher Deboule stock. The western ends of the 1202 and 1002 drifts cross the contact into hornfelsic siltstones of the now defined upper Jurassic Bowser Lake Group (uJB). In the mine the contact strikes north 50

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degrees west and dips 63 degrees southwest. The country rock is porphyritic granodiorite of the Rocher Deboule stock, but locally deuteric alteration along joints has removed the dark minerals. Jointing is pronounced in a least four sets with average attitudes as follows:

- Strike north 55 degrees east; dip, 55 degrees southeast.
- Strike north 15 degrees west; dip 65 degrees west.
- Strike north 85 degrees east; dip, 5 degrees north.
- Strike north 60 degrees east; dip 65 degrees northwest.

The last three joints sets conform fairly closely with the normal orthogonal joint system of the stock. The last set contains much of the deuteric alteration and quartz-hornblende pegmatitic veinlets. Both alteration and pegmatitic veinlets are particularly prominent on the footwall sides of the major veins.

Dykes are not abundant in the mine and four main rock types are present. The first forms the Rocher dyke, a fine-grained quartz monzonite 12 to 24 metres wide, that strikes north 10 degrees east and dips 52 degrees west on the average, but dips locally from 47 to 60 degrees. The dyke has chilled margins and the petrology is similar to that of the quartz-monzonite phase of the Rocher Deboule stock. The age relations with the veins and vein fractures are complicated. The dyke is offset by the veins in the1002 Level west and 1204 east drifts 1.2 to 2,4 metres, but on 1202 west drift the dyke apparently offset by dilation No. 4 vein and fracture.

On the 1200 level a small dioritic dyke parallels the Juniper fault and about 120 metres south of the 1203 drift a similar 4.5 metre wide dyke strikes north 30 degrees east and dips 70 degrees north-westward.

A porphyritic andesite dyke 3.7 metres wide occurs in the hanging wall of No. 3 vein shear on the 1200 level. The rock resembles dykes related to the Brian Boru Formation, although it is younger.

The last type of dyke consists of two occurrences of narrow, 0.6 metres wide, pale greenishgrey aphanitic dikes found on the 1200 level.

The Juniper fault, striking north 57 degrees west and dipping 70 degrees southwestward, is the only significant fault in the mine. It is younger than the veins and a small granitoid dyke that it follows on the 1200 level. It offsets No. 2 vein 30 metres to the left, although drag indicates a right-hand movement.

The veins occupy shears that are remarkably uniform in over all attitudes. The veins are complex and were formed by successive deposition along fissures or shears that moved repeatedly. As a result the veins are lenticular in shape and variable in detail they may be negligible in tight shears, or be 1.2 to 2.4 metres wide with or without much brecciated and altered granodiorite. There is a variable amount of mineralization in the wall rocks.

#### Vein Descriptions

The No.1 vein is followed by a drift for 15 metres on the 1200 level and is exposed in the rockslide on the surface. On the 1200 level it is a 0.6 metre wide breccia zone cemented by

calcite with traces of chalcopyrite. On surface it is better mineralized with chalcopyrite in hornblende and guartz.

The No. 2 vein is developed chiefly by the 1200 and 1000 Levels, but there are several additional small workings including a winze and small drift below the 1200 Level. Most of the ore mined in 1952 came from the stopes above the 1000 Level on No. 2 vein. most of this 1952 production would now be located on the mineral tenure 374216. On the 1200 Level east of the Juniper fault the vein consists of lenses of crushed rock about 0.6 metres wide, cemented with quartz and with some arsenopyrite, pyrite, chalcopyrite, and malachite. West of the fault to about 45 metres beyond the Rocher dyke the shear is tight and contains some lenses 0.3 to 0.9 metres wide, but normally not more than 0.3 metres of vein material consisting of third stage mineralization.

The No. 2a vein is exposed only on the 1000 Level and is believed to be flooded.

The No. 3 vein is exposed by about 180 metres of drift on the 1200 Level. Here it is chiefly a fault with a 3.7 metre wide porphytitic andesite dyke on the hanging wall and containing little guartz and calcite material.

The No. 4 vein is developed by the 100, 300, 500, and 1200 Levels. On the 1200 Level the vein consists either of barren shear or pegmatitic hornblende-quartz-feldspar with almost no metallic minerals. The upper part of the No. 4 vein produced all the ore shipped in 1915 and 1916 and some of that shipped in 1917 and 1918. Four distinct ore shoots, which contained large quantities of chalcopyrite in hornblende, but apparently the shoots terminated abruptly with little disseminated mineralization between them.

Results of various sampling programs are discussed and tabulated in **Item 10** and illustrated on **Figure 10-1**.

#### 7.4 Victoria Mine

#### Mine Geology & Vein Descriptions

The Victoria veins form one system with those of the Rocher Deboule mine. **Note Figure 7-2**. From the No.1 vein of the Rocher Deboule mine there is a sequence of veins or similar orientation, spaced every 200 to 300 metres, to the No. 1 vein of the Victoria. Note **Figure 10-10** is a compilation of mapping and sampling by Sutherland Brown (1960) but includes earlier work by Stevenson (1949) and Kindle (1954). Results of the sampling are given in **Table 10-10** of **Item 10**.

The showings of significance are all within the Rocher Deboule stock adjacent to the western contact of the northern dome of porphyritic granodiorite. Hornfelsic greywackes and siltstones outcrop immediately west of portal No. 3 adit and they strike nearly north and dip steeply west.

Dykes are not abundant in the surface showings but are quite prominent in the workings as dykes follow the same shears as No. 1 and No. 2 veins. Veins cut the dykes. There are three main types of dyke rock, similar to the Rocher Deboule mine. Following the No.1 vein shear is a dark grey, fine-grained diorite dyke that averages 0.6 to 0.9 metres in No. 1 adit and above, but thickens to 6 metres in No. 3 adit. A second type of dyke is found in the in the wall of No. 1 vein is an aphanitic light grey felsite with some feldspar and quartz. This dyke is also seen in No. 1

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adit where it is 3.7 to 4.6 metres wide, strikes northeastward and dips steeply southeastwards. A third type follows the No.2 vein shear. It is feldspar porphyry 9 metres wide that strikes eastward and dips 60 degrees north and is similar to the feldspar porphyry that follows No. 3 vein on the 1200 level of the Rocher Deboule mine.

The showings are in three parallel vein shears and one small cross-vein. The main vein shears strike about north 85 degrees east, and dip about 60 degrees north. No. 1 vein is well exposed. No. 2 vein is about 300 metres south of No.1 and is intermittently exposed. No. 3 vein is about 200 metres south of No. 2 vein and 300 metres north of the No. 4 vein of the Rocher Deboule mine.

No.1 vein has been explored in some detail. No. 1 vein shear strikes north 85 degrees east and dips 58 degrees north. Striations in the shear plane in No. 2 adit rake 60 degrees to the west in the plane of the shear. The shear cuts a fine dioritic dyke that averages 0.6 to 0.9 metres wide; the dyke is offset in No. 1 adit 6 metres to the left. It is filled with variable amount of vein material ranging up to 0.6 metres.

#### 7.5 Highland Boy Vein Description

The Highland Boy is located 2 km east of the Rocher Deboule veins. Butte-Rocher Deboule Copper Company Ltd first prospected the property in 1912. Two east-west trending quartz-sulphide fissure veins occur on the Highland Boy area from 1,768-1,980 metres elevation. The southernmost fissure vein zone is traced west along surface to the No. 4 Rocher Deboule vein. These veins are reportedly continuations of vein shears on the Rocher Deboule and certainly are part of the same set. The Chicago Creek fault, the northerly trending fault on the east side of the Rocher Deboule Property, crosses the Highland Boy on its eastern side and vein showings are not known east of it. Note **Figure 7-2**.

At elevation 1,738 metres, the lower adit has been driven in a northwest direction along a fissure zone that dips 80 degrees north. At elevation 1,791 metres, located approximately 95 metres uphill from the lower adit, the middle adit follows the same quartz-sulphide fissure zone. The upper adit is located at 1,844 metres, approximately 107 metres uphill from the middle adit. The upper adit was driven 91 metres following a quartz-sulphide fissure, which trends at a bearing of 306 degrees and dip of 70 degrees north. At the upper adit portal, a zone of 30% chalcopyrite-pyrite-magnetite occurs across a width of 0.5 metres. Nine metres within the upper adit, the vein pinches and no heavy sulphides are seen until a 0.12 metre seam of almost solid pyrite with some chalcopyrite, comes in on the south wall 21.3 metres from the portal. For the next 4.6 metres the vein strengthens, and between 26.5-32 metres the roof is stoped out and a winze has been sunk 3-9 metres. Strong sulphide mineralization (chalcopyrite-pyrite-magnetite) occurs in widths ranging from 0.3-0.8 metres. Above the adits, the fissure zone is followed by several open cuts to an elevation of 1,950 metres. In one open cut at 1,932 metres elevation, and 150 metres west of the upper portal, the zone is 0.6 metres wide with massive and banded chalcopyrite, coarsely crystalline magnetite and pyritohedral pyrite crystals 2.5 cm in diameter. West of this cut, a branch splay of the fissure joins the main vein. The branch splay carries 0.6 metres of solid sulphide, chiefly chalcopyrite, for a distance of 9 metres from the main vein. A representative sample of solid sulphide ore stacked at the portal of the upper adit assaved 0.13 opt Au, 0.73 opt Ag, and 15.03% Cu (Annual Reports, Minister of Mines, B.C.: 1912, 1913, 1916, 1917, 1918, 1920, 1921).

#### 7.6 Great Ohio

Quartz fissure veins with variable chalcopyrite-pyrite-galena-sphalerite are hosted in porphyritic granodiorite. The quartz-sulphide vein system occurs near the west edge of the Bulkley Intrusive Complex in close proximity to hornfels sediments and volcanics. Minor hornblende lamprophyre dykes occur in the porphyritic granodiorite. An adit, at elevation 1,372 metres explores 3 parallel shear zones in the porphyritic granodiorite trending 055 degrees and dipping 65-70 degrees northwest. This prospect is at the west contact of the granodiorite in contact with sandstone and argillaceous sediments. A strong shear zone is traced for 250 metres with numerous open cuts. Note Figure 7-2.

# 7.7 Cap

The showings consist of a main vein-shear that trends north 70 degrees east and dips +70 degrees to the north and a subsidiary vein a few hundred metres to the east of the last workings on the main vein. The main vein-shear is silicified and in places contains vein quartz with pyrite, siderite, chalcopyrite, and some arsenopyrite. The vein has a 23-metre adit crosscut leading to a 29-metre drift, which connects, with a shaft that extends 6 metres below the drift. Another small shaft is 60 metres southwest of the first and a 60 metre adit is a further 120 metres southwest. There are a number of overgrown open cuts on the subsidiary vein. **Note Figure 7-2.** 

# 7.8 Armagosa

The Armagosa is located on the north side of Armagosa Creek and approximately 600 metres south of the Great Ohio veins and is just south of the Property. A steep gully on the south side of a ridge trends 030 degrees and dips 60 degrees west. This gully follows a quartz-sulphide fissure vein system with chalcopyrite-magnetite-scheelite hosted in hornfelsic greywacke and siltstone/argillite. Old workings are at 1,325-1,463 metre elevations. There are two adits and one small shaft. The lower adit is at 1,322 metres and the upper adit is at 1,408 metres where a 45.7 metre long crosscut trends 360 degrees and cuts a 030-degree trending shear zone. Note Figure 7-2.

# 7.9 Golden Wonder

The showings are underlain by somewhat pyritic argillite of the Red Rose formation, which is believed to be folded with a trend east of north. The workings consist of a shaft 30 metres deep on top of the knoll, a shallower shaft 100 to 150 metres west, and a number of open cuts. Two shear zones are reported, with most of the workings on the southern one. The workings consist of a shaft 30.5 metres deep on top of the knoll, a shallower shaft 100 to 150 metres west and a number of open cuts. The shear zone trends north 85 degrees west and dips 80 degrees north and has been traced more than 152 metres. It is up to 0.9 metres wide, is silicified in places, and contains small quartz stringers. In the shear are lenses of almost pure sulphides, mostly pyrrhotite, hut including chalcopyrite, arsenopyrite, and pyrite. Kindle (1954, p. 44) reports assays from two ore piles near the main shaft as follows: Gold, 6.22 and 14.31 grams per tonne respectively; silver, 223.9 and 50.70 g/t; copper, 6.50 and 4.69 per cent; nickel, none. Kindle also reports an assay of some sacked ore that shows 0.15 per cent tin.

At the north end of the rock drumlin, 305 metres northeast of the main shaft, a shear zone striking north 70 degrees west and dipping 75 degrees south and up to 1.2 metres wide is exposed in a series of open cuts for a few hundred metres. A post mineral porphyry dyke

occupies the shear. Small quartz stringers and lenses of sulphides, mostly pyrite and chalcopyrite occur within the shear.

#### 7.10 Three Hills

The terrain is flat and drift-covered except for a number of rock drumlins on which the showings are found. The showings are about 300 meters southeast of the Highway 16 at about 335 metres elevation. The main showing consists of a small rock drumlin about 35 metres wide and about two or three times as long, that rises some 7 metres above the adjacent drift-covered area. This area has a shallow trench cut out of the surficial rock across the centre of the drumlin. The trench strikes north 30 degrees west and is approximately at right angles to the trend of the drumlin.

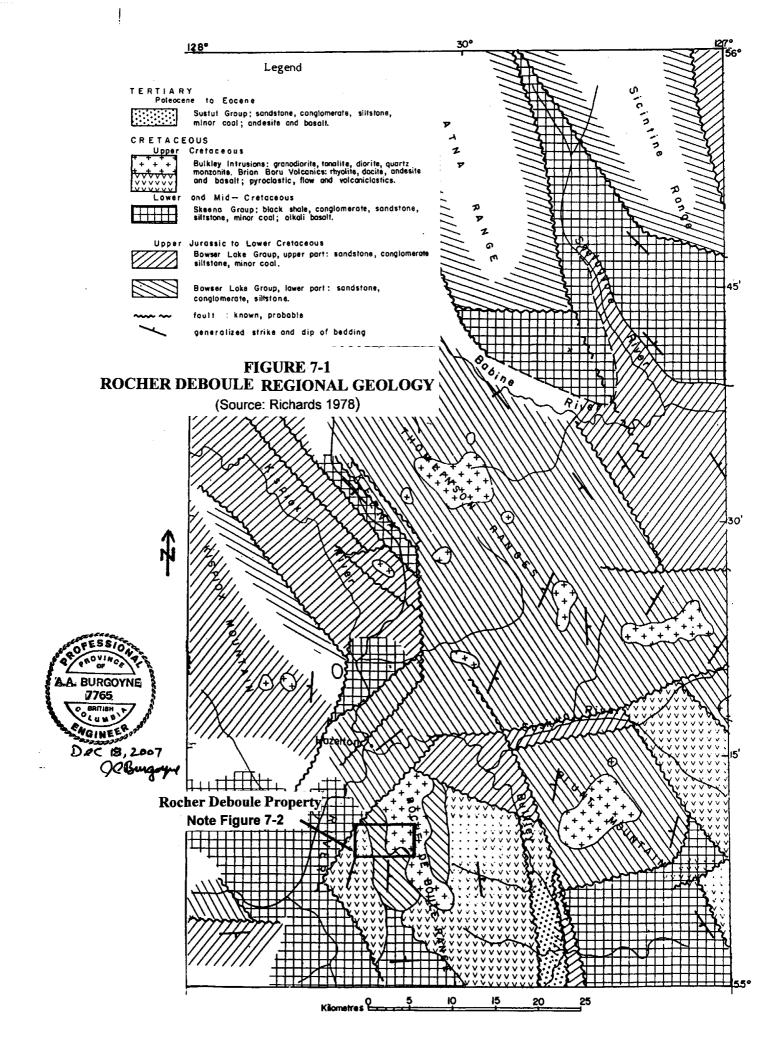
The rocks are hornfelsic argillite and feldspar porphyry of the Hazelton Group. They strike north 35 degrees east, parallel to the trend of the drumlins and on the southeast dip 40 degrees northwest; elsewhere the dip is obscure. The rocks are fractured by many small joints striking north 75 to 90 degrees east and dipping about 60 degrees north. Some joints are filled with small stringers of quartz and chalcopyrite. Two chip samples each taken over 3.05 metres in the central, better-looking part of the trench assayed trace gold, 9.3 g/t silver and 0.058% copper; and, trace gold and silver and 0,61% copper.

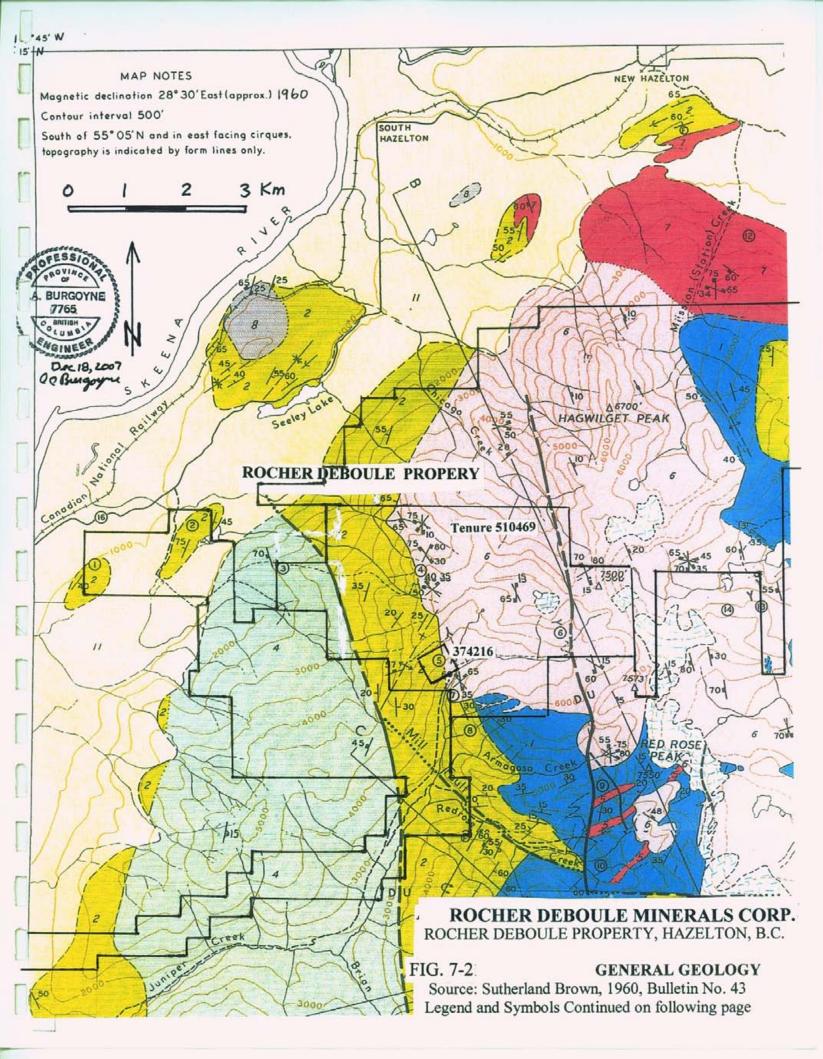
#### 7.10 Daley West

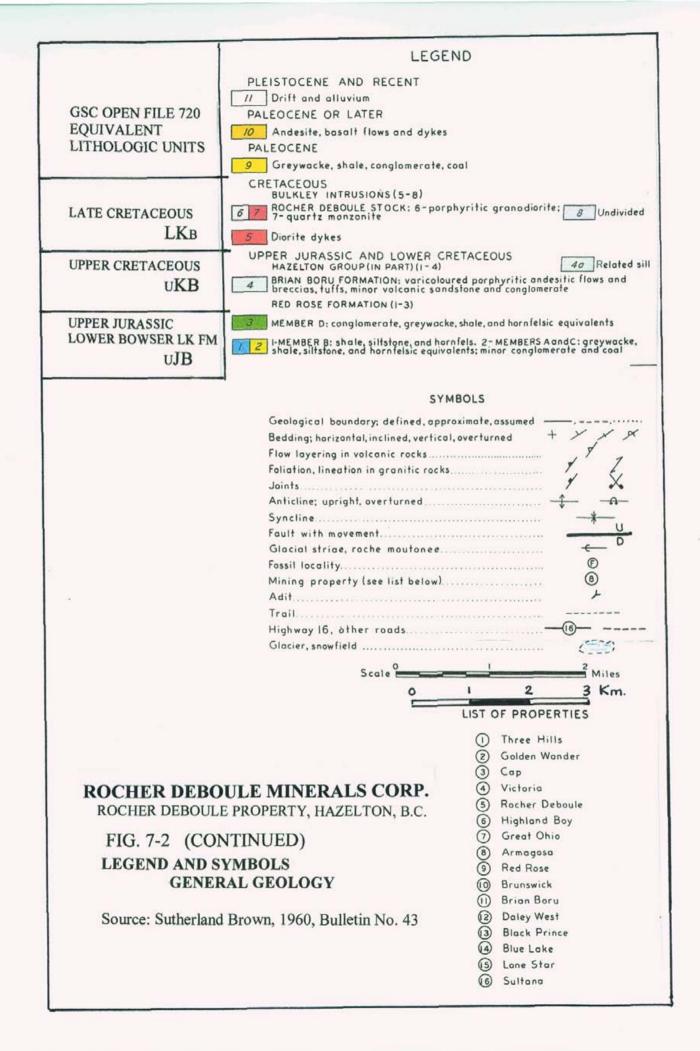
The showings are within the fine-grained quartz monzonite phase of the Rocher Deboule stock. The showings are defined by caved two adits of 72 and 47 metres in length driven by the Spokane Rocher Deboule Mining and Copper Company in 1916. The workings expose a silicified shear zone with small amounts of vein quartz that strikes north 20 degrees east and dips 65 degrees northwest. The shear zone contains some masses of arsenopyrite with pyrrhotite, pyrite and some chalcopyrite. The limited work done in 1981 by A. L'Orsa in Assessment report #8937 gives the following from two grab samples taken from about 15 cm of mineralization within the shear zone that is up to 1.5 metres width.

Lab Number	Au g/t	Ag – g/t	Cu %	W %	Co %	% Arsenopyrite
3600	2.18	15.6	1.06	0.66	0.10	15 +/-
3601	4.04	15.6	0,59		0.44	80 +/-

The arsenopyrite does not carry significant cobalt or nickel and little gold and silver.







# 8.0 Deposit Type

Based on the host lithologies and mapped alteration assemblages, the Rocher Deboule Property is classified as a high sulfidation, intrusive (sediment) hosted, epithermal gold – silver – base metal vein-shear deposit. The Property lies on the northwestern margin of a granodiorite pluton intruded into sediments and volcanics where a series of precious-base metal quartzsulphide veins have had historical mine production. The economic potential and Property merit is to be found not only in the historical quartz-sulphide veins but also in mineralization and alteration that has copper-gold porphyry and/ or iron oxide-copper-gold (IOCG) affinities and potential.

All of the mineral showings described in detail, with certain exceptions, on the Rocher Deboule Property comprise vein fillings of shear zones, normally in close proximity to the margin of the Rocher Deboule stock. These mineralized shears closely parallel one set of orthogonal joint pattern caused by the cooling of the stock. The veins all strike in a northeasterly to easterly direction and dip approximately 55 degrees to the north. The veins are found over significant lengths of shear zone, e.g., on the Highland Boy – Rocher Deboule system a strike length of perhaps 1500 metres is indicated. However, economic mineralization, as defined by mining on the Rocher Deboule mine, occurred over short strike lengths of 30 – 75 metres and was concentrated in near vertical shoots, e.g., the No. 4 vein at the Rocher Deboule mine.

Three distinct phases of mineralization defined in the different veins have been described by Southerland Brown (1960) and are discussed in **Item 9**. All three phases can overlap, especially at the western and eastern ends of No. 2 vein at the Rocher Deboule mine. The precious metals appear to be distributed among several minerals, but principally the iron-cobalt sulpharsenides and arsenides, tetrahedrite, and chalcopyrite.

In 2002 (Kikauka 2002) Ministry of Energy and Mines, Geological Survey Branch published Fe-Oxide Cu-Au (IOCG) deposit potential which lists the new major mineral deposits recently discovered, e.g., Olympic Dam (Southeast Australia), 2 billion tonnes grading 1.6% Cu, 0.04% U<sub>3</sub>O<sub>8</sub>, 3.5 g/t Ag, 0.6 g/t Au, and Candelaria (Northern Chile), 366 million tonnes 1.08% Cu, 0.26 g/t Au, 4.5 g/t Ag. The IOCG deposit characteristics are high iron content (hematite and/or magnetite), albite, K-feldspar, sericite, carbonate, chlorite, quartz, amphibole, pyroxene, biotite, tourmaline and apatite gangue, with geochemically anomalous Fe, Cu, Au, Ag, Co, P, U, and Rare Earth Elements (REE) (Eckstrand et al. 1995), (Webster 2002). The Geological Survey Branch of British Columbia (2001) lists the Rocher Deboule area as having Regional Geochemical Stream sediments >95<sup>th</sup> percentile for Au, La, Fe, & Cu. The Rocher Deboule also contains geochemically anomalous values in Co, U and REE as well as most of the gangue minerals common to IOCG deposits. The deep-seated structural setting of the Rocher Deboule occurrence combined with a geochemical signature possibly similar to other IOCG deposits increases the potential for an IOCG-type high grade and tonnage resource at depth. The Rocher Deboule can be classified as a vein/replacement type of occurrence, but the geochemical signature similar to know IOCG deposits suggests that the consideration be given to deeper exploration for porphyry mineralization. The anomalous lanthanum defined by the BC Geological Survey regional stream sediment surveys for the area and the anomalous air magnetic pattern defined by the Geological Survey of Canada are good indicators of iron-oxidecopper-gold style mineralization. The historical air magnetic coverage for the Property and surrounding area is given in the Geological Survey of Canada Geophysics paper 5245. It

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should be noted that there is a large magnetic anomaly with a +6500 gamma high. The air magnetic anomalies for IOCG deposits can be regional and are related to magnetite and / or coeval igneous rocks.

In 1990 (George Cross Newsletter 1990) International Kengate Ventures Inc. reported the No. 2 Porphyry Zone about 366 metres to the north of the Rocher Deboule mine. It is thought that this zone may be the area of the No. 2 vein at the Victoria mine. This porphyry zone is reported as a hydrothermal zone that has "estimated" dimensions of 762 metres length, 610 metres in depth and 12.2 metres in width. Mineralization is reported from a surface trench that yielded values as high as 30.5 grams per tonne gold and 0.35% cobalt. The 1990 report must be treated as anecdotal in nature. However, it is significant that the area where this reported mineralization occurs could be coincident to a 9 metre wide feldspar porphyry dyke, which follows No.2 vein at Victoria mine and is, in part, altered to guartz-sericite -carbonate rock.

It must be stressed that the vein systems known on the Rocher Deboule Property could be part of a much larger hydrothermal system that are indicative of a porphyry copper (gold) system laterally or possibly at depth. Hydrothermal vein systems, like Rocher Deboule, can be outboard of a typical hydrothermally altered defined porphyry copper (gold) system. From an exploration concept further evaluation should be focussed to the west of the Rocher Deboule and Victoria mines towards and into the sediments (uJB) and volcanics (uKB) to define porphyry style mineralization and alteration.

# 9.0 Mineralization & Alteration

All of the mineral showings described in detail, with certain exceptions, on the Rocher Deboule Property comprise vein fillings of shear zones, normally in close proximity to the margin of the Rocher Deboule stock. These mineralized shears closely parallel one set of orthogonal joint pattern caused by the cooling of the stock. The veins all strike in a northeasterly to easterly direction and dip approximately 55 degrees to the north. The veins are found over significant lengths of shear zone, e.g., on the Highland Boy – Rocher Deboule system a strike length of perhaps 1500 metres is indicated. However, economic mineralization, as defined by mining on the Rocher Deboule mine, occurred over short strike lengths of 30 – 75 metres and was concentrated in near vertical shoots, e.g., the No. 4 vein at the Rocher Deboule mine.

#### 9.1 Rocher Deboule Mine

Three distinct phases of mineralization defined in the different veins have been described by Southerland Brown (1960). These include:

- 1. The oldest and most widespread, a pegmatitic phase, formed veins composed principally of dark massive hornblende and glossy quartz with minor feldspar, apatite, magnetite, scheelite, tourmaline, ferberite, and molybdenite. This style of mineralization predominates on the Highland Boy, Great Ohio, and is locally well developed on No. 2 and No. 4 veins of the Rocher Deboule mine. The small amount of uraninite present, e.g., No. 2 vein Rocher Deboule, may belong to this phase.
- 2. The second stage forms the main phase of sulphide mineralization including principally chalcopyrite (No. 4 vein, Rocher Deboule), pyrrhotite (Great Ohio), but also locally significant amounts of arsenopyrite and cobalt-nickel sulpharsenides (Victoria vein) and pyrite. It appears that these minerals replace the hornblende and possibly the quartz and cavities. The sulphide content is variable, averaging 5-10% and ranging up to 89-90% over 0.5-1.0 metres. Quin (1987) suggests that there may some evidence for regional zoning of the sulphides from the interior of the pluton where pyrrhotite-chalcopyrite predominate (Great Ohio and Highland Boy) to chalcopyrite and pyrite at the pluton margins (No. 4 vein, Rocher Deboule) to sulpharsenides in the sediments outside the pluton (Victoria vein). Precious metals are associated with the sulphides of this phase.
- 3. The third and final stage of mineralization cross cuts the earlier stages. Mineralization consists of milky quartz with main sulphides of tetrahedrite, galena, and pyrite and possibly chalcocite. Gangue minerals fillings consist of combs of quartz containing siderite and calcite. The eastern end of No. 2 vein at Rocher Deboule mine is the best example of this phase.

All three phases can overlap, especially at the western and eastern ends of No. 2 vein at the Rocher Deboule mine on the 1200 and 950 levels, respectively. The precious metals appear to be distributed among several minerals, but principally the iron-cobalt sulpharsenides and arsenides, tetrahedrite, and chalcopyrite. Phases three and two are the main precious metal carriers with the of phase three minerals carrying most of the silver.

Southerland Brown reports that the granodiorite wall rock alteration is slight except for seemingly late magmatic or early hydrothermal alteration. This alteration involves a net removal of dark minerals adjacent to joints, giving the effect of bleaching, and in some places is balanced by deposition of hornblende with quartz and feldspar and rare tourmaline in veinlets

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within the joints and in larger amounts within the vein shears. This alteration is related in distribution to the main vein systems and in intensity to value within the veins. The zone of bleaching and alteration is on the footwall side of the veins, in joints that are sub parallel in strike to the veins and mostly sub parallel to dip.

#### 9.2 Victoria Mine

At the Victoria mine and showings the vein material consists principally of cobalt-nickel arsenides in hornblende gangue with glassy quartz and feldspar. Additional minerals include molybdenite, uraninite, apatite, sphene, allanite, and rare scapolite. Secondary minerals include erythite and possibly autunite. The cobalt-nickel sulpharsenides are complex and variable. They occur in discrete crystals within hornblende and in quartz-feldspar veinlets in the hornblende veins and as streaks and lenses of massive sulpharsenides. The gold is contained in the sulpharsenides. The molybdenite and uraninite tend to occur erratically in the pegmatitic phases of the hornblende veins but also occur in the walls. Alteration of the wall rock is minor, but in several places the granodiorite and fine diorite dyke have undergone patchy alteration to a sericite-quartz-carbonate rock. Also, a 9 metre wide feldspar porphyry dyke, which follows No.2 vein, is in part altered to quartz-sericite -carbonate rock.

#### 10.0 Exploration

#### **10.1 Introduction**

Exploration at the Rocher Deboule and Victoria mines covers the period commencing in the early 1900's through to 2007. Historical exploration data, that is reliable, documented and available, falls into two general periods including the 1950's and 1987-1990 and is summarized in **Item 6** along with mine production and detailed in this **Item 10**. Exploration completed by the Issuer, Rocher Deboule Minerals Corp., was done in 2001,2002, 2004, and 2007and is detailed in **Item 10.4**.

At the Rocher Deboule mine underground channel sampling results for the two main phases of **historical** sampling, the Western Uranium Cobalt Mines Ltd. (1952 program) and the Southern Gold Resources Ltd. (1987 program) for mineral tenure 510469 are summarized in **Table 10-1** and the details are given in **Tables 10-2**. The location of the results is given in **Figure 10-1**.

#### **TABLE 10-1**

#### HISTORICAL SUMMARY OF UNDERGROUND ASSAY VALUES – AREAS A TO Z FOR 950, 1002, & 1202 LEVEL DRIFTS, ROCHER DEBOULE MINE NO. 1, 2, 3, & 4 VEINS (NOTE-AREA 'W' SAMPLES TAKEN FROM SURFACE NEAR PORTAL AT 950 LEVEL DRIFT) Sources: Area 'A'-'G', M.W. Jasper (1952) & Area 'V'-'Z', Quin (1987)

Area & (Level) Vein No.	Average Width	*Length of Drift Sampled	Weighted Average % Cu	Weighted Average Grade -Ag Oz/Ton (gram/ tonne)	Weighted Average Grade – Au Oz/Ton (gram/tonne)
		Western Uranium Cobalt Mines Ltd.			
'A' (950) Vein 2	38.3 inches (97.2 cm)	68.8 feet (20.96 metres)	6.22	4.14 (141.9)	0.154 (5.28)
'B' (1002) Vein 2	43.3 inches (110.1 cm)	75.0 feet (22.86 metres)	3.86		
'C' (1002) Vein 2	30.7 inches (77.9 cm)	60.4 feet (18.41 metres)	4.03		
ʻD' (1050) Vein 2	43.06 inches (109.37 cm)	130.0 feet (39.62 metres)	3.12		
'E' (1202) Vein 2	43.3 inches (110.1 cm)	195.0 feet (59.44 metres)	0.32		
'F' (1202) Vein 2	18.7 inches (47.4 cm)	20.8 feet (6.34 metres)	3.00	3.73 (127.9)	0.086 (2.95)
'G' (1202) Vein 2	31.4 inches (79.87 cm)	180.0 feet (54.86 metres)	0.30		
		Southern Gold Resources Ltd.			
'V' (1201) Vein 1	41.9 inches (106.3 cm)	45.9 feet (14.0 metres)	0.71	0.95 (32.6)	0.010 (0.34)
'W' (950) Vein 2	13.12 inches (33.33 cm)	164.0 feet (50 metres)	5.44	3.20 (109.7)	0.593 (20.33)
'X' (1002) Vein 2	49.83 inches (126.6 cm)	183.7 feet (56 metres)	2.33	11.83 (390.2)	0.283 (9.70)
'Y' (1203) Vein 3	37.6 inches (95.5 cm)	32.8 feet (10 metres)	0.11	0.83 (28.5)	0.005 (0.17)
'Z' (1204) Vein 4	32.8 inches (83.3 cm)	242.8 feet (74 metres)	0.01	0.01 (0.3)	0.001 (0.03)

Note Figure 10-1 for Sample & Area Locations

Note- Blank space indicates sample was not assayed for precious metals.

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On the 950, 1002, 1050 and 1200 Levels on the eastern part of the No.2 vein high (>3%) copper and locally high gold values (3-20 grams/tonne) over significant strike lengths of 14 to 50 meters across widths of 0.33 to 1.10 metres are defined.

The sampling results of Southern Gold from Quin (1987) and Quin (1988) for the west portions of the No. 2 vein on the 1000, 1100, and 1200 Levels on mineral tenure 374216 are given in **Figures 10-3 through 10-5**.

On the down dip part of No. 2 vein at its western end, on the 1200 Level, Southern Gold has defined high grade gold values, varying from 1.44 to 112.64 g/t, silver values from 142 to 1459 g/t, and higher grade copper values generally greater than 3%. Note Figure 10-3. On the 1100 Sub Level, for mineral tenure 374216, the full length of about 48 meters of vein on this sub level was sampled as indicated in Figure 10-4. The vein varies from 0.66 to 1.85 meters in width and copper values range from 1.28 to 9.66%, silver values range from 32.23 to 1083.9 g/t and gold from 0.72 to 28.84 g/t. On the 1000 Level results are given on Figure 10-5 for mineral tenure 374216.

The eastern and western parts of the No.2 vein are worthy of future exploration. Extensive surface exploration, completed by Southern Gold in 1987, is reported in **Item 10.3** suggest additional targets occur on the relatively unexplored #1, #2A, and #3 Veins as well as dip and strike extensions of the #2 vein. The No. 4 vein is open to the east and west of the Rocher Deboule mine as defined by geophysics and mapping. Also, numerous geophysical and geochemical targets defined by Southern gold remain to be evaluated for vein mineralization.

#### **10.2** Rocher Deboule Historical Exploration / Development

Mine development completed on Rocher Deboule is detailed in **Item 6.** The last period for mine production at Rocher Deboule was 1952. Extensive underground chip and channel sampling was completed by Western Uranium Cobalt Mines Ltd. during 1951 and 1952 in anticipation of mining. The results for back channel samples taken perpendicular to the vein trends are given for several sections of the No. 2 vein where no mining has subsequently taken place as determined by review of longitudinal stope sections. Mine plans and stope outlines vein sections are indicated on **Figures 10-1** & **10-2** and results on pre 1987 work on **Tables 10-1** and **10-2** 

Sutherland Brown (1960) in the late 1950's, after mine production had ceased, completed through the then British Columbia Department of Mines and Energy, an underground geological mapping and compilation of the Rocher Deboule mine. The results of this geological mapping program are discussed in **Item 7.3** and **Figures 10-1** and **10-2** illustrates the results in relation to geology and vein location.

#### 10.3 Southern Gold 1987 – 1990: Rocher Deboule Historical Underground & Surface

In the period of 1987 through 1990 Southern Gold Resources Ltd. was active on the Property. During 1987 and 1988 both underground and surface channel sampling was completed for the Rocher Deboule mine. This work cumulated in the completion of a resource estimate in early 1989 that is discussed in **Item 6.8.** Underground work concentrated on the No. 2 vein although

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limited sampling was done on the No. 1., 2A, 3, and 4 veins. The following descriptions and assay data is taken from Quinn (1987) and Quinn (1989). Most of the work was done on the No. 2 vein from the 1200 level although a limited amount of sampling, on this vein, was done on the upper 950, 1050 and 1100 levels. Very limited sampling work has been done on the No. 1, No. 3, and No. 4 veins. The exploration results are broken into vein number for the respective levels.

#### No. 1 Vein

Results are given in **Figure 10-1** and **Table 10-3** on the 1200 Level under Area V on mineral tenure 510469. Here a 14.0 m length of vein averaging 1.06 meters wide and weight averages 5.44% Cu, 32.6 g/t Ag, and 0.34 g/t Au base on three channel samples.

#### No. 2 Vein

On the 1200 Level, for mineral tenure 374216, on the western end of the 1202 level drift an 85meter length of vein contains high-grade Cu-Ag-Au mineralization. The vein varies from 0.40 to 1.27 meters wide. **Note Figure 10-3.** Copper ranges from 2.1 to 14.87%, silver from 141.96 to 1454.9 g/t and gold from 1.44 to 112.64 g/t.

On the 1100 Sub Level, for mineral tenure 374216, the full length of about 48 meters of vein on this sub level was sampled as indicated in **Figures 10-1 and Figure 10-4**. The vein varies from 0.66 to 1.85 meters in width and copper values range from 1.28 to 9.66%, silver values range from 32.23 to 1083.9 g/t and gold from 0.72 to 28.84 g/t. The grade can be described as relatively medium grade copper and silver and lower grade gold mineralization. Sixteen (16) channels have been taken

On the 1050 sub level for mineral tenure 510469 results give 23.20 meters of exposed vein with a width of 0.48 to 1.30 meters wide. The sampling is based on six channel samples as illustrated in **Table 10-4** 

On the 1000 Level results are given on **Figure 10-1** and **Table 10-3** under Area X on mineral tenure 510469. Here 56 meters of vein length averages 1.266 meters wide and grades 2.33% Cu, 390.2 g/t Ag, and 9.70 g/t Au based on nine channel samples.

On the 1000 Level results are given on **Figures 10-1 and 10-5** for mineral tenure 374216. Here an approximate 90-meter length of vein on the west end of the 1002 drift varies from 0.53 to 1.40 meters wide. Copper grades ranges from 1.31 to 6.98 %, silver ranges from 26.7 to 396.4 g/t, and gold ranges from 1.51 to 5.80 g/t based on 18 channel samples

On the 950 Level results are given on **Figure 10-1** and **Table 10-3** under Area W on mineral tenure 510469. Here 50.0 meters of vein length averages 0.333 meters wide and grades 5.44% Cu, 109.7 g/t Ag, and 17.3 g/t Au base on three channel samples. Due to the sparse sampling the results are not representative of this 50 meters of vein length.

#### No. 2A Vein

This vein was defined on surface by strong and anomalous geophysics and geochemistry in 1987. Follow up work in 1988 consisted of the plotting of cross sections to define that this area would tie-in with the reported No. 2A vein on the 1000 Level. Examination of where the vein

comes to surface revealed a 0.49 meter wide vein with significant copper, lead, zinc, and silver values in a quartz-tetrahedrite-pyrite-chalcopyrite matrix. Sampling of the vein on surface returned the results given below. The vein varies in width from 0.21 to 0.51 meters in width. Note **Table 10-5** 

#### No. 3 Vein

Results are given in **Figure 10-1** and **Table 10-3** on the 1200 Level Crosscut under Area Y on mineral tenure 510469. Here a 10.0 m length of vein averaging 0.955 meters wide and weight averages 0.11% Cu, 28.5 g/t Ag, and 0.17 g/t Au based on two channel samples.

#### No.4 Vein

Results are given in **Figure 10-1** and **Table 10-3** on the 1200 Level Crosscut under Area Z on mineral tenure 510469. Here a 74.0 m length of vein averaging 0.833 meters wide and weight averages 0.01% Cu, 0.3 g/t Ag, and 0.03 g/t Au based on four channel samples.

Surface channel sampling of No. 4 Vein done in 1987 is illustrated in **Table 10-6** and sample locations are indicated in **Appendix A** 

Quin (1989) concluded that based on a brief examination of this vein that significant resource potential may remain. And further work is merited of existing workings and exploration along trend and down dip.

#### **Resource Estimation**

A detailed historical "reserve" estimate was completed by Quin (1989) at the completion of the underground exploration in 1988 on the Rocher Deboule mine. This is detailed in **Item 6.8**.

#### Surface Exploration

Southern Gold also undertook a surface sampling and geological mapping program over the No. 2 and No. 4 veins on north-south grid lines 100 metres apart; geological mapping (1:2500 scale) is given on **Appendix A.** They also completed a 1:5000 scale contoured base map and extensive ground geochemical and ground geophysical surveys. A summary and interpretation of the results is given in **Figure 10-6** 

Additional surface exploration consisted of geochemical soil surveys for gold, silver, arsenic, lead, zinc and copper, geophysical ground magnetic, and VLF electromagnetic surveys, all at a 1:2500 scale, over an area of approximately 1 square kilometre that was centred on the known strike and dip extensions of the known veins (No. 1 through 4) that have been developed and mined on the property. The results of these surveys are available through assessment reports by Quin (1987) and Pezzot (1987). Geochemical in-situ gold, silver, copper, arsenic, lead and zinc defined anomalous extensions and vein projections. The results for gold/silver and copper/arsenic soil surveys are given in Quin (1987) and the soil geochemistry for gold is given in **Figure 10-7**. Geophysical very low frequency (VLF) and magnetic surveys also were useful in defining structure that is favourable to hosting of the precious-base metal quartz-sulphide veins. A number of small isolated magnetic lows are observed within the stock which likely reflect localized areas of increased fault activity and probably define the vein-shear zones. Also. Alternating narrow bands of moderately conductive and resistive materials are aligned at 075 degrees across the main survey grid (Pezzot 1987) – these conductive zones are probably related to the mineralized shear-vein zones already known and to new undefined zones. The

No. 4 vein is open to the east and west of the Rocher Deboule mine as defined by geophysics and mapping. Southern Gold also completed reconnaissance talus fines sampling on the eastern side of the property.

From VLF-EM conductivity data, the main follow up targets occur within 200 meters of the intrusive contact with the volcanic/sediment country rock at 1,600-1,750 m (5,248-5,740 ft) elevation (approx. 50-150 m from the #4 Vein). Data compilation suggests additional targets occur on the relatively unexplored #1, #2A, and #3 Veins as well as dip and strike extensions of the #2 Vein. A geophysical compilation is taken from Quin (1988) and is given as **Figure 10.8**.

#### 10.4 Rocher Deboule Mineral Corp. 2001-2002, 2004, & 2007 Exploration

#### 2001/2002, 2004 Exploration

The rock sampling and stream sediment sampling locations for 2001/2002, 2004 and 2007 are illustrated on **Figure 10-9** and **Tables 10-7** through **10-9**.

Geological surveying and geochemical rock and stream sediment sampling was carried out over parts of the former Rocher Deboule and Victoria mines during the period of October 2001 and May 2002 by Mr. Andris Kikauka, P.Geo. on behalf of Rocher Deboule Minerals Corp. (Kikauka 2002). These results are discussed in detail in this report. The cost of this exploration work was in the order of \$ 4000. During June and August 2004 (Kikauka 2004) Rocher Deboule spent \$9725 on mineral exploration that was used for claim assessment.

An area of 0.7 X 1.0 km (70 hectares) was mapped in a reconnaissance fashion at a scale of 1:5,000. A global positioning satellite instrument was used for locating outcrop stations, as well as stream sediment and rock chip sample locations.

A total of 6 silt fraction stream sediment samples were taken from RD 1 & 3 claims (now Mineral Tenure 510469) at an elevation ranging from 1,380- 1,660 metres. Samples were taken with a shovel from active stream channels and were wet screened through -20 mesh screens. Stream sediment samples were placed in marked kraft envelopes and shipped to Pioneer Labs, Richmond, B.C. for 30 element Induced Couple Plasma (ICP) and gold geochemical analysis.

A total of 18 rock chip samples were taken from RD 1 and 3 claims (now part of Mineral Tenure 510469) at an elevation ranging from 1,380- 1,860 metres. The rock samples were taken across widths ranging from 0.2- 0.8 metres. Rock chip samples consisted of acorn to walnut sized chips taken with rock hammer and maul averaging 2.5 kg in weight. Samples were placed in marked poly bags and shipped to Pioneer Labs, Richmond, B.C. for 30 element Induced Couple Plasma and gold geochemical analysis.

The 2001/2002 rock sample and stream sediment locations are given on **Figure 10-9** and results on **Table 10-7**. Rock chip samples taken from Rocher Deboule are AR1-13, and AR-18 whereas the Victoria Vein is AR 14-17.

Aside from the expected Cu-Ag-Au values of economic interest, which returned values up to 14.8 g/t Au, >10% copper, and 399.6 g/t silver, the Rocher Deboule 2, 3 and 4 Veins contain variable molybdenite, sphalerite, arsenopyrite and safflorite (which accounts for geochemically anomalous Mo-Zn-Co-As). Also, AR-8 and 9 contain 5,227 and 1,658 ppm La that is a pathfinder element for Iron Oxide-Copper Gold mineralization.

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Kikauka reports a noticeable lack of copper bearing sulphide mineralization in the Victoria No. 1 vein. The elevated Au-Mo-Co-As is consistent with values obtained by previous work. The geochemically anomalous bismuth values suggest the Victoria No. 1 vein contains variable bismuthinite. The Victoria Vein, represented by samples AR 14-17, have an average geochemical analysis value >100 ppm uranium. The background values of uranium from samples taken from the Victoria No. 1 Vein is about 4 times greater than that of the Rocher Deboule No. 2,3 & 4 vein samples with the exception of AR-11, a rock chip sample taken from Rocher Deboule No. 4 Vein, that contains 405 ppm uranium.

The higher gold-silver values obtained from ST-5 (1,640 ppb gold and 160.9 ppm silver) correspond to elevated Cu-Pb-Zn-As-Co values and occur in the same area that Southern Gold located anomalous gold in soil (Quin 1987). This is located near Portal 100 on the Rocher Deboule No. 4 vein and is considered a prime area of exploration. Stream sediment samples ST-3 and ST-6 were taken from the larger creek that drains the valley between the Highland Boy and Rocher Deboule workings. ST-3 contains elevated Cu-Au-Ag values and ST-6, which was taken at higher elevation, contains elevated copper and low gold-silver values.

Exploration in 2004 was conducted by Kikauka (2004). This exploration focused on limited sampling and a small ground magnetic survey. This included three sediment samples in the vicinity of the Highland Boy mine (Mineral Tenure 510469). A further three rock chip samples from the vicinity of the No. 4 vein of the Rocher Deboule mine and four rock chip (AR 1–AR 4 samples from the Highland Boy mine were taken over widths of 0.2 to 0.6 m. Also 10 soil samples in the vicinity of the Highland Boy vein showing were taken some 2 kilometers east of the Rocher Deboule veins. Note **Figure 7.2** for Highland Boy showing and **Figure 10-9** and **Table 10-8** for location of samples and results.

At the Cap showing a northwest trending 300 meter sol line was established where seven (7) soil samples (C soil horizon) were taken. No significant base or precious metal results were obtained.

The sediment and rock sampling procedure and handling were treated identically to the 2002 sampling. The soil samples were taken from 0.3 to 0.55 m depth and averaged 0.5 kg in weight. Samples were placed in marked kraft bags and shipped to Acme Labs in Vancouver, BC and Pioneer Labs in Richmond, BC for 30 element ICP and Gold geochemical analyses.

The rock sample from the No. 4 Vein and the Highland Boy veins were analyzed geochemically and the results were all in excess of 10,000 ppm copper, from 0.79 to 1.80 g/t gold and 7.1 to 100 g/t silver and were similar to similar to the 2002 and historical results. The sediment results were from the stream in the vicinity of the Highland Boy Lower Vein and this returned anomalous copper (143 to 537 ppm), one anomalous arsenic value of 1437 ppm and gold values of 64.7 and 265.7 ppb. The soil sample results from the Highland Boy showing area returned highly anomalous copper (1757 to >10,000 ppm), anomalous silver and arsenic and moderate to highly anomalous gold (46 to 11,131 ppb.). The soil samples indicate known vein mineralization of the Upper and Lower Veins.

The 2004 ground magnetometer survey consisted of 3.3 line kilometers. The grid was oriented in a 030 degrees bearing with grid lines at 50 meter and 100 meter spacings; magnetic readings were done every 12.5 metres. The survey defined strong, positive total field values on the west

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edge of the grid area along the Highland Boy upper and lower veins. It appears that magnetite is found with and related to the Cu-Ag-Au bearing carbonate-sulphide fissure veins of the Highland Boy upper and lower veins. The Chicago Creek Fault transects the centre of the grid and is conspicuous as a magnetic low. The north end of the grid contains a broad magnetic high that requires further field investigations.

#### 2007 Exploration

During 2007 Rocher Deboule conducted limited prospecting and rock and soil sampling, a large area Dighem airborne geophysical survey by Fugro airborne Surveys Corp., a remote sensing analysis by John Ł. Berry, a small area ground magnetometer survey, and a diamond core drilling program of 1106.1 meters over 6 drill holes on the Highland Boy Showing in August and September 2007. The diamond drilling program is discussed in **Item 11**. The cost of this exploration during 2007 is \$705,000.

The prospecting and rock sampling involved collecting a total of 41 grab and chip samples and 6 soil samples. The work was done by Andris Kikauka, P.Geo., Sean Derby, Geologist, and Dan Ethier, Geological Technologist. A majority of the sampling of the work was concentrated on the Highland Boy Showing with lesser amounts on the Golden Wonder and Cap showings and on the Rocher Deboule and Victoria mines. The work done by Sean Derby include 18 grabs and chips (RD07-001 to 018 series) directed to analyses of Iron Oxide-Gold-Copper (IOGC) metals of gold, nickel, copper, iron, cobalt, and rare earth metals. Some of the samples were quite anomalous in La, Nd, and U in support of IOGC mineralization environment as reported in Table 10-9. The analytical results and location of the samples are illustrated in Figure 10-9 and results are given in Table 10-9. The results for the sampling, for the most part, give exceedingly high and anomalous values for copper, silver, and gold. Locally there are anomalous concentrations of arsenic, cobalt, nickel, iron, molybdenum and tungsten. Most of the mineralization, where described, defines veins of narrow width (mostly less than 1 meter) containing massive sulfides minerals of pyrite, and chalcopyrite associated locally with magnetite at the Highland Boy showings. These results are consistent with previous sampling programs completed during 2001/2002 and 2004.

A focus of the 2007 exploration work was on the Highland Boy Cu-Ag-Au mineral occurrence, which features two 090 to 120 degrees trending and steeply north dipping quartz-sulphide-iron oxide fissure veins that outcrop in rugged terrain at 1768 to 1980 meter elevation. The southernmost vein zone is traced west along surface to the No. 4 Rocher Deboule No. 4 vein. The Highland Boy veins contain massive and banded chalcopyrite, coarsely crystalline magnetite, and pyrite in a gangue of quartz, calcite, dolomite, hornblende, tourmaline, actinolite, sericite, biotite and chlorite. Additional prospecting in the vicinity of the two main veins led to the discovery of several parallel and perpendicular quartz-sulphide zones where 15 rock chip samples were taken that include grabs and chip samples across widths from 0.1 to 1.5 meters. From a 200 by 300 meter area located in the cliff area west of the 2007 drill site. In addition six soil samples were taken along the west extension of the Highland Boy Vein at 50 meter spacing.

As noted above the Highland Boy upper and lower veins were the focus of the 2007 exploration program, in order to determine the correlation between the 2000-3000 nT total magnetic field anomaly and nearby mineral trends on the Highland Boy Upper Vein. A ground magnetometer survey of six cross lines totaling 2.5 line kilometers was completed with readings at 12.5 meter

centers. The baseline was oriented 120 degrees and the respective cross lines at 030 degrees. The survey adjoined and was to the west of the 2004 ground magnetometer survey.

Results from rock chip sampling of the Highland Boy Upper Vein indicate there is a relatively low arsenic-antimony values with elevated values of Cu-Ag-Au-Fe. The iron notably occurs as magnetite, and the magnetometer geophysical performed in 2004 clearly shows a direct correlation between the vein and the magnetic anomaly. The magnetite zone is also verified by the DIGHEM airborne magnetic survey of Fugro Airborne Surveys Corp. (note below) and correlates closely with Cu-Ag-Au bearing sulphide mineralization of the Highland Boy Upper Vein.

From July 7 to 17, 2007 Fugro Airborne Surveys Corp. (Fugro, 2007) completed a DIGHEM airborne geophysical survey over the Rocher Deboule Property in a survey block amounting to 1089 line kilometers. The purpose of the survey was to detect zones of conductive mineralization and to provide information that could be used to map deology and structure of the This was accomplished by using a DIGHEM multi-coil, multi-frequency survev area. electromagnetic system, supplemented by a high sensitivity cesium magnetometer and a 256channel spectrometer. The information from these sensors was process to produce maps that display the magnetic, radiometric and conductive properties of the survey area. A series of eight colored maps illustrating the data include Total Magnetic Field, Calculated Vertical Magnetic Gradient, Radiometric Total Counts, Radiometric Potassium Counts, Radiometric Thorium Counts, Radiometric Uranium Counts, and Apparent Resistivity 56,000 Hz, and Apparent Resistivity 72,000 Hz. The report provided by Fugro gives only a brief description of the survey results and mostly describes the equipment, data processing procedures, and logistics of the survey. The various maps noted above display the magnetic, radiometric and conductive properties of the survey area. A complete assessment and detailed evaluation of the survey results remain to be carried out in conjunction with all available geophysical, geological, and geochemical information. Once this has been done consideration can be given to additional processing of existing geophysical data in order to extract the maximum amount of information from the survey results. The geophysical surveys remain to be evaluated by the Rocher Deboule geological staff. The Total Magnetic Field, Radiometric Total Counts, and Apparent Resistivity, 7200 Hz are illustrated in Appendix B.

The Remote Sensing Analysis of the Rocher Deboule Area given to the writers does not contain any text report but a series of color slides. The veins, dykes and faults from the study are included in the Fugro (2007) survey maps discussed above.

#### 10.5 Victoria Mine

Sutherland Brown (1960) completed geological mapping, sampling, and compiled available results for the Victoria Mine. The workings consist of five adits, one raise and sub-level, and a number of open cuts. All of the underground workings are on the No. 1 vein, the most northerly of three 080 trending and dipping 60 north, parallel veins; these veins comprise the main showings at the Victoria Mine. **Figure 10-10** is a plan of a chain and compass survey compiled by Southerland Brown (1960) and Stevenson (1949). This figure illustrates the workings on the No. 1 vein from the lowest adit, No. 3, at elevation 1576 metres to the highest adit, No.00, at about 1799 metres, and No. 1 open cut on the ridge at 1860 metres. Open cuts No. 2 & No. 4 are further east on the serrated ridge top. Workings on No. 2 and No. 3 veins consist of a few

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#### open cuts.

These results are illustrated on **Figure 10-10** and **Table 10-10**. The sampling results are a compilation from Stevenson (1949) (samples 1-38), Kindle (1954) (samples K1-K7), and Sutherland Brown (1960) (B1-B3). The Victoria mine was inactive until 1978 when Arber Resources Inc. constructed an access road to the 1,265-metre elevation and rehabilitated two adits at the 1,605 metre and 1768 metre elevations. At the same time DeGroot Logging were working on adjacent ground, not under lease to Arber Resources, and conducted an unsuccessful diamond drilling program which is reported in **Item 11**.

#### 10.6 Conclusions

Exploration since 1952 has focussed on definition of the known gold-silver-copper quartzsulphide veins on the Rocher Deboule Property. These veins are locally of very high grade and extend over significant strike and dip lengths, up to 1500 and 200 metres, respectively. The veins are relatively narrow but local steeply dipping "ore shoots" can be of high grade as defined by historical mining. The underground channel sampling results given in this **Item** provide an indication of the expected precious and base metal grades. Surface geological, geochemical (in-situ soil gold, copper and arsenic) and geophysical (electomagnetics and magnetics) exploration survey also define the surface expression of the veins and can provide good exploration targets for further follow-up, including drilling, to expand the known and potential new veins. The following targets are worthy of further exploration:

- On the 950, 1002, 1050 and 1200 Levels on the eastern part of the No.2 vein high (>3%) copper and locally high gold values (3-20 grams/tonne) over significant strike lengths of 14 to 50 meters across widths of 0.33 to 1.10 metres are defined. The eastern part of the No.2 vein is worthy of future exploration.
- On the 1200 Level, on the western part of the No. 2 vein, locally high grade gold, silver, and copper values are present whereas on the 1100, 1050, 1000, and 950 sub levels and levels and moderate grade copper, silver, and gold grades are present.
- The No. 4 vein is open to the east and west of the Rocher Deboule mine as defined by geophysics and mapping.
- Data compilation suggests additional targets occur on the relatively unexplored #1, #2A, and #3 Veins as well as dip and strike extensions of the #2 Vein.
- Numerous geophysical and geochemical targets defined by Southern Gold remain to be evaluated for vein mineralization.

Finally, only limited attention, is given or mentioned concerning inter-vein mineralization and alteration in the reports reviewed. Further surface geological mapping should focus both on the vein style mineralization and its extensions and on the recognition and definition of hydrothermal alteration of large tonnage, albeit, low-grade bulk tonnage porphyry copper (gold) and/or iron oxide-copper-gold (IOCG) style mineralization. The anomalous lanthanum defined by the BC Geological Survey regional stream sediment surveys and the anomalous La, Nd and U defined by Rocher Deboule rock sampling on the Property and the anomalous air magnetic pattern defined by the Geological Survey of Canada, as outlined in **Item 8**, can be good indicators of iron-oxide-copper-gold style mineralization.

#### **TABLE 10-2**

#### HISTORICAL COPPER, SILVER & GOLD ASSAY VALUES - 950, 1002 & 1202 LEVEL DRIFTS ROCHER DEBOULE MINE, NO. 2 VEIN – WESTERN URANIUM COBALT MINES LTD. DATA (Source: Jasper, 1952)

Camala No.	Width:	Drift Level	% Cu	Oz/ Ton Ag	Oz/ Ton Au
Sample No.		Duit Level	78 C U		
	Inches, (cm)				
391	14 (35.6)	950	1.50	2.80	0.030
390	24 (61.0)	950	2.90	6.00	0.160
389	20 (50.8)	950	1.20	1.60	0.150
388	44 (111.8)	950	4.10	2.40	0.120
387	72 (182.9)	950	6.70	3.80	0.070
386	28 (71.1)	950	9.50	12.10	0.240
385	32 (81.3)	950	10.20	1.90	0.560
384	72 (182.9)	950	7.40	3.80	0.070
	Average Width	*Length of Drift	Weighted	Weighted	Weighted
		sampled	Average % Cu	Average	Average
Imperial	38.3 inches	68.8 feet	6.22	4.14 opt Ag	0.154 opt
Metric	97.2 cm	20.96 metres	6.22	141.9 g/t Ag	5.28 g/t Au

#### AREA 'A': Underground Drift Level 950

Note Figure 10-1 for "Area" Locations

Note- Blank space indicates sample was not assayed for precious metals.

\*Fence pattern sampled @ 3-5 m sample spacing.

#### AREA 'B': Underground Drift Level 1002

Sample No.	Width: Inches (Centimetres)	Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
156	60 (152.4)	1002	4.52		
413	44 (111.8)	1002	2.60	4.30	0.850
157	48 (121.9)	1002	1.40		
412	46 (116.8)	1002	5.80	3.90	0.030
158	55 (139.7)	1002	0.67		
411	48 (121.9)	1002	4.10	9.50	0.150
159	48 (121.9)	1002	6.81		
410	32 (81.3)	1002	5.10	8.90	0.090
160	47 (119.4)	1002	2.23		
409	30 (76.2)	1002	6.80	12.80	0.060
161	58 (147.3)	1002	1.71		
162	45 (114.3)	1002	3.53		
	Average Width	*Length of	Weighted		
		Drift sampled	Average % Cu		
Imperial	43.3 inches	75.0 feet	3.86		
Metric	110.1 cm	22.86 metres			

Note- Blank space indicates sample was not assayed for precious metals.

\*Fence pattern sampled @ 3-5 m sample spacing.

#### TABLE 10-2 cont

	All dates in share		% Cu	Oz/Ton Ag	Oz/Ton Au
Sample No.	Width: Inches (Centimetres)	Drift Level	% Cu	OZ/TON Ag	0210n Au
414	34 (86.4)	1002	2.50	8.40	0.060
148	33 (83.8)	1002	6.29		
147	51 (129.5)	1002	5.20		
150	32 (81.3)	1002	2.13		
23W	18 (45.7)	1002	0.90		
151	24 (61.0)	1002	3.53		
152	42 (106.7)	1002	3.49		
153	24 (61.0)	1002	7.54		
154	18 (45.7)	1002	3.22		
	Average Width	*Length of Underground drift sampled	Weighted Average % Cu		
Imperial Metric	30.7 inches 77.9 cm	60.4 feet 18.41 metres	4.03		

#### AREA (C') Underground Level 1002

Note- Blank space indicates sample was not assayed for precious metals. \*Fence pattern sampled @ 3-5 m sample spacing.

Sample No.	Width: Inches (Centimetres)	Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
180	72 (182.9)	1050	1.76	8.40	0.060
179	36 (91.4)	1050	2.23		
178	36 (91.4)	1050	4.00		
177	54 (137.2)	1050	3.79		
176	58 (147.3)	1050	8.37		
175	60 (152.4)	1050	8.58		
174	24 (61.0)	1050	7.95		
173	40 (101.6)	1050	1.61		
172	30 (76.2)	1050	1.19		
171	30 (76.2)	1050	1.61		
170	42 (106.7)	1050	3.84		
169	38 (96.5)	1050	1.87		
168	36 (91.4)	1050	1.19	1	
167	54 (137.2)	1050	0.72		
181	32 (81.3)	1050	0.83		
182	36 (91.4)	1050	0.72		
166	54 (137.2)	1050	0.41		
	Average Width	*Length of Drift sampled	Weighted Average % Cu		
Imperial Metric	43.06 inches 109.37 cm	130.0 feet 39.62 metres	3.12		

AREA 'D': Underground Level 1050

Note- Blank space indicates sample was not assayed for precious metals.

\*Fence pattern sampled @ 3-5 m sample spacing.

AREA 'E'	: Underground	Level 1202

Sample No.	Width: Inches (Centimetres)	Drift Level	% Cu
93	18 (45.7)	1202	0.35
94	22 (55.9)	1202	0.10
95	24 (61.0)	1202	0.10
96	37 (94.0)	1202	0.35

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Imperial Metric	43.3 inches 110.1 cm	195.0 feet 59.44 metres	0.32	
	Average Width	*Length of Drift sampled	Weighted Average %Cu	
102	31 (78.7)	1202	0.96	
101	33 (83.8)	1202	0.15	
100	30 (76.2)	1202	0.25	
99	18 (45.7)	1202	0.20	
98	24 (61.0)	1202	0.10	
97	18 (45.7)	1202	0.51	

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Note- Blank space indicates sample was not assayed for precious metals. \*Fence pattern sampled @ 3-5 m sample spacing.

AREA 'F':	Underground	Leve	I 1202
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Sample No.	Width: Inches (Centimetres)	Drift Level	% Си	Oz/Ton Ag	Oz/Ton Au
402	28 (71.1)	1202	0.80	4.60	0.020
401	14 (35.6)	1202	8.20	2.20	0.200
400	14 (35.6)	1202	2.20	3.50	0.105
	Average Width	*Length of Drift sampled	Weighted Average % Cu	Weighted Average	Weighted Average
Imperial Metric	18.7 inches 47.4 cm	20.8 feet 6.34 metres	3.00	3.73 oz/ton Ag 127.9 g/t Ag	0.086 oz/ton Au 2.95 g/t Au

Note- Blank space indicates sample was not assayed for precious metals. \*Fence pattern sampled @ 3-5 m sample spacing.

#### AREA 'G': Underground Level 1202

Sample No.	Width: Inches	Drift Level	% Cu
	(Centimetres)		
260-261	65 (165.1)	1202	0.62
81	31 (78.7)	1202	0.51
265-266	53 (134.6)	1202	0.41
82	30 (76.2)	1202	0.15
269-271	61 (154.9)	1202	0.23
83	16 (40.6)	1202	0.05
274	28 (71.1)	1202	0.15
84	12 (30.5)	1202	0.10
275	30 (76.2)	1202	0.15
85	16 (40.6)	1202	0.00
276	42 (106.7)	1202	0.10
86	22 (55.9)	1202	0.30
277	14 (35.6)	1202	0.35
87	16 (40.6)	1202	0.20
278	20 (50.8)	1202	0.40
88	11 (27.9)	1202	0.20
279	48 (121.9)	1202	0.20
280	51 (129.5)	1202	0.45
	Average Width	*Length of Drift	Weighted
	-	sampled	Average % Cu
Imperial	31.4 inches	180.0 feet	0.30
Metric	79.87 cm	54.86 metres	

Note- Blank space indicates sample was not assayed for precious metals. \*Fence pattern sampled @ 3-5 m sample spacing

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#### **TABLE 10-3**

#### COPPER, SILVER & GOLD ASSAY VALUES - 950 (surface), 1002 & 1201 LEVEL DRIFTS ROCHER DEBOULE MINE, NO. 1, 2, 3, 4 VEINS - SOUTHERN GOLD RESOURCES 1987 DATA

Source: Quin 1987

Note Figure 10-1 for "Area" Locations

#### AREA 'V' (NO. 1 VEIN):

Sample No.	Width: Inches (Centimetres)	Underground Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
RU 11	39.4 (100)	1201	1.28	1.30	0.011
RU 12	39.0 (99)	1201	0.97	1.68	0.019
RU 13	47.2 (120)	1201	0.01	0.05	0.002
	Average Width	*Length of Underground drift sampled	Weighted Average % Cu	Weighted Average	Weighted Average
Imperial	41.9 inches	45.9 ft.	0.71	0.95 oz/ton Ag	0.010 oz/ton Au
Metric	106.3 cm	14.0 m	0.71	32.6 g/t Ag	0.34 g/t

\*Fence pattern sampled @ 7 m sample spacing.

#### AREA 'W' (NO. 2 VEIN):

Sample No.	Width: Inches (Centimetres)	Underground Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
RD#1R	15.7 (40)	950	8.09	0.92	1.390
RD#5R	11.8 (30)	950	4.41	7.26	0.065
RD#6R	11.8 (30)	950	2.92	2.18	0.059
	Average Width	*Length of Drift Sampled	Weighted Average % Cu	Weighted Average	Weighted Average
Imperial	13.12 inches	164.0 feet	5.44	3.20 oz/ton Ag	0.593 oz/ton Au
Metric	33.3 cm	50.0 metres	5.44	109.7 g/t Ag	20.33 g/t Au

\*Fence pattern sampled @ 25 m sample spacing.

#### AREA 'X' (NO. 2 VEIN):

Sample No.	Width: Inches (Centimetres)	Underground Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
R3	80.7 (205)	1002	0.79	0.81	0.016
R4	88.6 (225)	1002	1.39	5.19	0.023
RA159	43.3 (110)	1002	4.24	2.43	0.066
RA160	43.3 (110)	1002	0.01	0.02	0.068
RA161	37.8 (96)	1002	0.27	0.19	0.067
RU2001	47.6 (121)	1002	5.73	40.85	0.034
RU2002	34.3 (87)	1002	1.26	1.85	0.032
RU2003	53.1 (135)	1002	5.51	47.73	2.070
RU2004	63.0 (160)	1002	0.88	1.95	0.037
	Average Width	*Length of Drift Sampled	Weighted Average % Cu	Weighted Average	Weighted Average
Imperial	49.83 inches	183.7 feet	2.33	11.83 oz/ton Ag	0.283 oz/ton Au
Metric	126.6 cm	56.0 metres	2.33	405.6 g/t Ag	9.70 g/t Au

\*Fence pattern sampled @ 5-7 m sample spacing.

AREA 'Y' (NO. 3 VEIN):

Sample No.	Width: Inches (Centimetres)	Underground Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
RU31	45.7 (116)	1203	0.06	0.91	0.004
RU32	29.5 (75)	1203	0.20	0.71	0.007
	Average Width	*Length of Drift Sampled	Weighted Average % Cu	Weighted Average	Weighted Average
Imperial	37.6 inches	32.8 feet	0.11	0.83 oz/ton Ag	0.005 oz/ton Au
Metric	95.5 cm	10.0 metres	0.11	28.5 g/t Ag	0.17 g/t Au

\*Fence pattern sampled @ 10 m sample spacing.

#### AREA 'Z' (NO. 4 VEIN):

Sample No.	Width: Inches (Centimetres)	Underground Drift Level	% Cu	Oz/Ton Ag	Oz/Ton Au
RU41	47.2 (120)	1204	0.01	0.01	0.001
RU42	29.5 (75)	1204	0.02	0.02	0.001
RU44	24.8 (63)	1204	0.01	0.01	0.001
RU45	29.5 (75)	1204	0.01	0.01	0.001
	Average Width	*Length of Underground drift sampled	Weighted Average % Cu	Weighted Average	Weighted Average
Imperial	32.8 inches	242.8 feet	0.01	0.01 oz/ton Ag	0.001 oz/ton Au
Metric	83.3 cm	74.0 metres	0.01	0.3 g/t Ag	0.03 g/t Au

\*Fence pattern sampled @ 25 m sample spacing.

#### **TABLE 10-4**

## ROCHER DEBOULE MINE - PLAN OF UNDERGROUND SAMPLING 1050 LEVEL, No. 2 VEIN

(From	Quin (1989))					
Sample	Width	Cu	Ag	Ag	Au	Au
No.	(metres)	%	g/t	OPT	g/t	OPT
R1050-1	0.48	0.89	1846.2	53.8	3.0	5 0.09
R1050-2	0.9	0.532	73.7	2.15	18.2	4 0.53
R1050-3	1.3	0.258	676.2	19.7	8.8	5 0.26
R1050-4	0.6	0.174	26.4	0.77	5.9	7 0.17
R1050-5	0.9	0.06	36.0	1.05	0.3	8 0.01
R1050-6	0.85	0.011	44.2	1.29	2.0	6 0.06

### TABLE 10-5 ROCHER DEBOULE MINE - SURFACE SAMPLING No. 2A VEIN (from Quin 1989)

Sample No.	Location		Cu %	Ag g/t	Ag OPT	Au g/t	Au OPT
RD88-2R	2+50W 2+50N	0.49	2.15	555.2	16.19	0.96	0.028
RD88-2A-1	0+60W 3+10N	0.20	3.91	15.09	0.44	40.05	1.168
RD88-2A-2	0+60W 3+10N	0.46	7.90	567.5	16.55	11.04	0.322
RD88-2A-3	0+60W 3+10N	0.51	12.92	1365.8	39.83	6.79	0.198
RD88-2A-4	0+60W 2+95N	0.25	9.67	67.2	1.96	4.39	0.128
RD88-2A-5	1000 X C E. Side	0.26	2.49	107.7	3.14	0.38	0.011
RD88-2A-6	1000 X C W. Side	0.21	0.09	8.6	0.25	0.03	0.001

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#### **TABLE 10-6**

#### SURFACE CHANNEL SAMPLING 1987 - No. 4 VEIN **ROCHER DEBOULE MINE AREA - SOUTHERN GOLD RESOURCES LTD. DATA**

(Refer to Appendix A for Sample Location) Source: Quin 1987

VEIN	SAMPLE	WIDTH metres	Cu %	РЬ %	Zn %	Ag g/t	Au g/t
4	RD 13R	Selected Float Grab	8.25	0.01	0.06	27.1	9.43
4	RD14R	0.65	1.06	0.01	0.01	17.8	0.75
4	RD15R	0.65	0.34	<0.01	<0.01	10.0	0.27
4	RD16R	0.32	0.07	<0.01	0.01	3.7	0.14
4	RD17R	0.35	3.71	<0.01	0.04	56.5	5.45
4	RD18R	0.22	3.96	<0.01	0.02	34.5	17.00
4	RD19R	0.70	1.36	<0.01	0.01	76.3	7.30
4	RD101R	0.80	0.16	0.01	0.01	2.7	5.69
4	RD21R	1.00	2.26	<0.01	0.01	25.6	3.53
4	RD102R	1.15	0.92	0.07	0.02	32.6	2.26
4	RD32R	Dump Grab	0.09	<0.01	<0.01	2.0	0.03
4	RD33R	Dump Grab	0.05	<0.01	<0.01	0.6	0.03
4	RD34RA	Dump Grab	0.05	<0.01	<0.01	2.1	0.03
4	RD35RA	Dump Grab	3.24	<0.01	0.01	39.6	9.02
4	RD36R	Dump Grab	no	Results			
4	RD37R	0.95	4.14	<0.01	<0.01	47.6	2.23
4	RD103R		No	Results			
4	RD38R	0.50	1.37	<0.01	<0.01	1.0	0.03
4	RD39R	Dump Grab	10.0	<0.01	0.11	64.9	0.62

#### TABLE 10-7\* ROCK CHIP SURFACE SAMPLE ANALYSES ROCHER DEBOULE & VICTORIA MINES – ROCHER DEBOULE MINERALS 2001-2002 DATA

Sample No.	Width	ppm Mo	ppm Cu	ppm Pb	ppm Zn	ppm Ag	ppm Co	ppm As	ppm Bi	ppm Au
AR-1	0.4 m	1131	99999	825	9980	64.3	127	1470	3	0.61
AR-2	0.6 m	3941	47913	1165	6083	399.6	248	8109	49	1.56
AR-3	0.4 m	15	89393	6	280	0.3	208	60	40	.02
AR-4	0.5 m	106	97239	143	492	107.0	1388	35184	1 <b>91</b>	14.80
AR-5	0.7 m	139	83609	24	2 <b>9</b> 4	72.0	807	14473	63	5.06
AR-6	0.8 m	44	3377	955	99999	145.7	10	5726	3	1.78
AR-7	0.3 m	460	475	3	23	1.2	859	20809	205	9.78
AR-8	0.6 m	21	49163	76	279	21.8	88	1293	30	1.44
AR-9	0.6 m	1034	69429	86	441	51.2	197	4323	22	0.32
AR-10	0.5 m	7	99999	8	809	50.0	110	597	3	0.64
AR-11	0.4 m	14811	1105	3	44	1.8	17	320	5	0.11
AR-12	0.5 m	11	6407		59	4.5	67	1360	6	0.42
				10						
AR-13	0.3 m	18197	28	3	76	0.9	801	22017	14	0.11
AR-14	0.2 m	3790	1 <b>7</b>	3	41	19.5	1468	99999	2071	154.1 4
AR-15	0.2 m	2762	24	3	16	10.7	1694	99999	1421	125.1 3
AR-16	0.2 m	1999	37	3	51	7.1	1817	<del>99999</del>	926	59.29
AR-17	0.2 m	7785	131	3	21	0.7	630	3080	10	1.41
AR-18	0.4 m	9041	59613	80	399	104.2	537	14895	29	1.55

#### STREAM SEDIMENTS SAMPLES - ROCHER DEBOULE MINERALS 2001-2002 DATA

Sample No.	ppm Cu	ppm Pb	ppm Zn	ppm Co	ppm As	ppm Ag	ppm Au
ST-1	478	15	51	16	73	0.9	0.01
ST-2	4749	909	370	34	547	16.8	0.98
ST-3	2577	188	428	15	184	11.9	0.10
ST-4	1092	24	115	22	259	1.2	0.16
ST-5	8208	1925	9682	320	1634	160.9	1.64
ST-6	1537	15	87	19	129	1.1	0.015
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\*Source: Kikauka (2002)

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**\*NOTE FIGURE 10-9 FOR SAMPLE LOCATIONS** 

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#### TABLE 10-8\* SURFACE SAMPLING

Sample No.	Cu ppm	Ag ppm	As ppm	Fe %	Au ppm	
M386031	>10,000	>100	537	39.86	0.84	
M386032	>10,000	>100	4604	14.3	0.79	
RD-04-AR-1	>10,000	22.9	100	32.44	3.11	
RD-04-AR-2	>10,000	7.1	66	21.58	1.17	
RD-04-AR-3	>10,000	13.2	28	38.67	1.21	
RD-04-AR-4	>10,000	8.7	7	27.41	1.80	
Stream Sedim	ient Sam	pling				
RD-04-AST-51	143	0.2	17	11.32	0.06	
RD-04-AST-52	. 537	0.5	1437	7.52	0.27	
Soil Sampling	- Highla	nd Boy				
5000N 4700E	3786	1.3	112	10.72	0.08	
5000N 4800E	1924	0.6	37	8.73	0.05	
5000N 4850E	>10,000	14.5	107	22.9	5.46	
5000N 4900E	5137	25.6	98	25.61	11.13	
5000N 4950E	>10,000	5.3	132	14.2	0.31	
5000N 5000E	1757	116.2	3664	11.79	2.44	
4900N 4475E	4937	5.4	36	11.96	0.70	
4900N 4425E	3089	6.3	42	12.35	0.59	
4900N 4575E	1995	3	212	39.94	0.05	
4900N 4625E	5797	16.1	1352	47.71	2.74	

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TABLE 10-9SURFACE SAMPLING ANALYSESROCHER DEBOULE MINERALS 2007 DATA										
	SOULE PRO							ppm Mog		
Sample No GOLDEN	WONDER		/0 211	իհա ∨მ	ррш дэ	ppin Au	ppill oo	bhu wo t	phu aa	
76051	0.6 m		0.05	54.2	>10000	4.93	1980	1		
76052	0.2 m		0.05							
76052	grab		0.02		>10000	21.9				
76053	grab		0.02		>10000	1.29				
CAP	grab	ROCKS	0.01	0.7	- 10000	1.23	017			
76055	0.2 m		0.05	144	802	0.23	61			
76056	0.2 m 0.77 m		1.29							
76057	0.15 m		3.88		>10000	0.149				
10001	0.10711	1.10	0.00	00.	10000	0.140				
	<b>D O Y</b>									
HIGHLAND	BOA	ROCKS								
Sample No	0.2 -	% Cu		<b>ррт Ад</b> 0.6	••	ppm Au		1612		
HB-07-A-1	0.3 m	0.022		0.0 4.5	-			1613		
HB-07-A-2(B)	<b>U</b> . I m	0.239		4.5	259	0.145		1042		
HB-07-A-2(S)	grab	>1		52.8	333	0.545		360		
	ROCKS	% Cu	% Zn	pA mag	ppm As	ppm Au				
07-HB-101	grab		0.02						>100	
07-HB-102	grab									
07-HB-102	•									
07-HB-103										
07-HB-104	U U									
07-HB-106	grab									
07-HB-107	1.5 m									
07-HB-108	0.80 m	>1	0.01	5.8	16	0.405			>100	
		- 1	0.01	0.0		0.400			-100	
07-HB-109	0.91 m									
07-HB-110	1.0 m			_		_				
07-HB-111	1.0 m		0.01						2	
07-HB-112	grab	>1	0.01	26.4	28	2.31			2	
07-HB-113	grab									

#### HIGHLAND BOY SOILS

grid line	station	ppm Cu p	opm Zn p	pm Ag p	pm As p	pb Au p	pm Pb p	pm Mo p	pm W
5000 N	4750 E	3122	352	2.3	23	150	214	260	>100
5000 N	4700 E	1181	427	1.3	67	24	83	14	2
5000 N	4650 E	2886	90	2.1	48	205	41	306	45
5000 N	4600 E	3254	129	1.5	73	225	27	329	2
5000 N	4550 E	1146	89	0.8	31	21	11	138	2
5000 N	4500 E	>10000	85	4.9	43	320	21	64	>100

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**TABLE 10-9 CONTINUED** 

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RD07-016

RD07-017

RD07-018

85.8

27.7

17.3

0.8

0.2

2

0.5

0.1

1

<0.1

<0,1

0.4

2.6

2.4

0.2

0.4

72

10

0.7 <0.1 23.3 <0.1

Sample No.	Туре		Loc	ality		Cu		Cu %	Ag ppm	Au	ppm	Fe	%	Co ppr or (%)	<sup>n</sup> Ni	ppm	
RD07-001	Grab	Roche	r Debou	le West	t Adit	>100	00 1	2.05	50.4	0	.37	17.	.54	(0.29%	) 4	30	
RD07-002	Grab	Highla	nd Boy	Adit		109	Э			0	.01	25	.21	9	!	51	
RD07-003	Grab	Roche	r Debou	le East	Adit	>100	00 1	L <b>7.80</b>	39.5	3:	1.14	16	.92	2000	8	473	
RD07-004	Grab	Great	Ohio			546	7			0	.12	26	.22	172	9	32	
RD07-005	Grab	New D	iscover	y		>100	00 2	20.50	135	2	2.47	20	.94	93	1	.06	
RD07-006	Grab	Victoria	a Adit			68	1			20	6. <b>64</b>	5,	21	(1.0%)	10	665	
RD07-007	Grab	Victori	a Adit			83	ļ.			4:	1.99	11	.12	(1.1%)	19	992	
RD07-009	Chip	HB Ou	tcrop			120	0			C	.25	24	.95	63	:	21	
RD07-010	Chip	HB Ou	tcrop			15	2			C	.04	23	.32	33	:	37	
RD07-011	Grab	Highla	nd Boy	Adit		>100	00	6.05		1	89	23	.89	383	1	.66	
RD07-012	Grab	Highla	nd Boy	Adit		>100	00	8.47		1	65	36	.09	876	3	33	
RD07-013	Grab	Golder	n Wond	er		>100	00	1.01	57.6	10	0.34	27	.72	1683	8	37	
RD07-014	Chip	Сар				23	8			C	0.08	5.	25	30	:	35	
RD07-015	Grab	Roche	r Debou	ile Mair	n Adit	>100	00	8.23	248	2	2.35	11	.36	196	1	450	
RD07-016	Grab	Roche	r Debou	ıle Mair	n Adit	>100	00	2.55		1	2.06	25	.67	186	4	47	
RD07-017	Grab	Roche	r Debou	le Mair	n Adit	>100	00 2	23.70	163	2	2.27	22	.62	50		42	
RD07-018	Chip	Gravel	Pít			>100	00	1.02		5	.42	27	.22	1164	:	29	
Sample No.	Ce	Dy	Er	Eu	Gd	Но	La	Lu	Nd	Pr	Sc	Sm	ТЬ	Th	Tm	U	Y
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	<b>p</b> pm	ppm	ppm	ppm	ppm	ppm	p <b>p</b> m	ppm	ppm
RD07-003	115.3	1.7	1.3	0.2	3.3	0.4	71.5	0.2	25.4	8.9	2.6	2.6	0.3	3.2	0.2	15.5	6.6
RD07-005	84.9	1.8	1	0.4	3.7	0.3	47.1	0.1	26	7.5	1.7	3.5	0.4	2.7	0.1	3.3	8.1
RD07-006	27.9	1.8	1.2	<0.1	2.2	0.4	21	0.3	7.6	2.5	7.3	1.6	0.3	3.5	0.2	281	10.4
RD07-007	19.1	1.6	1.1	<0.1	1.9	0.3	13.7		6.6	1.9	3.9	1.5	0.3	0.7	0.1	328	9.5
RD07-011	130.3	0.9	0.3	1.2	4.8	0.1	111		34.7	10.9	1.5	4.4	0.3	0.8	<0.1	15.6	2.6
RD07-012	18.8	0.4	0.2	<0.1	1.0	0.1	14.7		6.4	1.7	0.2	0.9	0.1	0.3	<0.1	7.7	1.7
RD07-013	165.2	6.1	2.6	1.1	13.0	0.9	97.6		70.4	19.5	4.8	13.4	1.4	2.1	0.3	41.9	19.3
RD07-015	133.3	1.8	0.9	0.4	4.5	0.3	103	0.1	32.5	11.4	4.6	3.9	0.4	5.7	0.1	4.9	6.8

4.3

0.9

4.8

3.8

7.4 9.1

0.1 18.8

0.2

5.8

7.2

6.7

1.4

1.9 1.2 2.5

2.1 <0.1

1.9

0.2

0.3

0.5 <0.1

1.8

0.2

1.4

0.1

<0.1

0.1

#### **TABLE 10-10 VICTORIA MINE PLAN – HISTORICAL SAMPLING** (Modified from Sutherland Brown 1960)

1       2       3         1       2       3         3       1       1         5       5       1         9       1       10         11       11       1         13       1       1         14       1       1         15       1       1         16       2       2         17       16       2         18       19       20         21       22       1         22       23       1         24       25       1         27       1       2         27       1       2         27       1       2         28       1       2         29       1       2	aches 8 10 10 8 6 4 12 18 8 10 8 10 8 10 8 10 8 10 8 10 8 1	No. 1 Addt Hornblande, cobait-nickel suipharyenides and limonite	Oz. per Tou 3.73 0.01 1.04 0.11 7.75 6.04 0.10 6.06 0.14 NU	Ton 0.6 Nil 0.4 Nil 4.3 0.2 Trace Nil Nil	Per Cent 2.5 4 1.9 ‡ 3.3 3.2 ‡	0.03 0.001 0.01 0.007 0.42 \$
1     2     3       1     2     3       3     1       5     5       9     1       10     1       13     1       14     1       15     1       16     2       17     20       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1	8 10 8 5 4 8 12 8 10 8 12 8 10 8 12	Hornblande, cobalt-nickel supparpenides and limonite Hornblande, in footwall of Sample No. 1 Hornblande, aome disseminated cobalt-nickel suppar- senides (nickel, 0.3 per cent) Hornblande, a small amount of pismatific quartz and pink feldapat Gash vein of cobalt-nickel supparenides 1 inch wide, extending for 4 feet into hangingwall of main vein. Streak of cobalt-nickel supparenides (nickel, 0.4 per cent) Hornblande, some pink feldapat Hornblande, some pink feldapat	3.73 0.01 1.04 0.11 7.75 6.04 0.10 0.00 0.14	0.6 NII 0.4 NII 4.3 0.2 Trace NII NII	2.5 ‡ 1.9 ‡ 3.3 3.2 ‡	0.001 0.01 0.007 0.42 6
2     3     1       2     3     1       3     4     5       5     6*     7       7     8     9       10     11     13       13     14     1       13     14     1       14     15     1       15     17     1       19     20     21       21     22     1       22     1     2       23     1     2       24     25     1       27     1     1       28     29	10 10 8 6 4 8 12 18 8 10 8 12	Herniblende, an footwall of Sample No. 1 Hurniblende, aome disseminated cobalt-nickel sulphar- senifies (nickel, 0.3 per cent)	0.01 1.04 0.11 7.75 6.04 0.10 0.06 0.14	NH O.A NH 4.3 0.8 Trace NH NH	‡ 1.9 ‡ 3.3 3.2 ‡	0.001 0.01 0.007 0.42 6
3     1       4     5       5*     1       9     1       13     1       13     1       13     1       14     1       15     1       16     2       17     1       18     19       20     21       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1	10 8 6 4 12 18 8 10 8 12	Hornblende, some disseminated cobalt-nickel sulphar- sentices (nickel, 0.3 per cent) Hornblende, a small amount of pegmatitic quartz and pink feldspar. Gash vein of cobalt-nickel sulphareenides 1 lnch wide, extending for 4 fest into hunging wall of main vein Streak of cobait-nickel sulphareenides (nickel, 0.4 per cent). Hornblende, some pink feldspar. Hornblende, some pink feldspar.	1.04 0.11 7.75 6.04 0.10 0.06 0.14	0.4 NU 4.3 0.2 Trace NH NH	1.9 ‡ 3.3 3.2 ‡	0.01 0.007 0.42 6
4         5         6*         9         10         11         13         14         15         16         17         18         19         20         21         22         23         12         24         25         11         22         23         12         24         25         11         26         27         12         27         12         27         12         29	8 6 4 12 18 8 10 8 12	senides (nickel, 0.3 per cent) Hornblande, a small amount of pegmatitic quartz and pink fedapat. Gash vein of cobalt-nickel subphareenides 1 inch wide, extending for 4 feet into hanging wall of main vein	0.11 7.75 5.04 0.10 6.09 6.14	NU 4.3 0.\$ Trace NU NH	‡ 3.3 3.2 ‡	0.007 0.42 §
5     6*       7     1       9     1       10     1       13     1       13     1       14     1       15     1       16     2       17     1       18     1       19     20       21     22       23     1       24     2       23     1       24     2       25     1       27     1       28     1       29     1	5 4 12 18 8 10 8 12	Hornblande, a small amount of pigmatitic quartz and pink feldspat. Gash vein of cobait-nickel subpharsenides 1 lock wide, extending for 4 feet tato hanging wall of main vein Streak of cobait-nickel subpharsenides (nickel, 0.4 per cent) Hornblande, some pink feldspat	0.11 7.75 5.04 0.10 6.09 6.14	NU 4.3 0.\$ Trace NU NH	‡ 3.3 3.2 ‡	0.007 0.42 §
5     6*       7     1       9     1       10     1       13     1       13     1       14     1       15     1       16     2       17     1       18     1       19     20       21     22       23     1       24     2       23     1       24     2       25     1       27     1       28     1       29     1	5 4 12 18 8 10 8 12	pink feldspat Gash vein of cobalt-nickel sulphyremides 1 loch wide, extending for 4 fest into hungingwall of main vein. Streak of cohsit-nickel sulphyremides (nickel, 0.4 per cent) Hornblende, some pink feldspar Hornblende, some pink feldspar	7.75 6.04 0.10 6.06 6.14	4.3 0.\$ Truce NH NH	3.3 3.2 ‡	0.42 5
6*       7       8       10       11       12       13       14       15       16       17       18       19       20       21       22       23       11       24       25       1       26       1       27       1       28       29	4 12 18 10 10 12 12	Gash vein of cobait.nickel subphyseenides 1 inch wide, extending for 4 feet into hangingwall of main vein	7.75 6.04 0.10 6.06 6.14	4.3 0.\$ Truce NH NH	3.3 3.2 ‡	0.42 5
6*       7       8       10       11       12       13       14       15       16       21       22       23       24       22       23       24       25       1       26       1       27       1       27       1       28       29	4 12 18 10 10 12 12	extending for 4 fest into hanging wall of main vein	6.04 0.10 0.09 0.14	0.\$ Truce Mil Nil	3.2 ‡	\$
7     1       9     1       10     1       13     1       13     1       14     1       15     1       16     2       17     2       20     2       21     2       22     1       24     2       25     1       26     1       27     1       28     1       29     1	8 12 18 8 10 8 12	Streak of cobait-nickel subbarsendes (nickél, 0.4 per cent) Hornblende, some pink feldspar Hornblende, some pink feldspar Hornblende, some pink feldspar Hornblende, some pink feldspar Across a lens of pegnatitio quarts and calcite in hang- ingwall of hornblende with mather	0.10 6.09 0.14	Trace NII NII	+	5
8     1       9     1       10     11       13     1       13     1       14     1       15     1       16     2       17     2       18     1       19     2       20     2       23     1       24     2       25     1       26     1       27     1       28     1       29     1	12 18 8 10 8 12	Romblende, some pink faldspar Homblende, some pink faldspar Homblende, some pink faldspar Homblende, some pink faldspar Across a lens of pegmatitic quarts and calcite in hang- ingwall of homblende with mather	0.10 6.09 0.14	Trace NII NII	+	<b>f</b>
8     1       9     1       10     11       13     1       13     1       14     1       15     1       16     2       17     2       18     1       19     2       20     2       23     1       24     2       25     1       26     1       27     1       28     1       29     1	12 18 8 10 8 12	Homblende, some pink feldspar Homblende, some pink feldspar Homblende, some pink feldspar Across a lens of pegnatitic quarts and calcite in hang- ingwall of homblende with mather	0.09 0.14	NH NH		
8     1       9     1       10     1       13     1       13     1       14     1       15     1       16     2       17     18       19     20       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1	18 8 10 8 12	Homblende, some pink feldspar Homblende, some pink feldspar Homblende, some pink feldspar Across a lens of pegnatitic quarts and calcite in hang- ingwall of homblende with mather	0.14	NA		0,028
9     1       10     1       11     1       13     1       14     1       15     1       16     2       17     1       18     1       19     2       20     21       22     1       23     1       24     2       23     1       24     2       23     1       24     2       25     1       27     1       28     1       29     1	8 10 8 12	Hornblende, some pink foldspar. Hornblende, some pink foldspar. Across a lens of pegmatitic quarts and calcite in hang- ingwall of hornblande wile mather			1 1	0.25
10     11     1       11     1     1       12     13     1       13     1     1       14     1       15     1       16     2       17     2       18     1       19     2       21     2       22     1       24     2       25     1       26     1       27     1       28     1       29     1	8 10 8 12	Hornblande, some pink feldspar. Across a lens of pegmatitic quarts and calcits in hang- ingwall of hornblande vein mather			1 I	0.013
11     1       13     1       13     1       13     1       14     1       15     1       16     2       17     18       19     20       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1	10 8 12	Across a lens of pegmatitic quarts and calcits in hang- ingwall of homblands vein matter		NI	1 1	0.14
13     1       13     1       14     1       15     1       16     2       17     2       18     1       19     2       20     21       22     1       23     1       24     2       23     1       24     2       25     1       27     1       28     1       29     1	8 12	ingwall of hourblands win mather-		I	i .	
13     t       14     1       15     1       16     2       17     18       19     20       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1	12		NS	NE	i 🔹	0.005
13     t       14     1       15     1       16     2       17     18       19     20       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1	12	LATINGATIAN IN TODESTALL OF MANYAR PRO. 11	0.01	Na	1 1	0.16
14     1       15     1       16     2       17     2       18     1       19     2       20     21       22     23       23     1       24     2       23     1       24     2       23     1       24     2       25     1       26     1       27     1       28     1       29     1		Silcified granodiorite in footwall of Sample No. 12	0.01	Nit	I I	0.004
15     1       16     2       17     2       18     1       19     20       20     21       21     22       23     1       24     2       25     1       26     1       27     1       28     1       29     1		Homblende plus small amount of disseminated cobalt-			1 -	
16     2       17     -       18     19       19     20       21     21       22     1       24     2       25     1       26     1       27     1       28     1       29     1		nickel supparsendes, adjacent to pegnatitic quartz			(	
16     2       17     -       18     19       19     20       21     21       22     1       24     2       25     1       26     1       27     1       28     1       29     1		and calcing	6.20	0.2	0.4	0.37
16     2       17     -       18     19       19     20       21     21       22     1       24     2       25     1       26     1       27     1       28     1       29     1	12		0.02	NI		0.41
17     -       18     -       19     -       20     -       21     -       22     -       23     1       24     22       25     1       26     1       27     1       28     1       29     -		Hornblende, some pink faldsper			1 ±	
18 19 20 21 22 23 11 24 22 23 12 24 22 12 24 25 1 26 1 27 1 28 1 28 1 29	24	Hornblende, some pink feldspar	10.0	Na	ļŧ	0.19
19       20       21       22       23       1       24       25       1       26       1       27       1       28       1       29	-	Along I inch of pink feldspar in hornblende vein matter.	2.24	<u>М</u> 10.2	1	0.019
20           21           22           23           1           24           25           1           26           1           27           1           26           1           27           1           26           1           28           1           29		Along lens of ouldized with matter 3 feet long	£.24	0.2	0.0	0.003
21 22 23 11 24 23 12 25 1 26 1 27 1 28 1 28 1 29	6	Across hornblands and cobali-nickel subbaricaides in			1	
21 22 23 11 24 23 12 25 1 26 1 27 1 28 1 28 1 29		floor of drift	NH	NI	0,3	0.011
22 23 124 25 1 26 1 26 1 26 1 28 1 28 1 29	2	Across gash years of homblends on south wall of drift	0.04	0.5	:	0.003
23 1 24 2 25 1 26 1 27 1 28 1 29	4	Along streak of pink feldspar, quartz and disteminated		ſ		[
23 1 24 2 25 1 26 1 27 1 28 1 29		cobait sulpharsenides in hombiende vein	0.05	M	÷ + ·	0.017
24         2           25         1           26         1           27         1           28         1           29         1	2	Along gash wins of plak feldapar and horoblende in		1	1	1
24         2           25         1           26         1           27         1           28         1           29         1		footwall grmodiorite	0.0£	NU	1 1	0.006
25   1 26   1 27   1 28   1 29	16	Typical homblende vein matter	Nil	NH	1 1	0.003
26   1 27   1 28   1 29	24	Across web, where in dyRc, includes quariz-feidspar		f		i i
26   1 27   1 28   1 29		SUTING TE	Trace	) XV31	1 2	0.005
26   1 27   1 28   1 29	10	Across vein, hornbiende plus pink feldspar	0.02	ทย	i t	0.006
277 L 28 I 29	10	Across vein in face, mostly pink feidspar and quartz	NII	NII	Ŧ	0.003
28 1 29				1		
28 1 29	10	No. 08 Adde Across sheared dyke, voin only a natrow shear	Trace	Nii	1 1	0.009
29	10	Horobicade plus considerable cobalt-nickel subharse-	TLACE	1.6411	*	
- i	14			1		A
- i		pides (nickel, 0.2 per cent)	2.81	0.2	3.2	0.12
30 1	8	Hamblende plus considerable cohaltanckel sulpharse-				
30   1		nides (nicksl, 0.4 per \$414)	5.09	1.0	3,6	0.011
1	10	Across dyke, including yein-hombiende	0.01	NH	1	0.006
		No. I Showing		ļ.	-	ŀ
		Hombiends minoralization from along footwall	ŭ.53	Nil	0.7	0.011
31	10	Across less of quarty and foldpar in footwall				0.000
	TA.		0.18	0.2	) ‡	1 2003
334	•	Hand specimen of cohalt-nicket anipharsenides and		ļ		
1		hottiblands vein matter found in bottom of cat; also		ŀ		
ł		contains molybdanum, 0.81 per cent; and nickel, 2.8				
	_ 1	per cent	7.88	1.1	5.9	0.75
34 ]		No. 3 showing, hornhlands and cobalt-nickel suppares-		!		
	8	nides (nickel, 3.4 per cent)	1.75	0.2	1,9	0.16
35   3	-	Across full width of yeln, including pegnetite and		ł		Į
F .	8 30	homblesde plus cobalt-nickel mipharsenide clusters,		1	1	1
ł	-	at west and of cuit	0.20	Trace	i 0,4	į 0.13

#### ASSAYS OF SAMPLES FROM No. 1 VEIN\*

\* Samples taken in 1949, except those marked with an asterisk, which were taken in 1940. † Radioaclivity of each sample, measured in the isborstory, is reported as "equivalent per cent  $U_3O_6$ " and may be due either to maximum or therean. However, spectrodismical analyses of representative samples from the Victoria indicate that on this property the radioactive element is urasiuch. ‡ Less than 0.03 per cent. § Not determined,

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Rocher Deboule Property, British Columbia

Burgoyne Geological Inc.

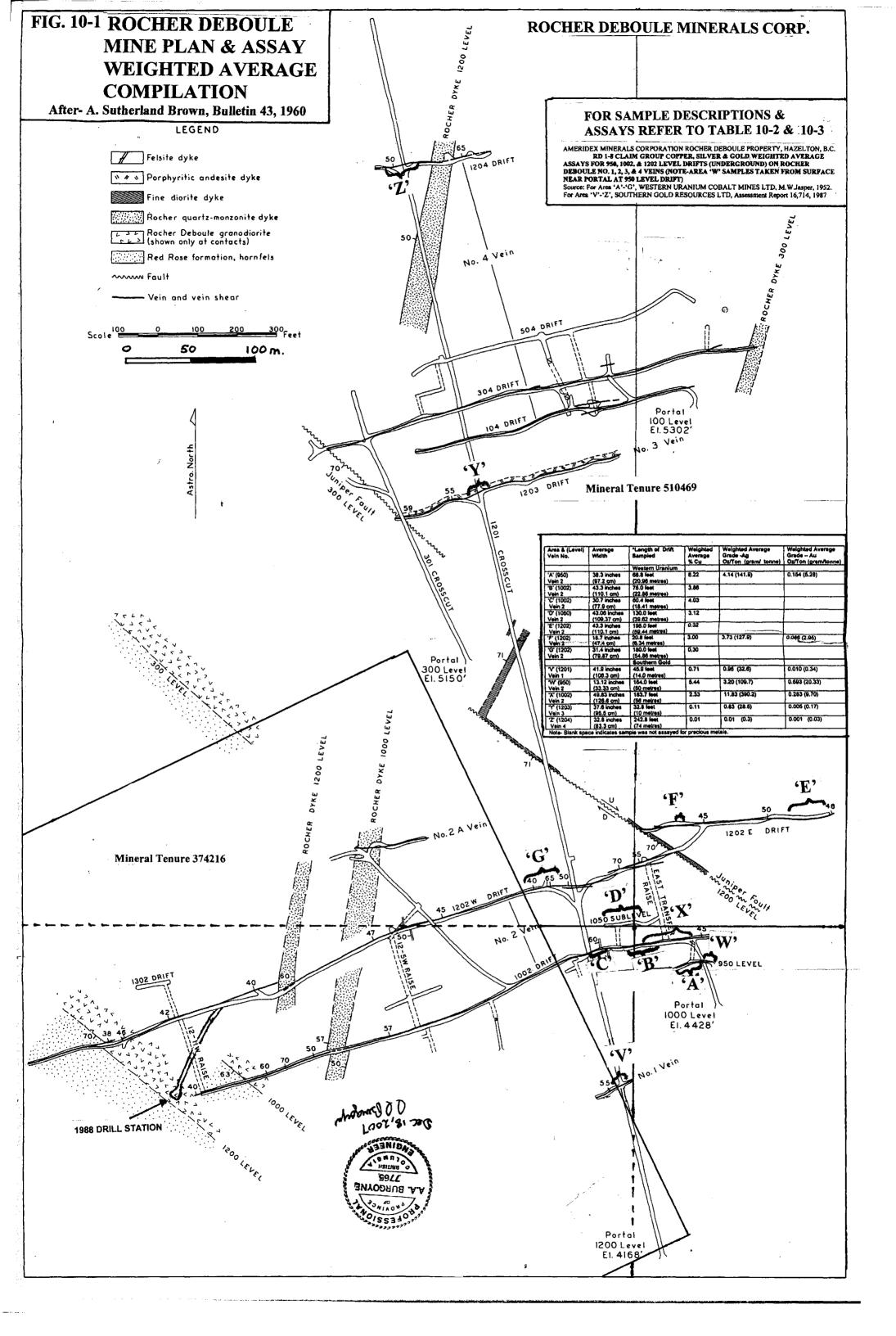
#### **Geo-Facts Consulting**

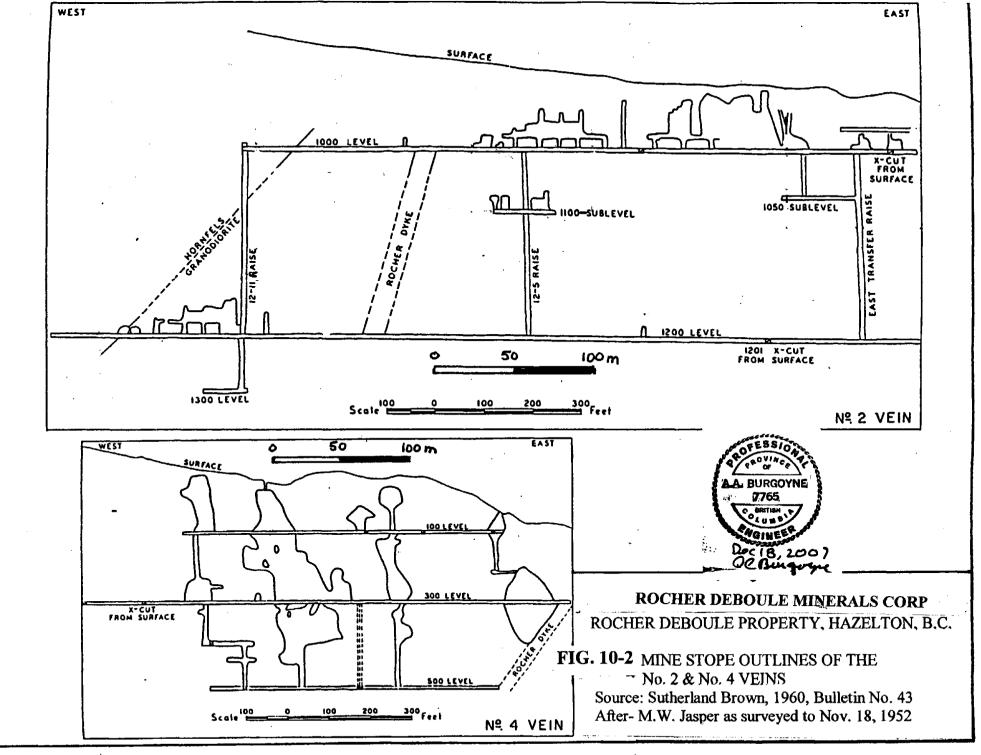
Sample Width No. Width Motter		Description	Ocid	Silver	Cobalt	Uranium oxide Equiva- Jent?	
	Inches	No. I Showing—Continued	Öz. per Ton	Oz. per Ton	Per Cent		
36 37	4 16	Across less of pegmatile quarts and feldspar 2 feet long Homblends and pegmatic quarts and feldspar, at cast	0.17	Nil	0.5	0.10	
38*	4	and of cut. Acrost rib of cobalt-nicket sulphansenides exposed in 1940 easterly over ridge from Showing No. 4 and containing molybdenum. 0.9 per cest, and nickel. 4	0.79	NA	0.5	0.04	
		per centNo. 3 Adit	5.66	2.9	2.4	5	
<b>X</b> 1	20	Subsidiary parallel shear	1.64	NI	1.08	Nu	
K2	10	Cross-veip	1.21	NR	0.83	0.71	
		No. 2 Adit					
K3	12	Vain matter (nickel, 0.02 per cent)	2.04	0.25	1,51	NU	
K4	12	Altered granodiorite	Trace	Trace	NA	NØ	
K5			ي من الم	•			
K)	14	Pissute 2009	1,84	Në	0,25	NH	
<b>X6</b>	10	Hombiende, salpharsenides (nickel, 0.02 per cent)	2.81	0.2	3.2	0.12	
<b>K</b> 7	11	Voin matter	1.74	NU	0.44	NII	
		No. 2 Adit					
B1 B2	16 18	Hombiende, quariz, and gouge with sulphides	6.06 8.05	0.7	2.72	0.0045	
B3	9	Horabiende rock. Sheared horablende vein with granodiorite	0.19 0.19	Trace 0,02	0.11 0.65	0.0055 0.013	

#### ASSAYS OF SAMPLES FROM No. 1 VEIN+-Considered

\* Samples taken in 1949, except those marked with an asterisk, which were taken in 1940. † Radioactivity of each sample, measured in the laboratory, is reported as "equivalent per cent UgOs " and may be due skiber to vanium or therium. However, spectrochemical analyses of representative samples from the Victoria indicate that on this property the radioactive element is transm. § Not determined.

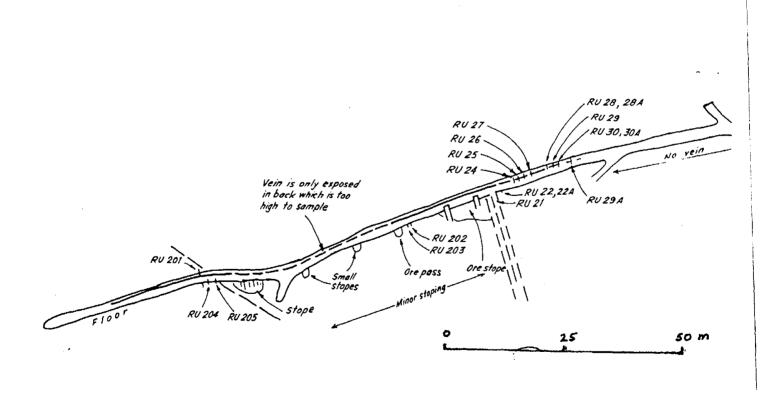
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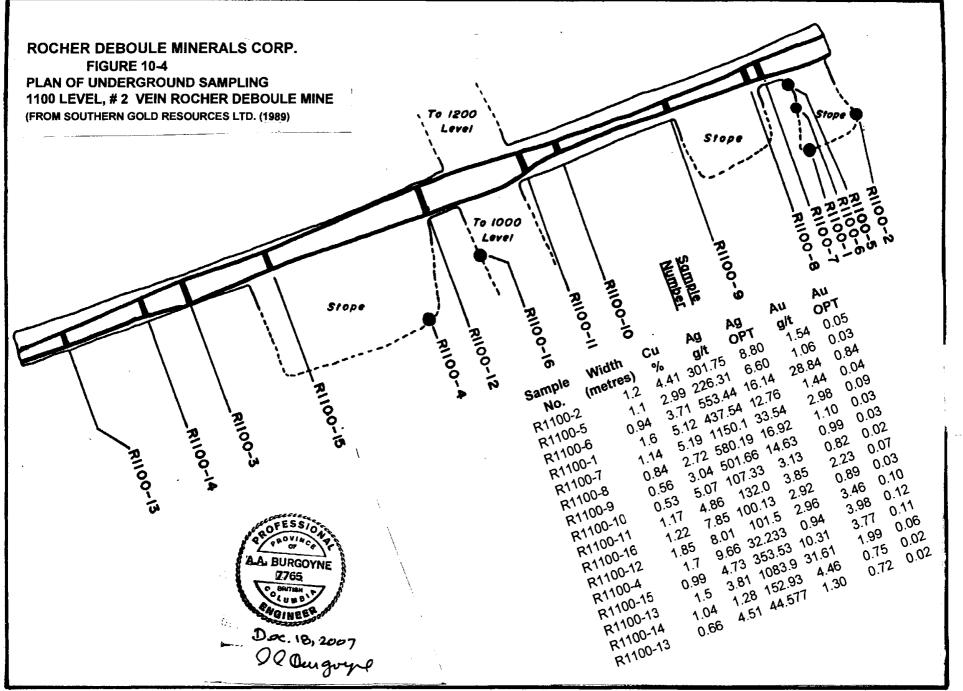
Sample No.	Width (metres)	Cu %	Ag g/t	Ag OPT	Au g/t	Au OPT
RU 201	0.4	3.84	519.49	15.15	10.97	0.32
RU 202	1.27	2.19	621.68	18.13	9.94	0.29
RU 203	1.3	2.64	349.07	10.18	1.44	0.04
RU204	0.7	2.1	155.68	4.54	2.61	0.08
RU 21	0.8	8.76	542.81	15.83	53.49	1.56
RU22	0.73	10.93	1049.3	30.60	24.76	0.72
RU22A	0.58	14.87	963.21	28.09	78.49	2.2 <del>9</del>
RU23	0.47	6.37	737.92	21.52	9.77	0.2 <del>9</del>
RU24	0.65	12.91	1454.9	42.43	112.64	3.2 <del>9</del>
RU25	0.95	5.8	473.54	13.81	46.84	1.37
RU26	0.7	5.55	153.62	4.48	12.17	0.36
RU28	1.15	6.87	197.85	5.77	9.33	0.27
RU28A	0.4	11.51	158.42	4.62	12.21	0.36
RU29	0.99	5.06	<b>141.96</b>	4.14	20.51	0.60
RU29A	0.81	3.69	154.31	4.50	2.47	0.07
RU30	0.69	2.95	215.68	6.29	4.87	0.14
RU30A	0.47	15.78	1683.6	49.10	43.03	1.26

ESSIO BURGOYNE 7765 FT1SH 104 GINEE Dec. 18, 2007 De Burgwyl L



## **ROCHER DEBOULE MINERALS CORP**

FIGURE 10-3 PLAN OF UNDERGROUND SAMPLING WEST PORTION OF 1200 LEVEL, # 2 VEIN ROCHER DEBOULE MINE (FROM SOUTHERN GOLD RESOURCES LTD. (1987)



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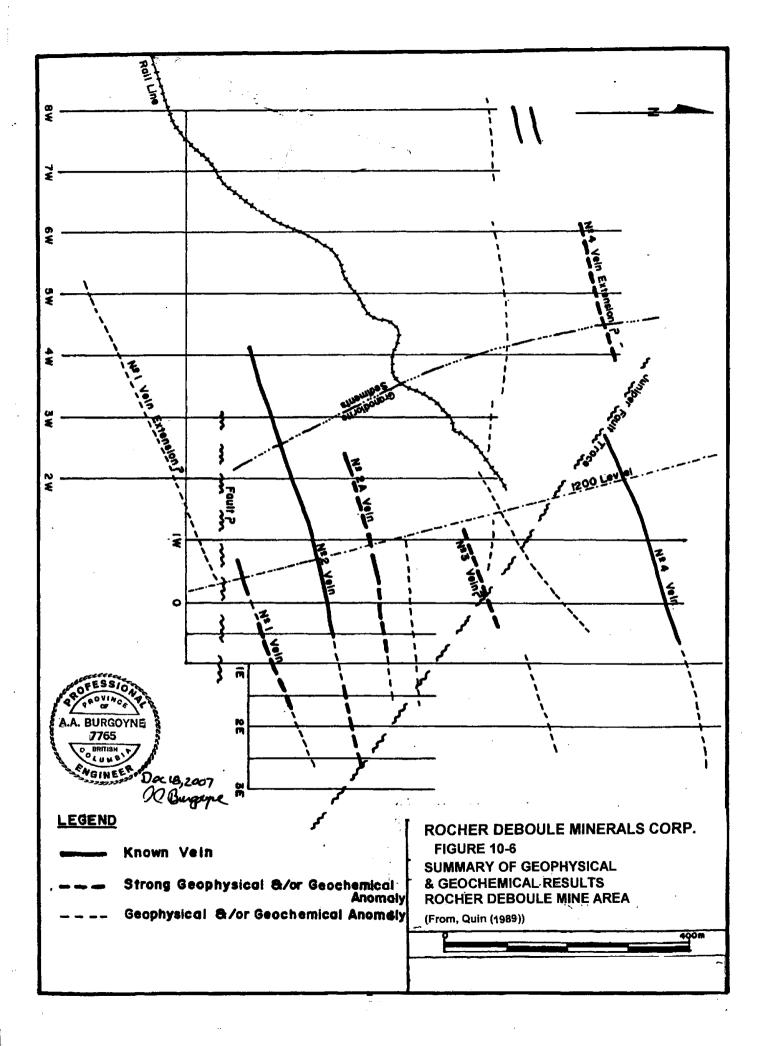
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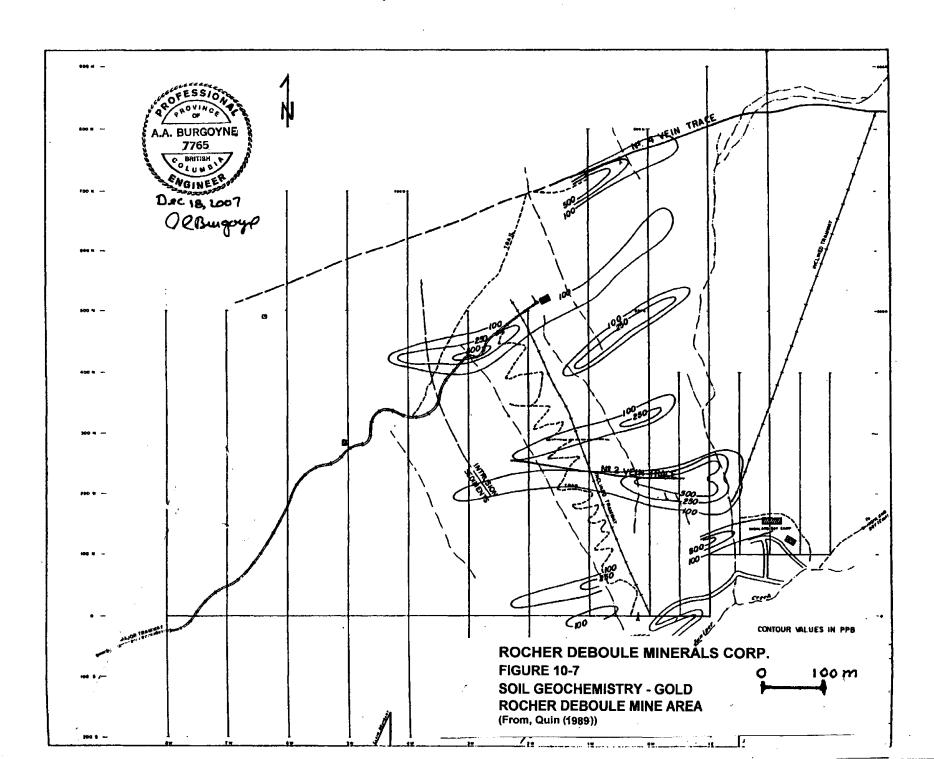
Sample No.	Width (metres)	Cu %	Ag g/t	Ag OPT	Au g/t	Au OPT	
RA 1	0.53	1.31	90.9	2.65		0.018	
RA 11	1.00	1.72	198.9	5.8	5.80	0.169	A States
RWU 55	1.35	2.63	183.5	5.35	1.47	0.043	to ope 33/04
RA 12	1.10	1.5	105.6	3.08	0.51	0.015	
RA 13	1.38	4.77	83.0	2.42	2.81	0.082	A.A. BURGOYNE
RA 14	1.30	1.69	26.7	0.78	3.29	0.096	17765
RA 16	0.75	2.49	148.8	4.34	0.65	0.019	
RA 17	1.40	3.83	62.1	1.81	1.92	0.056	4 GINER STATES
RA 90	1.00	1.43	164.6	4.8	2.02	0.059	Ho. 3 Vein Roise Dec 18, 2007
RA 29/30	1.15	2.51	396.4	11.56	1.20	0.035	
RA 32	0.60	5.19	44.6	1.3		0.038	Dec 18, 2007 11, Ho. 3 Vein Roise Dec 18, 2007 11, Dec 18, 2007 Dec 18, 2007 Dec 18, 2007
RA 41	0.90	5.35	142.3	4.15	0.69	0.02	+
R 42	0.73	3.85	197.9	5.77	0.00		
R 1	1.13	5.65	294.2	8.58	1.99	0.058	
R 2	0.85	6.98	199.2	5.81	1.89	0.055	
RA 101	1.00	2.92	323.0	9.42	5.69	0.166	
RWU 75	1.05	3.16	88.8	2.59	3.91	0.114	2
RWU 77	1.05	1.73	63.8	1.86	1.51	0.044	C   RWU 77
En be rav	d of drift sm rely breats thr se from 1200 14	all hole ough to ough to ough				Fine g. FSP R Dyke	
1002 Drift		PA II	RA 17	06 13		061	o so Lucation to the solution of the solution

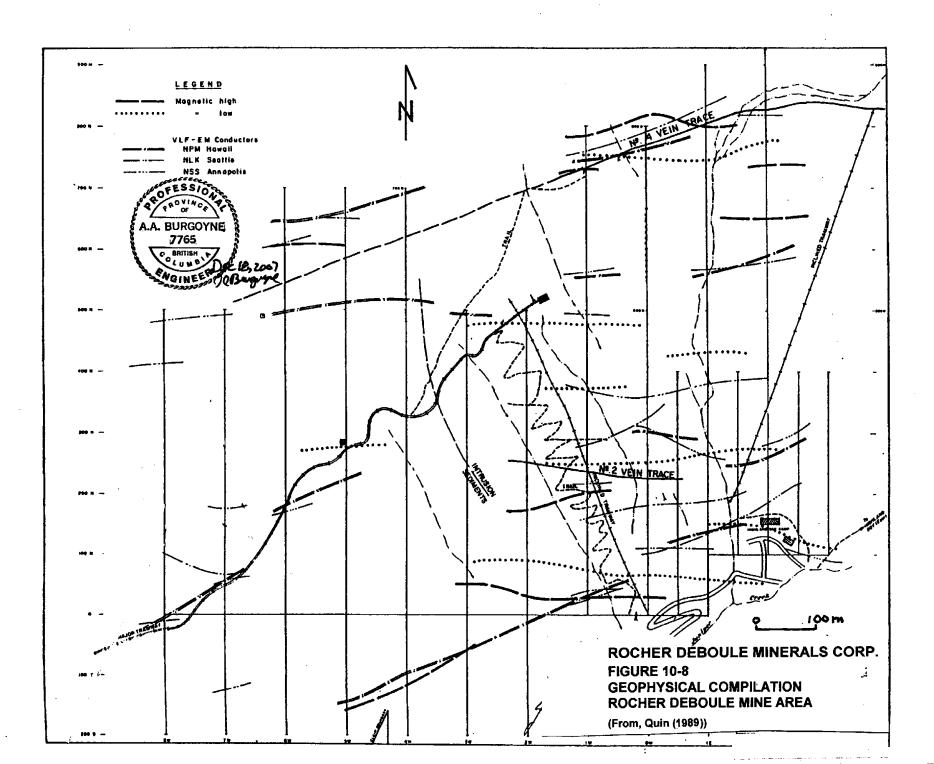
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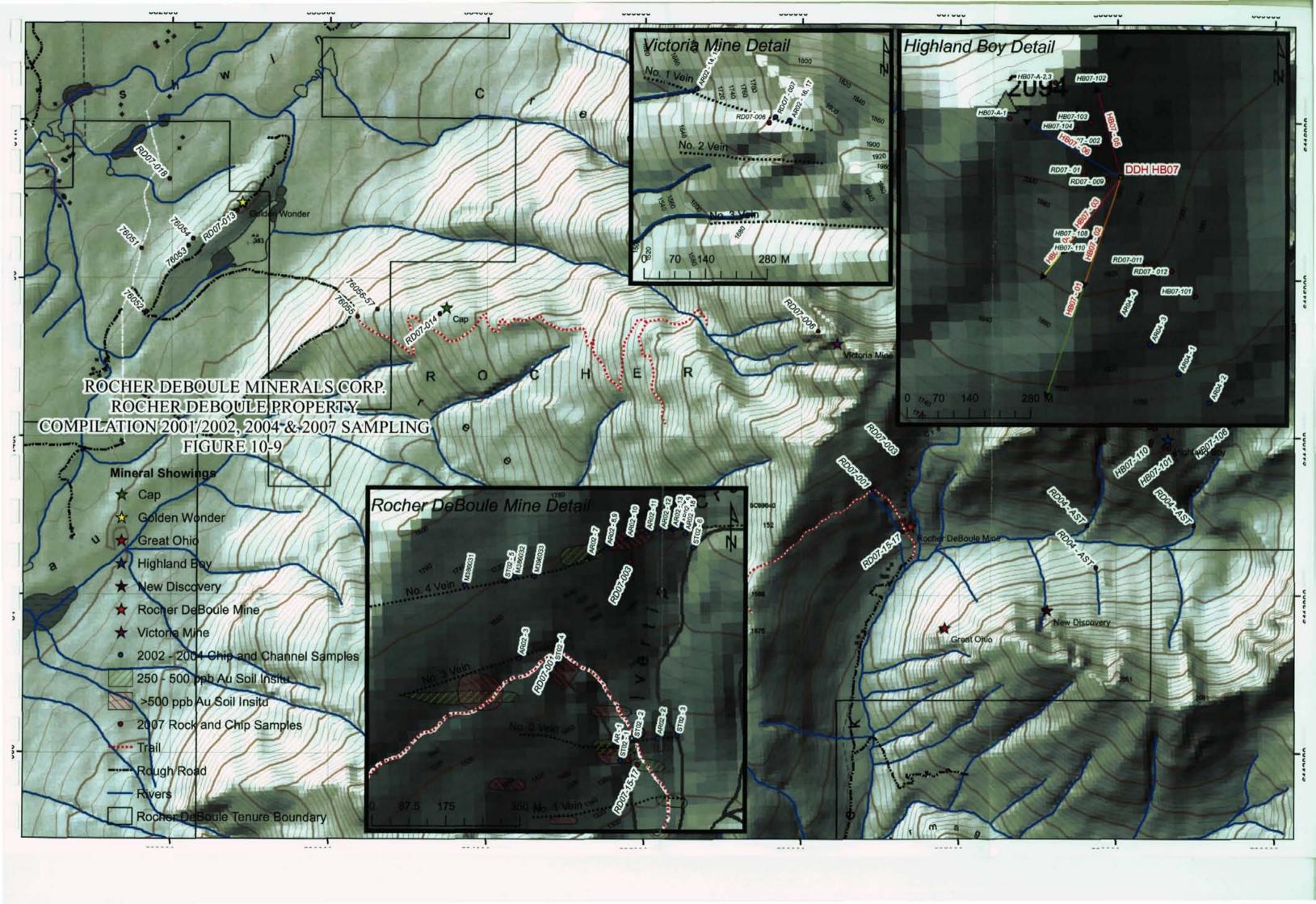
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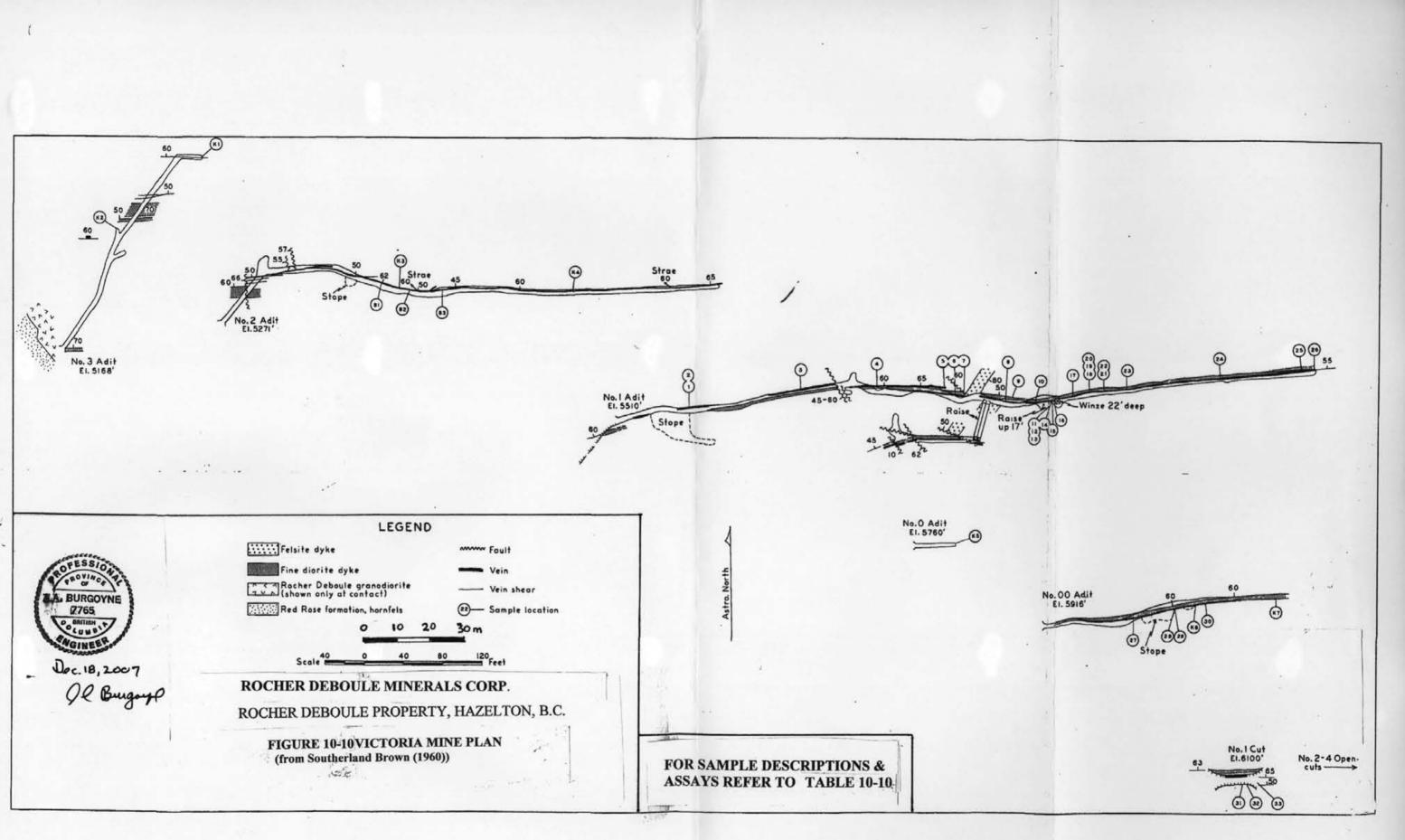
ROCHER DEBOULE MINERALS CORP. FIGURE 10-5 PLAN OF UNDERGROUND SAMPLING WEST PORTION OF 1000 LEVEL, # 2 VEIN ROCHER DEBOULE MINE (FROM SOUTHERN GOLD RESOURCES LTD, Quin (1987))











#### 11.0 Drilling

Historical drilling by DeGroot Logging on the Victoria Mine is discussed in Item 6.

The 1988-drilling program by Southern Gold Resources on the Rocher Deboule mine is detailed below.

#### Rocher Deboule Minerals Corp. 2007 Drilling

During September 2007 Rocher Deboule Minerals Corp. completed 1106.1 meters over six drill holes on the Highland Boy Showing and vein structure. This drilling was carried out under the supervision of Mr. Andris Kikauka, P.Geo., Qualified Person. The holes were drilled from one set up, approximately 100 m north of the surface trace of Cu-Ag-Au bearing quartz-sulphide Highland Boy Upper Vein, at 1952 meter elevation and the six drill holes were completed that varied from 137.2 to 327.7 meters in depth as tabulated in **Table 11-1**. The Highland Boy Cu-Ag-Au mineral occurrence features two 090 to 120 degrees trending and steeply north dipping quartz-sulphide-iron oxide fissure veins that outcrop in rugged terrain at 1768 to 1980 meter elevation. The southernmost vein zone is traced west along surface to the No. 4 Rocher Deboule No. 4 vein. The Highland boy veins contain massive and banded chalcopyrite, coarsely crystalline magnetite, and pyrite in a gangue of quartz, calcite, dolomite, hornblende, tourmaline, actinolite, sericite, biotite and chlorite. The drilling was completed by Neill's Mining Ltd. and was of BQ TW diameter core size.

Diamond drill hole data including hole number, depth, easting, northing, elevation, azimuth, and dip are given in **Table 11-1. Figure 10-9 gives** the location of the drill holes.

#### TABLE 11-1 HIGHLAND BOY DIAMOND DRILL HOLE DATA

Hole	Depth	Easting*	Northing*	Elevation	Azimuth	Dip
	(Meters)			(meters)	(degrees)	(degrees)
07HB1	327.7	588259	6114062	1952 m	200	-70
07HB2	<b>163</b> .1	588259	6114062	1952 m	200	-50
07HB3	144.5	588259	6114062	1952 m	220	-50
07HB4	182.9	588259	6114062	1952 m	220	-70
07HB5	150.9	588259	6114062	1952 m	340	-50
07HB6	137.2	588259	6114062	1952 m	300	-48
	* UTM - NAD	83				

The core from six drill holes was logged in detail by Andris Kikauka, P.Geo. Sample assay sheets were developed for the 97 split drill core samples that were split and assayed. These sample intervals varied in length from 0.31 to 2.63 meters. No down the whole surveys were completed and the ground location were done with a hand held GPS unit.

The following potential economic intercepts were obtained from a quartz -sulphide vein. This quartz - sulphide vein dips 60 degrees to the north was intercepted in holes 07HB1 and 07-

HB2. The results for the better assays results are given in **Table 11-2** and illustrated on **Figure 11-1**. The estimated true thickness of the mineralized intercepts is also given in **Table 11-2**.

#### **TABLE 11-2** HIGHLAND BOY DRILL HOLE ASSAY RESULTS Est. True Sample From То Intercept Thickness Cu Ag Au Mo W Hole Number (meters) (meters) (meters) (meters) % g/t g/t % % 0.42 0.71 0.77 0.118 0.054 0.001 07HB1 D1-14 130.82 131.34 0.52 1.93 07HB2 D2-7,8 105.37 107.38 2.01 2.18 7.71 0.511 0.004 0.070 0.30 including D2-7,8 105.37 105.68 0.31 13.80 47.5 3.140 0.026 0.452 1.04 07HB4 137.77 0.10 0.27 0.250 0.046 D4-8 136.64 1.13 0.024

#### Southern Gold Resources Ltd. 1988 Historical Drilling Program

In order to facilitate an underground drilling program near the west end of the 1200 Level drift to define the extent and grade of the No. 2 Vein, a footwall drift was extended 66 meters to the 1202 drift. At the end of this crosscut a drill station was established followed by a second drill station approximately 40 meters south of the crosscut junction with the 1202 drift. Note **Figure 10-1** for the location of the crosscut.

A total of 894 meters over 14 holes was completed of BQ core size utilizing a BBU-1 drill and a 1200 cfm Gardiner Denver compressor. A panel of about 80 x 80 meters was effectively tested. This was about one half of the area that was scheduled for testing – in effect the eastern one half of the proposed area for drilling was not done. The plan level of the 1988 drilling is illustrated in **Figure 11-2** and a section through the drill station at the end of the crosscut is illustrated in **Figure 11-3**.

The diamond drill hole data for nine drill holes returned 11 potential economic intercepts as given below on **Tables 11-3** and **Table 11-4**. On this **Table 11-3** the intercept lengths have not been corrected to true thickness.

Holes 2, 5, 6, and 11 intersected a quartz-hornblende vein structure with associated shearing but contained no significant values. Hole 14 intersected an old stope.

These results formed the basis for an historical resource estimate (Quin 1989) that is discussed in **Item 6.8**. Quin reports that simple "reserve estimates" were made on the No. 2 vein, based on the 1988 underground diamond drilling and on the 1988, and 1987, and historical underground sampling that is detailed in **Item 10**.

# TABLE 11-3ROCHER DEBOULE MINE DRILL HOLE ASSAY RESULTSSOUTHER GOLD RESOURCES 1988 DATA(from Quin 1989)

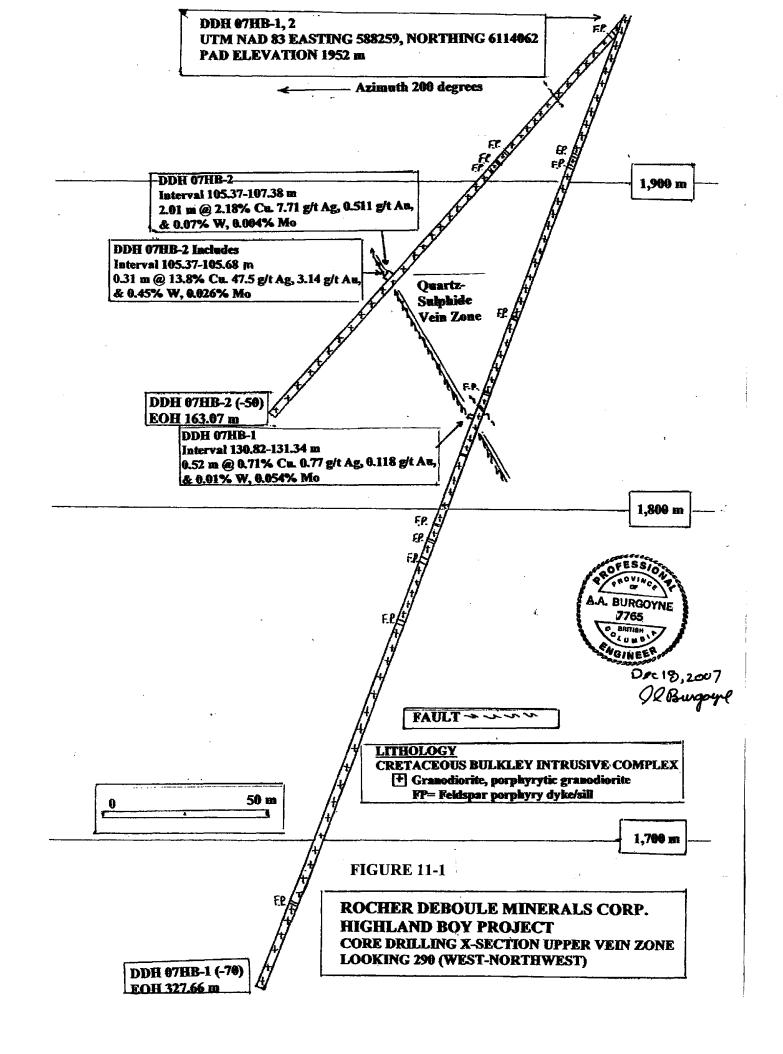
Drill Hole		То	Intercept	Cu	Ag	Ag	Au	Au
	(meters)	(meters)	(meters)	%	OPT	g/t	OPT	g/t
RDU 88-1	44.27	46.40	2.13	1.49	2.63	90.2	0.018	0.62
RDU 88-3	29.15	29.85	0.7	4.17	36.72	1259	0.081	2.78
RDU 88-4	27.80	28.96	1.16	4.51	0.81	27.8	0.041	1.41
and	40.91	41.98	1.07	0.80	3.79	129.9	0.041	1.41
RDU 88-7	61.65	62.20	0.55	6.55	12.53	429.6	0.177	6.07
RDU 88-8	50.88	53.66	2.78	3.77	4.04	138.5	0.381	13.06
including	52.38	53.66	1.28	4.92	2.42	83	0.765	26.23
RDU 88-9	31.46	32.84	1.37	1.29	1.04	35.7	0.008	0.27
RDU 88-10	40.34	41.46	1.13	3.4	35.87	1229.8	0.021	0.72
RDU 88-12	30.30	31.43	1.13	0.66	3.01	103.2	0.007	0.24
RDU 88-13	61.40	66.95	5.55	3.07	7.72	264.7	0.219	7.51
including	62.10	63.48	1.83	6.86	19.46	667.2	0.12	4.11
and	66.28	66.95	0.67	1.65	3.2	109.7	1.26	43.2

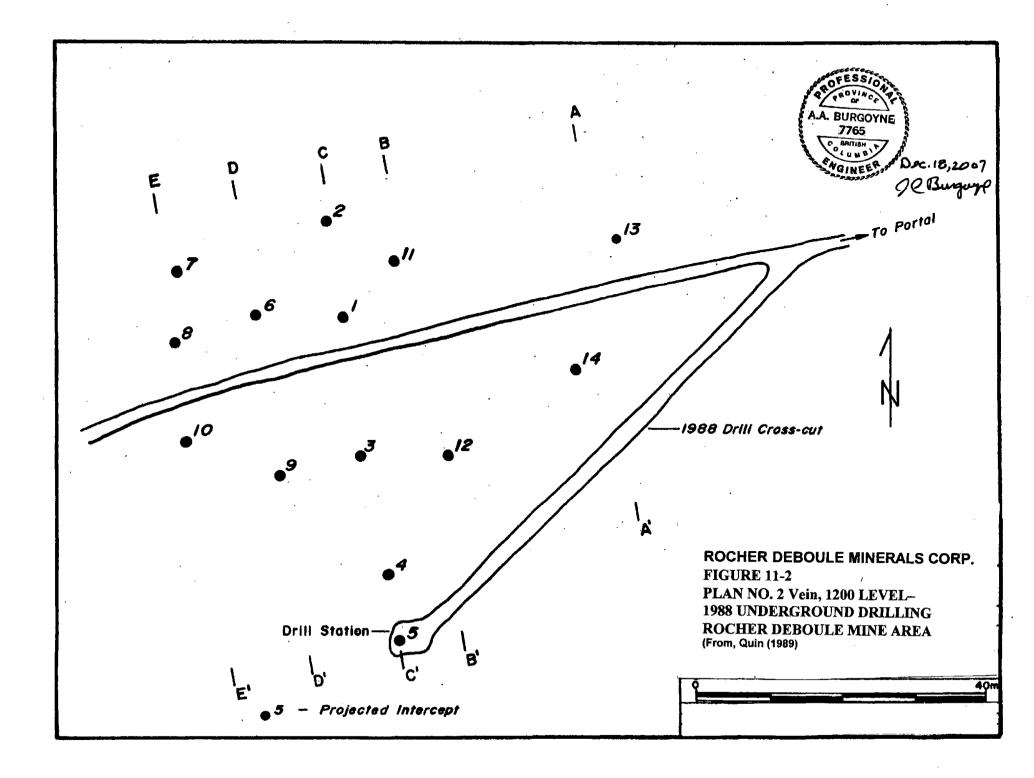
## TABLE 11-4ROCHER DEBOULE MINE DRILL HOLE DATA 1988Located on 1202 W Drift & in 1988 Drill Cross-Cut (Quin 1989)

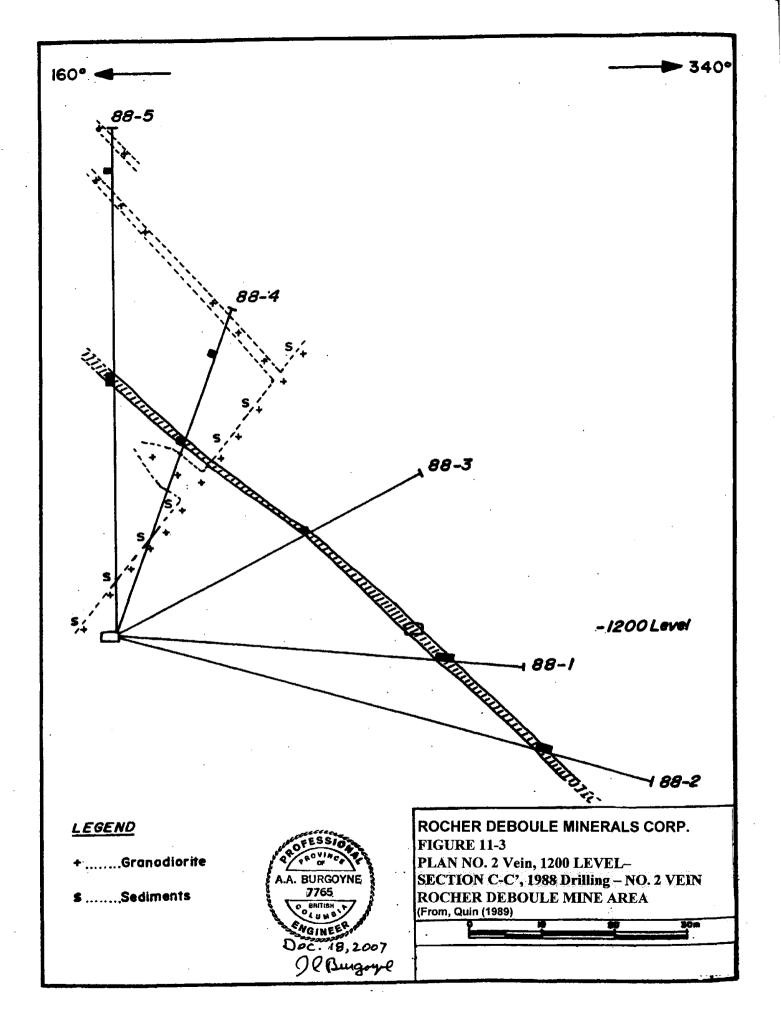
Hole	Depth (Meters)	Section	Azimuth (degrees)	Dip (dearees)
RDU 88-1	62.6	0 + 25' W	340	-5
RDU 88-2	76.2	0 + 25' W	340	-16
RDU 88-3	47.3	0 + 25' W	340	+30
RDU 88-4	47.6	0 + 25' W	349	+70
RDU 88-5	70.4	0 + 25' W	340	-50
RDU 88-6	73.2	0 + 50' W	323	-12
RDU 88-7	97.9	0 + 50' W	314	-16
RDU 88-8	66.8	0 + 90' W	308	-8.5
RDU 88-9	54.9	0 + 50' W	308	+25
RDU 88-10	64.0	0 + 90' W	298	+7
RDU 88-11	66.5	0 + 10' E	344	-10
RDU 88-12	44.2	0 + 30' E	360	+28
RDU 88-13	71.6	1 + 00' W	014	-9
RDU 88-14	48.5	1 + 00' W	018	+6

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**Geo-Facts Consulting** 







## 12.0 Sampling Method and Approach

During the 2007 Rocher Deboule diamond-drilling program core boxes from the 6 dril holes were transported to Hazelton and laid out in sequence for visual inspection and photographic record. Geological and mineralogical data was recorded with visual observations in the form of drill log. The core was laid out in a manner whereby data for variance in mineral, alteration and structure could be recorded. The core was half split using a manual, screw-tightened vice coresplitter. Split core samples were placed in marked poly bags and shipped to ASL Chemex North Vancouver, BC for 4 acid-near total digestion (ALS Code ME-MS61) 48 element ICP geochemical analyses. The remaining 1/2 split core was returned to the box as an oriented specimen and placed back in marked core boxes. Sample intervals varying in width from 0.31-2.63 m, resulting in a total of 97 split core samples. After the core was examined, photographed, and split, core boxes were labelled and lids were fastened. The core boxes were cross-stacked >1 m high for storage.

The Rocher Deboule Minerals Corp. 2001-2002 and 2004, and 2007 rock sampling programs consisted of samples taken across widths ranging from 0.2-1.5 metres. Rock chip samples consisted of acorn to walnut sized chips taken with rock hammer and maul averaging 2.5 kg in weight. Samples were placed in marked poly bags and shipped to Pioneer Labs, Richmond, B.C. for 30 element Induced Couple Plasma (ICP) and gold geochemical analysis. Silt fraction stream sediment samples were taken with a shovel from active stream channels and were wet screened through -20 mesh screens. Stream sediment samples were placed in marked kraft envelopes and shipped to Pioneer Labs, Richmond, B.C. for 30 element ICP and gold geochemical analysis. The soil samples in the 2004 and 2007 programs were taken from 0.3 to 0.55 m depth and averaged 0.5 kg in weight.

Soil samples were taken with a grub hoe and consist of talus fines, the soil horizon is poor to moderately well developed in the grid area and the soil sample material is considered to be weathered 'C' horizon. Samples were placed in marked kraft bags and shipped to Acme Labs in Vancouver, BC and Pioneer Labs in Richmond, BC for 30 element ICP and gold geochemical analyses (2004 program) and to Pioneer Labs in Richmond, BC (2007 program). Lines were surveyed with Garmin C60 GPS, hip chain and compass. Flagging, and aluminium tags were used to mark stations at 50 m intervals. Slope correction distance was adjusted with the use of clinometer readings.

The majority of the sampling results reported in this report are for the underground sampling completed by Western Uranium Cobalt Mines Ltd. in the early 1950's and that for Southern Gold Resources in 1987. There are no written descriptive reports on the "methodology" of the 1950's sampling except that it is reported as channel sampling. Results from the various mine sampling programs are reported and verified by M.W. Jasper P.Eng., Resident Mine Engineer in Jasper (1952). Also, these sampling results were reviewed by Kohanowski (1951), Associate Professor of Mining Geology, University of North Dakota and Assistant State Geologist, State of North Dakota, and he was in complete agreement with these results. The assay methods and laboratory used are not reported.

The samples for the Victoria Mine, reported on by Sutherland Brown (1960), were all taken by Government geologists of the British Columbia Department of Mines or the Geological Survey of Canada. The samples date mostly from 1949 but also from 1940.

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The Southern Gold Resources underground and surface sampling program is reported by Quin (1987) and Quin (1989). All underground samples were chipped channel samples and surface samples included chipped channel and grab samples. From reading the description of the work it appears that Quin was quite careful in his sampling and duplicate channel samples are reported. The samples were submitted to Acme Analytical Labs of Vancouver, BC for analyses.

## 13.0 Sample Preparation, Analyses & Security

Sample collection and analyses methods and procedures prior to 1960 are not known.

Rock samples for analyses, collected by Southern Gold in 1987 and 1988, were transported from the site by vehicle to Smithers and shipped by commercial transport to Acme Analytical Labs in Vancouver, BC. The samples were crushed, pulverized and analyzed. Gold was done by traditional fire assay methods. All lead, zinc, and copper and silver analyses were done by Induced Couple Plasma; however, all high values were resubmitted for conventional assay methods including silver, which was done by traditional fire assay. All gold values were reported as ounces per ton. All other values were reported as parts per million except when samples were reanalyzed by conventional assay methods gave copper, lead and zinc in percent and silver in ounces per ton. The laboratory analyses are considered accurate, as a reputable laboratory, such as Acme, would have used internal checks and standards.

Rock samples collected by Rocher Deboule Minerals Corp. during the 2001/2002 and 2004 programs were delivered to Pioneer Labs of Richmond, BC. During the 2007 program all samples, except drill core, were sent to Pioneer Labs for analysis; the split drill core was sent to ALS Chemex Labs in North Vancouver for analysis. Qualified Person, Andris A Kikauka, P.Geo supervised core sampling and logging. Here the samples were crushed and pulverized and analyzed by Induced Couple Plasma for all elements, except gold, which was done independently as a Geochemical analyses by a combined fire assay and atomic absorption method. All element except gold were expressed in parts per million. Gold analyses used a 0.5-gram sample digested with 3 ml of aqua regia diluted to 10 ml of water. Gold analysis uses a 10-gram sample digested with aqua regia, methyl isobutyl ketone extracted (MIBK), graphite furnace and atomic absorption finished to 1 part per billion detection.

Split core samples from the 2007 program were placed in marked poly bags and shipped to ASL Chemex North Vancouver, BC for 4 acid-near total digestion (ALS Code ME-MS61) 48 element ICP geochemical analyses.

The security programs for rock samples for the pre 1960 (Western Uranium Cobalt Mines Ltd) and the 1987 Southern Gold Resources sampling is not known nor recorded. The rock, soil, and silt samples collected by Rocher Deboule Minerals Corp. were personally collected by Mr. Andris Kikauka, P.Geo, and delivered personally by him to Pioneer Labs in Richmond, BC and Acme Labs in Vancouver, BC during the 2001/2002 and 2004 programs. During the 2007 program Andris Kikauka, P.Geo., Sean Derby, Geologist and Dan Ethier, geological technician collected the rock and soil samples.

## 14.0 Data Verification

Much of the information used in the preparation of this report is on public record in the form of assessment reports filed with the BC Ministry of Energy and Mines and in their respective geological and mining publications. The writers have no reason to doubt the quality or veracity of these data. All of the exploration work conducted since 1951, with subsequent reporting, was performed by competent, qualified persons. The writers have completed site visits to the Property. Kikauka has visited all showings on the property whereas Burgoyne has evaluated the Rocher Deboule mine and Cap showing. The writers have collected surface samples for visual evaluation during the course of the field examinations. A substantial amount of surface and underground sampling has been done since 1951 to provide a reasonable assessment of average grades on the Property.

The sampling programs underground and on surface by Western Uranium Cobalt Mines Ltd. (1952), Southern Gold Resources Ltd. (Quin 1987, 1989), Sutherland Brown (1960) and Rocher Deboule Minerals Corp. in 2001/2002, 2004 and 2007 confirm the general tenor and extent of the precious-base metal quartz-sulphide veins that are present on the Rocher Deboule Property.

The concept and undertaking of quality control/quality assurance as known today was not present during the Southern Gold 1987 & 1988 programs and earlier Western Uranium Cobalt Mines programs. Field blanks and manufactured reference samples provide indications of absolute accuracy of the sampling and assaying procedures. It is clear from a review of the data that sampling and subsequent analyses were taken with care and diligence; however, the concepts of using extensive duplicate, field blank, and reference standard samples, as we know today, was normally not undertaken. These historic sampling programs had no data verification scheme in place (that is used in present day quality control/quality assurance programs) other than some assay duplicates (identical samples taken at source), as was customary at that time. There is also no record of any check assay program being initiated.

The Rocher Deboule Minerals sampling method, preparation, analyses and security program is the only modern one and was done according to good-practise industry standards.

A detailed review, was completed by the writers, of all underground and surface rock sampling programs done on the Property and included:

- A geological and mineralization in-depth review and on-site evaluation of the Rocher Deboule mine, the Victoria mine, the Highland Boy, Cap and Golden Wonder showings;
- Review and confirmation of the location of all historical underground workings, rock sampling programs, trench/surface sampling programs and drill hole locations (where appropriate);
- A review of all technical reports dealing with the Property and many maps and sections;
- Technical discussions with the representatives of Rocher Deboule Minerals Corp.

## 15.0 Adjacent Properties

The Rocher Deboule Property is located within the Hazelton Mountain Range of central British Columbia. This is a very prolific mineralized belt for a variety of metals and styles of mineralization.

The Red Rose mine is located 11 km south of Hazelton and 1.5 km southeast of the Rocher Deboule Property. Note Figure 7-2. The Red Rose (Kikauka 2002) mineral occurrence consists of a quartz vein system, which contains variable amounts of tungsten, copper, gold, silver, molybdenum, and uranium. Siltstone and argillite of the Middle Jurassic to Lower Cretaceous Bowser Lake Group are intruded by the Late Cretaceous Rocher Deboule granodiorite stock of the Bulkley intrusive complex. Sediments are hornfelsed and are intruded by a set of northeast trending diorite dykes that predate the Rocher Deboule stock. Bedding in the sediments strikes 015 degrees and dips 70 west. The Chicago Creek Fault, striking 010 degrees and dips 70 west, cuts all rocks and is a normal fault with dip-slip of 600-900 metres. The Red Rose vein occupies a shear zone that trends 145 degrees and dips 65 west and is hosted in a diorite dyke. The vein is 1.2 to 2.8 metres wide, 60-120 metres along strike and at least 335 metres down dip. The vein consists largely of quartz with lesser feldspar, biotite, hornblende, ankerite, tourmaline, apatite, scheelite, ferberite, chalcopyrite, pyrrhotite, molybdenite, and uraninite. Extensive lenses of chalcopyrite occur in the hanging wall shear. The biggest concentrations of radioactive material are erratically distributed with molybdenite in the wall rocks. Between 1942 and 1954, 103,424 tonnes or ore produced 1,002,839 kg of tungsten. Probable "reserves" listed in a company report are 13,606 tonnes grading 1.18 % tungsten or 1.5% tungsten trioxide. This reserve is most likely a "resource" and is neither CIM nor 43-101 compatible. The Red Rose also contains guartz veins with reported assay values greater than 17 grams per tonne gold and silver, which occur with chalcopyrite and/or tetrahedrite.

The Armagosa is located on the north side of Armagosa Creek and approximately 600 metres south of the Great Ohio veins. A steep gully on the south side of a ridge trends 030 degrees and dips 60 degrees west. This gully follows a quartz-sulphide fissure vein system with chalcopyrite-magnetite-scheelite hosted in hornfelsic greywacke and siltstone/argillite. Old workings are at 1,325-1,463 metre elevations. There are two adits and one small shaft. The lower adit is at 1,322 metres and the upper adit is at 1,408 metres where a 45.7 metre long crosscut trends 360 degrees and cuts a 030-degree trending shear zone.

Within approximately 150 kilometres of the Rocher Deboule Property there are no less than eleven large porphyry or porphyry–style copper-molybdenum, copper-gold, molybdenum, and molybdenum-tungsten deposits. Grades are typically low to medium ranging from 0.30 to 0.48% copper, 0.013 to 0.192 % molybdenum, 0.041 % tungsten and 0.03 to 0.8 grams per tonne gold. The deposits range from 20.6 million tonnes to perhaps 250,000,000 tonnes. These deposits have been systematically explored for many years and mineral resources / mineral reserves are reported for all of them. The deposits include: Bell-Granisle (Cu-Au), Berg (Cu-Mo), Big Onion (Cu-Mo), Endako (Mo), Huckleberry Main & East Zones (Cu-Mo-Au), Kitsault (Mo), Louise Lake (Cu-Mo), Poplar (Cu-Mo), and York Hardy (Mo-W). Endako, currently Canada's largest molybdenum producer, and Huckleberry are in production. For a detailed review of these deposits the reader is referred to CIM Special Volumes 15 and 46 by Schroeter (1995) and Sutherland Brown (1976). There are also other small base metal vein and replacement deposits including the Duthie (Pb-Zn) and Hearne Hill (Cu-Au).

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## 16.0 Mineral Resource

The historical resource and reserve estimates are discussed in **History**, **Item 6.3**; they are not compliant with either National Instrument 43-101 or CIM standards and are only relevant for information and documentation in a historical sense. The **Issuer should not treat the historical resource/reserve as current resources/reserves.** 

Rocher Deboule Minerals Corp. has not completed any resource estimates. The information on historical "resource" and "reserve" estimates in Item 6.3 is given for information purposes only. The estimates are not considered reliable or relevant today and the writers have not classified the historical estimates as current mineral resources/reserves. The historical resource estimates should not be relied upon.

## 17.0 Mineral Processing and Metallurgical Testing

There is no documented report(s) on mineral processing and metallurgical testing.

### **18.0** Interpretation & Conclusions

1. The authors have completed a detailed technical evaluation of the Rocher Deboule Property that includes the Rocher Deboule Mine, the Victoria Mine and the Great Ohio, Highland Boy Cap, and Golden Wonder vein workings. The preparation of this technical report included certain due diligence procedures. It is concluded that the technical field work, office data compilation, and reporting of data, completed by previous owners/operators including Western Uranium Cobalt Mines Ltd, Southern Gold Resources Ltd. and now by Rocher Deboule Mineral Resources Corp., is of good quality and meets good practice industry standards.

2. The objective of the exploration mapping and surface sampling, and other surveys undertaken by Rocher Deboule Mineral s Corp. in 2001-2002 and 2004, and 2007 over the projected Rocher Deboule and Highland Boy veins, was to confirm, on the ground, the extent and grade of the veins known to exist. A second objective was to consider the possibility of an Iron Oxide-Copper-Gold (IOGC) deposit potential as defined by stream sediments anomalous in copper, lead, zinc, arsenic, cobalt, iron, silver and gold and other elements.

3. Based on the host lithologies and mapped alteration assemblages, the Rocher Deboule Property is classified as a high sulfidation, intrusive (sediment) hosted, epithermal gold – silver – base metal vein-shear deposit. The Property lies on the northwestern margin of a granodiorite pluton intruded into sediments and volcanics where a series of precious-base metal quartz-sulphide veins have had historical mine production.

4. The economic potential and Property merit is to be found not only in the historical quartzsulphide veins but in mineralization and alteration that has copper-gold porphyry and/ or iron oxide-copper-gold (IOCG) affinities and potential where mineralization is found as veins, disseminations and breccias.

5. On the Property, the Rocher Deboule mine No.2 vein, on its western and eastern parts, contains potential economic gold-silver-copper mineralization and further exploration is warranted. Also, the No. 4 vein is open on strike to the east. From VLF-EM conductivity data, the main follow up targets occur within 200 meters of the intrusive contact with the volcanic/sediment country rock at 1,600-1,750 m (5,248-5,740 ft) elevation (approx. 50-150 m from the #4 Vein). Data compilation suggests additional targets occur on the relatively unexplored #1, #2A, and #3 Veins as well as dip and strike extensions of the #2 Vein.

6. At the Victoria mine further exploration is warranted along trend to define additional mineralization.

7. All of the mineral showings described in detail, with certain exceptions, on the Rocher Deboule Property comprise vein fillings of shear zones, normally in close proximity to the margin of the Rocher Deboule stock. These mineralized shears closely parallel one set of orthogonal joint pattern caused by the cooling of the stock. The veins all strike in a northeasterly to easterly direction and dip approximately 55 degrees to the north. The veins are found over significant lengths of shear zone, e.g., on the Highland Boy – Rocher Deboule system a strike length of perhaps in excess of 1500 metres and a dip length in excess of 200 metres is indicated. However, economic mineralization, as defined by mining on the Rocher Deboule mine, occurred

over short strike lengths of 30 - 75 metres and was concentrated in near vertical shoots, e.g., the No. 4 vein at the Rocher Deboule mine.

8. It must be stressed that the vein systems known on the Rocher Deboule Property could be part of a much larger hydrothermal system that are indicative of a porphyry copper (gold) system laterally or possibly at depth. Hydrothermal vein systems, like Rocher Deboule, can be outboard of a typical hydrothermally altered porphyry copper (gold) system. From an exploration concept further evaluation should be focussed to the west of the Rocher Deboule and Victoria mines towards and into the sediments (uJB) and volcanics (uKB) to define porphyry style mineralization and alteration

9. The primary exploration and development objective is to complete an exploration program that will focus on the undertaking of surface geological mapping and rock sampling that is directed at the scope and nature of hydrothermal alteration. This would be followed by testing the potential for precious metal-chalcopyrite-quartz veins and porphyry-style alteration and mineralization by diamond drilling. Prior to this, the road access to the Property up Juniper Creek, from Highway 16 on the Skeena River, must be repaired and maintained.

### 19.0 Recommendations

The Rocher Deboule Property, located over the historic Rocher Deboule and Victoria Mines, the Great Ohio, Highland Boy, and Cap, and Golden Wonder vein workings, should be advanced by further surface exploration.

On the Property, the Rocher Deboule mine No.2 vein, on its western and eastern parts, contains potential economic gold-silver-copper mineralization and further exploration is warranted. Also, the No. 4 vein is open on strike to the east. The No. 1 vein has anomalous surface geophysics and geochemistry and is open. From VLF-EM conductivity data, the main follow up targets occur within 200 meters of the intrusive contact with the volcanic/sediment country rock at 1,600-1,750 m (5,248-5,740 ft) elevation (approx. 50-150 m from the #4 Vein). Data compilation suggests additional targets occur on the relatively unexplored #1, #2A, and #3 Veins as well as dip and strike extensions of the #2 Vein.

It is the writers opinion that the character and favourable underground and surface sampling results for precious and base metals (Cu-Ag-Au and W-Mo-Co-As) obtained to date by Rocher Deboule Resources Corp., Southern Gold Resources Ltd., Western Cobalt Uranium Mines Ltd., and others, are of sufficient merit to warrant the following programs as detailed below. A two phase program consisting of core drilling, geological mapping, trenching, core drilling, and lithogeochemical sampling, and road improvement followed by additional diamond drilling, and further geological mapping are proposed. Prior to commencement of field work, a detailed evaluation of the Fugro airborne geophysical survey, done in 2007, should be completed.

The object of this proposed geological fieldwork is to test the Rocher Deboule No.1, No. 2, and No. 4 veins, and Victoria No. 1 vein. Concurrent with this, a program of drilling, hand trenching, geological mapping and rock chip sampling is required to outline further extensions of other known mineral occurrences and veins including Highland Boy, Cap, and golden Wonder. Surface geological mapping should be directed at the scope and nature of hydrothermal alteration specifically covering Rocher Deboule and Victoria mines and Cap, and other showings. Also determine how this is related to the underlying structural controls and especially to test the potential for porphyry-style alteration and mineralization. This geological mapping should focus not only at confirming the potential and extension of additional precious–base metal quartz-sulphide veins, but also for iron oxide-copper-gold and/or copper-gold-base metal porphyry alteration and mineralization.

A detailed budget of this two-phase exploration program is given in **Tables 19-1** and **19-2**. The Phase One portion totals \$232,500 and the Phase Two program \$350,000.

# TABLE 19-1 PHASE ONE RECOMMENDED EXPLORATION PROGRAM & BUDGET

FIELD CREW- Geologist, and geo-technician, 42 days	\$ 25,000
FIELD COSTS-Assays 250 Samples	9,400
Geological/Geochemical Survey	15,000
Geological Evaluation of Fugro Airborne Survey	10,000
800 m core drilling @ \$100/ meter	80,000
Equipment and Supplies	2,000
Communication	900
Food	2,400
Transportation & Helicopter	63,600
Road Improvement, Trenching	7,350
REPORT PREPARATION	1,850
Contingency	15,000
_	

Total \$ 232,500

Assuming favourable Phase One results the following Phase Two program is recommended.

## **TABLE 19-2**

## PHASE TWO RECOMMENDED EXPLORATION PROGRAM & BUDGET

	V- Geologist, 1 Geo-technician, 1 cook 120 days S- Core drilling, (1,800 meters) 150,000	\$ 46,000
	Assays 900 Samples	20,500
	Equipment and Supplies	4,000
	Communication	3,000
	Food	6,500
	Transportation & Helicopter	98,000
REPORT		2,000
	Contingency	20,000

Total \$ 350,000

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## 21.0 SIGNATURE PAGE

The report titled "Technical Report on the Rocher Deboule Property, Rocher Deboule Range, Omineca Mining Division, British Columbia for Rocher Deboule Minerals Corp." dated December 18, 2007 was prepared and signed by the following authors.

Dated at North Saanich, British Columbia December 18, 2007

(Signed and Sealed) A. A. Burgoyne, P.Eng., M.Sc.,

Consulting Geologist Burgoyne Geological Inc.

Dated at Sooke, British Columbia December 18, 2007

A. Kikaulos

(Signed and Sealed)

Andris Kikauka, P.Geo.

Consulting Geologist Geo-Facts Consulting

## 22.0 CERTIFICATE - STATEMENT OF QUALIFIED PERSON

### BURGOYNE GEOLOGICAL INC. Consulting Geologists & Engineers

548 Lands End Road North Saanich, BC, Canada V8L 5K9 TEL / FAX (250) 656 3950

### A.A. (Al) Burgoyne, P.Eng. M.Sc.

### I Alfred A. Burgoyne hereby certify:

- 1. I am an independent consulting Geologist employed by Burgoyne Geological Inc. with residence and office at 548 Lands End Road, North Saanich, BC, CANADA, V8L 5K9.
- 2. I graduated from the University of British Columbia in 1962 with a Bachelor of Science Degree in Geology and from the University of New Mexico in 1967 with a Master of Science Degree in Geology.
- 3. I am a registered Professional Engineer in the Association of Professional Engineers and Geoscientists for the Province of British Columbia and am registered as a Fellow of the Geological Association of Canada.
- 4. I have practiced my profession for 44 years and have been involved in mineral exploration and development in Canada, USA, Latin America (including Mexico), Southeast Asia and Eastern Europe.
- 5. During this period of professional practice I have been extensively involved in the discovery / definition, recognition and development phases of no less than four major and one small gold deposits in British Columbia, Nevada and Manitoba of which all attained production.
- 6. Prior to establishing Burgoyne Geological Inc. in 1991 I held several successive positions from 1980 to 1991 as Vice President-Exploration for Breakwater Resources Ltd., Western Canadian Mining Corporation, Cassiar Mining Corporation and Bethlehem Copper Corporation. From 1970 to 1979 I was Exploration Manager of Western Canada for UMEX Corp.
- 7. I have read the definition of "qualified person" set out in national Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 8. The report dated December 18, 2007 and titled "Technical Report on the Rocher Deboule Property, Rocher Deboule Range, Omineca Mining Division, British Columbia for Rocher Deboule Minerals Corp." is based on three weeks of technical evaluation in November and December 2007, Mr. Kikauka has helped in compilation of the Tables and supervised the previous exploration programs in 2001/2002, 2004, and 2007 on the property.
- 9. A two day site visit was made to the property on June 21 and 22, 2004. The Rocher Deboule mine and Cap showing were examined. The examination covered geology, mineralization, landforms, infrastructure, and old surface and mine workings. The sources of all information not based on personal examination are quoted in the report. The information provided by the various parties is to the best of my knowledge and experience correct.
- 10. I have written all Items of the report with exception of Items 10, 11. 12, 13, 14,15, and 19 which were co written with Mr. Kikauka. All Items were thoroughly vetted and reviewed by the writer. Item 4. Mineral Tenure was prepared by Terri Piorun of Rocher Deboule Minerals Corp. That as of the date of this certificate, to the best of the qualified person's knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 11. Numerous maps and sections, especially in respect to underground sampling were supplied by Rocher Deboule Minerals Corp. and reviewed.
- 12. I am independent of the issuer applying all the tests in section 1.4 of National Instrument 43-101

Rocher Deboule Property, British Columbia Burgoyne Geological Inc. Geo-Facts Consulting

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- 13. I have read National Instrument 43-101 and Form 43-101Fl and the Technical Report has been prepared in compliance with that instrument and form
- 14. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public of the Technical Report.

Dated at North Saanich, British Columbia this 18th day of December 2007.

Dated at North Saanich, British Columbia December 18, 2007

(Signed and Sealed) A. A. Burgoyne, P.Eng., M.Sc.,

Independent Qualified Person Consulting Geologist Burgoyne Geological Inc.

## GEOFACTS CONSULTING Consulting Geologist

406-4901 East Sooke Road Sooke, BC, Canada V0S 1N0 TEL (250) 656 3950

### A.A. Kikauka, P.Geo.

### I Andris A. Kikauka hereby certify:

- I am a self-employed consulting Geologist with residence and office at 406-4901 East Sooke Road, Sooke, BC, CANADA, VOS 1NO. I am a Director of Rocher Deboule Minerals Corporation and I have a direct interest in the subject property, as part of a stock option agreement dated Sept 4, 2007, I am entitled to purchase 100,000 shares of Rocher Deboule Minerals Corporation at \$0.55 up to and including Sept 4, 2012
- 2. I graduated from Brock University in 1980 with Honours Bachelor of Science Degree in Geology.
- 3. I am a registered Professional Geoscientist (18,275) in the Association of Professional Engineers and Geoscientists for the Province of British Columbia and am registered as a Fellow of the Geological Association of Canada (F5717).
- 4. I have practiced my profession for 21 years and have been involved in mineral exploration and development in Canada, USA, Latin America (including Mexico).
- 5. During this period of professional practice I have been extensively involved in the discovery / definition, recognition and development phases of gold deposits in British Columbia and Mexico which have attained production.
- 6. Prior to establishing Geofacts Consulting in 1996, I held several successive positions from 1981 to 1995 with numerous mining companies such as Rayrock Mines, Anaconda Canada Exploration, Skyline Explorations, Gulf International Minerals, Inel Resources, Navarre Resources, Verdstone Gold, Molycor Gold, and Stirrup Creek.
- 7. I have read the definition of "qualified person" set out in national Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. The report dated December 18, 2007 and titled "Technical Report on the Rocher Deboule Property, Rocher Deboule Range, Omineca Mining Division, British Columbia for Rocher Deboule Minerals Corp." is based on three weeks of technical evaluation on the property in July and September, and December 2007.
- 8. I have been on the Rocher Deboule property performing technical fieldwork on 5 separate occasions which include site visits ranging from 1-7 days in length during Sept, 2001, June, 2004, Sept, 2004, July, 2007, and Sept, 2007. These property examinations dealt primarily with geological mapping, rock chip sampling of mineralization on the Rocher Deboule No 1-4 Veins, Victoria No 1-3 Veins, Highland Boy Upper and Lower Veins, Golden Wonder and Cap occurrences, magnetometer ground surveys, logging drill core from 2007 Highland Boy drilling, recording all relevant technical data pertaining to geological evaluation of surface and mine workings. The sources of all information not based on personal examination are quoted in the report. The information provided by the various parties is to the best of my knowledge and experience correct.
- 9. I have assisted in writing Items 10, 11. 12, 13, 14,15, and 19which were co written with Mr. Burgoyne. All Items were thoroughly vetted and reviewed by the writer. Item 4, Mineral Tenure was prepared by Terri Piorun of Rocher Deboule Minerals Corp. That as of the date of this certificate, to the best of the qualified person's knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 10. Numerous maps and sections, especially in respect to underground sampling were supplied by Rocher Deboule Minerals Corp. and reviewed.

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- 11. I am independent of the issuer applying all the tests in section 1.4 of National Instrument 43-101
- 12. I have read National Instrument 43-101 and Form 43-101Fl and the Technical Report has been prepared in compliance with that instrument and form
- 13. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public of the Technical Report.

Dated at East Sooke, British Columbia this 18th day of December 2007.

Dated at East Sooke, British Columbia December 18, 2007

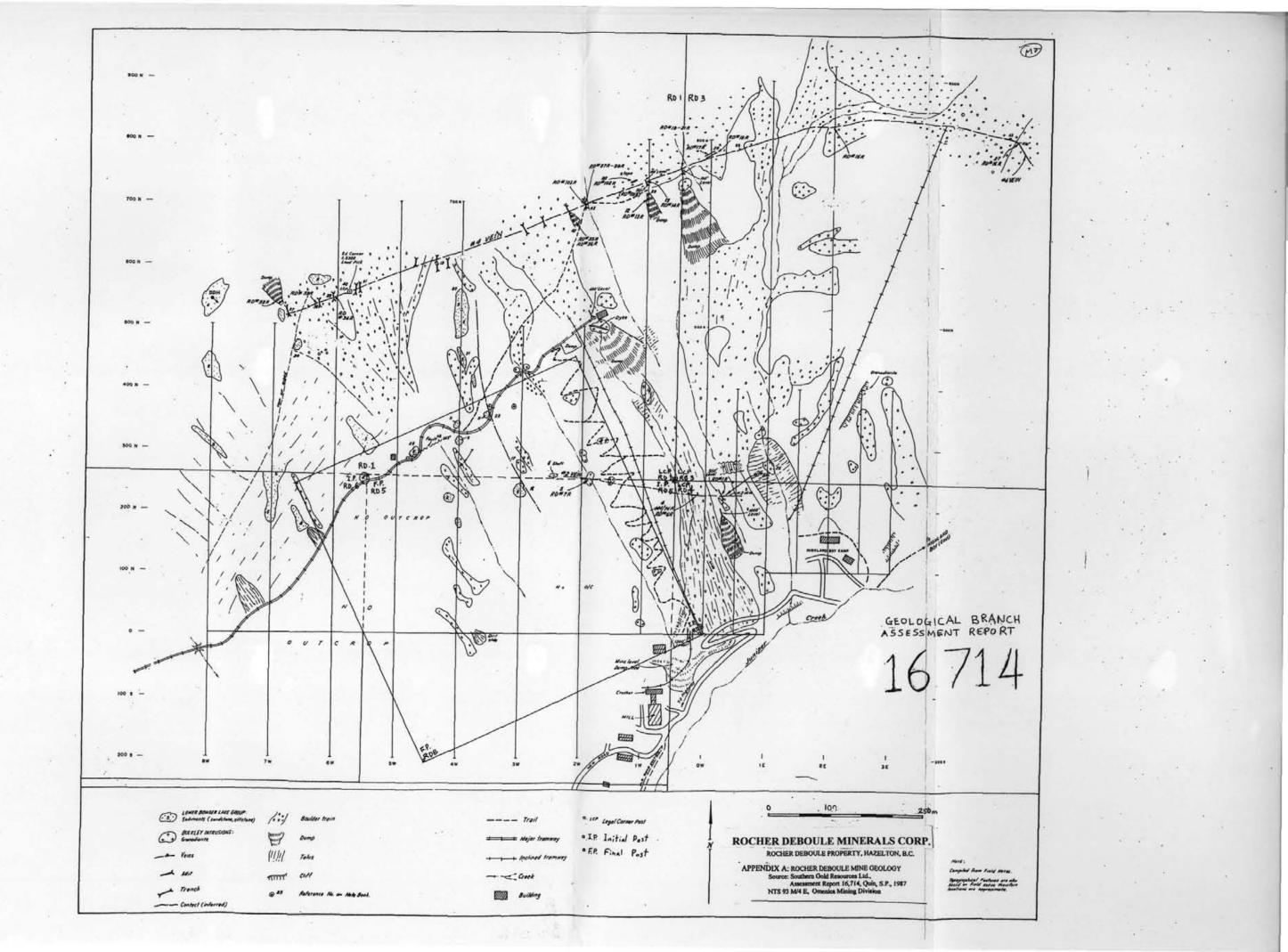
(Signed and Sealed) A. A. Kikauka, P.Geo.,

A. Kulture Qualified Person Consulting Geologist Geo-Facts Cnsulting

APPENDIX A

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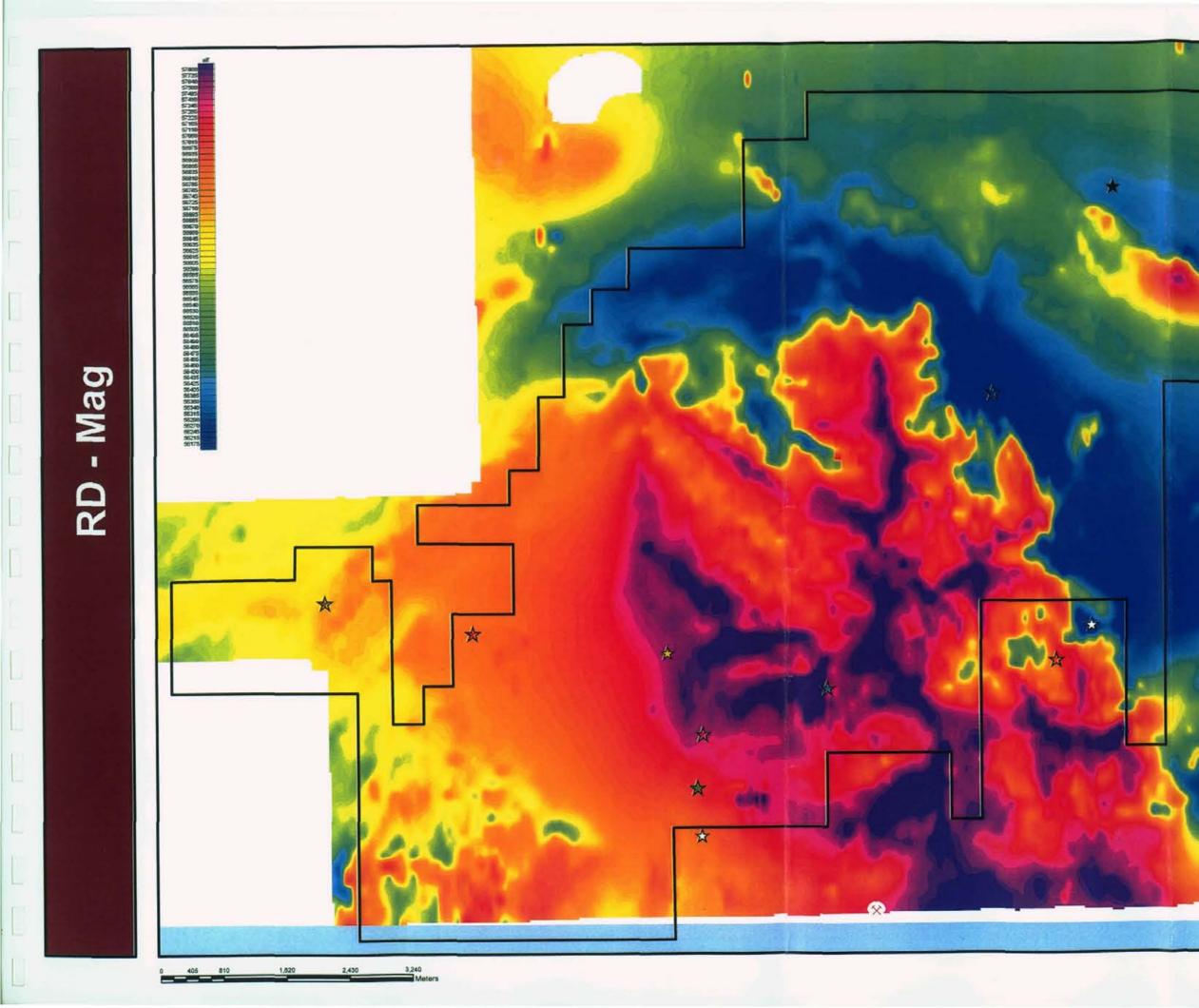


## **APPENDIX B**

## Fugro 2007 Airborne Survey, Rocher Deboule Property Summary Maps

RD - Mag - Total Magnetic Field -

- **RD TC Field Radiometric Total Counts**
- RD Resistivity Apparent Resistivity, 7200 Hz



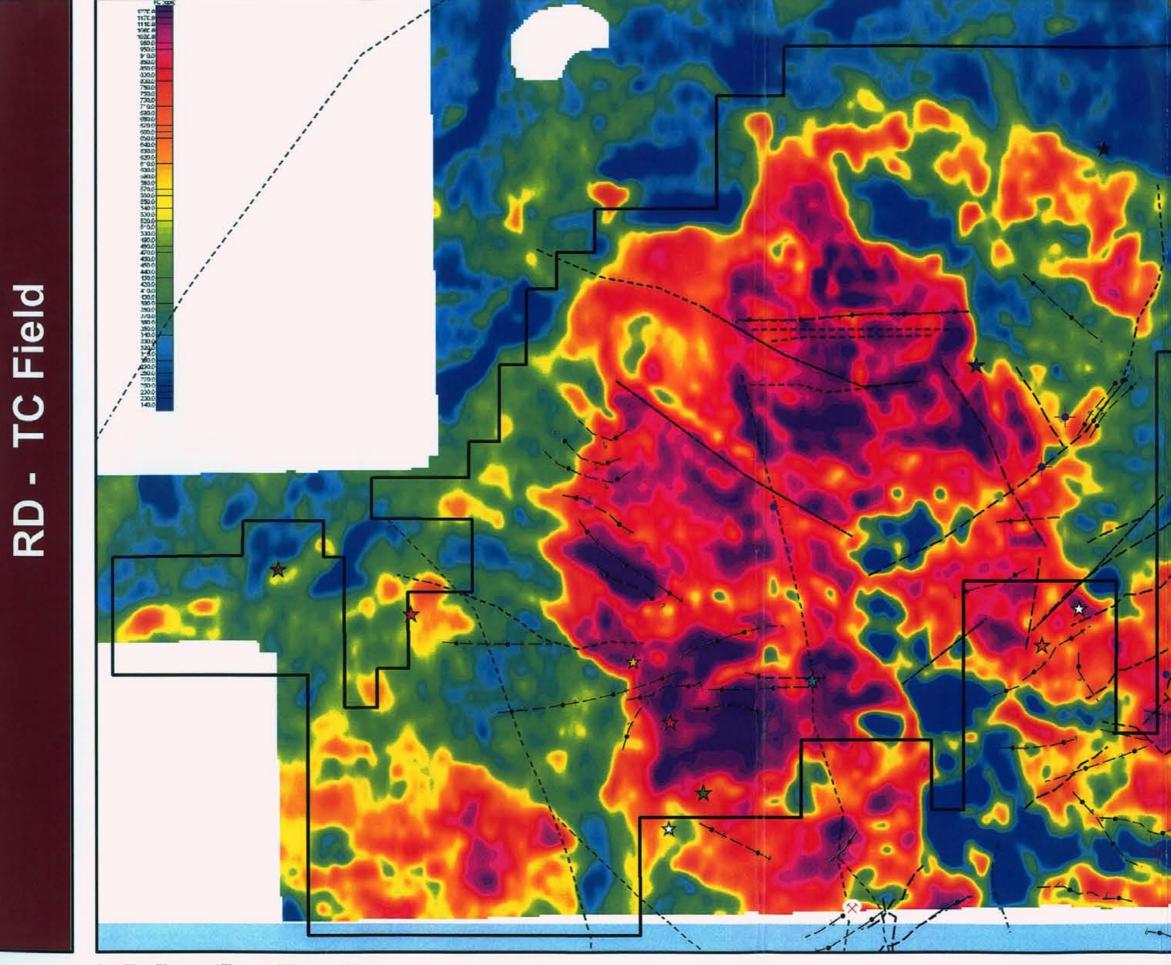
# **RD Showings and Faults**

6

## RD\_Sites Showings

×	Red Rose
*	Rocher DeBoule

- Golden Wonder
- ★ Highland Boy
- 🖈 Blue Lake
- ☆ Black Prince
- 🖈 Great Ohio
- 🖈 Cap
- ★ Daley West
- ☆ Victoria
- ☆ Armagosa
- ★ Hecla Bluebird



0 380 70 1,520 2,280 3,040 760

-

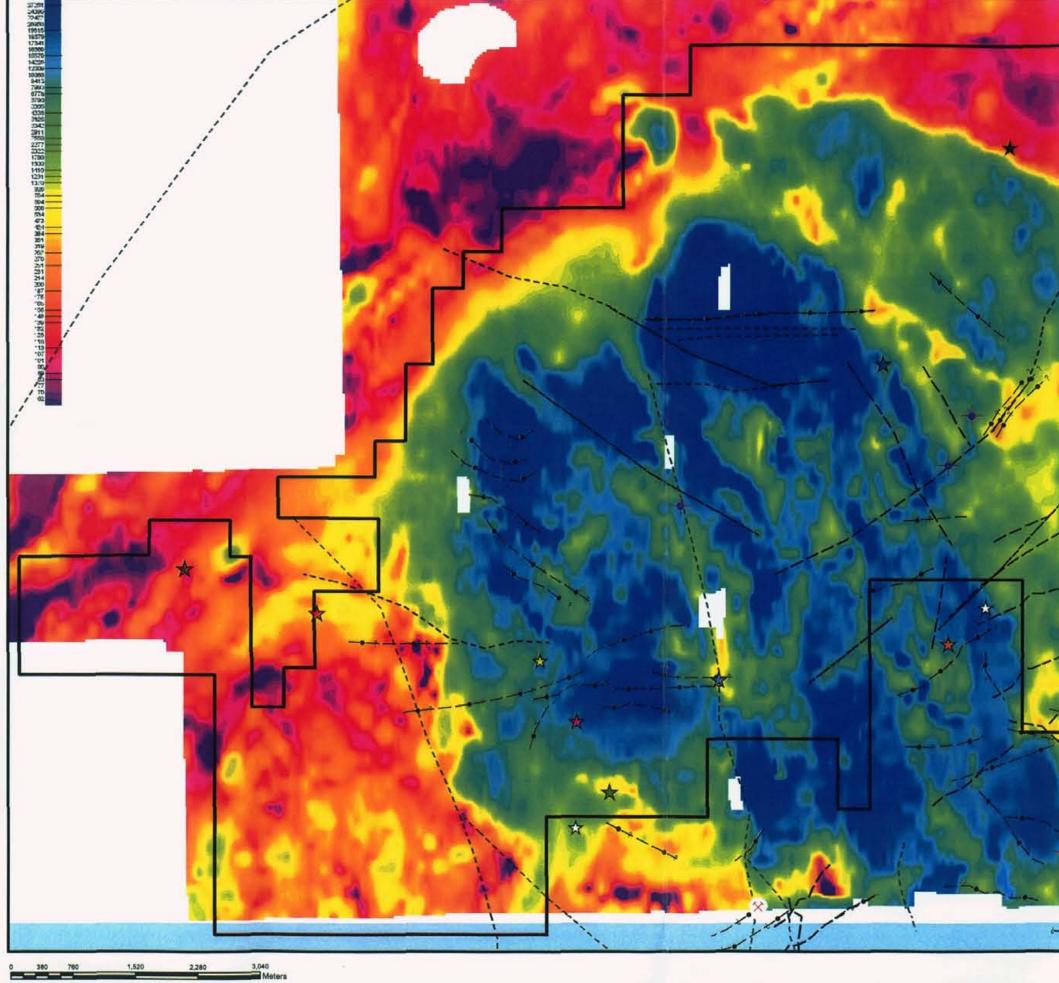
# **RD Showings and Faults**

**RD\_Sites** Showings

$\times$	Red Rose
*	Rocher DeBoule
*	Golden Wonder
★	Highland Boy
*	Blue Lake
☆	Black Prince
*	Great Ohio
*	Сар
*	Daley West
☆	Victoria
☆	Armagosa
*	Hecla Bluebird
• +	Veins/Dykes - Berry
	Faults - Berry Study
	Faults - Images
	Faults - Known

Study





1,520 2,280

# **RD Showings and Faults**

**RD\_Sites** Showings

×	Red Rose
*	Rocher DeBoule
*	Golden Wonder
*	Highland Boy
*	Blue Lake
☆	Black Prince
*	Great Ohio
*	Сар
*	Daley West
☆	Victoria
☆	Armagosa
*	Hecla Bluebird
•+	Veins/Dykes - Berry Study
	Faults - Berry Study
	Faults - Images

Faults - Known

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Page: 1 Finalized Date: 21-NOV-2007 This copy reported on 22-NOV-2007 Account: ROCDEB

com	APPENDIX

## CERTIFICATE VA07118520

Project: HIGHLAND

P.O. No.:

This report is for 97 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 16-OCT-2007.

The following have access to data associated with this certificate:

S. DERBY	D. ETHIER	ANDRIS KIKAUKA
LARRY REAUGH	L. REAUGH	LARRY REAUGH

	SAMPLE PREPARATION								
ALS CODE	DESCRIPTION								
WEI-21	Received Sample Weight	·····							
LOG-22	Sample login - Rcd w/o BarCode								
CRU-QC	Crushing QC Test								
PUL-QC	Putverizing QC Test								
CRU-31	Fine crushing - 70% <2mm								
SPL-21	Split sample - riffle splitter								
PUL-31	Pulverize split to 85% <75 um								

	ANALYTICAL PROCEDUR	ES
ALS CODE	DESCRIPTION	
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	VARIABLE
Au-AA23	Au 30g FA-AA finish	AAS

To: ROCHER DEBOULE MINERALS ATTN: L. REAUGH 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Coursence (1)

Lawrence Ng, Laboratory Manager - Vancouver



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CERTIFICATE OF ANALYSIS VA07118520

Page: 2 - A Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

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Project HIGHLAND

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	Methed Analyte	WEI-21 Recvd Wt.	Au-AA23 Au	ME-MS61 Ag	ME-MS61 Al	ME-MS61 As	ME-MS61 Ba	ME-MS61 Be	ME-MS61 Bi	ME-MS61 Ca	ME-MS61 Cd	ME-MS61 Ce	ME-MS61 Co	ME-MS61 Cr	ME-MS61 Ce	ME-MS61 Cu
Sample Description	Units LOR	kg 0.02	ppm 0.005	ppm 0.01	% 0.01	ppm 0.2	ppm 10	ррт 0.05	ppm 0.01	% 0.01	ppm 0.02	ppm 0.01	ррт 0.1	ppm 1	ppm 0.05	ррт 0.2
D1-1		3.08	<0.005	0.08	7.13	7.7	330	1.14	0.25	4.17	0.45	31.6	4.8	54	0.79	32.7
D1-2		0.76	<0.005	0.01	7.18	3.4	300	1.56	0.19	2.84	0.12	23.4	3.7	26	1.62	14.6
D1-3		2.22	<0.005	<0.01	6.57	3.4	1700	1.05	0.07	3.65	0,1	30.4	9	38	7.53	10.6
D1-4		2.76	<0.005	<0.01	6.76	3.9	1590	1.42	0.09	3.37	0.12	32.4	9.2	27	11.35	13.9
D1-5		4.20	<0.005	0.05	7.07	5.8	810	1.41	0.1	2.91	0.2	32.4	9.3	60	4.12	21.3
D1-6		2.48	<0.005	0.16	7.57	6.4	1850	1.97	0.13	4.05	0.49	78.5	15.7	30	4.17	19.2
D1-7		6.64	<0.005	<0.01	6.69	4,4	690	1.51	0.11	2.9	0.13	36.3	8.6	41	3.51	18
D1-8		2.76	<0.005	<0.01	7.19	4	440	1.57	0.13	3.27	0.13	25.7	6.3	29	2.38	17
D1-9		4.02	<0.005	<0.01	7.15	4.6	750	1.45	0.09	2.66	0.08	52.4	10.8	50	4.4	8.9
D1-10		1.90	<0.005	<0.01	6.32	7.4	190	1.6	0.31	3.39	0.02	>500	6.6	10	2.1	4.7
D1-11		3.50	<0.005	<0.01	7.02	3.5	810	1.45	0.07	2.57	0.1	32.1	9.2	50	3.84	12.5
D1-12		3.52	<0.005	<0.01	7.23	3.9	790	1.53	80.0	2.81	0.09	37.8	7.8	28	3.36	8.1
D1-13		3.16	<0.005	0.01	7.17	6	550	1.42	0.11	2.97	0.02	60.4	7.8	46	4.42	51.5
D1-14		0.92	0.116	0.77	4.49	24.3	100	1.16	0.53	5.14	<0.02	124.5	292	16	6.86	7050
D1-15		1.92	<0.005	0.02	7.19	10.1	430	1.63	0.11	2.81	0.07	38.9	8.9	46	6.37	99
D1-16		4.80	<0.005	<0.01	7.35	4.8	1000	1.35	0.11	2.92	0.1	34.2	9.9	33	3.76	31.4
D1-17		1.36	<0.005	0.01	7.53	9.1	600	1.61	0.14	3.42	0.02	62.1	11.4	41	11.7	15
D1-18		2.26	<0.005	0.06	4.03	5.5	180	0.92	0.41	4,9	0.03	280	8.6	8	2.52	10.4
D1-19		2.86	<0.005	<0.01	7.2	4	670	1.07	0.07	2.43	0.12	43.6	5.4	43	1.97	5.1
D1-20		2.66	0.005	0.09	7.34	4.6	590	1.28	0.1	2.54	0.15	61.6	8.4	27	3.24	11.1
D1-21		3.08	<0.005	0.08	7.76	3.6	690	1.46	0.07	2.18	0.12	40.6	8.5	44	3.78	10.6
D1-22		3.06	<0.005	0.1	7.81	3	820	1.52	0.07	1.97	0.09	38.5	9.5	27	4.83	11.4
D1-23		3.54	<0.005	0.08	7.89	4	1310	1.65	0.07	3.25	0.1	63	17	53	3.62	20.5
D1-24		2.86	<0.005	0.08	7.67	3.8	850	1.72	0.09	2.9	0.28	44.8	12.1	31	2.73	15.9
D1-25		2.98	<0.005	0.12	7.58	4.7	810	1.9	80.0	2.43	0.17	234	10	41	3.26	22.3
D1-26		3.20	<0.005	0.12	7.56	2.7	520	1.59	0.08	2.35	0.23	36.2	6.7	38	4.94	11.6
D1-27		2.86	<0.005	0.14	8.4	5.8	1500	1.75	0.06	3.21	0.06	79.4	20.2	46	4.19	26.5
D1-28		3.42	<0.005	0.07	7.19	2.9	690	1.38	0.08	2.23	0.16	35.9	9.2	39	4.07	10.7
D1-29		2.92	<0.005	0.09	7.77	2.6	620	1.49	0.08	2.67	0.13	38.2	10.2	30	3.15	14.8
D1-30		1.46	<0.005	0.04	5.03	3.9	140	0.9	0.05	2.22	0.04	18.95	1	54	11.4	8.1
D1-31		1.24	<0.005	0.11	5.76	5.9	160	1.06	0.12	2.2	0.03	30.3	1.6	21	8.71	21.2
D1-32		3.44	<0.005	0.08	7.77	2.8	300	1.53	0.16	3.43	0.13	31.5	4.7	47	1.32	6.9
D1-33		4.12	<0.005	0.18	7.89	4.1	230	1.49	0.17	4.02	0.14	24.6	3.2	37	1.51	32.8
D2-1		2.56	<0.005	0.16	7.35	9.7	300	1.14	0.26	4.13	0.6	37.3	5.4	51	0.78	69.3
D2-2		1.10	<0.005	2.26	8.7	14.8	150	1.69	1.19	3.27	0.17	86.1	48.9	26	1.8	42.2
D2-3		2.52	<0.005	0.13	7.46	4.7	360	1.65	0.17	3.56	0.14	31.2	6.5	35	2.38	16.6
D2-4		2.52	<0.005	0.1	7,51	4.5	440	1.57	0.19	3.18	0.13	31.3	6.1	33	4.97	12.8
D2-5		1.72	<0.005	0.13	7.62	10.7	520	1.79	0.2	3.18	0.13	28.9	8,1	31 39	4.51 3.95	23.3 177
D2-6		2.54	0.006	0.13	8.11	6.5 24P	960	1.56	0.15	2.66	0.1 11.45	38.4	11.8 213	39 <1		>10000
D2-7		0.96	3.14	47.5	0.6	348	20	0.74	4.37	4.55	11.49	61.3	213	S	1.26	>10000

Comments: Interference: Mo>400ppm on ICP-MS Cd,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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CERTIFICATE OF ANALYSIS VA07118520

Project HIGHLAND

Sample Description          D1-1       Units         D1-2       Units         D1-3       1-4         D1-5       D1-6         D1-7       D1-8         D1-9       D1-10         D1-10       D1-11	ME-MS61 Fe % 0.01 4.38 4.35 2.6 2.68 2.92 4.8 3.19 2.44 3.73 17.9 2.88 2.96 4.41	ME-MS61 Ga ppm 0.05 15.55 15.65 10.5 13.55 14.45 19.05 16 15.6 17.9 31.4 16.8	ME-MS61 Ge ppm 0.05 0.1 0.11 0.11 0.11 0.16 0.12 0.1 0.14 0.59	ME-MS61 Hr ppm 0.1 1.7 0.6 0.4 0.6 0.5 4.8 0.6 0.6 1.1	ME-MS61 In ppm 0.005 0.084 0.024 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027 0.027	ME-MS81 K % 0.01 0.25 0.59 2.15 2.59 1.95 2.07 1.92	ME-MS61 La ppm 0.5 16.1 10.4 16 17.2 16	ME-MS81 Li ppm 0.2 19.8 15.4 19.3 22 15	ME-MS61 Mg % 0.01 1.84 0.73 1.08 1.15	ME-MS61 Mn ppm 5 534 313 585 640	ME-MS61 Mo ppm 0.05 11.6 7.91 1.61 1.54	ME-MS61 Na % 0.01 2.84 2.99 1.03 1.06	ME-MS61 Nb ppm 0.1 11.4 14 12.7 14.8	ME-MS61 Ni ppm 0.2 36.7 16.6 11 12	ME-MS81 P ppm 10 1090 340 750
D1-2 D1-3 D1-4 D1-5 D1-6 D1-7 D1-8 D1-9 D1-10 D1-11	4.35 2.6 2.68 2.92 4.8 3.19 2.44 3.73 17.9 2.88 2.96	15.65 10.5 13.55 14.45 19.05 16 15.6 17.9 31.4	0.11 0.1 0.11 0.16 0.12 0.1 0.1 0.14	0.6 0.4 0.5 4.8 0.6 0.6	0.024 0.027 0.027 0.04 0.057 0.039	0.59 2.15 2.59 1.95 2.07	10.4 16 17.2 16	15.4 19.3 22	0.73 1.08 1.15	313 585	7.91 1.61	2.99 1.03	14 12.7	16.6 11	340 750
D1-5 D1-6 D1-7 D1-8 D1-9 D1-10 D1-11	2.92 4.8 3.19 2.44 3.73 17.9 2.88 2.96	14.45 19.05 16 15.6 17.9 31.4	0.11 0.16 0.12 0.1 0.1	0.5 4.8 0.6 0.6	0.04 0.057 0.039	1.95 2.07	16								730
D1-8 D1-9 D1-10 D1-11	2.44 3.73 17.9 2.88 2.96	15.6 17.9 31.4	0.1 0.14	0.6		1.92	39.3 19.9	15 31.3 16.7	1.24 2.07 1.08	544 1040 525	3.08 1.71 3.14	1.76 1.04 2.25	15.3 18.7 15.1	15.6 13.3 16.5	820 2930 790
—	2.96	16.8		0.4	0.042 0.082	1.09 2.2 0.51	11.7 28.3 1130	14.9 28.1 23.4	1.13 1.26 0.44	504 540 401	2.07 3.09 49.8	2.83 2.72 2.69	15 15.1 10.7	10 14.6 39.7	710 1420 490
D1-12 D1-13 D1-14	7.54	16.8 17.6 15.1	0.1 0.11 0.13 0.25	0.5 0.5 0.6 0.4	0.034 0.034 0.05 0.141	2.33 2.13 1.32 1.41	17 20.5 36.6 108.5	19.9 13.1 17.7 41.1	1.03 1.03 0.99 0.32	539 507 437 665	3.64 4.6 123.5 544	2.58 2.7 2.69 0.22	15.6 15.1 12.7 8	13.7 13.1 18.8 27.1	820 830 910 750
D1-15 D1-16 D1-17	4.14 3.08 8.07	17.95 17.1 20.5	0.12 0.12 0.17	0.6 0.6 1.4	0.052	1.68 1.97 1.29	20.3 17.2 31.4	16.8 12.6 30.3	0.82 1.1 1.75	433 671 614	13.7 7.11 3.65	2.59 2.72 2.6	15 12.2 14.1	15 14.3 26	1190 880 2040
D1-18 D1-19 D1-20	13.75 3.82 5.02	20.3 12.95 18.7	0.24 0.08 0.14	0.3 0.4 0.5	0.174 0.034 0.073	0.53 1.58 1.57	215 26.5 37.8	28.4 11 16	2.55 1.05 1.4	764 551 630	72.7 2.94 3.16	0.85 2.81 2.69	5 8.2 10.7	52.6 10.9 23.9	1130 800 930
D1-21 D1-22 D1-23 D1-24 D1-25	3.51 2.99 4.44 3.45 8.09	18.45 18.5 20.5 18.95 21.9	0.12 0.11 0.15 0.13 0.2	0.6 0.6 2.6 1.1 0.7	0.044 0.037 0.061 0.046 0.047	1.83 2.22 2.01 1.84 1.61	22.4 21 31 23 169	17.8 16.3 28 15.6 15.8	1.11 1.03 1.8 1.33 1.07	560 536 901 667 566	2.55 5.96 3.84 5.22 2.51	2.77 2.6 2.71 2.81 2.83	12.9 13.3 16.2 16.1 13.7	15.4 14.1 23.4 15.9 22.9	880 850 2030 1320 1120
D1-26 D1-27 D1-28 D1-29	2.69 5.24 2.71 3.01	18.15 22 17 19.05	0.12 0.18 0.11 0.12	0.7 2.9 0.8 0.7	0.041 0.069 0.037 0.042	1.56 2.08 2.02 2.22	18.1 39.6 19.1 18.9	10.3 31.5 12.1 11.4	0.89 2.16 0.97 1.07	436 971 498 574	2.86 3.18 3.69 4.43	2.78 2.95 2.44 2.79	12.9 18.8 12.7 14	13 23.9 12.8 14.5	770 2750 800 870
D1-30 D1-31 D1-32 D1-33 D2-1	1.29 1.42 1.94 1.62 4.75	12.2 12.25 17.9 18.45 18.8	0.1 0.11 0.09 0.12	0.7 1.5 0.8 0.9 1.8	0.034 0.032 0.058 0.072 0.09	2.06 1.87 0.58 0.5 0.26	6.6 8.8 13.3 8.3 21.2	10 15.2 7.9 13.8 20.8	0.28 0.44 1.04 1.56 1.82	241 294 464 436 555	0.78 0.48 0.76 0.53 16.55	0.3 0.95 3.38 3.78 2.88	10 31.5 15.4 17.7 13	6.1 6.7 11.3 18.7 40.4	100 80 810 550 1360
D2-2 D2-3 D2-4 D2-5 D2-6 D2-7	11.1 2.49 2.36 2.78 4.12 28.9	23.9 17.5 17.3 17.95 19.3 8.19	0.18 0.09 0.1 0.11 0.13 0.69	0.6 0.7 0.8 0.6 0.6	0.035 0.05 0.053 0.05 0.057 1.785	0.45 0.85 1.26 1.38 2.25 0.15	59.1 15.2 14.8 13.7 20.8	23.6 15.3 19.2 20.9 13.3	0.54 1.23 0.99 1.03 1.19	354 530 473 544 577	10.35 1.87 2.22 2.17 4.52 257	3.49 3.19 2.98 3.07 2.76 0.04	9.1 16.4 15.1 17 13	55.9 13.4 12.9 17.6 21 182.5	260 720 660 680 980 650

Comments: Interference: Mo>400ppm on ICP-MS Cd,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



North Vancouver BC V7J 2C1

**EXCELLENCE IN ANALYTICAL CHEMISTRY** ALS Canada Ltd. 212 Brooksbank Avenue

Phone: 604 984 0221 Fax: 604 984 0218 www.aischemex.com

To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

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CERTIFICATE OF ANALYSIS VA07118520

Project HIGHLAND

										CERTIFICATE OF ANALTSIS		VAUT				
Sample Description	Nethod Analyte Units LOR	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS81 Sr ppm 0.2	ME-MS81 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS81 Th ppm 0.2	ME-MS81 Ti % 0.005	ME-MS61 TI ppm 0.02	ME-MS61 U ppm 0.1
D1-1 D1-2		11.7 16,9	7.2 19.2	0.004	0.02 <0.01	2.68	10.4 7.2	<1 <1	2.1 1.4	455 408	0.8 1.39	<0.05 <0.05	8.2 6.5	0.363 0.331	0.09 0.2	2.8 2.3
D1-3 D1-4		9 10.5	70 78,4	<0.002 <0.002	<0.01 <0.01	0.77 0.98	7.8 8.1	<1 <1	0.7 0.9	1330 1175	1.25 1.49	<0.05 <0.05	9.7 11.6	0.287	0.55 0.65	3.7 5.2
D1-5		10.5	62.6	<0.002	0.04	1.2	10.1	<1	1.4	446	1.49	<0.05	10.5	0.311	0.56	5
D1-6 D1-7		29.9 9.1	49.4 61.6	<0.002 <0.002	0.06 <0.01	0.93 1.23	11.7 10.2	1 <1	1.4 1.3	642 326	0.87 1.3	<0.05 <0.05	5.1 11.4	0.734 0.31	1.32 0.49	3.3 4.3
D1-8 D1-9		7.6 9.8	31.2 58.5	<0.002 <0.002	<0.01 0.12	1.28	10.1 9.8	<1 <1	1.3 1.2	378 367	1.26 0.92	<0.05 <0.05	10.7 8.1	0.351 0.467	0.3 0.51	3.1 2.9
D1-10		3.9	21.9	0.04	0.04	1.73	3.7	1	1.2	352	0.92	<0.05 <0.05	19.3	0.254	0.21	3.7
D1-11 D1-12		8.7 8.2	65.7 63.5	<0.002 <0.002	0.03	1.05 1.29	9.3 9.4	<1 <1	1 1.2	349 356	1.28	<0.05 <0.05	10.3 11.2	0.32	0.51 0.47	4.5 4.4
D1-13 D1-14		6 5.4	47.8 67.7	0.03 0.045	0.18 4.75	2.47 6.16	10.6 4.6	1 4	2.4 1.6	293 51.6	0.94 0.65	0.07 0. <b>43</b>	8.5 10	0.308 0.17	0.43 0.86	4.2 9.8
D1-15		6.2	55.9	0.004	0.13	3.6	9.5	1	2.9	256	1.3	<0.05	11.7	0.298	0.57	5.3
D1-16 D1-17		11 7.4	56.2 48.2	<0.002 <0.002	0.08 0.27	1.42 2.19	10.3 12.9	1 1	1.1 2.1	392 458	0.97 0.74	0.05 0.18	9.4 4.6	0.289 0.541	0.5 0.56	4.2 2.4
D1-18 D1-19		5.7 10.4	25 34.4	0.046 <0.002	1.58 0.23	3.31 1.02	4.9 6.6	1 <1	2.7 1.1	128.5 375	0.36 0.62	0.4 0.05	10 6.2	0.159 0.276	0.25 0.31	2.1 2.6
D1-20		11.3	55.6	0.002	0.45	1.37	9.1	2	2.1	323	0.76	0.05	8.4	0.25	0.39	3.4
D1-21 D1-22		9.9 11.9	68.1 79.2	<0.002 <0.002	0.56 0.65	1.02 0.89	10.3 10.4	2 2	1.6 1.2	352 401	1.01 1.03	<0.05 <0.05	10.6 12.4	0.283 0.282	0.44 0.51	4.3 4.8
D1-23 D1-24		15.3 14.8	57.2 57.8	<0.002 0.002	0.36 0.19	0.93 0.73	13.8 11	2	1.3 1.5	585 475	0.87 1.23	0.06 <0.05	6.5 8.9	0.554 0.4	0.57 0.42	2.8 4
D1-25		<b>10</b> .1	60	<0.002	0.4	1.2	9.2	2	1.8	505	1.11	0.06	11.8	0.359	0.42	4
D1-26 D1-27		12.6 13.6	55.7 59	<0.002 <0.002	0.47 0.63	1.02 1.08	9.8 15.4	2 2	1.9 1.5	511 648	1.03 0.88	<0.05 0.1	13.1 5.3	0.249 0.696	0.37 0.6	4.9 1. <del>9</del>
D1-28 D1-29		11.1 10.2	72.1 69.8	<0.002 <0.002	0.35 0.12	1 0.71	9.9 10.4	2	1.3 1.4	349 422	0.96 1.06	<0.05 <0.05	10.9 10.4	0.266 0.302	0.46 0.48	4.4 4.3
D1-30		2.5	116	<0.002	0.1	2.7	1.6	2	2.2	46	0.98	<0.05	4.6	0.214	0.88	1.9
D1-31 D1-32		2.5 8.2	104 17	<0.002 <0.002	0.31 0.04	3.58 1.16	3 10.1	2 2	5.7 2.2	44.5 463	3.01 1.24	0.07 <0.05	15.2 10.8	0.647 0.327	0.75 0.14	4.8 2.8
D1-33 D2-1		5.8 17.4	17.6 10.6	<0.002 0.01	0.02 0.01	1.72 2.98	10.9 11.9	2	2.4 2.3	419 444	1.4 0.93	<0.05 <0.05	10.1 9.8	0.426 0.381	0.24 0.1	1.7 3.2
D2-2		24.3	29.2	0.005	0.32	2.73	4.9	2	1	438	0.85	1.42	8.4	0.23	0.15	1.4
D2-3 D2-4		7.5 8.5	23.6 47	<0.002 <0.002	<0.01 <0.01	1.8 1.87	13 11.5	2 2	1.7 1.7	415 350	1.37 1.4	<0.05 <0.05	10.4 10.9	0.363	0.21 0.32	2.7 3.7
D2-5 D2-6		8.7 9.3	44.9 80.8	<0.002 <0.002	0.03	1.73 5.61	10.4 11.8	2	1.7 1.5	501 344	1.62 1.01	<0.05 <0.05	12 10,4	0.336	0.35 0.55	3.7 4.2
D2-7		29.3	8.4	0.139	>10.0	668	3.5	61	3.4	64.5	0.07	2.7	2.1	0.025	1.87	27.2

Comments: Interference: Mo>400ppm on ICP-MS Cd,ICP-AES results shown. REE's may not be totally soluble in MS61 method.



## ALS Chemex EXCELLENCE IN ANALYTICAL CHEMISTRY

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#### To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

Page: 2 - D Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

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Project: HIGHLAND

## CERTIFICATE OF ANALYSIS VA07118520

	Mathed	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62	
	Analyte	v	w	Y	Zn	Zr	Cu	
	Unite	ppm	ppm	ppm	ppm	ppm	96	
Sample Description	LOR	1	0.1	0.1	2	0.5	0.001	
D1-1		96	0.6	13.1	58	45.7		
D1-2		66 67	0.4	13.7	44	12.2		
D1-3 D1-4		67 68	0.6 0.7	13.3 13.7	49 53	6.7 10.1		
D1-5		75	0.9	15.4	43	9.6		
D1-6		125	0.9	19.5	243	178		
D1-7		78	0.7	15.6	41	10.8		
D1-8		74	0.5	14.7	42	12.6		
D1-9		102	0.7	14.2	85	36		
D1-10		308	0.9	15.7	39	8.5		
D1-11		74	0.7	14.6	47	9.5		
D1-12	1	71	0.7	15.7	41	10.4		
D1-13		94 136	3.1 93.7	18	44	10.2 6.6		
D1-14 D1-15		112	3.4	13.1 16.9	21 40	0.0 11.5		
D1-16 D1-17		75 242	1.7 0.8	15.6 17.3	50 72	10.9 45.3		
D1-17 D1-18		242 557	0.6 3.6	14.2	87	45.3		
D1-19		113	0.6	11.9	57	8.1		
D1-20	1	173	0.8	17.1	56	9.8		
D1-21		100	1	18.6	45	10.3		
D1-22		72	0.9	17.3	44	11.4		
D1-23		121	0.8	18.3	89	95.2		
D1-24		90	1	17.3	65	32.8		
D1-25		238	1.2	17.3	64	15.9		
D1-26		73	1.1	17.3	39	13.7		
D1-27		146	0.8	18.6	119	110.5		
D1-28		69	1.2	16.5	48	10.1		
D1-29 D1-30		77 87	1.1 4	17.3 12.9	52 9	11.4 11.5		
D1-31		113	6.9	26.8	14	25		
D1-32 D1-33		78 106	0.8 0.5	18.8 19.8	40 59	16.3 18.1		
D1-33 D2-1		95	0.5	19.0	59 64	16.1 46.9		
D2-2		101	1.1	14.3	42	12.9		
D2-3		75	0.7	17.6	45	13.3		
D2-4		62	1	16.8	40	14.4		
D2-5		71	1.2	16.5	47	11.8		
D2-6	J	87	2.4	16.9	54	10.4		
D2-7		113	4520	7.4	310	1.5	13.80	

Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.



**EXCELLENCE IN ANALYTICAL CHEMISTRY** ALS Canada Ltd.

To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account ROCDEB

CERTIFICATE OF ANALYSIS VA07118520

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#### Project HIGHLAND

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Sample Description	Nothod	WEI-21	Au-AA23	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS81	ME-MS61	ME-MS61	ME-MS81	ME-MS61	
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
	LOR	0.02	0.005	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	
D2-8		2.18	0.032	0.45	7,41	7.4	700	1.38	0.16	2.52	0.08	34.6	9.8	31	5,1	626	
D2-9		2.36	0.021	0.52	7.47	6.8	760	1.41	0.19	2.54	0.1	38.1	17.5	44	2.96	668	
D2-10		2.16	<0.005	0.16	7.15	5.7	600	1.42	0.16	3.1	0.08	39.4	9.9	60	2.93	49.8	
D2-11 D2-12 D2-13		1.98 4.00 3.32	<0.005 <0.005 <0.005	0.14 0.16	5.87 7.17 6.82	4.1 6.3 5.3	260 630 720	1.25 1.47 1.52	0.13 0.18 0.14	2.64 3.49 3.14	0.09 0.15 0.12	32.3 50.9 49	6.7 14.1 14	50 79 66	2.32 2.57 2.86	150 51.3 52.8	
D2-13 D2-14 D2-15 D2-16		2.70 2.62 2.20	<0.005 <0.005 <0.005 <0.005	0.13 0.11 0.12 0.09	7.59 7.65 7.16	5.6 9 6.2	310 1060 830	1.52 1.55 1.56 1.39	0.14 0.16 0.11 0.09	2.68 3.27 2.97	0.12 0.11 0.21 0.12	49 28.7 37.4 49.6	4.5 10.4 8.2	34 29 27	2.50 2.51 11.2 5.08	74.6 48.7 15.4	
D2-17 D2-18		0.58 2.70	0.008	4.12 0.79	6.66 7.14	83.1 20.1	310 310	1.32	0.56	3.62	0.25	36.7 125	51.2 10.2	23 38	5.95 10.5	988 124.5	
D2-19		4.64	<0.005	0.16	7,23	8,9	480	1.49	0.12	3.23	0.14	107.5	9.3	32	6.23	46	
D3-1		0.82	<0.005	0.28	8.19	10.2	180	1.73	0.3	3.41	0.25	178	5.3	29	1.35	66.2	
D3-2		0.92	<0.005	0.24	8.58	6.8	140	1.93	0.24	3.45	0.36	13.15	19.3	19	0.82	150.5	
D3-3		3.02	<0.005	0.08	7.31	5.9	930	1.45	0.06	3.26	0.11	35.2	9.9	31	9.77	13.5	
D3-4		3.00	<0.005	0.09	7.22	8.6	120	1.09	0.04	4.46	0.22	32.3	8	24	12.45	486	
D3-5		2.00	<0.005	0.18	7.3	6.8	250	1.38	0.11	2.21	0.08	35.4	6.6	27	8.24	48.6	
D3-6		0.60	<0.005	0.09	5.93	7.3	120	1.08	0.08	2.41	0.05	25.8	4.6	23	3.92	15.8	
D3-7		1.62	<0.005	0.14	7.83	7.1	770	1.48	0.14	2.62	0.1	37.3	8.7	30	3.72	17.4	
D3-8		2.06	<0.005	0.24	7.83	9.4	160	1.31	0.19	5.91	0.14	35.6	5.3	37	13.4	32.7	
D3-9		1.74	<0.005	0.12	7.5	7.8	640	1.55	0.11	3.35	0.09	36	6.4	29	7.79	25.7	
D3-10		1.86	<0.005	0.1	7.63	9.3	480	1.47	0.13	3.47	0.1	30	4.9	39	3.02	17.7	
D4-1		2.92	<0.005	0.08	7.14	4.7	800	1.25	0.11	4.19	0.13	38.3	9.9	27	4.91	20.2	
D4-2		2.96	<0.005	0.1	7.4	5.9	930	1.29	0.1	3.54	0.14	37.6	9.7	43	5.32	11.5	
D4-3		2.42	<0.005	0.09	7.44	4.9	840	1.46	0.1	3	0.11	38.8	10.2	29	4.53	15	
D4-4 D4-5 D4-6 D4-7		2.50 2.48 1.50 2.48	<0.005 <0.005 <0.005 <0.005	0.09 0.1 0.09 0.12	7.61 7.98 7.54 7.49	7.1 5.9 6.1 7.4	670 550 560 320	1.33 1.44 1.33 1.67	0.13 0.13 0.13 0.13 0.15	3.54 3.53 3.26 3.17	0.09 0.13 0.11 0.12	47 35.8 32.8 34.8	7.7 6.9 7.1 4.8	38 28 40 30	4.46 7.3 4.75 1.54	8.8 10.6 11.8 71.7	
D4-8		2.00	0.025	0.27	6.54	7.8	160	1.33	0.16	3.66	0.02	170.5	7.1	50	3.65	960	
D4-9		2.12	<0.005	0.08	7.75	5	350	1.51	0.09	3.66	0.03	60.9	10.8	33	10.55	18	
D4-10		1.66	<0.005	0.11	8.05	8.6	670	1.49	0.12	3.49	0.08	60.9	11.7	45	7.65	32.8	
D4-11		1.08	<0.005	0.22	7.48	5	570	1.43	0.07	2.06	0.03	35.4	7	21	7.58	15.6	
D4-12		2.42	<0.005	0.05	8.09	3.8	690	1.45	0.06	2.56	0.06	40.9	8.4	36	4.5	8.8	
D4-13		2.80	<0.005	0.07	8.03	4.6	710	1.45	0.05	3.11	0.12	40.8	8.8	28	7.83	6.5	
D4-14 D4-15 D4-16 D4-17 D4-18		2.34 2.62 2.50 0.84 2.90	<0.005 <0.005 <0.005 <0.005 <0.005	0.05 0.03 0.03 0.09 0.06	7.5 7.65 7.73 4.8 7.86	4.1 4.5 5.1 7.5 5.2	2110 1310 320 510 580	1.21 1.3 1.15 0.95 1.55	0.05 0.04 0.04 0.08 0.08	3.45 3.02 3.58 7.2 3.09	0.23 0.07 0.53 0.12	41.3 41.3 37.2 32.8 38.4	8.5 8.3 6.6 7.2 6.3	23 24 22 10 25	6.46 12.75 15.2 4.5 2.21	9.1 5 4.5 5.5 5	

Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.

Page: 3 - A



212 Brooksbank Avenue North Vancouver BC V7J 2C1

EXCELLENCE IN ANALYTICAL CHEMISTRY ALS Canada Ltd.

Phone: 604 984 0221 Fax: 604 984 0218 www.alschernex.com

To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

Page: 3 - B Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

CERTIFICATE OF ANALYSIS VA07118520

Project: HIGHLAND

									·····						7/0/11/0/20		
Sample Description	Nethed	ME-MS81	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS81	ME-MS61	ME-MS61	ME-MS61	ME-M\$61	ME-M\$81	ME-MS61	ME-MS61	ME-MS61	
	Analyte	Fe	Ga	Ge	H#	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	pom	ppm	
	LOR	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	
D2-8		5	17.4	0.11	0.5	0.074	1.86	17.5	15	1.19	529	16.6	2.13	12.1	19.4	930	
D2-9		5.43	18.55	0.12	0.6	0.075	1.96	19.6	12.2	1.45	623	19.8	2.74	13.6	24	1020	
D2-10		6.46	18.85	0.14	0.6	0.065	1.35	19.7	14.2	1.5	681	9,51	2.76	14.6	27.2	1020	
D2-11		7.17	16.7	0.12	0.6	0.055	0.81	14	12.5	1.23	492	4.3	2.42	14.3	26.2	770	
D2-12		4.9	18.35	0.13	0.7	0.087	1.53	25.6	11.7	2.13	964	3.42	2.82	17.9	32.4	1340	
D2-13		5.77	18.25	0.16	0.7	0.08	1.8	24.7	12.4	1.94	914	3.79	2.49	17	31.3	1270	
D2-14		4.04	18	0.1	0.7	0.036	0.71	13.7	11.1	0.76	326	14.5	3.26	15	23.1	540	
D2-15		3.36	16.6	0.12	0.4	0.035	2.28	21	15.8	0.86	549	8.27	1.89	13.5	17.2	860	
D2-16		4.77	18.05	0.13	0.4	0.072	1.94	30.6	12.7	1.36	566	39.7	2.28	11	19.5	1040	
D2-17		7.26	17.45	0.15	0.4	0.067	1.7	20.7	13.3	0.88	536	18.45	1.97	11.1	222	800	
D2-18		6.35	19.85	0.16	0.4	0.066	2.06	87.3	16.3	0.7	521	80.9	1.26	12.9	57.3	870	
D2-19		5.82	19.2	0.16	0.5	0.065	1.66	75.3	13.2	1.11	568	60.6	2.02	13.4	36.4	860	
D3-1		9.71	23.8	0.2	0.6	0.05	0.56	138.5	11	0.79	419	8.36	3.46	16.3	42.3	500	
D3-2		3.49	18.8	0.08	0.5	0.043	0.3	6.2	9.8	0.85	262	3.69	4	9.2	90.9	350	
D3-3		3.1	17.4	0.11	0.5	0.038	2.21	18.8	8.9	0.89	510	1.89	1.93	14.7	14.6	790	
D3-4 D3-5		4.6 5.33	17.45 17.3	0.1	0.4	0.059	2.55 1.23	16.3 17.5	10.3 14.8	0.5 0.98	625 369	6.31 2.95	0.31 1.96	10.8 11.8	16.3 17.7	750 810	
D3-6		7.34	16.95	0.1	0.4	0.034	0.75	11.4	17.8	0.72	291	1.7	2.27	11.8	21.6	1460	
D3-7		3.15	17.35	0.11	0.5	0.035	2.13	18.5	13.8	1.2	548	2.71	2.79	13.5	15.1	830	
D3-8		3.96	19.35	0.11	0.4	0.047	1.61	19.6	26.3	0.71	739	4.63	1.92	11.2	24.4	630	
D3-9		3.25	17.6	0.1	0.4	0.035	1.42	17.4	26.3	1.08	477	8.35	2.23	14.3	17	870	
D3-10		2.99	17.05	0.11	0.7	0.043	1.05	12.7	17.7	1.28	487	5.34	2.9	15.4	25.6	740	
D4-1		2.81	15.65	0.12	0.4	0.031	2.46	19.5	20.1	1.15	635	3.5	2.1	14.8	13.9	770	
D4-2		2.85	16.15	0.1	0.4	0.03	2.41	18.3	19.5	1.22	594	3.35	2.12	15.7	14.4	820	
D4-3		3.04	16.9	0.09	0.4	0.034	2.37	18.8	18.3	1.22	617	4.05	2.42	15.9	15.3	860	
D4-4 D4-5		3.09	16.25 17.45	0.1	0.4 0.5	0.035	1.97 1.52	25.8 17.5	18.8 15.2	1.31 1.31	498 582	3.08	1.94 2.87	15.3 15.6	14.9 15.3	840 880	
D4-6		2.4	16.55	0.09	0.5	0.035	1.66	15.1	20.9	1.27	581	1.94	2.58	14.6	13.1	810	
D4-7		2.56	17.35	0.11	0.6	0.052	0.78	15.2	7.5	1.15	450	4.33	3.41	16.1	12.9	1090	
D4-8		5.11	17.4	0.14	0.5	0.082	0.79	141	17.7	0.93	503	455	2.23	13.2	19.6	740	
D4-9 D4-10		3.75 3.91	19.15 19.1	0.12 0.13	1.3 1	0.044 0.057	1.42 1.68	29.9 32.6	28 22.5	1.23 1.55	568 625	4.98 15.3	2.78 2.71	15.9 14.7	14.5 18.6	1800 1590	
D4-11		3.51	18.05	0.11	0.8	0.027	1.76	17.2	18.1	0.94	429	10.4	2.44	13.3	11	750	
D4-12		2.73	18	0.12	0.6	0.029	2.12	21.4	16.5	1	537	3.36	2.87	12.5	11	830	
D4-13		3.14	19.1	0.1	0.6	0.038	2.12	19.4	17	1.01	565	2.35	2.43	14.1	13,7	880	
D4-14		3.73	17.75	0.12	0.5	0.03	2	20.9	19	0.9	632	2.23	2.23	11.5	11.7	830	
D4-15		3.2	17.95	0.13	0.5	0.029	2.15	20.9	19.2	0.92	517	3.36	1.87	12.1	13.3	860	
D4-16		2.83	18.85	0.11	0.6	0.033	2.07	18	19.6	0.79	471	3.58	1.68	12.5	12	770	
D4-18 D4-17 D4-18		2.63 8.66 4.21	20.8 19.05	0.12 0.12	0.6 0.4 0.6	0.033 0.142 0.053	0.93 1.2	17.1 17.6	20.3 15.6	1.75 1.07	945 513	3.56 11.15 4.85	0.86 3.08	8 12.3	39.8 15.9	1670 970	

Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.

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EXCELLENCE IN ANALYTICAL CHEMISTRY ALS Canada Ltd. To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6 .

CERTIFICATE OF ANALYSIS VA07118520

Page: 3 - C Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

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Project HIGHLAND

Sample Description	Method Analyte Units LOR	ME-MS61 Pb ppm 0.5	ME-MS81 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-M\$61 Ta ppm 0.05	ME-MS81 Te ppm 0.05	ME-MS61 Th ppm 0.2	ME-MS81 TI % 0.005	ME-MS61 Ti ppm 0.02	ME-MS61 U ppm 0.1	
D2-8		6.9	74.9	<0.002	0.07	5.67	10.8	2	2.5	292	0,93	<0.05	10.3	0.271	0.55	4.5	
D2-9		7.9	77.2	<0.002	0.12	4.39	12.9	2	3	304	1	<0.05	10.9	0.336	0.48	4.1	
D2-10		7.4	56.3	<0.002	0.02	2.23	13.5	2	3.3	308	1.02	<0.05	8.9	0.345	0.34	3.7	
D2-11		5.7	41	< 0.002	0.02	1.96	10.8	2	2.9	240	1	<0.05	9.4	0.332	0.27	3	
D2-12		8	55	<0.002	0.01	1.8	20.5	2	2.6	329	1.13	<0.05	10.1	0.466	0.35	3.7	
D2-13		7.7	73	<0.002	0.02	1.54	18	2	2.6	298	1.23	<0.05	10.9	0.427	0.39	3.9	
D2-14		8.6	27.5	0.008	0.04	1.68	7.2	2	1.9	417	1.19	<0.05	9.4	0.36	0.28	2.4	
D2-15		7.1	92.3	0.002	0.09	6.31	10.9	2	1.1	272	1.12	<0.05	11.6	0.29	0.67	4.9	
D2-16		7.1	65.6	0.03	0.02	2.31	9.8	2	1.6	352	0.87	<0.05	10.4	0.249	0.39	4.1	
D2-17		34.2	64.3	0.011	4.31	8.87	8.8	10	1.6	253	0.84	0.16	8.2	0.246	0.45	4	
D2-18		9.7	89.2	0.053	0.61	8.43	10	3	1.7	152	1.04	<0.05	12.5	0.276	0.77	5.9	
D2-19		6.9	69.9	0.034	0.13	4.41	10.1	2	2.1	303	1.09	<0.05	11.7	0.285	0.48	5	
D3-1		12.4	28.3	0.005	0.04	2.56	6.9	2	2.1	460	1,57	<0.05	10.6	0.335	0.24	2.7	
D3-2		14.4	7.6	0.002	0.32	1.22	4.4	2	1.3	560	0.89	<0.05	5.5	0.199	0.09	1.5	
D3-3		6.2	86.2	<0.002	0.02	3.29	9.9	1	1.4	230	1.17	<0.05	11.8	0.296	0.87	4.7	
D3-4	-	4.3	110	0.004	0.05	6.25	8.7	1	2.4	57.7	0.86	<0.05	10	0.238	1.23	4.8	
D3-5		4.5	56.6	0.002	0.01	5.67	9.1	1	2.3	211	1	<0.05	11.6	0.265	0.62	3.7	
D3-6		2.9	49.9	<0.002	<0.01	2.36	5.9	1	2.9	160.5	0.97	<0.05	7.3	0.242	0.5	2.2	
D3-7		9.8	74.7	0.002	0.01	1.89	9.7	1	1.6	376	1.18	<0.05	12.4	0.307	0.49	4	
D3-8		4.1	77.9	0.004	0.28	9.03	11.8	1	1.9	192	0.98	<0.05	8.5	0.254	0.73	3.5	
D3-9		5.7	49.8	0.005	0.04	3.6	9.9	1	1.7	438	1.14	<0.05	10.7	0.314	0.48	4.4	
D3-10		6.3	31.5	0.004	0.03	2.21	12.3	1	2.1	414	1.35	<0.05	9.8	0.361	0.32	3.9	
D4-1		8.9	88	0.002	<0.01	1.28	9.3	1	1.3	352	1.26	<0.05	12.9	0.31	0.56	4.8	
D4-2		9.3	82.5	0.002	0.01	1.21	9.8	1	1.2	444	1.33	<0.05	11.8	0.322	0.55	4.4	
D4-3		8.3	79	0.002	0.01	1.23	10.4	1	1.6	362	1.26	<0.05	12.1	0.335	0.52	4.7	
D4-4		6.6	64.8	0.002	0.03	1.43	9.5	1	2.1	300	1.27	<0.05	13.3	0.317	0.44	5.4	
D4-5		8.9	45	0.002	0.04	1.55	10.2	1	1.6	410	1.22	<0.05	10.6	0.333	0.31	4	
D4-6		7.3	51.1	0.002	0.14	1.46	9,9	1	1.3	371	1,17	<0.05	11.1	0.324	0.35	3.8	
D4-7		7.3	20.6	0.002	0.01	2.52	9.3	1	3.4	395	1.38	<0.05	12.5	0.306	0.2	4.3	
D4-8		3.7	36.2	0.06	0.2	5.91	8	2	3.2	248	1.18	0.06	13.6	0.268	0.31	6.1	
D4-9		4.9	44.7	0.003	0.15	2.42	9.9	1	2.9	339	0.91	<0.05	8.4	0.497	0.41	3.3	
D4-10		8.3	61.4	0.004	0.21	1.56	11.8	2	1.8	369	0.96	0.13	9.3	0.403	0.41	5.6	
D4-11		11.3	69	0.004	0.71	1.58	7.5	1	1.5	290	1.1	0.17	12.9	0.257	0.53	5	
D4-12		12.2	76.7	0.002	0.1	1.2	8.4	1	1.3	350	0.99	<0.05	13.3	0.286	0.53	5.3	
D4-13		9.3	79.2	0.002	0.06	1.51	9.7	1	1.5	313	0.98	<0.05	10.7	0.31	0.68	4.2	
D4-14		7.5	72.4	0.002	0.03	1.44	8.3	1	1.2	453	0.8	<0.05	10.3	0.271	0.61	3.7	
D4-15		6.2	90.8	0.002	0.03	2.7	8.9	1	1.2	291	0.91	<0.05	10.7	0.281	0.81	4.2	
D4-16		4.8	83	0.002	0.03	3.02	8.1	1	1.5	147	0.95	<0.05	13	0.259	0.84	4.9	
D4-17		4.9	37.7	0.006	0.25	2.67	5.5	1	2.8	197.5	0.46	0.08	7	0.174	0.37	2.2	
D4-18		7.5	39.4	0.003	0.08	1.42	8.8	1	2.6	433	0.85	<0.05	8.3	0.28	0.33	3.8	

Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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## ALS Chemex

EXCELLENCE IN ANALYTICAL CHEMISTRY ALS Canada Ltd.

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#### To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

Page: 3 - D Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

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Project: HIGHLAND

		ME-MS61	NE NOCI	NE MORA	ME MORA	ME-MS81	Cu-OG62	
	Method		ME-MS61	ME-MS61	ME-MS61			
	Analyte	v	w	Y	Zn	Zr	Cu	
	Units	ppm	ppm	ppm	ppm	ppm	96	
Sample Description	LOR	1	0.1	0.1	2	0.5	0.001	
					50	10.4		
D2-8		110	16.2	16.7	53	10.1		
D2-9	1	135	19.8	18.7	71	10,1		
D2-10		159	3.5	22.3	60	10.6		
D2-11		173	2.9	19	43	12.9		
D2-12		142	2.5	25.2	75	13.6		
D2-13		156	2.2	24	77	12.2		
D2-13		80	1.1	17	37	12.1		
D2-14 D2-15		79						
			2.7	16.5	46	7.5		
D2-18		109	1.7	15.9	47	7.8		
D2-17		83	3	16.1	46	6.5		
D2-18		115	10.1	16.5	58	8.9		
D2-19		118	3.7	18.4	53	9.8		
D3-1		149	0.7	18	54	11.9		
D3-2		57	0.6	9.6	46	9.6		
D3-3		73	9.1	14.7	38	9.8		
		-						
D3-4		97	20.1	12	42	8.6		
D3-5		131	3.3	13.3	42	10.4		
D3-6		173	1.4	13.1	47	9.3		
D3-7		84	1.5	15.2	54	11.3		
D3-8		96	1.6	14.3	36	9.7		
D3-9		81	2	15.1	39	8.9		
D3-10		91	0.7	16.8	49	17		
D4-1		77	0.8	15.2	52	7.7		
D4-2		79	0.9	15.1	50	7.4		
D4-3		84	1	15.9	47	7.8		
		-						
D4-4		81	1.4	15.1	38	7.9		
D4-5		81	0.8	15.6	45	11.1		
D4-6		76	0.9	15	51	9.9		
D4-7		94	12.3	16.3	39	14.2		
D4-8		147	243	14.4	33	12.2		
D4-9		121	2.1	14.6	47	49.1		
D4-10		121	2.1	14.6		49.1 34.5		
					52			
D4-11		84 70	1.1	13.7	51	15.9		
D4-12		72	1	15.2	67	12.7		
D4-13		81	1.7	15.6	62	10.8		
D4-14		71	3.3	14	66	9.6		
D4-15		73	2.4	14.4	51	10.2		
D4-16		75	3.8	14	44	11.8		
D4-17		348	3.6	15.3	69	9		
D4-18		135	0.9	17.6	52	12.2		
U-+ 10		130	0.8	17.0	54	<b>I∡</b> ,∡		

Comments: Interference: Mo>400ppm on ICP-MS Cd,ICP-AES results shown. REE's may not be totally soluble in MS61 method.

CERTIFICATE OF ANALYSIS VA07118520





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To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6 Page: 4 - A Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

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Project: HIGHLAND

## CERTIFICATE OF ANALYSIS VA07118520

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Au-AA23 Au ppm 0.005	ME-MS61 Ag ppm 0.01	ME-MS81 A! % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS81 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Ca ppm 0.05	ME-MS81 Cu ppm 0.2
D4-19 D4-20 D4-21 D4-22 D5-1		2.10 1.94 2.28 0.96 1.92	<0.005 <0.005 <0.005 <0.005 <0.005 <0.005	0.05 0.06 0.07 0.16 0.13	7.81 7.7 8.03 7.25 7.96	4.2 6.9 5.1 13.6 6.6	1090 660 870 540 500	1.25 1.32 1.4 1.26 1.41	0.07 0.05 0.07 0.18 0.18	2.78 3.17 3.12 4.23 5.39	0.16 0.13 0.12 0.06 0.39	38.7 36.6 42.3 426 34	8.7 7.5 7.1 8.3 4	26 23 23 14 47	2.95 9.22 4.42 1.75 3.1	7.6 5.9 6.6 4.2 7.2
D5-1 D5-2 D5-3 D5-4 D5-5 D5-6		2.44 2.12 3.00 2.40 0.60	<0.003 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005	0.13 0.09 0.16 0.1 0.08 0.11	7.90 7.7 7.83 7.92 7.65 7.88	4.4 9.4 7.6 7.6 4.1	770 1180 880 880 370	1.29 1.71 1.62 1.5 1.58	0.18 0.09 0.12 0.11 0.18	4.2 2.79 2.66 2.85 3.65	0.39 0.14 0.11 0.08 0.07 0.11	39.1 53.3 41.4 43.6 53.5	9.5 12.7 11.4 12 6.1	33 31 32 41 31	8.73 5.36 5.29 5.46 1.56	13.7 28.2 28 19.5 45
D5-7 D5-7 D5-8 D6-1 D6-2 D6-3		4.50 2.80 3.50 1.38 2.86	<0.005 <0.005 <0.005 <0.005 <0.005 <0.005	0.09 0.1 0.17 0.18 0.2	7.88 7.09 7.15 7.22 7.51	3.6 6 6 4.8 8.2	960 940 410 290 300	1.48 1.27 1.51 1.11 1.11	0.15 0.06 0.12 0.12 0.12 0.27	3.24 2.48 3.46 3.89 4.19	0.11 0.13 0.18 1.14 0.43	41.7 31.6 35.1 32.4 28	6.7 9 6.3 5.8 4.4	30 21 34 51 51	4.24 4.94 1.38 0.84 0.94	6.9 20.2 7.1 69.8 24.5
D6-4 D6-5		1.80 0.66	<0.005 <0.005	0.19 0.13	7.09 7.04	7 4.6	510 480	1.31 1.12	0.19 0.29	3.84 4.27	0.26 0.11	29.3 32.4	6.9 8.9	40 37	2.71 11.2	18.2 14
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Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.

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To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E8 Page: 4 - 8 Total # Pages: 4 (A - D) Finalized Date: 21-NOV-2007 Account: ROCDEB

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Project: HIGHLAND

CERTIFICATE OF ANALYSIS VA07118520

Sample Description	Method Analyte Units LOR	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	ME-MS81 In ppm 0.005	ME-MS81 K % 0.01	ME-MS81 La ppm 0.5	ME-MS81 Li ppm 0.2	ME-MS81 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS81 Mo ppm 0.05	ME-MS81 Na % 0.01	ME-MS61 Nb ppm 0.1	ME-MS81 Ni ppm 0.2	ME-MS81 P ppm 10
D4-19		2.91	17.65	0.11	0.5	0.03	2.13	19.1	18.6	1.03	580	4.53	2.71	12.4	12.3	840
D4-20		3.04	17.75	0.11	0.5	0.034	2.02	17.7	25.7	0.9	505	3.41	2.14	12.4	12.6	830
D4-21		3.21	18.55	0.11	0.5	0.04	1.56	20.7	24.8	0.99	526	3.01	2.81	12	13.3	890
D4-22		15.05	29.7	0.25	0.4	0.165	0.77	323	26.3	1.75	861	0.51	2.79	7.8	51	810
D5-1		2.71	16.65	0.09	1.6	0.068	0.25	14.5	22.5	1.95	591	0.86	2.41	13.5	25.6	1160
D5-2		2.86	16.65	0.12	0.5	0.035	2.27	19.4	30.1	1.28	652	3.29	2.01	15.5	15.6	860
D5-3		3.38	18.55	0.14	1.5	0.036	2.61	25.9	30.6	1,4	837	3.28	2.53	17.3	14.5	1380
D5-4		3	17.6	0.11	0.4	0.032	2.75	20.9	25.8	1.21	590	5.31	2.63	15.6	14.8	840
D5-5		3.11	17.55	0.12	0.4	0.04	2.48	21.9	27.3	1.3	610	3.86	2.47	15.9	18.4	910 1000
D5-6		3.27	19	0.12	0.7	0.058	0.85	28.2	16	1.43	494	1.72	3.31	15.9	18	1030
D5-7		3.15	17.75	0.12	0.6	0.038	2.03	19.9	22.2	1.23	553	3.28	2.41	14.7	13.3	870
D5-8		2.6	16.75	0.06	0.4	0.03	2.22	15.6	29.7	1.24	719	3.46	1.79	11.5	9.6	790
D6-1		2.99	16.75	0.06	0.6	0.053	0.98	16	16.6	1.26	543	14.3	2.96	12.9	16.8	890
D6-2		8.01	18.25	0.08	1.5	0.063	0.25	15.8	10	1.51	428	48.2	2.97	11.1	37.3	830
D6-3		4.43	17.7	0.05	1.7	0.077	0.24	14.1	34.3	1.86	557	6.17	3.22	10.8	37.1	1040
D6-4 D6-5		3.5 4.98	16.35 18.05	0.05 0.07	1 0.5	0.06 0.044	1.01 1.72	13.3 15.2	24.6 39	1.5 1.03	544 612	6.37 3.24	2.69 2.28	11.7 10.6	23 28.6	860 680
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Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.



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ME-MS81

ME-MS61

#### To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

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CERTIFICATE OF ANALYSIS

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ME-MS61

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ME-MS81

Project HIGHLAND

ME-MS61

Sample Description	Method Analyte Units LOR	Pb ppm 0.5	Rb ppm 0.1	Re ppm 0.002	S % 0.01	Sb ppm 0.05	Sc ppm 0.1	Se ppm 1	Sn ppm 0.2	Sr ppm 0.2	Ta ppm 0.05	Te ppm 0.05	Th ppm 0.2	Ti % 0.005	T  ppm 0.02	₩⊒=₩361 U ppm 0.1
D4-19		9.3	65.7	0.003	0.08	0.99	9.2	1	1.3	444	0.86	<0.05	7.6	0.296	0.49	3.2
D4-20		9.6	76.7	0.002	0.06	3.22	8.6	1	1.3	280	0.85	<0.05	8.8	0.294	0.74	3.7
D4-21		9.6	49.3	0.002	0.1	1.63	9.1	1	1.8	428	0.85	<0.05	8.3	0.293	0.43	3.6
D4-22		6.8	36.8	0.002	0.51	4.02	7.9	1	2.5	428	0.67	0.13	23.4	0.211	0.38	3.9
D5-1		10.2	10.3	0.002	0.01	3.02	12.2	1	2	688	0.95	<0.05	9.3	0.396	0.1	3
D5-2		8.9	80.7	0.003	<0.01	1.63	10.4	1	1.3	381	1.25	<0.05	11.6	0.336	0.57	4.7
D5-3		15.8	90.6	0.003	0.05	1.13	10.7	1	1.3	426	1.25	<0.05	10.9	0.452	0.85	4.2
D5-4		8.1	96.7	0.002	0.01	1.21	10.1	1	1.2	363	1.28	<0.05	11.8	0.334	0.64	4.6
D5-5		7.6	89.6	0.002	0.01	1.38	11.7	1	1.3	392	1.24	<0.05	12.1	0.342	0.63	5.4
D5-6		6.2	28.2	0.002	0.02	1.23	11.1	2	2.3	418	1.21	<0.05	10.5	0.351	0.2	3.7
D6-7 D6-8 D6-1 D6-2 D6-3		6.8 9.4 12.1 60.5 28.9	69.9 63.8 20.7 6.4 6.8	0.002 <0.002 0.005 0.027 0.002	0.01 0.01 <0.01 0.03 0.01	1.26 1.24 2.11 1.61 3.59	9.7 8.3 10.8 10.5 12.4	1 <1 <1 <1 <1 <1	1.6 0.9 2 2.2 2.3	575 370 400 435 464	1.16 0.88 1.14 0.85 0.78	<0.05 <0.05 <0.05 <0.05 <0.05	10.5 7 12.4 7.4 7.2	0.332 0.305 0.334 0.356 0.38	0.38 0.46 0.15 0.03 0.05	4.3 3.5 3.4 2.7 2.4
D6-4 D6-5		12 4.9	27.6 81.7	0.002 <0.002	<0.01 <0.01	2.35 2.87	11.4 10.6	<1 <1	21 23	443 234	0.96	<0.05 <0.05	8.5 10.1	0.333 0.311	0.19 0.5	2.8 3.8

ME-MS61

ME-MS61

ME-MS61

Comments: Interference: Mo>400ppm on ICP-MS Cd, ICP-AES results shown. REE's may not be totally soluble in MS61 method.

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#### To: ROCHER DEBOULE MINERALS 2A - 15782 MARINE DRIVE WHITE ROCK BC V4B 1E6

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CERTIFICATE OF ANALYSIS VA07118520

Project HIGHLAND

		ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62	
	Hethod	WE-MO01	W	Y	Zn	Zr	Cu	
	Analyte Units			ppm	ppm	ppm	96	
Sample Description	LOR	ppm 1	ppm 0.1	0.1	2	0.5	0.001	
			<b>V</b> .1	0.1		0.0		
D4-19		76	1.1	15.4	54	9		
D4-20		75	6.5	13.5	55	9		
D4-21		83	2.9	15.2	58	9.9		
D4-22		475	0.6	16.1	76	8.9		
D5-1		91	0.4	16.1	52	44.6		
D5-2		83	0.9	15.7	43	11.4		
D5-3		97	1.3	16.6	110	57.3		
D5-4		83	1.5	16.1	46	7.5		
D5-5		87	1.4	17.3	45	7.7		
D5-6		118	0.5	18	44	15		
D5-7		86	0.8	16.5	40	12.2		
D5-8		68	0.6	12.3	58	7.6		
D6-1		82	0.5	15.8	57	12.4		
D6-2		136	0.4	13.4	102	45.7		
D6-3		96	0.5	13	97	50.8		
D6-4		86 148	0.6	14.8	63 33	27.4 9.9		
D6-5		148	1.4	12.2	33	9.9		
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Comments: Interference: Mo>400ppm on ICP-MS Cd,ICP-AES results shown. REE's may not be totally soluble in MS61 method.

# **ALS Chemex**

## **APPENDIX D**

### **ITEMIZED COST STATEMENT**

Geological and geochemical costs from core drilling fieldwork carried out on mineral tenure ID # 518469 (Skeena Mining Division) between the dates of: 2007/AUG/15 to 2007/DEC/30: (Note- This cost statement does not include costs for prospecting rock chip/soil sampling)

FIELD	CREV	17-
	UIL 1	τ.

A. Kikauka, Geologist, Sooke , BC (22 days)	8,536.00
Ethier Exploration Services, Hazelton, BC, 274 man days,	
geotechnical/geochemical sampling (by contract)	\$ 132,336.31

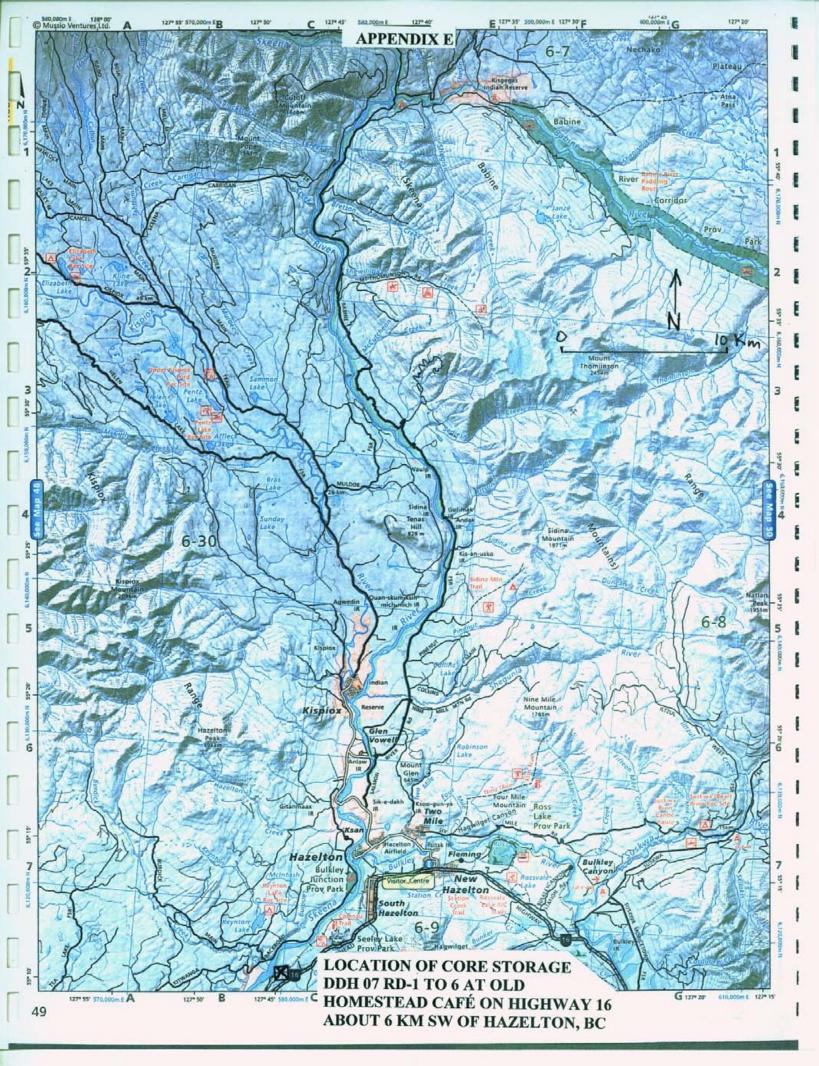
#### FIELD COSTS:

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Diamond drilling Neill's Mining Ltd, Victoria, BC	
(1,106.3 meters by contract)	115,096.69
Mob/demob (by contract helicopter/truck)	29,750.00
Helicopter charters, Canadian Heli, Smithers BC, (contract)	28,145.00
Meals and Accommodation (500 man-days)	18,680.00
Freight costs (samples trucked to Richmond BC)	647.20
Geochemical analysis 97 ICP 48 element (N Vancouver, BC)	5,700.00
Equipment and Supplies	3,525.00
Report	2,600.00

Total costs=

\$ 345,016.20



## **APPENDIX F**

ddh no.	depth ft	depth m	easting	northing	elevation	azimuth	dip
07HB1	1075	327.66	588259	6114062	1952 m	200	-70
07HB2	535	163.07	588259	6114062	1952 m	200	-50
07HB3	474	144.48	588259	6114062	1952 m	220	-50
07HB4	600	182.88	588259	6114062	1952 m	220	-70
07HB5	495	150.88	588259	6114062	1952 m	340	-50
07HB6	450	137.16	588259	6114062	1952 m	300	-48

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total= total =

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# **APPENDIX G**

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ddh no	sample no	from (ft)	to (ft)	width (ft)	from (m)	to (m)	width (m)	ppm Cu	ppm Ag	ppm Au	ppm W	ppm Mo
07-HB-1	D1-1	19.4	24.9	5.5	5.91	7.59	1.68	32.7	0.08	0.005	0.6	11.6
07-HB-1	D1-2	48	49.1	1.1	14.63	14.97	0.34	14.6	0.01	0.005	0.4	7.91
07-HB-1	D1-3	75.5	79.8	4.3	23.01	24.32	1.31	10.6	0.01	0.005	0.6	1.61
07-HB-1	D1-4	79.8	88	8.2	24.32	26.82	2.5	13.9	0.01	0.005	0.7	1.54
07-HB-1	D1-5	137.1	145.5	8.4	41.79	44.35	2.56	21.3	0.05	0.005	0.9	3.08
07-HB-1	D1-6	145.5	150.7	5.2	44.35	45.93	1.58	19.2	0.16	0.005	0.9	1.71
07-HB-1	D1-7	150.7	156.7	6	45.93	47.76	1.83	18	0.01	0.005	0.7	3.14
07-HB-1	D1-8	201	205.7	4.7	61.26	62.7	1.44	17	0.01	0.005	0.5	2.07
07-HB-1	D1-9	401	409.6	8.6	122.22	124.85	2.63	8.9	0.01	0.005	0.7	3.09
07-HB-1	D1-10	409.6	411.5	1.9	124.85	125.43	0.58	4.7	0.01	0.005	0.9	49.8
07-HB-1	D1-11	411.5	417.8	6.3	125.43	127.35	1.92	12.5	0.01	0.005	0.7	3.64
07-HB-1	D1-12	417.8	423.6	5.8	127.35	129.11	1.76	8.1	0.01	0.005	0.7	4.6
07-HB-1	D1-13	423.6	429.2	5.6	129.11	130.82	1.71	51.5	0.01	0.005	3.1	123.5
07-HB-1	D1-14	429.2	430.9	1.7	130.82	131.34	0.52	7050	0.77	0.118	93.7	544
07-HB-1	D1-15	430.9	435	4.1	131.34	132.59	1.25	99	0.02	0.005	3.4	13.7
07-HB-1	D1-16	435	443.3	8.3	132.59	135.12	2.53	31.4	0.01	0.005	1.7	7.11
07-HB-1	D1-17	443.3	446.2	2.9	135.12	136.03	0.91	15	0.01	0.005	0.8	3.65
07-HB-1	D1-18	515.3	519	3.7	157.06	158.19	1.13	10.4	0.06	0.005	3.6	72.7
07-HB-1	D1-19	519	523.5	4.5	158.19	159.56	1.37	5.1	0.01	0.005	0.6	2.94
07-HB-1	D1-20	523.5	528.4	4.9	159.56	161.06	1.5	11.1	0.09	0.005	0.8	3.16
07-HB-1	D1-21	528.4	534	5.6	161.06	162.76	1.7	10.5	0.08	0.005	1	2.55
07-HB-1	D1-22	534	540.7	6.7	162.76	164.81	2.05	11.4	0.1	0.005	0.9	5.96
07-HB-1	D1-23	540.7	546.6	5.9	164.81	166.6	1.79	20.5	0.08	0.005	0.8	3.84
07-HB-1	D1-24	564.8	570.3	5.5	172.15	173.83	1.68	15.5	0.08	0.005	1	5.22
07-HB-1	D1-25	570.3	575.8	5.5	173.83	175.5	1.67	22.3	0.12	0.005	1.2	2.51
07-HB-1	D1-26	575.8	581.5	5.7	175.5	177.24	1.74	11.6	0.12	0.005	1.1	2.86
07-HB-1	D1-27	581.5	586.5	5	177.24	178.76	1.52	26.5	0.14	0.005	0.8	3.18
07-HB-1	D1-28	586.5	592.3	5.8	178.76	180.53	1.77	10.7	0.07	0.005	1.2	3.69
07-HB-1	D1-29	592.3	598.8	6.5	180.53	182.51	1.98	14.8	0.09	0.005	1.1	4.43
07-HB-1	D1-30	614	617	3	187.15	188.06	1.45	8.1	0.04	0.005	4	0.78
07-HB-1	D1-31	617	620	3	188.06	188.98	0.92	21.2	0.11	0.005	6.9	0.48
07-HB-1	D1-32	620	625.9	5.9	188.98	190.77	1.79	6.9	0.08	0.005	0.8	0.76
07-HB-1	D1-33	782.2	789.5	7.3	238.41	240.64	2.23	32.5	0.16	0.005	0.5	0.53

ddh no	sample no	from (ft)	to (ft)	width (ft)	from (m)	to (m)	width (m)	ppm Cu	ppm Ag	ppm Au	ppm W	ppm Mo
07-HB-02	D2-1	18.5	23.7	5.2	5.64	7.22	1.58	69.3	0.16	0.005	0.6	16.55
07-HB-02	D2-2	39.6	41.2	1.6	12.07	12.56	0.49	42.2	2.26	0.005	1.1	10.35
07-HB-02	D2-3	181.7	185.2	3.5	55.38	56.45	1.07	16.6	0.13	0.005	0.7	1.87
07-HB-02	D2-4	185.2	190	4.8	56.45	57.91	1.46	12.8	0.1	0.005	1	2.22
07-HB-02	D2-5	253	256.2	3.2	77.11	78.09	0.98	23.3	0.13	0.005	1.2	2.17
07-HB-02	D2-6	341	345.7	4.7	103.94	105.37	1.43	177	0.13	0.006	2.4	4.52
07-HB-02	D2-7	345.7	346.7	1	105.37	105.68	0.31	138000	47.5	3.14	4520	257
07-HB-02	D2-8	346.7	352.3	5.7	105.68	107.38	1.7	626	0.45	0.032	16.2	16.6
07-HB-02	D2-9	352.3	356.5	4.2	107.38	108.66	1.28	668	0.52	0.021	19.8	19.8
07-HB-02	D2-10	356.5	360	3.5	108.66	109.73	1.07	49.8	0.16	0.005	3.5	9.51
07-HB-02	D2-11	360	363.4	3.4	109.73	110.76	1.03	150	0.14	0.005	2.9	4.3
07-HB-02	D2-12	363.4	370	6.6	110.76	112.78	2.02	51.3	0.16	0.005	2.5	3.42
07-HB-02	D2-13	370	377	7	112.78	114.91	2.13	52.8	0.15	0.005	2.2	3.79
07-HB-02	D2-14	377	382.5	5.5	114.91	116.59	1.68	74.6	0.11	0.005	1.1	14.5
07-HB-02	D2-15	470	474.8	4.8	143.25	144.72	1.47	48.7	0.12	0.005	2.7	8.27
07-HB-02	D2-16	474.8	479.5	4.7	144.72	146.15	1.43	15.4	0.09	0.005	1.7	39.7
07-HB-02	D2-17	479.5	480.8	1.3	146.15	146.54	0.39	988	4.12	0.008	3	18.45
07-HB-02	D2-18	480.8	486.4	5.6	146.54	148.25	1.71	124.5	0.79	0.005	10.1	80.9
07-HB-02	D2-19	486.4	495	8.6	148.25	150.88	2.63	46	0.16	0.005	3.7	60.6

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ddh no	sample no	from (ft)	to (ft)	width (ft)	from (m)	to (m)	width (m)	ppm Cu	ppm Ag	ppm Au	ppm W	ppm Mo
07-HB-03	D3-1	133	134	1	40.54	40.84	0.3	66.2	0.28	0.005	0.7	6.36
07-HB-03	D3-2	214.4	216.2	1.8	65.35	65.9	0.55	150.5	0.24	0.005	0.6	3.69
07-HB-03	D3-3	325.5	331.2	5.7	99.21	100.95	1.74	13.5	0.08	0.005	9.1	1.89
07-HB-03	D3-4	331.2	336.5	5.3	100.95	102.56	1.61	486	0.09	0.005	20.1	6.31
07-HB-03	D3-5	336.5	341.2	4.7	102.56	104	1.44	48.6	0.18	0.005	3.3	2.95
07-HB-03	D3-6	341.2	342.5	1.3	104	104.4	0.4	15.8	0.09	0.005	1.4	1.7
07-HB-03	D3-7	342.5	346.2	3.7	104.4	105.52	1.12	17.4	0.14	0.005	1.5	2.71
07-HB-03	D3-8	437	440.5	3.5	133.2	134.26	1.06	32.7	0.24	0.005	1.6	4.63
07-HB-03	D3-9	440.5	445	4.5	134.26	135.64	1.38	25.7	0.12	0.005	2	8.35
07-HB-03	D3-10	445	449.5	4.5	135.64	137.01	1.37	17.7	0.1	0.005	0.7	5.34

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ddh no	sample no	from (ft)	to (ft)	width (ft)	from (m)	to (m)	width (m)	ppm Cu	ppm Ag	ppm Au	ppm W	ppm Mo
07-HB-04	D4-1	162.4	168	5.6	50	51.21	1.21	20.2	0.08	0.005	0.8	3.5
07-HB-04	D4-2	168	173.6	5.6	51.21	52.91	1.7	11.5	0.1	0.005	0.9	3.35
07-HB-04	D4-3	173.6	178.5	4.9	52.91	54.41	1.5	15	0.09	0.005	1	4.05
07-HB-04	D4-4	178.5	183.5	5	54.41	55.93	1.52	8.8	0.09	0.005	1.4	3.08
07-HB-04	D4-5	236.6	241.6	5	72.11	73.64	1.53	10.6	0.1	0.005	0.8	3.07
07-HB-04	D4-6	241.6	244.8	3.2	73.64	74.62	0.98	11.5	0.09	0.005	0.9	1.94
07-HB-04	D4-7	443.1	448.3	5.2	135.06	136.64	1.58	71.7	0.12	0.005	12.3	4.33
07-HB-04	D4-8	448.3	452	3.7	136.64	137.77	1.13	960	0.27	0.025	243	455
07-HB-04	D4-9	452	456	4	137.77	138.99	1.22	18	0.08	0.005	2.1	4.98
07-HB-04	D4-10	456	459.4	3.4	138.99	140.03	1.04	32.8	0.11	0.005	6	15.3
07-HB-04	D4-11	506.2	508.5	2.3	154.29	154.99	0.7	15.6	0.22	0.005	1.1	10.4
07-HB-04	D4-12	524.5	529.5	5	159.87	161.4	1.53	8.8	0.05	0.005	1	3.36
07-HB-04	D4-13	529.5	534.4	4.9	161.4	162.89	1.49	6.5	0.07	0.005	1.7	2.35
07-HB-04	D4-14	534.4	538.3	3.9	162.89	164.07	1.18	9.1	0.05	0.005	3.3	2.23
07-HB-04	D4-15	538.3	543.8	5.5	164.07	165.75	1.68	5	0.03	0.005	2.4	3.36
07-HB-04	D4-16	543.8	548	4.2	165.75	167.03	1.28	4.5	0.03	0.005	3.8	3.58
07-HB-04	D4-17	548	549.5	1.5	167.03	167.49	0.46	5.5	0.09	0.005	3.6	11.15
07-HB-04	D4-18	549.5	554	4.5	167.49	168.86	1.37	5	0.06	0.005	0.9	4.85
07-HB-04	D4-19	554	559	5	168.86	170.38	1.52	7.6	0.06	0.005	1.1	4.53
07-HB-04	D4-20	559	563.5	4.5	170.38	171.75	1.37	5.9	0.06	0.005	6.5	3.41
07-HB-04	D4-21	563.5	567.2	3.7	171.75	172.88	1.13	6.6	0.07	0.005	2.9	3.01
07-HB-04	D4-22	567.2	568.9	1.7	172.88	173.4	0.52	4.2	0.16	0.005	0.6	0.51

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ddh no	sample no	from (ft)	to (ft)	width (ft)	from (m)	to (m)	width (m)	ppm Cu	ppm Ag	ppm Au	ppm W	ppm Mo
07-HB-05	D5-1	50	55	5	15.24	16.76	1.52	7.2	0.13	0.005	0.4	0.86
07-HB-05	D5-2	55	60	5	16.76	18.29	1.53	13.7	0.09	0.005	0.9	3.29
07-HB-05	D5-3	173.6	178.2	4.6	52.91	54.31	1.4	28.2	0.16	0.005	1.3	3.28
07 <i>-</i> HB-05	D5-4	178.2	185	6.8	54.31	56.39	2.08	28	0.1	0.005	1.5	5.31
07-HB-05	D5-5	185	191	6	56.39	58.22	1.83	19.5	0.08	0.005	1.4	3.86
07-HB-05	D5-6	288.8	290	1.2	88.02	88.39	0.37	45	0.11	0.005	0.5	1.72
07-HB-05	D5-7	336.5	346.7	10.2	102.56	105.67	3.11	6.9	0.09	0.005	0.8	3.28
07-HB-05	D5-8	380	386	6	115.82	117.66	1.84	20.2	0.1	0.005	0.6	3.46

ddh no	sample no	from (ft)	to (ft)	width (ft)	from (m)	to (m)	width (m)	ppm Cu	ppm Ag	ppm Au	ppm W	ppm Mo
07-HB-06	D6-1	38.3	43.5	5.2	11.67	13.26	1.59	7.1	0.17	0.005	0.5	14.3
07-HB-06	D6-2	43.5	46.3	2.8	13.26	14.11	0.85	69.8	0.18	0.005	0.4	48.2
07-HB-06	D6-3	46.3	52	5.7	14.11	15.85	1.74	24.5	0.2	0.005	0.5	6.17
07-HB-06	D6-4	52	56.7	4.7	15.85	17.28	1.43	18.2	0.19	0.005	0.6	6.37
07-HB-06	D6-5	277.8	279	1.2	84.67	85.04	0.37	14	0.13	0.005	1.4	3.24

<b></b>	APPENDIX H			
ddh no	comments	from (ft)	to (ft)	width (ft)
	casing	0	6	6
07-HB-01				
	granodiorite altered, fracture fills are calcite with a bright red - orange colour.	6	19.5	13.5
07-HB-01	this could be a calcite/ankerite with hematite fracture coating			. <u></u>
07-HB-01				
07-HB-01			<u> </u>	
07-HB-01				
07-HB-01	contact between granodiorite and feldspar porphyry. Epidote stringers 1/4 " at 22 ft	19.5	25	5.5
07-HB-01	calcite stringers with epidote magnetitte stringers up to 1/4", 16 over 5ft			
07-HB-01				
07-HB-01	contact between granodiorite and feldspar porphyry	25	27	2
07-HB-01				
07-HB-01	granodiorite fractured and soft, mushy or pulpy, heavy weathered zone or a fault zone	27	29	2
07-HB-01				
07-HB-01	granodiorite, minor fractures with calcite coating, minor epidote	29	47.7	18.7
07-HB-01				
07-HB-01	granodiorite intensely altered, magnetitte stringers, hematite fracture fills	47.7	49	1.3
07-HB-01				
07-HB-01	granodiorite altered and some fractures	49	65	16
07-HB-01				
07-HB-01	granodiorite pulpy soft easily stabbed with a pencil, intense zones of alteration.	65	95.6	30.6
07-HB-01				
07-HB-01	brown pulpy vein gouge	95.6	95.9	0.3
07-HB-01				
07-HB-01	continue with granodiorite sections broken up with soft gouge material, clay	95.9	146	50.1
07-HB-01	alteration, brown to red fracture fill coatings anhydrite/gypsum			
07-HB-01				
07-HB-01				
07-HB-01	fine grained feldspar porphyry, calcite/hematite veinlets/stringers	146	150.7	4.7
07-HB-01				
07-HB-01				
07-HB-01	granodiorite altered and some fractures	150.7	162	11.3
07-HB-01				
07-HB-01	smaller pieces of granodiorite with heavy alteration and gouge mush.	162	164.6	2.6
07-HB-01				

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07-HB-01	granodiorite altered, increase in calcite (brown) and white and mushy	164.6	201	36.4
07-HB-01				
07-HB-01	granodiorite silicified with magnetite stringers, increase in epidote.	201	202	1
07-HB-01				
07-HB-01	granodiorite improved consistency in piece size, less fracture fills, less calcite	202	320	118
07-HB-01				
07-HB-01	feldspar porphyry dyke, fractured	320	321	1
07-HB-01				
07-HB-01	granodiorite, altered, calcite stringers	321	368.9	47.9
07-HB-01				
07-HB-01	grey green fault cement	368.9	369	0.1
07-HB-01				
07-HB-01	granodiorite, altered, calcite stringers	369	401	32
07-HB-01	disseminated and fracture filling magnetitte, chlorite stringers and veinlets			
07-HB-01				
07-HB-01	feldspar porphyry dyke	401	403.8	2.8
07-HB-01				
07-HB-01	granodiorite, altered,	403.8	408.3	4.5
07-HB-01				
07-HB-01	granodiorite altered, magnetitte replacement	408.3	411	2.7
07-HB-01	10%?, light, pale green epidote?			
07-HB-01	no contact or fault but a transition			
07-HB-01				
07-HB-01	granodiorite altered but no mag minor hemititte	411	424	13
07-HB-01	424 - 435 ft magnetite replacement, qtz vein 8", 1" massive chalcopyrite			
07-HB-01	granodiorite altered, magnetitte replacement	424	435	11
07-HB-01	stringers and fault gouge material of mag&hem			
07-HB-01				
07-HB-01	fault gouge	424.4	424.8	0.4
07-HB-01				
07-HB-01	qtz vein 8", 30° to core axis,1"massive cpy	429.4	430	0.6
07-HB-01	· · · · · · · · · · · · · · · · · · ·			]
07-HB-01	granodiorite alt, calcite&hem stringers	430	443	13
07-HB-01				
07-HB-01	fine grained fault gouge material	443	445.7	2.7
07-HB-01				

		445 7	474	
	granodiorite alt, greater flucuations of	445.7	471	25.3
07-HB-01	bleaching with the alteration			
07-HB-01				
	both locations have 1" seams of ankerite	458.4	459.8	1.4
07-HB-01	brecciated pcs very minor hem & cpy			
07-HB-01				
	fine grained dyke material 2" purplish brown	471	471.6	0.6
07-HB-01				
07-HB-01	granodiorite alt, epidote,	445.7	505	59.3
07-HB-01	·····			
07-HB-01	altered granodiorite, intense for 1 ft, small stringers of Magnetitte	505	515	10
07-HB-01	505 - 540 ft magnetite replacement, fault zone			
07-HB-01	granodiorite, magnetitte increase, numerous veinlets1" in width	515	522	7
07-HB-01				
07-HB-01	granodiorite intense alteration, epidote, trace chalcopyrite fracture fill	522	540.8	18.8
07-HB-01				
07-HB-01	feldspar porphyry dyke, minor calcite in fracture fills	540.8	545.6	4.8
07-HB-01				
07-HB-01	granodiorite	545.6	548.7	3.1
07-HB-01				
07-HB-01	fine grained feldspar porphyry dyke, green	548.7	552	3.3
07-HB-01				
07-HB-01	granodiorite	552	554.9	2.9
07-HB-01				
07-HB-01	feldspar porphyry dyke	554.9	557	2.1
07-HB-01				
07-HB-01	granodiorite	557	558	1
07-HB-01				
	feidspar porphyry dyke, green	558	561	3
07-HB-01				
	granodiorite	561	564	3
07-HB-01				
	feldspar porphyry dyke, dark green	564	565	3
07-HB-01				
	granodiorite	565	573	8
07-HB-01	granouloiko		0/0	

07-HB-01	granodiorite, magnetite zone with pyrite.	573	574	1
07-HB-01				
07-HB-01	feldspar porphyry dyke, green	574	575	1
07-HB-01				
07-HB-01	granodiorite	575	580	5
07-HB-01				
07-HB-01	feldspar porphyry dyke, green	580	586	6
07-HB-01				
07-HB-01	granodiorite	586	601	15
07-HB-01				
07-HB-01	feldspar porphyry dyke, green	601	607	6
07-HB-01				
07-HB-01	granodiorite	607	614	7
07-HB-01				
07-HB-01	quartz veins	614	617	3
07-HB-01				
07-HB-01	granodiorite heavy altered, clay, pulpy with knots of qtz minor pyrite, hematite	617	620	3
07-HB-01				
07-HB-01	granodiorite	620	625	5
07-HB-01				
07-HB-01	granodiorite, alteration is stronger	625	634	9
07-HB-01				
07-HB-01	feldspar porphyry dyke, green	634	647	13
07-HB-01				
07-HB-01	granodiorite	647	659	12
07-HB-01				
07-HB-01	feldspar porphyry dyke, green	659	661	2
07-HB-01				
07-HB-01	granodiorite	661	664	3
07-HB-01				
07-HB-01	granodiorite, heavily altered to clay, some competent zones, but alteration is intense	664	708	44
07-HB-01	approximately 35% clay gouge.			
07-HB-01				
07-HB-01	granodiorite firming up, not as much clay but still intense alteration zones approx. every 5 ft.	708	765	57
07-HB-01				
07-HB-01	intense alteration mud	765	766	1

07-HB-01				
07-HB-01	intense alteration mud	774	775	1
07-HB-01				
07-HB-01	alteration turns multi-coloured, granodiorite, calcite, minor magnetite	781	790	9
07-HB-01				
07-HB-01	granodiorite darkens	790	817	27
07-HB-01				
07-HB-01	brown dyke 8 inches wide, similar to dyke that appears at the main adit.	817	818	1
07-HB-01				
07-HB-01	granodiorite	818	839	21
07-HB-01				
07-HB-01	granodiorite clay alteration	839	840	1
07-HB-01				
07-HB-01	granodiorite	840	968	128
07-HB-01				
07-HB-01	brown mafic dyke	968	968.6	0.6
07-HB-01				
07-HB-01	granodiorite	968.6	1012	43.4
07-HB-01				
07-HB-01	rubble granodiorite	1012	1016	4
07-HB-01				
07-HB-01	numerous bands of brown orange carbonate (ankerite?) not constant but several bands/ft	1019	1026	7
07-HB-01				
07-HB-01	granodiorite	1026	1060	34
07-HB-01				
07-HB-01	granodiorite clay alteration	1060	1065	5
07-HB-01				
07-HB-01	granodiorite	1065	1074	9
07-HB-01				]
07-HB-01	granodiorite clay alteration	1074	1075	1
07-HB-01	ЕОН		1082	

dh no	comments	from (ft)	to (ft)	width (ft)
7-HB-02	casing	0	8	8
7-HB-02			1	1
7-HB-02	granodiorite	8	18.6	10.6
7-HB-02			1	1
	feldspar porphyry dyke, green chloritic (mafic) groundmass, contact 65 deg	18.6	23.6	5
7-HB-02				1
	granodiorite	23.6	182.3	158.7
7-HB-02				
	39.7-40.2 magnetite, chlorite,		1	
7-HB-02				
	95.0-107.6 broken ground			
	107.6-108.6 fault clay gouge			+
	124.0-155.5 zone of qtz-hem veinlets, kaolinite alteration		1	
7-HB-02				1
	feldspar porphyry dyke, green chloritic (mafic) groundmass, contact 85 deg	182.3	182.4	0.1
	180.0-190.0 chlorite-epidote, qtz veinlets 10-20/meter	102.0	102.4	0.1
	granodiorite	182.4	198.6	16.2
	184.6-185.0 felsic bleached alteration	102.4	100.0	10.2
	feldspar porphyry dyke, green chloritic (mafic) groundmass,contact 40-70 deg	198.6	198.9	0.3
7-HB-02			130.5	0.0
	granodiorite	198.9	202.9	4
7-HB-02		130.3	202.9	+
	feldspar porphyry dyke, green chloritic (mafic) groundmass,contact 50-70 deg	202.9	203.3	0.4
7-HB-02		202.9	203.5	0.4
	granodiorite	203.3	535	331.7
7-HB-02 7-HB-02		203.3	555	
	243.0-254.0 1"-5" wide zones of felsic alteration, tr-1% py, tr cpy, mag veins	243	254	11
7-HB-02			234	+
		332.8	335.3	- 25
	332.8-335.3 broken ground, minor fracture filling ankerite			2.5
	346.0-347.2 qtz-sulphide vein,25% chalcopyrite,10% pyrite,8% qtz,5% mag, tr calcite,ankerite	346	347.2	1.2
	347.2-353.2 footwall fault zone, 10% quartz as 0.2"-3.0" wide veins @ 55 degrees to ca	347.2	353.2	6
7-HB-02			000.0	
	359.0-362.3 15% quartz 0.2"-3.0" wide veins,5-15% actinolite subhedral, coarse grain clots	359	362.3	3.3
7-HB-02				
	379.0-380.0 felsic alteration, increased magnetite	379	380	1
	374.0-403.0 broken ground	374	403	29
	408.0-412.8 broken, 1% clay gouge, 2% magnetite as disseminations and veins	408	412.8	4.8
7-HB-02				
	427.0-427.1 clay fault gouge	427	427.1	0.1
	427.1-435.0 broken ground	427.1	435	7.9
	475.8-476.1 trace chalcopyrite as disseminations and veins	475.8	476.1	0.3
	479.0-479.5 10% pyrite, 1% chalcopyrite 2.5" (10 cm) wide sulphide vein	479	479.5	0.5
7-HB-02				
	492-493 increased chlorite	492	493	1
	493.0-495.0 zone of 1-4 cm wide magnetite-pyrite-chalcopyrite veins	493	495	2
7-HB-02				
	EOH 535'		535	

ddh no	comments	from (ft)	to (ft)	width (ft)
			<u> </u>	
07-HB-03	casing	0	6	66
07-HB-03				L
07-HB-03	granodiorite	6	19.2	13.2
07-HB-03				
07-HB-03	feldspar porphyry dyke, fine gr mafic (chloritic) groundmass,	19.2	24.3	5.1
07-HB-03	contacts at 40 degrees to ca			
07-HB-03	granodiorite	24.3	43	18.7
07-HB-03				
07-HB-03	tan coloured felsic dyke, contacts at 60 degrees to ca, 5% actinolite	43	43.2	0.2
07-HB-03				
07-HB-03	granodiorite	44	60.5	16.5
07-HB-03				
<u>07-HB-03</u>	minor clay gouge	60.5	60.9	0.4
07-HB-03				
07-HB-03	granodiorite	60.9	64	2.9
07-HB-03				
07-HB-03	granodiorite soft, slight increase in chlorite and clay	64	67	3
07-HB-03	65.3-67 fault gouge, clay			
07-HB-03	granodiorite	67	79	12
07-HB-03				
07-HB-03	fault granodiorite soft and clay altered fractures, quartz veinlets, hematite, calcite	79	82	3
07-HB-03				
07-HB-03	granodiorite	82	97	15
07-HB-03				
07-HB-03	2" vein gouge (dark brown)	97	97.2	0.2
07-HB-03				
07-HB-03	granodiorite	97.2	103	5.8
07-HB-03				
07-HB-03	feldspar porphryr dyke, fine gr chloritic groundmass, contacts at 60 degrees to ca	103	103.5	0.5
07-HB-03	fault zone at 103.0-103.1 with breccia texture infilling of epidote and limonite			
07-HB-03	granodiorite	103.5	120	0.5
07-HB-03		1		
07-HB-03	1/2" calcite, magnetite, hematite veinlets	120	120.6	0.6
07-HB-03				
07-HB-03	granodiorite	120.6	133	12.4
07-HB-03	129.0-129.6 feldspar porphyry dyke, mafic dark green chloritic groundmass			
07-HB-03	bleached alteration 6", magnetite vein 1"	133	133.6	0.6
07-HB-03	133.0-133.5 mag, chl, qtz, K-feldspar diss and fracture filling pyrite, chalcopyrite			<u> </u>
07-HB-03	granodiorite	133.6	181	47.4
07-HB-03	165.5-165.8 broken ground			
07-HB-03	fractures filled with calcite 1/4 - 1/2" veinlets, broken ground	181	182	1
07-HB-03				<u> '</u>
07-HB-03	granodiorite	182	214	32

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07-HB-03		1		
07-HB-03	quartz vein, actinolite magnetite, hemitite, cpy, minor pyrite.	214	216	2
07-HB-03	214 ft 20 " qtz vein, actinolite, magnetite, minor pyrite, chalcopyrite			
07-HB-03	granodiorite	216	273.6	57.6
07-HB-03		1 1		
07-HB-03	bleached felsic alteration in granodiorite, 10% chlorite as fracture filling	273.6	275	1.4
07-HB-03				
07-HB-03	granodiorite	275	286	11
07-HB-03				
07-HB-03	3" bleached felsic alteration, 1/4" bands of magnetite	286	286.3	0.3
07-HB-03				
07-HB-03	granodiorite	286.3	295	8.7
07-HB-03				
07-HB-03	bleached felsic alteration, 5% chlorite	291	292	1
07-HB-03		1		
07-HB-03	1/2" magnetite vein	295	295.1	0.1
07-HB-03				
07-HB-03	granodiorite	295.1	328	32.9
07-HB-03				
07-HB-03	blue - green colouration of the alteration which leads into actinolite, breaks up	328	344	16
07-HB-03	and becomes fault gouge and/ or breccia zones			
07-HB-03	sharp increase in magnetite at 340 - 344			
07-HB-03	333.4-343.0 ft qtz-sulphide vein, fault zone, ankerite, 1/2" wide chalcopyrite veins	T		
07-HB-03	granodiorite	344	363	19
07-HB-03				
07-HB-03	3" calcite - quartz vein , hematite, magnetite	363	363.3	0.3
07-HB-03	362.8-363.4 fault zone, clay			
07-HB-03	7 zones (1"-5" wide) of clay altered granodiorite, calcite (orange), chlorite	363.3	392	28.7
07-HB-03				
07-HB-03	granodiorite with minor 1/4" clay gouge fractures, minor magnetite, chlorite.	392	424	32
07-HB-03				
07-HB-03	3" qtz vein with magnetite	424	424.3	0.3
07-HB-03				
07-HB-03	granodiorite	424.3	437	12.7
07-HB-03				
07-HB-03	actinolite, granodiorite minor clay gouge, magnetite vein 2" wide, chlorite	437	439	2
07-HB-03				
07-HB-03	granodiorite	439	444	5
07-HB-03				
07-HB-03	granodiorite minor clay, chlorite, actinolite	444	449	5
07-HB-03				
07-HB-03	granodiorite minor calcite hematite	449	474	25
07-HB-03	EOH 474'			

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dđh no	comments	from (ft)	to (ft)	width (ft)
07-HB-04	Casing	0	6	e
07-HB-04				········
	granodiorite	6	102.5	96.5
	48.0-73.0 quartz-calcite veinlets 1-3/m, trace hematite fracture filling		102.0	
07-HB-04				
	feldspar porphyry dyke, mafic chloritic groundmass,contacts @ 40-50 degrees to ca	102.5	103	0.5
07-HB-04	granodiorite	103	132.3	29.3
	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 60-80 degrees to ca	132.3	132.8	0.5
07-HB-04	granodiorite	132.8	133.6	0.8
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass,contacts @ 55-80 degrees to ca	133.6	134.2	0.6
07-HB-04	granodiorite	134.2	135.4	
	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 60-70 degrees to ca	135.4	135.7	0.3
07-HB-04	granodiorite	135.7	327.3	
07-HB-04				
	168.0-184.0 quartz-calcite-hematite fracture filling veinlets, 1-3/m			
07-HB-04				
	237.6-244.0 increased magnetite as veins, 1% kaolinite as secondary alteration			
07-HB-04				
	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 65 degrees to ca	327.3	327.6	0.3
07-HB-04				
	granodiorite	327.6	387.8	60.2
07-HB-04				
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass,contacts @ 65 degrees to ca	387.8	390.4	2.6
	granodiorite	390.4	401.7	11.3
	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 65 degrees to ca	401.7	402.3	0.6
07-HB-04	granodiorite	402.3	408	5.7
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 65 degrees to ca	408	409.8	1.8
07-HB-04				
07-HB-04	granodiorite	409.8	450.2	40.4
07-HB-04	405.0-419.0 broken ground			
07-HB-04	444.0-460.3 increased magnetite veins and weak clay alteration			
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 60 degrees to ca	450.2	452.3	2.1
	granodiorite	452.3	454.1	1.8
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 60 degrees to ca	454.1	455.3	
	granodiorite	455.3	490.3	3
07-HB-04	484.0-499.8 broken ground, minor clay alteration			
07-HB-04	484.0-499.8 broken ground, minor clay alteration			
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 60 degrees to ca	490.3	496.3	(
07-HB-04				
	granodiorite	496.3	548	51.7
07-HB-04	508.7-568.9 increased magnetite as 1-5 cm wide veins, trace pyrite, chalcopyrite			
07-HB-04				
07-HB-04	feldspar porphyry dyke, mafic chloritic groundmass, contacts @ 60 degrees to ca	548	549.5	1.
07-HB-04				
	granodiorite	549.5	600	50.
07-HB-04	EOH 600'			

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ddh no	comments	from (ft)	to (ft)	width (ft)
07-HB-05	casing	0	6.5	6.5
07-HB-05				
07-HB-05	granodiorite	6.5	495	488.5
07-HB-05	50.0-60.0 increased magnetite, trace pyrite, chalcopyrite, minor kaolinite alteration	50	60	10
07-HB-05				
07-HB-05	108.0-122.0 broken ground	108	122	14
07-HB-05				
07-HB-05	173.6-191 increased magnetite, trace pyrite, chalcopyrite, minor kaolinite alteration	173.6	191	17.4
07-HB-05				
07-HB-05	288.8-290 magnetite veins, 1-3 cm wide, trace pyrite, chalcopyrite	288.8	290	1.2
07-HB-05				
07-HB-05	462-463.6 fault zone, minor clay gouge	462	463.6	1.6
07-HB-05				
07-HB-05	EOH 495'		495	1

ddh no	comments	from (ft)	to (ft)	width (ft)
07-HB-06	casing	0	7	7
07-HB-06				
07-HB-06	granodiorite	7	469	462
07-HB-06	38.3-56.7 increased magnetite, trace pyrite, chalcopyrite, minor kaolinite alteration	38.3	56.7	18.4
07-HB-06				
07-HB-06	60.0-64.0 increased clay alteration	60	60.4	0.4
07-HB-06				
07-HB-06	250.0-251.3 tan coloured felsic alteration, minor kaolinite	250	251.3	1.3
07-HB-06				
07-HB-06	277.8-279.0 10% magnetite as veins, 1-3 cm wide, trace pyrite, chalcopyrite	277.8	279	1.2
07-HB-06				
07-HB-06	339.0-346.0 quartz-calcite-hematite veinlets, 1-3 mm wide, 1-3/m	339	346	7
07-HB-06				
07-HB-06	EOH 469'		469	

