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J-Pacific Gold Inc.

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GEOLOGICAL MODELING AND PRELIMINARY REVIEW OF THE RESOURCE ESTIMATE FOR THE BLACKDOME GOLD-SILVER PROPERTY, BRITISH COLUMBIA

Clinton Mining Division

51°20' North, 122°30' West

2CC014.00

GEOLOGICAL MODELING AND PRELIMINARY REVIEW OF THE RESOURCE ESTIMATE FOR THE BLACKDOME GOLD-SILVER PROPERTY, BRITISH COLUMBIA

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EXECUTIVE SUMMARY

Between 1986 and 1991, the Blackdome Mine in south-central British Columbia was one of the highest grade gold producers in western Canada, yielding 240,000 ozs from 338,000 tonnes of ore, then again in 1998-99, the mine produced another 6,547 ozs from 21,286 tonnes of ore. Totals- 246,547 oz from 359,286 tonnes

At the request of J-Pacific Gold, SRK Consulting (SRK) visited the Blackdome Mine to review the geology, particularly the controls on gold and silver mineralization, in order to construct a geological model. Based on this model, SRK completed a review of the current resources/reserves and recent mining operations in order to assess the validity of the current resource/reserves and provide recommendations for consideration by J-Pacific for improving any future resource modeling efforts and for re-opening of the mine.

Geological Model

- The distribution and orientation of gold mineralization, in the Blackdome vein system, is controlled by structures that developed during an episode of local NW-SE extension, related to movements on the Fraser River fault system, and one of its subsidiary structures, the Hungry Valley fault.
- Geological context for the mineralization is provided here in the form of a structural model for the vein system, in which the preferred sites of mineralization can be shown to have predictable controls. Primary controls on the shape and distribution of ore grade mineralization are, in order of importance:
    - ✓ Intersections between major vein-bearing structures (e.g. #1 and #2 veins)
    - ✓ Broad flexures, down dip and along strike, in sinusoidal structures with normal displacement
    - ✓ Steepening or refraction of normal faults as they pass through beds of different competence, particularly through rhyolite
- Past experience has shown that assayed drill intersections are poor indicators of contained ounces. For this reason, exploration should be based on geological criteria, such as the presence of vuggy quartz breccia veins (and deformed equivalents), and/or major faulting, rather than grade.
- In addition to exploring and extending the historically mined ore bodies within the existing workings, SRK believes there is significant potential of discovering entirely new ore bodies that could provide 'another Blackdome'.
- With this approach in mind, we have defined three high priority targets from the perspective that large-scale ore bodies or structures with the highest amount of potential contained ounces should be sought. A number of lower priority targets have been identified adjacent to known historic ore bodies

- It is recommended that the high priority targets be explored by a combination of underground bulk sampling, where existing development permits, and trenching at surface prior to drilling. This approach would minimize the risks associated with the variable ('nuggety') gold distribution, and its poor representation in drill core.

Resource Model

- Although the QA/QC program was not reviewed in detail, SRK is of the opinion that the exploration and development data is reliable based on the experience from previous mining campaigns. However, a more comprehensive QA/QC program, consisting of sample standards, sample blanks, duplicate samples and independent assay verification through a third party laboratory, is recommended for any future exploration programs, particularly outside of the area of the current mine workings.
- Gold mineralization at the Blackdome Mine is the very discontinuous, due primarily to the discontinuous nature of the quartz veining within the main deformation/alteration zones and the nuggety nature of the attendant gold mineralization.
- The higher-grade gold and silver mineralization is typically associated with the thickest portions of the deposit where gold precipitation and deposition has been concentrated. Previously, gold and silver were mined from narrow zones (i.e. 1-3 meters) from within the broader zone of alteration, quartz veining, etc. Ore and waste determination was based primarily on assay grade, which for a nuggety deposit can often produce uncertain results with a high degree of difference between the forecast and actual ounces of metal.
- Currently, the Blackdome property has an Inferred Reserve (now re-classified by SRK as Inferred Mineral Resource, CIMM, 2000 definitions) of 124,120 tonnes averaging 12.8 grams gold per tonne (0.37 oz/ton) and 33.7 grams silver tonne (0.98 oz/ton) totaling 50,834 ounces gold and 134,386 ounces silver (A. Boronowski, 1999). Resource
- Generally, SRK is in agreement with the methodology used to estimate the resources based on the current data set and data format, particularly utilizing the use of a minimum mining width and a predicted dilution (which needs to be formally finalized in a more detailed study) thereby approaching a "mineable" resource (not reserve), and as such, will result in significantly less modification in the future converting resources to reserves.
- Although SRK does not believe that there would be material changes to the current resource estimate, SRK cautions that polygonal methods are often not well suited to resource estimation in "nuggety" gold deposits because individual data are unreliable. Future resource estimates should consider an approach that, based on the mining method and the anticipated degree of mining selectivity, may require additional averaging of grades over a broader area of the deposit, thereby producing an overall lower grade, higher tonnage, and more reliable estimate.

- In the opinion of SRK, there is insufficient knowledge of the grade and geometric continuity of the mineralization, given the data density, for a level of confidence that is sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposits, to be classified as Indicated Mineral Resource. As such, SRK has classified the resources as an Inferred Mineral Resource.
- Due to the nuggety nature of the deposit, additionally drilling is not considered to materially lower the associated risk with the resource estimate, as such, SRK recommends that any upgrading up the Inferred Mineral Resources to Indicated requires better definition of the geometry and grade of the deposit with underground development.
- In SRK's opinion, in the absence of a detailed mine design and mine plan; the current resources cannot be converted to reserves (CIMM, 2000 definitions).
- Previous mining methods, although appropriate to the context, were very labour intensive, expensive, and required considerable amounts of pre-production. This translates into under-developed (under-capitalized) operations with inadequate working places, so that any problems would directly affect production.
- A few opportunities exist for changes to mining the deposits:
  - ✓ There is no alternative to cut-and-fill, but the method could be converted to mechanized operations with access on each level (as distinct from the captive operations used in the past). This could greatly increase productivity and significantly reduce the number of working places needed - with consequent reduction in the amount of capitalization needed.
  - ✓ It is realized that the use of ramp access would, in effect, double the amount of waste development, and the reduction in stope costs would have to more than offset the extra cost of development. This is possible but needs much more analysis.
  - ✓ Finally, underhand operations (backfill as a roof) could significantly improve dilution control (mucking on ore), decrease rock support costs, and decrease up-front development costs due to top-down operations as opposed to bottom-up.
  - ✓ The concern with underhand methods is the need to cement all backfill – again, analysis is required to ensure that there would be a consequent cost benefit.

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GEOLOGICAL MODELING AND PRELIMINARY REVIEW OF THE RESOURCE ESTIMATE FOR THE BLACKDOME GOLD-SILVER PROPERTY, BRITISH COLUMBIA

1. INTRODUCTION

246,547 oz from 359,286 tonnes

Between 1986 and 1991, the Blackdome Mine was one of the highest-grade gold producers in western Canada, yielding 240,000 ozs from 338,000 tonnes of ore, then again in 1998-99, the mine produced another 6,547 ozs (uneconomically) from 21,286 tonnes of ore (Price and Glanville, 1999). Low gold prices and high operating costs were blamed for the shut down in May 1999. Recent changes in management, corporate direction, and strategic focus at J-Pacific Gold Inc. (*formerly,* Claimstaker Resources Ltd.) has renewed interest in the dormant Blackdome silver-gold mine, in central British Columbia. The most recent, post-mining, resource evaluation for the Blackdome property (Boronowski, 1999) estimated a drill-inferred resource of 50,834 ozs gold, and 134,386 ozs silver.

124,120 tonnes @ 12.8 g/t (0.37 opt) Au, 33.7 g/t (0.98 opt) Ag

At the request of J-Pacific Gold, SRK Consulting (SRK) visited the Blackdome Mine in British Columbia to review the geology, particularly the controls on gold and silver mineralization, in order to construct a geological model. Based on our understanding of the geological model, particularly the controls on gold and silver mineralization, SRK completed a preliminary review of the current resources/reserves and recent mining operations in order to assess the validity of the current resource/reserves and provide recommendations for consideration by J-Pacific for improving any future resource modeling efforts and for re-opening of the mine.

In preparing the report, Mr. Chris Lee and Mr. Michael Michaud, a qualified person and senior geologist with SRK, visited the Blackdome Mine during the period from August 5 to August 10, 2001. During this period, SRK interviewed project personnel, examined drill core and underground and surface exposures. In addition, SRK reviewed numerous geologic reports and production records. During the site visit, Mr. Norm Berg, Project Geologist, and Mr. Nick Ferris, President and CEO of J-Pacific Gold accompanied SRK.

SRK utilized the database provided by J-Pacific Gold, which is comprised primarily of drill hole data and underground development channel sampling information, and has every indication that the quality of the data is reliable.

2. PROPERTY DESCRIPTION

The Blackdome property is located approximately 250 kilometers north of Vancouver B.C., near the summit of Blackdome Mountain (previously Porcupine Mountain), and 70 kilometers west-northwest of the small town of Clinton B.C. Refer to Figure 1 for a location map of the Blackdome Area, and Figure 2 for a location map of the Blackdome Mine. Access to the mine is by vehicle, coming from Clinton or Williams Lake B.C. An additional 20 kilometers of gravel road permits access to all parts of the property. The mine is at an elevation near 2000 meters.

The Blackdome property is held 100% by No. 75 Corporate Ventures Ltd., owned equally by J-Pacific Gold Inc. (50%) and Jipangu Inc. (50%). J-Pacific Gold's joint venture partner in the project, Jipangu Inc. of Tokyo, Japan, is a private Japanese resource company. The property consists of 21 mineral claims totaling 214 units, 10 crown granted mineral claims totaling 169 hectares, and two mining leases totaling 988.33 hectares.

Placer mining on the Fraser River at locations such as Big Bar, French Bar, Crows Bar and High Bar led to a placer gold discovery on Poison Mountain in the early 1930's. After an extended period of exploration, Blackdome Mining Ltd. brought the outlined gold deposit into production in 1986. The initial 140 tonnes per day rate of production increased to 200 tonnes per day. During its five year life, the mine was one of the highest grade gold mining operations in western Canada, having produced a total of 7,000,000 grams of gold (225,000 ounces) and 17,000,000 grams of silver (547,000 ounces), from 338,000 tonnes (373,000 tons) of ore.

After J-Pacific Gold (then, Claimstaker Resources) purchased the asset in 1995, a small amount of exploration drilling was completed adjacent to the existing workings and a decision was made to bring the mine back into production. Between November 1998 and May 1999, the mine produced 203,631 grams of gold (6,547 ounces) and 538,090 grams of silver (17,300 ounces) from 21,286 tonnes of ore.

Currently, the Blackdome property has a small sub-economic Mineral Resource, described by Alex Boronowski, P. Geo. (1999) as an Inferred Reserve (more properly called "inferred mineral resource") of 124,120 tonnes averaging 12.8 grams per tonne (0.37 oz/ton) gold and 33.7 grams per tonne (0.98 oz/ton) silver, for an in-situ total of 50, 834 ounces gold and 134, 386 ounces silver.

The mill is reported to be in good shape (last operated in 1999) and is secured by a caretaker.

FIGURE 1

LOCATION MAP B.C.

Figure 1: Map showing the location of the Blackdome Area (after Price and Glanville, 2000b).

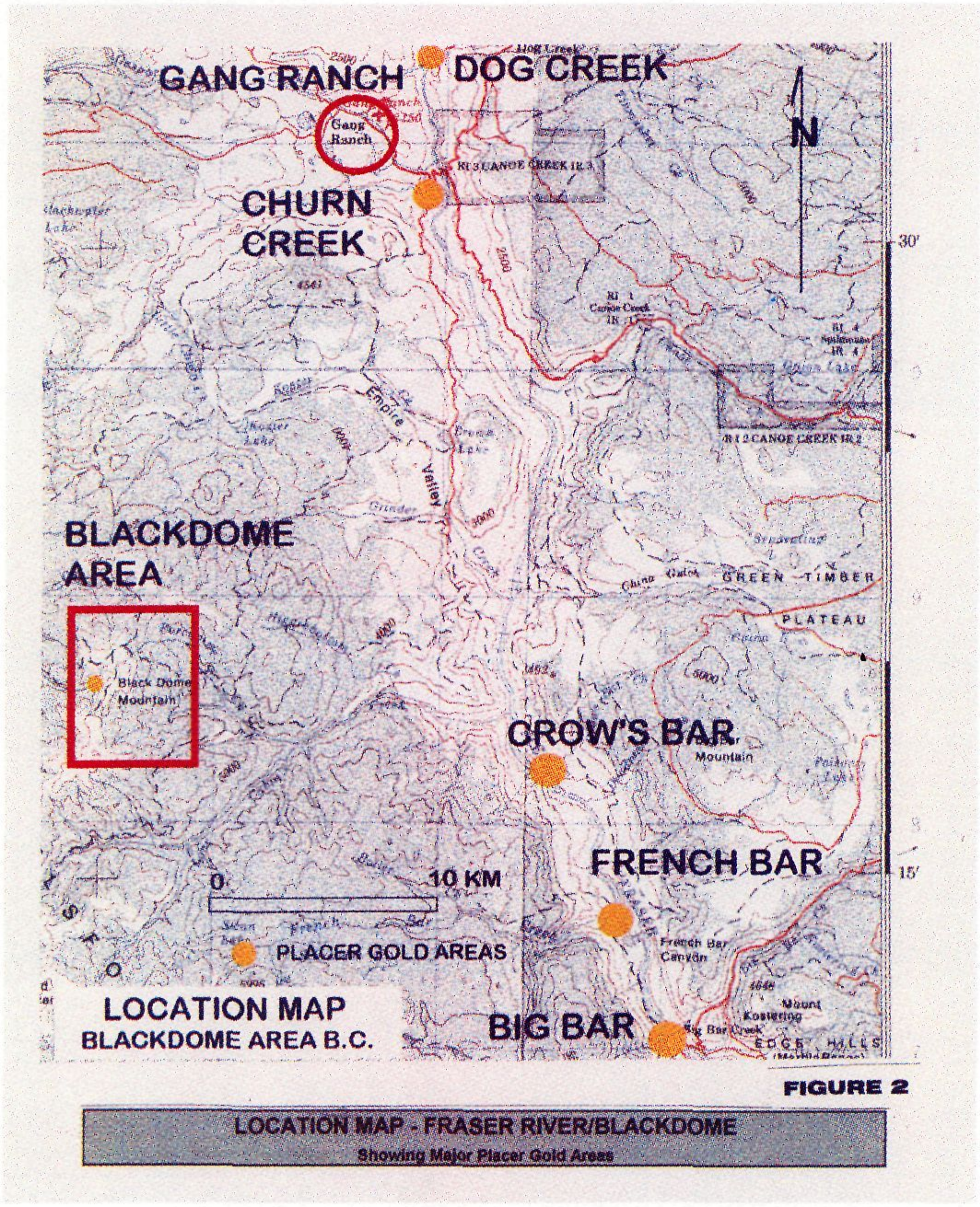


Figure 2: Map showing the location of the Blackdome Mine (after Price and Glanville, 2000b).

The property comprises 27 mineral claims totalling 258 units, ten crown granted mineral claims totalling 169 Hectares and two Mining leases totalling 988.33 hectares, all held by No. 75 Corporate Ventures Ltd., as shown in Figure 3 and summarized in the following table. The writers have checked the mineral titles as stated on the Mineral Titles website of the BC Ministry of Mines, Energy, and Petroleum Resources. These titles were in good standing as of November 1, 2001.

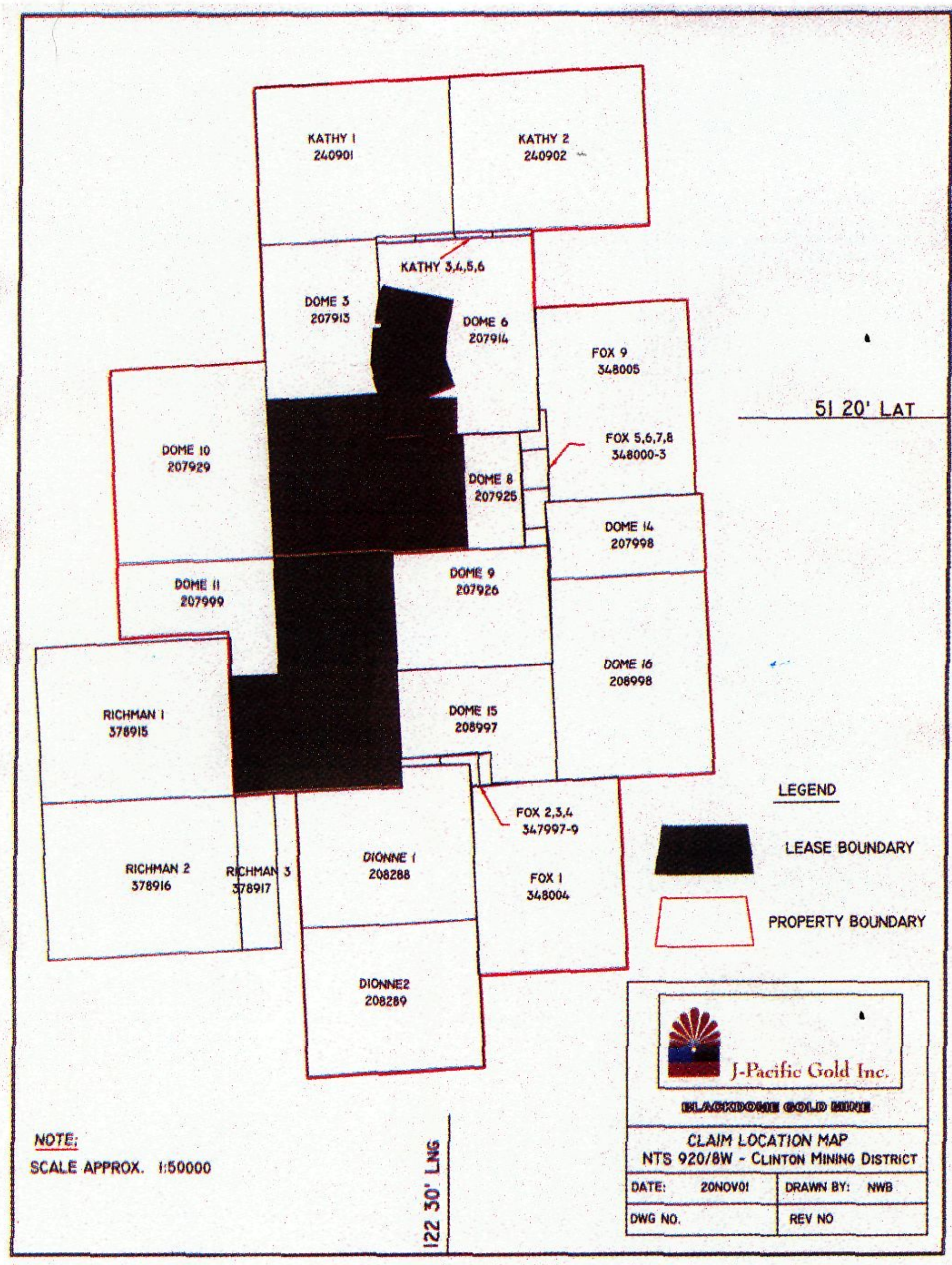


Figure 3: Map showing the Claims and Mining Leases

Blackdome Gold Mine - Mineral Titles

Mineral Claims

Tenure	Claim Name	Owner	Equity	Mapsheet	Expiry	Status	Mining Div.	Units	Tag No.
207929	Dome #10	133817	100%	092O07E	10/1/2003	Good Standing	Clinton	20	45470
207999	Dome 11	133817	100%	092O07E	10/1/2003	Good Standing	Clinton	12	61698
208288	Dionne 1	133817	100%	092O07E	10/1/2003	Good Standing	Clinton	20	82591
208289	Dionne 2	133817	100%	092O07E	10/1/2003	Good Standing	Clinton	20	82590
208308	Laurie Fr.	133817	100%	092O07E	10/1/2003	Good Standing	Clinton	1	75386
207913	Dome #3	133817	100%	092008W	10/1/2003	Good Standing	Clinton	12	42762
207914	Dome #6	133817	100%	092008W	10/1/2003	Good Standing	Clinton	20	36053
907925	Dome #8	133817	100%	092008W	10/1/2004	Good Standing	Clinton	6	37041
907926	Dome #9	133817	100%	092008W	10/1/2004	Good Standing	Clinton	12	30742
907998	Dome #14	133817	100%	092008W	10/1/2003	Good Standing	Clinton	8	37046
208997	Dome 15	133817	100%	092008W	10/1/2003	Good Standing	Clinton	16	112581
208998	Dome 16	133817	100%	092008W	10/1/2003	Good Standing	Clinton	20	112582
347997	Fox 2	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617072M
347998	Fox 3	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617073M
347999	Fox 4	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617074M
348000	Fox 5	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617075M
348001	Fox 6	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617076M
348002	Fox 7	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617077M
348003	Fox 8	133817	100%	092008W	10/1/2003	Good Standing	Clinton	1	617078M
348004	Fox 1	133817	100%	092008W	10/1/2003	Good Standing	Clinton	20	200855
348005	Fox 9	133817	100%	092008W	10/1/2003	Good Standing	Clinton	20	213331
387893	Kathy #1	133817	100%	092008W	7/7/2002	Good Standing	Clinton	20	240901
388333	Kathy #2	133817	100%	092008W	7/7/2002	Good Standing	Clinton	20	240902
387894	Kathy #3	133817	100%	092008W	7/8/2002	Good Standing	Clinton	1	690701
388334	Kathy #4	133817	100%	092008W	7/15/2002	Good Standing	Clinton	1	705445
388335	Kathy #5	133817	100%	092008W	7/16/2002	Good Standing	Clinton	1	705446
388336	Kathy #6	133817	100%	092008W	7/15/2002	Good Standing	Clinton	1	705447
27 Claims								258	Units

Mining Leases

Title No.	Name	Owner	Equity	Mapsheet	Expiry	Status	Lease Tem	Area Ha.	Rental/Yr.
209457	209457 ML 30	133817	100%	092O07E	3/12/2008	Good Standing	30 Years	433.50	$ 4,440.00
209456	209456 ML 46	133817	100%	092008W	12/8/2019	Good Standing	21 Years	544.83	$ 5,450.00
								978.33	$ 9,890.00

Crown Grants

Lot No.	Name	Owner	Equity	Land District	Mapsheet	Quadrant	BCGS	Area Ha.	
7871	Moosehorn	133817	100%	Lillooet	092008W	D	920038	20.90	
7872	Sadie	133817	100%	Lillooet	092008W	D	920038	20.90	
7873	Whiskey Jack	133817	100%	Lillooet	092008W	D	920038	20.90	
7874	Pinon Pine	133817	100%	Lillooet	092008W	D	920038	20.27	
7875	Electrum Fr.	133817	100%	Lillooet	092008W	D	920038	5.47	
7876	Bonanza	133817	100%	Lillooet	092008W	D	920038	20.67	
7877	Eldorado	133817	100%	Lillooet	092008W	D	920038	16.96	
7878	Blackdome	133817	100%	Lillooet	092008W	D	920038	17.33	
7879	Ptarmigan	133817	100%	Lillooet	092008W	D	920038	20.90	
7880	Sugarbowl Fr.	133817	100%	Lillooet	092008W	D	920038	4.89	
10 Claims								169.19	Hectares

3. HISTORY OF THE PROPERTY

The following history has been compiled from BC Department of Mines Annual Reports and from the database of the Northern Miner 12 yr CD, taken essentially as verbatim from Price and Glanville (2000b).

1930's Placer mining on the Fraser River at Big Bar, French Bar Crows Bar, High Bar, etc., led to a placer gold discovery on Poison Mountain in 1932. The resulting claim rush saw a large area staked, including most of the creeks in the Black Dome Mountain area. The source of the placer gold was a large low-grade copper-gold porphyry system that was drilled much later. Considerable sluicing was done on Fairless Creek, which drains the west slope of Black Dome Mountain. Recorded production to 1945 was 57 ounces of placer gold, but actual production was likely higher than that. The source of the placer gold in Fairless Creek is almost certainly the epithermal veins higher on the slope.

1947 The hardrock gold property was discovered in 1947 by prospector L. Frenier, who staked eight claims on the upper part of the western slope of Porcupine (locally called Blackdome) Mountain. Additional claims were staked as follows: Norman Hillborn - 8 claims, W.G. Osborne: 6 claims, Walter Fenton, Mary J. Fenton, Henry Fenton, K.J.S. Chisholm and Hugh McLeod: - 32 claims. The claims were isolated at the time and required a 15 mile walk from Gang Ranch or 25 mile walk from Big Bar. Frenier had set up an ingenious arrastre of granite boulders, from which he produced small amounts of gold. In 1948 he brought in a 2 ton elliptical roll mill with an attached mercury feeder, all powered by a 1.5 horsepower gas motor. The claims were called: Moosehorn, Saddle, Whiskey Jack, Pinion Pine, Electrum Fraction, Bonanza, Eldorado, Black Dome, Ptarmigan and Sugarbowl Fraction, as shown in the accompanying map.

1952 **Empire Valley Gold Mines Ltd**. gained control of the Frenier property and six placer leases on Fairless Creek, and completed underground work and testing. A 25 mile road was built from Empire Valley, south of Gang Ranch, which is reached via the Churn Creek Bridge over the Fraser River. The bulldozer was then used for stripping, and exposed the Giant vein on the Pinion Pine claim for 500 feet and the Red Bird No.'s 1 and 4 veins, on the Bonanza and Eldorado claims, were exposed for 200 feet each. Cross-cut trenches exposed the Redbird No. 3 and No. 4 veins.

1953 **Silver Standard Mines Ltd.** (Wilson Mining Corporation Ltd. - Ridgeway Wilson) obtained an option on the property and explored by stripping and drilling. The Giant vein is exposed for 650 feet with an average width of 4 feet. No. 1 vein, exposed for 540 feet, was stated to average 0.284 opt gold and 1.8 opt silver over 375 feet, at an average width of 8.2 feet. The Redbird vein is traced for 700 feet with a width of 3.5 feet. Silver Standard drilled 6 holes totalling 783 feet to test the No. 1 vein below outcrop. (Results were not reported). Later in 1958, Silver Standard or Empire Valley Gold Mines Ltd. completed a 150 ft adit on the Giant Vein (elev. 5800 ft) and 50 feet on the Red Bird Vein (elev. 6,500 feet). Stripping was done on the Black Shear and Honey veins. A short landing strip was built at 6,500 ft elevation.

1977 **Barrier Reef Resources Ltd.**, under the direction of Bert Reeve, gained control of the property, and extensive work was carried out on the No. 1 vein system. From 1977 to 1983, extensive geological mapping, prospecting, rock geochemistry, geophysics and diamond drilling were performed on the property, under the direction of Jim Dawson, P.Geo. (Kerr Dawson and Associates of Kamloops).

1979 **Blackdome Exploration Ltd.,** a company formed by the various equity holders, completed surface geological mapping, 1073 soil and 76 rock samples, 36 surface diamond drill holes (BQ) totalling 2097 meters,.5 trenches totalling 600 linear meters and 1 kilometre of road construction. (AR# 7512???)

1980 **Blackdome Exploration Ltd.** completed 70 BQ diamond drill holes totalling 6,580 meters on 5 claims, Dome 1,2,3,6 and 8.

1981 Underground exploration, in the form of 900 meters of drifting and raising, delineated a resource of 50,000 tons of 0.62 oz gold per ton and 5.6 oz silver per ton along the No. 1 vein zone. Diamond drilling of 106 holes totalling 8,700 meters was completed, after which, resources were re-calculated to 284,000 tonnes averaging 12 g/t gold and 110 g/t silver.

1982 **Heath Steele Mines Ltd.** (a Noranda Exploration company subsidiary) and Blackdome Exploration (Barrier Reef Resources) reached an option agreement for further exploration on the property. This work constituted geological mapping, geochemical and geophysical surveying and another 4400 meters of diamond drilling. The work was actually done by Matagami Lake Exploration, another Noranda company. J.M. Dawson, P.Geo., completed geological mapping at a scale of 1:5,000, 4,377 meters of BQ diamond drilling in 32 holes and 1230 rock and core samples. (AR #11046).

1983 In May 1983, Noranda Exploration company Limited (Heath Steele) commenced with a drift, 762 meters north of the original portal. Approximately 900 meters of drifting were completed by October of 1983, but only limited success resulted from this work and Heath Steele chose not to continue financing the development. However, they retained a 15.4% shareholding in Blackdome. Other shareholders were Barrier Reef Resources Ltd., 19 %, and Empire Valley Gold Mines Ltd 10.6%.

1984 Blackdome promoted their property in order to raise capital for further exploration drifting. Drifting was undertaken to explore a continuation to the south along the No. 1 vein system and an extension to the west to connect with the untested No. 2 vein system. An exploration drift and raises on the 1920 m level were initiated in the fall of 1984, and encouraging results allowed Blackdome to make a positive decision to go into production.

1985 **Blackdome Exploration Ltd.** under the direction of C.M. Lalonde and D.W. Rennie completed detailed geological mapping, 932 soil samples, 705 meters NQ and BQ diamond drilling 340 meters of trenching and 1087 meters of underground mining development. (AR # 14301).

1986 **MFC Mining Finance Corp** was the major shareholder of Blackdome with 51.4% ownership. Production began in the spring of 1986 using a 200 ton per day mill. The first seven and one-half months production to the end of 1986 saw 38,267 tons of ore treated, averaging 174 tons per day with an average grade of 0.86 oz. gold and 3.17 oz silver per ton. Approaching the end of March 1987, recovery averaged 92.7% for gold and 72% for silver. Total ore reserves as quoted at the end of 1986 were 276,000 tons averaging 0.72 oz gold and 2.58 oz silver per ton with a cut-off grade of 0.25 oz gold per ton. Production continued to 1991, when the high-grade ore shoots were depleted. During this time, ownership of Blackdome's parent company MFC Mining Finance Corp. changed, and in 1989, Blackdome merged with MinVen Gold Corp. MinVen closed the mine in 1991. During its five-year life, the mine was one of the highest-grade gold mining operations in western Canada. The underground gold mine operated from May 1986, to January 1991, producing 240,000 ounces of gold from 371,950 tons of ore.

1994 **Claimstaker Resources Ltd,** in July 1994 agreed with a private company BDM Gold Corp. to buy the Blackdome mine. The purchase price included $200,000 cash, 1.9 million shares (of which 1.4 million will be in escrow) and a $900,000 debenture. The debenture pays 6% per year and is convertible into a maximum of 900,000 shares. The property included the 220-ton-per-day mill and camp facilities, as well as miscellaneous heavy equipment. Ivor Watson, P.Eng., Charles Forster, P.Geo and D. Wortman P.Eng prepared a detailed geological report describing the property and recommending a $1.5 million exploration and rehabilitation program.

1995 **Aurizon Mines Ltd** agreed with Claimstaker to purchase 50% interest in the Blackdome property. Aurizon would pay $450,000 cash by July 15, 1996, and spend slightly more than $2 million by July 15, 1997. If the property was brought into production by April 30, 1997, at Aurizon's expense, the company would receive an additional 5% interest. To maintain its option, Aurizon had to spend at least $500,000 by the end of 1995.

1998 **Joint Venture Agreement with Jipangu**: On April 27, 1998 the company entered into a joint venture agreement with Jipangu, whereby, Jipangu could earn a 50% working interest in the Blackdome property by expending $1,700,000 on the property, and paying Claimstaker $1,300,000. Payment of the $3,000,000 was received by Claimstaker by December 23, 1998, of which Claimstaker spent $1,700,000 on exploration. Accordingly, Jipangu has earned its 50% interest in the property.

Claimstaker Resources re-opened the mine on October 10, 1998. Reserves at start-up were stated as 128,627 tonnes grading 14.0 grams per tonne gold in the proven and probable categories. The total, fully diluted resource, including drill-indicated resources, is 237,881 tonnes grading 13.1 grams per tonne gold and 37.1 grams per tonne silver (Exploration in BC 1998, page 60 (Claimstaker Resources Ltd., May 27, 1998)). At this time, Claimstaker held 65% and Jipangu Inc. of Tokyo held 35% of the mine. Pilot production began in October 1998. In January 1999, commercial production commenced at the Blackdome mine.

In May 1999, Claimstaker drilled 7 holes totalling 1060 meters targeting the No. 11 vein. Jipangu increased its interest to 50% by funding the exploration. In spite of favourable drilling results, the price of gold continued to fall, and the mine was shut down in May 1999.

4. PAST PRODUCTION AT BLACKDOME

Early production at Blackdome (taken as verbatim from Price and Glanville (2000b)), ca. 1985, began at a rate of 185 tonnes per day. Production was mainly from the No. 1 and No. 2 veins using the 1870, 1920, 1960 and 2050 underground levels. Trackless haulage was used throughout the mine. Total workforce was 135 men. Development headings and raises were also driven on four smaller satellite veins: the Watson, Redbird, No. 17, and No. 18 veins. The No. 18 vein was accessed by a 120 meter cross-cut from the 1870 level on the No. 1 vein. Mining was done mainly by cut and fill methods except where steeper dips and more competent ground allowed for shrinkage stoping (No. 18 vein and the north end of No. 2 vein).

In August 1989, Black Dome Mines became a wholly owned subsidiary of MinVen Gold Corporation based in Denver Colorado. At this time ore reserves and grade were declining. However, MinVen continued to explore, mainly by drilling, and mineralization in drill hole No. 723, and a subsequent follow-up hole, No. 730, resulted in an intersection of 1757 g/t gold over 0.41 meters. This new zone, on a new vein named No. 18, proved to be the largest and richest stope yet encountered at the mine (28,200 tonnes grading 26.4 grams/tonne, or 23,870 ounces in-situ). This permitted the mine life to extend to January 1991, at which time, although considerable work had been done on the No.11, 18 and 19 veins, MinVen closed the mine.

At the mine closure, a total of 20,988 meters of mine development had been completed along 3,750 meters of strike length, mostly on the No.1 and 2 veins, and mainly along a 1,250 meters strike length of these two veins. Production as outlined above, exceeded the initial reserves in 1986 by 145,300 tonnes (55%). The mine is said to have produced revenues (after taxes) of Can$6.7 million for the shareholders. Operating cash costs between 1986 and 1991 averaged $208 per ounce.

5. RECENT PRODUCTION

After a feasibility study, completed in 1997, and between November 1998 and June 1999, under Claimstaker Resources Ltd. as operator, the mine produced 203,631 grams of gold (6,547 ounces) and 538,090 grams of silver (17,300 ounces) from 21,286 tonnes of ore (Price and Glanville, 2000b). This gives a recovered grade of 0.28 ounces per ton gold (9.55 grams/tonne).

Operating problems at the mine were:

- A slow start up in the period October 31 to December 31, 1998 resulted in a shortfall to the mill of 12,000 tonnes or more.
- Insufficient mine development headings resulted in the above shortfall. The mill throughput was reduced to one shift, or, 100 tonnes per day.
- The cone crusher failed in January 1999, resulting in two weeks of down time.
- A fatal accident occurred underground in February 1999 as a result of unstable ground.
- Grades were lower than expected in the resource areas that were developed for production, as a result of nuggety gold distribution.
- The price of gold kept falling. Overall production costs totalled Cdn$218 per tonne or US$472 per ounce of gold. Gross Revenues were $1.87 million and overall costs were $3.34 million.

6. PART A - GEOLOGICAL MODEL

The Blackdome deposit is characterized as a 'low-sulphidation', or 'adularia-sericite type', volcanic-hosted, epithermal gold-silver deposit and, as such, it is endowed with the complex mineralogical assemblages and paragenesis of gangue and ore-related minerals that are typical of its class. Details of the mineralogy and geological setting of the deposit are well described by Vivian (1988), and summarized in *MINFILE* (http://www.em.gov.bc.ca/cf/minfile), and by Price and Glanville (2000b), and will not be reproduced here.

SRK's approach to gold exploration begins with an understanding of the plumbing system responsible for the transport and concentration of the mineralizing fluids. By placing the primary fluid pathways into their structural context, it is possible to develop effective targets that test key areas at the earliest stages of the exploration program. For this reason, the principal focus of the model presented here is on the structural controls on the distribution of mineralization and identification of critical targets for exploration drilling, trenching and drifting.

6.1 Regional Setting

The Blackdome vein system is hosted by a sequence of Eocene aged volcanic and volcaniclastic rocks within the Fraser River fault system, in central British Columbia. The volcanics occupy a northward widening fault block, bound to the west by the Hungry Valley Fault and, to the east, by the Fraser River Fault (Figure 4). These faults separate the Eocene aged rocks in the fault block from older, Cretaceous volcanics to the west and Paleozoic rocks to the east.

The principal structures of the Fraser River fault system, the Fraser and Slok Creek faults, have experienced an estimated 160 km of dextral strike-slip displacement since the Late Permian (Friedman and van der Hayden, 1992). Most of this movement predates emplacement of the Eocene aged volcanic host rocks of the Blackdome deposit, but some post-Eocene dextral strike-slip movement of unknown magnitude is recorded locally along the Fraser and Slok Creek faults.

Subsidiary structures in this system, the Yalakom, Hungry Valley and McEwen faults are also primarily dextral strike slip faults. However, juxtaposition of Cretaceous and

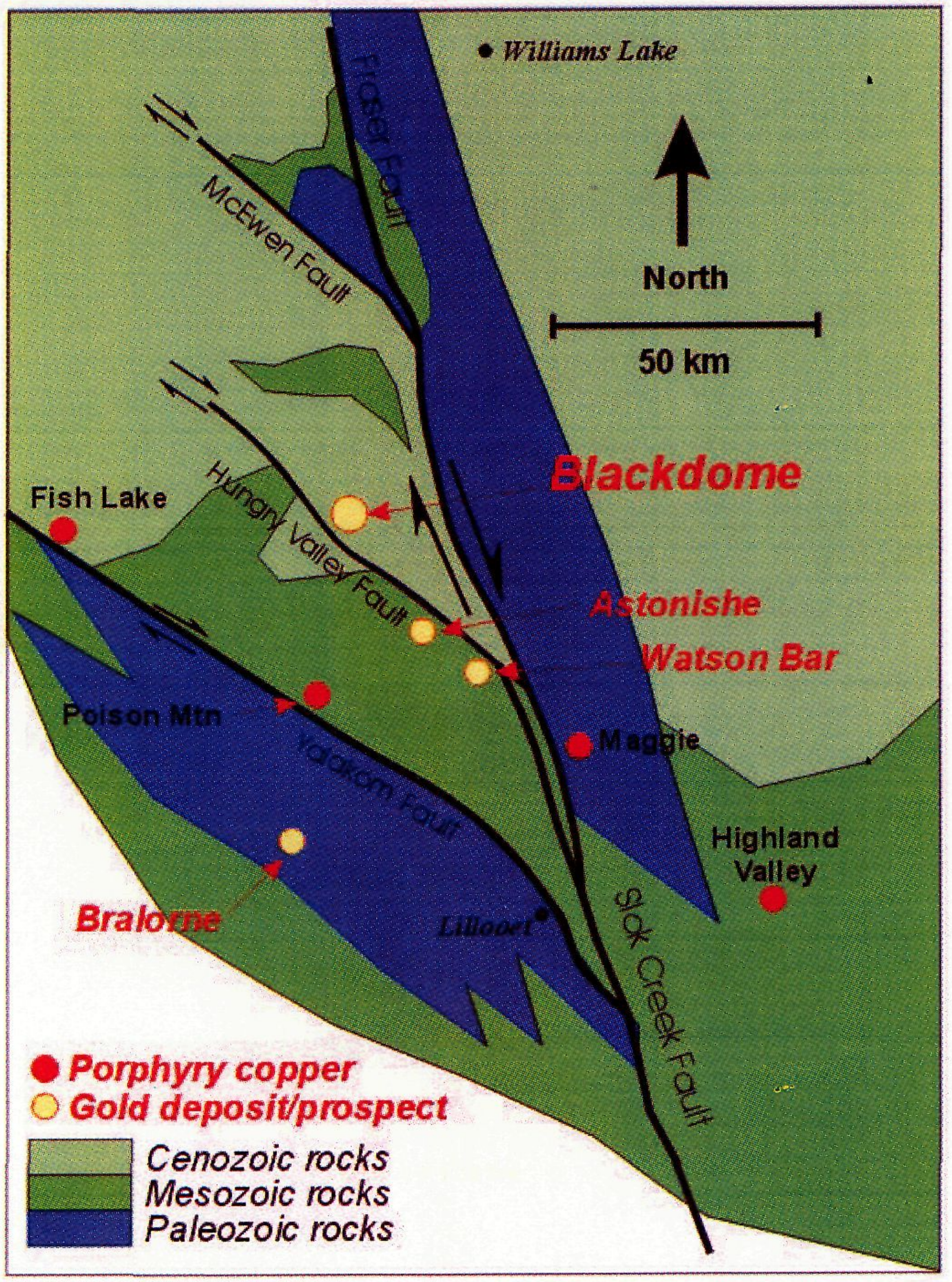


Figure 4 - Simplified map of the regional tectonic setting of the Blackdome deposit, in central British Columbia, showing the Fraser River fault system and the broad age divisions of the rocks it transects.

Paleozoic rocks on either side of the Eocene volcanic wedge that hosts the Blackdome deposit indicates that a certain amount of vertical displacement was also accommodated by these, and related, structures. Based on the known kinematics from structural studies around the Yalakom fault (Schiarizza et al., 1996), and the expected movements in a dextral strike slip system, the vertical components of displacement on these subsidiary structures were most likely reverse and/or thrust faulting.

Gold and porphyry copper mineralization is well-known in this area along the Fraser River fault system, and its subsidiary structures, the Yalakom, Hungry Valley, and McEwen fault, including such well-known deposits as the Bralorne gold deposit and the Highland Valley Copper deposit. Mineralization is invariably localized along these major faults and related minor structures. The Blackdome deposit occurs within 5 km of the Hungry Valley fault, in an area where placer gold occurrences have been known for more than a century.

Rocks within the wedge formed by the Fraser and Hungry Valley faults consist of more than 1000 meters of andesite to rhyolitic flows, tuffs, breccias and ash beds that form a gently east-dipping homocline. These Eocene aged volcanics, and their contained epithermal gold veins, are unconformably overlain by Miocene aged basalt flows that are preserved on topographic highlands, such as the peak of Blackdome Mountain (Figure 5).

6.2 Other Mineral Deposits in the Area

The following has been taken as verbatim from Price and Glanville (2000b).

Frenier Perlite

Perlite Canada Inc. owns the **Frenier Perlite** mine. Attempts were made to bring the property back into production at a rate of 25,000 tonnes per year. Located west of Clinton, the mine produced about 6,000 tonnes of raw perlite between 1983 and 1986. Perlite is hosted in volcanic rocks correlated with the Kamloops Group (MINFILE).

Watson Bar

North of Lillooet, adjacent to Watson Bar Creek, Stirrup Creek Gold Inc. continued drilling for epithermal gold mineralization on the **Watson Bar (Second Creek)** property. A total of 12 holes tested several new targets, as well as, possible extensions to Zone V, the main mineralized zone, where a geological reserve of 136,962 tonnes grading 14.33 g/t Au has been defined. Although results were generally disappointing, several of the holes intersected strong alteration and/or mineralized fault zones similar to Zone V, and additional drilling is warranted.

Stirrup Creek:(Astonishe, Watson Bar)
(amended from Minfile)

During the First World War, placer gold was discovered on the north Fork of Watson Bar Creek (Stirrup Creek). Up to the 1940's, from 3,00 to 5,000 ounces of gold were produced from the creek bed in a series of short drifts. In 1942, N.F.G. Davis explored the property and discovered stibnite, cinnabar and gold in colours in the soil. Later, the property was explored by Rio Tinto Canadian Exploration, who discovered strongly mineralized float. Dr. Harry Warren and partner Charlie Robertson and others explored the property for many years, and found gold crystals in the soil. Chevron completed geological mapping, geophysical surveys and soil sampling and a number of drill holes, some of which intersected gold mineralization. The property is now owned by R.E. Gordon Davis.

Marine sedimentary rocks of the Lower Cretaceous Jackass Mountain Group have been intruded by sills and dykes of feldspar porphyry and quartz porphyry (Tertiary to Cretaceous in age). The Jackass Mountain Group consists of conglomerate, siltstone and sandstone generally trending to the north or northeast and dipping to the west. The sandstone locally contains disseminated pyrite. A number of epithermal veins occur in this area, which has seen a long history of prospecting. However, because the mineralization is almost certainly deposited from one hydrothermal system, related probably to the intrusion of felsic dykes in the area, the mineral occurrences are grouped under the one MINFILE number. Gold-bearing, vuggy, limonitic, chalcedonic, quartz veins and narrow, limonitic, fracture zones cut the sedimentary and intrusive rocks; in places, these veins appear to be stratiform. The veins and fracture zones contain gold, stibnite, arsenopyrite, minor pyrite and anomalous mercury. A positive correlation exists between arsenic and gold in these veins. At the Chisholm showing, stibnite occurs along the margins of a quartz-feldspar porphyry dyke. Wallrock alteration varies from weakly to strongly sericitic (or argillic), while silicification along fault and fracture zones accompanies the sulphide and gold mineralization.

Poison Mountain

The Poison Mountain porphyry copper deposit is on the southwest flank of Poison Mountain, 37 kilometres west of the Big Bar cable ferry on the Fraser River. Mineralization at Poison Mountain is associated with two granodiorite to quartz diorite stocks (the Main and North porphyries), which intrude arkosic sandstones, conglomeratic sandstones and shales of the Lower Cretaceous Jackass Mountain Group. The stocks comprise relatively unaltered cores of hornblende-plagioclase porphyry which grade outwards into biotite-plagioclase porphyry in which the biotite is an alteration product of hornblende. The intrusion, potassic alteration and mineralization at Poison Mountain are about 59 to 56 Ma in age (Paleocene) as indicated by potassium-argon dating of hornblende and biotites from the mineralized system (Canadian Institute of Mining and Metallurgy Special Volume 15).

The highest-grade mineralization occurs within the biotite-altered border phases of the intrusions and adjacent biotite-hornfelsed sedimentary rocks. It consists mainly of pyrite, chalcopyrite, molybdenite and bornite, which occur as disseminations and fracture-fillings, and in veins associated with quartz. Calcite and gypsum also occur as hydrothermal minerals, and pyrite, together with magnetite and hematite, forms an irregular halo around the mineralized zone. Chlorite-epidote alteration occurs sporadically within Jackass Mountain Group rocks for several kilometres around the deposit.

Since its discovery in 1956, the property has been explored by a variety of surveys, 17,269 meters of diamond drilling and 21,131 meters of percussion drilling, which has identified two zones. The Copper Creek zone has reserves of 280 million tonnes grading 0.261 per cent copper, 0.142 gram per tonne gold, 0.007 per cent molybdenum and 0.514 grams per tonne silver. The Fenton Creek zone is estimated at 18.3 million tonnes grading 0.31 per cent copper and 0.128 grams per tonne gold (George Cross News Letter No. 65 (April 2), 1993 and Imperial Metals Corporation, 1995 Annual Report).

In 1993, Bethlehem Resources Corporation drilled 10 holes totalling 2569 meters. Imperial Metals Corporation held an option on the property in 1995.

Many other less significant mineral showings are present in the area. It is beyond the scope of this report to discuss them in detail.

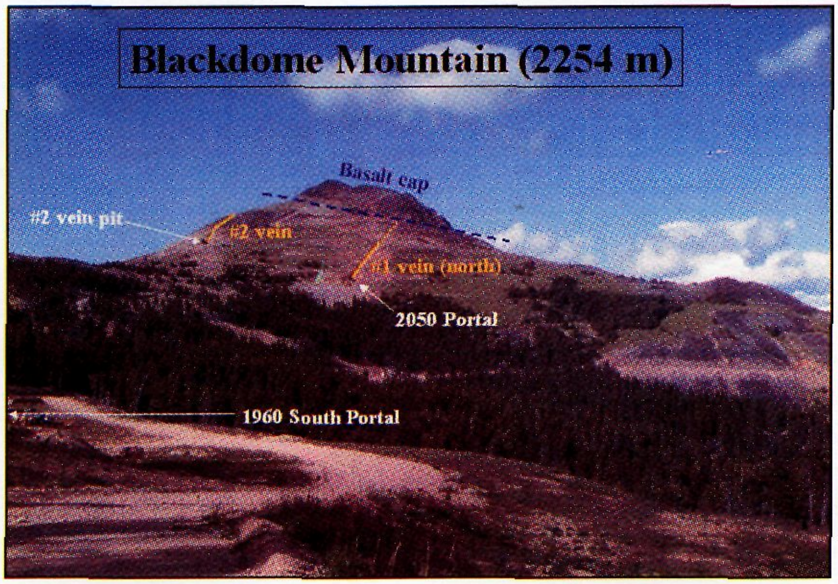


Figure 5 - View of the northern portions of the #1 and #2 veins of the Blackdome vein system beneath the basalt cap, on the south flank of Blackdome Mountain (view looking north).

6.3 Local Geology

In the immediate area of the Blackdome deposit, the Eocene volcanic rocks beneath the basalt cap have been grouped into 3 major lithological units: lower andesite, rhyolite, and upper andesite (Figure 6). Each unit comprises variable amounts of flows, tuff, ash and volcaniclastic rocks, with average thicknesses between 1 to 5 meters. The lower andesite forms the base of the known stratigraphy in the area, and underlies the entire deposit. South of 13,000 N on the Blackdome mine grid, rhyolite forms a unit approximately 100 meters thick on top of the lower andesite. The upper andesite is approximately 200 meters thick, and rests conformably on both rhyolite to the south and the lower andesite to the north. Large volumes of dacitic volcanics occur to the northwest, at the same stratigraphic level as the rhyolite, but do not form a significant part of the local geology around the deposit.

All units are intruded by narrow mafic dykes, which appear to be feeders to the overlying Miocene basalt cap. These dykes locally follow fault vein structures where they truncate mineralization and its associated alteration (e.g. Figure 7).

In the immediate vicinity of the Blackdome deposit, the rocks are gently folded about northerly trending axes, but generally have a shallow, easterly dip. The volcanic rocks below the basalt cap are truncated by a system of mineralized faults and veins with a dominant northerly strike and moderate westerly to sub-vertical dips. The vein system is comprised of two principal structures, the #1 and #2 veins, along with a number of minor, related structures; the #17, Redbird and Giant veins to the north, the #11, #18 and #19 veins in the immediate footwall of the #1 vein to the southeast, and the Southwest and Watson veins to the southwest.

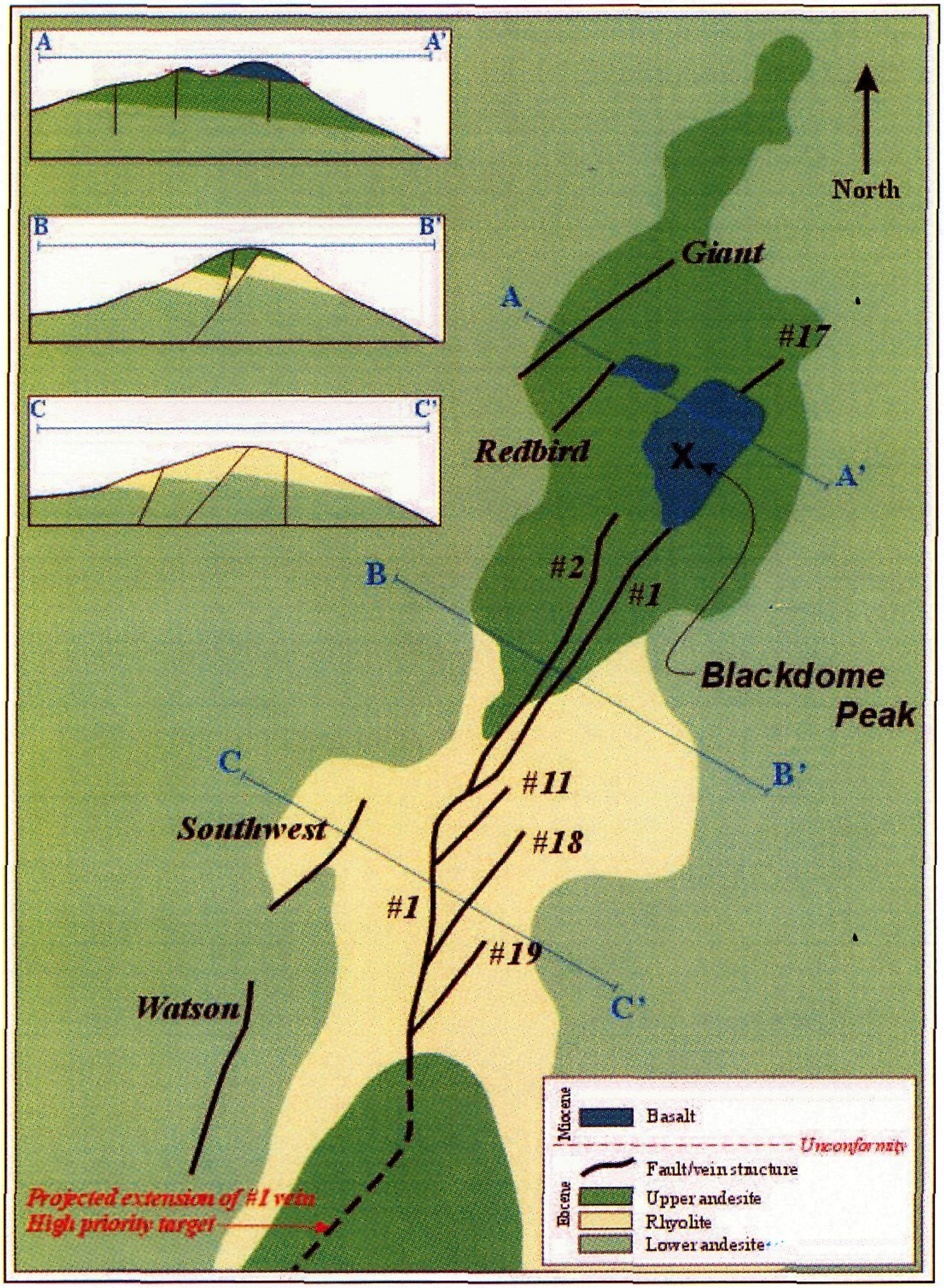


Figure 6 – General geology of the Blackdome deposit, showing the major lithological units and the distribution of the principal vein structures (n.b. cross-sections are drawn schematically).

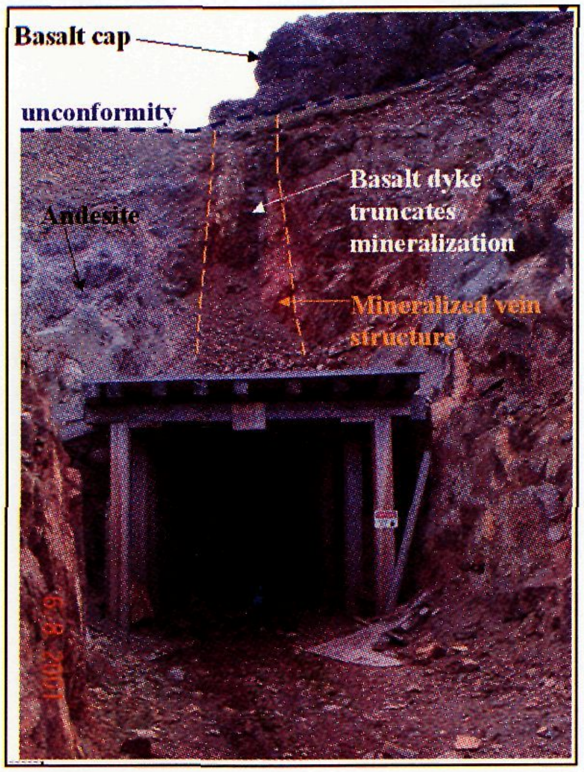


Figure 7 - Example of mafic dyke cutting a mineralized structure beneath the basalt cap. The mineralized structure (Redbird vein) is truncated by the unconformity beneath the basalt.

6.4 Mineralization

Gold and silver mineralization is associated with vuggy quartz breccia veins (Figure 8) that have been superimposed on an earlier phase of weakly developed stockwork veining, pervasive argillic alteration and disseminated pyrite mineralization. Assays from selected samples from each vein system suggest that gold is primarily contained in the vuggy quartz breccia veins (*c.f.* samples 41 a & b, and 48 a & b, Appendix A), which is supported by the work of Vivian (1988), who determined that gold emplacement occurred during the second of three phases of alteration. The third phase of alteration is represented by relatively minor quartz-carbonate veins that are superimposed on the ore.

Both veining events have undergone varying degrees of post-mineral deformation, varying from virtually no deformation (Figure 9) to strongly deformed (Figure 10). Deformation such as that seen in figure 10 is well developed in the #1 vein, and to a lesser degree in the other vein structures. The deformation is associated with the development of gouge and clay, carrying broken vein fragments, and slickensided fault surfaces, which form the most obvious structures in the system.

Figure 8 - Example of gold and silver rich vuggy quartz breccia vein from the 1870 level. Sample BD-40: 171 g/t gold, >100g/t silver.

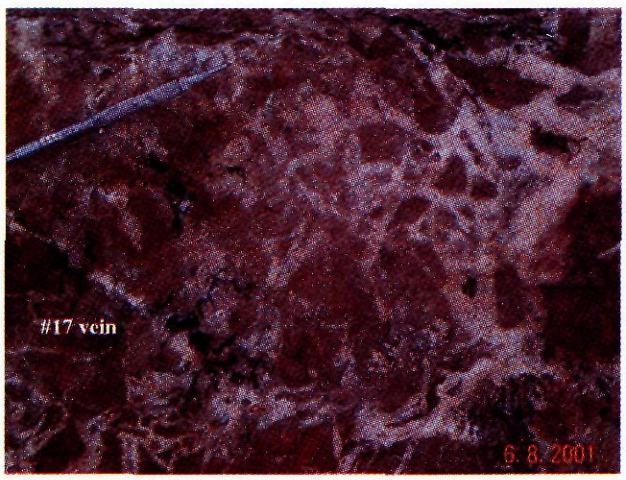


Figure 9 - Example of undeformed, mineralized vuggy quartz breccia from the #17 vein.

Figure 10 - Example of strongly deformed quartz breccia vein due to reactivation of the #1 vein structure.

However, most of this deformation is interpreted to post-date mineralization for the following reasons:

- Slickensides record a variety of movement directions that include reverse, normal, dextral strike-slip and sinistral strike-slip movements, the kinematics of which cannot explain the known distribution of mineralized veins.
- The veins are equally well developed in areas that have been strongly deformed and areas that are essentially undeformed, suggesting that their emplacement was unrelated to this stage of deformation.
- Sheared basalt observed in the basalt cap above the Redbird vein indicates that at least some of the deformation post-dates mineralization, denudation, and subsequent emplacement of the basalt.

Despite this post-mineral overprint, the distribution of vuggy quartz breccia veins correlates very well with the distribution of the main structures. It seems likely that this structural system formed the primary architecture of the mineralized system, but also focused deformation, albeit inconsistently, during later reactivation events. As a result, portions of the ore zones are intensely deformed, whereas others remain relatively pristine, but none of this deformation bears any influence on the distribution of ore in the system. Understanding the ore controls therefore requires examination of the broader scale features that have not been obscured by the later deformation.

In the upper portion of the #2 vein pit, the geometry of relatively undeformed quartz veins indicates that they were emplaced during normal movement on that structure (Figure 11). The dominant orientation of internal veins in the structure, forming a line from upper left to lower right (parallel to hammer handle), shows their opening direction (red arrows) to be compatible with normal displacement on the steeply west-dipping structure. The presence of veins along, and parallel to, the zone walls, indicates that mineralization continued during slip on the structure. Similar veins cross-cutting each other further indicate that mineralization was synchronous with movements on this structure. Large vugs filled with euhedral quartz crystals present in some parts of the veins indicate that the veins remained open for extended periods of time between each sequential displacement.

Figure 11 - Example of relatively undeformed, vuggy quartz breccia veins, illustrating emplacement during sequential normal displacement on the #2 vein (from #2 vein pit).

6.5 Structural Model for the Blackdome Deposit

A 3D structural model of the Blackdome vein system (Figure 12) has been constructed from a database of 994 diamond drill holes. The structures defined in the structural model are interpreted from logged fault/vein intersections in the core, but also incorporate intersections where veins occur, but no faults were logged, or vice versa. Emphasis was placed on defining discrete, continuous structures that occur at the scale of the deposit, and isolated veins and structures that could not be traced for a significant distance were ignored. The result is a 3D model of the fundamental structural elements of the deposit that can be used in analyzing the distribution of mineralization and its relationship to deformation.

The model clearly illustrates a number of important large-scale structural features of the deposit. First, the #1 vein is the dominant structural element of the deposit, to which the #2, #11, #18 and #19 veins are intimately related. Second, the vein structures can be divided into two broad classes based on dip; the #1, Southwest and Watson veins have moderate westerly dips, whereas all other veins are steep to vertical. Third, the #1 and #2 veins are highly sinuous structures that split apart, rejoin, and appear to bifurcate and fragment towards the north.

The #1 vein and its related structures are centered on the rhyolite unit, which acts as an excellent marker horizon for illustrating the kinematics of the system. Drill hole fans across these structures clearly illustrate normal displacements of the rhyolite across the #1 and #2 veins (Figure 13).

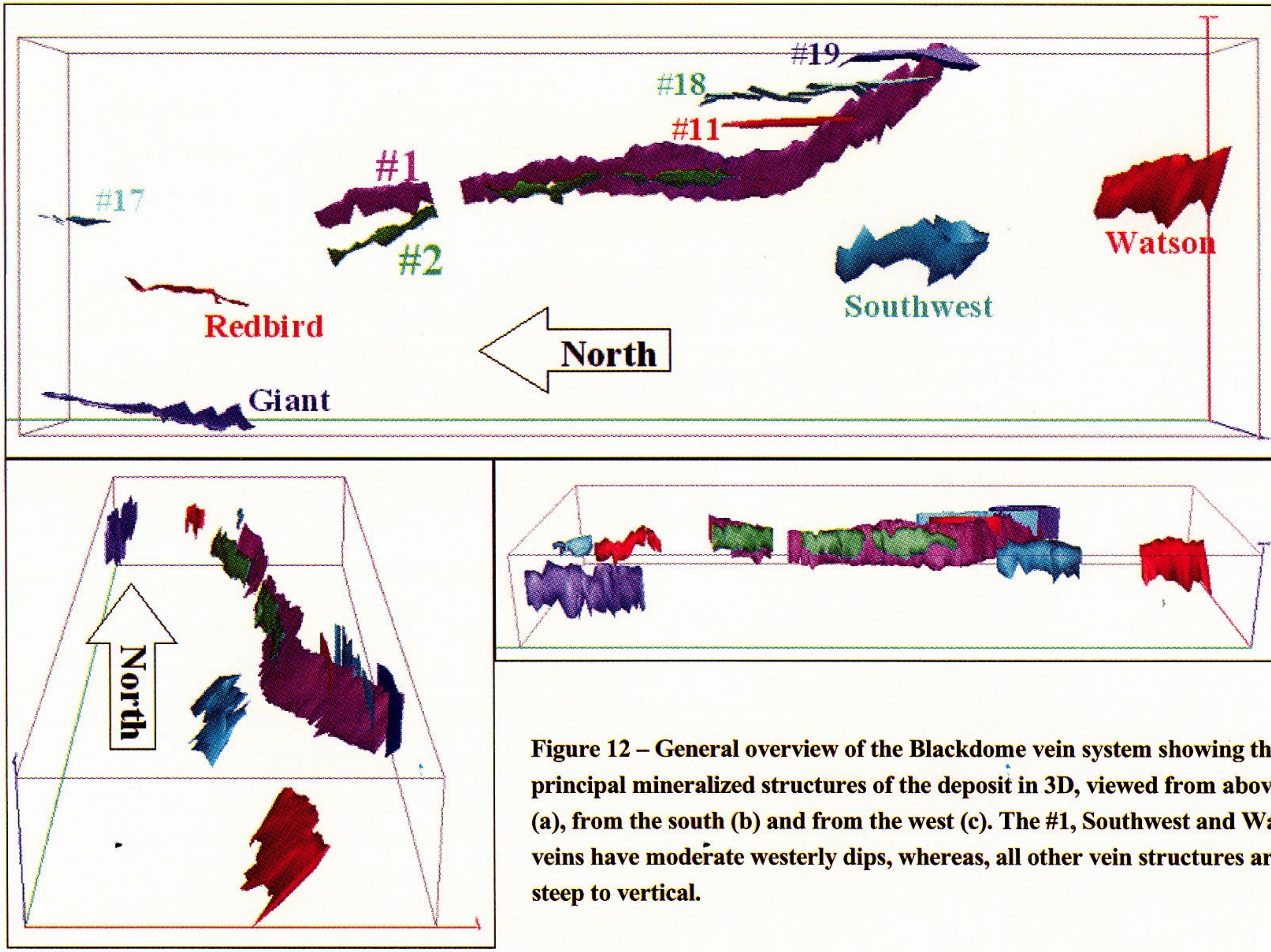


Figure 12 – General overview of the Blackdome vein system showing the principal mineralized structures of the deposit in 3D, viewed from above (a), from the south (b) and from the west (c). The #1, Southwest and Watson veins have moderate westerly dips, whereas, all other vein structures are steep to vertical.

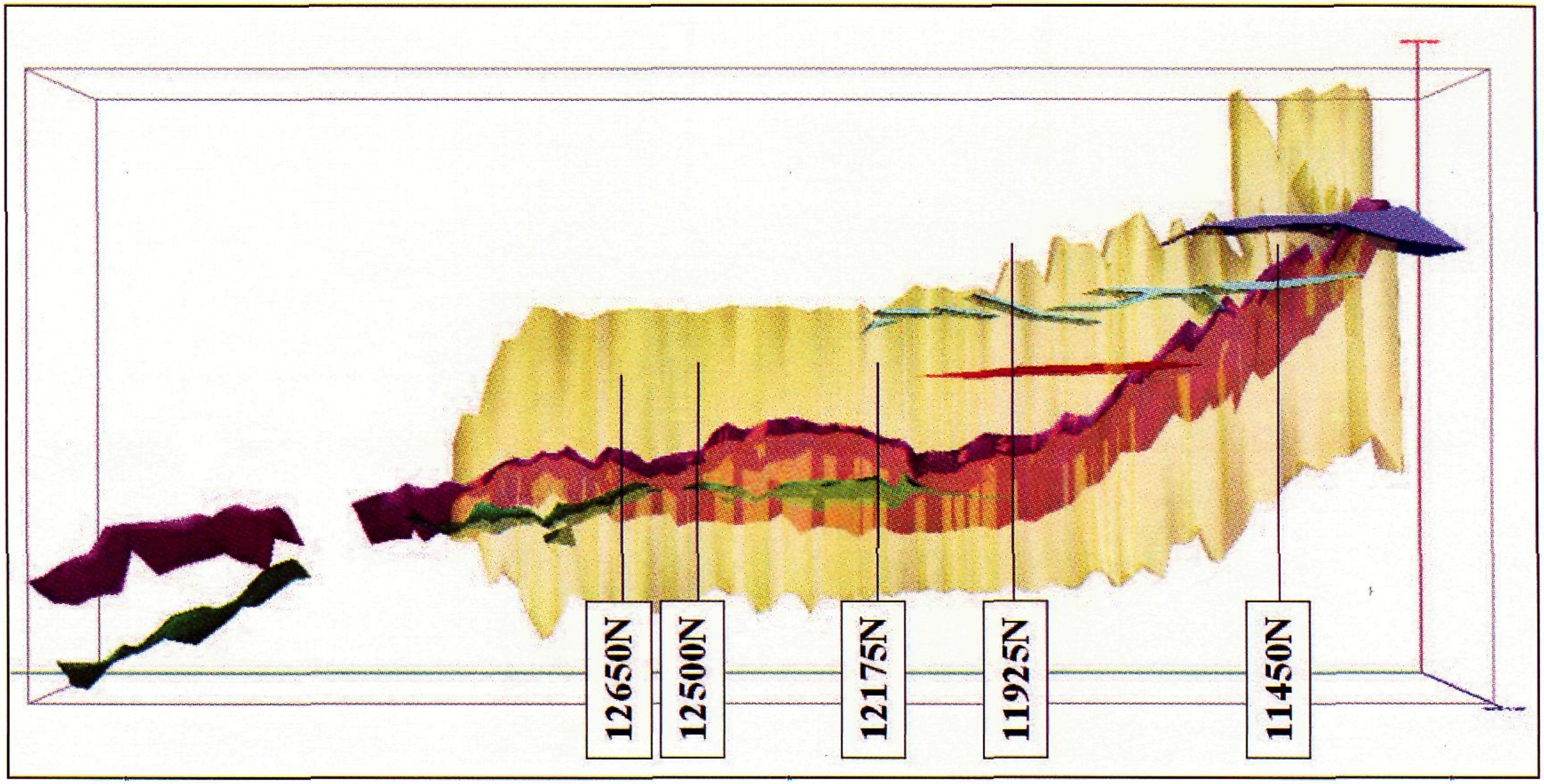


Figure 13a – Plan view of the Blackdome vein system within rhyolite. Section lines refer to the positions of figures 13b-f.

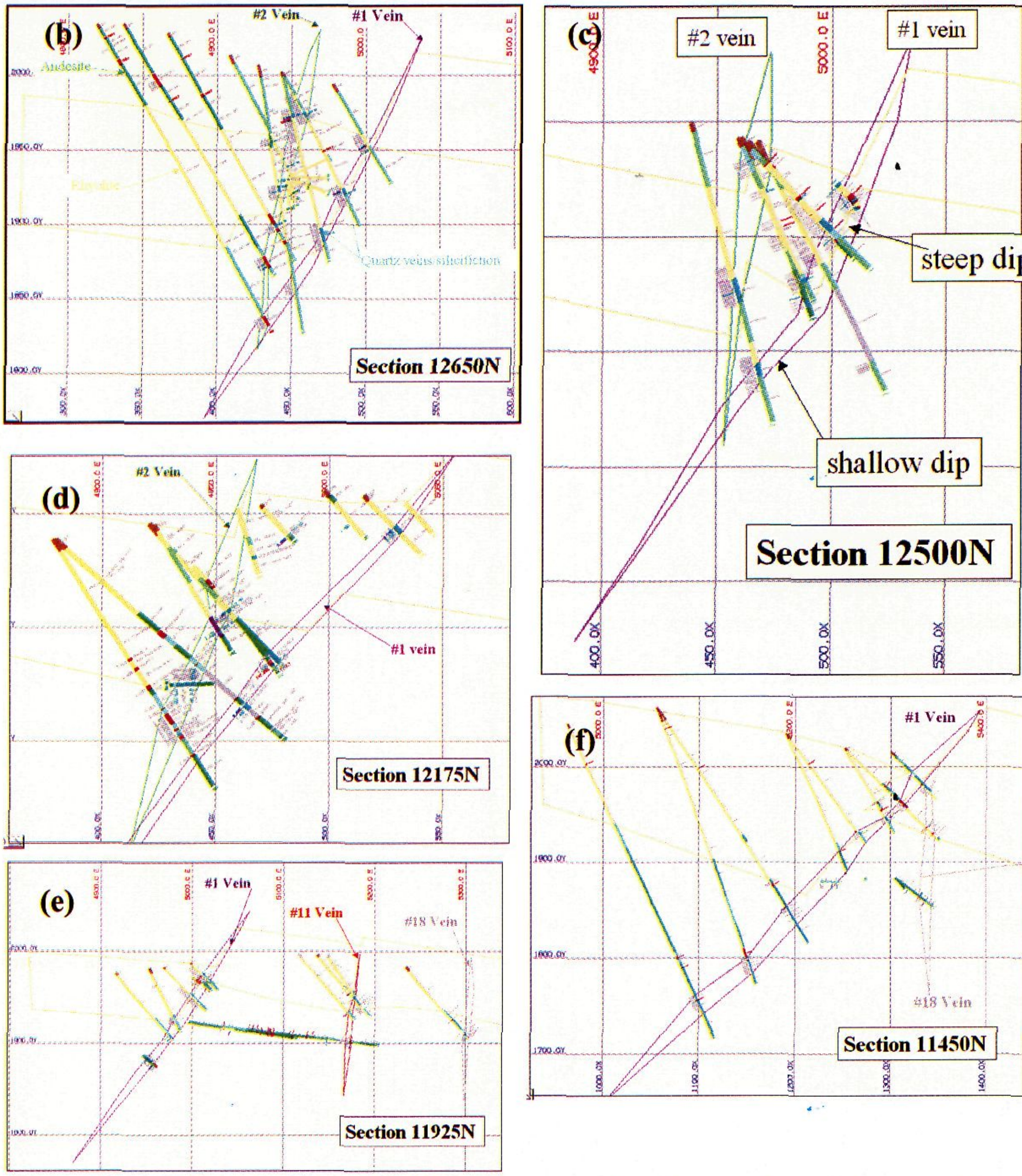


Figure 13b-f: Examples of drill hole interpretations from various sections, as shown in figure 13a. The rhyolite marker horizon clearly defines normal displacement on the westerly dipping #1 and #2 veins, but note the limited offset on the vertical veins #11 and #18 in (e) and (f). Note the distinctly steeper dip of the #1 vein as it passes through the rhyolite from andesite, particularly in ©. The section in (f) is an apparent section, which gives the false impression of a much shallower dipping #1 vein.

Normal faulting on the #1 and #2 vein structures, coupled with limited displacement on the vertical #11, #18 and #19 veins, show that the Blackdome vein system forms a classic fault and tension vein system that formed in response to predominantly east-west extension. Normal displacement is fairly uniform along most of the main structure, but diminishes fairly quickly from around 90 meters vertical displacement in the central portions to less than 10 meters in the north and south. In the north, the structures bifurcate and fragment into a number of narrow, discontinuous veins, which implies that the deformation weakened in this direction. However, to the south, rather than breaking up into smaller structures, the #1 vein is refracted towards the southeast, where it intersects three vertical tension veins (#11, #18 and #19 veins).

The southerly changes in geometry are associated with a change in the style of deformation from normal faulting on westerly dipping structures, north of the bend, to the development of vertical tension veins and limited vertical displacement on the #1 vein, south of the bend. Here, the #1 vein accommodates predominantly strike slip displacement, thus accounting for the lesser amount of vertical displacement, and transfers the extensional strain into its hanging wall and footwall, resulting in the development of the subsidiary tension veins #11, #18, and #19.

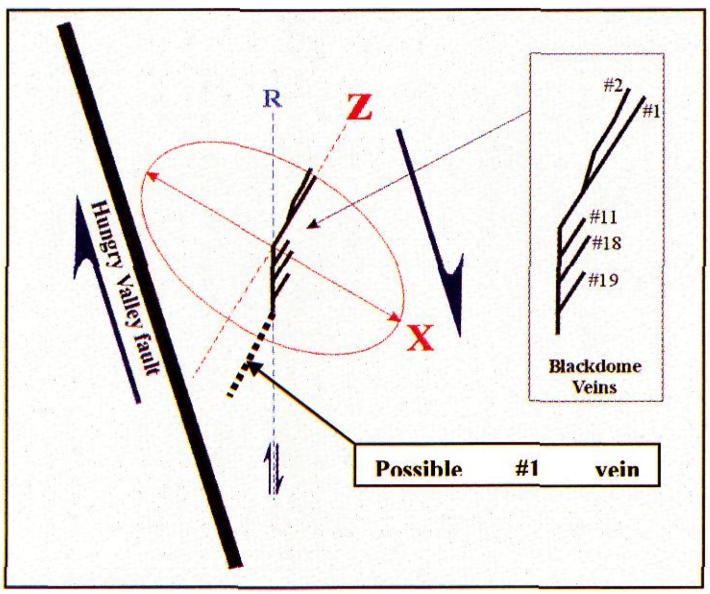


Figure 14a - Schematic illustration of regional strain pattern, or strain 'ellipse', showing the directions of extension (X), shortening (Z) and strike-slip (R) deformation. North is towards the top of the page.

When these elements of the deformation are placed into their regional context, it is clear that they formed in response to the regional scale dextral strike-slip movements on the Fraser Valley fault system. The regional strain field around the Blackdome deposit can be viewed in terms of a strain ellipse (Figure 14a). Regional scale, dextral strike-slip movements, parallel to the neighbouring Hungry Valley fault, southwest of the Blackdome property, would cause extension in the X direction of the strain ellipse. This promotes pure extension on structures parallel to the Z direction (e.g. most of the Blackdome veins). Structures oriented parallel to 'R' (e.g. southern portion of #1 vein) would undergo predominantly dextral strike-slip movements with minor extension.

These structures may have formed in response a local distortion in the strain field set up by the presence of another normal fault, offset to the south. The zone in between the two faults can be referred to as a relay zone, in which extensional strain is transferred through initially intact rock, by tension veins and a relay fault (Figure 14b).

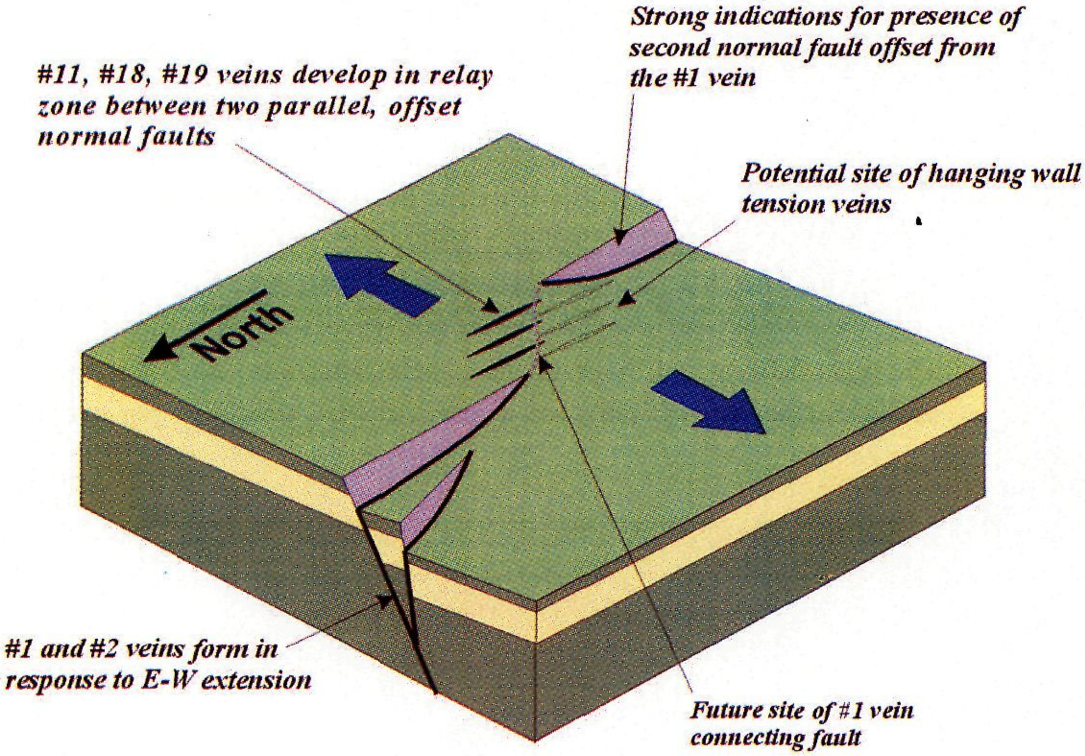


Figure 14b - Schematic diagram illustrating a relay zone geometry in which strain is transferred via tension veins and a connecting fault between two normal faults.

6.6 Structural Controls on Mineralization

Understanding the timing of mineralization to deformation is critical to assessing what controls vein distribution. Thrusting, normal faulting and strike-slip displacement have all been observed throughout the mine and surrounding areas, but all of the evidence suggests that the primary control on the distribution of mineralization was east-west extension, which produced normal faults in the form of the #1, #2, Southwest and Watson veins, and tension veins in the form the #11, #18, #19, Giant, Redbird, and #17 veins.

Once an understanding of the deformation associated with mineralization is established, as in the above model, it can be used to help predict the controls on the distribution of discrete ore bodies within the system. Ore bodies will occur where the structural system provides sites of dilation, thus allowing passage of greater volumes of mineralizing fluids. Dilatant sites generally occur at irregularities in the geometry of system, which behave favourably under a given strain field. At Blackdome, there are two key types of irregularities, each of which can be shown to localize known ore bodies. The two key sites are:

- Intersections between discrete structures
- Inflections in the sinusoidal trace of the veins, both along strike and down dip.

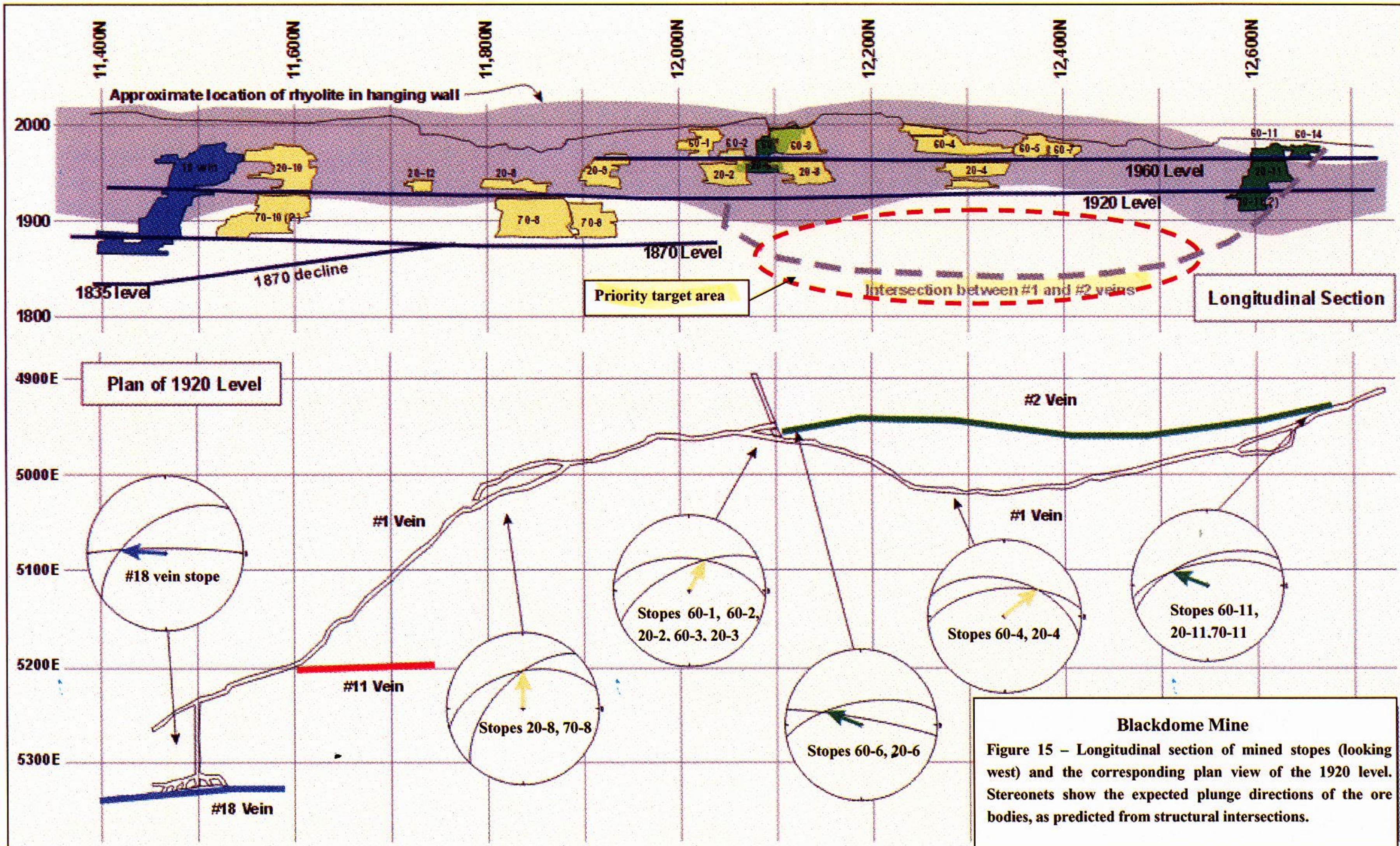
Structural intersections promote dilation as a result of the competitive movements taking place on the different structures. Each structure forms to accommodate a certain displacement, be it normal movement, pure extension, or strike-slip movement. When these structures intersect, space problems develop as a result of the incompatibilities between the movement vectors, and dilation occurs.

Inflections in the plane of a structure can create space when there is lateral displacement across the structure at an angle to the zone of inflection. Similar to two sheets of corrugated tin, when the displacement vector is parallel to the line of inflection, no dilation occurs, whereas if the two sheets are forced to slide against the grain of their corrugation, many long shoots open up and large volumes of fluid may pass through them.

Structural inflections normally occur as a result of competence contrasts between lithological units. Strain tends to refract as it passes through rocks of different competency or rheology, as light refracts through media of contrasting density. In other words, a fault that propagates from a rock with low competence, such as andesite, into a more competent unit, such as rhyolite, it will tend to refract towards the normal of the contact between the two. This is well illustrated in section 12,500N (Figure 13c), which shows that the #1 vein has a significantly steeper dip where it passes through rhyolite. As the #1 vein structure undergoes normal displacement, this steep zone may be expected to dilate preferentially, relative to adjacent parts of the structure in the andesite. Indeed most of the ore at Blackdome came from this portion of the system (Figure 15).

Figure 15 shows a longitudinal section of mined stopes, looking west, and the corresponding plan view of the 1920 level. Stopes mined from the #1 vein are shown in yellow, #2 vein stopes in green, and the #18 vein stope in blue. The hangingwall intersection of the #1 vein with rhyolite is shaded, and the intersection between #1 and #2 veins is shown as a dashed line.

The stope outlines show that there are two competing mechanisms at work in producing the ore bodies. The first order control on the ore body shapes appears to be from structural intersections. This is evident from the variable plunges of the ore bodies at each structural intersection. The #18 vein stope, and 20-10/70-10 stopes have distinct southerly plunges, parallel to the line of intersection between the #1 vein and each of the vertical tension veins, #18 and #11, respectively (see corresponding stereonet). These two stopes are different in that the #18 vein stope is developed in a vertical tension vein (i.e. the #18 vein), whereas the 10 stope (at the 20 and 70 levels) are developed in the #1 vein where it intersects the #11 vein (no stope outlines were found for the #11 vein ore body). In the drill hole sections, this latter zone coincides with a very broad zone of intense veining, likely developed as a result of space compatibility problems between the #1 and #11 veins during deformation.



Blackdome Mine

Figure 15 – Longitudinal section of mined stopes (looking west) and the corresponding plan view of the 1920 level. Stereonets show the expected plunge directions of the ore bodies, as predicted from structural intersections.

The 20-8/70-8 stope occurs at a strong inflection in the #1 vein, from a dominantly southeast trend to a dominant north-northwest trend. The vein structure bifurcates at this junction, giving rise to a structural intersection that plunges steeply to the west. In long section, this direction projects as a vertical line, and the steep plunge of the stope suggests it is following this line. This zone is on the northern flank of the thickest portion of the #1 vein, as defined in vein thickness contour plots produced by Blackdome geologists. The thick zone plunges steeply towards the north, between the 20-12 and 20-8/70-8 stopes, but does not itself appear to contain ore.

Stopes 60-6/20-6 and 60-11/20-11/70-11 all occur at intersections between the #1 and #2 veins (see dashed grey line). The orientations of these intersections plunge steeply towards the south; again parallel to the ore bodies. These intersections also coincide with anomalously thick zones defined in vein thickness plots produced by Blackdome geologists.

Stopes 60-4/20/4 and 60-1/20-2, 60-2, 60-3/20-3 both appear to have formed at flexures in the #1 vein, where it changes orientation from a southwest trend (unmineralized) to a more northerly trend (mineralized). This relationship illustrates the prediction made by the structural model that zones oriented at a high angle to the principal extension direction (i.e. structures parallel to 'Z' in Figure 14a) will undergo the greatest dilation. The plunge of each ore body is also parallel to the intersection line defined by the flexure.

The second order control on the shapes of the stopes appears to be refraction of the structures across bedding contacts. The shallow east-dipping beds intersect the main structures along a sub-horizontal line (parallel to the rhyolite contact). Down dip refraction from steep to shallow dips, and vice versa, of the structures as they pass through beds 1-5 meters thick would be expected to produce sub-horizontal zones of preferential dilation within each stope. The small scale, sub-horizontal embayments and 'apophyses' of the stope outlines (e.g. 20-10, 20-8, 60-1, 60-14) and general sub-horizontal shape of some of the stopes (e.g. 60-4, 60-5, 60-7) seem to exhibit this kind of control.

This bedding control appears to be most pronounced within the rhyolite, partly since most of the stopes occur where the structures intersect rhyolite, but those outside of it, nevertheless, appear to have more regular shapes. Clearly the rhyolite unit has a strong influence on, and is a favourable host for, ore at Blackdome, but an examination of the first order controls on the locations of the ore, namely structural intersections, coupled with the fact that large volumes of rhyolite do not appear to contain ore, it is not the single most important criteria for ore.

6.7 Previous Ideas on Ore Controls

Apart from the work of Vivian (1988), which sought primarily to characterize the mineral paragenesis of the ore and its associated alteration, very little work has focused on placing the vein system into a broader geological context, or addressed key controls on the distribution of mineralization. One such study, that of Bird (1989), recognized the presence of rhyolite, within an andesite 'sandwich', as a key element in focusing mineralization. His model emphasized the steepening of the main structures (#1 and #2 veins), through the rhyolite unit, arguing that these steeper zones would accommodate more dilation and thus better ore horizons. As discussed above, this is clearly an important part of the ore distribution at Blackdome, and should be a strong, but not absolute, consideration in any targeting strategy.

Other workers have proposed a preferred mineralized horizon between the 1870 and 1960 levels, controlled by the optimum depths for boiling (Boronowski, 1999a). This hypothesis was based on the following assumptions:

- Gold was precipitated as a result of 'boiling' (spontaneous lowering of gold solubility due to effervescence of a gas phase) of mineralized fluids within a specific hydrostatic pressure horizon ***above the 1870 level***.
- Hydrostatic pressure below this horizon was too high to allow boiling.
- Confining pressures above the 1960 level were too low to allow the formation of discrete, continuous veins. Rather, gold precipitated into broad, discontinuous vein networks that are too diffuse to produce economic grade-thickness intersections.

'Boiling' is one of the most important precipitation mechanisms in low-sulphidation epithermal gold deposits, and was likely a key factor in the development of the Blackdome ores. Within a perfectly hydrostatic system, in which fluid pressure gradients remain constant throughout the history of gold precipitation, one might expect to find a specific elevation where fluids boil and precipitate gold. However, this type of system would require well-maintained permeabilities and a perpetual connection to surface, neither of which are expected characteristics in an active hydrothermal mineralizing system.

Mineralization is a self-defeating mechanism. As quartz, gold and other minerals are precipitated in a vein, it gradually becomes sealed and can no longer transmit substantial amounts of fluid. New cracks must open and dilate in order to continue the mineralizing process. The enormous amount of mineralizing fluid that is required to form a gold deposit, requires that the host rocks are in a continually active state of deformation, such that new cracks are forming throughout the mineralizing event. The dynamic nature of such a system, with fluid pressures building beneath sealed areas compounded by compression and dilation introduced from deformation, causes fluid pressure fluctuations throughout the system, both laterally and with depth. It is therefore unlikely that the mineralization at Blackdome has such a clean depth 'cut-off' at the 1870 elevation.

Furthermore, this hypothesis appears to have stopped previous workers from doing any significant exploration below this depth on the #1 vein (Figure 16).

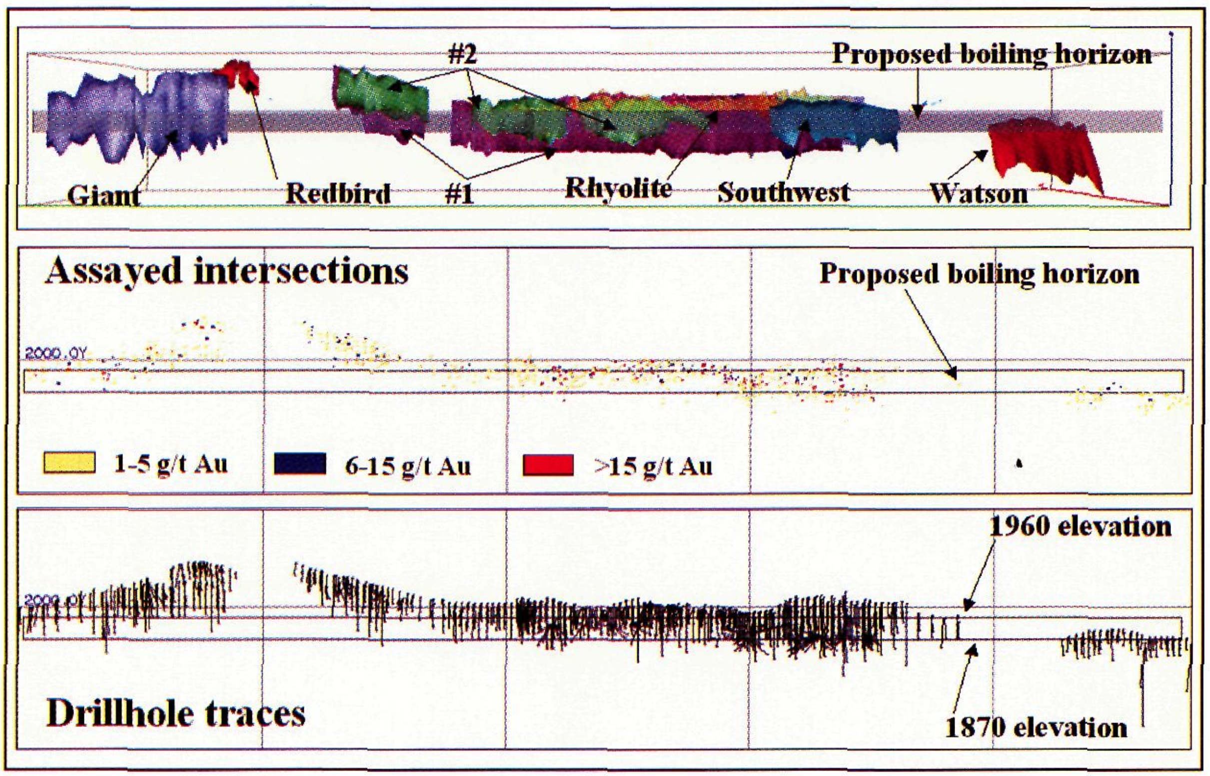


Figure 16 - Longitudinal sections showing the extent of interpreted structures, assayed gold intersections and drill hole traces in and around the previously proposed 'boiling horizon', between the 1870 and 1960 levels.

However, in the few cases where drilling extended to depths below the 1870, gold intersections, several in the >15 g/t range, are as regular as at higher levels. Most of the deeper drilling took place in the #18 vein below the #18 stope, and in the Watson vein, to south, and each of these areas returned significant numbers of average gold grade intersections.

The notion that the lack of hydraulic pressures above the 1960 level is responsible for the discontinuity of vein structures in the northern areas, is probably not as important a control as the fact that strain clearly diminishes in this direction along the #1 and #2 veins, as indicated by the decreased offset of the rhyolite unit toward the north. While gold intersections are fairly abundant, some with very high grades, the lack of structural continuity in this area reduces its attractiveness for further exploration.

6.8 Targeting

Many of the richest stopes at Blackdome were developed in areas that contained only 3 out of a couple dozen high-grade intersections. Clearly, the nuggety gold distribution presents a significant barrier to grade prediction on the basis of drill core intersections. For this reason, the focus of any drill exploration program must be based on criteria that incorporate a broader geological understanding of the controls on mineralization, in addition to gold grade.

The geological model presented in the previous section defines both the controls on the distribution of mineralization, and the geometry of the vein system at Blackdome. Based on this model, a number of key criteria have been developed to assist in evaluating potential targets. Geological criteria that are deemed critical to the development of economic ore bodies in the Blackdome system include the presence of, in order of importance:

1- Vuggy quartz breccia veins (or deformed equivalents) and continuous structure,

2- Intersections between major vein-bearing structures,

3- Flexures in vein-bearing structures with normal displacement and northerly strikes, and,

4- Vein bearing structures crossing rhyolite-andesite contacts.

All known ore bodies contain some combination of these features, the best of which are developed in areas with criteria 1 and 2. Targets have been developed on the basis of the structural model and these easily recognizable criteria to allow quick and efficient evaluation of drill test success. Due to the nugget effect of the gold distribution at Blackdome, the gold grade of drill intersections is known to be a poor indicator of contained ounces. In evaluating the success of a drill hole, these criteria should therefore take priority over assayed grades.

Targets have been defined in high and low priority classes on the basis of their potential of containing large new reserves (high), and extending known mineralized areas with smaller potential yields (low). The targets are listed below in order of priority:

High Priority Targets

#1 and #2 vein intersection – This target is defined on the basis of the well-known presence and location of two very important structures, the #1 and #2 veins. The location of their intersection is well constrained from existing drilling, and the first three critical criteria are known to be present. The target remains essentially untested, possibly due to the fact that the area with highest potential occurs just below the 1870 level (Figures 15 and 17).

This target is an attractive one since retrieving a bulk sample (the best indicator of ore body grade) would only involve extending the workings at the 1870 level, to the north, by about 200 meters to determine whether the zone is viable, and 400 meters ~~to get a~~ confident estimate of its continuity. No drill holes are recommended since the structures are known to be present, and the best indicator will be an easily retrievable bulk sample. BULK SAMPLE

Southern extension - The asymmetry of the #1 vein and its strain distribution suggests that only half of the structure may be known. The gradual increase in continuity of the veins and gold distribution, towards the south, and the well-developed tension veins (#11, #18, #19), should not be expected to end as abruptly as it does on existing maps. Structures generally need space to gradually dissipate strain. In the case of the #1 vein, it could have a mirror image, south of its mapped southern termination (Figures 14 and 17). Fault jogs in gold bearing systems, elsewhere, commonly have the form expressed by the southern parts of the Blackdome vein system, namely a strike slip connection between two offset normal faults, with a set of intervening tension veins. There is a strong possibility that the strike-slip deformation on the southern part of the #1 vein, and the extension developed in the #11, #18, and #19 veins represents a strain transfer, or *'relay'*, to another normal fault, to the south, parallel to the main #1 vein to the north.

Because this target is so large, its presence could be confirmed with trenching, or a single well-placed drill hole. In order to confirm at least a couple hundred meters of depth extent along strike, at least 2 holes (600 meters max.) are recommended to test this area, following trenching. DDH

#1 hanging wall tension veins – The kinematics of the Blackdome system defined by the structural model predict that the hanging wall portion of the #1 vein, south of the #11, #18, and #19 veins (Figure 17) is equally capable of containing large tension veins similar to those in the footwall. When targeting these structures it must be recognized that they will not necessarily occur directly on strike with the known tension veins in the footwall. They could be slightly offset due to the strike slip deformation, or for other reasons.

To completely test this area for tension veins would require a continuous fan of drill holes that left no gaps along strike, possibly as much as 1000 meters (five 60 degree holes @ 200 m apiece). However, trenching can again be used as a valuable and cost effective precursor to drilling. Follow up drilling would be recommended to test the depth extent of any significant newly defined structures. DDH

Watson and Southwest connector – Might have been a nice target due to the presence of a promising flexure, similar to that of the #1 vein, but unfortunately most of it has been gouged out by the valley containing the headwaters of Fairless Creek.

Lower Priority Targets

Depth extensions of known ore bodies, particularly those within the #1 and #2 vein intersection (below stopes 20-2, 20-6, 20-3, 20-4 and 20-11) have good potential for yielding additional ore bodies, comparable in size to some of those already mined.

The #1 vein system is expected to dissipate in intensity to the north and under the basalt cap. There are almost certainly many gold-bearing veins in this area, but their predicted small size and lack of continuity make them very unattractive targets.

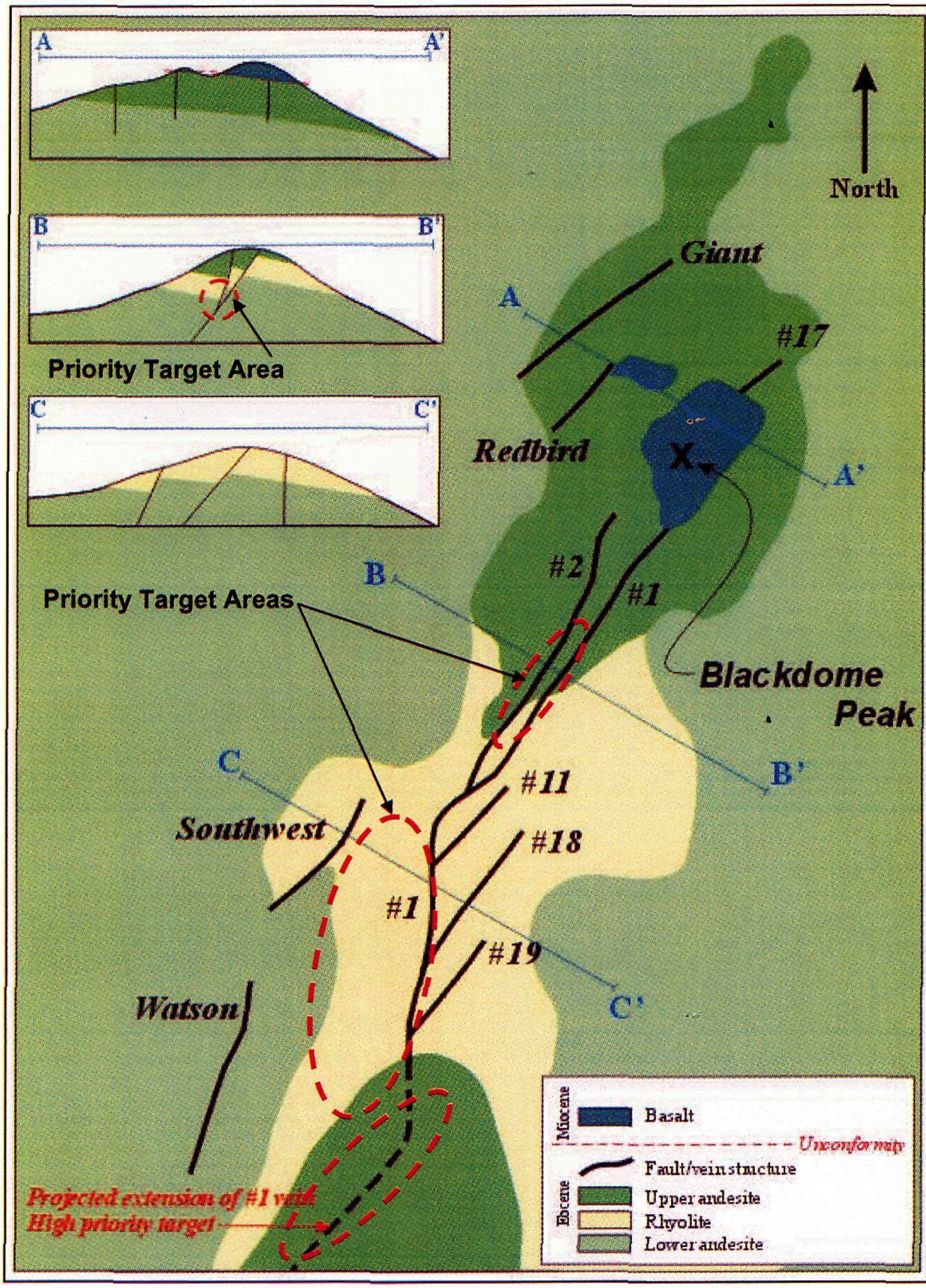


Figure 17 – Copy of figure 3 showing proposed high priority targets.

7. PART B - RESOURCE ESTIMATE

Based on our current understanding of the geology model, particularly the controls on gold and silver mineralization, SRK completed a preliminary review of the current resources/reserves and recent mining operations in order to assess the validity of the resource/reserves. Another objective is to provide recommendations for consideration by J-Pacific for improving any future resource modeling efforts and for re-opening of the mine.

Currently, the Blackdome property has an Inferred Reserve (now re-classified by SRK as Inferred Mineral Resource, CIMM, 2000 definitions) of 124,120 tonnes averaging 12.8 grams gold per tonne (0.37 oz/ton) and 33.7 grams silver per tonne (0.98 oz/ton), totaling 50,834 ounces gold and 134,386 ounces silver (A. Boronowski, 1999).

7.1 Database

The database for the Blackdome Mine consists of 994 surface and underground core holes and numerous underground channel samples collected from more than 5,000 meters of underground development along several drifts (namely the 1870, 1920 and 1960 levels) connected by numerous raises and adits. This data has been used to delineate the various deposits from the topographic surface to a vertical depth of approximately 200 meters. In addition, several small surface open pits/trenches exist along the expression of the mineralization. All of this data have been incorporated into the current resource calculation (Boronowski, 1999).

The majority of the drill holes occur along northwest-southeast trending, 25-meter spaced cross sections, drilled at 45 to 80 degrees inclination to the southeast, intersecting the mineralized zones as close to right angles as possible (true thickness). The majority of the drilling intersects the mineralization at 25-50 meter spacing down dip.

The drill hole database, which includes the survey, assay, and lithological data, is maintained at the mine site and at J-Pacific Gold's office in Vancouver utilizing the Gemcom computer software program. The remaining data for the underground and surface chip and channel sampling and production statistics exists as paper copies at the mine site. As a recommendation, a portion of this data should be reformatted for use in any future metal reconciliation efforts.

Although the QA/QC program was not reviewed in detail, SRK is of the opinion that the exploration and development data is reliable based on the experience from previous mining campaigns. However, a more comprehensive QA/QC program, consisting of sample standards, sample blanks, duplicate samples and independent assay verification through a third party laboratory, is recommended for any future exploration programs, particularly outside of the area of the current mine workings.

7.2 Solid Body Modeling

In order to better define the controls on gold and silver mineralization, SRK constructed a "conceptual" 3-dimensional solid body model for each of the deposits (Figure 18). During construction, emphasis was placed on defining discrete, continuous structures that occur at the scale of the deposit. Isolated veins and structures that could not be traced for a significant distance were ignored. The result is a 3D model of the fundamental structural elements of the deposit that can be used in analyzing the distribution of mineralization and its relationship to deformation. These geological boundaries are essential in any good resource estimate as they provide constraints for assay compositing and grade interpolation.

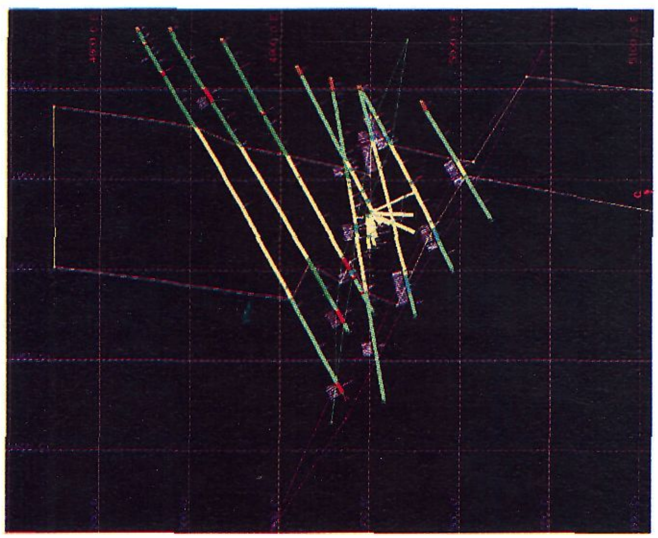


Figure 18: Cross section through the Vein 1 deposit (looking north) showing the Vein 1 (magenta) and Vein 2 (green) solid body models and the rhyolite horizon (yellow).

7.3 Statistical Analysis

Gold mineralization at the Blackdome Mine is very discontinuous, due primarily to the discontinuous nature of the quartz veining within the main deformation/alteration zones and the nuggety nature of the attendant gold mineralization (the latter is illustrated in figure 19). The discontinuous nature of the quartz veining is related to emplacement of the veins at structural traps along the main structural trend, whether it is due to the intersection of two geological structures, or where structures cross favourable stratigraphy, such as the rhyolite horizon. For these reasons, great care and attention must be given to predicting the grade and geometry of the deposit for exploration, resource delineation and estimation, and mining.

An initial review of the data by SRK indicates that the Blackdome deposits are "nuggety" (which is typical of many gold deposits around the world having erratic and wide space distribution of the free gold particles compared to the bulk of the accompanying waste material), evidenced by:

- Representative muck samples show wide variation from the mill head assays on a stope-by-stope basis, although better agreement is typical over a longer, larger sample basis.
- Systematic channel sampling in the stopes often varies dramatically with drill hole, development drift channel samples, and head grades.
- Frequently, surface and underground drill holes intersecting known mineralized shoots have returned only trace values in gold. Conversely, some holes that returned high-grade intercepts, later proved to be essentially barren or very low-grade areas of the structure.

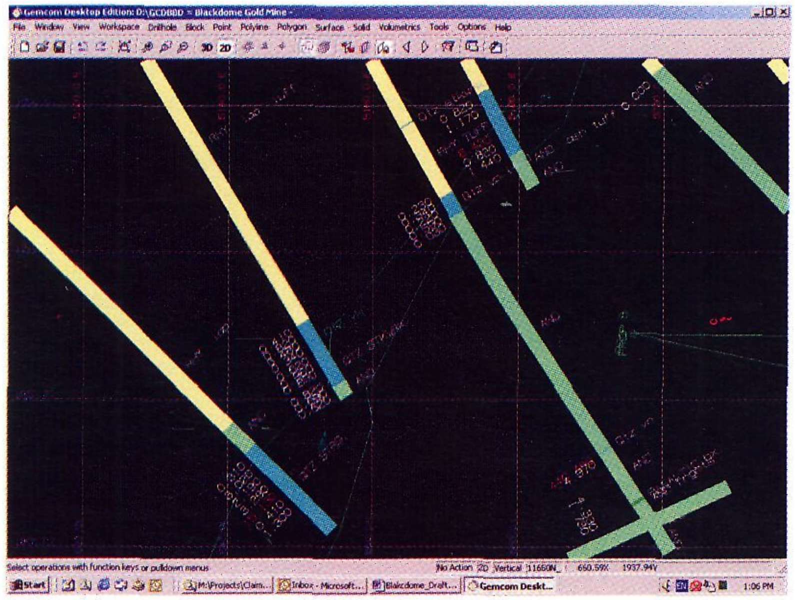


Figure 19: Cross sectional view (looking north) of the Vein 1 deposit (above and below), showing the discontinuous geometry of the quartz vein zones and the very nuggety distribution of the attendant gold mineralization.

The higher-grade gold and silver mineralization is typically associated with the thickest portions of the deposit where gold precipitation and deposition has been concentrated. This is evident on a longitudinal plot where the true thickness of the mineralized zone correlates well with the previously mined stopes (Figure 21). In addition, this confirms that, previously, gold and silver were mined from narrow zones (i.e. 1-3 meters) from within the broader zone of alteration, quartz veining, etc. Ore and waste determination was based primarily on assay grade, which for a nuggety deposit can often produce uncertain results with a high degree of difference between the forecast and actual ounces of metal.

In order to provide an indication of the true thickness of the deposit, the data is summarized in the table below and illustrated on the accompanying histogram. The histogram clearly illustrates three distinctive populations (Figure 20). The population with the highest mean thickness is centered at approximately 22 meters, and it is these thickest portions of the deposit that is typically the host to the higher-grade gold (>10 g/t Au) mineralization.

Summary of True Thickness Statistics across Vein 1

	True Thickness (m)
Count	395
Mean	7.39
Min. value	0.02
Max. value	40.47
CV	0.90

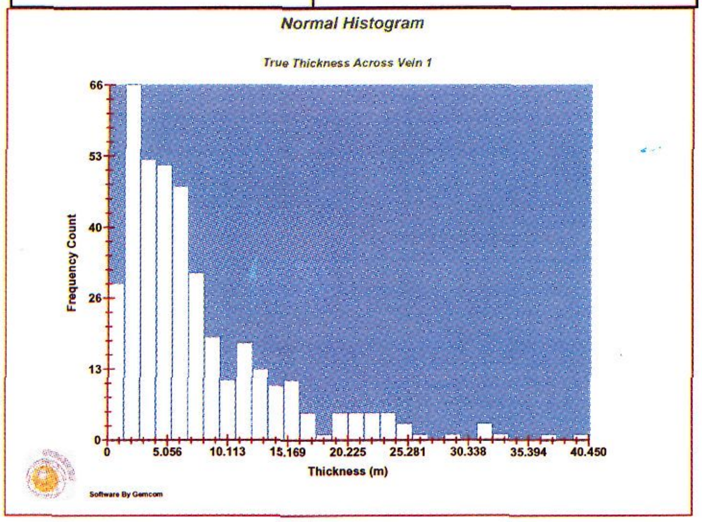


Figure 20: Summary of true thickness statistics for the entire Vein 1 deposit (based on extent of alteration, deformation and gold and silver mineralization) and histogram showing the presence of three distinct populations.

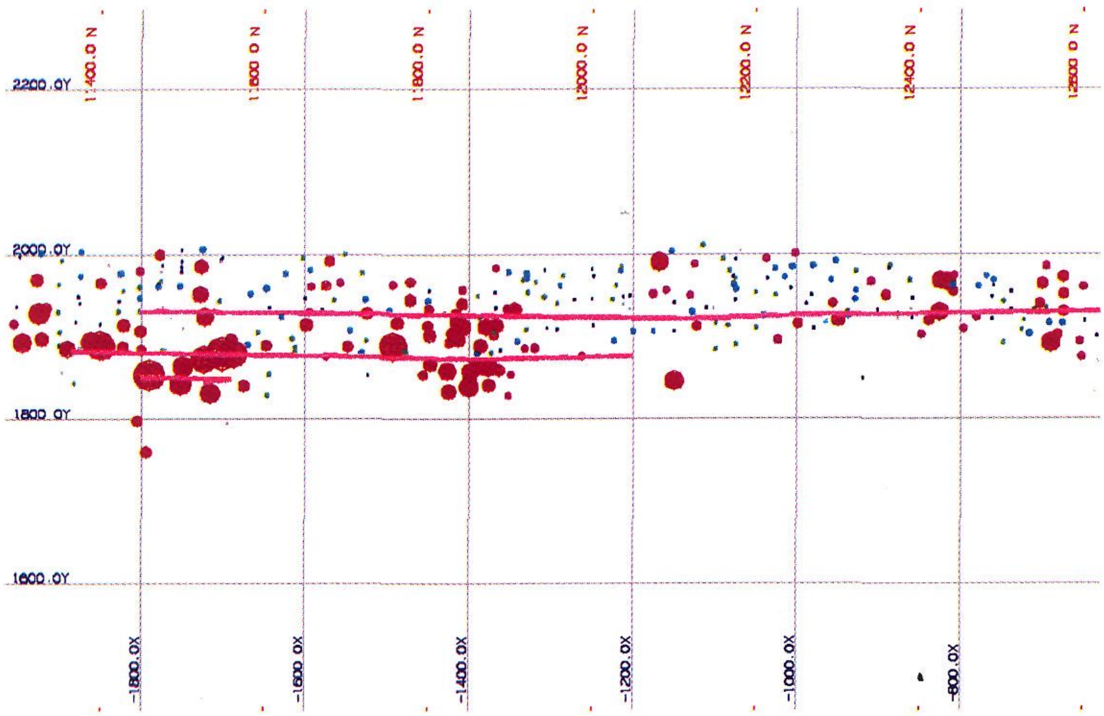
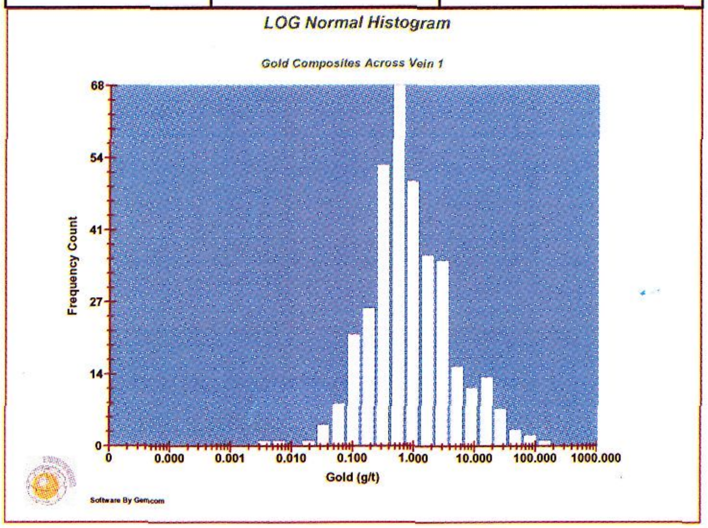


Figure 21: Longitudinal plot of the Vein 1 deposit (looking west), showing the true thickness drill intersections, with larger circles representing greater thickness. The thickest portions of the deposit correlate well with the placement of the stopes from previous mining campaigns.

In order to assess the frequency distribution of the gold and silver mineralization, SRK completed a statistical analysis on the drill hole data (defined by the 3-dimensional solid). Typical of most gold deposits, the untransformed assays show that distribution of gold is highly skewed to the right (*i.e.* mean to the right of the mode). Transformed to log, the gold distribution approaches a normal distribution (summarized in the following table and illustrated in Figure 22). However, several distinct populations have been identified (for Vein 1) at approximately 1.0 g/t Au, 6.0 /t Au and 11.0 g/t Au. However, due to the irregular geometry and discontinuous nature of these different populations, it is not possible to confidently extrapolate these populations from hole to hole to form separate geological domains (similar geological features such as metal distribution and other physical characteristics) based on the current density of data.

Summary of Assay Statistics within Vein 1

	Gold (g/t)	Silver (g/t)
Count	2,441	2,441
Mean	3.52	15.97
Min. value	0.0	0.0
Max. value	958.64	2,811.45
CV	9.19	6.57



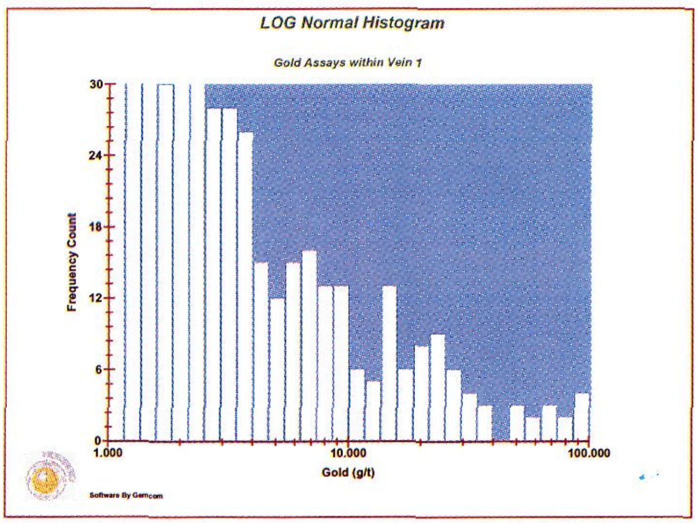


Figure 22: Histograms at different data ranges showing the distribution of gold grades. Note the three distinct populations (i.e. at 1.0, 6.0 and 11.0 g/t Au) in the lower, more detailed, histogram.

Further confirming the nuggety nature of the gold mineralization at the Blackdome Mine is the presence of a high coefficient of variation of the gold grades (a measure of grade variability), which suggests that the variability in grade is high, and therefore, local estimates of grade in the resource estimate may be unreliable. In order to define the amount of grade variability and the orientation of maximum grade continuity (and therefore the amount of grade averaging required during grade interpolation), a selective suite of relative and non-relative 3-D semi-variograms were generated for gold and silver. The modeling utilized several different lag intervals related to the spacing of the assay data, with a 1.0-meter lag distance down-hole to obtain the nugget, and a 25.0 meter lag within the plane of the structure. However, both larger and smaller lag intervals were investigated. Smaller intervals often resulted in poor variogram definition at shorter lag distances due to the low number of pairs contained within each interval, whereas larger intervals made it difficult to define the slope and range of any short-range structures.

In general, variography was controlled primarily by the orientation of the alteration/deformation zone. The variograms generally indicate that the direction of maximum continuity is down plunge, steeply to the south for the Vein 1 deposit, which correlates well with the plunge of intersecting structures and the orientation of mined-out stopes. However, the semi-variogram ranges are typically less than 25 meters, further confirming the nuggety nature of the deposit and short range of the higher-grade structures (Figure 23). This is in agreement with the relatively poor horizontal/lateral continuity defined by the mined-out stopes that are typically less than 50 meters in length. The relative nugget values (a measure of local variance) interpreted for the variogram models for gold are typically greater than 50% of the total sill value (total variance), again in agreement that the local variability in gold grade is high.

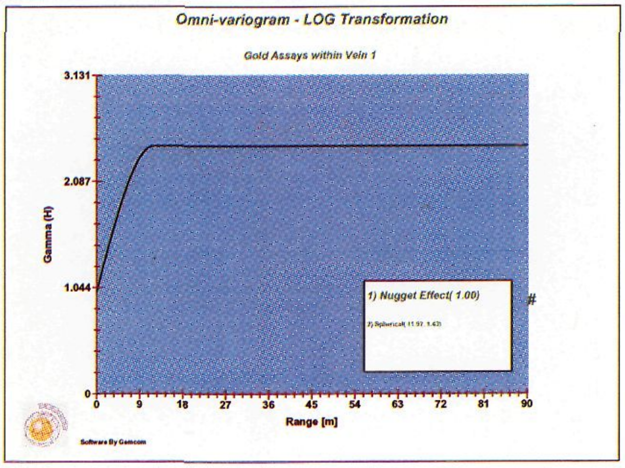


Figure 23: Log-transformed omni semi-variogram for gold for the Vein 1 deposit.

It is recommended that additional univariant statistics and variography should be completed to compare samples with various sample supports, such as drill core and channel sample data. Ultimately, these different samples will have a congruent sample mean with the larger samples (channel samples) having a lower coefficient of variation due to a lesser amount of high and low values. The Coefficient of Variation (CV) is the standard deviation divided by the mean. It is a measure of variability, which is unitless and therefore can be compared between populations. If the mean or coefficient of variation is considerably different, then the different sampling types may not be combined for the resource estimation without first applying a correction for the change of sample support. However, due to the "nuggety" nature of the gold mineralization, it is expected that the small differences in sample support between the drill core and channel samples will be negligible, and in the opinion of SRK, can therefore be combined for grade interpolation.

7.4 Grade Capping

Historically, in order to minimize the impact of very high-grade assays/intercepts on a resource estimate, grade capping is often implemented to prevent overestimation of the grade of the deposit. In essence, grade capping is considered to be a "fudge factor" (particularly with inverse distance and polygonal methods since they provide insufficient averaging during grade interpolation) used to modify the resource estimate. In the opinion of SRK, capping can only be properly determined based on reconciliation with actual production.

It is our understanding that J-Pacific applied a capping level of 137 g/t Au for the assays (i.e. gold assays greater than 137 g/t Au were lowered to equal 137 g/t Au), based on the work of previous operators, which involved reconciliation of channel and muck samples with the head grade/production data at the processing plant. J-Pacific never verified whether or not this is the most appropriate grade cutting value, or estimation methodology. Although we believe this approach to be appropriate, SRK has not reviewed this reconciliation.

SRK recommends that the following issues be considered in any future grade capping determinations:

- Ensure that the capping level determined from previous production from Veins 1, 2 and 11 is valid for the other zones such as Red Bird and Giant.
- Since the original capping level was determined solely on the basis of reconciliation of the muck and channel sample data, the validity of applying this capping grade to the drill hole data needs to be assessed.
- The capping levels have been applied to the assay values; however, the samples have been collected over variable sample lengths ranging from 0.5 to 2.0 meters in length (i.e. unequal sample support), and therefore, the validity of this approach needs to be assessed.
- Typically, determining capping levels for multi-modal populations, such as Vein 1, are often unreliable.
- Currently in the minerals industry, grade capping is not considered to be an acceptable method of dealing with "high-grade outliers" in most deposits, particularly since the refinement of more appropriate grade interpolation techniques, such as kriging, have been developed.

7.5 Resource Estimation - Grade Interpolation

The most recent resource has been estimated by Alex Boronowski, P.Geo., in 1999 following a brief exploration drilling program. Currently, the Blackdome property has an Inferred Reserve (classified by SRK as Inferred Mineral Resource, CIMM, 2000 definitions) of 124,120 tonnes averaging 12.8 grams gold per tonne (0.37 oz/ton) and 33.7 grams silver per tonne (0.98 oz/ton) (A. Boronowski, 1999). This equates to 50,834 ounces gold and 134,386 ounces silver, as summarized in the following table.

SUMMARY OF MINERAL RESOURCES

BLACKDOME MINE (after A. Boronowski, 1999)

Zone	Block	Tonnes	Au Grade grams/tonne	Ag Grade grams/tonne	Ounces Au	Ounces Ag
11 Vein	97C-13	11,000	6.8	47.4	2,405	16,753
11 Vein	11880N	5,750	12.4	10.8	2,292	1,997
18 Vein	97C 16	5,600	13.4	136.0	2,412	24,486
18 Vein	97 C 15	5,600	12.9	38.0	2,323	6,842
18 Vein	97 A7	2,691	22.45	72.4	1,942	6,269
1 Vein	70-8	1,200	12.0	---	463	---
1 Vein	97A-3	14,000	9.9	4.8	4,456	2,174
2 Vein	97A-4	3,000	13	43.0	1,254	4,148
Redbird	97A-8	5,000	15.7	18.4	2,524	2,958
Redbird	97A-9	2,153	12.5	19.0	864	1,315
Redbird	97C-17	6,000	18.2	36.6	3,511	7,060
Giant	97C-18	19,033	11.4	16.3	6,970	9,986
Giant	97C-19	21,912	10.0	41.0	7,042	28,871
Giant	97C-20	13,519	22.0	36.0	9,568	15,664
17 Vein	97C-14	7,662	11.4	23.8	2,808	5,863
Total		**124,120**	**12.8**	**33.7**	**50,834**	**134,386**

The 1999 resources were estimated using a polygonal method on longitudinal section and the following parameters were used (taken as verbatim from Price and Glanville (2000b)):

- A drill hole intersection has an area of influence around it of 625 square meters (25 m x 25 m).
- All gold assays were capped at 137 g/t Au.
- A minimum 1.5 meter mining width was used to calculate grades and tonnes.
- An additional 15 % mining dilution at zero grade is included in the tonnage and grade calculations.

Generally, SRK is in agreement with the methodology used to estimate the resources based on the current data set and data format, particularly utilizing the use of a minimum mining width and a predicted dilution (which needs to be formally finalized in a more detailed study). In this way, the resources approach a "mineable" resource (not reserve), and as such, will result in significantly less modification in the future converting resources to reserves.

Although SRK does not believe that there would be material changes to the current resource estimate based on a different grade estimation techniques based on the current data, SRK believes that polygonal methods are typically not well suited for estimating resources in "nuggety" gold deposits. This is particularly true if only a portion of the mineralized zone is going to be mined and not the entire mineralized envelope, and for large-spaced data sets. This is because individual data are unreliable (i.e. two holes drilled several meters apart can have very different grades). The polygonal approach on longitudinal section only provides an indication of the total number of ounces in the deposit (global estimate) at a zero cutoff grade. At elevated cutoff grades, this method says nothing about where those ounces occur or anything about continuity. In a "nuggety" gold deposit, one should not expect to see the drill intercept grades match the grades in adjacent model blocks. With such a high nugget, and large distance between data, the local estimate of grades may be unreliable, and therefore, unreliable for detailed stope design (particularly with polygonal methods that honour local data).

SRK's approach would be to average the grades more over a broader area of the deposit (in the general trend of the mineralization and not concentrated as "bulls eyes" around an anomalous drill hole), producing a lower grade, higher tonnage, more reliable estimate. Due to the highly skewed distribution and the presence of multiple populations, non-linear interpolation methods such as indicator kriging should be considered, which better considers not only the spatial distribution of the data but also the frequency distribution.

Previous production at the Blackdome Mine has been predominantly above the 1870 meter level and below the 1990 meter level. It was once believed that this elevation-constrained horizon was beneath the paleosurface where mineralizing solutions were confined and precipitated to form continuous, gold bearing quartz veins. However, the current geological model proposed by SRK does not conform to this theory and deeper drilling has indicated that significant gold mineralization has been identified outside of this elevation and represents an opportunity to expand the current resource base. In addition, J-Pacific has identified potential for delineating additional resources adjacent to the current mine workings, as summarized below by Boronowski, 1999:

No 11 Vein: *"The 11 Vein was drill tested and mined between November 1998 and May 1999. The 11-3 stope, which was the furthest north stope along the 11 vein, was narrow but contained high-grade gold mineralization. A drill program north of the stope resulted in the discovery of two ore grade intersections cantered at approximately 11880 North. There is good potential for additional reserves to be delineated by the proposed exploration program".*

"The reserve estimate for the 11 Vein, 97C-1 3 block, which is cantered at 11950 North, was based upon four narrow high-grade intersections. Dilution to a 1.5 meter mining width has caused the overall grade to be lowered to sub-economic grade. One drill hole is proposed to test the down dip extension of the block. This block could be accessed from development along the 11 vein or from the A2 decline development on the 1920 level".

No.18 Vein: *"The No. 18 Vein was mined and a diamond drilling program is recommended to test existing blocks and explore untested areas. Blocks 97A-6 and 97B-l 1 were mined adjacent to and south of the existing stope. Block 97C- 16, located at approximately 11650N and 1875 meter elevation, contains two ore grade drill intersections. The tonnage for this block has decreased but the grade has increased because one apparent low-grade drill intersection was eliminated from the reserve calculation. The block could be accessed from the present 18 Vein workings to the south.*

"Block 97C-15, located at approximately 11350N and at the 1860 meter elevation, contains two ore grade intersections and is open down dip and to the south. This block and 97-A7 located beneath stope30-18 that could be developed simultaneously from existing workings. Any development below the 1870 level will require pumping out of the decline from the 1870 level. Block 97A-7 has not been examined in detail by the author and therefore the reserve tonnage and grade calculated by N. Berg has been given to the block, but the category has been down graded from Proven to Probable".

"The pillar located at the intersection of the 1870 drift and crosscut contains a Probable reserve, but removing it would be difficult and would terminate future access to the 1870 level. Other potential reserves exist adjacent to or in near proximity to existing stopes. As mentioned in the 1999 Exploration Program, defining these resources will require further study and development".

1960 North Mine

"Currently, the 1960 North Mine (figure 6) contains the largest property mineral resource. As well, the area contains good potential for hosting ore shoots below the adit level. During the 1999 production period, the 97A-3 block was partially explored by a raise in the low-grade South 97A-3 block and drifting was carried out along the southern portion of the North 97A-3 block, and a raise was driven from the end of the drift towards the high-grade intersection in DDH 265, which assayed 24.62 gpt gold, 16.36 gpt silver across 1.17 meters. The drift and raise returned disappointing results".

No.2 Vein: *"During the 1999 production period the 2 Vein on the 97A4 block was developed by trenching. The results were disappointing owing to excessive dilution because the structure was difficult to follow during the severe winter weather conditions and the mining method required a mining width to accommodate the excavator. However, it was also determined that the gold distribution was erratic. The 97A4 block has been partially explored by underground development, including a raise to surface. The distribution of gold values within the raise and the nature of the mineralization requires a study before an exploration or development program is conducted in this area".*

Redbird Vein: *"The Redbird Vein, 97-A8 and A9 blocks (were) studied during the 1999 production period. A report on these findings is contained in "Blackdome Mine 1999 Proposed Exploration Program - Appendix II: Memorandum - A review of the Redbird Vein data above the drift level". The Redbird Vein has good potential for hosting ore shoots beneath the 2110 adit level".*

Giant Vein: *"The Giant Vein (figure 9) has good potential for hosting ore shoots beneath the 97C-19 and C-18 blocks and below the 1950 meter elevation. Refer to the following report for more detail ("Blackdome Mine 1999 Proposed Exploration Program"). The author has only made a brief surface examination and review of the Giant Vein data and therefore, is not confident in estimating a resource for the blocks. An Inferred reserve is assumed to be correct, and the tonnage and grade is based upon previous work by N. Berg".*

No.17 Vein: *"The 17 Vein (figure 10) is the extrapolated northward extension of the 1 Vein. The 97C-14 block has a drill indicated Inferred reserve based upon two widely spaced drill hole intersections. The block has excellent potential for hosting an ore shoot, since the block is open down dip and has not been tested within the theorized production zone between the 1870 and 1960 meter elevations. Refer to the "Blackdome Gold Mine 1999 Proposed Exploration Program" for more detail."*

7.6 Resource and Reserve Classification

The resource classification is based essentially on the density of the drill hole data, proximity of underground workings and the continuity of the geometry and grade of the quartz veining and its attendant gold mineralization. In classifying the resource, one must consider not only the geological boundaries that define the mineralized zone, but consider the continuity of the metal within. The geological boundaries can often be known with a high degree of confidence, while the continuity of grade within this outline can be known with less confidence. Isolated areas of mineralization, or areas that have currently no indication that they can be mined at a profit, cannot be included in the resources.

The current resources/reserves have not been classified according to the "*CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines*" (August, 2000) as defined below.

Mineral Resources

A **Mineral Resource** is a concentration or occurrence of natural, solid, inorganic or fossilized organic material in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

An **'Inferred Mineral Resource'** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

An **'Indicated Mineral Resource'** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

A **'Measured Mineral Resource'** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

Mineral Reserves

A **Mineral Reserve** is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

A **'Probable Mineral Reserve'** is the economically mineable part of an Indicated, and in some circumstances a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

A **'Proven Mineral Reserve'** is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

In the opinion of SRK, there is insufficient knowledge of the grade and geometric continuity of the mineralization, given the data density, to be estimated with a level of confidence that is sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposits, to be classified as an Indicated Mineral Resource. The vast majority of the resources, in excess of 95%, are based on a drill spacing of 25 to 50 meters, and given the nuggety nature of the deposit, produces an reliable estimate of the grade and tonnage of the deposit. As such, SRK has classified the resources as an Inferred Mineral Resource. Accordingly, SRK has reclassified the current Inferred Reserves by Boronowski, 1999 as an Inferred Mineral Resource.

In addition to the uncertainty of the grade and tonnage of the estimated resource, the average grade of the majority of the resource (based on current gold prices) is only marginally above the anticipated economic cutoff grade (needs confirmation with more detailed study) making the resources (and any future reserves) sensitive to metal price/cost scenarios.

Due to the nuggety nature of the deposit, additional drilling is not considered to materially lower the associated risk with the resource estimate, as such, SRK recommends that any upgrading up the Inferred Mineral Resources to Indicated requires better definition of the geometry and grade of the deposit with underground development. The lowest risk, mining scenario would be to mine the entire strike length and width of the deposit. However, since J-Pacific will be mining within this boundary the risk is very high and probably can only be lowered to an acceptable level with considerable underground development. In addition, SRK recommends that the upgrading of resources should focus on areas of the deposit where the minbralized can be related to a geologic feature, such as along the down plunge extension of known mineralized trends, mined-out stopes and intersection of various geologic structures.

U/G Devel.

The original mining campaign (i.e. late 1980's) was very successful recovering the required feed to the mill, while maintaining higher grades, albeit with inherent low productivity rates in the mine with extensive pre-development. The later mining campaign (i.e. mid 1990's) experienced several difficulties including:

- Reliance on drill indicated resources and reserves with substantially less mine development.
- Underdevelopment of the mine provided constant pressure on the mine to produce the required tonnage and therefore was often provided at the expense of good grade control.
- Frequently, mining occurred adjacent to mine workings, designed to recover the "dribs and drabs" left over from the previous operation, whereas a properly developed deposit may have produced much better results.

In order to minimize risk there are a variety of considerations, including:

- Drilling is unreliable and therefore requires underground development.
- Not cost-effective to drill off 250,000 ounces of resources, when only enough drilling should be done to ensure structure is there and proceed with underground development.
- During mining, ensure that sufficient predevelopment had been done to reduce uncertainty in the resources and reserves.
- A lower risk alternative would be to provide more averaging of grades over a broader area therefore increasing confidence in the resource; however, the average grade would be lowered.

- Concentrate on resources that are based on a geological model (i.e. based on known trends of the mineralization that are located at the intersection of known structures).

7.7 Conversion of Resources to Reserves

In SRK's opinion, in the absence of a detailed mine design and mine plan along with associated costs of mining and processing, the resources for all zones cannot be converted to reserves (CIMM, 2000 definitions). No attempt has been made to convert these resources to reserves, which would require that the reserves be converted from contiguous zones of indicated and measured resources based on appropriate cutoff grades, a mine design and a mine plan. Appropriate dilution and mining recovery must be applied based on the mining method and degree of selectivity anticipated. During mining, it is expected that it may be difficult to remove higher and lower grade areas of the deposit, since the face samples may not be reliable for underground grade control.

As illustrated in the aforementioned histograms, gold occurs essentially in several distinct populations, and therefore, there is not a "smooth" or gradual change across the deposit. Therefore, increasing the tonnage rate to take advantage of economies of scale (i.e. higher production rates and lower mining costs), and therefore, a lower cutoff grade will not substantially increase the number of contained ounces in the deposit. This is due to the fact that there does not exist substantial mineralization grading between 5-10 g/t Au material). Any increase in production rate will most likely require additional mining areas and would result in mining the deposit faster, recovering the same number of contained ounces (although there most likely will exist some local exceptions).

8. MINING

SRK completed a brief review of the previous mining campaigns in order to identify the advantages and disadvantages of the previous mining methods and be able to provide recommendations that should be considered by J-Pacific for a path forward for reopening of the mine. The information for the review on historical mining achievements and what these suggest might be reasonable changes for the future was taken from the following:

- Detailed discussion with Norm Berg of historical mining practices

- BDM Corp, 1989 Mine Budget Report
- Allan Bird's geological interpretation, 1989
- Wortman et al Review of Blackdome Mine, 1994

It is important to ensure that a mining method is appropriate to the context. The choice of a mining method depends on:

- Geology: continuity of lithology, major structures, etc.
- Rock mass: strength and competency of the ore and waste.
- Major weakening structures: through-going, continuous structures.
- Grade distribution: continuity, grade zonation, grade of dilution (if any).
- Constraints: in situ stress, water, etc.
- Limiting production rates: Tonnes per Vertical Meter (TVM), mining complexity, etc.

Although not all these contextual questions were answered, one can gain a good impression from anecdotal evidence and be able to judge the appropriateness of what they did before, how well they did it and what changes could be made to reduce the cost of finished gold.

1. Geometry

The salient points are:

- Steep dip to the mineralization
- Attempted to extract a higher-grade portion of the structure.
- Generally the mined shape was about 2m width

2. Ground conditions

The rock mass in the structure tended to be very poor:

- Had to drill uppers as horizontal holes mudded-up (this is very unusual so there may have been other problems here); uppers are not good for mining accuracy as the geological control is more difficult
- Rock mass tended to be very "broken"

SRK does not have any information on the wall rocks but have assumed that they were better quality than the structure itself.

3. Grade distribution

The following is important:

- Very little grade outside the structure
- Presume that where they managed to leave some of the structure in place then this must have carried grade; so most of the dilution must have carried grade
- Bird's report shows very, very high grades?
- Wortman report: reserve grade and delivered grade are similar - so no dilution?
- The term "probable" means very little as apparently development was needed before any certainty of mining
- No visual controls and everything done on detailed sampling

Norm makes the interesting comment that "it would be good to know what they might have achieved if they had simply mined the whole structure". The inference being that they went to great effort to try and take a higher grade portion but with lack of information, and potentially very high dilution using a difficult mining system, they might have done just as well taking the whole structure: much lower cost, easier mining with visual controls and fewer stopes needed to feed the mill.

4. Mining methods

Historical Mining - Very selective with adequate pre-development to assess ore, but were successful at a 200 t/day rate, although a very labour-intensive mining method and very high cost. Past mining between November 1998 and May 1999, from the Main Mine Area, Veins 1, 2, 11, and 18 – mining of stockpiles, open pit trenching and small ore blocks adjacent to mined-out ore shoots, yielded poor results, mainly because of a lack of development relative to prior mining efforts. When a raise was completed to assess mineralization, and proved the ore to be low grade, mill feed was needed, and therefore lower grade was accepted (i.e. What do you lose more money at: shutting down the mill or running low grade?). Previous mining was captive cut and fill and some shrinkage stoping; however, it would be better to use mechanized cut and fill. A repeat of the most recent attempt must be avoided.

Old way of mining – mine high grade. Diamond drilling and even channel samples were unreliable to predict ore or waste, but did provide an indication of potential – having said that, the current reserves are unreliable. Attempting to recover remnants of the current Blackdome ore body was very unsuccessful in the last attempt due to very high-risk resources and an inappropriate mining method (primarily lack of pre-development). In the old days, mining utilized lots of pre-development allowing time to drive raises into the areas of potential ore grade, and, if good, it was taken, and if not, it was left, thereby maintaining a 20 g/t Au head grade.

Mining according to the old method may not be possible today, therefore it is recommended that mechanized "cut and fill" be used, possibly underhand, with cemented backfill to control poor ground conditions (due to clay in the shear zones) and to minimize dilution. Results of higher production rates and lower costs for mining would be somewhat offset by backfill costs. It is unlikely that J-Pacific will be able to find miners that did the work of the old days, therefore backfill might be better. Old style mining generated 2.5 tonnes waste to ore, and with mechanized cut and fill the ratio will be about 3.5:1, and backfill will add about $5/tonne. There is some opportunity to lower mining costs with mechanized cut and fill, but the zones typically have a small footprint, low lateral extent (<50 m) and therefore will be costly to ramp up every drift.

In the past, most of the mining was by cut-and-fill:

- Slusher mucking with access raises and ore passes - expensive and slow
- Initially used mullock fill (likelihood of either lost grade in fill or gained waste)
- Later changed to sand fill, but difficulties due to fine grind
- Used boards, cemented fill and straight fill as slusher surface - everything but straight fill is either labour intensive or expensive

Some shrinkage was tried in the past but without much success due to weak ground conditions. Claimstaker, when they re-started the mine, also tried shrinkage unsuccessfully.

It is noted that the mullock fill also carried grade - further confusing the dilution assessment.

Using cut-and-fill was appropriate to the context but the choice of slusher and captive operations ensures very high costs and considerable difficulty in controlling grade.

5. Achievements

What they actually achieved was as follows:

- Delivered grades: consistently 0.6 to 0.7 opt
- Productivity:
    - Production rate of 230 tpd (short tons) - 85,000 t/yr
    - Some 52 people in mining giving approximately 1,600 t/man year - which is a reasonable achievement for this type of mining
    - Needed some 6 to 7 stopes in operation to make production; this is a large number of work areas for such a small production and increases cost and the amount of capital tied up in the developed area
- Reconciliation:
    - It has been assumed that the tailings grade was probably "high"
    - Probably lots of dilution given slusher operations and a weak environment and variable geometry; but reserve grade and actual grade were very close, so dilution was being "hidden" in the reconciliation process
    - They were "pushing" the mill which also has the effect of increasing the tails grade
    - The conclusion being that it is likely that the <u>planned grade was underestimated</u> (Norm strongly believes that this was the case)
- Costs:
    - The cash mining operating cost was $90/t (probably reasonable given the difficult mining conditions)
    - This does not include an additional $24/t for capital
    - Total cost of $200/t
    - Note low labour rates per hour and unionized workers – in future operations rates would be higher but possibly with higher productivity
- Ore distribution and development:
    - Low tons per meter of development
    - Only one third of strike length converted to ore

- Some 16t of ore per meter of development; 1.4t of waste per ton of ore - not untypical for this type of deposit

6. Conclusions

Previous mining methods, although appropriate to the context, were very labour intensive and expensive and required considerable amounts of pre-production. This translated into under-developed (under-capitalized) operations with inadequate working places so that any problems would directly affect production.

The methods would have resulted in considerable dilution, but, since the planned grade and delivered grade were very close, it is assumed that the block grade was significantly under-estimated. (This assumes that the planned grade did not contain an estimate for dilution and there is no reference to this being the case).

There are only a few opportunities for change:

- If in-situ grades have been under-estimated there may be opportunity to mine the whole structure and still get reasonable grades but with a much lower mining cost.
- There is no alternative to cut-and-fill but conversion to mechanized operations with access on each level (as distinct from the captive operations used in the past). This could greatly increase productivity and significantly reduce the number of working places needed - with consequent reduction in the amount of capitalization needed.
- It is realized that the use of ramp access would in effect double the amount of waste development and the reduction in stope costs would have to more than offset the extra cost of development; this is possible but needs much more analysis.
- Finally, underhand operations (backfill as a roof) could significantly improve dilution control (mucking on ore), decrease rock support costs and decrease up-front development costs due to top-down operations as opposed to bottom-up.
- The concern with underhand is the need to cement all of the fill - again analysis is required to ensure that there would be a consequent cost benefit.

There are no companies currently making money with captive operations and slusher mucking. Although there are extra costs with mechanization there is usually a cost benefit due to increased productivity and fewer work places.

9. CONCLUSIONS AND RECOMMENDATIONS

- The Blackdome vein system was emplaced during an episode of local NW-SE extension, within a regional dextral strike-slip regime controlled by movements on the Fraser River fault system and one of its subsidiary structures, the Hungry Valley fault.
- Mined ore bodies can be shown to have clear structural controls related to this broad kinematic framework. Primary controls on the shape and distribution of ore grade mineralization are, in order of importance:
  - ✓ Intersections between major vein-bearing structures (e.g. #1 and #2 veins)
  - ✓ Broad flexures, down dip and along strike, in sinusoidal structures with normal displacement
  - ✓ Steepening or refraction of normal faults as they pass through beds of different competence, particularly through rhyolite
- Assayed drill intersections are poor indicators of contained ounces, and resources should therefore be evaluated based geological criteria, such as the presence of vuggy quartz breccia veins (and deformed equivalents), and/or major faulting, rather than grade.
- Three high priority targets are recommended based on the structural model of the Blackdome vein system. These targets have been developed from the perspective that large-scale ore bodies or structures with the largest amount of contained ounces should be sought.
- Lower priority targets are built around known historic ore bodies. These targets have potential for significant mineralization but not enough to singly carry a mining operation at Blackdome. They should be viewed as 'sweeteners' to a larger resource defined by the higher priority-targeting program.
- The Blackdome system appears to weaken towards the north, where veins become less continuous and more fragmented. These areas have been reduced in importance in the current targeting strategy.
- The highest priority target can be bulk sampled immediately, by extending the 1870 level by 200-400 meters. This approach is recommended over drilling because of the uncertainties extrapolating resources from drill intersections.
- It is recommended that two of the high priority targets, southern extension and hanging wall tension veins, be explored by trenching at surface prior to drilling. This would allow greater confidence in situating drill holes and give early indication of whether or not they are viable targets.

Resource Model

- Although the QA/QC program was not reviewed in detail, SRK is of the opinion that the exploration and development data is reliable based on the experience from previous mining campaigns. However, a more comprehensive QA/QC program, consisting of sample standards, sample blanks, duplicate samples and independent assay verification through a third party laboratory, is recommended for any future exploration programs, particularly outside of the area of the current mine workings.
- Gold mineralization at the Blackdome Mine is the very discontinuous, due primarily to the discontinuous nature of the quartz veining within the main deformation/alteration zones and the nuggety nature of the attendant gold mineralization.
- The higher-grade gold and silver mineralization is typically associated with the thickest portions of the deposit where gold precipitation and deposition has been concentrated. Previously, gold and silver were mined from narrow zones (i.e. 1-3 meters) from within the broader zone of alteration, quartz veining, etc. Ore and waste determination was based primarily on assay grade, which for a nuggety deposit can often produce uncertain results with a high degree of difference between the forecast and actual ounces of metal.
- Currently, the Blackdome property has an Inferred Reserve (now re-classified by SRK as Inferred Mineral Resource, CIMM, 2000 definitions) of 124,120 tonnes averaging 12.8 grams gold per tonne (0.37 oz/ton) and 33.7 grams silver tonne (0.98 oz/ton) totaling 50,834 ounces gold and 134,386 ounces silver (A. Boronowski, 1999).
- Generally, SRK is in agreement with the methodology used to estimate the resources based on the current data set and data format, particularly utilizing the use of a minimum mining width and a predicted dilution (which needs to be formally finalized in a more detailed study) thereby approaching a "mineable" resource (not reserve), and as such, will result in significantly less modification in the future converting resources to reserves.
- Although SRK does not believe that there would be material changes to the current resource estimate, SRK cautions that polygonal methods are often not well suited to resource estimation in "nuggety" gold deposits because individual data are unreliable. Future resource estimates should consider an approach that, based on the mining method and the anticipated degree of mining selectivity, may require additional averaging of grades over a broader

area of the deposit, thereby producing an overall lower grade, higher tonnage, and more reliable estimate.

- In the opinion of SRK, there is insufficient knowledge of the grade and geometric continuity of the mineralization, given the data density, for a level of confidence that is sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposits, to be classified as Indicated Mineral Resource. As such, SRK has classified the resources as an Inferred Mineral Resource.
- Due to the nuggety nature of the deposit, additionally drilling is not considered to materially lower the associated risk with the resource estimate, as such, SRK recommends that any upgrading up the Inferred Mineral Resources to Indicated requires better definition of the geometry and grade of the deposit with underground development.
- In SRK's opinion, in the absence of a detailed mine design and mine plan, the current resources cannot be converted to reserves (CIMM, 2000 definitions).
- Previous mining methods, although appropriate to the context, were very labour intensive, expensive, and required considerable amounts of pre-production. This translates into under-developed (under-capitalized) operations with inadequate working places, so that any problems would directly affect production.
- A few opportunities exist for changes to mining the deposits:
  - ✓ There is no alternative to cut-and-fill, but the method could be converted to mechanized operations with access on each level (as distinct from the captive operations used in the past). This could greatly increase productivity and significantly reduce the number of working places needed - with consequent reduction in the amount of capitalization needed.
  - ✓ It is realized that the use of ramp access would, in effect, double the amount of waste development, and the reduction in stope costs would have to more than offset the extra cost of development. This is possible but needs much more analysis.
  - ✓ Finally, underhand operations (backfill as a roof) could significantly improve dilution control (mucking on ore), decrease rock support costs, and decrease up-front development costs due to top-down operations as

opposed to bottom-up. The concern with underhand methods is the need to cement all backfill – again, analysis is required to ensure that there would be a consequent cost benefit.

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This report, **2CC014.00, 'Geological Modeling, and Preliminary Review of the Resource Estimate for the Blackdome Gold-Silver Property, British Columbia'**, has been prepared by:

STEFFEN, ROBERTSON AND KIRSTEN (CANADA) INC.

Christopher Lee, M.Sc.
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SRK Canada, Toronto

CERTIFICATE AND CONSENT

I, Michael J. Michaud, residing at 43 Eastlawn Street, Oshawa, Ontario do hereby certify that:

1) I am a Senior Geologist with the firm of Steffen Robertson and Kirsten (Canada) Inc. (SRK) with an office at Suite 602, 357 Bay Street, Toronto, Canada.

2) I am a graduate of the University of Waterloo with a HBSc. in Earth Science, M.Sc. from Lakehead University in 1998, and have practiced my profession continuously since 1987;

3) I am a a fellow with the Geological Association of Canada; is a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of the province of British Columbia;

4) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Blackdome Project or securities of J-Pacific Gold.

5) I am not aware of any material fact or material change with respect to the subject matter of the technical report, which is not reflected in the technical report, the omission to disclose which makes the technical report misleading.

6) I, as the qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7) I have not had any prior involvement with the property that is subject to the technical report.

8) I was the co-author of the report.

9) I hereby consent to use of this report and our name for submission to the appropriate Provincial regulatory authority for assessment credit.

Toronto, Canada
November 21, 2001

Michael J. Michaud, P.Geo.
Senior Resource Geologist

PROFESSIONAL
PROVINCE OF
M. J. MICHAUD
BRITISH COLUMBIA
GEOSCIENTIST

CERTIFICATE AND CONSENT

To Accompany the Independent Review of the Blackdome Project, B.C.

I, Michael J. Michaud, residing at 43 Eastlawn Street, Oshawa, Ontario do hereby certify that:

1) I am a Senior Geologist with the firm of Steffen Robertson and Kirsten (Canada) Inc. (SRK) with an office at Suite 602, 357 Bay Street, Toronto, Canada.

2) I am a graduate of the University of Waterloo with a HBSc. in Earth Science in 1987 and a MSc. from Lakehead University in 1998, and have practiced my profession continuously since 1987.

3) I am a a fellow with the Geological Association of Canada and a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of the province of British Columbia;

4) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Blackdome Project or securities of J-Pacific Gold Inc.

5) I am not aware of any material fact or material change with respect to the subject matter of the technical report, which is not reflected in the technical report, the omission to disclose which makes the technical report misleading.

6) I, as the qualified person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7) I have not had any prior involvement with the property that is subject to the technical report.

8) I have read National Instrument 43-101 and Form 43-101F1 and the technical report has been prepared in compliance with this Instrument and Form 43-101F1.

9) Steffen Robertson and Kirsten (Canada) Inc. was retained by J-Pacific Gold Inc. to prepare an independent report for the Blackdome project in accordance with National Instrument 43-101. This report is based on our review of project files, discussions with J-Pacific Gold Inc. personnel and observation made during a visit to the Blackdome Mine on August 5-10, 2001.

10) I was co-author of the report.

11) I consent to the filing of the technical report with any stock exhange and other regulatory authority and any publication by them, including electronic publication in the company public files on their web sites accessible by the public, of the Technical Report

PROFESSIONAL PROVINCE OF M. J. MICHAUD BRITISH COLUMBIA GEOSCIENTIST

Toronto, Canada
June, 2002

Michael J. Michaud, P.Geo.
Senior Resource Geologist

CERTIFICATE AND CONSENT

I, Christopher Lee, residing at 503-1260 Bidwell St., Vancouver, BC, do hereby certify that:

10) I am a Structural Geologist with the firm of Steffen Robertson and Kirsten (Canada) Inc. (SRK) with an office at: Suite 800, 580 Hornby Street, Vancouver, Canada.

11) I am a graduate of the University of Waterloo with a H.BSc. in Earth Science, in 1991, M.Sc. from Memorial University of Newfoundland in 1994, and have practiced my profession continuously since 1999;

12) I am an associate member of the Geological Association of Canada, and the Society of Economic Geologists.

13) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Blackdome Project or securities of J-Pacific Gold.

14) I am not aware of any material fact or material change with respect to the subject matter of the technical report, which is not reflected in the technical report, the omission to disclose which makes the technical report misleading.

15) I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

16) I have not had any prior involvement with the property that is subject to the technical report.

17) I was a co-author of the report.

18) I hereby consent to use of this report and our name for submission to the appropriate Provincial regulatory authority for assessment credit.

Christopher Lee
Structural Geologist

Toronto, Canada
November 21, 2001

APPENDIX A

Blackdome Site Visit (August 5-10, 2001) - Grab Sample List

3 samples collected from outside 1870 portal by RS:

S2-H2-1 – **(0.6 ppm Au)** massive andesite, ~5% cubic pyrite (1-2mm)

S2-H2-2 – **(0.2 ppm Au)** massive andesite, ~5% pyrite (bimodal: dominantly disseminated py, with some cubic crystals)

BD-40 – **(171 ppm Au)** large sample of vuggy quartz breccia, contains clasts of silicified andesite with stockwork quartz veins and disseminated py; veins show multi-stage growth (early quartz, medial ankerite-pyrite, late quartz)

16 samples collected from various localities by CL, MM and NB: All UTM coordinates = NAD 83, Zone 10)

BD-37 – **(no detectable Au)** (538631mE, 5689673mN, 1948 mEL) quartz-feldspar veins in ~5m wide fault zone, roughly on strike with #1 vein on edge of Blackdome claims

BD-39 – **(no detectable Au)** (536037mE, 5689143mN, 1917 mEL) rust-coloured, vuggy quartz breccia in red-brown volcanics, from trench north of Blackdome Mtn

BD-41a – **(34.5 ppm Au)** #2 vein pit; platey quartz with vuggy quartz infill, early stage dark-coloured quartz

BD-41b – **(0.7 ppm Au)** #2 vein pit; quartz stockwork (with small, ~3mm wide vugs) with disseminated pyrite-silica alteration

BD-42 – **(0.1 ppm Au)** north end of 1960 South drift; vuggy cockscomb quartz from high grade chip sample assay area

BD-43 – **(0.6 ppm Au)** #17 trench; vuggy quartz breccia in volcaniclastic rock

BD-44 – **(1.5 ppm Au)** Giant vein, 1st pit, east of access road; cockscomb quartz breccia with honeycomb quart texture

BD-45 – **(0.5 ppm Au)** 50 m from south end of 1920 South drift; stockwork quartz veins with disseminated pyrite and silica alteration

BD-46 – **(0.1 ppm Au)** south end of 1920 South drift; quartz-pyrite stockwork zone, heavily altered (sericite, limonite staining)

BD-47 – **(1.1 ppm Au)** north end of 1960 South drift (north of rhyolite exposure); zone of high grade mineralization indicated on back sample assay data; intense limonite/brown clay alteration, remnant quartz breccia with some stockwork veins.

BD-48a – **(0.2 ppm Au)** south end of 1920 South drift; quartz stockwork and disseminated pyrite with silica alteration, from zone 3m west of main structure

BD-48b – **(72.4 ppm Au)** south end of 1920 South drift; vuggy quartz breccia from main zone

BD-49 – **(0.7 ppm Au)** #17 vein trench; platey quartz with crystalline lining in vugs, some breccia texture, some quartz stockwork veins

BD-50 – **(1.1 ppm Au)** #2 vein pit; typical undeformed cockscomb quartz (vuggy) breccia, with limited wall rock alteration

BD-51 – **(0.04 ppm Au)** north end of 1960 South drift (south of fork); intense sericite and clay alteration, fragmented cockscomb quartz vein in main fault

BD-52 – **(0.3 ppm Au)** Giant vein, 1st trench east of access road; quartz stockwork with limited silica alteration and disseminated pyrite, narrow breccia vein with altered clasts and comminuted fragments, vuggy quartz