

**TECHNICAL REPORT  
FOR THE GOLDEN SUMMIT PROJECT,  
FAIRBANKS MINING DISTRICT, ALASKA**

Prepared for

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## 1. SUMMARY

The Golden Summit property (Property) is located in central Alaska, approximately 18 miles northeast of Fairbanks, Alaska. It is readily accessible from Fairbanks via the paved Steese highway and a well-developed gravel road system. Fairbanks is a full service community with infrastructure support for both exploration and mining activities.

The Property is comprised of 49 Federal patented and 76 Federal unpatented lode claims and 253 State of Alaska mining claims controlled or owned by Freegold. The property is situated largely in the south portion of Township 3 North, Range 2 East of the Fairbanks Meridian, centered at approximately 479250 E, 7215464 N (UTM Zone NAD 27 Alaska). All of the leases and claim holdings that comprise the property are in good standing.

Several historic gold mines are located on the property, and open pit gold mining is ongoing at Kinross Gold's nearby Fort Knox gold deposit. Freegold acquired interest in the Golden Summit project in mid-1991, and since that time has conducted extensive surface exploration at numerous prospects over much of the property, including reverse circulation, rotary air blast and diamond core drilling, reconnaissance rock sampling, geologic mapping, property-wide grid-based soil sampling, and several trenching projects at key prospects. The majority of Freegold's drilling efforts have been focused on the western portion of the Property; however drilling in the eastern portion of the Property has also identified significant grade-thickness gold mineralization which has not been examined since the late 1990s.

Freegold conducted drilling on the Dolphin gold deposit in 1995-1996, 1998, 2004, 2008, 2011 and 2012. The 2011 and 2012 programs were also expanded in the Dolphin area to include the adjacent Cleary Hill mine area.

There are three styles of gold occurrences identified on the Property, including 1) intrusive-hosted sulfide-quartz stockwork veinlets and disseminations (such as the Dolphin gold deposit), 2) low-sulfide auriferous quartz veins, and 3) shear-hosted gold-bearing quartz veinlets. All three types are considered to be part of a large-scale intrusive-related gold system on the property.

The Dolphin gold deposit is hosted in the Dolphin stock, which consists largely of granodiorite and tonalite. Mineralization at Dolphin remains open in several directions. There appears to be potential for other intrusive bodies on the Golden Summit project based on historical drilling and previous underground investigations. The mid-Cretaceous Dolphin stock is approximately the same age as the granitic intrusion that hosts the nearby Fort Knox gold deposit. The discovery of the widespread low-grade gold mineralization in the Dolphin area was made by Freegold in 1995. Reverse circulation drilling in 1995 and 1996 and one core hole in 1998 confirmed the presence of widespread, low-grade mineralization, however it was not until 2011 that a comprehensive drill campaign was undertaken with the aim of defining resources in the Dolphin area. Additional drilling in 2012 has significantly increased those resources.

In March 2011 a NI43-101 compliant gold resource for the Dolphin gold deposit, using kriging methods, was estimated using pre-2011 drill results. This evaluation, using a 0.3g/t cut-off, outlined a gold resource estimate of 7,790,000 tonnes at 0.695 g/t (174,085 ounces) “indicated”, and 27,010,000 tonnes at 0.606 g/t (526,324 ounces) “inferred”.

A total of 26 additional holes were completed in the Dolphin/Cleary Hill area in 2011 (18,927.5 feet/5769.1 metres). The results of the new drilling were added to the existing resource data base, and a new resource estimate was completed in December 2011. This gold resource estimate for the Dolphin deposit, utilizing a 0.3 g/t cut-off, was 17,270,000 tonnes at 0.62 g/t “indicated” (341,000 ounces) and 64,440,000 tonnes at 0.55 g/t “inferred” (1,135,000 ounces).

In 2012 an additional 47 holes (48,937.5 feet/14,915.42metres) were completed in the Dolphin/Cleary Hill area. In October 2012 a revised NI43-101 compliant gold resource was calculated for the Dolphin/Cleary Hill area and included 20 holes that were completed in 2011 as well as all of the 2012 drill holes. This new resource estimate increased the number of holes within the mineralized solid from the 77 used in the 2011 estimate, to 177 holes. The October 2012 gold resource estimate for the Dolphin deposit, utilizing a 0.3 g/t cut-off, is 73,580,000 tonnes at 0.67 g/t “indicated” (1,576,000 ounces) and 223,300,000 tonnes at 0.62 g/t “inferred” (4,437,000 ounces).

Gold mineralization is the only type of economic mineralization known on the Golden Summit property at this time. Gold mineralization on the property occurs in three main forms, including 1) intrusive-hosted sulfide-quartz stockwork veinlets (such as the Dolphin gold deposit), 2) auriferous sulfide-quartz veins (exploited by historic underground mines), and 3) shear-hosted gold-bearing veinlets. All three types are considered to be part of a large-scale intrusive-related gold system (or “IRGS”) on the property. The Dolphin gold deposit is hosted in the Dolphin stock, which consists largely of granodiorite and tonalite, similar to the Pedro Dome pluton. It is the only large intrusive body known on the property at this time. The Dolphin stock is approximately the same age as the nearby Fort Knox pluton, which hosts the Fort Knox gold deposit. Freegold made the initial discovery of widespread low-grade gold mineralization in the Dolphin stock during the initial drilling campaign on the prospect in 1995. Freegold is also focusing on exploring large zones of shear-hosted gold-bearing veinlets, including several zones in the Cleary Hill Mine area. These types of zones also occur at the Too Much Gold prospect and at the Circle Trail and Saddle prospects. It is recommended that drilling be continued in the Dolphin gold resource and Cleary Hill Mine areas. Areas of proposed new drilling are shown in Figure 26.1. The geology of the deposit in the Dolphin area is essentially a several phase intrusive complex which hosts gold mineralization in stockworks, veins, and fractures. The Cleary Hill area hosts gold mineralization predominantly within chloritic and sericitic schists, within veins, stockworks, breccias, and fractures.

Continued core drilling on the Golden Summit property should be designed to:

1. Increase the Dolphin/Cleary Hill gold resource by a) drilling deeper holes in portions of the deposit, b) drilling shallow to moderate depth holes in un-tested areas adjacent to the south and east portions of the deposit, and c) drilling a limited number of exploration drill holes in locations more distal to the resource d) drilling strategically located infill drill holes to move more ounces into the drill indicated category. Exploration drill holes should target areas where gold-bismuth anomalous soils are known to the south of the deposit and on the west side of Willow Creek, and areas where IP/resistivity survey data suggests the presence of possible shallow intrusive rocks to the southwest of the deposit. Approximately 15,000 metres of drilling recommended for the Dolphin/Cleary area - Approximate cost of this program is \$4,875,000.
2. 10,000 metres of drilling is recommended on the Goose Creek, Too Much Gold and Christina prospect areas and combine these drill results with past Freegold drill results in order to estimate a preliminary NI 43-101 compliant resources in these areas. Approximate cost of this program is estimated at \$3,250,000.
3. Complete remainder of ground geophysical and geochemical surveys over the remainder of the property. Approximate cost of this program is estimated at \$250,000.
4. A significant metallurgical program should be undertaken on drill core from various areas of the Dolphin/Cleary Deposit. Approximate cost of this program is estimated at \$250,000.
5. It is recommended a Preliminary Economic Assessment be completed using reasonable metal prices and costs to assess the economics of this project. Approximate cost of this program is estimated at \$500,000.

The recommendations are designed to further advance the project and as such should be undertaken independently of each part of the program. Total recommended program is budgeted at \$9,125,000.

## **2. INTRODUCTION**

### **2.1 Introduction**

At the request of Freegold Ventures Limited and Free Gold Recovery, USA (Freegold), this technical report has been prepared on the Golden Summit property, Fairbanks Mining District, Alaska. The purpose of this report is to provide Freegold with an independent opinion of the technical aspects of the Golden Summit project and make recommendations for future work. This report conforms to the standards specified in National Instrument 43-101 (NI 43-101) and Form 43-101F (Standards of Disclosure for Mineral Properties).

The data from Adams and Giroux (2012) was reviewed and validated by the authors and all subsequent new information generated by Freegold was evaluated and incorporated in this report.

The author has been provided documents, maps, reports and analytical results by Freegold. Additionally, Kristina Walcott, President and CEO and Alvin Jackson, Vice President, Exploration and Development accompanied the author to the property May 25 and 26, 2012, discussed the geology and explained the past and proposed exploration activities. During this visit the author reviewed the geology, areas of historical activities, claim corners/locations monument locations, drill holes, open cuts and other pertinent features of the property. The author also reviewed core in Freegold's Fairbanks core storage facility.

The work completed by Freegold, along with historical data available to the authors, forms the basis of this report. These data include reports from previous operators, including but not limited to, annual, monthly, operations, geological, engineering, metallurgy and production reports.

### **2.2 Units of Measure**

Unless otherwise noted, all costs contained in this report are denominated in United States dollars (US\$1.00 = CDN\$1.00).

All units of measurement used in this report are metric unless otherwise stated. Historical grade and tonnage are reported as originally published. Gold grades are reported as referenced and conversion factors are listed below. Freegold uses the UTM coordinate system, NAD 27 Alaska, Fairbanks Base and Meridian (MDB&M).

Some of the conversion factors applicable to this report are:

#### Analytical Values

	oz/ton (opt)	gm/tonne ( g/t)
<b>1 ppm</b>	0.0291667	1
<b>1 ppb</b>	0.0000291667	0.001
<b>1 oz/ton</b>	1	34.2857

#### Linear Measure

1 inch (in)	=2.54 centimeters (cm)
1 foot (ft)	=0.3048 meter (m)
1 yard (yd)	=0.9144 meter (m)
1 mile (mi)	=1.6093 kilometers (km)

#### Area Measure

1 acre	=0.4047 hectare	
1 square mile	=640 acres	=259 hectares

## 2.3 Definitions

ADL	Alaska Division of Lands
AOI	Area of Influence
BLM	United States Bureau of Land Management
CFR	Code of Federal Regulations (United States Federal Code)
DDH	Diamond Drill Hole
FA/AA	Fire Assay with Atomic Absorption finish, analytical technique for gold analysis
FBM	Fairbanks Base and Meridian
GPS	Global Positioning System
ICP	Inductively Coupled Plasma (geochemical analytical method)
LR2000	US Bureau of Land Management online Legacy Rehost System (BLM land status)
NAD	North American Datum
NSR	Net Smelter Royalties
RAB	Reverse Air Blast (Drill Hole)
RC	Reverse Circulation (Drill Hole)
USGS	United States Geological Survey
4WD	Four Wheel Drive vehicle
2WD	Two Wheel Drive vehicle

### **3. RELIANCE ON OTHER EXPERTS**

This report has been prepared by Mark J. Abrams (Abrams) and by Giroux Consultants Ltd (GCL). Several public and private documents acquired by the authors were used to prepare this report. GCL is responsible for Item 14 of the report pertaining to the Mineral Resource Estimate. Abrams is responsible for all other sections of this report.

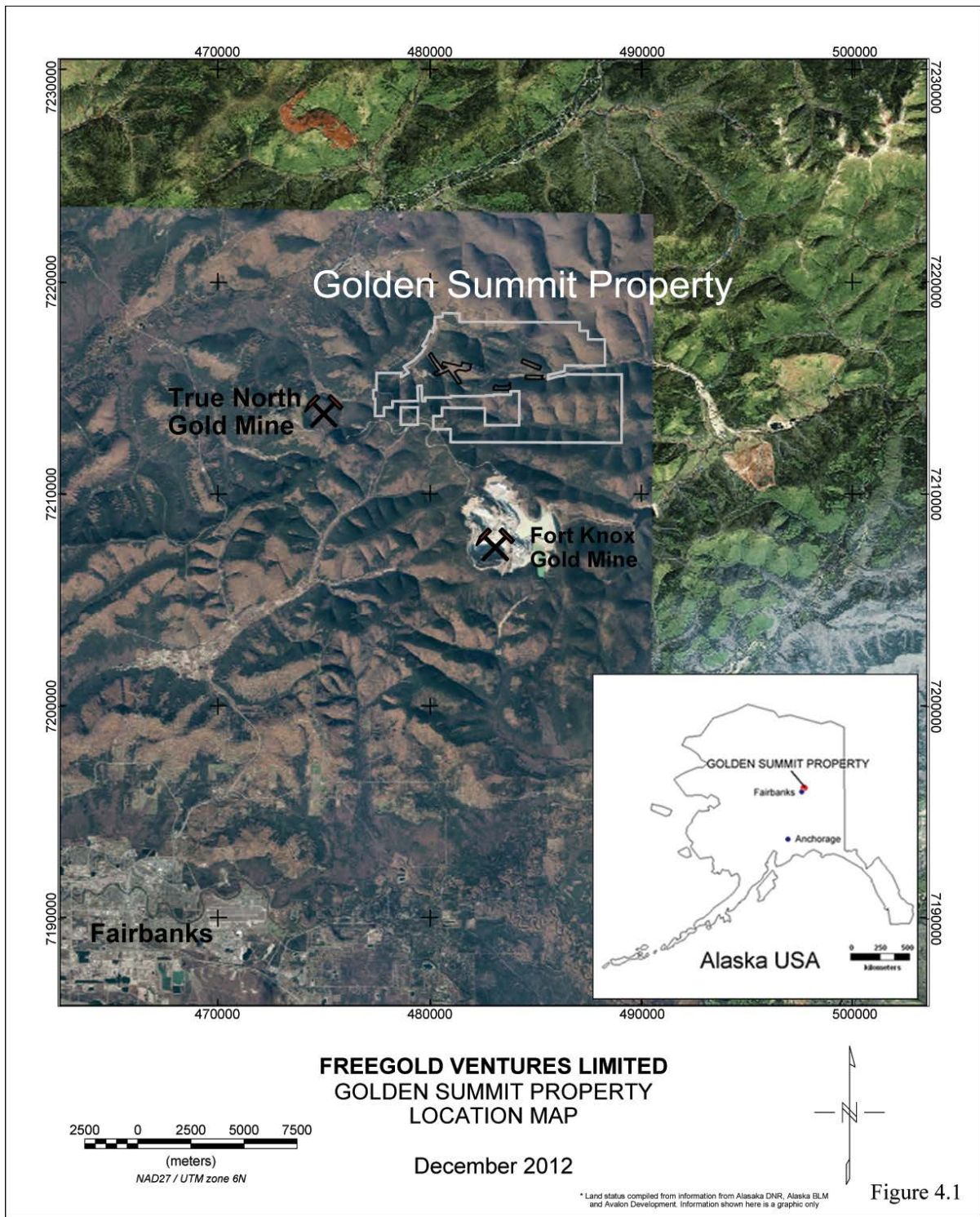
The author assumes that all the data provided by Freegold and reviewed in preparation for this report is accurate and complete in all material aspects. Freegold has warranted that it has fully disclosed all material information in its possession or control at the time of writing and that the data is complete, accurate and not misleading.

While reasonable care has been taken in preparing this report, the authors cannot guarantee the accuracy or completeness of all supporting documentation. In particular, the authors did not attempt to determine the veracity of geochemical data reported by third parties, nor did the authors attempt to conduct duplicate sampling for comparison with the geochemical results provided by other parties. The interpretive views expressed herein are those of the authors and may or may not reflect the views of Freegold or the underlying land owners on whose property the work was conducted.

### **4. PROPERTY DESCRIPTION AND LOCATION**

#### **4.1 Area and Location**

The Golden Summit property (Property) is located in the north portion of the Fairbanks Mining District (Figure 4.1) and is located approximately 18 road miles (32 km) northeast of Fairbanks, Alaska. The Property consists of 49 patented claims, 76 unpatented federal claims, and 253 State of Alaska claims which cover a total area of 12,257.3 acres (4,960.8 hectares). The property is situated in Township 3N, Range 1E, 2E and 3E of the Fairbanks Base and Meridian, centered at approximately 479250 E, 7215464 N (NAD 27).



**Figure 4.1 Golden Summit Property Location Map**

Five miles to the south of the Property lies Kinross Gold's operating Fort Knox gold mine. Fort Knox gold mine has produced over 5 million ounces of gold and operated year-around since entering commercial production in 1997. The 1.3 million ounce True North gold deposit, mined out by Kinross Gold, and now fully reclaimed lies 5 miles west of the Golden Summit project. True North achieved commercial production in early April 2001 and operations ceased in 2004.

During the third quarter of 2012 production the Fort Knox mine produced 106,698 ounces of gold at a cash cost of \$648 per ounce. The mine processed 16,111,000 tonnes of ore grading 0.76 grams of gold per tonne during the quarter. Recovery from the mill for the quarter was 84%. Kinross Gold also operates a valley leach operation adjacent to its current open pit at Fort Knox which allows year-around cyanide valley leaching of all rock not processed through the mill.

## **4.2 Claims and Agreements**

Mineral rights in this part of Alaska are administered by the State of Alaska (State Claims) and the U.S. Bureau of Land Management (federal claims). Annual rents vary according to the type of claims, claim size and age and are due and payable by August 31<sup>st</sup>, of each year (federal) and November 30<sup>th</sup> of each year (state). Total rents due for the federal claims total \$13,350 and \$39,888.50 for the state. Claim rentals are paid in lieu of annual labour for the federal claims and the work commitment on State mining claims total \$2.50 per acre per year. Amounts spent in excess of these levels are bankable on State mining claims for up to four years into the future. All claims on the Golden Summit project currently are in good standing with annual labor banked the maximum four years into the future. The land on which the project is situated is zoned as Mineral Land by the Fairbanks North Star Borough, giving mineral development activities first priority use. There currently are no unusual social, political or environmental encumbrances to mining on the project.

Other than the 49 patented mining claims (fee simple lands), the claims of the Golden Summit project have not been surveyed by a registered land or mineral surveyor and there is no State or federal law or regulation requiring such surveying. Survey plats for all patented mining claims are open to public inspection at the Bureau of Land Management. Freegold currently holds a valid Five-Year Hardrock Exploration Permit from the State of Alaska (2012-2016). Additional permits for currently anticipated future work are being acquired from the U.S. Bureau of Land Management, Alaska Department of Natural Resources, Alaska Department of Environmental Conservation, Army Corps of Engineers and other State, federal and local regulatory agencies as required. Figure 4.2 shows the land status. A summary of the claims held by Freegold is shown in Table 4.1.

**Table 4.1 Summary of claims comprising the Golden Summit property**

<b>Claim Type</b>	<b>Total Claims</b>	<b>Total Area (sq mi)</b>	<b>Total Area (acres)</b>	<b>Total Area (hectares)</b>
Federal Patented	49	1.074	687.3	278.1
Federal Unpatented	76	2.62	1,677	678.7
State of Alaska	253	15.46	9,893	4,004
<b>Total</b>	<b>378</b>	<b>19.15</b>	<b>12,257.3</b>	<b>4,960.8</b>

*The agreements under which Freegold holds non-owned claims are summarized below:*

The Golden Summit Project is comprised of a series of long-term leases and outright ownership by Freegold. The project is subject to various NSR's ranging from 3-5%. Freegold is required to cumulatively make lease and/or advance royalty payments as per the following schedules:

**(i) Keystone Claims**

By an agreement dated 17 May 1992, Freegold entered into an agreement with Keystone whereby the Freegold agreed to make advance royalty payments of US\$15,000 per year. In May 2000, the agreement was renegotiated and on 15 October 2000, a \$50,000 signing bonus was paid. On 30 November 2001, Freegold restructured the advance royalty payments as follows:

<b>Year</b>	<b>US Funds</b>	
1992 – 1998 (US\$15,000 per year)	\$ 105,000	(paid)
2000	\$ 50,000	(\$25,000 paid in cash and \$25,000 with 9,816 treasury shares issued)
2001 - 2006 (US\$50,000 per year)	\$ 300,000	(paid)
2007	\$ 150,000	(paid)
2008	\$ 150,000	(paid \$75,000 in 2008 with the remaining \$75,000 paid in 2009, subject to a payment extension)
2009	\$ 150,000	(paid)
2010	\$ 150,000	(paid)
2011	\$ 150,000	(paid)
2012	\$ 150,000	(paid)
2013 – 2019 (\$150,000 per year)	\$ 1,050,00	

The property is subject to a 3% NSR. In 2011 Freegold negotiated an extension for the Lease that for so long as there is either active exploration or production on the Project the Lease shall continue.

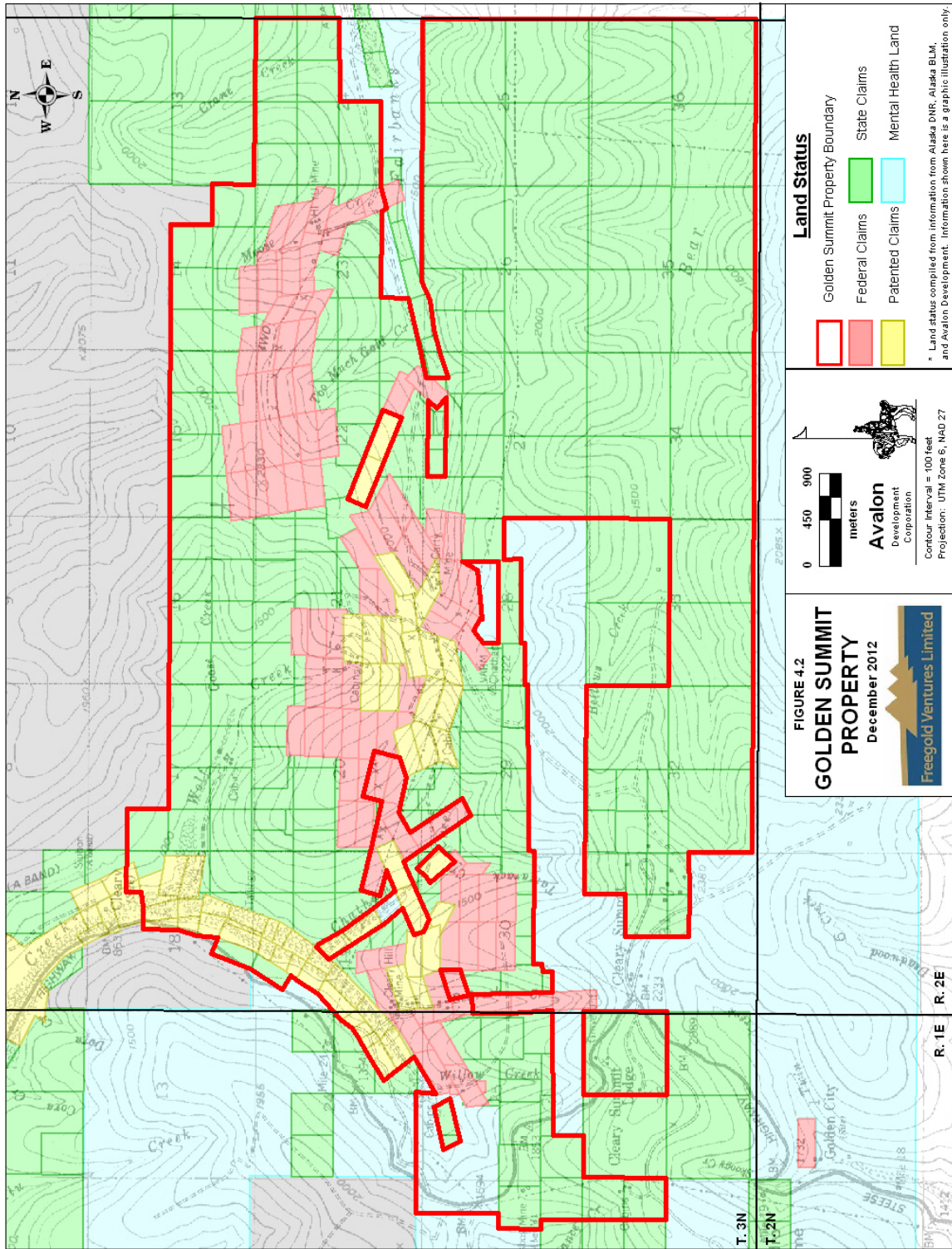


Figure 4.2 Golden Summit Land Status Map

**(ii) Tolovana Claims**

In May 2004, Freegold entered into an agreement with a third party (the “Seller”) whereby the Seller transferred 100% of the rights via Quit Claim Deed to a 20-year lease on the Tolovana Gold Property in Alaska.

Under the terms of the agreement, Freegold assumed all of the Seller’s obligations under the lease, which include making annual payments of \$1,000 per month for the first 23 months increasing to \$1,250 per month for the 24th to the 48th months and increasing to \$1,500 after the 49th month and for the duration of the lease. These payments are current.

The property is subject to a sliding scale NSR as follows: 1.5% NSR if gold is below US\$300 per ounce, 2.0% NSR in the event the price of gold is between US\$300 to US \$400, and 3.0% NSR in the event that the price of gold is above US\$400. In addition, Freegold made a cash payment of US\$7,500 on signing and issued 66,667 shares on regulatory approval. An additional 33,333 shares were to be issued within 30 days if a minimum 200,000 ounce mineral resource being calculated on the property if the resource was established in five years or less from the date of the agreement. No resource was calculated during the prescribed time frame so these shares were not issued.

**(iii) Newsboy Claims**

By lease agreement dated 28 February 1986 and amended 26 March 1996, Freegold assumed the obligation to make advance royalty payments of US\$2,500 per year until 1996 (paid) and US\$5,000 per year until 2006 (paid). During 2006, the Company renewed the existing lease term for an additional 5 years on the same terms and conditions. In 2011 Freegold extended the lease for another 5 years through 2016 and the advance royalty payments increased to \$12,000 per year. These payments are current. In addition Freegold will have the opportunity to further extend the lease for another 5 years by making a one-time payment of US \$50,000. The claims are subject to a 4% NSR. Freegold has the option to purchase the NSR for the greater of the current value or US\$1,000,000 less all advance royalty payments made.

**(iv) Green Claims**

By lease agreement dated 16 December 2010, Freegold acquired from Christina Mining Company, LLC (“CMC”) certain mineral claims in the Fairbanks Mining District of Alaska known as the Green Property. The property is controlled by Freegold through a long-term lease agreement. The claims are subject to a 3% NSR. Freegold must make annual cash payments and exploration expenditures as follows:

	Payments	Exploration Expenditures
1 December 2010	US\$100,000 (paid)	-
1 December 2011	US\$100,000 (paid)	US\$250,000 (completed)
1 December 2012	US\$100,000 (paid)	US\$500,000 (completed)
1 December 2013	US\$100,000	US\$750,000
1 December 2014	US\$100,000	US\$1,000,000
1 December 2015 to 2019	US\$100,000 per year	-
1 December 2020 to 2029	US\$200,000 per year	-
<b>Total</b>	<b>US\$3,000,000</b>	<b>US\$2,500,000</b>

(v) **Chatham Claims**

Freegold holds certain mineral claims in the Fairbanks Mining District of Alaska known as the Chatham Property. The property is controlled by Freegold through a four year lease agreement. The claims are subject to a 2% NSR. Freegold must make annual cash payments and exploration expenditures as follows:

	Payments	Exploration Expenditures
11 July 2011	US\$20,000 (paid)	-
11 July 2012	US\$30,000 (paid)	US\$50,000 (completed)
11 July 2013	US\$40,000	US\$50,000
11 July 2014	US\$50,000	US\$50,000
11 July 2015	-	US\$50,000
Total	US\$140,000	US\$200,000

Freegold has the option to purchase one-half of the NSR representing one percent for US\$750,000.

Freegold also has the option to purchase the property for US\$750,000.

(vi) **Alaska Mental Health Trust Authority Land**

Freegold entered into a long term lease agreement between the Alaska Mental Health Trust Authority Land (MHT) for land and minerals with an effective date of June 1<sup>st</sup>, 2012 in the Fairbanks Mining District of Alaska known as the State of Alaska (MHT). The property is controlled by Freegold through a three year lease agreement, which may be extended for two extensions of three years each. The land is subject to the following sliding scale royalty.

Price of Gold (per Ounce)	Net Royalty
US\$500 – or below	1.0%
US\$500.01 - \$700	2.0%
US\$700.01 - \$900	3.0%
US\$900.01 - \$1,200	3.5%
Above US\$1,200	4.5%

Freegold must make annual cash payments and exploration expenditures as follows:

	Annual Payments	Exploration Expenditures
Execution of agreement	US\$20,000 (paid)	-
Years 1 -3	US\$2,000	US\$25,000 (per year)
Year 4-6	US\$3,000	US\$50,000 (per year)
Years 7-9	US\$4,000	US\$75,000 (per year)

Certain claims acquired from Fairbanks Exploration Inc (FEI) in 1997 are subject to a 7% carried working interest held in trust for FEI by the Freegold. After production is achieved FEI must contribute 7% of any future approved budget. The same claims are also to a subject to a 2% Net Smelter Returns (“NSR”) payable to FEI. Freegold has a 30 day right of first refusal in the event that the 7% carried working interest of FEI or the NSR is to be sold. Freegold can also purchase

the NSR at any time following the commencement of commercial production, for a price equal to its then net present value as determined in accordance with an agreed upon formula.

## **5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Accessibility**

The paved Steese Highway transects the Golden Summit property and is connected to state and privately maintained gravel roads which allows easy access to most areas of the property on a year-round basis. A high voltage electrical power line, land telephone lines, and a cellular phone net service the property.

### **5.2 Climate**

Sub-freezing temperatures are the norm in this region of Alaska during the 6 to 8 months of winter. Following winter, four to six months of warm summer weather prevails. Precipitation in this part of Alaska averages 13 inches, occurring mostly as snowfall between October and March. Drilling is possible on a year round basis on the Property.

### **5.3 Local Resources**

The greater Fairbanks area supports a population of approximately 87,000 and has excellent labor and services infrastructure, including rail and international airport access. The Fairbanks International airport is served by several major airlines with numerous scheduled daily flights. The main campus of the University of Alaska is located in Fairbanks in addition to numerous State and Federal Offices. Major employers within the Fairbanks Area include Fort Knox, Fort Wainwright (US Army), the University of Alaska as well as numerous State and Federal Agencies. Exploration and development costs in the Fairbanks area are at or below those common in the western United States.

### **5.4 Infrastructure**

The Property is accessed via the Steese Highway. A high voltage electrical power line runs parallel to the highway and crosses the western portion of the Property. Both land lines and a cellular network provide telephone service to the western portion of the property. Approximately 15 miles (24 km) south of Fairbanks, the city of North Pole hosts a major oil refinery.

### **5.5 Physiography**

The terrain in the Project areas is composed of low rounded hills cut by steep sided valleys. Elevations on the property range from 1,000 feet (305 metres) to over 2,200 feet (670 metres). Outcrops are rare except in man-made exposures. Vegetation consists of a tundra mat that

supports subarctic vegetation (alder, willow, black spruce, aspen and birch). A variably thick layer of aeolian silt covers most of the property. Permafrost is limited to small discontinuous lenses on steep, poorly drained north-facing slopes, and does not pose an obstacle to exploration activities.

## **6. HISTORY**

Placer or lode gold mining has occurred almost continuously in the Golden Summit project area since gold was discovered in the district in 1902. Over 9.5 million ounces of placer gold have been recovered from the Fairbanks Mining District, of which 6.75 million ounces have been recovered from streams that drain the Golden Summit project (Freeman, 1992e). In addition, over 506,000 ounces of lode gold were recovered from past producing mines on the Golden Summit project (Freeman and others, 1996). More than 80 lode gold occurrences have been documented in the project area. Recent exploration discoveries in the Tintina Gold Belt have underscored the potential for bulk tonnage and high-grade deposits, both of which are known to exist in the Golden Summit project area (McCoy and others, 1997; Flanigan and others, 2000).

Freegold acquired an interest in the Golden Summit project in mid-1991 and since then has conducted extensive geologic mapping, soil sampling, trenching, rock sampling, geophysical surveys and core, reverse circulation, and rotary air blast drilling on the project (Freeman, 1991; Galey and others, 1993; Freeman and others, 1996; Freeman and others, 1998; Freeman, 2004; Freeman, 2005; Freeman, 2006 and Freeman, 2007, Adams and Giroux, 2012). Drilling completed by Freegold on the Golden Summit project between 1991 and 2009 totaled 88,241 feet of core and reverse circulation in 214 holes and 80,822 feet of rotary air blast drilling in 2,028 holes.

In 2004 exploration work at Golden Summit consisted of diamond core drilling at Cleary Hill mine prospect (6 holes, 4,960.5 feet) and trenching (1,790 feet) and diamond core drilling at the Tolovana prospect (7 holes, 3,585 feet). Total expenditures in 2004 were \$301,852 on the Cleary Hill prospect and \$355,424 on the Tolovana prospect. In addition a total of 683 line-kilometers of fixed-wing airborne magnetics was flown over the Golden Summit project. In 2005, dozer and backhoe trenching were conducted at the Cleary Hill prospect (6 trenches, 1,270 feet). Total expenditures in 2004 were \$850,000.

In 2006 four programs totaling 321 man-days of work were completed at a cost of \$816,000, all of which was spent in the Cleary Hill mine area. This work included dozer trenching and collection of 9,900 tons of bulk sample from the Beistline, Cleary Roadcut, Cleary High Grade, D8, Red, Alaska, Wackwitz and Currey zones.

During 2007 a total of 28,602 feet of shallow (<78 feet deep) Rotary Air Blast (RAB) drilling was completed in the Cleary Hill mine area (504 holes). In addition, stripping and stockpiling was completed in the Beistline pit area and along RAB fence 1. At the Beistline pit area, a total of 3,150 tons of low grade material was stockpiled and 1,162 tons of high grade material

stockpiled for possible future bulk sample processing. In the Fence 1 area, a total of 6,330 tons of low grade material was stockpiled and 780 tons of high grade material stockpiled for possible future bulk sample processing. A total of 270 tons of the mineralized material stockpiled from Fence 1 was transported to the pilot-scale gravity processing plant constructed by Freegold on Cleary Creek near the mouth of Wolf Creek. Of this total, 120 tons of material came from the Cleary Hill vein immediately east of the Red Shaft while 150 tons of material came from the Cleary Hill vein in Fence 1 Cut 5. In addition, during 2007 a total of 11,449 feet of shallow (<78 feet deep) Rotary Air Blast (RAB) drilling was completed in the Tolovana mine area (170 holes). Total approximate expenditures at Tolovana prospect in 2007 were \$400,000. Total approximate expenditures at Cleary Hill Mine prospect in 2007 were \$3,651,868.

During 2008 a total of 10,063.5 feet of diamond core drilling was completed in 26 core holes as well as 21,139 feet of exploration RAB drilling were completed in 291 holes averaging 63 feet deep. A total of 19,635 feet of definition RAB drilling were completed in 1,063 holes which averaged 18.5 feet deep and were sampled on 2.5 foot intervals. Total approximate expenditures at Golden Summit in 2008 were \$3,199,940. In addition, stripping and stockpiling was completed in the Beistline pit area, Fence 1 pit and the Cleary North pit. A total of 28,274 tons of high grade material from these pits was transported to and processed at the company's gravity test plant on Cleary Creek.

During 2010 a ground based geophysical survey was undertaken on the Dolphin/Tolovana area in addition to the extensive compilation work on the Golden Summit Project. The results of the geophysical survey indicated that the alteration in the Dolphin Area is well defined with a low resistivity feature. Total exploration expenditures at Golden Summit in 2010 amounted to \$293,378. In addition to the exploration and compilation work, Freegold also entered into a long term lease on 133 State of Alaska mining claims and 18 unpatented Federal mining claims in order to better strengthen its land position within the Project area. In March of 2011 Freegold completed its first NI – 43101 compliant resource calculation using previous drilling completed in the Dolphin/Tolovana area. The resource was completed by Giroux Consultants of Vancouver, BC and, using a 0.3 g/t cut off included indicated resources totaling 7,790,000 tonnes grading 0.695 g/t (174,000 ounces) and inferred resources totaling 27,010,000 tonnes grading 0.606 g/t (526,000 ounces). Drilling aimed at increasing this resource began in February of 2011. During 2011 a total of 29 holes (20,766.5 feet/6,329.5 metres) were completed in the Dolphin/Tolovana area. The results of the Dolphin/Tolovana drilling were incorporated into the updated NI 43-101 which was released in December 2011 and using a 0.3 g/t cut off resulted in an increase in the indicated category to 17,270,000 tonnes @ 0.62g/t (341,000 contained ounces) and 64,440,000 tonnes @ 0.55 g/t (contained ounces 1,135,000) in the inferred category. 2011 also saw the further expansion of the property with the addition of 7 patented mining claims of the Chatham mine block. Ground based IP geophysics and shovel soil sampling was also carried out during the summer and fall of 2011.

A total of 18 holes (11,515 feet) (3,509.9 metres )were also drilled in the Cleary Hill area during

2011. This initial drilling was aimed at infilling historical drilling in the Cleary Hill mine area with the aim of linking the Dolphin/Cleary Hill areas in a future resource model. Total exploration expenditures in 2011 on Golden Summit were \$3,927,969.

In late 2011 Freegold also undertook its first drilling in the Christina prospect area, a high grade vein and bulk tonnage style target which lies 3 km to the east of the Dolphin – Cleary Hill area. A total of 12 holes were drilled in the Christina prospect during late 2011 and early 2012.

A total of 55 holes (54,470.5 feet/16,602.6 metres) were completed at Golden Summit in 2012. In January 2012 drilling resumed with one drill rig at the Christina area and a second rig at the Dolphin/Cleary Hill area. From mid-May on, a single drill rig remained active on the Dolphin/Cleary Hill area through late September. In addition ground based geophysics and shovel soil sampling were also undertaken on the project. A mineral lease with the State of Alaska Mental Health Trust Authority was finalized in 2012 which expanded the project area by 212 acres to the west. The company also staked an additional 37 State of Alaska claims covering 4,720 acres along its southern boundary.

In October 2012, an updated NI 43-101 resource was again calculated this time expanding the Dolphin/Tolovana Resource to encompass the eastern portion of the Cleary Hill area as well (see section 14). Exploration expenditures to September 30<sup>th</sup>, 2012 were \$4,763,783.

**Table 6.1 Summary of modern exploration (1969-2012) conducted within the Golden Summit property and on adjacent prospects**

Company	Years	Exploration/Mining Activity	Principle Targets
International Minerals & Chemicals	1969	Trenching RC drilling	Saddle Zone Circle Trail Zone
Placid Oil Company	1978 – 1986	Trenching Core & RC drilling Adit excavation Christina feasibility study	Christina Vein Pioneer Vein American Eagle Vein Hi Yu Vein
SC	1980 – 1981	Diamond core drilling RC drilling Resource estimate	Tolovana Shear Zone
Fairbanks Exploration	1988	Bulk sampling	Christina Vein
Keystone Mines Partnership	1989	Bulk sampling of mine waste dumps	American Eagle, Hi Yu, Cleary Hill Mines
British Petroleum/Fairbanks Exploration( FEI) JV	1987 – 1988	Trenching, RC drilling	Too Much Gold prospect Saddle Zone Circle Trail Zone Christina Vein
Freegold/FEI JV	1991	Property-wide data compilation	Property-wide
Freegold/Amex Gold JV	1992 – 1994	Trenching, soil sampling, RC drilling, aerial geophysical surveys (EM), bottle roll testing, baseline water quality surveys, aerial photos, EDM surveys	Too Much Gold prospect Cleary Hill Mine area
Freegold	1995 – 1996	RC drilling	Dolphin Deposit Cleary Hill Mine area

Company	Years	Exploration/Mining Activity	Principle Targets
Freegold/Barrick JV	1997 – 1998	Property-wide grid-base soils, recon & prospect mapping, grab sampling, limited RC and core drilling	Property-wide Goose Ck prospect North Extension prospect Coffee Dome Dolphin Deposit Newsboy Mine area Wolf Ck area
Freegold	2000	Limited core drilling	Cleary Hill Mine area
Freegold	2002	Trenching	Cleary Hill Mine area (Currey Zone)
Freegold	2003	Limited core drilling	Cleary Hill Mine area (Currey Zone)
Freegold/Meridian Minerals JV	2004	Trenching, core drilling	Tolovana Mine area Cleary Hill Mine area
Freegold	2005 -2006	Trenching	Cleary Hill Mine area Wackwitz Vein area Beistline Shaft area
Freegold	2007 - 2008	Trenching, RAB drilling, core drilling, bulk sampling	Cleary Hill Mine area Tolovana Mine area
Freegold	2010	Induced Polarization Survey	Dophin/Tolovana Area
Freegold	2011	Induced Polarization Survey, Geochemical Surveys, Core Drilling,	Dolphin Deposit Cleary Hill, Christina Prospect
Freegold	2012	Induced Polarization Survey, Geochemical Surveys, Trenching, Core Drilling	Dophin/Tolovana Area, Cleary Hill, Christina Prospect.

## 7. GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional, District and Property Geology

#### 7.1.1 Regional Geology

The following summary of the regional geology of eastern Interior Alaska is excerpted from Adams and Giroux (2012):

The Fairbanks Mining District is located in the north-central portion of the Yukon-Tanana terrane (YTT). The YTT is a diverse lithotectonic terrane of largely continental affinity consisting primarily of quartzitic, pelitic and calcic metasedimentary rocks, and local mafic and felsic meta-igneous rocks. These protoliths are intruded to a large extent by Mesozoic and Cenozoic granitic rocks (Foster and others, 1994; Newberry, 2000). The YTT is bound on the north by the Tintina-Kaltag fault system, and on the south by the Tanana-Denali-Farewell fault system. These fault systems form zones of major right lateral strike-slip movement, but are largely obscured by alluvial and other Quaternary deposits. Small subterranes of possible island-arc affinity occur along the south margin and in the northeast portion of the YTT (Nokleberg, et al, 1994).

Igneous rocks are widespread throughout the YTT, but are most abundant in the eastern portion of the province. Age dates of plutonic rocks in the YTT generally cluster into three distinctive groups: 1) 215–188 Ma (Late Triassic–Early Jurassic), 2) 110–85 Ma (mid- to Late Cretaceous), and 3) 70–50 Ma (Latest Cretaceous–Eocene). Within the 110–85 Ma group, most age dates cluster within a sub-group ranging in age from 95–90 Ma, and typically referred to as the “Tombstone” suite (Mortinson et al, 2000); plutonic compositions of the Tombstone suite ranges are dominantly granite, granodiorite, quartz monzonite and diorite. The Tombstone suite plutonic rocks are thought to be derived from crustal melts, but could also be mantle-derived melts with significant crustal material contamination. Volcanic rocks in the YTT are far less voluminous plutonic rocks. Volcanic rocks ranging from Cretaceous to Cenozoic in age, and from rhyolite to basalt in composition, are found in scattered locations throughout the YTT.

### 7.1.2 Fairbanks District Geology

Bedrock geology of the Fairbanks Mining District is dominated by a N60–80E trending lithologic and structural trend covering a 30-mile by 15-mile area (Robinson and others, 1990; Newberry and others, 1996). The Golden Summit project is situated in lower to middle Paleozoic metavolcanic and metasedimentary rocks of the Cleary sequence and Fairbanks Schist adjacent to an east-west trending thrust fault known as the Chatanika thrust (Figure 7.1.2). Rocks of the Fairbanks Schist and Cleary Sequences are exposed at Golden Summit in the Cleary antiform, the northern of two northeast trending antiformal belts which form distinctive marker horizons in the mineralized portions of the district. Lithologies within the Cleary Sequence include quartzite, massive to finely laminated mafic to intermediate flows and tuffs, calc-schist, black chloritic quartzite, quartz-sericite schist of hydrothermal origin and impure marble. Lithologies in the Fairbanks Schist include quartz muscovite schist, micaceous quartzite and biotite quartz mica schist. These lithologies have been metamorphosed to the lower amphibolite facies.

Figure 7.1.2 General Geology of the Fairbanks District

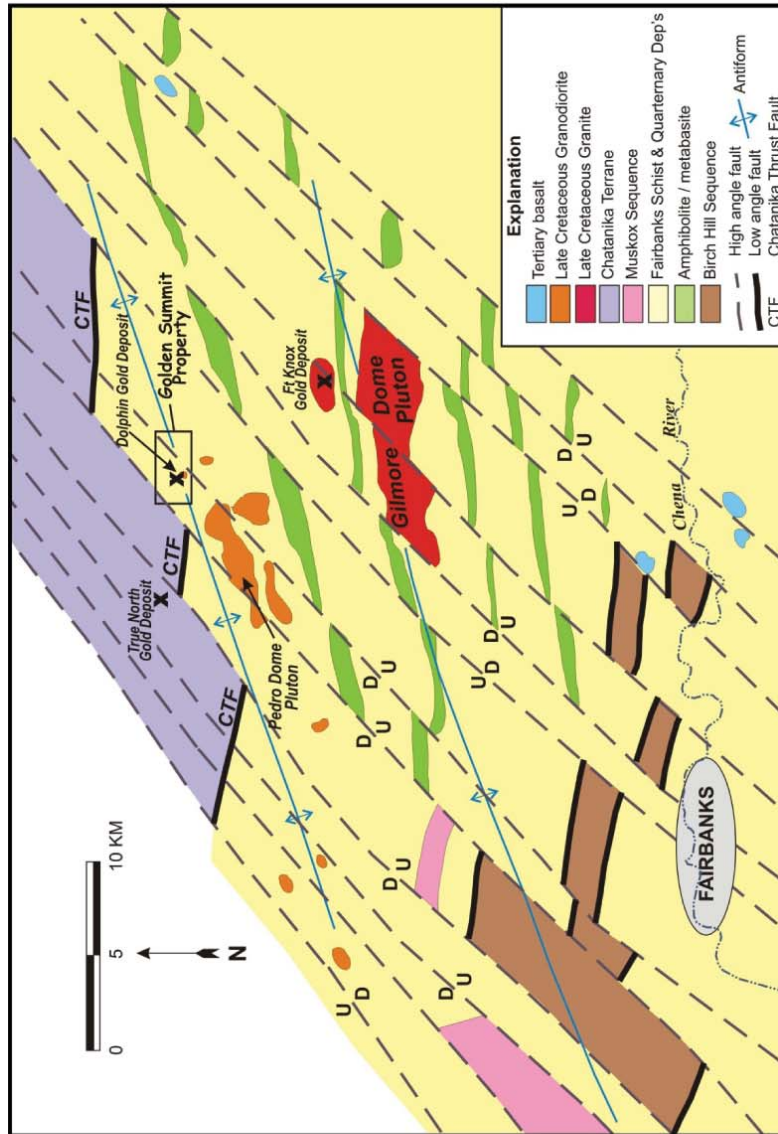


Figure 7.1.2. General geology of the Fairbanks Mining District, Alaska. Data from Newberry, and others, 1996 modified by Avalon Development, 2008.

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Current maps for the Fairbanks District indicated that rocks of the Fairbanks Schist and Cleary Sequence have been over thrust from the northeast by eclogite to amphibolite facies rocks of the Chatanika terrane (Newberry and others, 1996;). The Chatanika terrane consists of quartz muscovite schist, carbonaceous quartzite, impure marble, garnet feldspar muscovite schist, and garnet-pyroxene eclogite that have yielded Ordovician Ar<sup>40</sup>/Ar<sup>39</sup> age dates ranging from 470 to 500 Ma (Douglas, 1997). Motion on the Chatanika thrust fault has been dated at approximately 130 million years and resulted in structural preparation of favorable host units in the Chatanika terrane and adjacent lower plate rocks. Diamond drilling and trenching completed on the Golden Summit project by Freegold have encountered Chatanika Terrane rocks over a zone extending up to one mile south of the mapped contact of the Chatanika Terrane. The location of these exposures suggests that the contact between the upper and lower plate is in fact a series of en-echelon low angle structures. This mixed terrane can be distinguished on airborne magnetics maps as a zone of intermediate magnetic intensity that is less than the highly magnetic rocks of the Chatanika Terrane but more magnetic than the Fairbanks Schist (Freeman, 2009). The ramifications of this hypothesis are discussed under “Mineralization”.

Intrusives in the Fairbanks district have yielded Ar<sup>40</sup>/Ar<sup>39</sup> and K-Ar dates of 85-95 million years (Freeman and others, 1996). These intrusives range in composition from diorite to granite and possess elevated Rb/Sr ratios indicative of significant crustal contribution to subduction generated magmas. Several granodiorite to aplite intrusive bodies are present in the Golden Summit project area. The presence of hypabyssal intrusives and sporadic Au-W skarn mineralization in the Golden Summit project area suggests the area may be underlain by more extensive intrusive bodies similar to those on Pedro Dome and Gilmore Dome (Freeman and others, 1998). This conclusion is supported by airborne geophysical surveys (DGGS, 1995) and by depth modeling conducted on these airborne data (PRJ, 1998). Mineralization within the Pedro Dome, Gilmore Dome and Dolphin intrusive complexes suggests plutonic rocks pre-date mineralization.

Rocks on the Golden Summit project are folded about earlier northwest and northeast trending isoclinal recumbent fold axes followed by an open folded N60-80E trending event (Hall, 1985). Upper plate rocks of the Chatanika terrane have been affected by more intense northwest and northeast trending isoclinal and recumbent folding followed by folding along the same N60-80E trending axis which affected lower plate rocks. Lithologic packages in both the upper and lower plates are cut by steeply dipping, high angle northwest and northeast trending shear zones, some of which are mineralized (Figure 7.1.2). Recent large-scale trenching in the Cleary Hill mine area suggest that numerous low angle structures are present in the Golden Summit project area, some of which are mineralized. Late post-mineral north-south structures with normal motion further dissect the project. Airborne magnetic data in this part of the Fairbanks District indicate the presence of district scale east-west and northeast trending structures which appear to post-date N60-80E folding (DGGS, 1995). Gold mineralization on the Golden Summit project post-dates regional and district scale folding and is contemporaneous with or slightly younger than

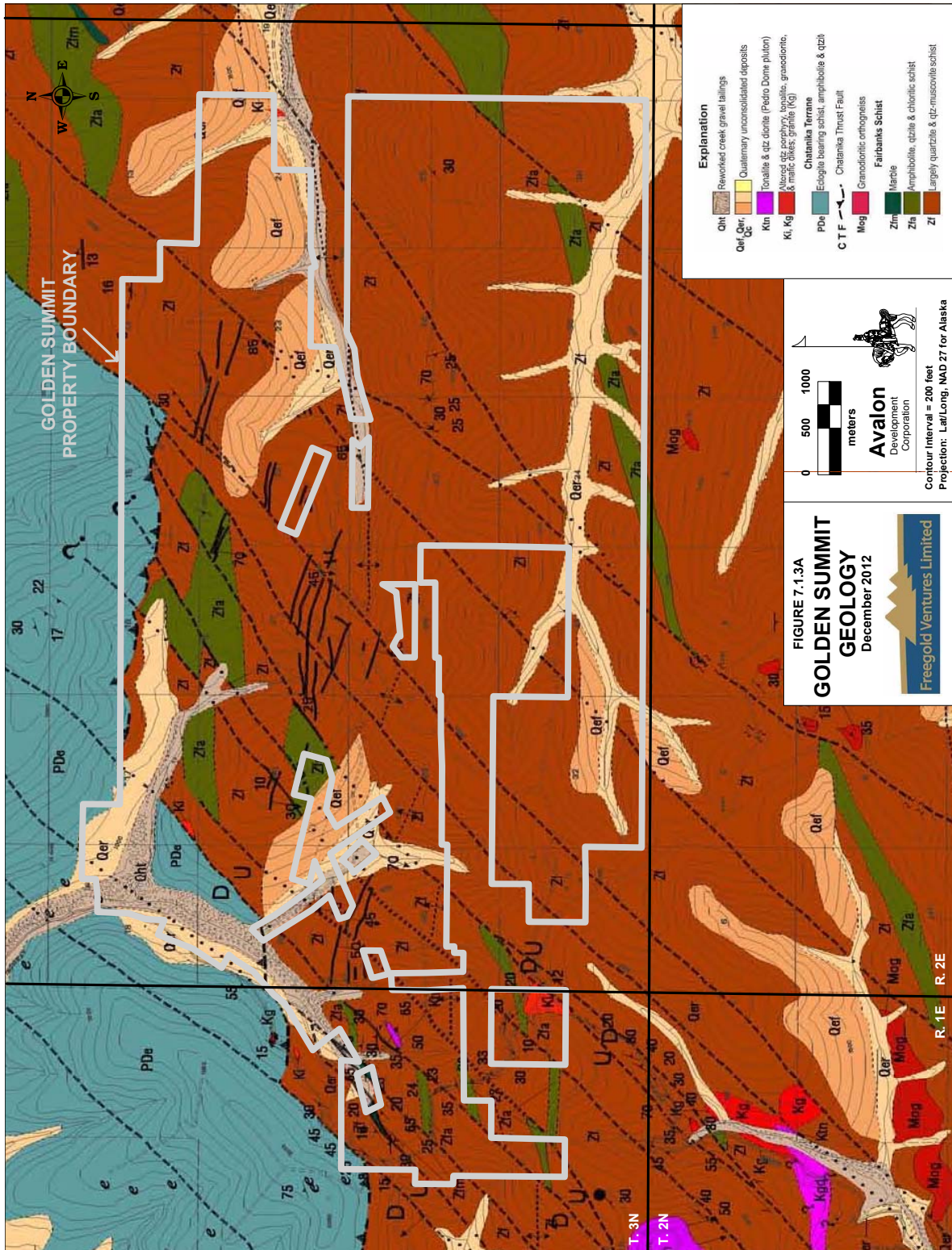
district-scale northeast trending structures and plutonic activity. Excavations completed in the Cleary Hill area in 2006, 2007 and 2008 clearly indicate that the strike and/or dip of gold-bearing quartz veins were influenced by pre-existing fold geometry. This subject is discussed in more depth under “Exploration”.

### 7.1.3 Golden Summit Project Geology

The following summary of the Golden Summit project general geology is derived in large part from Freeman (2009) and Adams and Giroux (2012):

Three main rock units underlie the Golden Summit property, including rocks of the Fairbanks Schist, rocks of the Chatanika Terrane, and intrusive rocks (Figure 7.1.3A). The Fairbanks Schist and Chatanika Terrane have both been subjected to one or more periods of regional metamorphism. The intrusive bodies are post-metamorphic. Chatanika Terrane rocks are found structurally above the Fairbanks Schist and north of the Chatanika Thrust fault and comprise the northernmost portion of the property. Intrusive rocks are relatively minor on the Golden Summit property, and are primarily represented by the Dolphin stock, although small granitic dikes are known in several locations.

Most of the property is underlain by the Fairbanks Schist. The Fairbanks Schist consists largely of quartz-mica schist and micaceous, massive to laminated quartzite, with lesser amounts of amphibolite, chlorite schist, calc-schist and marble. A unit within the Fairbanks Schist, referred to as the “Cleary Sequence”, consists of three mappable sub-units containing distinctive and highly variable lithologies. The lower portion of the Cleary Sequence (~450 feet thick) consists of massive, mafic metavolcanic rocks (flows and tuffs), and minor actinolite schist, quartzite, and dolomite. The middle portion of the Cleary Sequence (~300 feet thick) consists of massive quartzite, feldspathic quartz schist, and quartz mica schist. The upper portion (~250 feet) is similar to the middle portion, but is distinguished by the presence of interlayered marble and minor amounts of garnet-bearing schist. Locally the Cleary Sequence is capped by a distinctive gray, sulfide-bearing marble unit up to 50 feet thick.



Figures 7.1.3A Local Geology and Major Prospects on the Golden Summit Project, (geology from Newberry et al, 1996)

Chatanika Terrane rocks on the Golden Summit property include muscovite-quartzite, coarse-grained muscovite schist, amphibolite, massive actinolite greenschist, chlorite schist, and local garnet-diopside eclogitic rocks (Swainbank, 1971). Chatanika Terrane mafic rocks are not readily discernible from mafic rocks of the Fairbanks Schist either in hand specimen or drill core. This has created difficulties with mapping, logging and establishing a stratigraphic section in the Tolovana Mine and Cleary Hill Mine areas. The Dolphin stock is located on the ridge between Bedrock and Willow Creek. Initial diamond core logging identified five intrusive phases within the Dolphin stock, including 1) fine- to medium-grained, equigranular to weakly porphyritic biotite granodiorite, 2) fine- to medium-grained, equigranular to weakly porphyritic hornblende-biotite tonalite, 3) fine-grained biotite granite porphyry, 4) fine-grained biotite rhyolite to rhyodacite porphyry, and 5) rare fine-grained, chlorite-altered mafic dikes (Adams and Giroux, 2012).

Limited drill data suggests the north and west contacts of the Dolphin stock are fault contacts (Adams and Giroux, 2012,). The south and east contacts are largely intrusive contacts with minor faulting.

Due to the paucity of radiometric age dates, limited outcrop, and limited observations of crosscutting relations, the crystallization and mineralization history of the Dolphin stock remain unknown. Small dikes of granodiorite cutting tonalite have been observed in core, and altered granitic dikes cut both altered and unaltered granodiorite and tonalite, suggesting multiple phases of intrusion and hydrothermal alteration. Two radiometric age dates, including two sericite Ar40/Ar39 plateau age dates (McCoy, 1996); place some constraints on the timing of crystallization and mineralization. The sericite ages were obtained from two different samples representing two distinctly different styles of gold mineralization. One sample, from stockwork style mineralization, was 90.1 Ma. Another sample, from a sericite shear-zone, was 88.3 Ma. These ages are quite similar to ages from Fort Knox (86.3-88.2 Ma). Due to age and chemical similarities, most workers associate the Dolphin and Fort Knox intrusive rocks with widespread intrusive-related gold deposits in the Tintina Gold Belt.

Nearly all rocks comprising the Golden Summit property are highly deformed. Primary foliations ( $S_0$ ) in the Fairbanks Schist generally dip north on the north half of the property and generally dip south on the south half of the property, defining the Cleary antiform, a large-scale northeast trending antiform. Deformation intensity increases further north, with proximity to the Chatanika Thrust fault. The Chatanika Thrust fault is thought to represent an ancient thrust event, and one of the earliest deformation events in the area. Rather than a simple fault contact as shown on published geologic maps of the district, the Chatanika Thrust fault is a complex thrust fault zone containing numerous thin thrust sheets or wedges emplaced above and in between layers of various Fairbanks Schist lithologies (Freeman, 2009). The Chatanika Thrust fault has been offset by numerous northeast-trending high angle faults. These types of faults are very common throughout the northern part of the Yukon Tanana Terrane, and typically represent a very late stage structural event. The Chatanika Thrust fault may also have been re-activated during later deformation events, or served as the focus of north-directed gravity or listric style

fault activity. The next oldest structural event is thought to be represented by the high angle faults and shear zones which host the major auriferous quartz veins found at numerous locations on the property. These zones are largely oriented northwest-southeast, however, northeast-southwest oriented shear zones, which are otherwise very similar in terms of structural style and mineralization; occur to the west of the Dolphin deposit and at several other locations on the property. The veins most often dip steeply towards the south, but occasionally dip north. Field evidence for repeated veining, alternating with brecciation suggests the mineralization within these zones was largely syn-deformational. Short offsets (<20ft) of the veins occur along the youngest structures observed at Golden Summit, along steep, north to northeast-trending normal faults.

## **7.2 Mineralization**

Over 63,000 strike feet of mineralized shear zones have been identified within and immediately adjacent to the Golden Summit project (Freeman and others, 1996). The majority of the mineralized shear zones on the eastern end of the project trend N60-80W and dip steeply to the southwest. Shear zones on the western end of the project area predominantly trend N60-80E and dip steeply north. Shear zones in the central portion of the project (centered on the Dolphin/Cleary Hill area trend closer to east-west with variable south dips and appear to mark a transition zone from primarily northwest trending, south dipping shears to the east to primarily northeast trending, north dipping shears to the west. Bulk sampling completed in 2006, 2007, and 2008 has exposed mineralized flat-lying (10-30°) structures dipping both north and south. The extent and economic significance of these flat-lying structures is uncertain. In addition, exploration activities conducted by Freegold have identified previously unrecognized shear zones trending N30-50W and due north-south (Freeman and others, 1998). These shear zones possess significantly different metal suites than flat-lying structures or N80W and N60E trending shears. These shear zone geometries and their distribution may represent sympathetic structures generated by regional scale shear couples related to Tertiary (post 55 Ma) motion of the Tintina and Denali faults (Flanigan and others, 2000).

Examination of the spatial arrangement of the +80 known gold occurrences in the Golden Summit area and the geometry of the +63,000 linear feet of documented gold-bearing quartz veins in the area suggest veins tend to cluster into discrete vein swarms. These vein swarms are controlled by a series of district-scale northeast-trending structures regularly spaced approximately 8,000 feet (2.4 km) apart in the Golden Summit area. These structures were first identified as district scale features evident on public airborne geophysical surveys conducted in the mid-1990's (DGGs, 1995). Their periodicity with respect to clusters of known gold occurrences was unrecognized prior to 2004 when it was recognized on the Golden Summit project (Freeman, 2004). The Eldorado fault, which appears to control mineralization at both the Ryan Lode and the True North deposits, is the best documented of these district scale northeast structures. The Dolphin trend, located parallel to and 8,000 feet east of the Eldorado fault, is the next best-defined northeast-trending structure and probably is critical to the mineralization in the

Newsboy, Tolovana, and 6 M oz Dolphin/Cleary Hill areas. Approximately 8,000 feet farther east, an unnamed northeast-trending structure passes through the Saddle zone where it may be integral to the formation of the highest known density of veins in the Fairbanks Mining district, including those which host gold mineralization at the McCarty, American Eagle, Pioneer and Pennsylvania mines. Eight thousand feet further east, another unnamed northeast-trending structure passes through the Hi Yu mine area and probably is key to the formation of multiple veins in this area of the Golden Summit project. This 8,000-foot periodicity probably extends to the east where northeast structures may control mineralization on Coffee Dome and to the west of the Eldorado Creek fault where they may control gold mineralization in the Treasure Creek area and the Sheep Creek area of Ester Dome.

The other recently recognized feature of gold mineralization in the Golden Summit area is related to the structural relationship between “lower plate” rocks of the Fairbanks Schist – Cleary Sequence and “upper plate” rocks of the Chatanika Terrane. Published maps of the district (Robinson and others, 1990; Weber and others, 1992; Newberry and others, 1996) indicate that the contact between the overlying Chatanika Terrane and rocks of the lower plate are marked by a single north-dipping thrust plane that strikes northeast according to Robinson and others (1990) or east-west according to Newberry and others (1996). Douglas (1997) dated this thrust event at 130 Ma based on data derived from a single core hole drilled by Placer Dome on the south flank of Marshall Dome near the northwestern edge of the Golden Summit project. The actual contact between upper and lower plate rocks is not exposed at surface anywhere along its mapped trace so the inferred motion direction (thrust versus low-angle gravity fault) remains uncertain. Regional scale kinematic evidence is permissible for the formation of either gravity or thrust faults. Douglas (1997) presents evidence of multiple low-angle fault events which structurally interpose thin (<250 feet) layers of upper and lower plate rocks over a +750 foot interval. Chemical evidence for structurally juxtaposed upper and lower plate rocks has also been documented in drilling in the Cleary Hill mine area (Freeman and others, 1998).

With the exception of gold and antimony mineralization in the vicinity of the True North deposit, published geologic maps of the district indicate that all of the historic lode gold, tungsten and antimony occurrences in the Golden Summit area are hosted in lower plate rocks. However, reinterpretation of the airborne magnetic data for the Golden Summit project suggests rock with magnetic signatures identical to the Chatanika Terrane (variable but high magnetic susceptibilities) extend considerably farther south than current published geologic maps indicate. In the field, geological and multi-element geochemical data suggest that virtually all of the known lode gold occurrences on the Golden Summit project are hosted in a zone containing structurally mixed lithologies derived from both upper and lower plate rocks. This mixed zone appears to be the result of multiple en-echelon low angle structures separating upper and lower plate rocks. If this interpretation is correct, the grade and geometry of gold mineralization in the Golden Summit project area may be controlled in part by physical and/or chemical conditions that existed at the time of mineralization along or adjacent to en-echelon low-angle faults caused by emplacement of the Chatanika Terrane.

The major historic lode gold mines of the Golden Summit project derived their production primarily from steeply dipping northwest and northeast trending high angle, low sulfide, gold-polymetallic quartz veins and shear zones which transect what is now thought to be the mixed upper plate - lower plate rock package at Golden Summit (Hill, 1933; Pilkington, 1969; Metz, 1991; Freeman and others, 1996). These shear zones are characterized by a metal suite containing free gold with variable amounts of tetrahedrite, jamesonite/boulangerite, arsenopyrite, stibnite and scheelite with minor base metal sulfides. Fluid inclusion data suggest mineralization was associated with high CO<sub>2</sub>, low salinity fluids at temperatures averaging 350°C. Lead and sulfur isotope data, tellurium geochemistry and tourmaline compositions suggest a strong plutonic component to the Golden Summit shear hosted mineralization (McCoy and others, 1997).

There are three styles of gold occurrences identified on the Property, including 1) intrusive-hosted sulfide disseminations and sulfide-quartz stockwork veinlets (such as the Dolphin gold deposit), 2) auriferous sulfide-quartz veins, and 3) shear-hosted gold-bearing veinlets. All three types are considered to be part of a large-scale intrusive-related gold system on the property.

#### 7.2.1 Intrusive-hosted Sulfide-Quartz Veinlets

Intrusive-hosted, auriferous sulfide disseminations and auriferous sulfide-quartz veinlets (0.1-5mm) within the Dolphin stock are spatially associated with the highest gold grades within the Dolphin gold deposit (Figure 7.2.1A). Gold also occurs with disseminated euhedral arsenopyrite (1 to 5 mm) which appear to be an earlier, higher temperature mineralization event (McCoy and Olson, 1997). Gold mineralization within the deposit also occurs as mineralized fault gouge enriched with sulfides, sulfide-rich veins, and locally as narrow sulfide-quartz veins <6 inches thick, however, these comprise a relatively small portion of the total gold resource.

Gold within the Dolphin gold deposit occurs largely as inclusions in sulfides, and locally as visible grains, within the sulfide-quartz veinlets. Arsenopyrite is the most common sulfide mineral, although pyrite, stibnite, lead-antimony sulfosalt minerals, tetrahedrite (?), scheelite, galena and sphalerite occur locally. McCoy and Olson (1997) identified two distinct varieties of arsenopyrite in the Dolphin gold deposit based on arsenopyrite geothermometry and age relations. Older arsenopyrite from quartz stockworks (90.1Ma) formed at higher temperatures, whereas younger arsenopyrite from shear zones formed at lower temperatures (88.3Ma). McCoy also noted that older “hotter” arsenopyrites were finer-grained compared to younger “cooler” arsenopyrites, which were generally coarse and bladey. Furthermore, the high-temperature arsenopyrite contains particulate inclusions of gold, whereas the low-temperature arsenopyrite contains maldonite (a gold-bismuth mineral). Although stibnite and antimony sulfosalts are not uncommon in the deposit, geochemical studies suggest that high antimony values are generally associated with very low gold values. Evidence suggests that the ore fluids evolved towards increasing base metals and antimony with time (Figure 7.2.1D). For example, chalcopyrite embayments in pyrite were noted in thin section, and massive sulfide veins (jamesonite, galena,

stibnite and/or sphalerite) cutting arsenopyrite-quartz veins are noted in several drill logs. In addition to sulfides, some portions of the Dolphin gold deposit contain abundant scheelite.

Several forms of alteration have overprinted the Dolphin intrusive rocks. The most common alteration types are chloritization, kaolinitization, silicification and sericitization. Carbonate alteration, as calcite or less commonly dolomite or iron carbonate, is found locally. Alteration can range from weak to intense, and is generally indicative of higher gold values, in particular, when strong silicification and sericitization are present. As mentioned, strong sericite alteration is characteristic of shear zones, but weak to moderate sericite alteration is ubiquitous throughout the deposit and appears to be one of the earliest phases of hydrothermal alteration in the Dolphin deposit. Detailed core logging suggests the paragenetic sequence of alteration and mineralization events at the Dolphin deposit range from early sericite alteration and disseminated arsenopyrite ± pyrite through sheeted auriferous quartz-sulfide veining to coarse grained pyrite-dominated ± base metal sulfide veining (no quartz associated).

### 7.2.2 Auriferous Quartz Veins

High grade auriferous quartz veins (2cm-3m), hosted in metamorphic rocks, occur at numerous locations on the Golden Summit property, and were the source of all previous gold production from the property. A discussion of each occurrence is beyond the scope of this report; the general mineralogy, morphology and structural setting is summarized below. Detailed information for individual vein prospects on the Golden Summit property can be obtained from previous reports (Freeman, 1992).

The auriferous quartz veins typically crosscut the host rock primary foliation at very high angles. A large number of these veins dip south, although some veins dip north. Vein thickness is quite variable, and can range from a few inches to several feet over short distances along both strike and dip. Pinch-and-swell features, bifurcations and splays are characteristic. Discrete auriferous quartz veins often have sharp wallrock contacts but can grade into shear zones suggesting a continuum between this type of gold quartz veining and shear-hosted gold described below (Brown and others, 2008a, 2008b). In contrast to the high grade quartz veins, barren, translucent or milky colored metamorphic quartz most often occurs as seams or boudinage sub-parallel to the primary foliation of the host rocks.

Auriferous quartz veins on the Golden Summit property consist of hydrothermal quartz with minor to trace amounts of sulfides. The veins are opaque to milky white quartz and locally gray to mottled gray and white. Bands or laminations parallel to the vein walls are not uncommon, and vein centers often contain vuggy or comby quartz crystals. Silicified vein breccia is also common, and may comprise the entire vein or be restricted to bands within the banding sequence (Adams and Giroux, 2012). This suggests there were most likely multiple, possibly alternating episodes of silicification and deformation. Auriferous quartz veins seldom contain more than 5% total sulfides and average 1-3%. The most common sulfide is arsenopyrite, although other sulfides are locally present, including pyrite, stibnite, jamesonite, tetrahedrite, galena and

sphalerite. Scheelite is present in a few specific veins (notably abundant in the Cleary Hill and Wyoming vein). Visible gold typically occurs as coarse flakes, filigree, or wires suspended in quartz or mingled with sparse, scattered sulfides. Locally the auriferous quartz veins may be accompanied by parallel stringers and pods of later massive stibnite. This massive stibnite occurs locally as <10 inch (<0.25m) thick seams or pods parallel or adjacent to auriferous quartz veins, and also as veins up to 4 feet (1.3m) thick along steep cross-faults which offset the auriferous quartz veins. This stibnite mineralization is thought to be formed as the last metal-bearing event at lower temperatures.

### 7.2.3 Shear-hosted Veinlet Zones

Shear-hosted auriferous veinlet zones on the Golden Summit property are found within some of the same shear zones which host major auriferous quartz veins and, as mentioned above, are likely part of the same mineralization event. The key characteristic of these zones is that they may contain sufficient polyphase veinlet density and gold grade to justify bulk-mining methods. Several of these zones have been explored since about 1969, including the Too Much Gold prospect, the Circle Trail and Saddle prospects, and the Curry Zone. Most recently, several zones in the Cleary Hill Mine area have been targeted by Freegold and included in the resource estimate outlined in this report (see Section 14).

The shear-hosted veinlets consist largely of quartz with variable amounts of sulfides, although locally the veinlets may consist largely of sulfides with lesser amounts of quartz. Sulfide-quartz veins within the shear-hosted zones generally are less than a few centimeters in thickness. Locally these veins form vein sets with spacing of a few feet, resembling a sheeted vein system (vein swarm). The veins are discontinuous along strike and dip, and often grade into broken veins, vein breccia, or zones of sugary, granulated crush quartz material. Higher quartz vein and veinlet density is generally indicative of higher gold values.

The shear-hosted veinlet zones are characterized by pervasive sericite and clay alteration, as well as localized silicification and carbonate alteration. In addition, the zones are typically highly oxidized near the surface, and contain locally intense iron, arsenic or antimony oxides. The majority of the veinlets within the zones are sub-parallel to the strike and dip of the zone.

Host rocks for the veinlet zones are quite variable. Differences in rock competency appears to influence the geometry of mineralization within and adjacent to the deformation zone. For example, massive quartzite or greenstone units are more competent, and tended to propagate fractures where fluids were more restricted, resulting in the formation of thinner but often higher grade gold quartz veins. In comparison, thin-bedded units with higher pelitic, carbonaceous and calcareous components are more susceptible to shearing and widespread infiltration by metal-bearing fluids, resulting in stockwork of sheeted vein zones. Therefore, key factors are thought to be the right combination of host rock lithology, location within a major shear zone, and access to a hydrothermal fluid source. These zones are best developed where multiple shears or faults

intersected and caused widespread fracturing and increase permeability within metamorphic host rocks.

**Golden Summit Core Photos – Dolphin Prospect**

**Shear Hosted Breccia & Quartz Vein Zone – GSDL 12-10  
Figure 7.2.3A**



**Quartz Stockwork Zone in Granodiorite & Tonalite – GSDC 11-32  
Figure 7.2.3B**



**Intense Quartz Stockwork Zone (End of Hole) – GSDC 11-32  
Figure 7.2.3C**



**Intense Brecciation and Fractured Schist hosted Stockwork – GSDL 12-01  
Figure 7.2.3D**



## 8. DEPOSIT TYPES

Recent discoveries in the Fairbanks District have outlined a series of distinctive mineral occurrences which appear to be genetically related to mid-Cretaceous plutonic activity which affected a large area of northwestern British Columbia, Yukon, Alaska and the Russian Far East (Flanigan and others, 2000). This work, based on extensive geologic and structural mapping and analytical studies (major and trace element analysis, fluid inclusion microthermometry,  $^{40}\text{Ar}/^{39}\text{Ar}$  geochronology, and isotope analysis) has provided new information regarding gold metallogenesis in the Fairbanks district (Baker and others, 2006; Burns et al., 1991; Lelacheur et al., 1991; Hollister, 1991; McCoy et al., 1994; Newberry et al., 1995; McCoy et al., 1995). A synthesis of this information (Hart et al., 2002, McCoy et al., 1997, Lang and others 2001) suggests an ore deposit model in which gold and high  $\text{CO}_2$  bearing fluids fractionate from ilmenite series, I-type mid- Cretaceous intrusions during the late phases of differentiation. The gold is deposited in anastomosing pegmatite and/or feldspar selvage quartz veins. Brittle fracturing and continued fluid convection and concentration lead to concentration of gold bearing fluids in intrusions and schist-hosted brittle quartz-sericite shear zones. Carbonate and/or calcareous metabasite horizons host W-Au skarns and replacement deposits. Structurally prepared calcareous and/or carbonaceous horizons may host bulk-minable replacement deposits. These occur most distal to the intrusions within favorable host rock in the Fairbanks Schist and Chatanika Terrane.

Seven different potentially economic gold deposit types have been identified in the Fairbanks district. They are:

1. Gneiss or high-grade schist-hosted quartz veins or metasomatic replacement zones proximal to or within causative intrusives. Metals associated include Au, Bi, and As and possibly Cu and W. Pogo (+7 M oz M oz) and Gil (+0.5 M oz) are examples of such mineralization.
2. Stockwork-shear style mineralization hosted in porphyritic intermediate to felsic intrusives. Mineralization contains Au with anomalous Bi, Te, W and trace Mo. There is a strong genetic relationship between host intrusion and gold mineralization. Examples include Fort Knox (10 M oz) and Dublin Gulch (+3 M oz).
3. Porphyritic stockwork with intrusion/schist shear hosted Au-As-Sb with a strong genetic relationship between host intrusion and gold mineralization. Ryan Lode (2.4 M oz) and Dolphin (6 M oz) are examples of this type of mineralization.
4. Base metal  $\pm$  Au, Ag and W intrusion hosted mineralization with a possible genetic relationship between precious metal mineralization and intrusion. Silver Fox prospect is an example.
5. Structurally controlled mineralization hosted by schist-only high angle shear zones and veins. Associated metals include Au, As, Sb, Ag, Pb and Win low sulfide quartz- carbonate

veins. Alteration adjacent to veins is pervasive quartz-sericite-sulfide alteration that can extend for up to one mile from the source structure. Deposits were mined heavily prior to World War II and are noteworthy because of their exceptional grades (+1 to +5,000 opt Au). Examples include Cleary Hill (280,000 oz production), Christina (20,000 oz production), American Eagle (60,000 oz production), Hi Yu (110,000 oz production) and Newsboy (40,000 oz production) veins.

6. Low angle, disseminated, carbonate-hosted Au-As-Sb mineralization associated with brittle thrust or detachment zones distal to generative intrusives. The True North deposit (1.3 M oz) is an example of this type of mineralization.

7. Shear-hosted monominerallic massive stibnite pods and lenses. Trace As, Au, Ag and Pb but these prospects are noteworthy because they appear to represent the most distal end members of the intrusive gold hydrothermal systems. Examples include the past producing Scrafford and Stampede mines.

## **9. EXPLORATION**

Between 2011 and 2012, Freegold completed 90,791 feet of core drilling in 107 holes primarily in the Dolphin/Cleary Hill areas. In addition, other exploration conducted on the Golden Summit property during 2012 included induced polarization, limited trenching, shovel soil sampling and rock sampling.

### **9.1 Induced Polarization Survey**

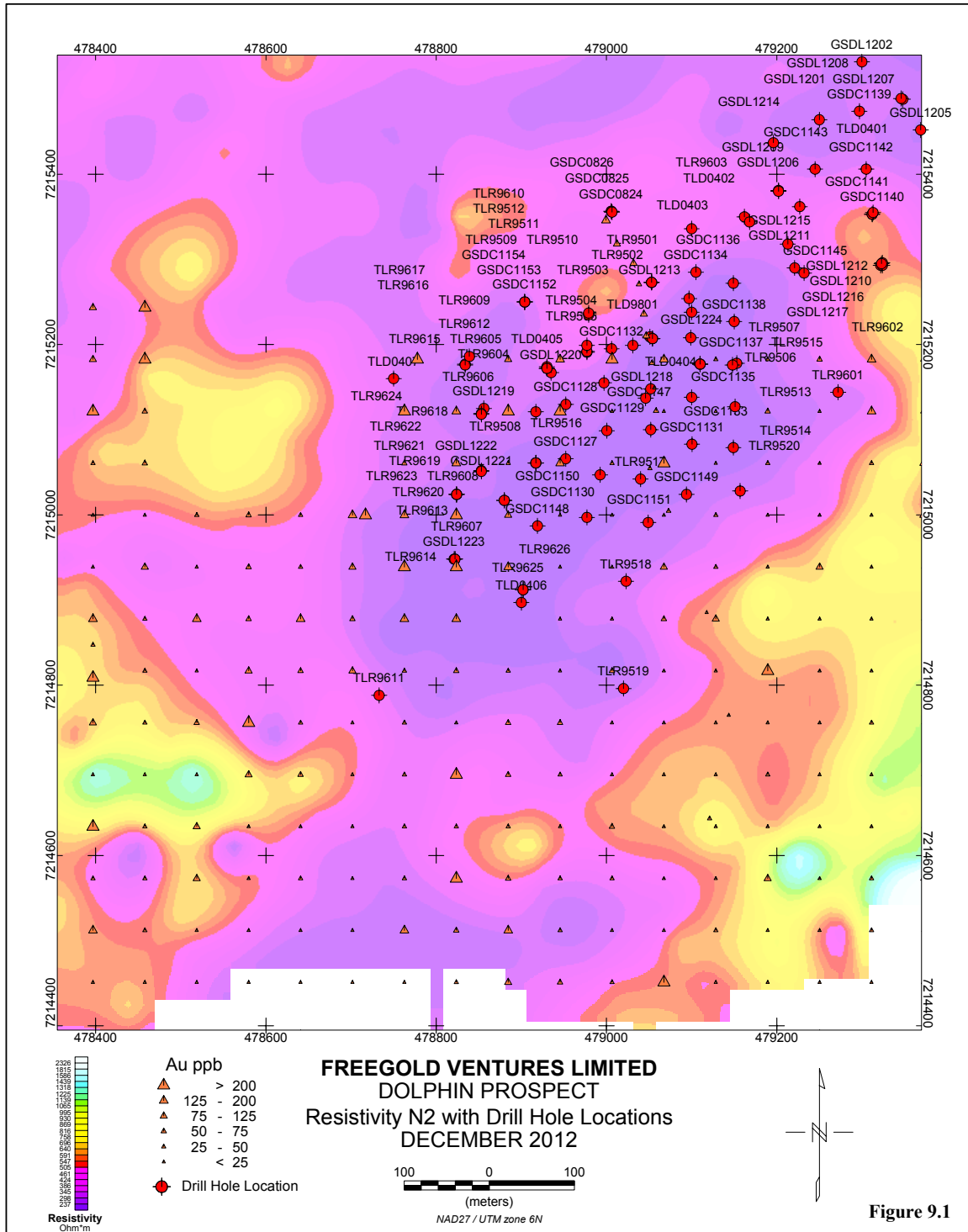
Induced polarization geophysics was conducted on the Golden Summit project in 2010, 2011 and 2012. The surveys now cover approximately 80% of the property. IP lines were established using a compass, GPS and tight chain. Lines were lightly brushed out and flagged. Soil samples were collected either at IP stations or at set coordinates in areas of no IP coverage. In 2010, 22.5 km of IP surveying was conducted on 15 parallel lines spaced 100 and 200 metres apart and ranging in length from 1.1 km and 2.3 km in the Dolphin area. In 2011 101.75 km of IP surveying was conducted. The IP survey was done on 33 parallel lines spaced 200 metres apart and ranging in length from 1.1 km and 3.5 km. In 2012, an additional 49.3 km of IP surveying was conducted and was focussed primarily on the western side of the Golden Summit project to expand coverage of the 2010 IP program. In total, 37 lines were surveyed, spaced 100 metres apart and ranging in length from 500 metres to 2.7 km. Measurements – first to sixth separation – of apparent chargeability – the IP response parameter – and resistivity were made along the traverse lines using the pole-dipole technique with a 50 metre dipole. The 400 metre long IP array consists of 8 wires ranging from 50 metres to 200 metres in length which are connected to electrodes and fed back to the receiver. Current is run to the ground injection point along a wire that is unwound as the survey progresses. A crew of three to 5 people are used to advance the survey array and one person is dedicated to the transmitter. The induced polarization (IP) survey was conducted using a pulse type system, the principal components of which were manufactured

by Instrumentation GDD Inc. of Quebec, Canada and Iris Instruments of Orleans, France. The system consists basically of three units, a receiver (Iris Elrec 6), transmitter (GDD or Iris VIP) and a motor generator. The transmitter, which provides a maximum of 3.6 kw d.c. to the ground, obtains its power from a 6.5 kw 60 c.p.s. single phase alternator driven by a gasoline engine. The cycling rate of the transmitter is 2 seconds “current-on” and 2 seconds “current-off” with the pulses reversing continuously in polarity. The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through the current electrodes  $C_1$  and  $C_2$ , the primary voltages (V) appearing between any two potential electrodes,  $P_1$  through  $P_{n+1}$ , during the “current-on” part of the cycle, and the apparent chargeability, ( $M_a$ ) presented as a direct readout in millivolts per volt using a 200 millisecond delay and a 1000 millisecond sample window by the receiver, a digital receiver controlled by a micro-processor - the sample window is actually the total of ten individual windows of 100 millisecond widths. The apparent resistivity ( $\rho_a$ ) in ohm metres is proportional to the ratio of the primary voltage and the measured current, the proportionality factor depending on the geometry of the array used. The chargeability and resistivity are called apparent as they are values which that portion of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous the calculated apparent chargeability and resistivity are functions of the actual chargeability and resistivity of the rocks. The 400m long IP array consists of 8 wires ranging from 50 metres to 200 metres in length which are connected to electrodes and fed back to the receiver. Current is run to the ground injection point along a wire that is unwound as the survey progresses. A crew of three to 5 people are used to advance the survey array and one person is dedicated to the transmitter (Unpublished Freegold Internal Memo, 2012).

### *Discussion of Results*

In 2010 a small geophysical program (Induced Polarization) was undertaken on the Dolphin Zone and a small portion of the Cleary Hill area. The initial survey appeared to define the Dolphin intrusive and alteration halo. As a result the “West Grid” was expanded in 2012 to test for potential expansion and to cover additional ground to the southwest. The results of the work completed during 2012 suggest that Dolphin may be open for an additional 1.5 km to the southwest and drilling during 2013 is recommended in order to follow up on the geophysical target outlined. Higher chargeability values caused by sulphides within the hornfels are seen to the north of Dolphin and may also represent prospective targets. See Figure 9.1 – Resistivity N2 with Drill Holes – Dolphin Prospect.

Figure 9.1 Resistivity N2 with Drill Hole Locations – Dolphin Prospect



In 2011 the program was focused on what is now known as the East Grid - which was designed to encompass the Christina, Goose Creek and Too Much Gold prospects. To ensure greater coverage (at the cost of resolution) the lines were spaced at 200m. The IP and Resistivity results do a good job of mapping structural and topographical features and highlighting prospective new drill targets. These targets include anomalous high chargeability values over high resistivity zones and potential structural ‘traps’ where mineralization may occur.

The East and West Grids overlap in the south but a large gap still remains to the north. Expanding the East Grid to the west and the West Grid to the northeast to complete IP coverage over Golden Summit is recommended. Further IP surveying is also recommended for parts of the East Grid to improve data resolution over zones of interest which would include Christina, Too Much Gold and Goose Creek.

## **9.2 Soil Sampling**

Shovel soil sampling was conducted in 2011 and 2012 as a means to augment subsequent exploration. Twelve sample lines were collected for infill coverage of previous geochemical data. These samples were taken at the IP stations and spaced 50m apart a total of 424 soil samples were taken.

In 2012, 1,210 soil samples were collected on the Property, 740 of those samples were taken in the newly staked Bear Creek area on the south edge of the Golden Summit project. 218 samples were taken in the Newsboy area, with an additional 252 samples collected on the western portion on the Project – for which assays are still pending. Assaying of soil samples has shown a correlation between areas of anomalous gold values and mineralization in bedrock. Current and historical geochemical, results are plotted on the chargeability maps with historic drill holes for reference purposes for the Christina, Goose Creek and Too Much Gold areas (Figures 9.2, 9.3 and 9.4)

Figure 9.2 Chargeability N2 with Drill Hole Locations – Christina Prospect

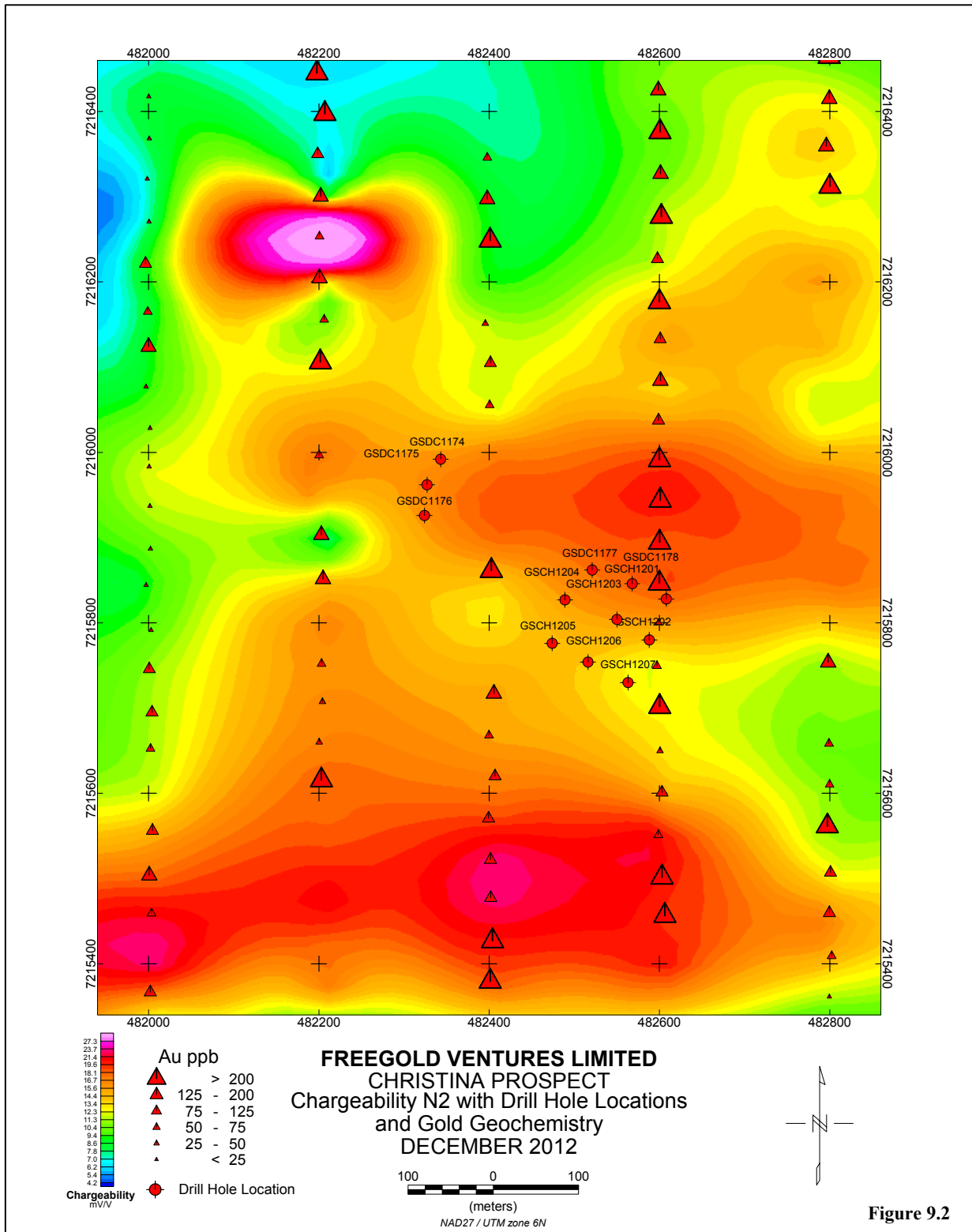


Figure 9.2

Figure 9.3 Chargeability N2 with Drill Hole Locations – Goose Creek Prospect

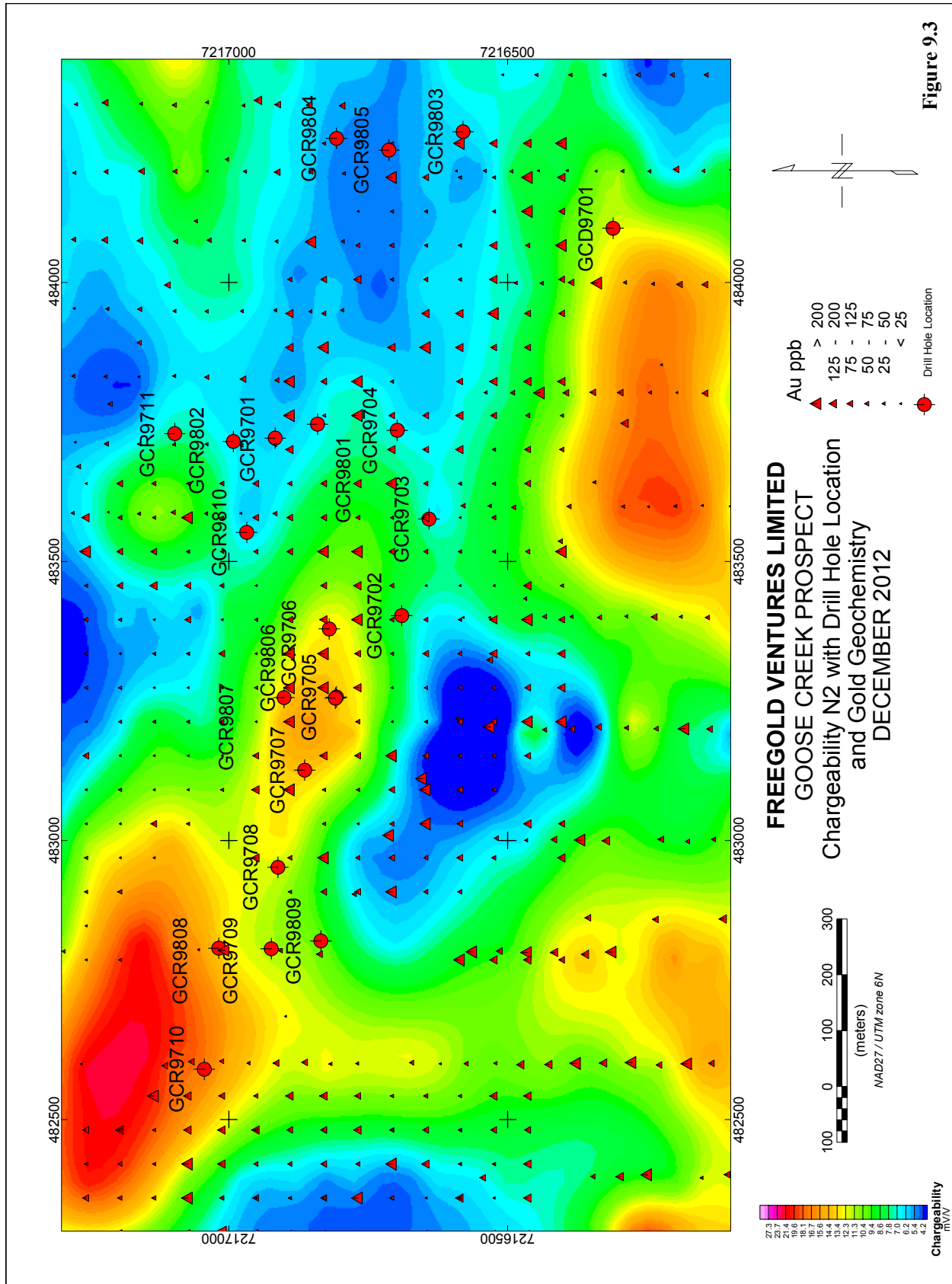
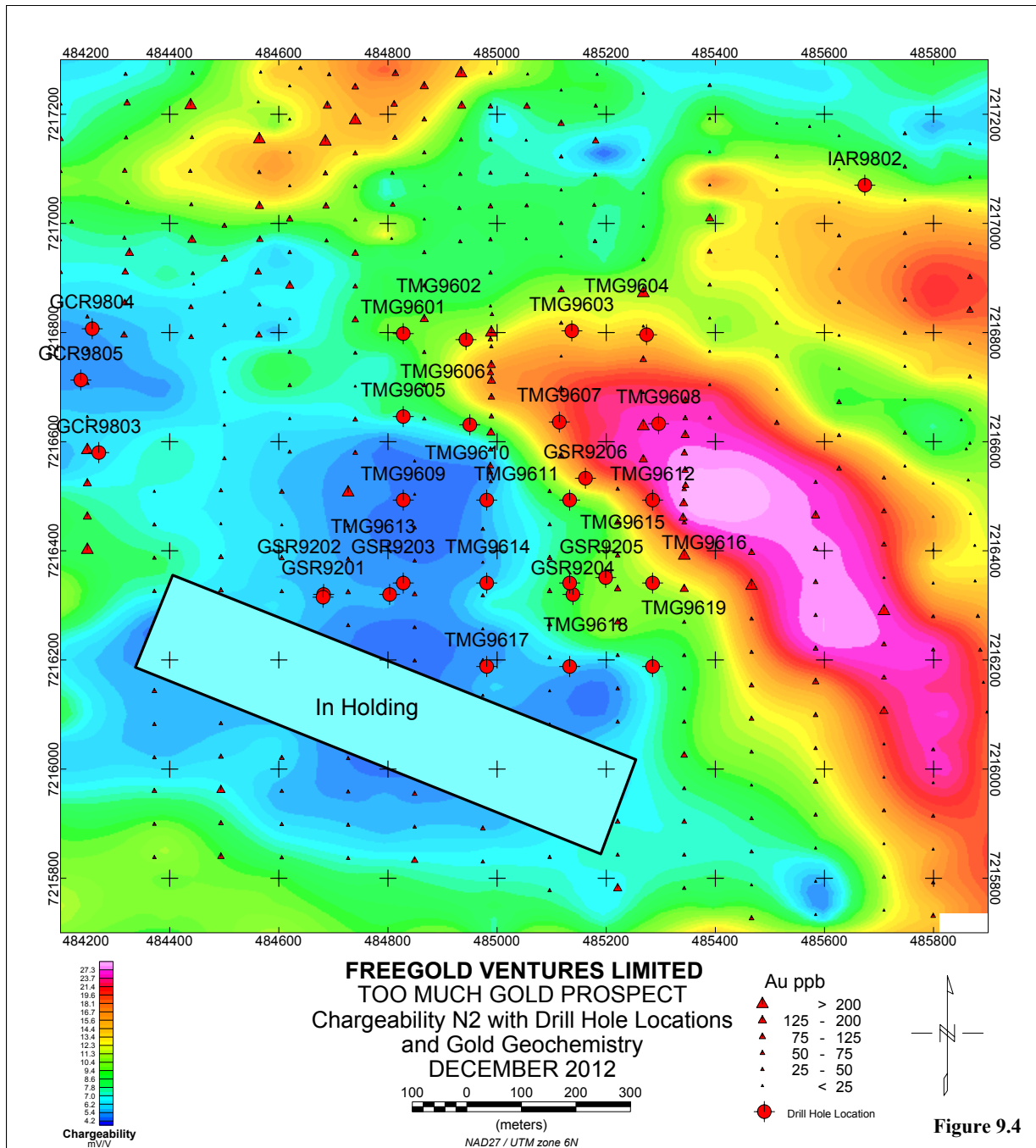


Figure 9.4 Chargeability N2 with Drill Hole Locations – Too Much Gold Prospect



## 10. DRILLING

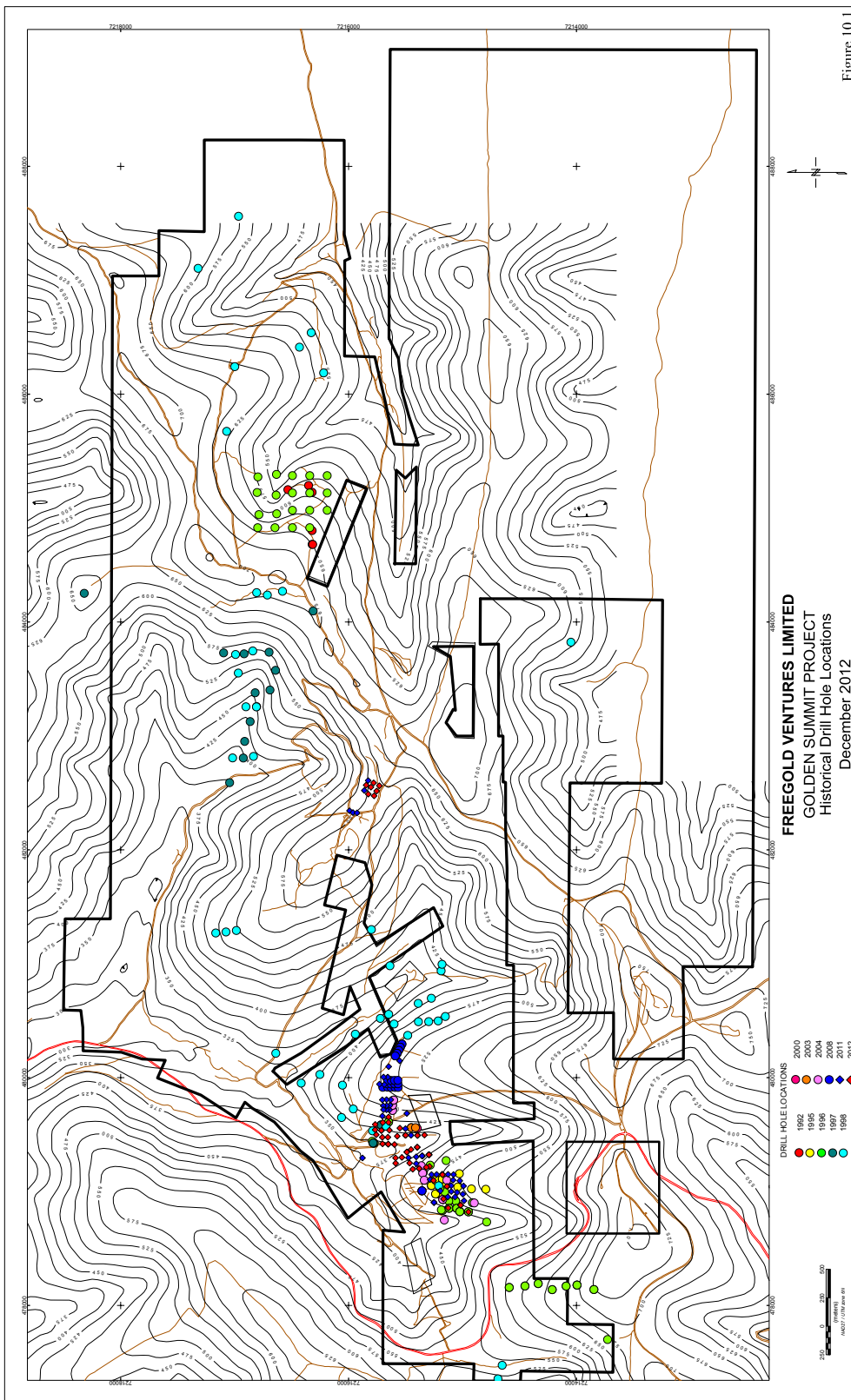
A summary of pre-2012 drilling activities is presented in Adams and Giroux (2012) and is not repeated here. A map showing all Freegold drilling is presented in Figure 10.1.

Drilling on the Golden Summit property during 2012 consisted of diamond core drilling in three main target areas, including the Dolphin gold deposit, the Cleary Hill Mine area, and the Christina Prospect. Freegold completed drilling a total of 54,471ft of HQ (2.5 inch) and NQTW (1.995 inch) core in 55 drill holes (Table 10.1; Figure 10.2). The majority of drilling completed during 2012 was targeted at the Dolphin/Cleary Hill areas whilst limited drilling was undertaken on the Christina prospect. The locations of the 2012 drilling are shown in Table 10.1. Figure 10.2 is a map showing the collar locations of the drill holes in the Dolphin/Cleary Hill gold resource. Significant assay results for all drill holes completed during 2012 are listed in Table 10.2.

Majority of the drilling was conducted with HQ sized core which resulted in excellent core recoveries in spite of difficult ground conditions, particularly within the schist and breccia zones. Drilling planned for the 2013 program should therefore again continue with HQ sized core as far as possible. In addition to better recoveries it also provides for larger sample size which is normally more representative.

Some areas of the project have proven to be more readily accessed during the winter months due to permafrost conditions and these areas should be prioritized during the 2013 winter drilling season.

Figure 10.1 Historical Drill Hole Locations – Golden Summit Property





**Table 10.1 Drill holes completed on the Golden Summit property during 2012**  
**Coordinates are UTM, NAD 27 Alaska**

Hole	Prospect	Easting	Northing	Elev. ft	Azimuth	Dip	TD ft
GSCH1201	Christina	482568	7215846	1927	25	-50	733.5
GSCH1202	Christina	482588	7215780	1979	25	-50	748
GSCL1201	Cleary	479654	7215649	1399	360	-55	810
GSCL1202	Cleary	479607	7215649	1365	360	-55	886
GSCH1203	Christina	482550	7215804	1960	25	-50	810
GSCL1203	Cleary	479606	7215700	1335	360	-55	764
GSCH1204	Christina	482489	7215827	1976	25	-50	700
GSCL1204a	Cleary	479536	7215712	1273	360	-55	86.5
GSCL1204b	Cleary	479536	7215712	1273	360	-55	807
GSCH1205	Christina	482474	7215776	1996	25	-50	863.5
GSCL1205	Cleary	479538	7215642	1301	360	-55	943
GSCH1206	Christina	482516	7215754	1990	25	-50	830
GSCL1206	Cleary	479589	7215766	1312	360	-55	769
GSCH1207	Christina	482563	7215730	2027	25	-50	848
GSCL1207	Cleary	479542	7215767	1231	360	-55	944
GSDL1201	Dolphin	479250	7215464	1320	360	-55	1058.5
GSCL1208	Cleary	479499	7215757	1208	360	-55	711
GSDL1202	Dolphin	479300	7215532	1260	360	-55	823.5
GSCL1209	Cleary	479476	7215704	1166	360	-55	938.5
GSCL1210	Cleary	479477	7215655	1211	360	-55	1074
GSDL1203	Dolphin	479388	7215398	1189	45	-55	1177.5
GSCL1211	Cleary	479496	7215334	1228	360	-55	928
GSCL1212	Cleary	479494	7215394	1159	315	-55	458
GSCL1213	Cleary	479492	7215396	1218	360	-55	904
GSDL1204	Dolphin	479390	7215397	1186	360	-55	927.5
GSCL1214	Cleary	479494	7215501	1250	315	-55	825
GSDL1205	Dolphin	479369	7215452	1167	360	-55	855
GSCL1215	Cleary	479494	7215500	1248	360	-55	803
GSDL1206	Dolphin	479202	7215381	1650	0	-90	1647
GSDL1207	Dolphin	479348	7215488	1174	45	-55	775
GSDL1208	Dolphin	479346	7215489	1164	360	-55	690
GSDL1209	Dolphin	479202	7215380	1650	360	-55	758
GSDL1210	Dolphin	479322	7215293	1355	45	-55	1003
GSDL1211	Dolphin	479221	7215290	1442	0	-90	1655
GSDL1212	Dolphin	479324	7215293	1355	0	-90	1023
GSDL1213	Dolphin	479097	7215254	1529	0	-90	1795.5
GSDL1214	Dolphin	479196	7215437	1385	360	-55	898
GSDL1215	Dolphin	479213	7215318	1442	0	-90	1789
GSDL1216	Dolphin	479324	7215296	1358	53	-70	1277
GSDL1217	Dolphin	479323	7215295	1358	360	-55	1083
GSDL1218	Dolphin	479046	7215137	1542	360	-90	1757
GSDL1219	Dolphin	478856	7215125	1461	360	-90	1975
GSDL1220	Dolphin	478935	7215167	1491	360	-90	1505.5
GSDL1221	Dolphin	478880	7215017	1498	360	-90	690
GSDL1222	Dolphin	478880	7215017	1498	230	-80	1831.5
GSDL1223	Dolphin	478821	7214948	1450	360	-90	1758

Hole	Prospect	Easting	Northing	Elev ft	Azimuth	Dip	TD ft
GSCH1201	Christina	482568	7215846	1927	25	-50	733.5
GSCH1202	Christina	482588	7215780	1979	25	-50	748
GSCL1201	Cleary	479654	7215649	1399	360	-55	810
GSCL1202	Cleary	479607	7215649	1365	360	-55	886
GSCH1203	Christina	482550	7215804	1960	25	-50	810
GSCL1203	Cleary	479606	7215700	1335	360	-55	764
GSCH1204	Christina	482489	7215827	1976	25	-50	700
GSCL1204a	Cleary	479536	7215712	1273	360	-55	86.5
GSCL1204b	Cleary	479536	7215712	1273	360	-55	807
GSCH1205	Christina	482474	7215776	1996	25	-50	863.5
GSCL1205	Cleary	479538	7215642	1301	360	-55	943
GSCH1206	Christina	482516	7215754	1990	25	-50	830
GSCL1206	Cleary	479589	7215766	1312	360	-55	769
GSCH1207	Christina	482563	7215730	2027	25	-50	848
GSCL1207	Cleary	479542	7215767	1231	360	-55	944
GSDL1201	Dolphin	479250	7215464	1320	360	-55	1058.5
GSCL1208	Cleary	479499	7215757	1208	360	-55	711
GSDL1202	Dolphin	479300	7215532	1260	360	-55	823.5
GSCL1209	Cleary	479476	7215704	1166	360	-55	938.5
GSCL1210	Cleary	479477	7215655	1211	360	-55	1074
GSDL1203	Dolphin	479388	7215398	1189	45	-55	1177.5
GSCL1211	Cleary	479496	7215334	1228	360	-55	928
GSDL1224	Dolphin	479148	7215176	1507	360	-90	2000
GSCL1216	Cleary	479413	7215597	1181	360	-55	822
GSCL1217	Cleary	479416	7215652	1171	360	-55	139
GSCL1218	Cleary	479416	7215652	1171	360	-60	996
GSCL1219	Cleary	479419	7215702	1171	360	-55	813.5
GSCL1220	Cleary	479486	7215573	1241	360	-55	845.5
GSCL1221	Cleary	479557	7215550	1320	360	-55	802
GSDL1225*	Dolphin	479295	7215588	1214	360	-55	416
GSDL1226*	Dolphin	479248	7215587	1247	360	-55	700

\*Drilled in 2012 – but not included in resource.

**Table 10.2 Significant core drilling assay results for the 2012 Dolphin/Cleary drill holes**

Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
Dolphin Area							
GSDL1201	-55	1058.5	28	1058.5	1030.5	314.1	0.69
			28	464	436	132.9	0.27
including			464	1058.5	594.5	181.2	0.99
“			623	1058.5	435.5	132.7	1.19
Including			732	738.5	6.5	1.98	11.4
And			896	1020	124	37.8	1.67
GSDL1202	-55	823.5	346	823.5	477.5	145.54	0.5
including			761.5	823.5	62	18.9	0.67
GSDL1203	-55	1177.5	26.3	1177.5	1151.2	350.9	0.49
including			63	164	101	30.8	1.57
			221	382	161	49.1	0.43
And			806.5	928	121.5	37	0.77
And			1073	1172	99	30.2	1.15
GSDL1204	-55	927.5	550	927.5	377.5	115.06	1.08
including			765	770	5	1.52	48
GSDL1205	-55	855	70	127.5	57.5	17.5	1.59
			310	511.5	201.5	61.4	0.41
including			310	315	5	1.5	6.95
			675	835	160	48.8	0.39
GSDL1206	-90	1647	182	407	225	68.6	0.81
including			182	187	5	1.5	11.95
			263	302	39	11.9	1.9
And			656	1632.5	976.5	297.6	0.79
including			798	807	9	2.7	33.1
GSDL1207	-55	775	645	775	130	39.6	1.88
including			705	710	5	1.5	27
GSDL1208	-55	690	376	440	64	19.5	0.35
			510	555	45	13.7	0.6
			637	690	53	16.2	0.38
GSDL1209	-55	758	162	213	51	15.5	0.93
			360.5	675.5	315	96	0.79

Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
GSDL1210	-55	1003	319	387.5	68.5	20.9	34.69
including			350	355	5	1.5	177
including			355	360	5	1.5	264
including			377	377.5	0.5	0.2	87.8
			464.5	630	165.5	50.4	0.36
			700	872	172	52.4	0.41
			990	1003	13	4	1.42
GSDL1211	-90	1655	104	119	15	4.6	2.7
			219	222.5	3.5	1.1	33.7
			799	1655	856	260.9	0.51
GSDL1212	-90	1023	93	1023	930	283.5	0.42
Including			343	401	58	17.7	1.08
Including			498	623	125	38.1	0.87
Including			707	861	154	46.9	0.51
GSDL1213	-90	1795.5	14.5	1795.5	1781	542.8	0.82
Including			14.5	463	448.5	136.7	1.57
Including			757.5	1439	681.5	207.7	0.64
Including			1488	1795.5	307.5	93.7	0.76
GSDL1214	-55	898	33	114	81	24.7	0.83
			187.5	231	43.5	13.3	1.08
			388	528	140	42.7	0.5
			722.5	885.5	163	49.7	0.69
GSDL1215	-90	1789	429	473	44	13.4	0.4
			570.5	827	256.5	78.2	0.82
			915.5	1075	159.5	48.6	1.21
			1498	1748.5	250.5	76.4	0.51
GSDL1216	-70	1277.5	367.5	482	114.5	34.9	1.05
			607	1277.5	670.5	204.4	0.61
GSDL1217	-55	1083	336	1048.5	712.5	217.2	0.76
Including			336	496	160	48.8	0.9
Including			582	846	264	80.5	1.08
Including			982	1048.5	66.5	20.3	1.07

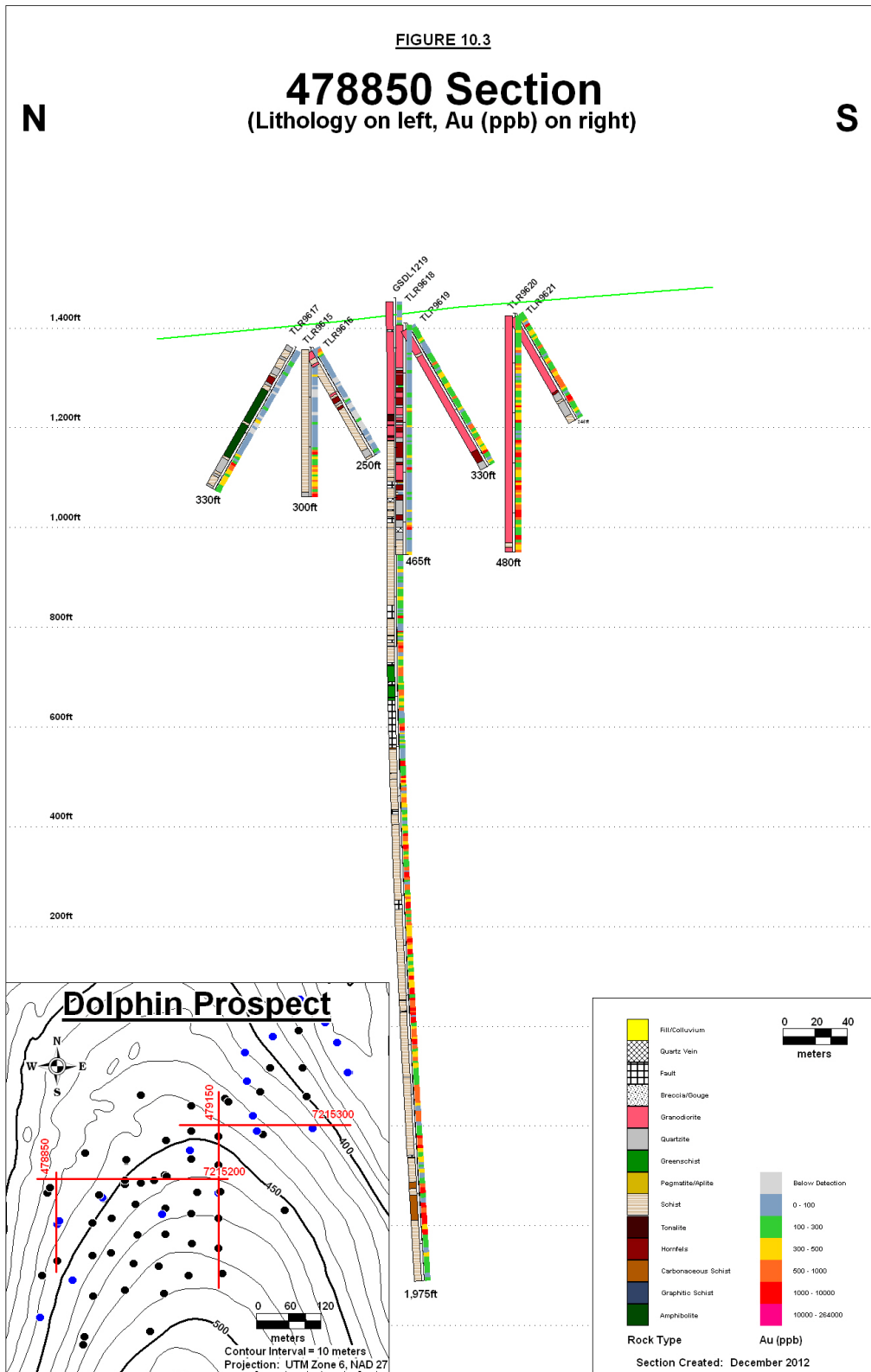
Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
GSDL1218	-90	1757	14	1757	1743	531.3	0.59
Including			1288	1585	297	90.5	1.1
GSDL1219	-90	1975	114	292	178	54.3	0.35
			669	868.5	199.5	60.8	0.45
			930.5	1883	952.5	290.3	0.67
GSDL1220	-90	1505.5	385	527.5	142.5	43.4	0.38
			681	835	154	46.9	0.47
			976.5	1265	288.5	87.9	0.75
GSDL1221		Abandoned				0	0
GSDL1222	-90	1831.5	403	798	395	120.4	0.34
			1022	1278	256	78	0.39
			1448	1804	356	108.5	0.33
GSDL1223	-90	1758	22	129.5	107.5	32.8	0.47
			597	867.5	270.5	82.4	0.42
			913	1065.5	152.5	46.5	0.69
			1178	1386.5	208.5	63.6	0.39
GSDL1224	-90	2000	11	2000	1989	606.3	0.57
<b>Cleary Hill Area</b>							
CL 1201	-55	810	26	46.5	20.5	6.24	2.93
			374	711	337	102.7	1.12
CL 1202	-55	886	341	766.5	425.5	129.7	0.83
Including			611	711.5	100.5	30.6	1.62
CL 1203	-55	764	351	514	163	50	0.46
CL 1204b	-55	807	259.5	427	167.5	51	0.39
CL 1205	-55	943	307.5	724	416.5	127	0.69
including			307.5	423	115.5	35.2	0.79
including			647.5	717.5	70	21.3	1.46
CL 1206	-55	769	94.5	221	126.5	38.6	0.3
CL 1207	-55	944	75	126.5	51.5	15.7	0.53
			139	192	53	16.2	0.65
GSCL1208	-55	711	98	145.5	47.5	14.48	1.11
Including			129	131	2	0.61	13.6
GSCL1209	-55	938.5	230.5	499.5	269	81.99	0.36

Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
GSCL1210	-55	1074	355	677.5	322.5	98.3	0.68
including			495.5	536.5	41	12.5	2.07
GSCL1211	-55	928	714.5	920.5	206	62.79	0.89
including			863.5	920.5	57	17.37	1.07
including			875	878	3	0.91	12.6
GSCL1212	-55	458	293	373	80	24.38	0.74
GSCL1213	-55	904	44	344	300	91.4	0.7
including			284	314.5	30.5	9.3	3.38
			549	904	355	108.2	0.38
			842	904	62	18.9	0.59
GSCL1214	-55	825	233.5	257	23.5	7.2	0.52
			310	335	25	7.6	3.39
			470.5	520.5	50	15.2	0.72
			700	825	125	38.1	0.77
GSCL1215	-55	803	470	494	24	7.3	0.36
			629.5	803	173.5	52.9	0.46
including			788	793	5	1.5	6.88
GSCL1216	-55	822	162	392	230	70.1	0.41
			467	536.5	69.5	21.2	0.41
			579.5	781	201.5	61.4	0.67
GSCL1217	Abandoned						
GSCL1218	-60	996	85	125	40	12.2	0.44
			166	638	472	143.9	0.44
			741	822	81	24.7	0.42
GSCL1219	-55	813.5	221	260.5	39.5	12	0.48
			433	526.5	93.5	28.5	0.35
GSCL1220	-55	845.5	27	34.5	7.5	2.3	5.4
			140	187.5	47.5	14.5	0.35
			421	789	368	112.2	0.38

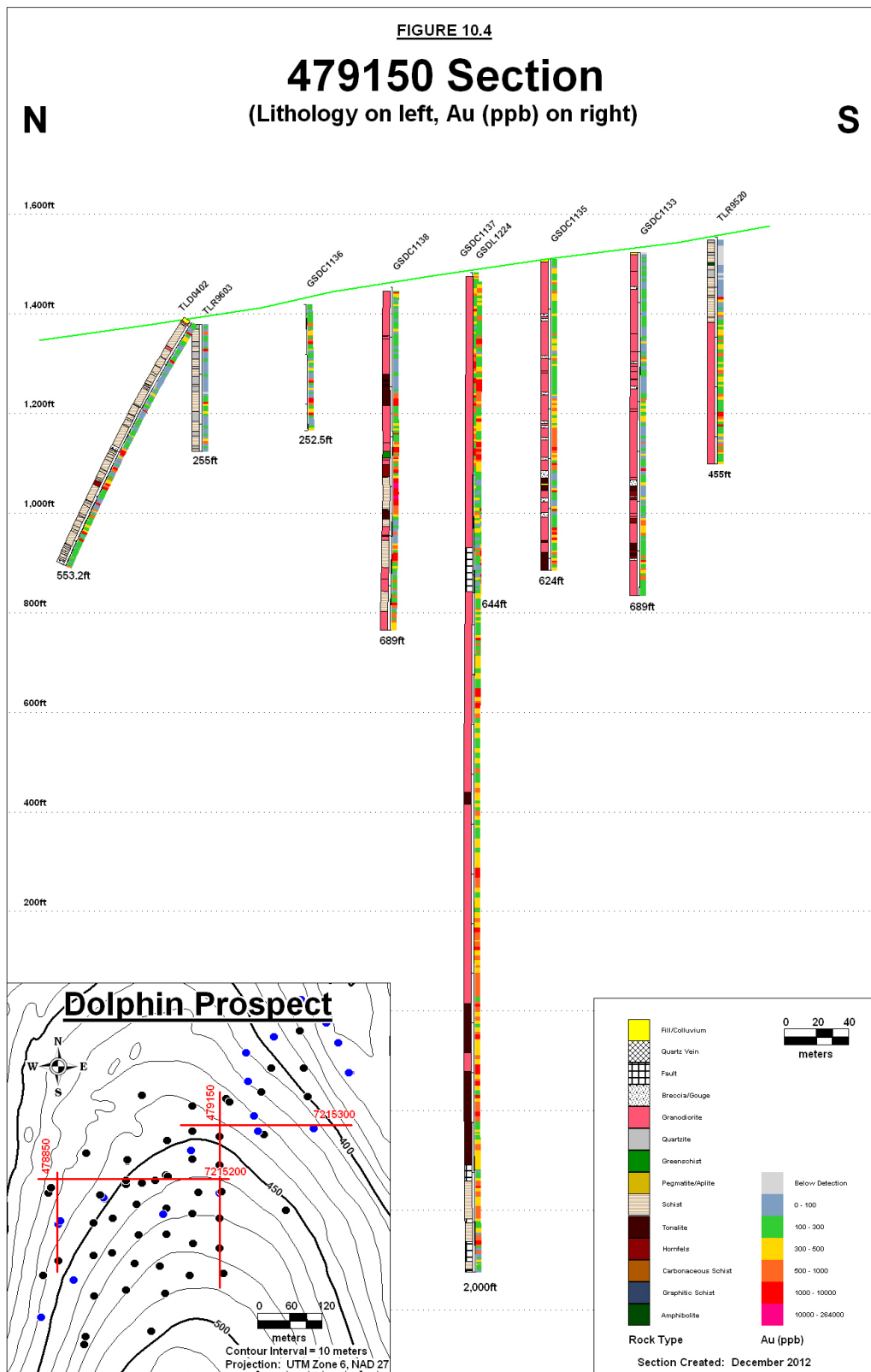
Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
GSCL1221	-55	802	637	802	165	50.3	1.46
		including	637	730.5	93.5	28.5	0.43
		including	730.5	735.5	5	1.5	191( <i>uncut</i> )
		including	769.5	802	32.5	9.9	1.34

In the figures below are representative sections depicting geology and assay results through the central portion of the Dolphin Deposit.

Figures 10.3 and 10.4 are north south sections looking towards the east while Figures 10.5 and 10.6 are east west sections looking north.



**Figure 10.3 Cross section through Dolphin Prospect with lithology and gold assays**



**Figure 10.4 Cross section through Dolphin Prospect with lithology and gold assays**

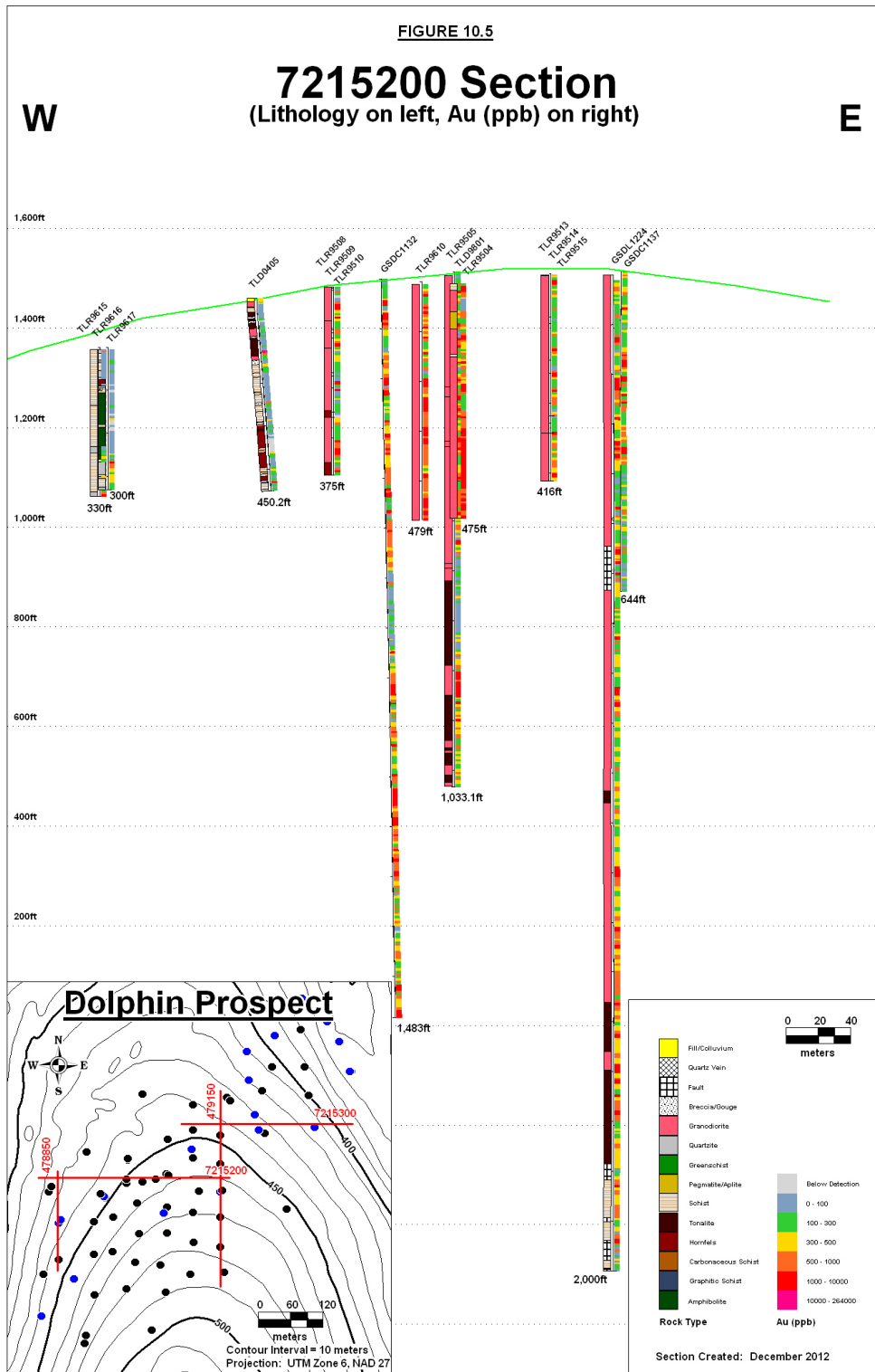
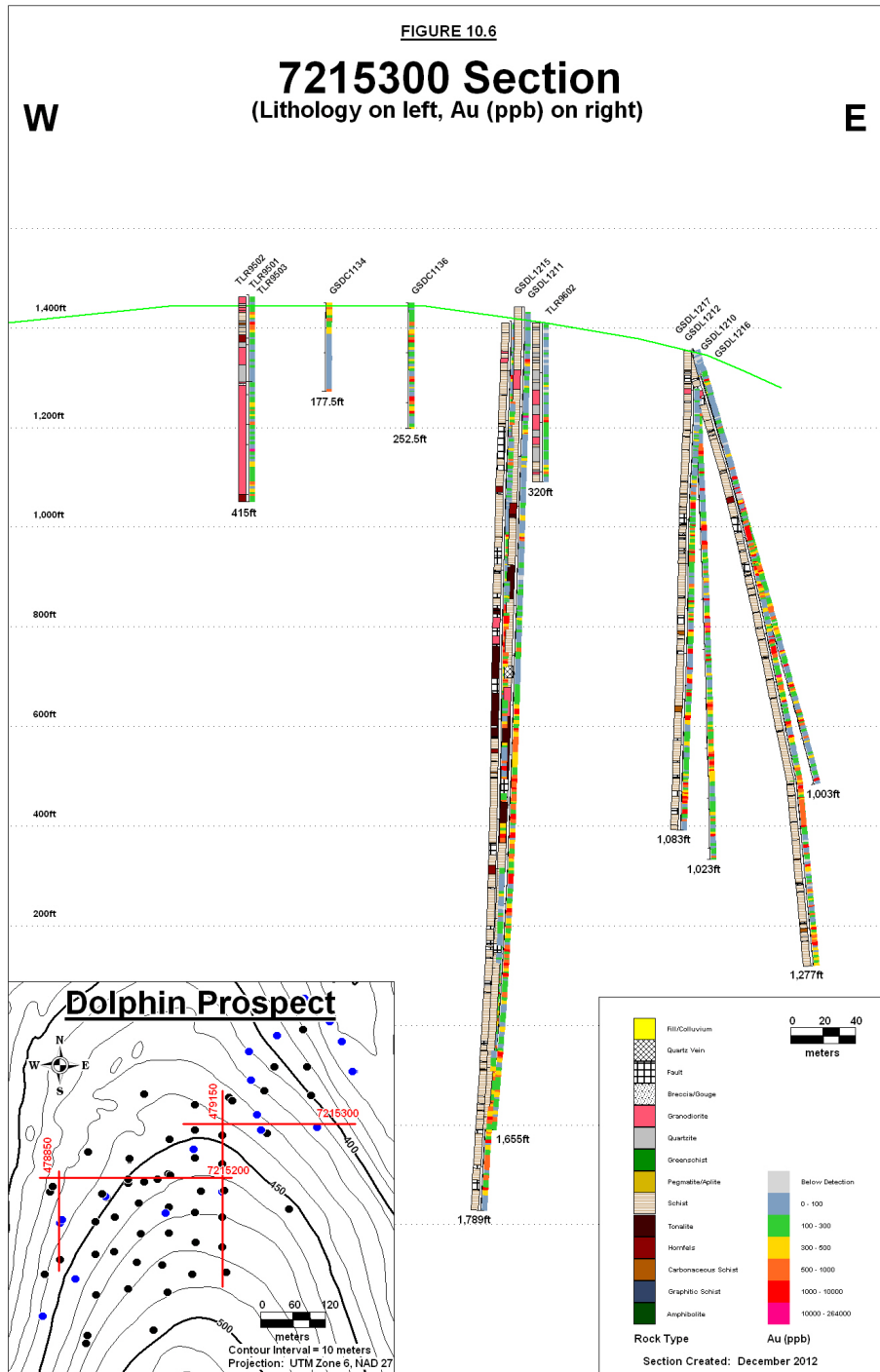


Figure 10.5 Cross section through Dolphin Prospect with lithology and gold assays



**Figure 10.6 Cross section through Dolphin Prospect with lithology gold and assays**

## Christina Prospect

During 2011 and 2012 Freegold completed its first ever drilling in the Christina Prospect. Previous drilling at Christina (+70,000 feet from 1977 to 1988) was focused solely on outlining a high grade vein resource on the prospect (Freeman, 1992). No effort was made to explore for bulk tonnage mineralization associated with the Christina vein and Freegold conducted no other work on the prospect until 2011.

During 2011 and 2012 a total of 12 holes were drilled (15,058 feet) (4,589 metres). The holes were targeted on a combination of known geological structure and chargeability anomalies outlined by the induced polarization survey. Drilling has indicated a good correlation between chargeability and mineralization. The bulk of the mineralization is associated with quartz veins and quartz stockworks with associated pyrite and arsenopyrite. Host rocks are predominately chloritic schists. Several of the holes intersected broader zones of mineralization indicative of bulk tonnage potential. Additional drilling is planned for this area when expanded permits are received.

**Table 10.3 Significant core drilling assay results for the 2011-2012 Christina drill holes.**

Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
GSDC 1175	-55	818.5	226.5	505	278.5	84.9	0.64
GSDC 1176	-55	736	402	614.5	212.5	64.7	1.75
GSDC 1178	-55	785	215	345	130	39.6	0.39
			544	615	71	21.6	0.38
GSCH 1201	-55	733.5	20	78	58	17.6	0.48
			243.5	383	139.5	42.5	0.32
GSCH1202	-50	748	135	204	69	21	0.56
			290	379	89	27.1	0.4
			679	748	69	21	0.35
GSCH1203	-50	810	118	205.5	87.5	26.7	0.3
			456	554.5	98.5	30	0.39
GSCH1204	-50	700	80	148.5	68.5	20.9	0.37
			514	629.5	115.5	35.2	0.35
GSCH1205	-50	863.5	240	310	70	21.3	0.42
			460	574.5	114.5	34.7	0.67
			702	753.5	51.5	15.7	1.07
			833.5	858.5	25	7.6	0.4
GSCH1206	-50	830	276.5	495	218.5	66.6	0.49

Hole #	Hole Incl.	TD (ft)	From (ft)	To (ft)	Interval (ft)	Interval (m)	Au g/t
GSCH1207	-50	848	93.5	155	61.5	18.75	0.42
			339	448	109	33.22	0.78
including			426	433	7	2.13	7.9
			491	582	91	27.74	0.63
			789	838	49	14.94	0.36

## 11. SAMPLE PREPARATION, ANALYSES, AND SECURITY

Soil samples were collected in 2011 and 2012 by digging a hole through the tundra mat cover down to the mineral soil layer and placing a sample of the soil into a marked bag. The clumps of moss and remaining soil were then returned and the hole was covered up. Sample weights were generally 250 – 500 grams. Samples were taken to ALS Chemex in Fairbanks for analysis. Multi element analysis for gold and pathfinder elements was performed. Fire Assay for gold with an AA finish for the gold and four acid digestion was used for the 33 pathfinder elements. (ICP-AES)

The following summarizes the procedure used for sample preparation, analyses and security for drill samples collected during the 2012 Golden Summit drilling program:

1. Core was moved by Avalon from the drill rig to the secure logging facilities at each shift change.
2. Upon arrival at the core logging facility, core boxes were inspected for proper labeling and placement of core in the boxes was done by the drill company at the drill site.
3. Core was washed with a spray bottle and brush to remove polymer or other drill mud. A quick log of the general geology was performed for the purpose of a daily drill summary and sample blocks were inserted at each run block. Exceptions to this practice were rare, but would have to be made if run blocks were less than .5 ft. in length or if core recovery was too low to obtain a large enough sample for geochemical analysis.
4. Core recovery (ratio of core recovered in a given core run to the actual length of the core run) was calculated and recorded as a percent-recovered.
5. The RQD, or Rock Quality Designation, was calculated for each drill run by recording the combined length of whole (unbroken) core in each run measuring a minimum of twice the diameter of the core. This number is recorded as a percent of each total drill run.
6. The drill core was logged by a senior geologist with experience in the rock type, alteration and mineralization. Details relating to lithology, structure, alteration and mineralization were recorded systematically. Details recorded include morphology, mineralogy and color

of quartz veins, sulfide mineralogy, form and abundance (in volume %), metallic oxide mineralogy, form and relative abundance, and any other feature related to gold, gold-pathfinder or other metallic mineralization.

7. The core was digitally photographed with a placard denoting hole number and footage contained in the box. Core run block and sample interval blocks were plainly visible in each picture.
8. Core was then split in half length-wise using a tile saw fitted with a diamond blade.
9. Every section of core drilled was then sampled by taking one half of the core drilled between each set of run blocks. Extra care was taken to ensure that only rock and rock fragments from the proper interval were collected in the sample bag. This sampling was done by a two person team who cross-referenced sample numbers of intervals on the core logs to the sample blocks and the sample numbers on the sample bags. The individual sample bags were sealed and stored in Avalon's warehouse for subsequent batch shipping to the geochemical lab. The remaining half core is stored in the original boxes at Avalon's core logging facility.
10. Bagged and labeled samples were picked up at Avalon Development by the geochemical analysis lab personnel. Samples were prepped and analyzed by Acme Labs and ALS Chemex Labs.

## **12. DATA VERIFICATION**

QAQC samples were inserted into the drill sample strings on the basis of approximately 1 QAQC sample per 10 assay samples (approximately 10%). A total of 13,519 samples were analyzed, including assay and QAQC samples. The types of QAQC samples used included standards, blanks and duplicates. Standards were inserted at a rate of approximately 7 standard samples per 100 assay samples (7%), blanks were inserted at a rate of approximately 2 blank samples per 100 assay samples (2.3%), and duplicates (a quarter-section of core) were inserted at a rate of approximately 1 duplicate sample per 100 assay samples (1%).

Sixteen standards were used in the 2012 drill program. Four standards were obtained from Rocklabs and ranged in value from 0.203 ppm gold to 3.562 ppm gold. Twelve standards were obtained from Analytical Solutions and ranged in value from .334 ppm gold to 7.15ppm gold. An attempt was made to use lower gold value standards (with higher base metal values) in zones known to have a higher sulfide concentration, and higher gold value standards were used where high gold values in the core were suspected. Of the 941 standards used in the 2012 drill program, 11 returned values differing more than 15% from the expected value. Those standard samples which returned suspect values were re-run at Avalon's request along with core samples surrounding the standard in question, and in all cases the re-assay values fell within the acceptable range.

Blank samples consisted of Browns Hill Quarry basalt, an unmineralized Quaternary basalt flow from the Fairbanks Mining District, Alaska. Avalon Development has an extensive data base of assay values for this material which provides a reliable base-line for determining expected geochemical values. The Author reviewed the sample preparation, security and insertion of blanks and standards and is of the opinion the sampling was completed to industry standards.

### **13. MINERAL PROCESSING AND METALLURGICAL TESTING**

Limited metallurgical test work on coarse crush material was completed in 2012 which consisted of preliminary bottle roll test work. A series of composite samples primarily concentrated within the unoxidized portion of Dolphin Intrusive indicated recoveries ranging from 35% - 73% which an overall average of 55%. Earlier testwork on the oxidized portion of the deposit indicated recoveries of 85-95%. Additional metallurgical work is underway and an extensive program is being planned for 2013.

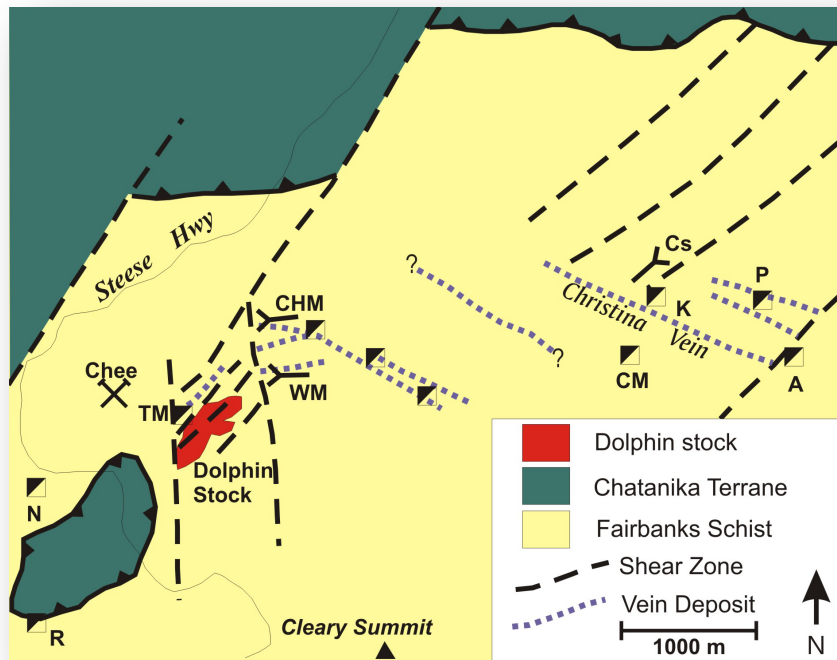
### **14. MINERAL RESOURCE ESTIMATE**

Freegold Ventures Ltd. (“Freegold”) contracted Giroux Consultants to update the gold resource present on the Golden Summit Project Fairbanks Mining District, Alaska. Gary Giroux was the Qualified Person responsible for the resource estimate. Mr. Giroux is a Qualified Person based on education, experience and his membership in a professional organization; criteria set out in National Instrument 43-101. Mr. Giroux is also independent of both the vendor and Freegold.

This update of the 43-101 resource reported in January 2012 (Adams and Giroux, 2012) was based on an additional 74 drill holes completed in 2012 and an extension of the mineralized zone to the north and east to cover the area known as the Cleary Hill Mine area. As a result the number of holes within the mineralized solid increased from the 77 used in the 2011 estimate, to 177 for this update. The effective date for this resource is October 19, 2012.

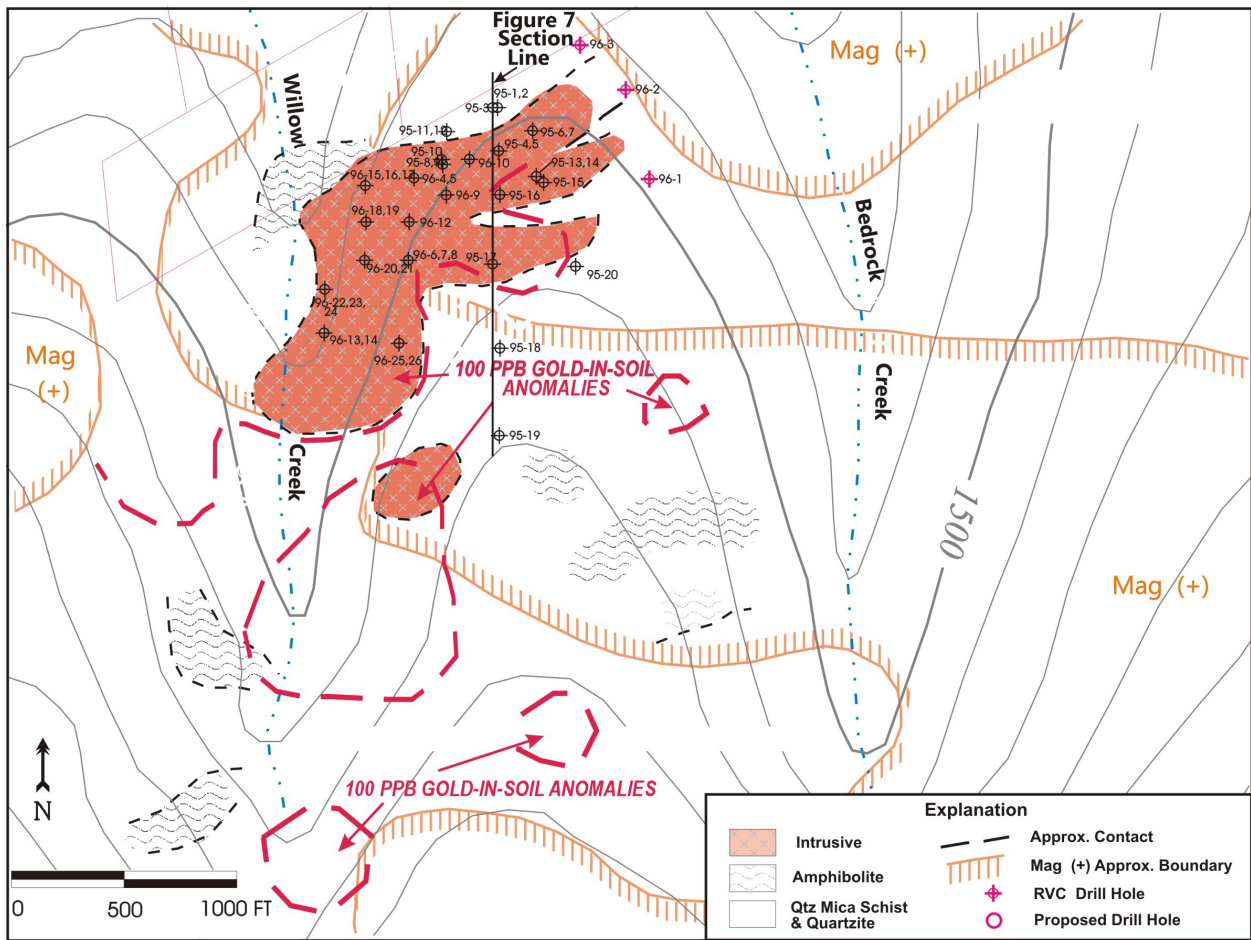
#### **14.1 Data Analysis**

The data provided by Freegold consisted of 320 drill hole collars and 41,079 gold assays extending across the entire Golden Summit Property. Gold assays reported as less than the detection limit were replaced by a value of ½ that detection limit. Gold values reported as 0 ppb were also set to 1 ppb. A total of 126 gaps in the from-to record were found and values of 1 ppb Au were inserted to fill these gaps.



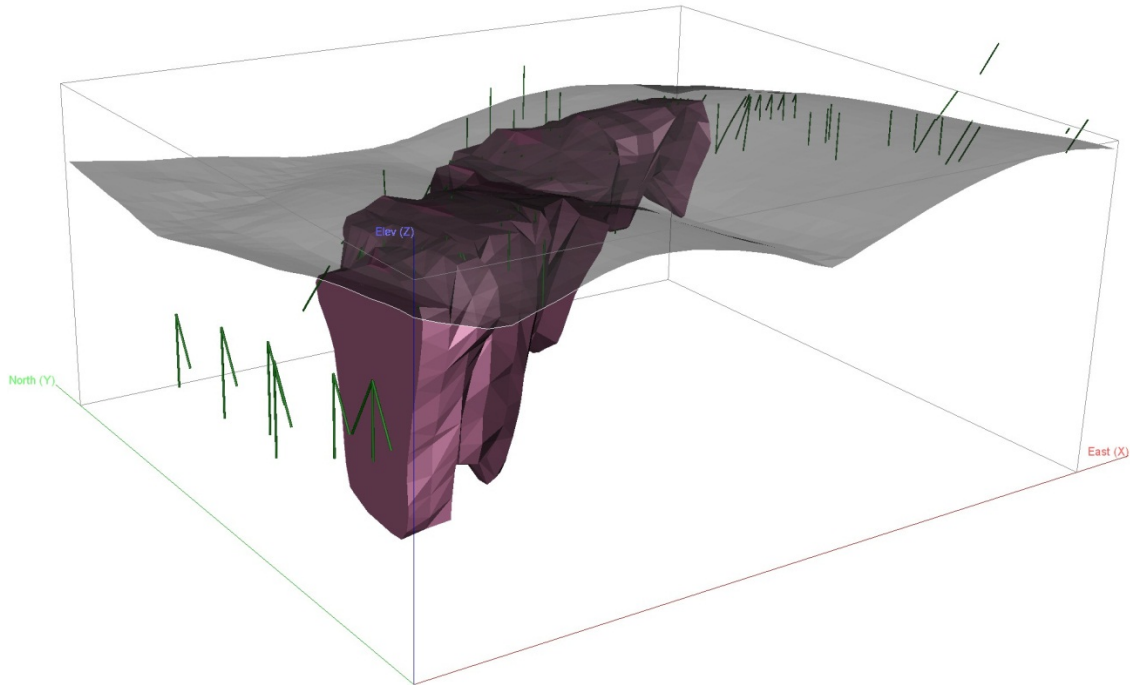
**Figure 14-1: Local geology of the Dolphin Stock Area. (from Adams, 2010)**

The Dolphin stock is a multi-phase intrusive located on the ridge between Willow Creek and Bedrock Creek. The stock has been traced on surface by soil sampling and RC drill data and represents an area of 1,200 by 2,000 ft. (366 x 610 m).



**Figure 14-2: Dolphin stock area geologic map, gold-arsenic soil anomalies, aeromag anomaly and drill holes (from Adams, 2010)**

A three dimensional mineralized solid was provided by Freegold to constrain the Dolphin Stock Zone Resource estimate.

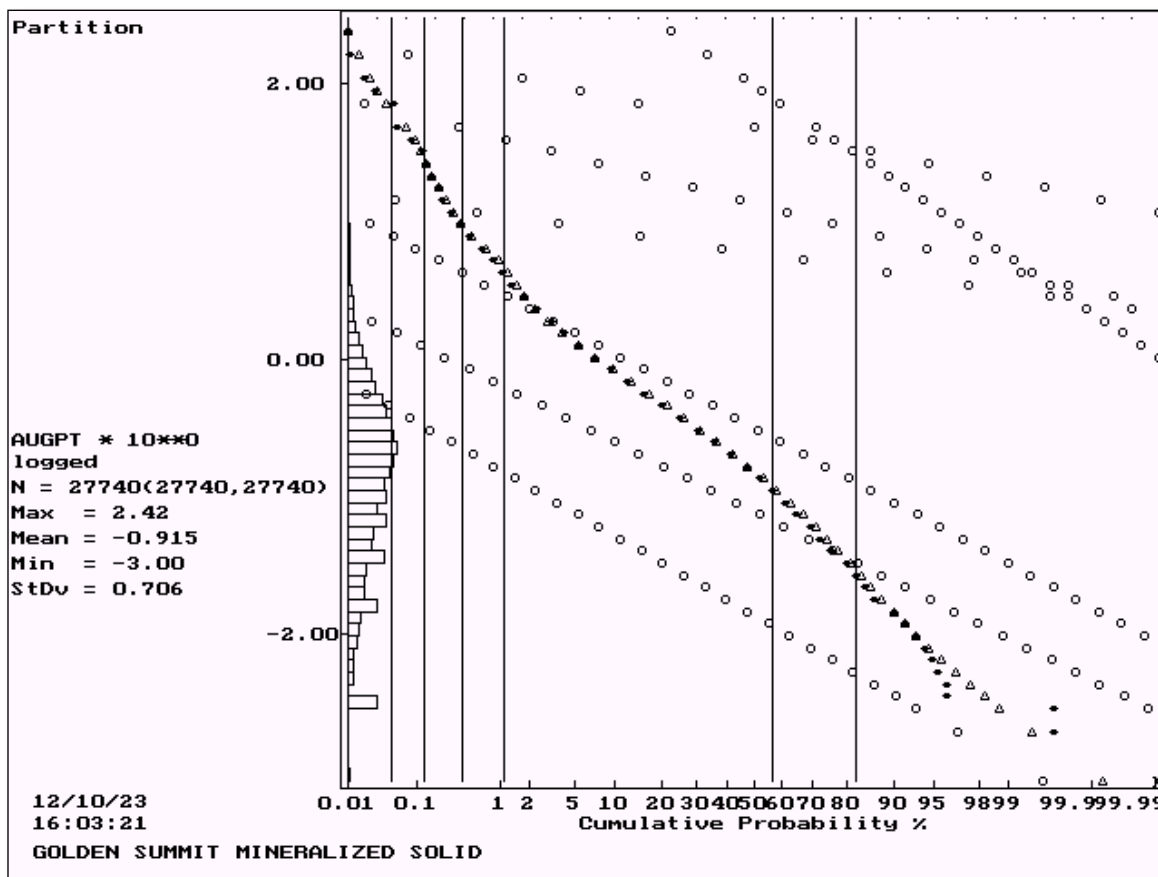


**Figure 14-3: Isometric view looking NE showing the mineralized solid, drill hole traces and surface topography**

Drill holes were “passed through” these solids with the point each hole entered and left the solid recorded. Individual assays were then tagged with a code of mineralized if inside solid and waste if outside solid. Of the supplied drill hole data, 177 drill holes were drilled in the mineralized Dolphin Stock totalling 35,829 metres (see Appendix 2 for a listing of drill holes used).

The gold distributions, within the mineralized solids, were examined using a lognormal cumulative frequency plot to determine if capping was required and if so at what level. The procedure used is explained in a paper by Dr. A.J. Sinclair titled Applications of probability graphs in mineral exploration (Sinclair, 1976). In short the cumulative distribution of a single normal distribution will plot as a straight line on probability paper while a single lognormal distribution will plot as a straight line on lognormal probability paper. Overlapping populations will plot as curves separated by inflection points. Sinclair proposed a method of separating out these overlapping populations using a technique called partitioning. In 1993 a computer program called P-RES was made available to partition probability plots interactively on a computer (Bentzen and Sinclair, 1993). A screen dump from this program is shown for gold in Figures 14-4. On this plot the actual gold distribution is shown as black dots. The inflection points that separate the populations are shown as vertical lines and each population is shown by the straight

lines of open circles. The interpretation is tested by recombining the data in the proportions selected and this test is shown as triangles compared to the original distribution.



**Figure 14-4: Lognormal cumulative frequency plot for gold assays within mineralized solids**

A total of 7 over-lapping lognormal populations are indicated (see table below).

**Table 14-1: Gold Populations present within Mineralized Solid**

Population	Mean Au ( g/t)	Percentage of Total	Number of Assays
1	97.61	0.04 %	11
2	48.84	0.08 %	23
3	13.52	0.25 %	70
4	5.91	0.72 %	200
5	0.31	55.49 %	15,394
6	0.08	25.78 %	7,151
7	0.01	17.63 %	4,891

Population 1 represents erratic outlier grades and should be capped. An effective cap would be 2 standard deviations above the mean of Population 2, a value of 88 g/t Au. A total of 7 assays were capped at 88 g/t Au. Populations 2, 3 and 4 might represent shear zone mineralization thought to strike to the north east and dip 40 to 50° to the northwest. Population 5 might represent the earlier stockwork style mineralization. Populations 6 and 7 could represent post mineral dykes and internal waste. Since there is insufficient data to model the higher grade shear zones an indicator approach was used.

**Table 14-2: Statistics for gold within mineralized the Mineralized Solid**

	<b>Assay Au ( g/t)</b>	<b>Capped Au ( g/t)</b>
Number of Assays	27,740	27,740
Mean Au ( g/t)	0.467	0.451
Standard Deviation	3.222	2.371
Minimum Value	0.001	0.001
Maximum Value	264.0	88.0
Coefficient of Variation	6.90	5.26

## 14.2 Composites

Uniform down hole 3 metre composites were formed that honoured the mineralized solid boundaries. Intervals less than 1.5 metre at the boundary of the solid were combined with the adjoining sample to produce a composite file of uniform support,  $3 \pm 1.5$  metre in length. The statistics for 3 metre composites are shown below.

**Table 14-3: Statistics for gold in 3m Composites within the Mineralized Solid**

	<b>Au ( g/t)</b>
Number of Composites	11,685
Mean Au ( g/t)	0.418
Standard Deviation	1.304
Minimum Value	0.001
Maximum Value	52.47
Coefficient of Variation	3.12

A lognormal cumulative probability plot was again used to evaluate the mineralized populations within 3 metre composites. Figure 14-5 shows 7 overlapping lognormal populations with the erratic outlier population gone after capping.

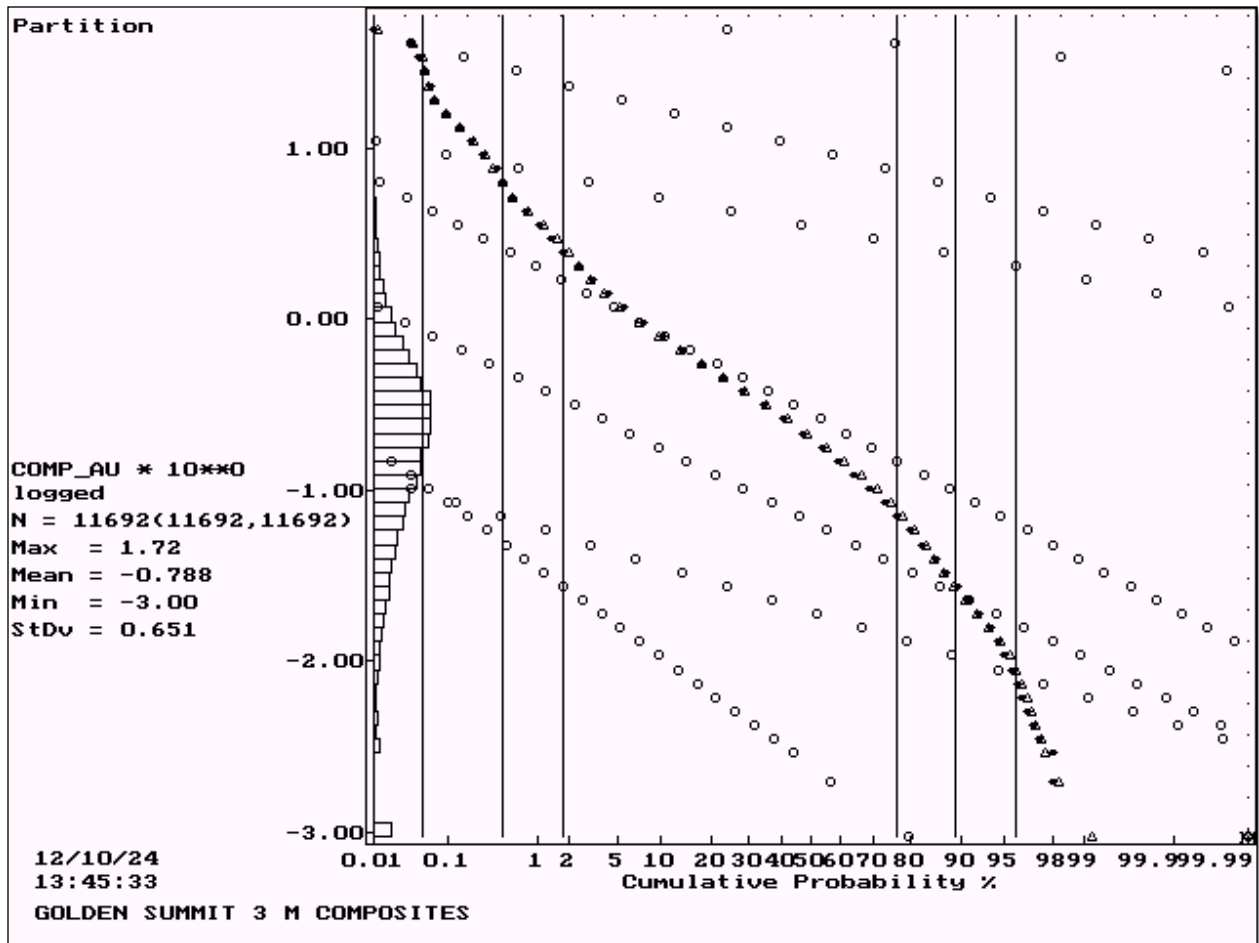


Figure 14-5: Lognormal cumulative frequency plot for gold 3 m composites within mineralized solids

Table 14-4: Gold Populations 3 m Composites within Mineralized Solid

Population	Mean Au ( g/t)	Percentage of Total	Number of Assays
1	45.10	0.05 %	6
2	9.92	0.39 %	46
3	3.51	1.31 %	152
4	0.28	75.00 %	8,769
5	0.06	12.29 %	1,437
6	0.02	6.90 %	807
7	0.002	4.06 %	475

Populations 1 to 3 might represent the higher grade shear hosted gold mineralization while populations 4 might represent the more pervasive stockwork style gold. Populations 5, 6 and 7 would represent post mineral dykes and other internal waste. A threshold that would separate

populations 1-3 from population 4 would be two standard deviations above the mean of population 4, a value of 1.0 g/t Au.

An indicator approach to modelling these two styles of mineralization would set up a single indicator variable for each composite. The indicator would be defined as follows:

Au IND = 0 if Au < 1.0 g/t Au (stockwork style mineralization)

Au IND = 1 if Au ≥ 1.0 g/t Au (shear zone mineralization)

In this manner the data base is reduced to 0's and 1's for modelling.

### 14.3 Variography

Pairwise relative semivariograms were produced for gold in the low grade stockwork data (Au < 1.0 g/t) and for the higher grade shear zone indicator variable for composites with Au ≥ 1.0 g/t. The longest range and therefore best continuity within the stockwork mineralization was 120 metres along azimuth 68°. The longest range for the higher grade shear zone indicator variable was 100 m along azimuth 90°. In all cases geometric anisotropy was demonstrated with nested spherical models fit to the data. The semivariogram parameters are tabulated below and the models attached as Appendix 2.

**Table 14-5: Semivariogram Parameters**

Variable	Az/Dip	C <sub>0</sub>	C <sub>1</sub>	C <sub>2</sub>	Short Range (m)	Long Range (m)
Au in LG	68 / 0	0.20	0.32	0.13	12.0	120.0
	158 / -73	0.20	0.32	0.13	50.0	110.0
	338 / -17	0.20	0.32	0.13	15.0	40.0
HG IND	90 / 0	1.40	0.31	0.19	30.0	100.0
	0 / -85	1.40	0.31	0.19	10.0	120.0
	180 / -5	1.40	0.31	0.19	12.0	30.0

### 14.4 Block Model

A block model containing blocks 10 x 10 x 5 m in dimension was superimposed over the Dolphin mineralized solid with the percentage of each block below surface topography and within the solid recorded. The block model origin is shown below.

Lower Left Corner

Easting 478700 E  
 Northing 7214700 N

Column size = 10 m  
 Row size = 10 m

145 Columns  
 130 Rows

Top of Model

Elevation 590

Level size = 5 m

155 Levels

No Rotation

## 14.5 Bulk Density

A total of 7 specific gravity determinations, using the weight in air/ weight in water methodology, were made in 2011 from drill core in holes GSDC 1127 and 1128. An additional 23 determinations were completed in 2011 from holes GSDC 1128 to 1131. In 2012 an additional 37 measurements were made. When the single measurement in massive sulphide is ignored, the other 66 had an average specific gravity of 2.67.

**Table 14-6: Specific Gravity Determinations Dolphin**

Hole Number	Depth (ft)	Dry Weight Avg. (g)	Wet Weight Avg. (g)	Specific Gravity	Rock Type
GSDC 1127	270.50	227.70	186.00	5.46	massive sulfide
GSDC 1130	594.00	391.40	231.70	2.45	AGRD
GSDC 1174	790.50	777.33	495.67	2.76	BqzS
GSDC 1174	802.00	1681.33	1062.33	2.72	BqzS
GSCH1205	637.00	1368.33	854.33	2.66	BqzS
GSCL1207	558.30	909.00	578.33	2.75	BqzS
GSDL1220	296.00	947.67	598.00	2.71	BqzS
GSDC 1176	590.60	522.00	328.00	2.69	CarbS
GSDC1165	390.60	707.00	440.00	2.65	CarbS
GSDC1167	91.00	690.67	403.00	2.40	CarbS
GSDC1169	396.50	567.00	356.00	2.69	CarbS
GSCL1207	40.00	704.00	419.00	2.47	CarbS
GSDC 1130	545.00	486.30	294.70	2.54	CHL-GRD
GSDC 1176	509.00	730.00	455.33	2.66	ChIS
GSDC1165	123.40	521.00	326.00	2.67	ChIS
GSDC1165	968.00	566.00	361.67	2.77	ChIS
GSDC 1131	496.00	397.90	233.60	2.42	DAC PORPH
GSCL1202	777.50	1606.00	1029.00	2.78	Eco
GSCL1202	776.50	781.00	500.33	2.78	Eco
GSDC 1127	284.00	192.50	114.60	2.47	GRD
GSDC 1127	298.00	547.50	343.50	2.68	GRD
GSDC 1127	641.00	182.65	115.50	2.72	GRD
GSDC 1128	348.50	573.90	419.50	3.72	GRD
GSDC 1128	282.00	234.50	135.20	2.36	GRD
GSDC 1128	332.50	435.70	274.40	2.70	GRD

GSDC 1128	439.00	440.50	267.20	2.54	GRD
GSDC 1128	493.00	524.00	326.00	2.65	GRD
GSDC 1128	512.50	529.50	327.80	2.63	GRD
GSDC 1128	522.00	409.00	256.00	2.67	GRD
GSDC 1128	531.00	384.80	240.50	2.67	GRD
GSDC 1128	557.50	224.90	138.00	2.59	GRD
GSDC 1128	576.00	410.00	257.00	2.68	GRD
GSDC 1128	582.00	473.00	296.50	2.68	GRD
GSDC 1128	584.00	134.20	79.50	2.45	GRD
GSDC 1128	621.00	297.80	178.70	2.50	GRD
GSDC 1128	643.00	164.00	101.80	2.64	GRD
GSDC 1129	13.50	398.90	240.20	2.51	GRD
GSDC 1130	271.00	479.60	292.00	2.56	GRD
GSDL1211	155.00	1475.00	961.00	2.87	GRD
GSDL1220	224.00	746.00	464.67	2.65	GRD
GSDL1220	361.00	912.33	573.00	2.69	GRD
GSDL1220	411.00	670.00	423.00	2.71	GRD
GSDL1222	137.00	1177.00	709.00	2.51	GRD
GSDC1165	90.60	738.67	479.67	2.85	GS
GSDC1165	113.50	743.00	489.00	2.93	GS
GSDC1167	12.80	669.00	432.33	2.83	GS
GSDC1168	39.50	1138.33	742.33	2.87	GS
GSCL1212	122.00	689.00	437.67	2.74	HFS
GSDC1165	880.70	920.00	580.67	2.71	Mar
GSDC1165	886.00	884.00	526.00	2.47	Mar
GSDC1165	205.80	1020.33	633.67	2.64	QmiS
GSDC1167	95.50	507.00	309.67	2.57	QmiS
GSDC 1130	644.00	418.40	258.00	2.61	RHY PORPH
GSDC1165	940.80	468.00	295.00	2.71	Sch
GSDC1165	954.20	727.00	448.33	2.61	Sch
GSDC1167	499.20	681.00	427.33	2.68	Sch
GSDC 1130	620.00	318.10	198.90	2.67	SGRD
GSDC 1131	528.00	424.50	263.90	2.64	SGRD
GSDC 1131	636.00	301.70	186.10	2.61	SGRD
GSDC 1127	651.50	179.30	111.60	2.65	TON
GSDC 1128	321.00	511.70	308.30	2.52	TON
GSDL1211	528.00	743.33	467.33	2.69	TON
GSDL1211	1068.50	995.00	630.00	2.73	TON
GSDL1212	777.00	1016.67	646.33	2.75	TON
GSDL1213	1661.50	991.00	635.33	2.79	TON
GSDL1220	533.00	1065.00	672.33	2.71	TON
GSDL1220	585.50	1066.33	673.67	2.72	TON
GSDC 1131	332.50	435.70	274.40	2.70	
Total = 66				2.67	

The relationship between specific gravity and gold grade was examined by averaging the specific gravity over a series of gold grade ranges in Table 14-7.

**Table 14-7: Specific Gravity sorted by gold grades**

<b>Au Grade Range ( g/t)</b>	<b>Average Au ( g/t)</b>	<b>Number of Samples</b>	<b>Minimum SG</b>	<b>Maximum SG</b>	<b>Average SG</b>
0.001 – 0.01	0.005	11	2.47	2.93	2.74
0.01 – 0.05	0.027	13	2.40	2.78	2.63
0.05 – 0.10	0.063	10	2.51	2.87	2.69
0.10 – 0.50	0.228	22	2.45	2.79	2.63
> 0.5	1.086	11	2.36	3.72	2.70
TOTAL		67			2.67

Based on the samples to date there appears to be no correlation between gold grades and specific gravity. As a result the average of 2.67 was applied to all blocks in the model. This is an increase from the average of 2.63 used in the 2011 estimate (Adams and Giroux, 2012)

## 14.6 Grade Interpolation

Grades for the lower grade stockwork style mineralization were first interpolated into blocks using only composites < 1.0 g/t Au. The interpolation was done by ordinary kriging in four passes. The first pass used a search ellipse with dimensions equal to  $\frac{1}{4}$  the semivariogram range for low grade Au. A minimum of 4 composites (from composites within the mineralized solid but less than 1.0 g/t Au), were required to estimate the block. For blocks not estimated in pass 1 a second pass using dimensions equal to  $\frac{1}{2}$  the semivariogram range was attempted. Again a minimum of 4 composites were required to make an estimate. For blocks not estimated a third pass using the full range and a fourth pass using twice the range completed the estimation process. In all passes a maximum of 12 composites were used with a maximum of 3 coming from any single drill hole. This exercise determined a grade for the low grade (stockwork) portion of the block.

A second kriging exercise was then completed estimating the high grade indicator or the probability of finding high grade within any given block. This estimation was completed using the 0 or 1 indicator value for composites within the mineralized solid and resulted in a value between 0 and 1. Again ordinary kriging was used in a series of 4 passes with the search ellipse dimensions for each pass a function of the high grade indicator semivariogram.

Finally, for blocks with a kriged indicator value greater than zero, a high grade gold value was estimated from composites within the mineralized solid greater than or equal to 1.0 g/t Au. A similar 4 pass estimate was made with the search ellipse dimensions a function of the high grade gold indicator variogram. Blocks estimated for low grade Au but not estimated for HG IND were not included.

The final grade for each block was a weighted average of the two styles of mineralization.

$$\text{Au Total} = (\text{LG Au} * (1.0 - \text{IND})) + (\text{HG Au} * \text{IND})$$

Where Au Total is the weighted average grade for the block

LG Au is the grade of the stockwork or low grade portion of block

HG Au is the grade for the shear zone or high grade portion of block

IND is the probability between 0 and 1 that high grade exists in the block

The search parameters for the various kriging runs are tabulated below.

**Table 14-8 : Kriging Parameters**

Variable	Pass	Number Estimated	Az/Dip	Dist. (m)	Az/Dip	Dist. (m)	Az/Dip	Dist. (m)
LG Au	1	17,682	68 / 0	30.0	158 / -73	27.5	338 / -17	10.0
	2	101,244	68 / 0	60.0	158 / -73	55.0	338 / -17	20.0
	3	187,940	68 / 0	120.0	158 / -73	110.0	338 / -17	40.0
	4	82,915	68 / 0	240.0	158 / -73	220.0	338 / -17	80.0
HG IND	1	7,173	90 / 0	25.0	0 / -85	30.0	180 / -5	7.5
	2	58,611	90 / 0	50.0	0 / -85	60.0	180 / -5	15.0
	3	173,185	90 / 0	100.0	0 / -85	120.0	180 / -5	30.0
	4	142,148	90 / 0	200.0	0 / -85	240.0	180 / -5	60.0
HG Au	1	421	90 / 0	25.0	0 / -85	30.0	180 / -5	7.5
	2	8,363	90 / 0	50.0	0 / -85	60.0	180 / -5	15.0
	3	60,079	90 / 0	100.0	0 / -85	120.0	180 / -5	30.0
	4	88,177	90 / 0	200.0	0 / -85	240.0	180 / -5	60.0

## 14.7 Classification

Based on the study herein reported, delineated gold mineralization of the Dolphin Zone at the Golden Summit Project are classified as a resource according to the following definitions from National Instrument 43-101 and from CIM (2005):

*“In this Instrument, the terms "mineral resource", "inferred mineral resource", "indicated mineral resource" and "measured mineral resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as those definitions may be amended.”*

The terms Measured, Indicated and Inferred are defined by CIM (2005) as follows:

*“A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and*

*precious metals, coal and industrial minerals 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."*

*"The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgement by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports."*

#### ***Inferred Mineral Resource***

*"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, workings and drill holes."*

*"Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies."*

#### ***Indicated Mineral Resource***

*"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."*

*“Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.”*

For the mineralized Dolphin zone the geological continuity has been established through surface mapping and diamond drill hole interpretation. Grade continuity can be quantified by semivariogram analysis. Blocks estimated in Pass 1 or Pass 2, using up to ½ the semivariogram range, during the low grade gold estimation, were classified as Indicated. All other blocks were classified as Inferred.

The results are tabulated below assuming one could mine to the limits of the mineralized solids. At this time, no economic analysis has been completed for the Dolphin zone, and as a result the economic cut-off is unknown. A value of 0.3 g/t Au has been highlighted as a possible cut-off for open pit extraction.

**Table 14-9: Dolphin Zone Indicated Resource**

Au Cut-off (g/t)	Tonnes > Cut-off (tonnes)	Grade > Cut-off		
		Au (g/t)	Contained	
			kgs Au	ozs Au
0.20	101,530,000	0.55	55,940	1,799,000
0.25	86,660,000	0.61	52,600	1,691,000
<b>0.30</b>	<b>73,580,000</b>	<b>0.67</b>	<b>49,000</b>	<b>1,576,000</b>
0.35	62,620,000	0.73	45,460	1,462,000
0.40	53,410,000	0.79	42,030	1,351,000
0.50	39,360,000	0.91	35,740	1,149,000
0.60	29,180,000	1.03	30,170	970,000
0.70	22,040,000	1.16	25,570	822,000
0.80	16,720,000	1.29	21,590	694,000
0.90	12,760,000	1.43	18,220	586,000
1.00	9,960,000	1.56	15,580	501,000
1.10	7,910,000	1.70	13,430	432,000
1.20	6,270,000	1.84	11,550	371,000
1.30	5,000,000	1.99	9,960	320,000

**Table 14-10: Dolphin Zone Inferred Resource**

Au Cut-off (g/t)	Tonnes > Cut-off (tonnes)	Grade > Cut-off		
		Au (g/t)	Contained	
			kgs Au	ozs Au
0.20	281,710,000	0.54	152,690	4,909,000
0.25	253,830,000	0.58	146,210	4,701,000
<b>0.30</b>	<b>223,300,000</b>	<b>0.62</b>	<b>138,000</b>	<b>4,437,000</b>
0.35	191,920,000	0.67	127,630	4,103,000
0.40	162,310,000	0.72	116,700	3,752,000
0.50	113,800,000	0.83	94,910	3,051,000
0.60	80,250,000	0.96	76,640	2,464,000
0.70	56,540,000	1.08	61,290	1,970,000
0.80	38,580,000	1.24	47,880	1,539,000
0.90	25,770,000	1.44	37,030	1,191,000
1.00	18,620,000	1.63	30,290	974,000
1.10	14,430,000	1.80	25,900	833,000
1.20	11,580,000	1.95	22,630	727,000
1.30	9,400,000	2.12	19,920	640,000

## 14.8 Model Verification

In order to verify the block model results, two methods were used: swath plots and cross sections.

Swath plots take slices through the mineral deposit comparing average grades of blocks with the average grades of composites. The results are shown for east-west slices (Figure 14-6), for north-south slices (Figure 14-7) and for slices in the vertical plane (Figure 14-8). In general the block estimates match very well with the sample grades with the larger deviations occurring in areas with few sample points at the horizontal extremities of the zone and at the very bottom.

Cross sections were evaluated with block grades compared to composite grades with the results appearing reasonable. Three examples are shown as Figure 14-9 to 14-11.

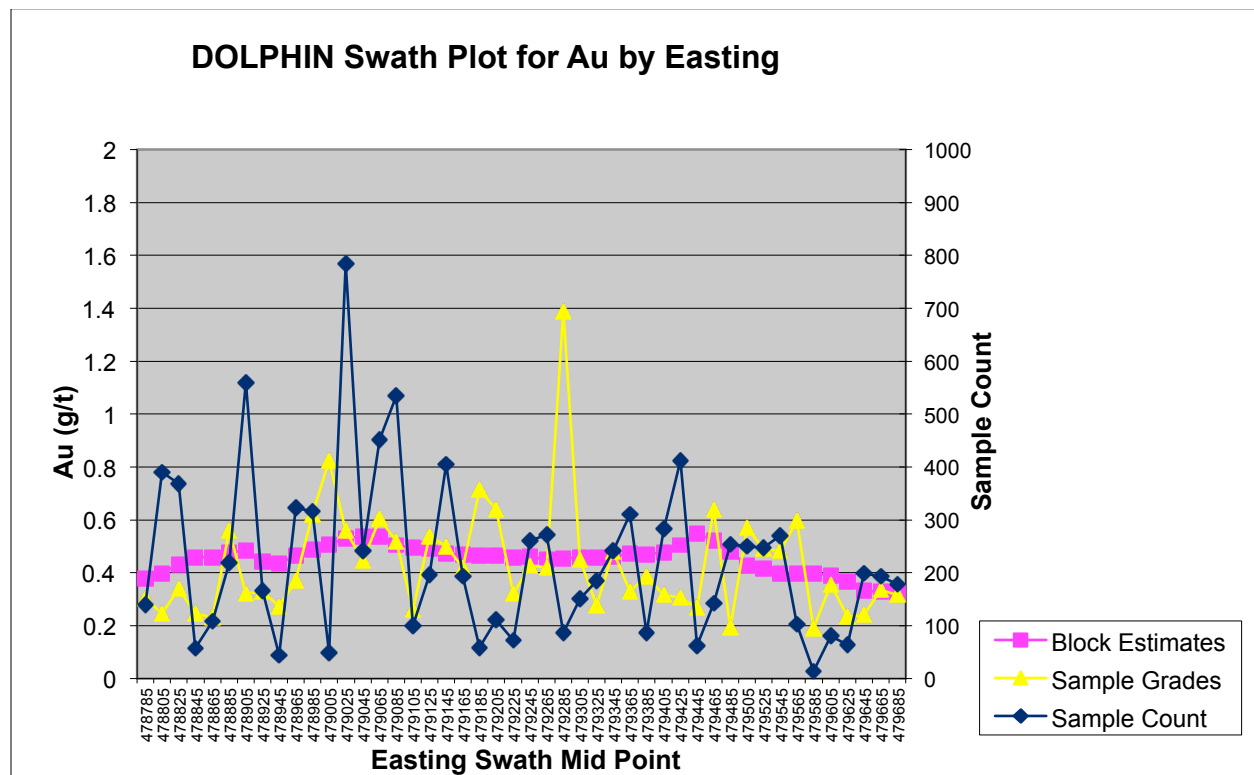


Figure 14-6: Swath plot for Au along 20 m east-west slices

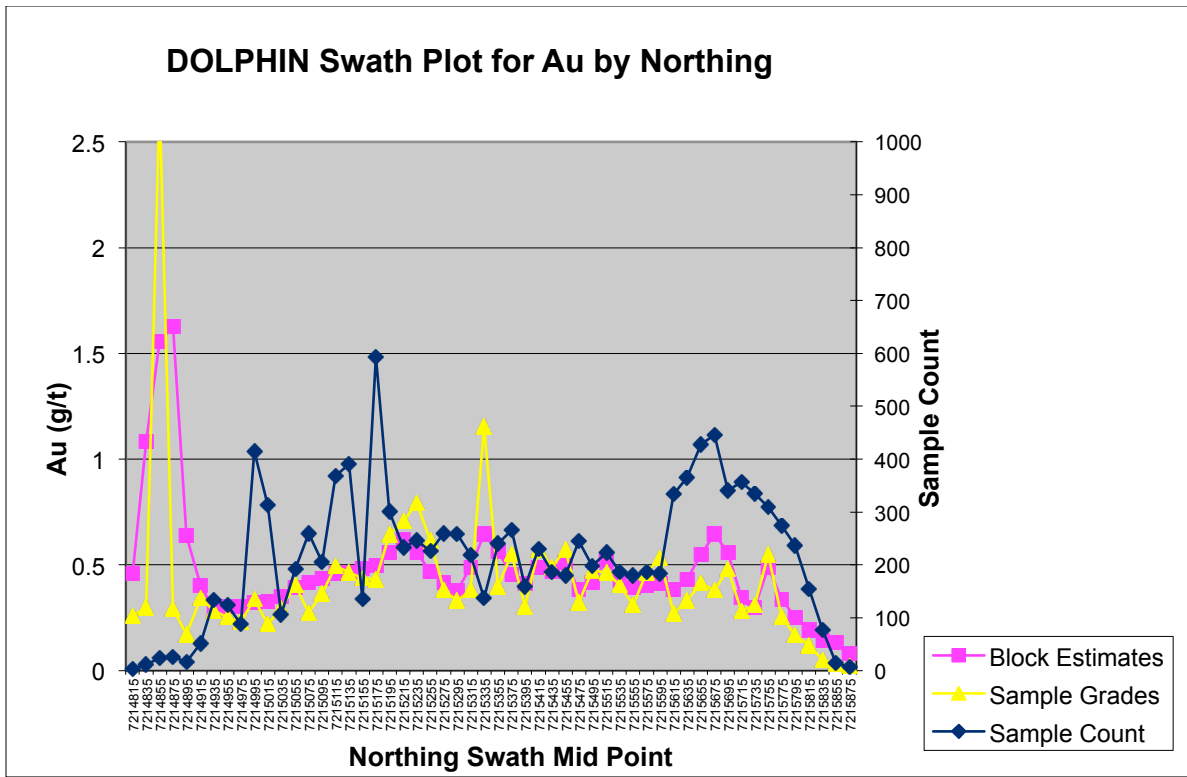


Figure 14-7: Swath plot for Au along 20 m North-South slices

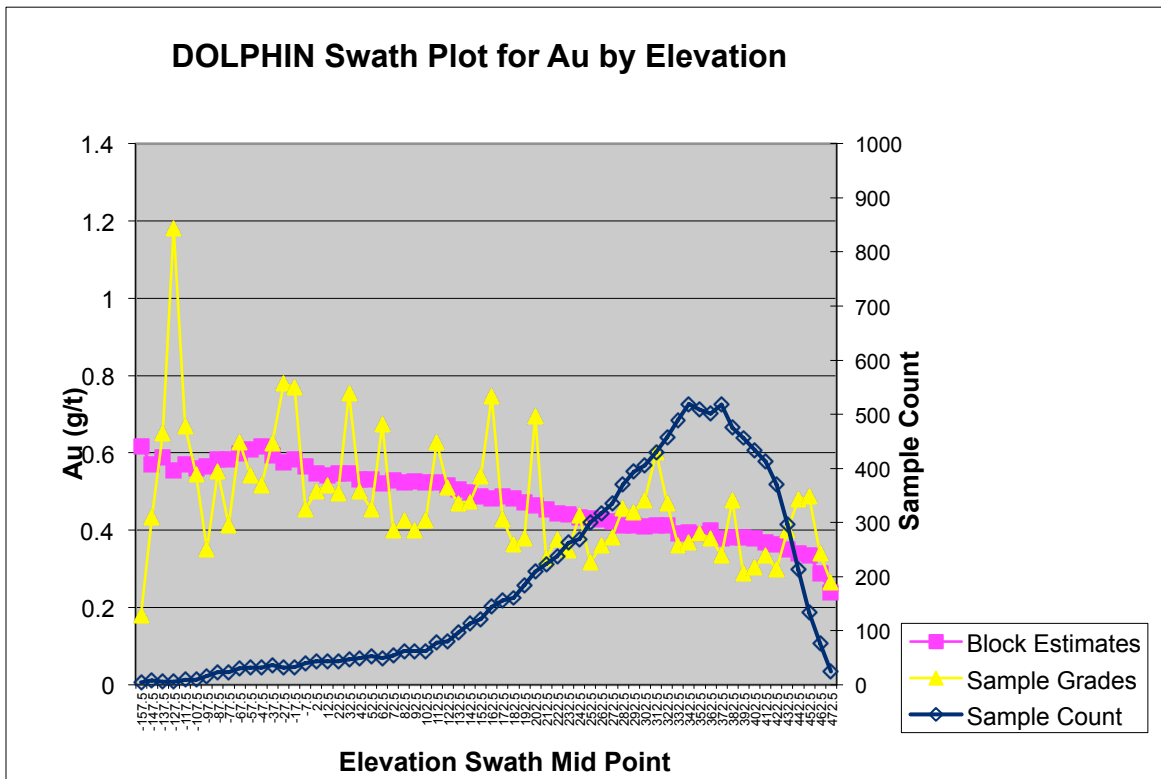
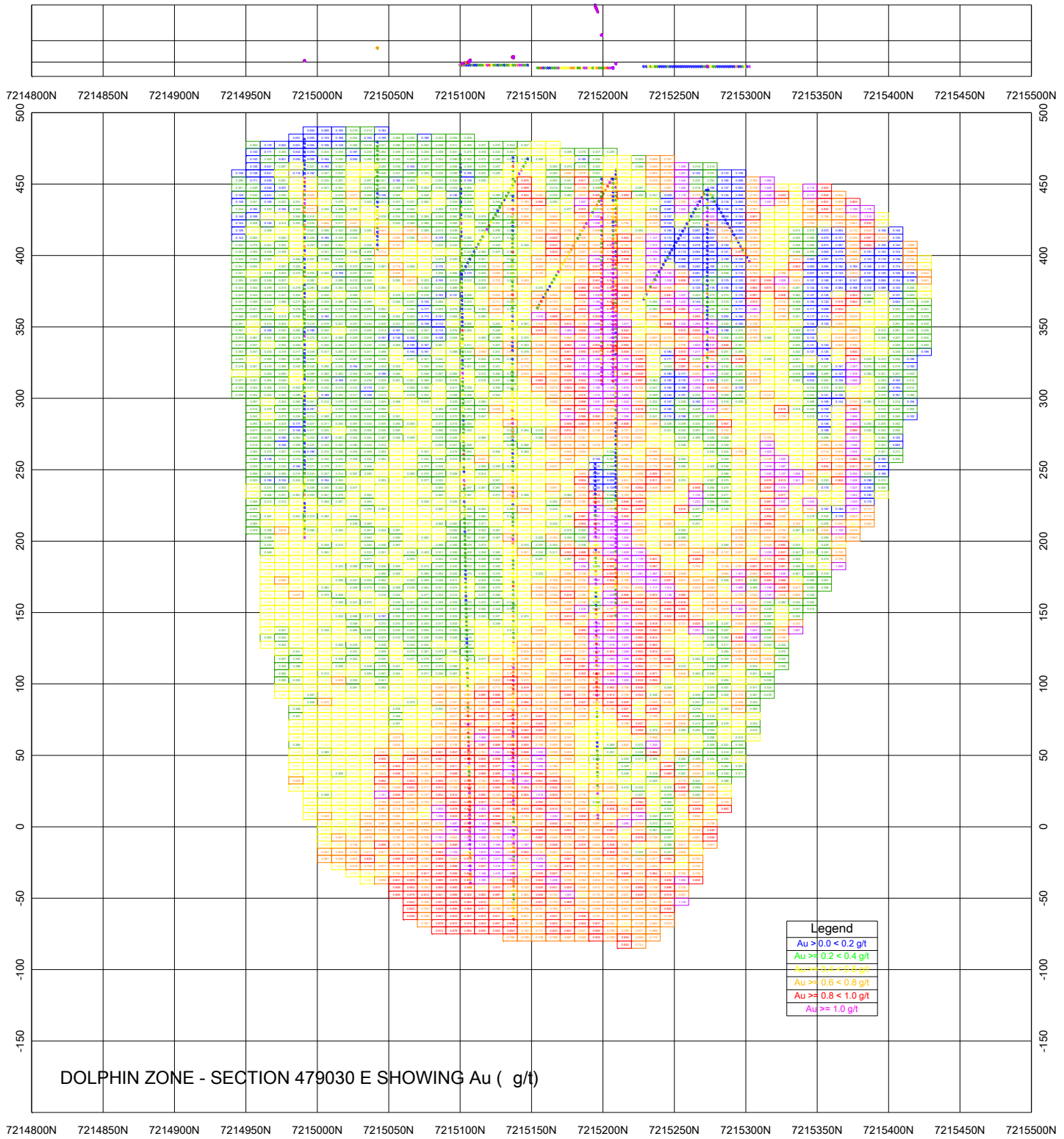
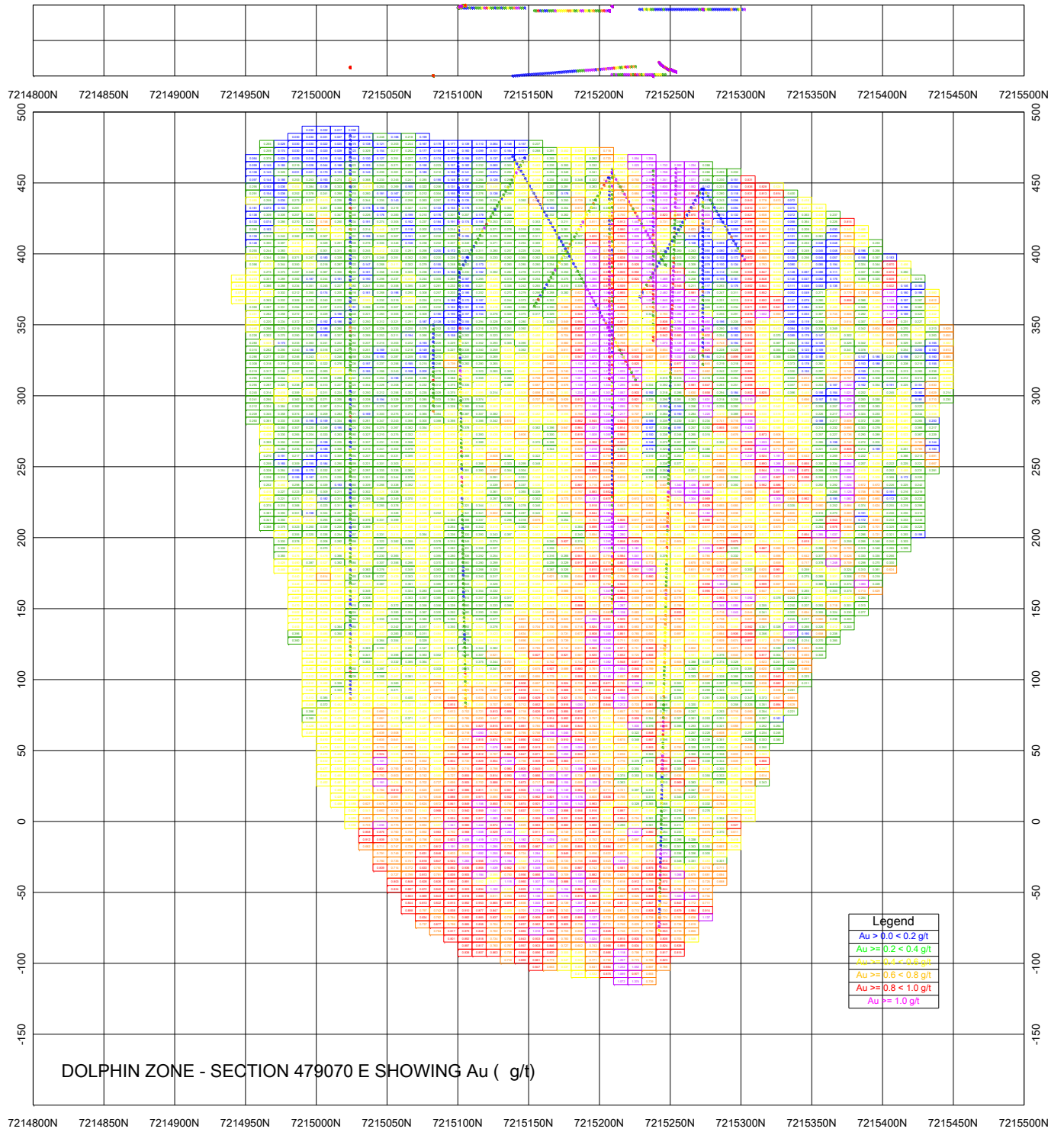


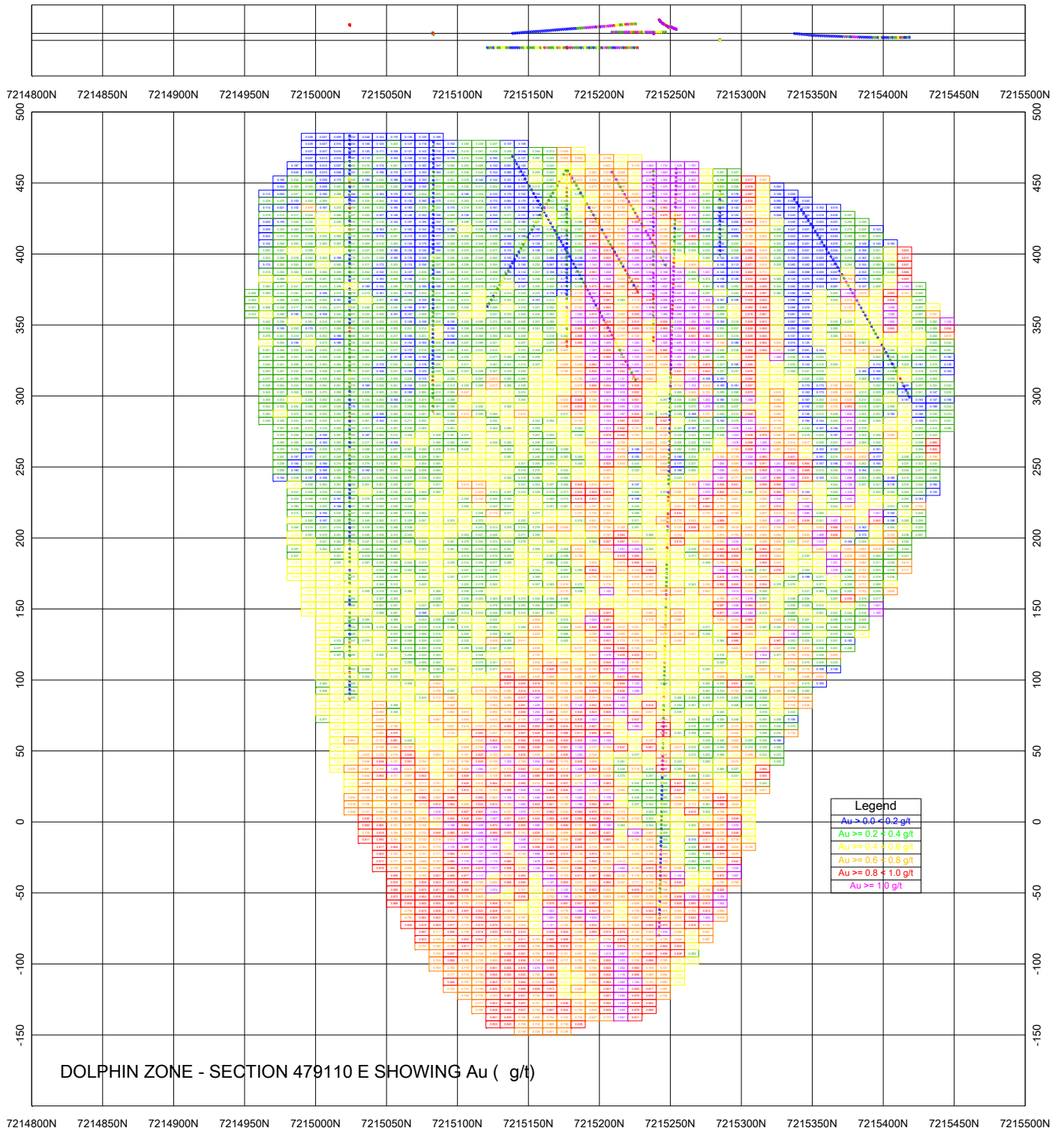
Figure 14-8: Swath plot for Au along vertical slices



**Figure 14-9: Dolphin Zone Section 479030 E**



**Figure 14-10: Dolphin Zone Section 479070 E**



**Figure 14-11: Dolphin Zone Section 479110 E**

## **CONCLUSIONS**

- The mineralized Dolphin Solid has increased in volume by 254 % over the one used in the 2011 Estimate (Adams, Giroux, 2012). It has been deepened and extended to the north east to include the Cleary Hill Mine area.
- The amount of drill holes used to make the estimate has increased by 100 drill holes from 77 to 177. Included in this are 74 new holes completed in 2012.
- Based on additional measurements the average specific gravity used to convert volume to tonnes has been increased from 2.63 used in the 2011 estimate to 2.67.
- As a result, at a 0.3 g/t Au cut-off the resource has increased from 17.3 million tonnes averaging 0.62 g/t Au to 73.5 million tonnes averaging 0.67 g/t Au in the Indicated category and from 64.4 million tonnes averaging 0.55 g/t Au to 223 million tonnes averaging 0.62 g/t Au in the Inferred category.
- It is recommended that a Preliminary Economic Assessment be completed using reasonable metal prices and costs to access the economics of this project.

## **15-22. ITEMS OMITTED**

Items 15-22 omitted since the Golden Summit property does not qualify as an “advanced property”.

## **23. ADJACENT PROPERTIES**

The Golden Summit property is surrounded by over a dozen small to moderate size properties owned by small companies and individuals. Several of these properties contain old mines and known-gold-bearing prospects (Freeman, 1992).

## **24. OTHER RELEVANT DATA AND INFORMATION**

To the best of the author’s knowledge, there are no other data available to the author that bear directly on the information presented in this report.

## **25. INTERPRETATIONS AND CONCLUSIONS**

The Golden Summit property (Property) is located in central Alaska, approximately 18 miles northeast of Fairbanks, Alaska. It is readily accessible from Fairbanks via the paved Steese highway and a well-developed gravel road system. Fairbanks is a full service community with infrastructure support for both exploration and mining activities.

The Property is comprised of 49 Federal patented and 76 Federal unpatented lode claims and 253 State of Alaska mining claims controlled or owned by Freegold. The property is situated largely in the south portion of Township 3 North, Range 2 East of the Fairbanks Meridian, centered at approximately 479250 E, 7215464 N (UTM Zone NAD 27 Alaska). All of the leases and claims holdings that comprise the property are in good standing.

Several historic gold mines are located on the property, and open pit gold mining is ongoing at Kinross Gold's nearby Fort Knox gold deposit. Freegold acquired interest in the Golden Summit project in mid-1991, and since that time has conducted extensive surface exploration at numerous prospects over much of the property, including reverse circulation, rotary air blast and diamond core drilling, reconnaissance rock sampling, geologic mapping, property-wide grid-based soil sampling, and several trenching projects at key prospects. The majority of Freegold's drilling efforts have been focused on the western portion of the Property; however drilling in the eastern portion of the Property has also identified significant grade-thickness gold mineralization which has not been examined since the late 1990s.

Freegold conducted drilling on the Dolphin gold deposit in 1995-1996, 1998, 2004, 2008, 2011 and 2012. The 2011 and 2012 programs were also expanded in the Dolphin area to include the adjacent Cleary Hill mine area.

There are three styles of gold occurrences identified on the Property, including 1) intrusive-hosted sulfide-quartz stockwork veinlets and disseminations (such as the Dolphin gold deposit), 2) low-sulfide auriferous quartz veins, and 3) shear-hosted gold-bearing quartz veinlets. All three types are considered to be part of a large-scale intrusive-related gold system on the property.

The Dolphin gold deposit is hosted in the Dolphin stock, which consists largely of granodiorite and tonalite. Mineralization at Dolphin remains open in several directions. There appears to be potential for other intrusive bodies on the Golden Summit project based on historical drilling and previous underground investigations. The mid-Cretaceous Dolphin stock is approximately the same age as the granitic intrusion that hosts the nearby Fort Knox gold deposit. The discovery of the widespread gold low-grade gold mineralization in the Dolphin area was made by Freegold in 1995. Reverse circulation drilling in 1995 and 1996 and one core hole in 1998 confirmed the presence of widespread, low-grade mineralization; however it was not until 2011 that a comprehensive drill campaign was undertaken with the aim of defining resources in the Dolphin area. Additional drilling in 2012 has significantly increased those resources.

In March 2011 a NI43-101 compliant gold resource for the Dolphin gold deposit, using kriging methods was estimated using pre-2011 drill results. This evaluation, using a 0.3g/t cut-off, outlined a gold resource estimate of 7,790,000 tonnes at 0.695 g/t "indicated" (174,085 ounces), and 27,010,000 tonnes at 0.606 g/t "inferred" (526,304 ounces).

A total of 26 additional holes were completed in the Dolphin/Cleary Hill area in 2011 (18,927.5 feet/5769.1 metres). The results of the new drilling were added to the existing resource data

base, and a new resource estimate was completed in December 2011. This gold resource estimate for the Dolphin deposit, utilizing a 0.3 g/t cut-off, was 17,270,000 tonnes at 0.62 g/t “indicated” (341,000 ounces) and 64,440,000 tonnes at 0.55 g/t “inferred” (1,135,000 ounces).

In 2012 an additional 47 holes (48,937.5 feet/14,915.42 meters) were completed in the Dolphin/Cleary Hill area. In October 2012 a revised NI43-101 compliant gold resource was calculated for the Dolphin/Cleary Hill area and included 20 holes that were completed in 2011 as well as all of the 2012 drill holes. This new resource estimate increased the number of holes within the mineralized solid from the 77 used in the 2011 estimate, to 177 holes. The October 2012 gold resource estimate for the Dolphin deposit, utilizing a 0.3 g/t cut-off, is 73,580,000 tonnes at 0.67 g/t “indicated” (1,576,000 ounces) and 223,300,000 tonnes at 0.62 g/t “inferred” (4,437,000 ounces).

## **26. RECOMMENDATIONS**

1. Increase the Dolphin/Cleary Hill gold resource by a) drilling deeper holes in portions of the deposit, b) drilling shallow to moderate depth holes in un-tested areas adjacent to the south and east portions of the deposit, and c) drilling a limited number of exploration drill holes in locations more distal to the resource d) drilling strategically located infill drill holes to move more ounces into the drill indicated category. Exploration drill holes should target areas where gold-bismuth anomalous soils are known to the south of the deposit and on the west side of Willow Creek, and areas where IP/resistivity survey data suggests the presence of possible shallow intrusive rocks to the southwest of the deposit. Approximately 15,000 metres of drilling recommended for the Dolphin/Cleary area - Approximate cost of this program is \$4,875,000, as shown in Figure 26.1.
2. 10,000 metres of drilling is recommended on the Goose Creek, Too Much Gold and Christina prospect areas and combine these drill results with past Freegold drill results in order to estimate a preliminary NI 43-101 compliant resources in these areas. Approximate cost of this program is estimated at \$3,250,000.
3. Complete remainder of ground geophysical and geochemical surveys over the remainder of the property. Approximate cost of this program is estimated at \$250,000.
4. A significant metallurgical program should be undertaken on drill core from various areas of the Dolphin/Cleary Deposit. Approximate cost of this program is estimated at \$250,000.
5. It is recommended a Preliminary Economic Assessment be completed using reasonable metal prices and costs to assess the economics of this project. Approximate cost of this program is estimated at \$500,000.

The recommendations are designed to further advance the project and as such should be undertaken independently of each part of the program. Total recommended program is budgeted at \$9,125,000.

**Figure 26.1 Map Showing Areas of Proposed Drilling.**

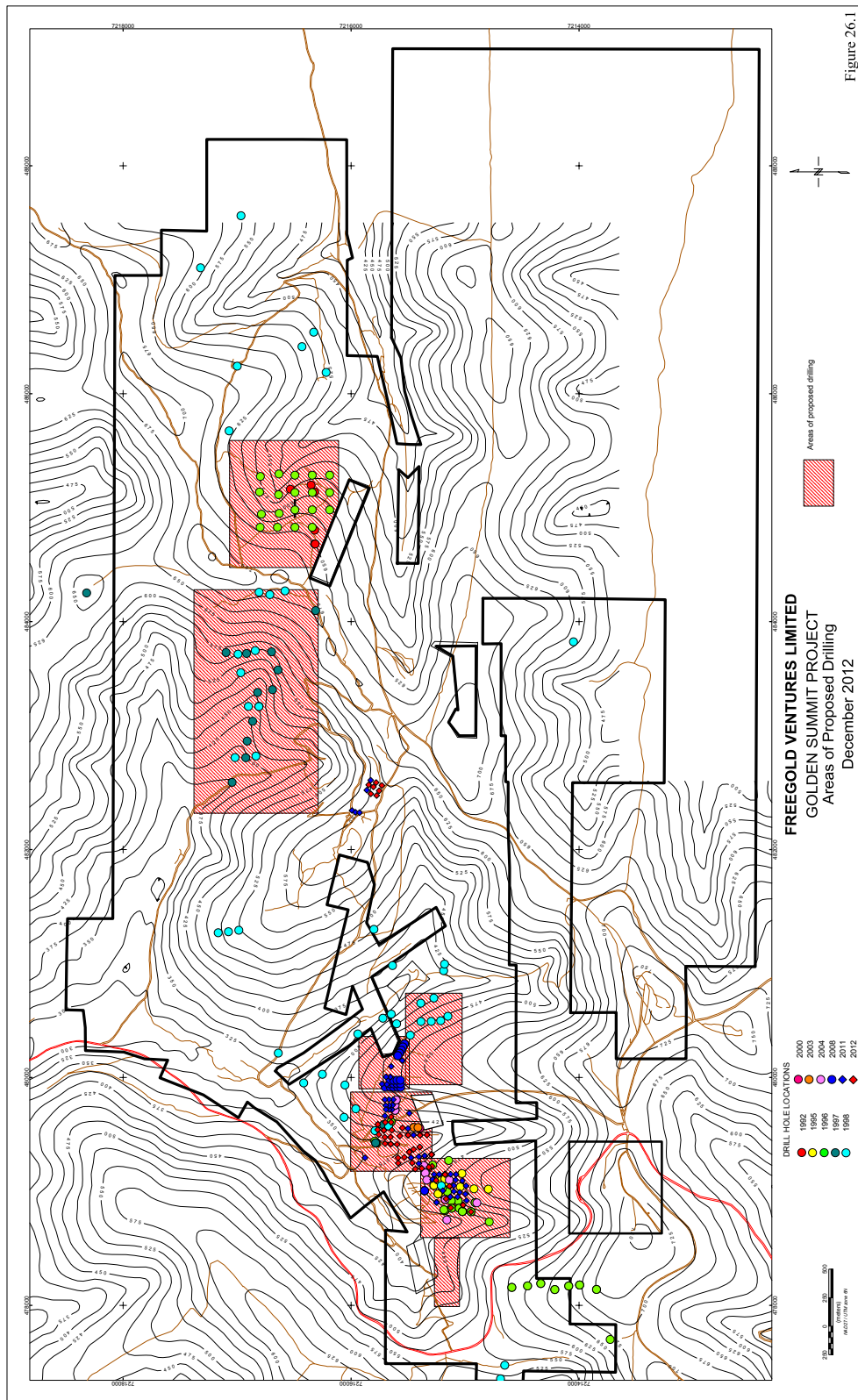


Figure 26.1

## 27. REFERENCES

- Adams, D. and G.H. Giroux (2011), “Geology and Mineralization and Mineral Resource Estimate for the Golden Summit Project, Fairbanks Mining District, Alaska”, 43-101 Report for Freegold Ventures Inc. March 31, 2011.
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## CERTIFICATE OF QUALIFIED PERSON

**Mark J. Abrams**

I, Mark J. Abrams, P.O. Box 33955, Reno, Nevada 89533, do hereby certify that:

- 1) I am a consulting geologist with an office at 815 Murray Way, Elko, Nevada, 89801, USA.
- 2) I am a graduate of Eastern Washington University in 1978 with a B.S. degree; and in 1980 with a M.S degree., both in Geology.
- 3) I am a member in good standing of the American Institute of Professional Geologists #11451.
- 4) I have practiced my profession continuously since 1979. I have 34 years of experience in all phases of mineral exploration and economic geology.
- 5) I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
- 6) This report titled “Technical Report for the Golden Summit Project, Fairbanks Mining District, Alaska” dated December 14, 2012, is based on a study of the data and literature available on the Golden Summit Property. I have visited the property multiple times, most recently May 24 – 27, 2012.
- 7) As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 8) I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.
- 9) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
- 10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 14<sup>th</sup> day of December, 2012



Mark J. Abrams, P.G., R.G. C.P.G., MS.



## CERTIFICATE OF QUALIFIED PERSON

**Gary H. Giroux**


I, G.H. Giroux, of 982 Broadview Drive, North Vancouver, British Columbia, do hereby certify that:

- 1) I am a consulting geological engineer with an office at #1215 - 675 West Hastings Street, Vancouver, British Columbia.
- 2) I am a graduate of the University of British Columbia in 1970 with a B.A. Sc. and in 1984 with a M.A. Sc., both in Geological Engineering.
- 3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- 4) I have practiced my profession continuously since 1970. I have had over 35 years' experience calculating mineral resources. I have previously completed resource estimations on a wide variety of intrusive hosted gold deposits, including Brewery Creek, Kisladag and Red Mountain.
- 5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
- 6) This report titled "Technical Report for the Golden Summit Project, Fairbanks Mining District, Alaska" dated December 14, 2012, is based on a study of the data and literature available on the Golden Summit Property. I am responsible for the Mineral Resource Estimate Section 14. I have not visited the property.
- 7) I have previously completed resource estimates for this property on March 2011 and January 2012.
- 8) As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 9) I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.
- 10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

**CERTIFICATE OF QUALIFIED PERSON**

**Gary H. Giroux**

Dated this 14<sup>th</sup> day of December, 2012



G. H. Giroux, P.Eng., M.A.Sc.



APPENDIX 1  
Mining Claim List  
Golden Summit Project, Alaska –  
FREEGOLD RECOVERY - FAIRBANKS EXPLORATION INC.  
CLAIM LIST

STATE MINING CLAIMS  
All claims located in the Fairbanks Recording District, Alaska

NO.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
1	What's Next #1	24	T3N	R2E	Fairbanks	501821	40
2	What's Next #2	24	T3N	R2E	Fairbanks	501822	40
3	What's Next #3	24	T3N	R2E	Fairbanks	501823	40
4	What's Next #4	24	T3N	R2E	Fairbanks	501824	40
5	What's Next #5	22	T3N	R2E	Fairbanks	502196	40
6	What's Next #6	22	T3N	R2E	Fairbanks	502197	40
7	What's Next #7	22	T3N	R2E	Fairbanks	502198	40
8	What's Next #8	22	T3N	R2E	Fairbanks	502199	40
9	Crane #1	24	T3N	R2E	Fairbanks	502551	40
10	Crane #2	24	T3N	R2E	Fairbanks	502552	40
11	Crane #3	24	T3N	R2E	Fairbanks	502553	40
12	Crane #4	24	T3N	R2E	Fairbanks	501930	40
13	Anticline #1	24	T3N	R2E	Fairbanks	501825	40
14	Anticline #2	24	T3N	R2E	Fairbanks	501836	40
15	Ruby 3A Fraction	25	T3N	R1E	Fairbanks	515911	40
16	Ruby 4A Fraction	25	T3N	R1E	Fairbanks	515912	40
17	Ruby 5 Fraction	25	T3N	R1E	Fairbanks	515913	40
18	Ruby 6 Fraction	25	T3N	R1E	Fairbanks	515914	40
19	Ruby 7 Fraction	25	T3N	R1E	Fairbanks	515915	40
20	Ruby 8 Fraction	30	T3N	R2E	Fairbanks	515916	40
21	Ruby 9 Fraction	30	T3N	R2E	Fairbanks	515917	40
22	Ruby 10 Fraction	30	T3N	R2E	Fairbanks	515918	40
23	Ruby 11 Fraction	30	T3N	R2E	Fairbanks	515919	40
24	Ruby 12 Fraction	29	T3N	R2E	Fairbanks	515920	40
25	Ruby 13 Fraction	29	T3N	R2E	Fairbanks	515921	40
26	Ruby 14 Fraction	29	T3N	R2E	Fairbanks	515922	40
27	Ruby 15 Fraction	29	T3N	R2E	Fairbanks	515923	40
28	Ruby 16 Fraction	28	T3N	R2E	Fairbanks	515924	40
29	Ruby 17 Fraction	28	T3N	R2E	Fairbanks	515925	40
30	Ruby 18 Fraction	28	T3N	R2E	Fairbanks	515926	40
31	Ruby 19 Fraction	28	T3N	R2E	Fairbanks	515927	40

NEWSBOY PROPERTY  
CLAIMS LIST

All claims located in the Fairbanks Recording District, Alaska

No.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
1	Greenback 1	35	T3N	R1E	Fairbanks	359771	40
2	Greenback 2	35	T3N	R1E	Fairbanks	359772	40
3	Greenback 3	26	T3N	R1E	Fairbanks	361184	40
4	Greenback 4	25	T3N	R1E	Fairbanks	505192	40
5	Newsboy	26	T3N	R1E	Fairbanks	333135	40
6	Newsboy Extension	25	T3N	R1E	Fairbanks	333136	40

KEYSTONE MINES INC. PROPERTY  
CLAIMS LIST

All claims located in the Fairbanks Recording District, Alaska

NO.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
1	Blueberry	21	T3N	R2E	Fairbanks	308497	40
2	Robin 1	28	T3N	R2E	Fairbanks	308498	40
3	Robin 2	29	T3N	R2E	Fairbanks	308499	40
4	Robin 3	29	T3N	R2E	Fairbanks	308500	40
5	Robin 4	29	T3N	R2E	Fairbanks	308501	40
6	Robin 5	29	T3N	R2E	Fairbanks	308502	40
7	Robin 6	30	T3N	R2E	Fairbanks	308503	40
8	Ing Fraction	22	T3N	R2E	Fairbanks	315014	40
9	Gene Fraction	22	T3N	R2E	Fairbanks	315015	40
10	Beta Fraction	22	T3N	R2E	Fairbanks	315016	40
11	Alpha Fraction	21,22	T3N	R2E	Fairbanks	315017	40
12	Arnold Fraction	22	T3N	R2E	Fairbanks	315018	40

FREGOLD RECOVERY INC. USA PROPERTY  
CLAIMS LIST

All claims located in the Fairbanks Recording District, Alaska

NO.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
1	FRG 1	31	T3N	R2E	Fairbanks	558129	40
2	FRG 2	31	T3N	R2E	Fairbanks	558130	40
3	FRG 3	31	T3N	R2E	Fairbanks	558131	40
4	FRG 4	31	T3N	R2E	Fairbanks	558132	40
5	FRG 5	32	T3N	R2E	Fairbanks	575592	40
6	FRG 6	32	T3N	R2E	Fairbanks	575593	40
7	FRG 7	26	T3N	R2E	Fairbanks	714368	40

NO.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
8	FRG 8	26	T3N	R2E	Fairbanks	714369	40
9	FRG 9	26	T3N	R2E	Fairbanks	714370	40
10	FRG 10	26	T3N	R2E	Fairbanks	714371	40
11	FRG 11	26	T3N	R2E	Fairbanks	714372	160
12	FRG 12	25	T3N	R2E	Fairbanks	714373	160
13	FRG 13	25	T3N	R2E	Fairbanks	714374	160
14	FRG 14	27	T3N	R2E	Fairbanks	714375	160
15	FRG 15	27	T3N	R2E	Fairbanks	714376	160
16	FRG 16	26	T3N	R2E	Fairbanks	714377	160
17	FRG 17	26	T3N	R2E	Fairbanks	714378	160
18	FRG 18	25	T3N	R2E	Fairbanks	714379	160
19	FRG 19	25	T3N	R2E	Fairbanks	714380	160
20	FRG 20	32	T3N	R2E	Fairbanks	714381	40
21	FRG 21	32	T3N	R2E	Fairbanks	714382	40
22	FRG 22	31	T3N	R2E	Fairbanks	714383	40
23	FRG 23	32	T3N	R2E	Fairbanks	714384	40
24	FRG 24	32	T3N	R2E	Fairbanks	714385	40
25	FRG 25	32	T3N	R2E	Fairbanks	714386	160
26	FRG 26	34	T3N	R2E	Fairbanks	714387	160
27	FRG 27	34	T3N	R2E	Fairbanks	714388	160
28	FRG 28	35	T3N	R2E	Fairbanks	714389	160
29	FRG 29	35	T3N	R2E	Fairbanks	714390	160
30	FRG 30	36	T3N	R2E	Fairbanks	714391	160
31	FRG 31	36	T3N	R2E	Fairbanks	714392	160
32	FRG 32	31	T3N	R2E	Fairbanks	714393	40
33	FRG 33	32	T3N	R2E	Fairbanks	714394	160
34	FRG 34	32	T3N	R2E	Fairbanks	714395	160
35	FRG 35	33	T3N	R2E	Fairbanks	714396	160
36	FRG 36	33	T3N	R2E	Fairbanks	714397	160
37	FRG 37	34	T3N	R2E	Fairbanks	714398	160
38	FRG 38	34	T3N	R2E	Fairbanks	714399	160
39	FRG 39	35	T3N	R2E	Fairbanks	714400	160
40	FRG 40	35	T3N	R2E	Fairbanks	714401	160
41	FRG 41	36	T3N	R2E	Fairbanks	714402	160
42	FRG 42	36	T3N	R2E	Fairbanks	714403	160
43	FRG 43	36	T3N	R1E	Fairbanks	714966	160
44	Erik 1	18	T3N	R2E	Fairbanks	574226	40
45	Erik 2	18	T3N	R2E	Fairbanks	574227	40
46	Erik 3	18	T3N	R2E	Fairbanks	574228	40

NO.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
47	Kelly 1	27	T3N	R2E	Fairbanks	574122	40
48	Kelly 2	27	T3N	R2E	Fairbanks	574123	40
49	Kelly 3	27	T3N	R2E	Fairbanks	574124	40
50	Kelly 4	27	T3N	R2E	Fairbanks	574125	40
51	Kelly 5	27	T3N	R2E	Fairbanks	574126	40
52	Kelly 6	27	T3N	R2E	Fairbanks	574127	40
53	Starbuck 1	16	T3N	R3E	Fairbanks	574128	40
54	Starbuck 2	16	T3N	R3E	Fairbanks	574129	40
55	Starbuck 3	16	T3N	R3E	Fairbanks	574130	40
56	Starbuck 4	16	T3N	R3E	Fairbanks	574131	40
57	Butterfly 1	33	T3N	R3E	Fairbanks	575583	40
58	Butterfly 2	33	T3N	R3E	Fairbanks	575584	40
59	Butterfly 3	33, 34	T3N	R3E	Fairbanks	575585	40
60	Butterfly 4	3, 4	T2N	R3E	Fairbanks	575586	40
61	Butterfly 5	3	T2N	R3E	Fairbanks	575587	40
62	Butterfly 6	34	T3N	R3E	Fairbanks	575588	40
63	Butterfly 7	34	T3N	R3E	Fairbanks	575589	40
64	Butterfly 8	33	T3N	R3E	Fairbanks	575590	40
65	Eldorado #1	27	T3N	R1E	Fairbanks	575591	40
66	Lauren #9	18	T3N	R2E	Fairbanks	604794	40
67	3 Above 2 T LL	18, 19	T3N	R2E	Fairbanks	519698	40
68	4 Above 2 T LL	18, 19	T3N	R2E	Fairbanks	519699	40

TOLOVANA MINE PROPERTY  
STATE CLAIMS LIST

All claims located on in the Fairbanks Recording District, Alaska

NO.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
1	VDH-AMS #1	25	T3N	R1E	Fairbanks	344681	40
2	VDH-AMS #2	25	T3N	R1E	Fairbanks	344682	40
3	VDH-AMS #3	25	T3N	R1E	Fairbanks	344683	40

CHRISTINA MINING LLC PROPERTY  
STATE CLAIMS LIST

No.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
1	RAM 1	17	T3N	R2E	Fairbanks	303366	40
2	RAM 2	17	T3N	R2E	Fairbanks	303367	40
3	RAM 3	17	T3N	R2E	Fairbanks	303368	40
4	RAM 4	17	T3N	R2E	Fairbanks	303369	40
5	RAM 5	16	T3N	R2E	Fairbanks	303370	40
6	RAM 6	16	T3N	R2E	Fairbanks	303371	40
7	RAM 7	16	T3N	R2E	Fairbanks	303372	40
8	RAM 8	16	T3N	R2E	Fairbanks	303373	40
9	RAM 9	15	T3N	R2E	Fairbanks	303374	40
10	RAM 10	15	T3N	R2E	Fairbanks	303375	40
11	RAM 11	15	T3N	R2E	Fairbanks	303376	40
12	RAM 12	15	T3N	R2E	Fairbanks	303377	40
13	RAM 13	17	T3N	R2E	Fairbanks	303378	40
14	RAM 14	17	T3N	R2E	Fairbanks	303379	40
15	RAM 15	17	T3N	R2E	Fairbanks	303380	40
16	RAM 16	17	T3N	R2E	Fairbanks	303381	40
17	RAM 17	16	T3N	R2E	Fairbanks	303382	40
18	RAM 18	16	T3N	R2E	Fairbanks	303383	40
19	RAM 19	16	T3N	R2E	Fairbanks	303384	40
20	RAM 20	16	T3N	R2E	Fairbanks	303385	40
21	RAM 21	15	T3N	R2E	Fairbanks	303386	40
22	RAM 22	15	T3N	R2E	Fairbanks	303387	40
23	RAM 23	15	T3N	R2E	Fairbanks	303388	40
24	RAM 24	15	T3N	R2E	Fairbanks	303389	40
25	RAM 25	17	T3N	R2E	Fairbanks	303390	40
26	RAM 57	14	T3N	R2E	Fairbanks	303422	40
27	RAM 59	14	T3N	R2E	Fairbanks	303423	40
28	RAM 60	14	T3N	R2E	Fairbanks	303424	40
29	RAM 62	14	T3N	R2E	Fairbanks	303426	40
30	RAM 63	14	T3N	R2E	Fairbanks	303427	40
31	RAM 64	14	T3N	R2E	Fairbanks	303428	40
32	RAM 65	14	T3N	R2E	Fairbanks	303429	40
33	RAM 66	20	T3N	R2E	Fairbanks	306460	40
34	RAM 67	20	T3N	R2E	Fairbanks	306461	40
35	RAM 68	20	T3N	R2E	Fairbanks	306462	40
36	RAM 69	20	T3N	R2E	Fairbanks	306463	40
37	RAM 70	21	T3N	R2E	Fairbanks	306464	40

No.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
38	RAM 71	21	T3N	R2E	Fairbanks	306465	40
39	RAM 72	20	T3N	R2E	Fairbanks	306466	40
40	RAM 73	20	T3N	R2E	Fairbanks	306467	40
41	RAM 74	20	T3N	R2E	Fairbanks	306468	40
42	RAM 75	20	T3N	R2E	Fairbanks	306469	40
43	RAM 76	21	T3N	R2E	Fairbanks	306470	40
44	RAM 2A	20	T3N	R2E	Fairbanks	302892	40
45	RAM 3A	20	T3N	R2E	Fairbanks	302893	40
46	RAM 58	19	T3N	R2E	Fairbanks	302894	40
47	RAM 58A	19	T3N	R2E	Fairbanks	302895	40
48	RAM 58B	19	T3N	R2E	Fairbanks	302896	40
49	RAM 58C	19	T3N	R2E	Fairbanks	302897	40
50	RAM 58D	19	T3N	R2E	Fairbanks	302898	40
51	RAM 58E	19	T3N	R2E	Fairbanks	302899	40
52	RAM 58F	20	T3N	R2E	Fairbanks	302900	40
53	RAM 58G	20	T3N	R2E	Fairbanks	302901	40
54	RAM 58H	20	T3N	R2E	Fairbanks	302902	40
55	RAM 58I	18	T3N	R2E	Fairbanks	302903	40
56	RAM 58J	20	T3N	R2E	Fairbanks	302904	40
57	RAM 58K	20	T3N	R2E	Fairbanks	302905	40
58	RAM 58L	20	T3N	R2E	Fairbanks	302906	40
59	VD 1	20	T3N	R2E	Fairbanks	302907	40
60	VD2	20	T3N	R2E	Fairbanks	302908	40
61	GOOSE 1	20	T3N	R2E	Fairbanks	342763	40
62	GOOSE 2	20	T3N	R2E	Fairbanks	342764	40
63	GOOSE 3	20	T3N	R2E	Fairbanks	342765	40
64	GOOSE 4	20	T3N	R2E	Fairbanks	342766	40
65	GOOSE 5	21	T3N	R2E	Fairbanks	342767	40
66	GOOSE 6	21	T3N	R2E	Fairbanks	342768	40
67	MOOSE FRACTION 1	23	T3N	R2E	Fairbanks	344966	40
68	MOOSE FRACTION 2	23	T3N	R2E	Fairbanks	344967	40
69	MOOSE FRACTION 3	23	T3N	R2E	Fairbanks	344968	40
70	MOOSE FRACTION 4	23	T3N	R2E	Fairbanks	344969	40
71	OAKIE FRACTION 1	30	T3N	R2E	Fairbanks	342791	40
72	OAKIE FRACTION 2	30	T3N	R2E	Fairbanks	342792	40
73	OAKIE FRACTION 3	30	T3N	R2E	Fairbanks	342793	40
74	OAKIE FRACTION 4	25	T3N	R1E	Fairbanks	342794	40
75	OAKIE FRACTION 5	19	T3N	R2E	Fairbanks	348966	40
76	OAKIE FRACTION 6	19	T3N	R2E	Fairbanks	348967	40
77	OAKIE FRACTION 7	19	T3N	R2E	Fairbanks	348968	40
78	OAKIE FRACTION 8	19	T3N	R2E	Fairbanks	348969	40

No.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
79	OAKIE FRACTION 9	19	T3N	R2E	Fairbanks	348970	40
80	OLD GOLD 1	21	T3N	R2E	Fairbanks	322801	40
81	OLD GOLD FRACTION 2	21	T3N	R2E	Fairbanks	322802	40
82	OLD GOLD FRACTION 3	21	T3N	R2E	Fairbanks	322803	40
83	OLD GOLD 4	21	T3N	R2E	Fairbanks	322804	40
84	OLD GOLD FRACTION 5	21	T3N	R2E	Fairbanks	322805	40
85	OLD GOLD FRACTION 6	21	T3N	R2E	Fairbanks	322806	40
86	OLD GOLD FRACTION 7	21	T3N	R2E	Fairbanks	322807	40
87	OLD GOLD FRACTION 8	21	T3N	R2E	Fairbanks	322808	40
88	OLD GOLD FRACTION 9	23	T3N	R2E	Fairbanks	322809	40
89	OLD GOLD FRACTION 11A	22	T3N	R2E	Fairbanks	336671	40
90	OLD GOLD FRACTION 13	22	T3N	R2E	Fairbanks	336672	40
91	OLD GOLD FRACTION 14	22	T3N	R2E	Fairbanks	336673	40
92	OLD GOLD FRACTION 15	23	T3N	R2E	Fairbanks	336674	40
93	OLD GOLD FRACTION 16	22	T3N	R2E	Fairbanks	336675	40
94	OLD GOLD FRACTION 17	22	T3N	R2E	Fairbanks	336676	40
95	OLD GOLD FRACTION 18	22	T3N	R2E	Fairbanks	336677	40
96	OLD GOLD 19	23	T3N	R2E	Fairbanks	336666	40
97	OLD GOLD FRACTION 20	23	T3N	R1E	Fairbanks	336678	40
98	OLD GOLD FRACTION 21	23	T3N	R1E	Fairbanks	336679	40
99	OLD GOLD FRACTION 22	23	T3N	R1E	Fairbanks	336680	40
100	OLD GOLD FRACTION 23	22	T3N	R1E	Fairbanks	336681	40
101	OLD GOLD FRACTION 24	22	T3N	R1E	Fairbanks	336682	40
102	OLD GOLD FRACTION 25	22	T3N	R1E	Fairbanks	336683	40
103	OLD GOLD FRACTION 26	23	T3N	R1E	Fairbanks	336667	40
104	OLD GOLD FRACTION 34	22	T3N	R1E	Fairbanks	336684	40
105	OLD GOLD FRACTION 35	22	T3N	R1E	Fairbanks	336685	40
106	OLD GOLD FRACTION 36	28	T3N	R1E	Fairbanks	336686	40
107	OLD GOLD FRACTION 37	27	T3N	R1E	Fairbanks	336687	40
108	OLD GOLD FRACTION 38	27	T3N	R1E	Fairbanks	336688	40
109	OLD GOLD FRACTION 39	27	T3N	R1E	Fairbanks	336689	40
110	OLD GOLD FRACTION 40	27	T3N	R1E	Fairbanks	336690	40
111	OLD GOLD FRACTION 41	27	T3N	R1E	Fairbanks	336691	40
112	OLD GOLD FRACTION 42	28	T3N	R1E	Fairbanks	336692	40
113	OLD GOLD FRACTION 43	27	T3N	R1E	Fairbanks	336668	40
114	OLD GOLD FRACTION 44	27	T3N	R1E	Fairbanks	336669	40
115	OLD GOLD FRACTION 45	27	T3N	R1E	Fairbanks	336670	40
116	RUBY 1	25	T3N	R1E	Fairbanks	354215	40
117	RUBY 2 FRACTION	25	T3N	R1E	Fairbanks	354216	40
118	RUBY 3 FRACTION	25	T3N	R1E	Fairbanks	354217	40
119	RUBY 4 FRACTION	25	T3N	R1E	Fairbanks	354218	40

No.	Claim Name	Section	Township	Range	Meridian	ADL #	Acres
120	WW FRACTION 1	20	T3N	R2E	Fairbanks	342778	40
121	WW FRACTION 2	20	T3N	R2E	Fairbanks	342779	40
122	WW FRACTION 3	20	T3N	R2E	Fairbanks	342780	40
123	WW FRACTION 4	20	T3N	R2E	Fairbanks	342781	40
124	WW FRACTION 5	20	T3N	R2E	Fairbanks	342782	40
125	WW FRACTION 6	20	T3N	R2E	Fairbanks	342783	40
126	WW 7	29	T3N	R2E	Fairbanks	342784	40
127	WW FRACTION 8	29	T3N	R2E	Fairbanks	342785	40
128	WW FRACTION 9	29	T3N	R2E	Fairbanks	342786	40
129	WW FRACTION 10	29	T3N	R2E	Fairbanks	342787	40
130	WW FRACTION 11	19	T3N	R2E	Fairbanks	342788	40
131	WW FRACTION 12	30	T3N	R2E	Fairbanks	342789	40
132	WW FRACTION 13	30	T3N	R2E	Fairbanks	342790	40
133	WW FRACTION 14	30	T3N	R2E	Fairbanks	506514	40

KEYSTONE MINES INC. PROPERTY  
UNPATENTED FEDERAL MINING CLAIMS  
All Claims Located in the Fairbanks Recording District, Alaska

No.	Claim Name	Section	Township	Range	Meridian	BLM F#	Type	Acres
1	Alabama	30	T3N	R2E	Fairbanks	F45603	Lode	20
2	Disc. on Bedrock Cr.	24,25	T3N	R1E	Fairbanks	F45604	Placer	20
3	July #1	30	T3N	R2E	Fairbanks	F45605	Lode	20
4	July #2	30	T3N	R2E	Fairbanks	F45606	Lode	20
5	July #3	30	T3N	R2E	Fairbanks	F45607	Lode	20
6	July Frac. #4	30	T3N	R2E	Fairbanks	F45608	Lode	20
7	Liberty Lode #1	30	T3N	R2E	Fairbanks	F45609	Lode	20
8	Liberty Lode #2	30	T3N	R2E	Fairbanks	F45610	Lode	20
9	Liberty Lode #3	30	T3N	R2E	Fairbanks	F45611	Lode	20
10	Millsite Fraction	30	T3N	R2E	Fairbanks	F45612	Lode	20
11	New York Mineral	24,25	T3N	R1E	Fairbanks	F45613	Lode	20
12	No Name	30	T3N	R2E	Fairbanks	F45614	Lode	20
13	#1 Above Disc. on Bedrock Cr	30	T3N	R2E	Fairbanks	F45615	Placer	20
14	Snow Drift	19	T3N	R2E	Fairbanks	F45616	Lode	20
15	Texas	19	T3N	R2E	Fairbanks	F45617	Lode	20
16	Wyoming Quartz	30	T3N	R2E	Fairbanks	F45618	Lode	20
17	Wyoming Frac.	25	T3N	R1E	Fairbanks	F45619	Lode	20
18	Button Weezer	27,28	T3N	R2E	Fairbanks	F45620	Lode	20
19	Caribou Frac.	21,28	T3N	R2E	Fairbanks	F45621	Lode	20

No.	Claim Name	Section	Township	Range	Meridian	BLM F#	Type	Acres
20	Caribou #1	21,22	T3N	R2E	Fairbanks	F45622	Lode	20
21	Caribou #2	21,22	T3N	R2E	Fairbanks	F45623	Lode	20
22	Fern	28	T3N	R2E	Fairbanks	F45624	Lode	20
23	Free Gold	21	T3N	R2E	Fairbanks	F45625	Lode	20
24	Henry Ford #1	28	T3N	R2E	Fairbanks	F45626	Lode	20
25	Henry Ford #2	21	T3N	R2E	Fairbanks	F45627	Lode	20
26	Henry Ford #3	28	T3N	R2E	Fairbanks	F45628	Lode	20
27	Henry Ford #4	28	T3N	R2E	Fairbanks	F45629	Lode	20
28	Laughing Water	21	T3N	R2E	Fairbanks	F45630	Lode	20
29	Little Jim	28	T3N	R2E	Fairbanks	F45631	Lode	20
30	Minnie Ha Ha	21	T3N	R2E	Fairbanks	F45632	Lode	20
31	Pennsylvania	21	T3N	R2E	Fairbanks	F45633	Lode	20
32	Ruth Frac.	21	T3N	R2E	Fairbanks	F45634	Lode	20
33	Speculator	28	T3N	R2E	Fairbanks	F45635	Lode	20
34	Wolf Lode	20,21	T3N	R2E	Fairbanks	F45636	Lode	20
35	Bonus	22	T3N	R2E	Fairbanks	F45637	Lode	20
36	Don	15,22	T3N	R2E	Fairbanks	F45638	Lode	20
37	Durando	22	T3N	R2E	Fairbanks	F45639	Lode	20
38	Edythe	15,22	T3N	R2E	Fairbanks	F45640	Lode	20
39	Flying Joe	22	T3N	R2E	Fairbanks	F45641	Lode	20
40	Gold Point	22	T3N	R2E	Fairbanks	F45642	Lode	20
41	Helen S.	23	T3N	R2E	Fairbanks	F45643	Lode	20
42	Hi Yu	23	T3N	R2E	Fairbanks	F45644	Lode	20
43	Hi Yu Millsite	23	T3N	R2E	Fairbanks	F45645	Lode	20
44	Homestake	23	T3N	R2E	Fairbanks	F45646	Lode	20
45	Inez	22	T3N	R2E	Fairbanks	F45647	Lode	20
46	Insurgent #1	23	T3N	R2E	Fairbanks	F45648	Lode	20
47	Insurgent #2	23	T3N	R2E	Fairbanks	F45649	Lode	20
48	Julia	15, 22	T3N	R2E	Fairbanks	F45650	Lode	20
49	Jumbo	22	T3N	R2E	Fairbanks	F45651	Lode	20
50	Laura	22	T3N	R2E	Fairbanks	F45652	Lode	20
51	Lillian	23	T3N	R2E	Fairbanks	F45653	Lode	20
52	Long Shin	23	T3N	R2E	Fairbanks	F45654	Lode	20
53	Mame	14,15	T3N	R2E	Fairbanks	F45655	Lode	20
54	Mayflower	22,27	T3N	R2E	Fairbanks	F45656	Lode	20
55	Mohawk	22	T3N	R2E	Fairbanks	F45657	Lode	20
56	#1 Moose Gulch	23	T3N	R2E	Fairbanks	F45658	Placer	20
57	#2 Moose Gulch	23	T3N	R2E	Fairbanks	F45659	Placer	20
58	N.R.A.	15	T3N	R2E	Fairbanks	F45660	Lode	20

No.	Claim Name	Section	Township	Range	Meridian	BLM F#	Type	Acres
59	Nars	22,23	T3N	R2E	Fairbanks	F45661	Lode	20
60	O'Farrel Frac.	23	T3N	R2E	Fairbanks	F45662	Lode	20
61	Ohio	22	T3N	R2E	Fairbanks	F45663	Lode	20
62	Rand	23	T3N	R2E	Fairbanks	F45664	Lode	20
63	Red Top	22	T3N	R2E	Fairbanks	F45665	Lode	20
64	Rob	23	T3N	R2E	Fairbanks	F45666	Lode	20
65	Royalty	15	T3N	R2E	Fairbanks	F45667	Lode	20
66	Santa Clara Frac.	23	T3N	R2E	Fairbanks	F45668	Lode	20
67	Summit	22,23	T3N	R2E	Fairbanks	F45669	Lode	20
68	Sunnyside	22	T3N	R2E	Fairbanks	F45670	Lode	20
69	Teddy R.	23	T3N	R2E	Fairbanks	F45671	Lode	20
70	Yankee Doodle	23	T3N	R2E	Fairbanks	F45672	Lode	20
71	Insurgent #3	14,23	T3N	R2E	Fairbanks	F45673	Lode	20
72	Roy	23	T3N	R2E	Fairbanks	F45674	Lode	20

CHRISTINA MINING COMPANY, LLC PROPERTY  
FEDERAL CLAIMS LIST  
All claims located in the Fairbanks Recording District, Alaska

No.	Claim Name	Section	Township	Range	Meridian	BLM #
1	Christina	20,	T3N	R2E	Fairbanks	F58503
2	Fraction #1	20, 21	T3N	R2E	Fairbanks	F58504
3	Fraction #2	20, 21	T3N	R2E	Fairbanks	F58505
4	Fraction #3	20	T3N	R2E	Fairbanks	F58506
5	Carrie A	20	T3N	R2E	Fairbanks	F58507
6	Carrie A #1	20	T3N	R2E	Fairbanks	F58508
7	Carrie A #2	20	T3N	R2E	Fairbanks	F58509
8	Grace E	20	T3N	R2E	Fairbanks	F58510
9	Grace E #1	20	T3N	R2E	Fairbanks	F58511
10	Grace E #2	20	T3N	R2E	Fairbanks	F58512
11	Grace Eva #1	20	T3N	R2E	Fairbanks	F58513
12	Grace Eva #2	20	T3N	R2E	Fairbanks	F58514
13	Grace Eva #3	30	T3N	R2E	Fairbanks	F58515
14	Wolf Lode #1	20, 21	T3N	R2E	Fairbanks	F58516
15	Wolf Lode #2	20, 21	T3N	R2E	Fairbanks	F58517
16	Fairbanks #1	21	T3N	R2E	Fairbanks	F58518
17	Fairbanks #2	21	T3N	R2E	Fairbanks	F58519
18	Fairbanks #3	21	T3N	R2E	Fairbanks	F58520

ROGER & DELOIS BURGGRAF PROPERTY  
 PATENTED MINING CLAIM LIST  
 All claims located in the Fairbanks Recording District, Alaska

No.	Claim Name	Section	Township	Range	Meridian	Pat #
1	Chatham #2 Lode	20, 29	T3N	R2E	Fairbanks	1713
2	Fey Lode	20, 29	T3N	R2E	Fairbanks	1713
3	Colby #2 Lode	29	T3N	R2E	Fairbanks	1713
4	Colby Lode	28, 29	T3N	R2E	Fairbanks	1713
5	Fay Claim #2 Lode	20, 28, 29	T3N	R2E	Fairbanks	1713
6	I.B. Claim	28	T3N	R2E	Fairbanks	1676
7	Margery Daw Claim	28, 29	T3N	R2E	Fairbanks	1676

KEYSTONE MINES INC. PROPERTY  
 PATENTED FEDERAL MINING CLAIMS  
 All Claims Located in the Fairbanks Recording District, Alaska

No.	Claim Name	Section	Township	Range	Meridian	Pat. #
1	Freegold	19	T3N	R2E	Fairbanks	MS821
2	Colorado	19,30	T3N	R2E	Fairbanks	MS1639
3	California	19,30	T3N	R2E	Fairbanks	MS1639
4	Pauper's Dream	30	T3N	R2E	Fairbanks	MS1639
5	Idaho	30	T3N	R2E	Fairbanks	MS1639
6	Keystone	20,21	T3N	R2E	Fairbanks	MS1607
7	Kawalita	20,21	T3N	R2E	Fairbanks	MS1607
8	Fairbanks	21	T3N	R2E	Fairbanks	MS1607
9	Hope	21	T3N	R2E	Fairbanks	MS1607
10	Willie	21	T3N	R2E	Fairbanks	MS2198
11	Marigold	21,28	T3N	R2E	Fairbanks	MS2198
12	Pioneer	21	T3N	R2E	Fairbanks	MS2198
13	Henry Ford	21,28	T3N	R2E	Fairbanks	MS2198
14	Henry Clay	21	T3N	R2E	Fairbanks	MS2198

FREGOLD RECOVERY INC. PROPERTY  
 PATENTED FEDERAL MINING CLAIMS  
 All Claims Located in the Fairbanks Recording District, Alaska

No.	Claim Name	Patent #
1	No. 9 Number Nine Above Discovery On Cleary Creek	1687
2	Bench Claim No. 9 Above Discovery, Left Limit Cleary Creek	1671
3	No. 8 Above Discovery On Cleary Creek	1670
4	No. 7 Above Discovery On Cleary Creek	1670
5	No. 6 Above Discovery Cleary Creek	1670
6	Side Claim No. 8, Above Left Limit On Cleary Creek, Placer	807
7	Side Claim No. 8, Above Left Limit, Cleary Creek, Placer	524
8	Side Claim No. 8, Above Left Limit, Cleary Creek	1968
9	No. 7 Above Discovery, 1st Tier, Left Limit Placer	1968
10	Placer Mining Claim No. 6, 1st T.LL. Above Discovery on Cleary Creek Placer	1972
11	Bench No. 5, Above Discovery On Left Limit Cleary Creek	367
12	No. 5 Above Discovery On Cleary Creek	365
13	No. 4 Above Discovery On Cleary Creek	365
14	No. 5 Above Discovery L.L. First Tier, Placer	836
15	The Lower Divided One Half of the Upper One Half of Number 4 Above Left Limit Bench Placer	1793
16	The Lower Half of Number 4 Above Discovery Creek Claim Placer	1793
17	Claim No. Three (3) Above Discovery On Cleary Creek Placer	1793
18	Fraction No. Three Above Discovery First Tier Left Limit Placer	1793
19	No. 3 Above Discovery, First Tier, Left Limit on Cleary Creek, Placer	1919
20	Discovery Placer	805
21	No. 1 Above Discovery	805
22	No. 2 Above Discovery	805
23	No. 2 Side Claim, Left Limit, Cleary Creek, Placer	1798
24	No. Two Above Fraction Placer	1798
25	No. 1 One Above Discovery on the Left Limit of Cleary Creek, Placer	1605
26	Discovery Bench Left Limit Cleary Creek, Placer	1926
27	Side Claim on Right Limit of Discovery Cleary Creek, Placer	1794
28	Discovery Claim on Wolf Creek Placer	1901
29	Bench Claim Right Limit Opposite Discovery on Wolf Placer	1920

**APPENDIX 2 – DRILL HOLE COLLARS  
THOSE USED IN RESOURCE STUDY HIGHLIGHTED**

<b>HOLE</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>ELEVATION</b>	<b>HOLE LENGTH (m)</b>
CFR9801	494295.00	7218914.00	660.00	92.96
CFR9802	494148.00	7219061.00	661.00	92.96
CFR9803	494057.00	7219180.00	668.00	92.96
CFR9804	493951.00	7218434.00	625.00	92.96
CFR9805	493958.00	7218628.00	665.00	92.96
CFR9806	493931.00	7218818.00	690.00	92.96
CHD0001	479555.00	7215398.00	388.60	304.80
CHD0301	479561.00	7215450.00	388.60	137.01
CHD0302	479561.00	7215450.00	388.60	137.46
CHD0303	479561.00	7215413.00	388.60	137.16
CHD0401	479712.00	7215615.00	428.55	213.36
CHD0402	479712.00	7215614.00	428.55	240.64
CHD0403	479757.00	7215615.00	438.61	219.46
CHD0404	479757.00	7215614.00	438.61	247.50
CHD0405	479803.00	7215605.00	448.37	299.32
CHD0406	479803.00	7215604.00	448.37	291.70
CHD9701	479426.00	7215785.00	362.10	70.41
CHD9702	479426.00	7215785.00	362.10	140.82
CHD9703	479585.00	7215715.00	395.80	134.11
CHD9704	479585.00	7215715.00	395.80	233.17
CHD9801	479574.00	7215671.00	393.10	247.50
CHD9802	479533.00	7215790.00	373.70	168.55
CHM9601	480195.00	7215589.00	468.00	150.88
CHM9602	480195.00	7215589.00	468.00	150.88
CHM9603	479425.00	7215776.00	360.00	10.67
CHM9604	479425.00	7215776.00	360.00	27.43
CHM9605	479442.00	7215792.00	360.00	39.62
CHM9606	479611.00	7215649.00	403.00	150.88
CHM9607	479611.00	7215649.00	403.00	86.87
CHR9801	480382.00	7215941.00	345.00	141.73
CHR9802	479650.00	7216062.00	374.00	143.26
CHR9803	479725.00	7215959.00	409.00	164.59
CHR9804	479934.00	7216054.00	407.00	173.74
CHR9805	480028.00	7216252.00	357.00	141.73
CHR9806	479952.00	7216416.00	337.00	169.16
CKR9801	477475.00	7214652.00	526.00	92.96
CKR9802	477356.00	7214689.00	497.00	92.96
CKR9803	477284.00	7214769.00	478.00	97.54

CLR9801	492149.00	7218657.00	601.00	150.88
CLR9802	491897.00	7219195.00	501.00	140.21
CLR9803	491283.00	7219090.00	545.00	164.59
CRR9801	491245.00	7217802.00	462.00	150.88
CRR9802	489922.00	7217560.00	416.00	152.40
CRR9803	487562.00	7216966.00	565.00	150.88
CRR9804	487105.00	7217321.00	589.00	146.30
GCD9701	484097.00	7216311.00	650.00	210.31
GCR9701	483721.00	7216917.00	529.00	124.36
GCR9702	483403.00	7216690.00	484.00	155.45
GCR9703	483576.00	7216641.00	520.00	155.45
GCR9704	483735.00	7216698.00	543.00	155.45
GCR9705	483257.00	7216807.00	432.00	148.74
GCR9706	483379.00	7216820.00	434.00	143.87
GCR9707	483126.00	7216864.00	408.00	155.45
GCR9708	482952.00	7216912.00	389.00	153.31
GCR9709	482806.00	7216924.00	380.00	32.61
GCR9710	482590.00	7217044.00	355.00	155.45
GCR9711	483729.00	7217097.00	541.00	155.45
GCR9801	483746.00	7216841.00	531.00	152.40
GCR9802	483715.00	7216992.00	533.00	161.54
GCR9803	484270.00	7216580.00	675.00	115.82
GCR9804	484258.00	7216807.00	665.00	92.96
GCR9805	484237.00	7216713.00	663.00	106.68
GCR9806	483255.00	7216809.00	432.00	137.16
GCR9807	483256.00	7216901.00	419.00	78.33
GCR9808	482807.00	7217018.00	371.00	92.96
GCR9809	482820.00	7216835.00	401.00	155.45
GCR9810	483552.00	7216968.00	482.00	152.40
GSCH1201	482568.00	7215846.00	587.36	224.03
GSCH1202	482588.00	7215780.00	603.21	227.99
GSCH1203	482550.00	7215804.00	597.42	246.89
GSCH1204	482489.00	7215827.00	602.29	213.36
GSCH1205	482474.00	7215776.00	608.39	263.20
GSCH1206	482516.00	7215754.00	606.56	252.99
GSCH1207	482563.00	7215730.00	617.84	258.47
GSCL1201	479654.00	7215649.00	426.42	246.89
GSCL1202	479607.00	7215649.00	416.06	270.06
GSCL1203	479606.00	7215700.00	406.91	232.87
GSCL1204a	479536.00	7215712.00	388.02	26.37
GSCL1204b	479536.00	7215712.00	388.02	245.98
GSCL1205	479538.00	7215642.00	396.55	287.43

GSCL1206	479589.00	7215766.00	399.90	234.39
GSCL1207	479542.00	7215767.00	375.21	287.73
GSCL1208	479499.00	7215757.00	368.20	216.72
GSCL1209	479476.00	7215704.00	355.40	286.06
GSCL1210	479477.00	7215655.00	369.12	327.36
GSCL1211	479496.00	7215334.00	374.30	282.86
GSCL1212	479494.00	7215394.00	353.27	139.60
GSCL1213	479492.00	7215396.00	371.25	275.54
GSCL1214	479494.00	7215501.00	381.00	251.46
GSCL1215	479494.00	7215500.00	380.40	244.76
GSCL1216	479413.00	7215597.00	359.97	250.55
GSCL1217	479416.00	7215652.00	356.93	42.37
GSCL1218	479416.00	7215652.00	356.93	303.58
GSCL1219	479419.00	7215702.00	356.93	247.96
GSCL1220	479486.00	7215573.00	378.26	257.71
GSCL1221	479557.00	7215550.00	402.34	244.45
GSDC0801	479914.96	7215700.19	470.19	152.71
GSDC0802	479915.94	7215657.17	474.30	61.30
GSDC0803	479914.94	7215627.97	474.98	91.70
GSDC0804	479914.23	7215592.42	483.57	122.20
GSDC0805	479914.14	7215565.57	487.53	228.60
GSDC0806	480295.26	7215532.68	473.95	32.61
GSDC0807	480294.45	7215531.01	474.22	60.05
GSDC0808	480266.93	7215545.02	474.49	66.10
GSDC0809	480267.74	7215546.46	474.56	73.20
GSDC0810	480240.27	7215560.80	474.54	73.50
GSDC0811	480239.51	7215559.47	474.57	64.31
GSDC0812	480212.73	7215572.91	474.46	65.53
GSDC0813	480213.64	7215574.57	474.35	73.15
GSDC0814	480191.64	7215591.55	474.14	59.74
GSDC0815	480190.78	7215589.77	474.26	66.90
GSDC0816	479945.77	7215658.52	478.52	99.70
GSDC0817	479945.00	7215627.87	481.39	117.70
GSDC0818	479946.20	7215597.22	486.94	233.60
GSDC0819	479946.24	7215567.02	491.98	232.00
GSDC0820	479974.19	7215658.78	481.41	163.20
GSDC0821	479975.15	7215625.89	485.20	123.10
GSDC0822	479975.78	7215596.91	490.12	234.70
GSDC0823	479976.40	7215567.93	495.05	229.20
GSDC0824	479005.55	7215356.66	445.89	157.60
GSDC0825	479006.07	7215355.99	445.90	106.68
GSDC0826	479006.48	7215355.54	445.94	109.73

GSDC1127	478952.06	7215065.86	469.25	276.15
GSDC1128	478952.27	7215129.72	459.63	197.82
GSDC1129	479000.38	7215098.84	471.17	182.58
GSDC1130	478992.48	7215046.96	480.79	206.96
GSDC1131	479100.39	7215082.98	481.27	194.16
GSDC1132	479006.00	7215195.00	456.60	452.02
GSDC1133	479149.00	7215079.00	483.11	210.01
GSDC1134	479105.00	7215285.00	452.02	54.10
GSDC1135	479151.00	7215127.00	474.58	190.20
GSDC1136	479149.00	7215272.00	449.28	76.96
GSDC1137	479153.00	7215178.00	463.30	196.29
GSDC1138	479150.00	7215227.00	457.82	255.73
GSDC1139	479297.00	7215474.00	388.62	198.12
GSDC1140	479312.00	7215353.00	401.73	57.61
GSDC1141	479312.00	7215353.00	401.73	198.12
GSDC1142	479305.00	7215406.00	393.81	196.60
GSDC1143	479245.00	7215406.00	403.56	200.26
GSDC1144	479552.00	7215501.00	377.96	196.90
GSDC1145	479313.00	7215355.00	401.73	199.80
GSDC1146	479494.00	7215452.00	395.64	198.43
GSDC1147	479052.00	7215100.00	472.14	516.19
GSDC1148	478919.00	7214987.00	483.11	474.88
GSDC1149	479094.00	7215024.00	487.69	403.26
GSDC1150	478977.00	7214997.00	449.59	257.86
GSDC1151	479049.00	7214991.00	488.91	287.73
GSDC1152	478904.00	7215250.00	431.91	101.65
GSDC1153	478904.00	7215250.00	431.91	99.37
GSDC1154	478904.00	7215250.00	431.91	133.50
GSDC1155	479295.00	7215878.00	333.76	164.29
GSDC1156	479939.00	7215686.00	464.83	199.64
GSDC1157	479943.00	7215729.00	462.08	201.17
GSDC1158	480004.00	7215656.00	470.01	238.66
GSDC1159	480004.00	7215656.00	470.01	275.24
GSDC1160	480005.00	7215693.00	465.13	240.19
GSDC1161	480097.00	7215648.00	472.14	176.18
GSDC1162	480148.00	7215552.00	483.11	198.73
GSDC1163	479718.00	7215641.00	437.09	123.75
GSDC1164	479757.00	7215636.00	445.93	135.33
GSDC1165	479806.00	7215630.00	452.02	297.18
GSDC1166	479686.00	7215489.00	419.11	244.76
GSDC1167	479718.00	7215667.00	434.35	210.01
GSDC1168	479754.00	7215666.00	452.33	231.96

GSDC1169	479807.00	7215667.00	450.80	255.12
GSDC1170	479805.00	7215704.00	448.98	74.07
GSDC1171	479753.00	7215696.00	438.61	219.46
GSDC1172	479719.00	7215694.00	424.90	81.84
GSDC1173	479663.00	7215703.00	427.03	106.99
GSDC1174	482343.00	7215992.00	579.74	264.57
GSDC1175	482327.00	7215962.00	582.18	249.48
GSDC1176	482324.00	7215926.00	591.62	224.34
GSDC1177	482521.00	7215862.00	573.64	256.34
GSDC1178	482608.00	7215828.00	576.08	239.27
GSDL1201	479250.00	7215464.00	402.34	322.63
GSDL1202	479300.00	7215532.00	384.05	251.01
GSDL1203	479388.00	7215398.00	362.41	358.91
GSDL1204	479390.00	7215397.00	361.50	282.71
GSDL1205	479369.00	7215452.00	355.71	260.61
GSDL1206	479202.00	7215381.00	420.00	502.01
GSDL1207	479348.00	7215488.00	357.84	236.22
GSDL1208	479346.00	7215489.00	354.79	210.31
GSDL1209	479202.00	7215380.00	420.00	231.04
GSDL1210	479322.00	7215293.00	413.01	305.72
GSDL1211	479221.00	7215290.00	439.53	504.45
GSDL1212	479324.00	7215293.00	413.01	311.81
GSDL1213	479097.00	7215254.00	466.04	547.28
GSDL1214	479196.00	7215437.00	422.15	273.71
GSDL1215	479213.00	7215318.00	439.53	545.29
GSDL1216	479324.00	7215296.00	413.92	389.23
GSDL1217	479323.00	7215295.00	413.92	330.10
GSDL1218	479046.00	7215137.00	470.01	535.54
GSDL1219	478856.00	7215125.00	445.32	601.99
GSDL1220	478935.00	7215167.00	454.46	458.88
GSDL1221	478880.00	7215017.00	456.60	210.31
GSDL1222	478880.00	7215017.00	456.60	558.25
GSDL1223	478821.00	7214948.00	441.97	535.84
GSDL1224	479148.00	7215176.00	459.34	609.61
GSDL1225	479295.00	7215588.00	370.03	126.80
GSDL1226	479248.00	7215587.00	380.09	213.36
GSR9201	484682.00	7216320.00	634.00	88.39
GSR9202	484681.00	7216315.00	634.00	115.82
GSR9203	484803.00	7216320.00	619.00	59.44
GSR9204	485139.00	7216320.00	584.00	89.92
GSR9205	485199.00	7216351.00	573.00	92.96
GSR9206	485162.00	7216533.00	558.00	71.63

IAR9801	486187.00	7216219.00	509.00	201.17
IAR9802	485674.00	7217070.00	614.00	150.88
IAR9803	486242.00	7216999.00	619.00	150.88
IAR9804	486413.00	7216431.00	539.00	92.96
IAR9805	486540.00	7216328.00	506.00	102.11
NBR9601	478140.00	7213847.00	711.00	155.45
NBR9602	478140.00	7213847.00	711.00	123.44
NBR9603	477701.00	7213727.00	659.00	155.45
NBR9604	478179.00	7213995.00	680.00	123.44
NBR9605	478179.00	7213995.00	680.00	100.58
NBR9606	478179.00	7213995.00	680.00	118.87
NBR9607	478170.00	7214091.00	659.00	132.59
NBR9608	478170.00	7214091.00	659.00	89.92
NBR9609	478139.00	7214213.00	643.00	155.45
NBR9610	478139.00	7214213.00	643.00	100.58
NBR9611	478192.00	7214336.00	622.00	155.45
NBR9612	478192.00	7214336.00	622.00	100.58
NBR9613	478171.00	7214452.00	612.00	155.45
NBR9614	478171.00	7214452.00	612.00	96.01
NBR9615	478158.00	7214590.00	592.00	128.02
NBR9616	478158.00	7214590.00	592.00	91.44
NED9701	484252.00	7218320.00	650.00	214.27
RKR9801	483823.00	7214049.00	550.00	153.92
TKR9801	480520.00	7215721.00	356.00	92.96
TKR9802	480471.00	7215601.00	399.00	92.96
TKR9803	480371.00	7215481.00	452.00	92.96
TKR9804	480491.00	7215387.00	442.00	92.96
TKR9805	480492.00	7215297.00	454.00	92.96
TKR9806	480498.00	7215214.00	463.00	96.01
TKR9807	480556.00	7215648.00	366.00	130.15
TKR9808	481300.00	7215800.00	440.00	120.40
TKR9809	480982.00	7215637.00	376.00	101.50
TKR9810	480937.00	7215188.00	383.00	18.29
TKR9811	480697.00	7215274.00	398.00	124.05
TKR9812	480652.00	7215389.00	397.00	120.40
TKR9813	480995.00	7215180.00	400.00	120.40
TKR9814	480537.00	7215151.00	465.00	150.88
TLD0401	479227.00	7215362.00	420.00	164.60
TLD0402	479162.00	7215350.00	431.00	168.60
TLD0403	479100.00	7215336.00	441.00	164.90
TLD0404	479100.00	7215138.00	470.00	182.90
TLD0405	478930.00	7215174.00	445.00	137.20

TLD0406	478900.00	7214897.00	476.00	143.30
TLD0407	478750.00	7215160.00	399.00	131.10
TLD9801	479051.00	7215209.00	461.30	314.86
TLR9501	479053.00	7215273.00	447.00	126.49
TLR9502	479053.00	7215273.00	447.00	60.96
TLR9503	479053.00	7215273.00	447.00	91.44
TLR9504	479054.00	7215207.00	455.00	144.78
TLR9505	479054.00	7215207.00	455.00	106.68
TLR9506	479100.00	7215238.00	460.00	121.92
TLR9507	479099.00	7215208.00	459.00	79.25
TLR9508	478977.00	7215191.00	452.00	88.39
TLR9509	478977.00	7215192.00	451.00	114.30
TLR9510	478977.00	7215199.00	450.00	88.92
TLR9511	478979.00	7215235.00	446.00	33.53
TLR9512	478979.00	7215237.00	445.00	33.53
TLR9513	479110.00	7215177.00	460.00	100.58
TLR9514	479110.00	7215177.00	460.00	126.80
TLR9515	479110.00	7215177.00	460.00	112.78
TLR9516	479052.00	7215148.00	469.00	95.71
TLR9517	479040.00	7215042.00	481.00	77.72
TLR9518	479023.00	7214922.00	496.00	83.82
TLR9519	479020.00	7214796.00	515.00	138.68
TLR9520	479157.00	7215028.00	483.00	138.68
TLR9601	479272.00	7215144.00	450.00	82.91
TLR9602	479232.00	7215284.00	430.00	97.54
TLR9603	479168.00	7215344.00	430.00	77.72
TLR9604	478930.00	7215172.00	439.00	132.59
TLR9605	478930.00	7215172.00	439.00	102.11
TLR9606	478917.00	7215061.00	454.00	131.98
TLR9607	478917.00	7215061.00	454.00	124.97
TLR9608	478917.00	7215061.00	454.00	96.01
TLR9609	478997.00	7215155.00	460.00	182.88
TLR9610	479031.00	7215199.00	455.00	146.00
TLR9611	478733.00	7214788.00	434.00	6.10
TLR9612	478917.00	7215121.00	448.00	103.63
TLR9613	478822.00	7214948.00	441.00	155.45
TLR9614	478822.00	7214948.00	441.00	77.72
TLR9615	478834.00	7215177.00	415.00	91.44
TLR9616	478834.00	7215176.00	415.00	76.20
TLR9617	478839.00	7215186.00	415.00	100.58
TLR9618	478853.00	7215119.00	430.00	141.73
TLR9619	478853.00	7215118.00	430.00	100.58

TLR9620	478853.00	7215052.00	436.00	146.30
TLR9621	478853.00	7215051.00	436.00	74.68
TLR9622	478824.00	7215024.00	437.00	134.11
TLR9623	478824.00	7215024.00	437.00	108.20
TLR9624	478824.00	7215024.00	437.00	114.30
TLR9625	478902.00	7214912.00	474.00	155.45
TLR9626	478902.00	7214912.00	474.00	128.02
TMG9601	484828.00	7216798.00	622.00	96.01
TMG9602	484943.00	7216787.00	590.00	100.58
TMG9603	485137.00	7216803.00	565.00	91.44
TMG9604	485274.00	7216796.00	554.00	105.16
TMG9605	484828.00	7216646.00	625.00	137.16
TMG9606	484950.00	7216631.00	590.00	146.30
TMG9607	485114.00	7216636.00	541.00	128.02
TMG9608	485296.00	7216633.00	508.00	155.45
TMG9609	484828.00	7216493.00	628.00	137.16
TMG9610	484981.00	7216493.00	604.00	132.59
TMG9611	485133.00	7216493.00	570.00	155.45
TMG9612	485285.00	7216493.00	543.00	128.02
TMG9613	484828.00	7216341.00	622.00	141.73
TMG9614	484981.00	7216341.00	604.00	141.73
TMG9615	485133.00	7216341.00	579.00	155.45
TMG9616	485285.00	7216341.00	555.00	155.45
TMG9617	484981.00	7216188.00	585.00	155.45
TMG9618	485133.00	7216188.00	567.00	137.16
TMG9619	485285.00	7216188.00	546.00	155.45
WFR9801	480214.00	7216639.00	321.00	161.54
WFR9802	481292.00	7216985.00	506.00	92.96
WFR9803	481270.00	7217166.00	478.00	92.96
WFR9804	481279.00	7217076.00	492.00	92.96

**APPENDIX 3**  
**SEMIVARIOGRAMS FOR AU IN LOW GRADE STOCKWORK MINERALIZATION**  
**AND FOR HIGH GRADE INDICATOR VARIABLE IN SHEAR ZONES**

