



SILVER PEAK



Ministry of Energy, Mines & Petroleum Resources  
Mining & Minerals Division  
BC Geological Survey

Assessment Report  
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Assessment

TOTAL COST: 33,936.12

AUTHOR(S): J. T. Shearer, M.Sc., P.Geo.

SIGNATURE(S):

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

YEAR OF WORK: 2014

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5527167

PROPERTY NAME: Silver Peak

CLAIM NAME(S) (on which the work was done):

COMMODITIES SOUGHT: Ag

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: New Westminster

NTS/BCGS: 92H/6W (92H.033)

LATITUDE: 49 ° 18 ' " LONGITUDE: 121 ° 28 ' " (at centre of work)

OWNER(S):

1) Homegold Resources Ltd. 2)

MAILING ADDRESS:

Unit 5 - 2330 Tyner Street

Port Coquitlam, BC, V3C 2Z1

OPERATOR(S) [who paid for the work]:

1) Same as above 2)

MAILING ADDRESS:

Same as above

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Two main quartz vein systems, Eureka and Victoria, striking 053 deg dipping 75 to 80 deg. SE.

High values of silver were obtained from Upper Victoria drift

All veins are hosted by siliceous Eocene Conglomerate

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

Assessment Report 20491, 18235, 11057

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping			
Photo interpretation			
<b>GEOPHYSICAL (line-kilometres)</b>			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil			
Silt			
Rock			6,000 <sup>00</sup>
Other			
<b>DRILLING (total metres; number of holes, size)</b>			
Core	x. esize shawdrill	336761	18,900 <sup>00</sup>
Non-core			
<b>RELATED TECHNICAL</b>			
Sampling/assaying			7,000
Petrographic			
Mineralographic			
Metallurgic			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			6,000 <sup>00</sup>
Trench (metres)			
Underground dev. (metres)			
Other			
<b>TOTAL COST:</b>			33,936 <sup>112</sup>

**ASSESSMENT REPORT  
on the  
SILVER PEAK CLAIMS**

**SILVER PEAK 1-3 CLAIMS**

**Tenure #562920, 568280, 594082, 594083, 596117 & 336759-336761  
MINE 0700610, PERMIT MX-7-189  
EVENT #5527167**

**SILVER PEAK AREA, HOPE, B.C.  
NEW WESTMINSTER MINING DISTRICT, BRITISH COLUMBIA  
Longitude 121°28'W/Latitude 49°18'N  
NTS 92H/6W, 92H.033**

**Prepared for**

**Homegold Resources Ltd.  
Unit 5 – 2330 Tyner Street  
Port Coquitlam, BC V3C 2Z1  
Phone: 604-970-6402  
Fax: 604-944-6102**

**By**

**J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)**

**November 1, 2014**

**Fieldwork completed between October 25, 2013 and October 25, 2014**

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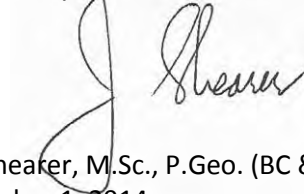
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## SUMMARY

- 1) The Silver Peak Claims cover the Eureka-Victoria Silver Mine, which has the distinction of being the first Crown-granted mineral property in British Columbia.
- 2) High grade silver veins were first discovered prior to 1868 and considerable ore was shipped up until 1874. Assays of remnant oxide material are recorded up to 658 oz/Ag per ton.
- 3) The property is located 6 km south of the Town of Hope. An old logging road extends to the workings. Presently, access has been reopened and the workings are accessible by 4x4 vehicle or ATV.
- 4) The mine workings on the Eureka Vein comprise several adits, interconnected raises and a glory hole. Underground work was completed in 1924, 1961, 1971 and 1981. An indicated resource based on this work (Spencer, 1982) for only the eastern portion of the Eureka vein was reported as Indicated: 38,000 tonnes grading 449.15 grams (13.10 oz/ton) per tonne silver and Inferred: 10,900 tonnes grading 449.15 grams per tonne silver, which equals 707,400 ounces of silver. This is a historical figure and not to 43-101 standards.
- 5) The area is underlain by chloritized Eocene conglomerate on the east side of a major regional structure called the Hope Fault. To the east and south is granodiorite of the Oligocene to Miocene Mount Barr batholith. To the west is the Cretaceous quartz diorite of the Spuzzum Pluton. On the north is the Eocene Silver Creek Stock composed of quartz diorite.
- 6) Cutting the conglomerate at an angle to both bedding and joint planes are a number of quartz porphyry dykes. The largest has an average width of 6 metres and follows the line of Glory Hole gulch where the Eureka Vein is thickest, varying between 12 and 20 feet thick for a length of 600 feet.
- 7) The silver deposits occur in well-defined branching fracture zones in the conglomerate which coincide with northeast trending joint planes and areas of brecciation.
- 8) Chief gangue minerals are siderite, limonite and quartz. The principle ore mineral is tetrahedrite (friebergite) and silver oxides.
- 9) The mineralized zones are called the Eureka, Victoria (formerly the Van Bremer) and Victoria West. At least two minor zones cross the Glory Hole gulch below the Eureka lode.
- 10) The Eureka vein has been traced across the summit of Silver Peak for about 668 metres striking  $053^{\circ}$ , varying in width from 1.5 to 6 metres and dipping steeply to the southeast ( $75^{\circ}$ - $80^{\circ}$ SE). The Eureka Zone has been defined over 1,000 feet (300m) down dip. The zone is open down dip along strike.
- 11) The Victoria Lode has been traced for about 625 metres on the southwestern slopes of Silver Peak. The depth to which the Victoria mineralization persists has not been defined by work to date nor has any resource been calculated for the Victoria.

- 12) Minor diamond drilling was attempted in 1983 without the benefit of survey control and was stopped by bad weather on October 31, 1983 (Krueckl, 1983). It is unlikely that the correct target depth was reached.
- 13) Surveying by S. Nickel and Associates has established the correct location of the 1878 survey of the Crowngrant Mineral Claims which have been misplotted on recent maps by an NAD83 plot translation and further work has defined the relative positions and elevations of the workings.
- 14) In 2011 and 2014, the road was further upgraded, the Upper Victoria drift was sampled and the Lower Adit was driven by company personnel and sampled.
- 15) A short Shaw diamond drill program was completed in 2014 supported by a portable XRF unit. Continuity of the high-grade silver values was confirmed with Lab assays up to 9,618 g/tonne Ag. Spot XRF values were up to 20,228 g/tonne (590 oz./ton).
- 16) Drill hole 14-03 was sawn in half and assayed at AGAT Labs. Weight average from 0 to 3.31m averages 3,496.91 g/tonne silver (102oz/ton Ag). Drill hole 14-01 also was split and sent to AGAT Labs and assayed a weighted average from 0-2.1m of 2,717.3g/tonne (108.44oz/ton). Numerous spot XRF assays using a hand held XRF Unit gave high silver values.
- 17) A program of detail geological mapping, transit surveying, bulk sampling and continued larger machine diamond drilling is recommended to investigate the Victoria vein at a depth and along strike in 2016.

Respectfully submitted,



J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)  
November 1, 2014

## INTRODUCTION

The author was commissioned by Homegold Resources Ltd. to complete a summary technical report on the Eureka-Victoria Mine property.

The historic Eureka-Victoria Silver Mine was acquired by Homegold Resources Ltd. on June 12, 1995 when the three 1869 Crown grants reverted to the Crown. The surrounding ground was staked on November 3, 2000 when previous located claims lapsed.

The property is located on the rugged western slopes of Silver Peak between the elevations of 4,500 and 6,000 feet. A partially overgrown and deactivated road leads to the mine site, which was re-opened during the 2009 program. The general mine area is clearly visible from the Trans Canada Highway at the Village of Silver Creek and Lake of the Woods.

The veins are characterized by silver-rich tetrahedrite (freibergite) in a siderite and quartz gangue. The upper parts of the veins, which were oxidized, produced spectacularly high silver values up into the hundreds of ounces silver per ton. The primary unaltered vein material appears to average around 10 to 25 oz/ton silver. Minor preliminary metallurgical testing has been done in 1982 for bench scale leaching. The mineralization is amenable to leaching and metallurgical optimization tests are ongoing.

Preliminary resource assessments (non NI 43-101 compliant) on the eastern portion of Eureka vein only, have been made (Spencer, 1982) suggesting the following inventory:

<b>EUREKA VEIN (from Spencer, 1982)</b>				
	<b>Sample Location</b>	<b>Length</b>	<b>Oz/Ag</b>	<b>Width</b>
Block A	Surface samples	200 ft	15.73	3.0 ft
	New Carbonate Level	214 ft	17.12	3.0 ft
	Average grade		16.31	3.0 ft
Block B	New Carbonate Level	214 ft	17.12	3.0 ft
	Eureka Raise	200 ft	7.78	3.0 ft
	Eureka Drift	280 ft	8.78	3.0 ft
	Average grade		11.06	3.0 ft
Block C	Eureka Drift	280 ft	8.78	3.0 ft
Total Indicated Reserves		42,000 @ 13.10 oz/ton Ag		
Inferred Inventory, Block D		12,000 @ 13.10 oz/ton Ag		
Total Indicated and Inferred		54,000 ton @ 13.10 oz/ton Ag		
		(note: for a total of 707,400 ounces of contained silver)		

The vein systems have **not** been tested at depth below the Eureka Drift. The lack of accurate survey data apparently has hampered the exploration efforts in the past. The "Lower Tunnel" apparently did not explore the main Eureka vein as was demonstrated by a 20 ft cross-cut driven in late 1981.

A phased exploration program is proposed to adequately test the Victoria vein systems at depth and along strike and also the lower-grade Eureka vein.



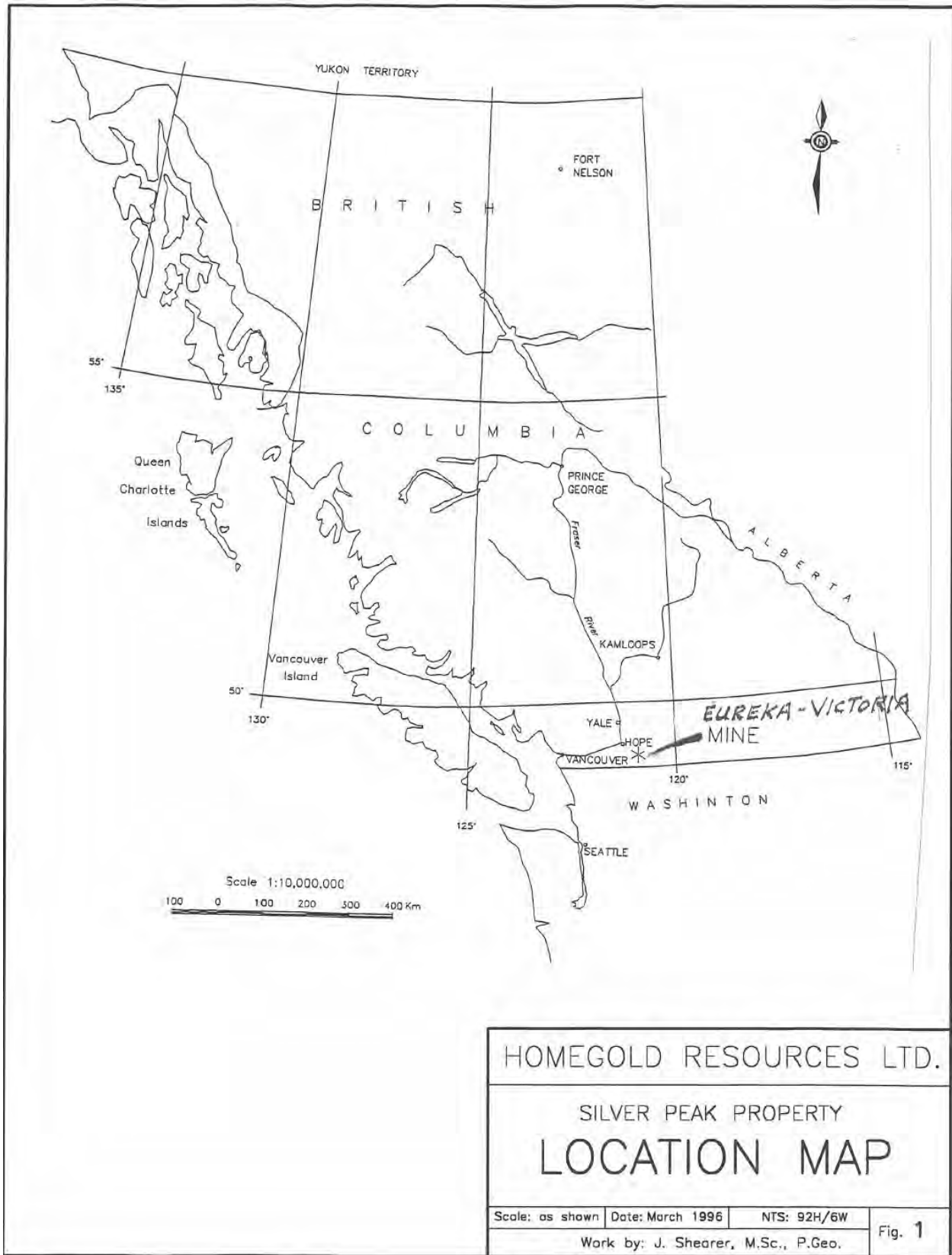
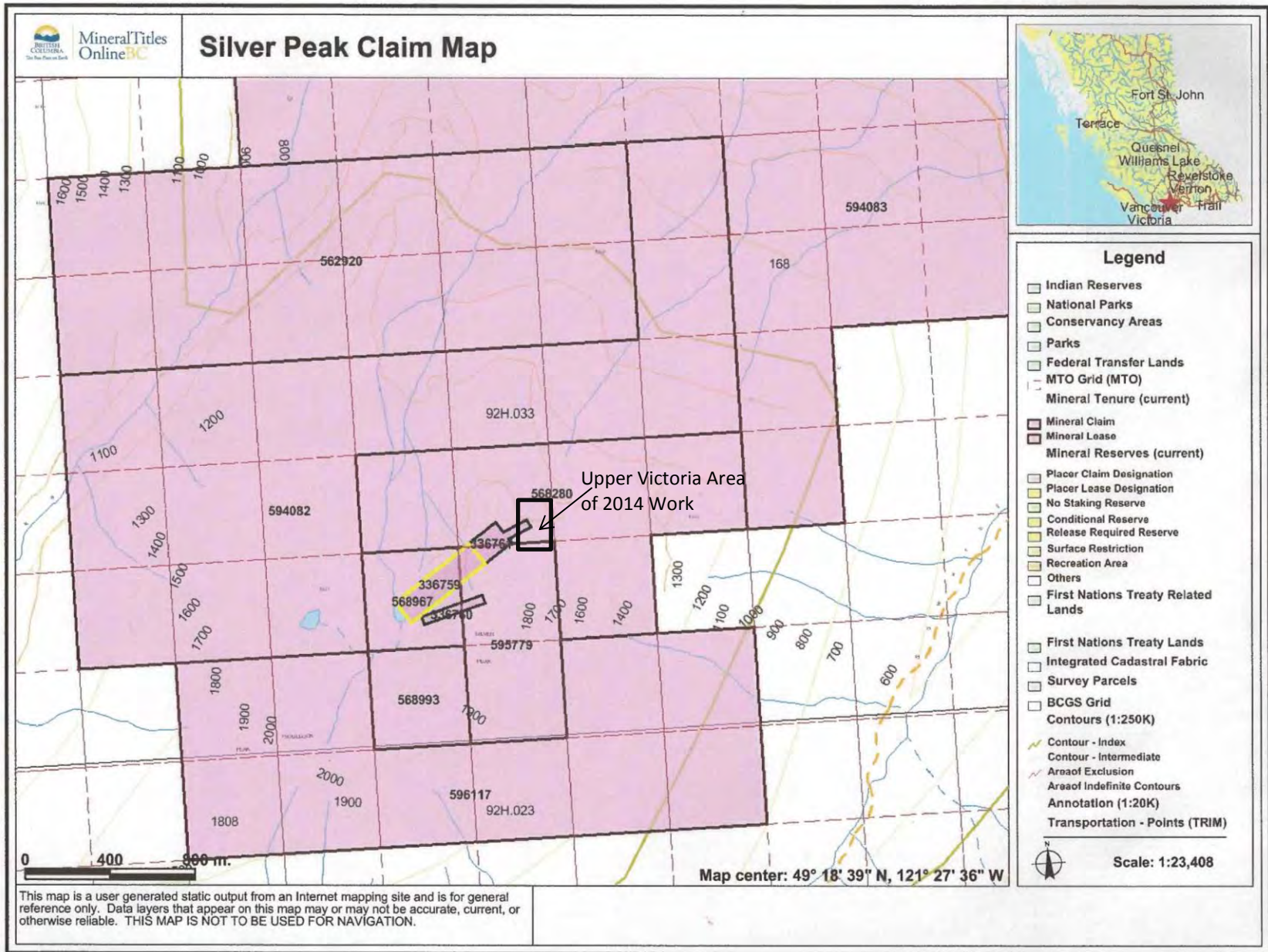




Figure 3 Claim Map



# Silver Peak Claim Map



Figure 3a Detail Claim Map

## PROPERTY DESCRIPTION and LOCATION

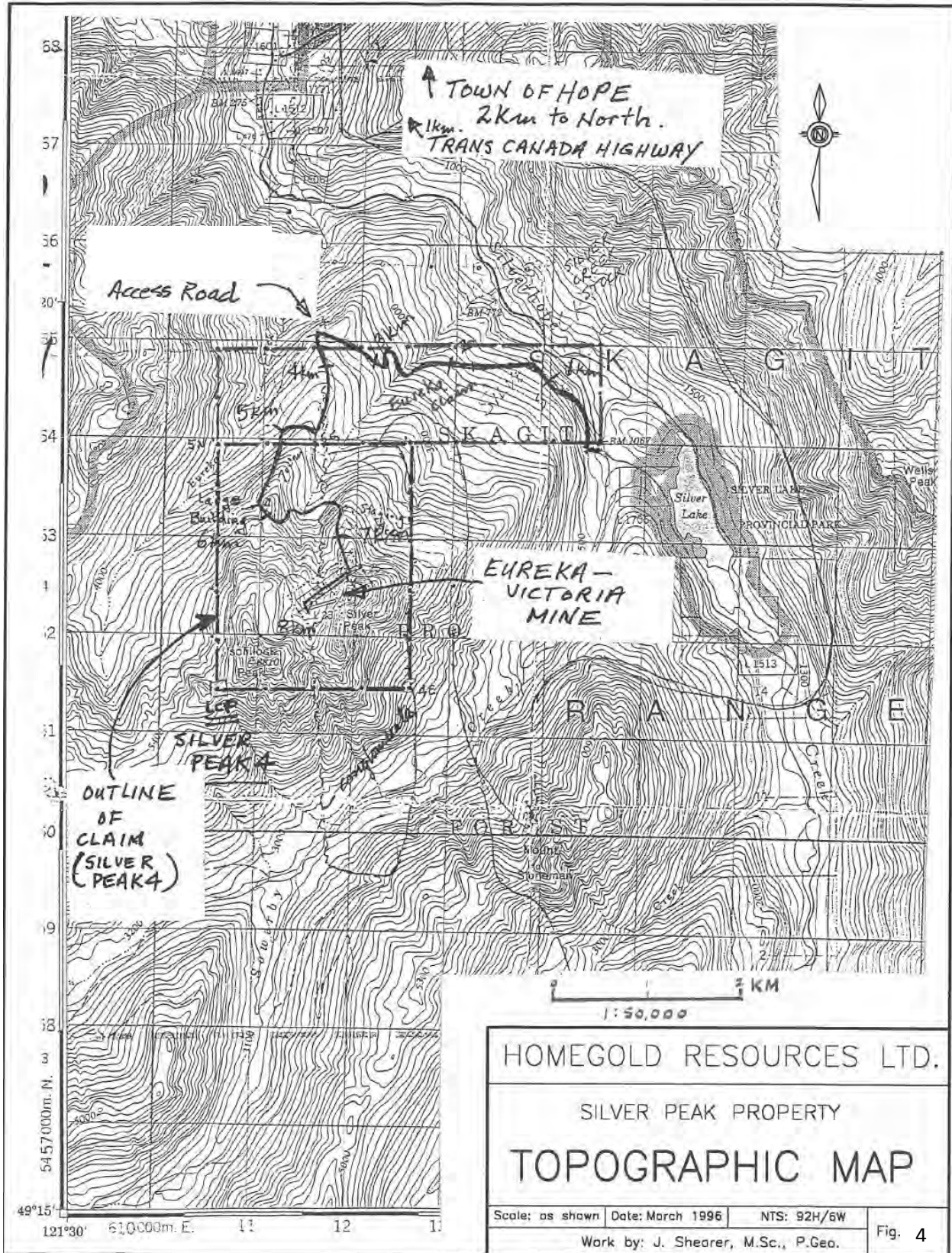
The area is held by the Silver Peak 1-3 and cell claims as shown in Table 1 and Figure 3.

<b>TABLE I</b>					
<b>LIST OF CLAIMS</b>					
<b>Claim Name</b>	<b>Tenure No.</b>	<b>Size (ha)</b>	<b>Location Date</b>	<b>Recorded Owner</b>	<b>Current Expiry Date</b>
Silver Peak 1	336759	25.00	June 12/95	Nugent/Shearer	October 30, 2023
Silver Peak 2	336760	25.00	June 12/95	Nugent/Shearer	October 30, 2023
Silver Peak 3	336761	25.00	June 12/95	Nugent/Shearer	October 30, 2023
Silver Peak Two	562920	252.69	July 13/07	Nugent/Shearer	October 30, 2020
Silver Peak South	568280	105.31	Oct. 19/09	Nugent/Shearer	October 30, 2020
	568967	21.06	Oct. 31/07	Nugent/Shearer	October 30, 2020
Victoria South	568993	21.07	Oct. 31/07	Nugent/Shearer	October 30, 2020
SP Middle	594082	315.91	Nov. 9/08	Nugent/Shearer	October 30, 2020
SP East	594083	505.33	Nov. 9/08	Nugent/Shearer	October 30, 2020
	595779	42.13	Dec. 10/08	Nugent/Shearer	October 30, 2020
SP South	596117	210.67	Dec. 15/08	Nugent/Shearer	October 30, 2020

Total 1,549.17 ha

Cash may be paid in lieu if no work is performed. Following revisions to the Mineral Tenures Act on July 1, 2012, claims bear the burden of \$5 per hectare for the initial two years, \$10 per hectare for year three and four, \$15 per hectare for year five and six and \$20 per hectare each year thereafter.

With the implementation of “Mineral Titles On Line” in January 2005, the plotting of the Silver Peak Crown grants was altered to the south and away from the physical location of the workings. Survey work in 2009 using the original 1878 Legal Survey has resulted in an accurate plotting of the claim. The misplotting is related to the introduction of the NAD83 (refer to Figure 10).



## **ACCESS, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE and PHYSIOGRAPHY**

### ***LOCATION***

The Eureka-Victoria mine is located 6 km south of the Town of Hope, Figure 1 and 2, bounded by Silverhope Creek to the northeast, Eureka Creek to the northwest and Sowerby Creek to the south and east. Topography rises very steeply from about 200 feet at the Fraser River to 6,810 feet elevation on the top of Isolillock (Holy Cross) Peak.

### ***ACCESS***

Access to the mine site is presently best by the recently opened old Eureka Creek logging road.

The lower slopes of Silver Peak have been logged off in the late 1950's and early 1960's. A series of logging roads extends up to the 4,500 foot level. A steep mine road in stable condition provides access from the logging road network. The main logging road has recently been cleared out by the present program. The road is driveable to the workings by 4x4 vehicles.

Due to the implementation of the British Columbia *Forest Practice Code* and its provisions for forest road standards, the opening of the access road for mining need a comprehensive plan. The result is that road "activation" tends to be more costly in the Province of British Columbia.

### ***PHYSIOGRAPHY***

The property is located on the rugged western slopes of Silver Peak between the elevations of 4,500 and 6,000 feet. A partially overgrown and deactivated road leads to the mine site, which was re-opened during the 2009 program. The general mine area is clearly visible from the Trans Canada Highway at the Village of Silver Creek and Lake of the Woods.

## HISTORY

High grade silver deposits were discovered by Peter Emery in 1868 while hunting mountain goat. He showed samples of the mineralization to George Schooley of Yale who located ground for himself and friends. Cairnes (1924) records that:

*In 1869 a company was formed by local and Victoria capital, called the Eureka Mining Company. About 1871 they sold out to the New Eureka Mining Company, Limited for \$80,000. That company had a capital of \$150,000. The Victoria claim was also disposed of by the original locators. The purchasers afterwards formed a company called the Victoria Silver Mining Company, Limited, with R. P. Rithet, secretary, and a nominal capital of \$60,000 in \$20 shares. Among the original subscribers were the well-known pioneers of British Columbia, E. P. Moody, who built the first sawmill on Burrard Inlet, H. Nelson, George Dietz, and George Dunbar. Cariboo pioneers were Francis Garesche, T. C. Hughes, and others prominent in the early history of British Columbia.*

*The amount of ore shipped apparently amounted to a considerable tonnage containing high values. The ore was packed part way down on Indian backs, and the rest of the way to Hope on packhorses. It was then floated on barges down the Fraser River, towed to Victoria, and loaded on sailing vessels for San Francisco. Some shipments went round Cape Horn to Swansea, Wales. This ore netted \$420 per ton.*

*The mines were **closed in 1874**, due in part, to the expensive methods of transportation, and, in part, to unfortunate litigation as to their ownership and management.*

*The mines were **reopened in 1920** for the present owners Sperry and White of Seattle, under the management of A. S. Williamson.*

It is reported that during 1924 one of the old drifts was extended. There is no record of any production at this time except a 5 ton test sample was assayed 268 oz/Ag/ton. In 1961, Tru-West Exploration Ltd. with W. Ferguson, President and J. Knopp, Manager, drove a new cross-cut at an elevation of 5,200 feet extending 126 metres and a 69 metre raise driven about 60 metres from the portal. In 1963, a 3,500 foot aerial tramway was installed in June to move equipment and materials.

A new company, Holy Cross Mountain Mines Ltd., S. McClay, President, contracted 1.5 miles of new road in 1968 and in 1971 drove 205 feet of 6'x7' drift which employed 10 men for six months under the direction of A. Aalde.

Vanstates Exploration Ltd. acquired an option of the three Crown grants in 1980. In 1981, a 61 metre raise was driven from the Eureka drift and a new adit was driven 65 metres to intersect the raise. Based on this work, an indicated resource (Spencer, 1982) on only the eastern portion of the Eureka vein of:

<u>Indicated</u>	38,000 tonnes grading 449.15 grams per tonne silver (13.10 oz/ton)
<u>Inferred</u>	10,900 tonnes grading 449.15 grams per tonne silver
	48,900 tonnes (54,000 tons) – which equals 707,400 ounces of contained silver.



Vanstates also attempted to carry out some diamond drilling in 1983. Unfortunately the drill sites were not surveyed and the drill crew was forced out by bad weather on October 31, 1983 without knowing if the target was reached (Krueckl, 1983).

A VLF-EM survey was conducted by J. Lloyd in 1982 and some prospecting was done for Guinet management by R. Yorston in 1990.

Geological mapping and sampling was completed by Homegold Resources between 1996 and 2001.

#### METALLURGICAL TESTING

Spencer (1982) reports that a 131 pound composite sample of assay reject material was shipped to Witteck Development Inc. in Mississauga, Ontario for bench scale leach testing. The results of this test work indicate the silver values are evenly distributed in the various size fractions and fine grinding was necessary to obtain optimum recoveries. The ore is amenable to leaching. A sample of coarser run-of-mine ore will be required for permeability testing of the potential heap leaching extraction method.

The testing of the Silver Peak mineralization in relation to flotation and leaching recoveries optimization tests are ongoing.

Testing in 2011 by G&T Metallurgical returned silver leach recoveries of up to 80%. Samples used averaged over 150 oz./ton which is representative of the high grade encountered in the Upper Victoria Adit.

#### FIELD PROCEDURES

Samples carefully collected in 2011 from the Victoria Upper workings used an electric chipper tool to give channel samples from the walls and back.

Samples collected in the new Lower Victoria working being driven by Homegold miners were collected from each 6 foot round and also carefully channelled from the face and back. These samples proved to be low in silver.

Drifting was done by jackleg drills to produce a 7x7 drift.

#### PROSPECTING and BULK SAMPLING

Prospecting and geological mapping was completed on Silver Peak 4 claims along the old logging/mining road system in 2001.

The siderite-tetrahedrite veins (both the Eureka and Victoria veins) were noted on surface to be steeply (75°-80°) dipping to the southeast. They rhyolite porphyry in Glory Hole Gulch was observed to be oriented 325°/75° east. There is a possible faulted segment of the rhyolite dyke oriented 105°/48° south.

The major regionally extensive Hope Fault is seen just to the west of Blue Lake. The schistose quartzite and shale/slate, which occur immediately to the east of Blue Lake, appear to owe their schistosity to

movement along this major structure. Similar schistose quartzites were noted just north of the Silver Peak 4 claim again immediately adjacent to the presumed trace of the Hope Fault.

The host (Eocene) conglomerate is variably altered by chlorite and silicification. Thin sandstone and shaley interbeds are relatively common over narrow intervals. Framework clasts in the conglomerate are mainly well rounded but occasionally angular intervals were noted

In 2009, three vein samples were collected from (1) two near the entrance to the lower adit and (2) from the portal of the Sunray Cross-cut. All the 2009 samples assayed relatively low in silver with the best running 106.2 g/tonne – see assay certificates in Appendix III.

In 2010, a number of grab samples were collected from the Upper Victoria drift, that assayed very high in silver content.

In 2011, the Upper Victoria drift was channel sampled (refer to Figure 7).

#### UNDERGROUND WORKINGS 2011

The old Eureka drift exposed a 280 foot strike length of silver mineralization which was sampled in 1980 and averaged 8.78 oz. silver per ton across a 3.0 foot mining width. To assess the vertical continuity of this mineralization, a raise was driven in 1981 on the mineralized vein at 45° for a distance of 200 feet. Chip samples across a 3 foot width from the back of the raise were taken at 5 foot intervals and the initial 155 feet of the raise averaged 7.78 oz silver per ton. The upper portion of the raise was not chip sampled due to access problems. Muck samples from the raise were taken for each 6 foot round over the entire 200 foot distance driven and the average grade of the 35 muck samples was 7.12 oz silver per ton. The mineralization exposed by the raise was weak from 75 to 125 feet where the vein thinned, nevertheless, the average grade compares reasonably well to that of the drift and indicates that there is vertical continuity to the mineralization.

A new level was driven on the mineralized vein some 125 feet vertically above the Eureka level in 1981. This new drift, the Carbonate level, was advanced 214 feet on the vein and broke through to the Eureka raise some 170 feet from the drift collar. Chip samples across a 3 foot width of the drift back were taken at 5 to 10 foot intervals and averaged 17.12 oz silver per tonne for the 214 foot drift length. 26 muck samples from the drift averaged 26.4 oz silver per tonne thus confirming the above average grade mineralization on this level. The drift was still in good mineralization at the face.

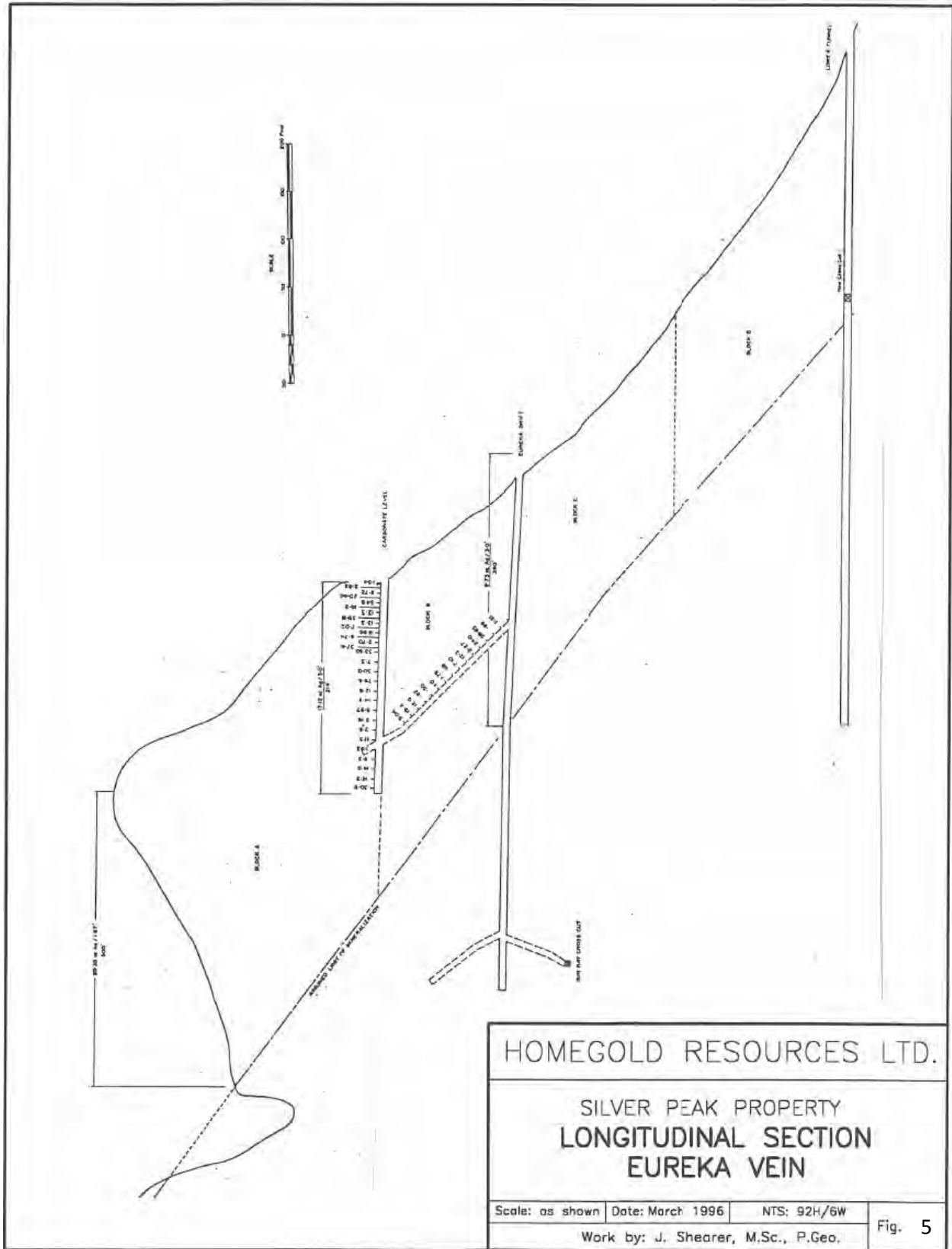




Photo 1, Lower Level at Portal, Victoria Vein 2011

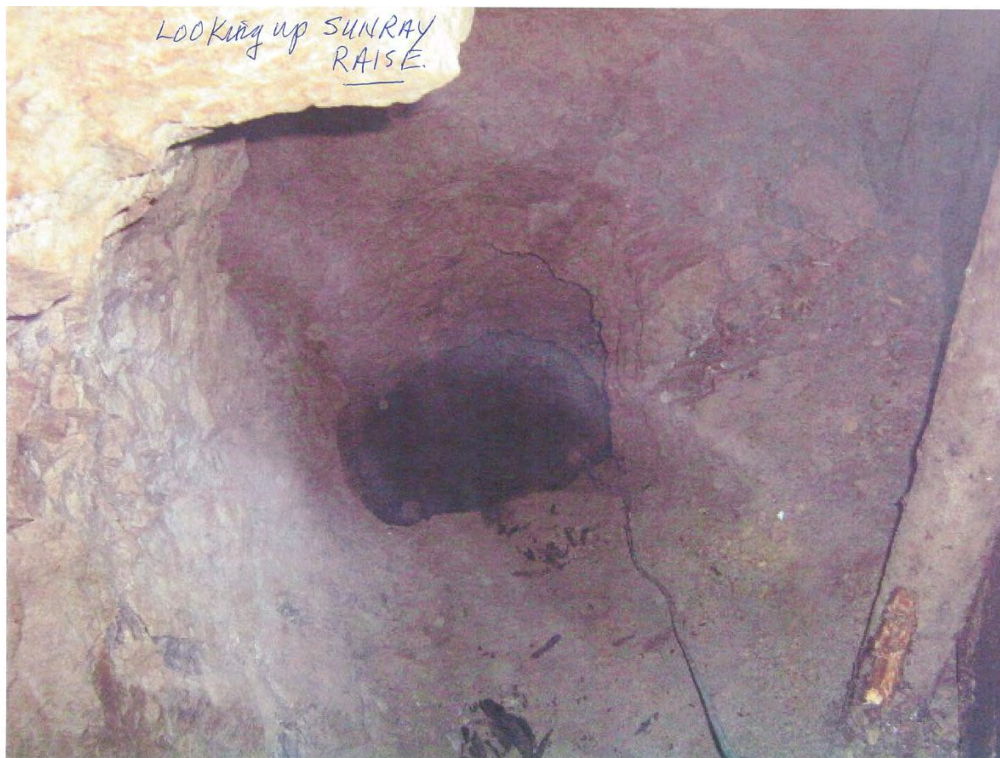
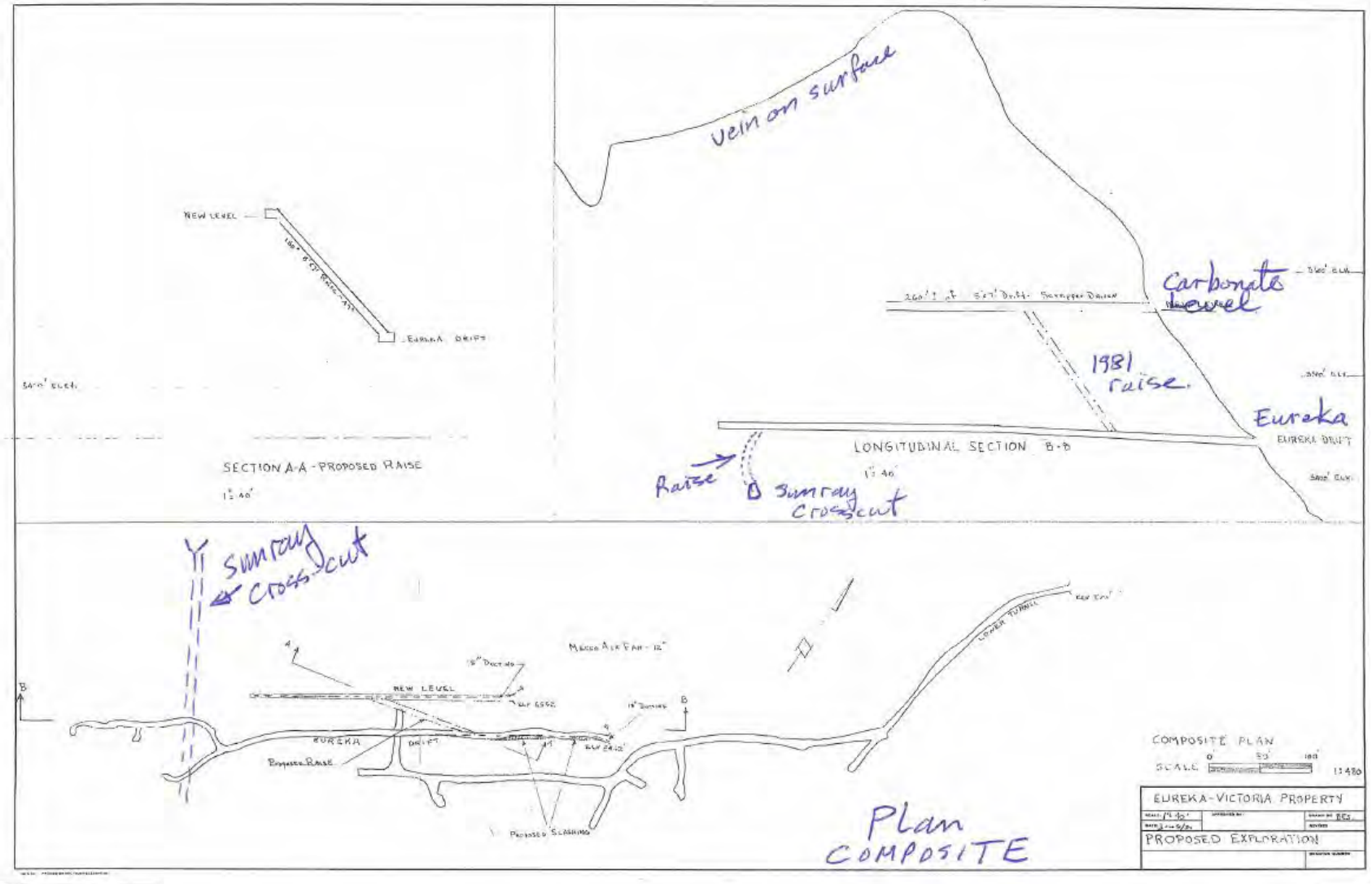


Photo 2, Raise in Sunray Crosscut, Eureka Vein 2010

Figure 6 Plan Composite



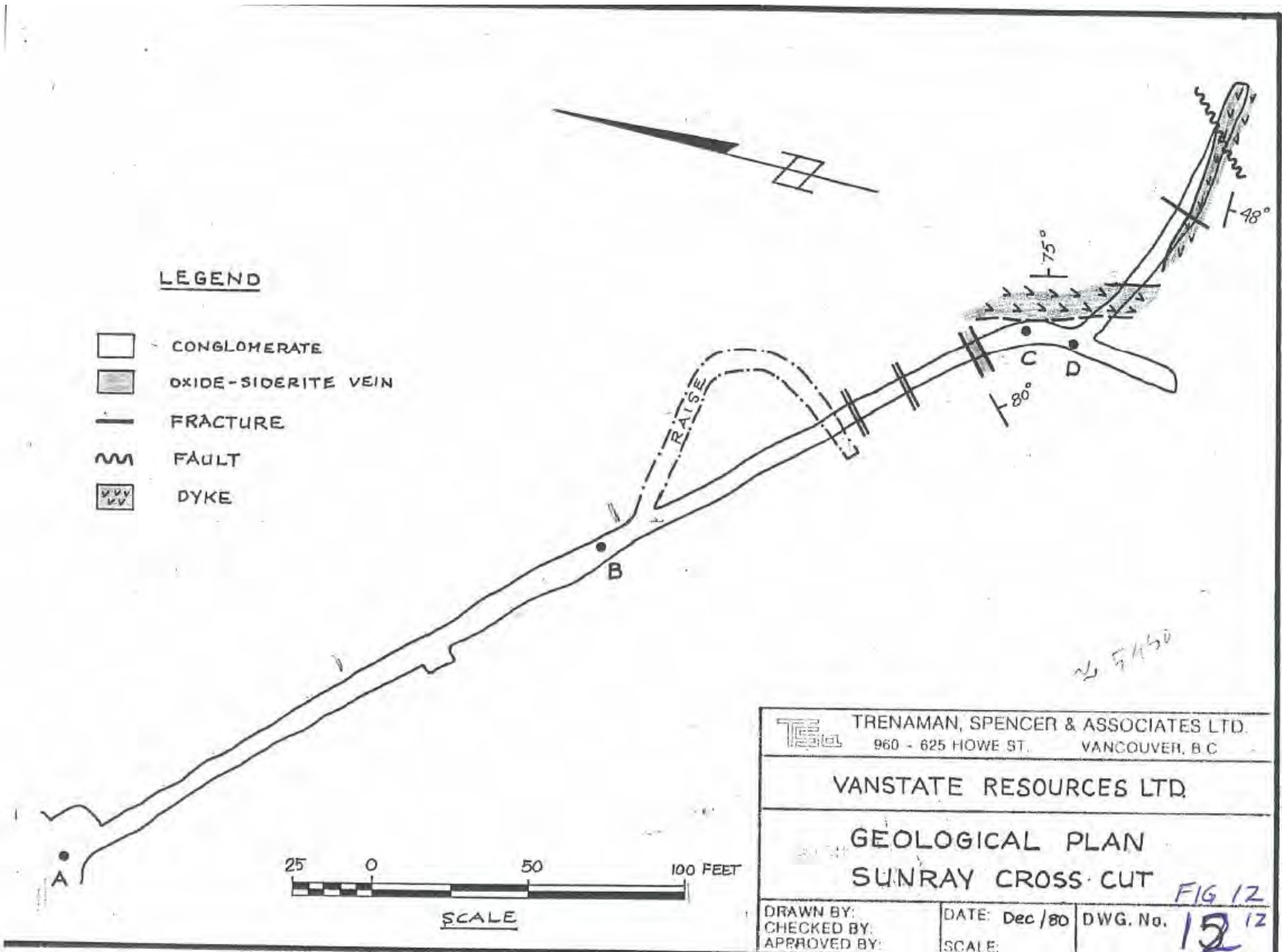


Figure 7 Plan of Sunray Cross-cut

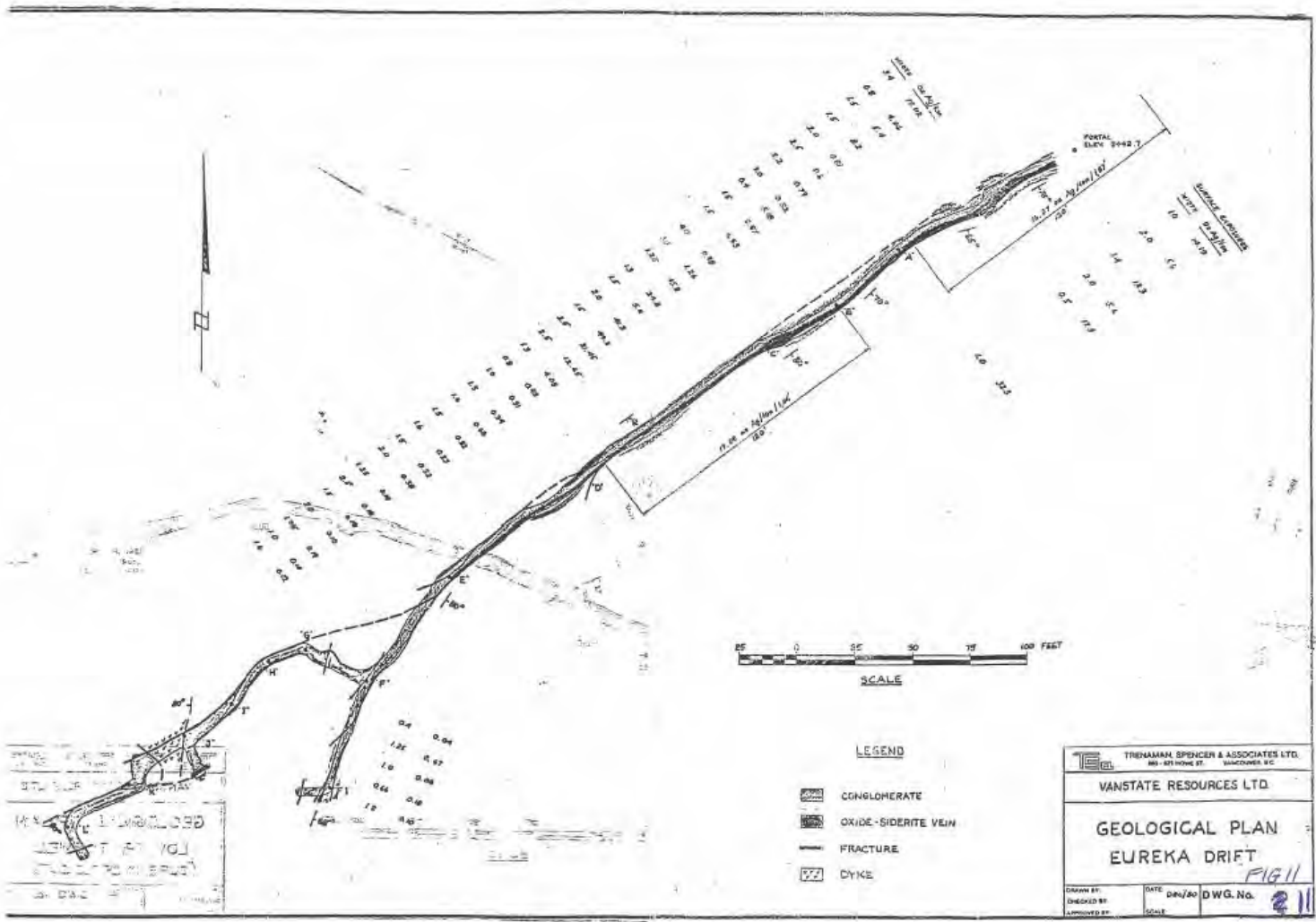
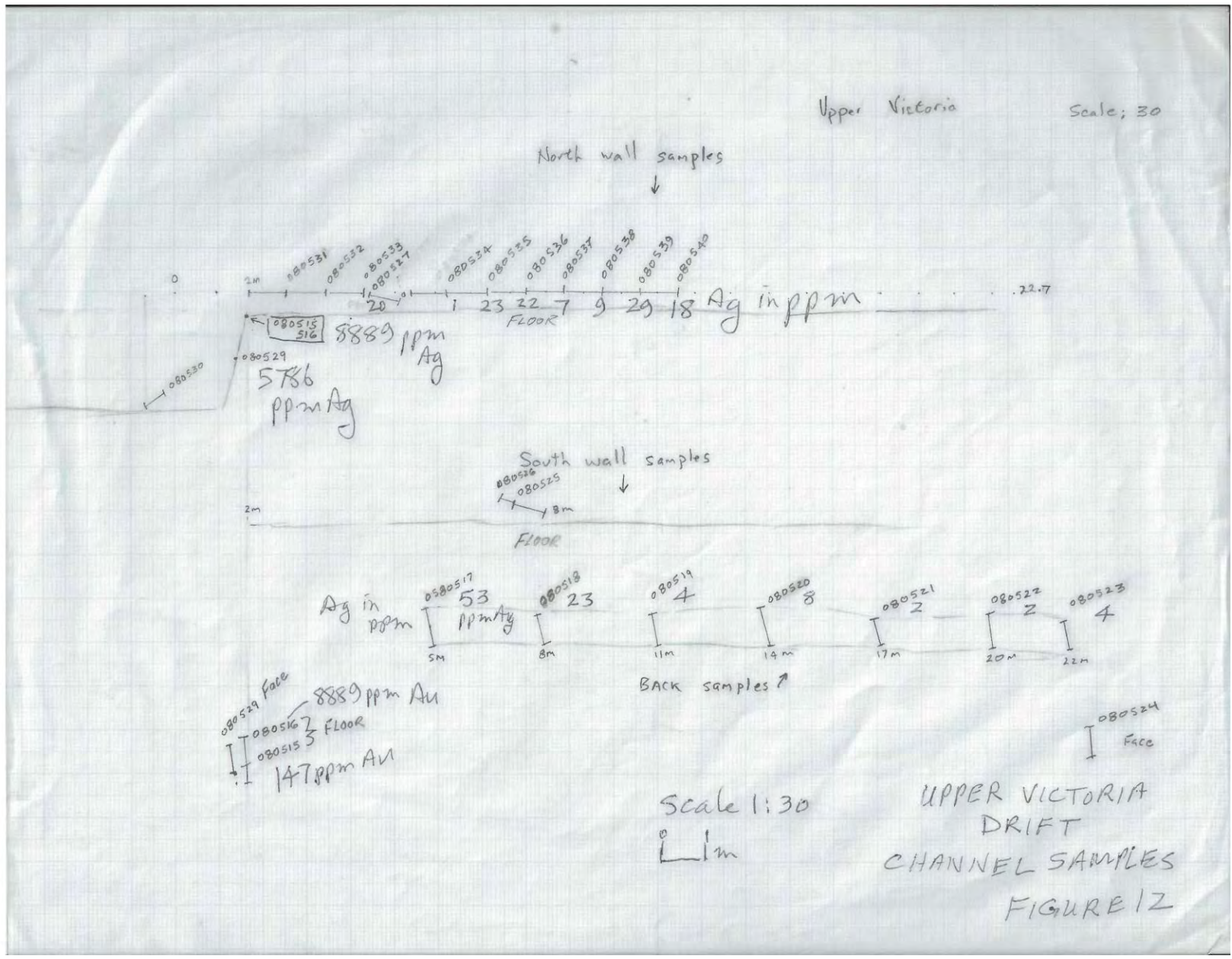


Figure 8 Plan of Eureka Level, 1:500

Figure 9 Plan of Victoria Upper Level





## Mineral Processing and Metallurgical Testing

A mineralogical assessment on a feed sample was completed by G&T Metallurgical (ALS Metallurgy). The principle objective of this study was to identify and quantify the mineral compositions of the feed sample. The present silver bearing minerals, together with the silver deportment by mineral species, were of particular interest. To achieve the objective, standard analytical protocols, QEMSCAN Bulk Mineral Analysis (BMA) and Trace Mineral Search (TMS) were performed on the representative cuts of the unsized sample.

The feed sample was received on April 5, 2011, and the analyses were completed on May 9, 2011. The data was sent in electronic format as it became available.

The feed sample was assayed at about 0.4% silver. The silver bearing minerals present in the feed sample were dominantly acanthite/argentite and pyrargyrite, which carried about 99% of the total silver in the feed. A trace amount of native silver and pearceite was also observed. This data can be located in Appendix ii, Table 1 and 2.

It is of interest to note that some of the silver bearing minerals in the feed sample were finely crystallized, and were included in the non-sulphide minerals. This fragmentation characteristic of the silver minerals in the feed was particularly shown in QEMSCAN Images 1 to 3, which are attached to this letter. The complex structures of the silver minerals may cause difficulties in processing the ore. A further mineralogical study, the QEMSCAN Particle Mineral Analysis on the sized sample, is recommended to assess the effect of primary grind sizing on silver mineral liberation.

G&T Metallurgical also completed a test program to evaluate a sample provided by Homegold Resources Ltd. The assessment investigated the response of the sample to cyanide leaching for silver. The program was conducted in accordance with the proposal dated June 2, 2011.

The program was conducted on a sample designated Feed, in the form of crushed ore. No details were provided about the origin of the sample. The measured feed grade of the sample was measured to be 4407 g/tonne of silver.

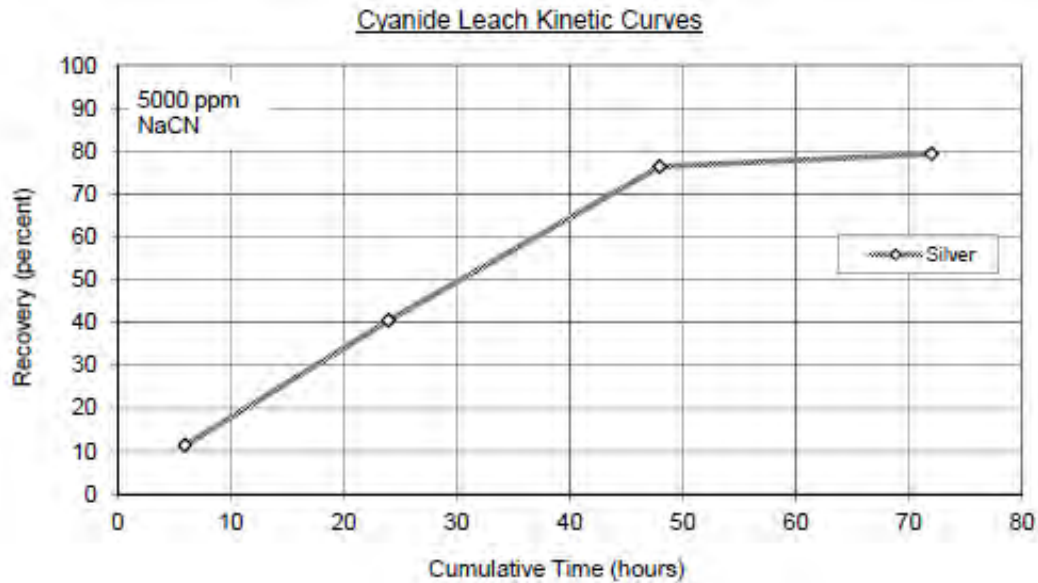
The sample was ground to a nominal 66µm K80. A standard cyanide leach bottle roll test was conducted on the sample. The test was 72 hours in duration and utilized cyanide solution strength of 5,000 g/tonne NaCN. The test was modulated with lime to pH 11.0 and used a 500 gram test charge. The results of this test are shown on the following table.

Cumulative Metallurgical Balance

Product	Cumulative Time – Hrs.	Volume or Mass	Units	Assay – g/t Silver	Distribution - % Silver
Cyanide Liquor (4hr)	6	1000	ml	248	11.4
Cyanide Liquor (24hr)	24	1000	ml	876	40.5
Cyanide Liquor (48hr)	48	1000	ml	1640	76.4
Cyanide Liquor (72hr)	72	1000	ml	1670	79.4
Cyanidation Tails		494.4	g	910	20.6
Calculated Feed		500	g	4360	100.0

At the target sodium cyanide concentration of 5000 ppm, the sodium cyanide consumption was approximately 16.9 kg/tonne. Lime consumption was about 8.0 kg/tonne under these conditions.

After a 48 hour leaching period, silver from the Feed sample was approximately 76 percent extracted into solution. After a 72 hour leach period, 79 percent of the silver was extracted into solution.



Parameter	Time Cum	Added (g)		Residual (g)		Consumed (g)		pH	Dissolved O <sub>2</sub> (mg/L)
		NaCN	CaO	NaCN	CaO	NaCN	CaO		
Natural		-	-	-	-	-	-	6.6	1.7
Leach 1	4	1.00	2.69	0.17	0.02	0.83	2.67	11.0	6.2
Leach 2	24	4.86	1.49	0.40	0.30	4.63	1.21	11.0	6.4
Leach 3	48	4.64	0.00	2.90	0.30	2.14	0.00	11.	6.6
Leach 4	72	2.14	0.00	4.20	.20	0.84	0.10	11.0	6.9
Total	72	12.64	4.18	4.20	0.20	8.44	3.98		

Mass of Sample	500
Volume of Water	1000
Pulp Density	33

NaCn Consumption	16.9 kg/tonne
Lime Consumption	8.0 kg/tonne

## GEOLOGICAL SETTING and MINERALIZATION

### PROPERTY GEOLOGY

Cairnes (1944) compiled the regional geology of the Hope Area as Map 737A. This was revised by Monger (1970). The area around Hope encompasses the major tectonic boundary between the Coast Plutonic Complex and the Cascade Fold Belt. A recent contribution to the regional geological setting is by Richards and McTaggart (1976), Figure 4.

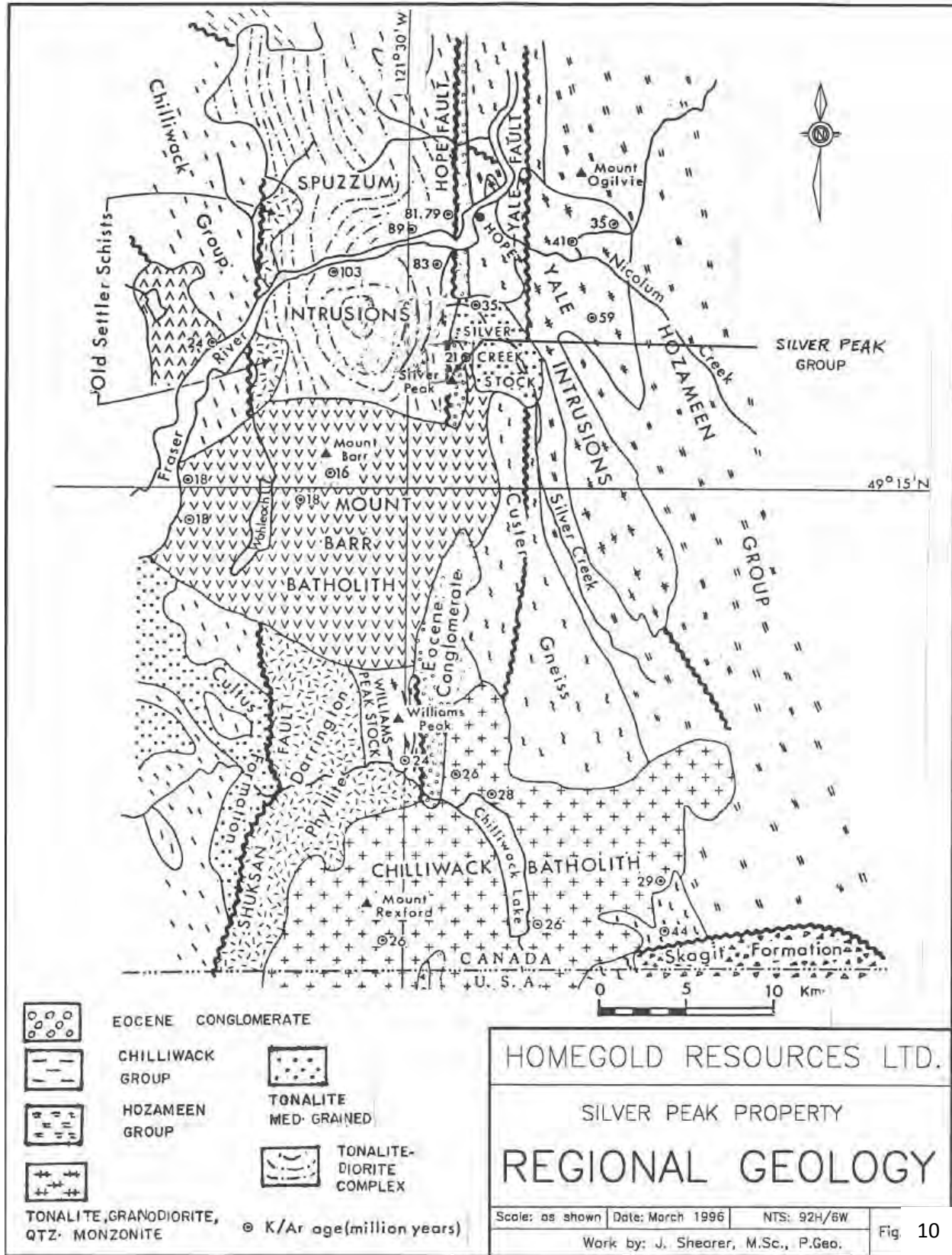
Structurally the area lies within imbricate fault slices between the Yale and Hope Faults and the Shuksan Thrust to the west. The graben created by the Yale and Hope Faults is a major fault system that extends northward for many kilometres and controls the course of the Fraser River.

The intrusive evolution of the area is varied and complex. The Silver Peak Claims are underlain to the west by late Cretaceous Spuzzum Intrusions, which range in age from 73 m.y. to 89 m.y. These are the oldest plutonic rocks of the region. The Yale Intrusions northeast of Hope are a group of stocks and sills that lie along a belt extending from 5 km north of Yale southward to near the head of Silver Creek. This suite of rocks range from tonalite and granodiorite to quartz monzonite. All units of the Yale intrusion display some degree of cataclastic foliation.

The Silver Creek Stock, 5 km south of Hope, is about 25 km<sup>2</sup> in area. It is composed of homogeneous and unfoliated medium grained tonalite. Richards and McTaggart (1976) page 944, describe the stock as follows:

*“The stock intruded and metamorphosed Eocene conglomerate and has been intruded by the Miocene Mount Barr batholith. The walls of the stock appear to be vertical. A single K Ar. determination on hornblende gave an age of 35 m.y., which is considered to be the time of emplacement of the stock. That the stock is epizonal is suggested by the high-temperature structural state of the alkali feldspar, fine grained margins, adjacent hornfels, and mid-Tertiary age.”*

Emplacement of the Mount Barr batholith has been dated at 21 m.y. (Richards and McTaggart, 1976) and is exposed 4 km south of the Silver Peak Group. The later phases of the Mount Barr batholith at 16 m.y. represent the youngest major intrusive phase in the area.



## MINERALIZATION

The area to the west of the claims is underlain by diorite and tonalite of the Spuzzum intrusions (McTaggart and Thompson, 1967). Two main units are distinguished: a central zoned diorite complex and a surrounding tonalite, Figure 5. The diorite is a fresh, medium-grained rock consisting of bronze-brown hypersthene and black augite with variable hornblende. Biotite is a minor constituent and quartz was rarely identified.

Richards and McTaggart, 1976, describe the dioritic complex as follows:

*“The diorite complex is crudely zoned, with hypersthene-augite diorite (rarely norite) in its core regions and hypersthene-hornblende diorite (rarely tonalite) at its margins. The mineralogical variation appears continuous, but three varieties have been defined: hypersthene-augite-hornblende diorite and a marginal zone of biotite-hypersthene-hornblende diorite. Only a small chemical differences accompany the pronounced mineralogical variation.”*

The area immediately around the Eureka-Victoria Mines working is best described in Cairnes (1924) as reproduced below:

*“The upper 2,000 feet of Silver Peak is composed chiefly of a massive conglomerate of Lower Cretaceous age. Other remnants of this formation occur on the southern flank of Hope Mountain and in the Fraser Valley on either side of the river near Hope. The conglomerate varies greatly in the size of its constituent pebbles. A large proportion might be regarded as a coarse-grained grit, but in other sections it contains cobbles varying up to 6 or 8 inches in diameter. The general attitude on Silver Peak is nearly north and south, with an average high dip to the east. The attitude is, however, subject to local variation and syncline. This conglomerate has been invaded by a large batholithic body of quartz diorite, locally known as “granite”, that comes in contact with the conglomerate on all except the southern flank of Silver Peak, where a narrow band of highly metamorphosed sediments, probably also of Cretaceous age, intervene. These sediments on the divide between Silver Peak and Isolillock Mountain form a belt less than 200 feet wide, but their width at lower elevation could not be determined. They comprise both shaly and sandy materials, but their original character has been largely marked by the metamorphism to which they have been subjected by the quartz diorite, as well as by an earlier intrusive lying farther to the northwest.*

*Cutting the conglomerate at an angle to both bedding and joint planes are a number of quartz porphyry dykes. The largest of these has an average width of 20 feet and follows in an irregular fashion the line of the Glory Hole gulch, which cuts through the middle of the property in an east-west direction.*

*Mineral Deposits. The mineral deposits at the Eureka-Victoria mines occur in well-defined fracture zones in the conglomerate. These coincide with a prominent set of joint-planes, which intersect the conglomerate in a general northeast-southwest direction. Along these joint fissures, more or less movement and brecciation of the conglomerate has occurred, so that fracture zones, many of them several feet wide, have been developed. These zones furnished relatively easy passage to the mineralizing solutions forming the present ore deposits.*

*The principal deposits occur in veins within the fracture zones. They rarely occupy the entire width of the zone, often form only a minor part of it, and in general, favour the hanging-wall side. Together with the*

*intervening and in some cases sparingly mineralized conglomerate gangue they constitute the ore-bodies or lodes. Only in rare instances can the high-grade vein material be mined separately.*

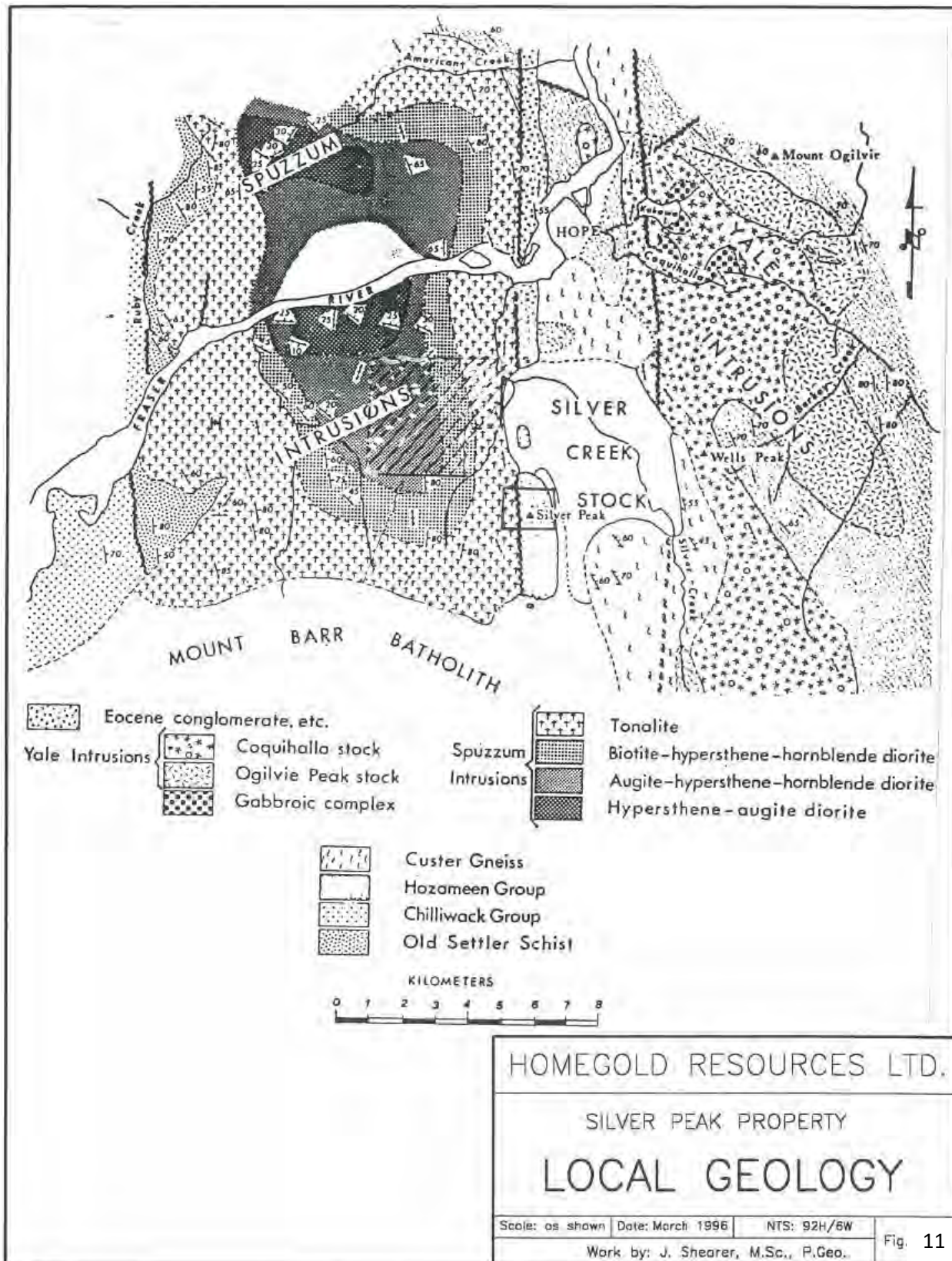
*The chief gangue minerals are siderite, limonite and quartz. The first occurs either as a brownish, coarsely crystalline mineral with large lustrous cleavage surfaces, or as a cream-coloured aggregate intergrown with clear crystalline quartz. The limonite occurs in two generations. That of the first is, in part, pseudomorphous after siderite and forms characteristic wedge-shaped crystals that project into open fissures in the vein. That of the second generation has been deposited over the older gangue minerals, is quite soft, and shows a botryoidal structure. The quartz is formed in two generations, the first intergrown with the siderite as well with tetrahedrite and iron sulphides, and the second forming crystals on the surfaces of the other minerals.*

*The principal ore mineral is the sulphantimonide of copper, tetrahedrite. This mineral carries a varying proportion of lead as well as the primary silver values in the deposits. It occurs in intergrown or deposited at different stages the siderite, quartz and pyrite and may replace the earlier formed minerals. It is disseminated irregularly throughout the ore-bodies in small specks or irregular masses that rarely exceed a cubic centimetre in size.*

*A concentration of silver values occurs in certain of the upper sections of the ore bodies. There, superficial processes involving oxidation, carbonatization, and solution have resulted in the substantial reduction of gangue minerals and a differential enrichment of the mineral content of the veins. The tetrahedrite there has suffered decomposition. The copper has largely disappeared and the little left converted to carbonates. The lead has been largely retained, probably as an amorphous carbonate, and holds the silver values. The oxidation products of the silver and lead have lent a characteristic yellowish appearance to the decomposed ore. The result is a rich concentrate, running into hundreds of dollars per ton, from which shipments were made in the early years of mining.*

*Description of Ore-bodies. The principal mineral deposits occur in the Eureka, Victoria and Victoria West ore-bodies. A couple of minor bodies cross the Glory Hole gulch below the Eureka lode outcrops.*

*The Eureka lode, at present the most important ore-body, has been traced across the summit of Silver Peak for about 1,400 feet, its course for the greater part of the way being well defined by solid conglomerate walls. Its width varies, according to the surveys made by the management, from 5 to 20 feet, and is greatest east of the Glory Hole gulch where for about 600 feet it is between 12 and 20 feet. The western section of 800 feet has been neither close followed nor measured, but may average 5 feet in width. The actual proportion of the vein and mineral disposition within this fracture zone is extremely variable. In part the entire zone is occupied by gangue mineral, but these are mostly confined to narrow veins or stringers within the fractured belt and their combined width is measurable in inches rather than feet.*



*An adit was driven, in the early days, from the eastern side of Silver Peak, and at 5,190 feet above sea-level, for a distance of 240 feet along the principal ore-body. At the face a sample taken across 2 feet of ore was assayed by the Mines Branch, and ran 4.42 ounces in silver per ton and 0.17 per cent copper. Near the mouth of the adit some gangue richly impregnated with tetrahedrite is said to have assayed high in silver. Farther up the hill the values have been concentrated by oxidation and an adit disclosing copper-stained ore was driven for 20 feet along a narrow vein of this oxidized ore.*

*Where the Eureka ore-body crosses the Glory Hole gulch it encounters a wide rhyolite dyke. This dyke does not cross the ore-body, but forms the northwest wall for a distance corresponding to its width. The opposite wall is conglomerate, but the dyke may reappear again farther up the gulch.*

*The Victoria lode originally constituted the old Van Bremer mine. It has been traced for approximately 1,200 feet on the southwestern slope of Silver Peak, its course, like that of the Eureka ore-body, being obscured at lower elevations by snow. The general character of this lode is essentially similar to the other.*

*At an elevation of 5,510 feet, or 90 feet above the snowbank (figure 6), a drift 8 feet long, known as the lower Victoria tunnel, has been driven on the ore-body, the mineralized part of which has a width of 14 inches. A sample across this was assayed by the Mines Branch and showed: silver, 11.65 ounces per ton; no gold; no lead; and 0.30 per cent copper.*

*Two hundred and twenty feet above this shore drift another adit has been driven for 50 feet along a vein of richly oxidized ore. The vein, which strikes nearly east and west and dips at about 70 degrees south, has an average width of a foot. A sample taken at the portal of this tunnel across 14 inches of ore was assayed by the Mines Branch, and yielded 168.75 ounces silver per ton, a trace of gold, 1.12 per cent copper, and 11.96 per cent lead. A sample taken the previous year from the richest part of this vein gave an assay return of 658.42 ounces silver, and 26.72 per cent lead.*

*At 50 feet below the portal of the upper adit this enrichment is not noticeable. A sample was taken across a vein 12 inches wide in which the gangue minerals were siderite and limonite. This sample, assayed by the Mines Branch, yielded 38.65 ounces silver, trace of gold, 1.04 per cent lead and 44.37 per cent iron.*

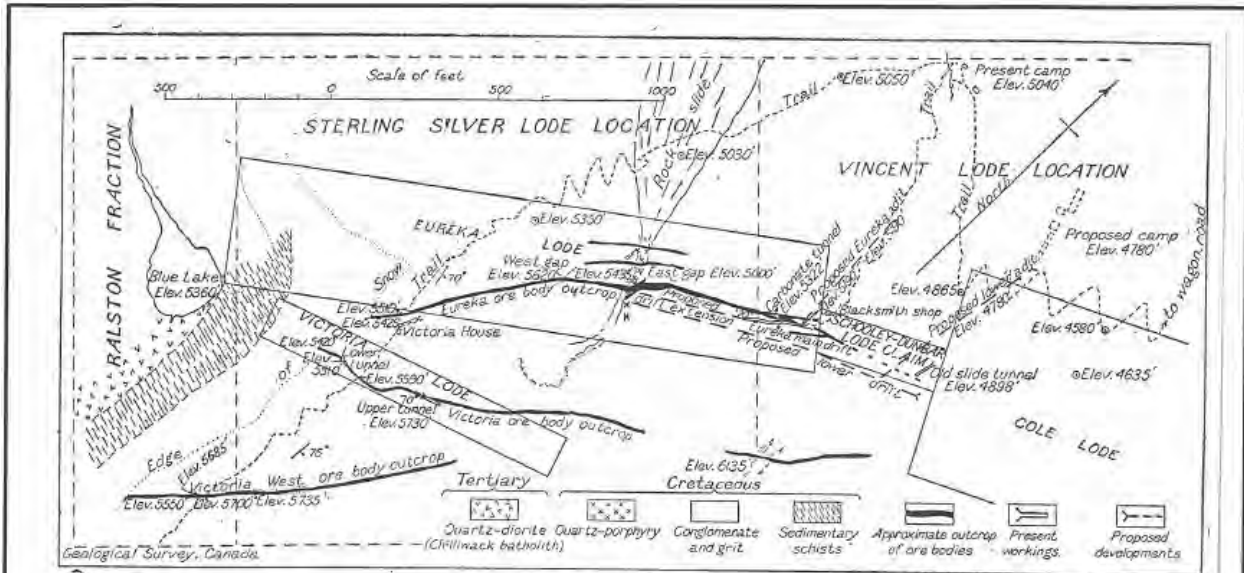
*The Victoria South ore-body, and the smaller veins crossing the Glory Hole gulch below the Eureka lode, are composed of much the same materials."*

(More recent work by G. E. Rouse showed that the conglomerate is of Eocene age based on pollen fossils.)

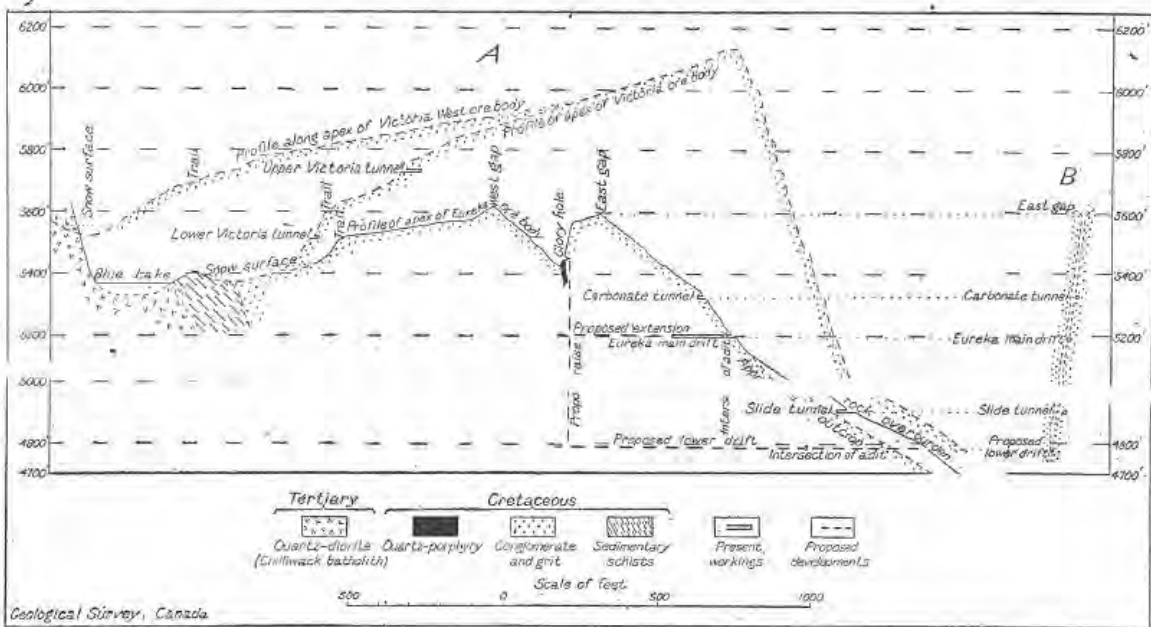
Sampling results by Vanstates Resources in 1981 (Spencer, 1982) are shown on Figure 8 from which the mineral inventory of 54,000 tons averaging 13.10 oz/ton was calculated on the eastern portion of the Eureka vein.

Limited prospecting and sampling was completed in 1995. Assay results of a suite of altered, chloritic conglomerate samples collected in 1995 are shown in Table 2. This suite of typically chlorite altered but unmineralized conglomerate averaged about 68.5% of SiO<sub>2</sub> and 14.1% Al<sub>2</sub>O<sub>3</sub>, but the combined alkali content (Na<sub>2</sub>O+K<sub>2</sub>O) is 4.3%.





Plan of Eureka-Victoria mines, Coquihalla River area, Yale district, B.C. (Plan reproduced by permission of mine management.)



Geological sections across Silver peak in vicinity of Eureka-Victoria mines, Coquihalla River area, Yale district, B.C.  
 A, Three profile sections, not exactly parallel, projected into one plane  
 B, Projection of Eureka ore-body on a vertical plane through East gap.

## HOMEGOLD RESOURCES LTD.

### SILVER PEAK PROPERTY PLAN & CROSS SECTION OF EUREKA-VICTORIA DEPOSITS

Scale: as shown Date: March 1996 NTS: 92H/6W

Work by: J. Shearer, M.Sc., P.Geo.

Fig 12

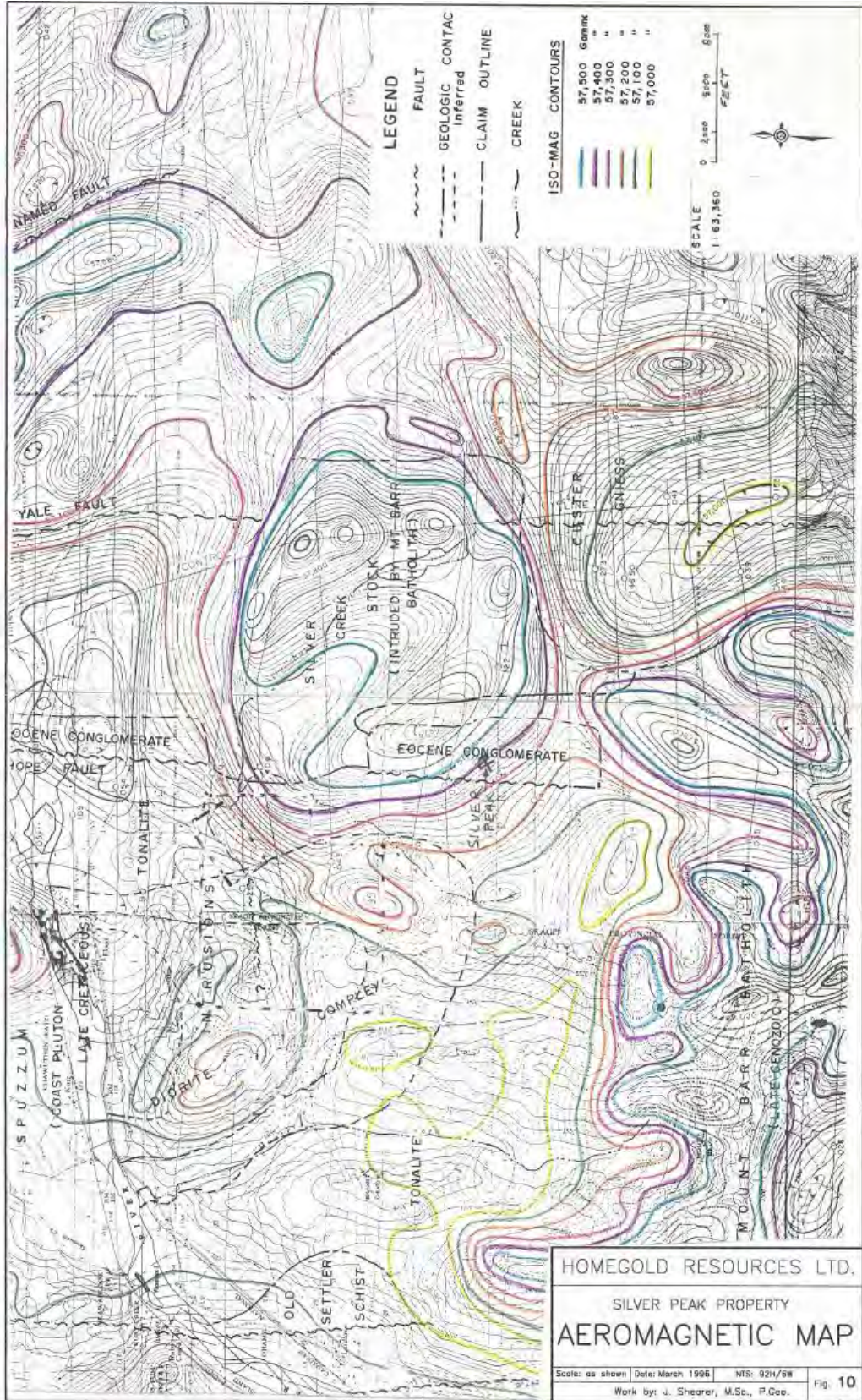


Figure 13 Aeromagnetic Map

## EXPLORATION 2014

The bifurcating nature of the vein system as observed above the lower Victoria Portal was confirmed at the Upper Adit and drilled area. The constituent veins branch and coalesce vertically as well as horizontally. The high grade vein is not a separate unrelated vein at some unknown relationship to the “main” vein but rather an integral part of the bifurcating nature of the entire Victoria vein system (see attached photos). The high-grade portion of the system can more accurately be referred to as the “West Hangingwall Branch” of the vein system.

The higher grade silver values have been followed by XRF to a lower elevation where they are cut off by an igneous sill (probably a rhyolite porphyry).

Below the sill the Hangingwall and Main veins appear to continue to lower elevations. However, in a major observation, the “Upper” vein system and the “Lower” vein system are offset by approximately 70 meters E-W. There will be a vertical displacement as well as horizontal but more mapping is required to define the vertical displacement. The dips vary from northeast and southwest. The marked variability of the dip and undulating strike and dip may be important guides to ore location.

The observation that the vein system has been displaced is actually quite startling and very significant. No previous work even hinted at such a displacement.

Samples collected from the lower extension (and proved to be silver bearing at 4,191g/tonne) of the high-grade hangingwall were found at least 110m in elevation below the drilled area (and 100m west of the Lower Portal). The area above the Upper Adit should also be prospected by Helicopter access. The old reports of high-grade at the “Glory Hole” should be quantified (to the west on the Eureka System but perhaps more related to the rhyolite sill).

It is not immediately apparent where the dislocation is occurring, but it may be related to the intrusion of the rhyolite porphyry. The displacement is left lateral but complicated by perhaps multiple displacements which allow the hangingwall vein to continue to lower elevations.

The shape of a larger drill program is emerging whereby drillsites can be located to the west (1) along the lower bench near the 1860’s cabin site; (2) build a drillsite west of the Lower Portal on the trail up to the 1860’s cabin site. These holes will cross-cut the 2 segments of the off-set vein systems.

The Victoria Vein has been traced for about 625 metres on the southwestern slopes of Silver Peak. The depth to which the Victoria mineralization persists has not been defined by work to date nor has any resource been calculated for the Victoria. In 1924 a 1.4m adit was driven and a sample over 36cm assayed 399.43 g/tonne (11.65 oz./ton). About 70m above an adit was driven for 15m. A sample taken from the portal across 35.6cm assayed 22,574.59 g/tonne (658.43 oz./ton Ag).

The Victoria West Zone has traced approximately 275m. No previous work is known on the Victoria West Zone. Future exploration programs need to take into account the expected presence of new zones within the vein system and further define the Victoria West Zone.

# Underground Workings

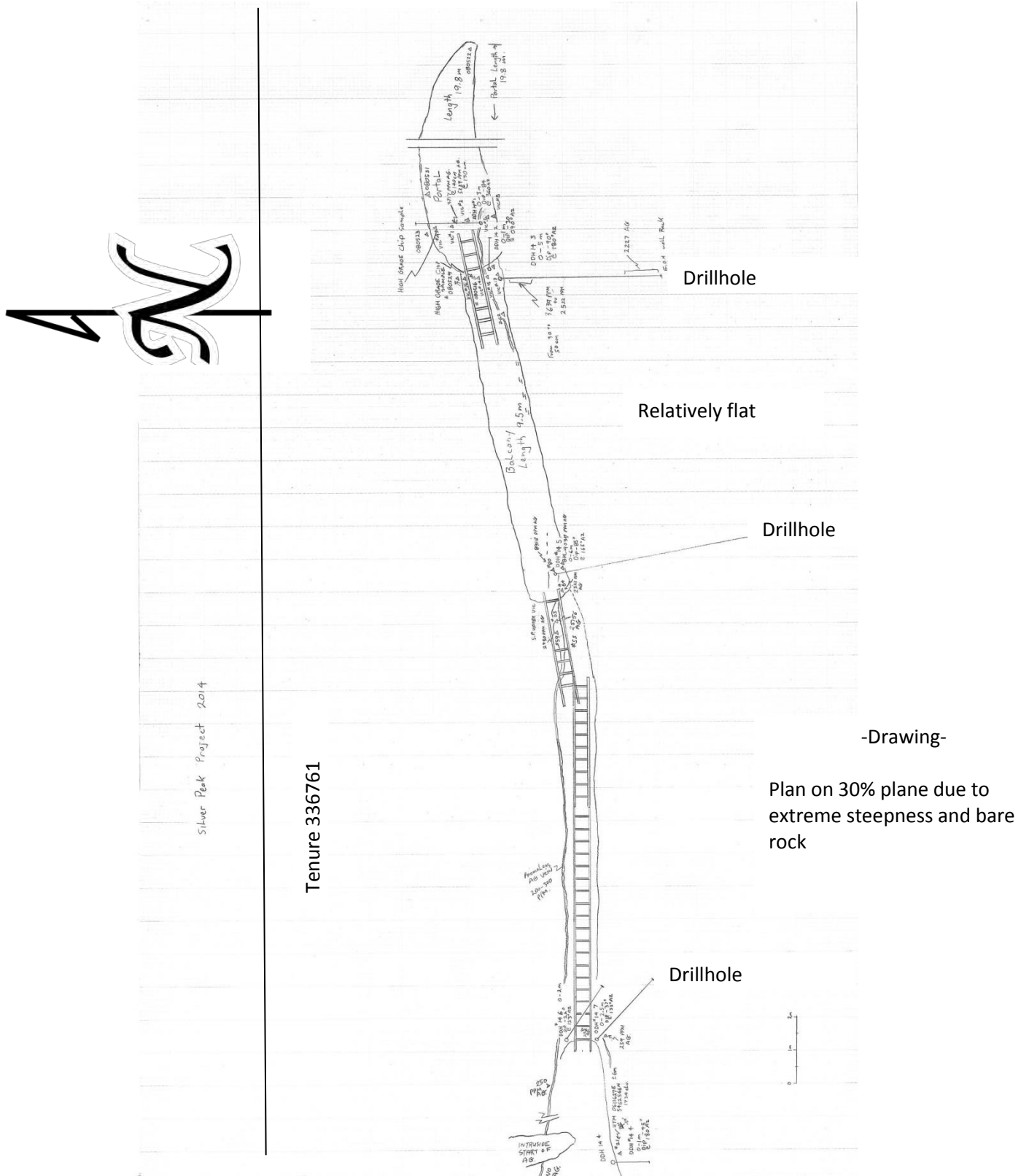


Figure 14 Silver Peak Project 2014 (see figures 15a, 15b and 15c for details)  
 This entire figure is on Tenure #336761

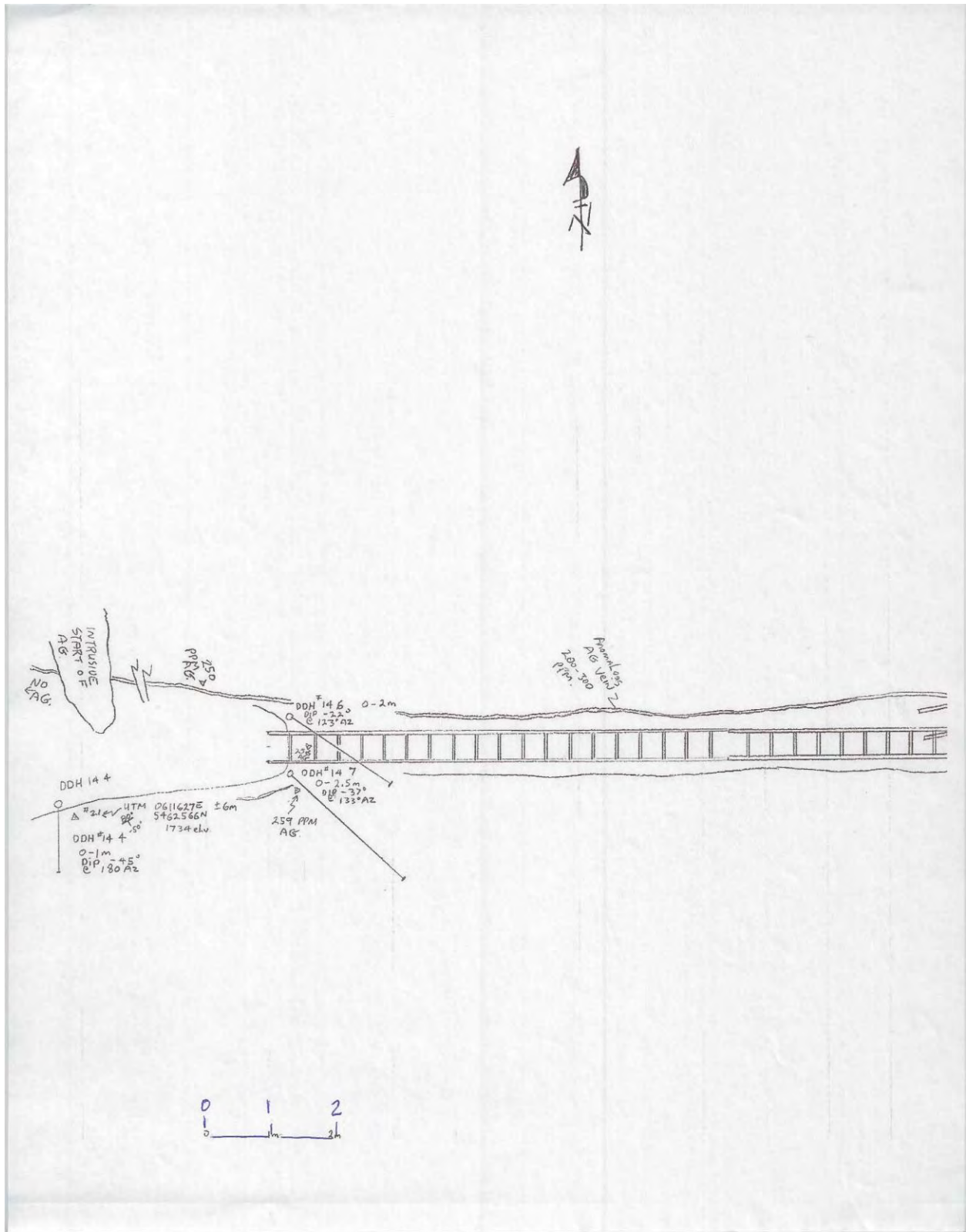


Figure 14a Silver Peak Project 2014 Details

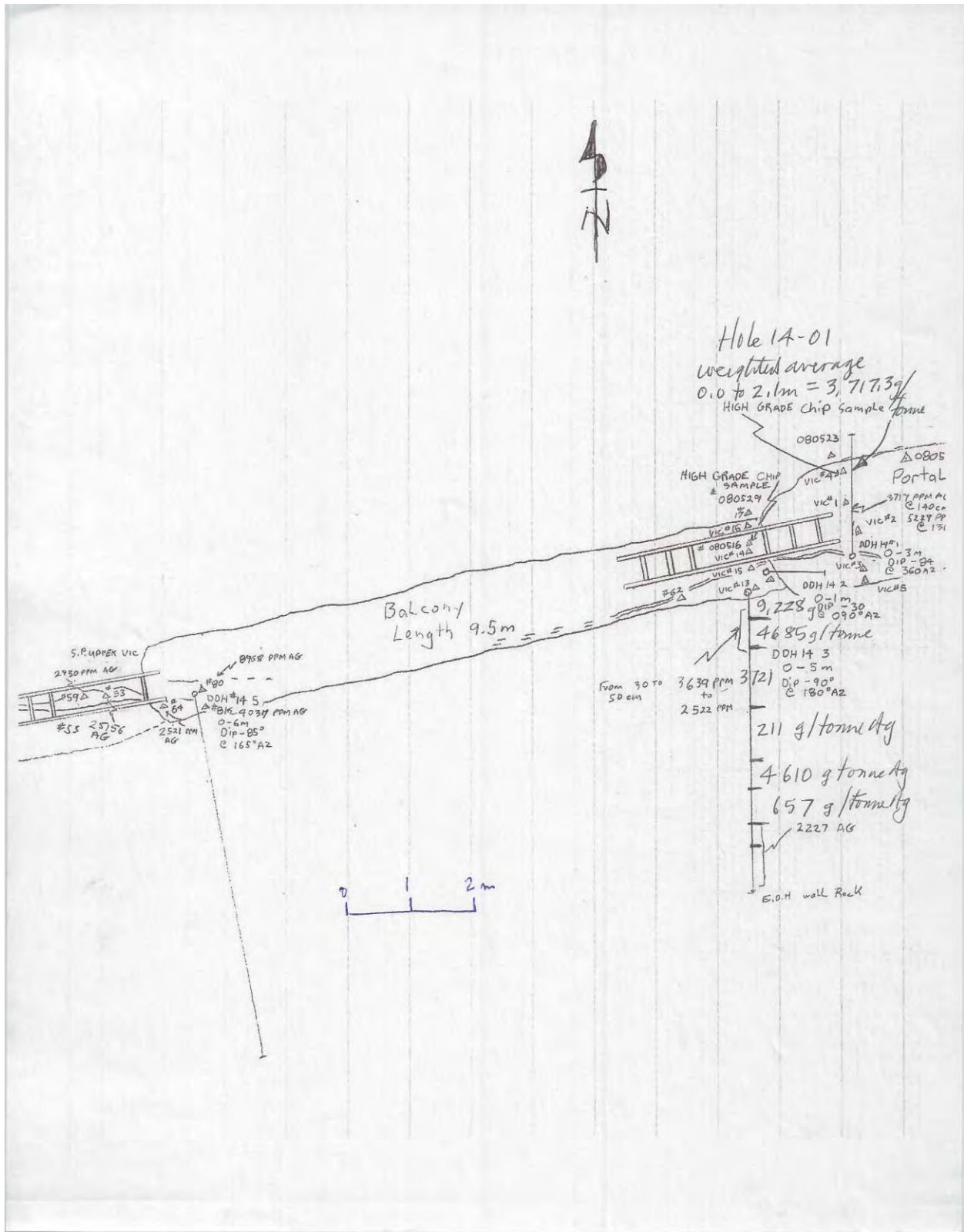


Figure 14b Silver Peak Project 2014 Details

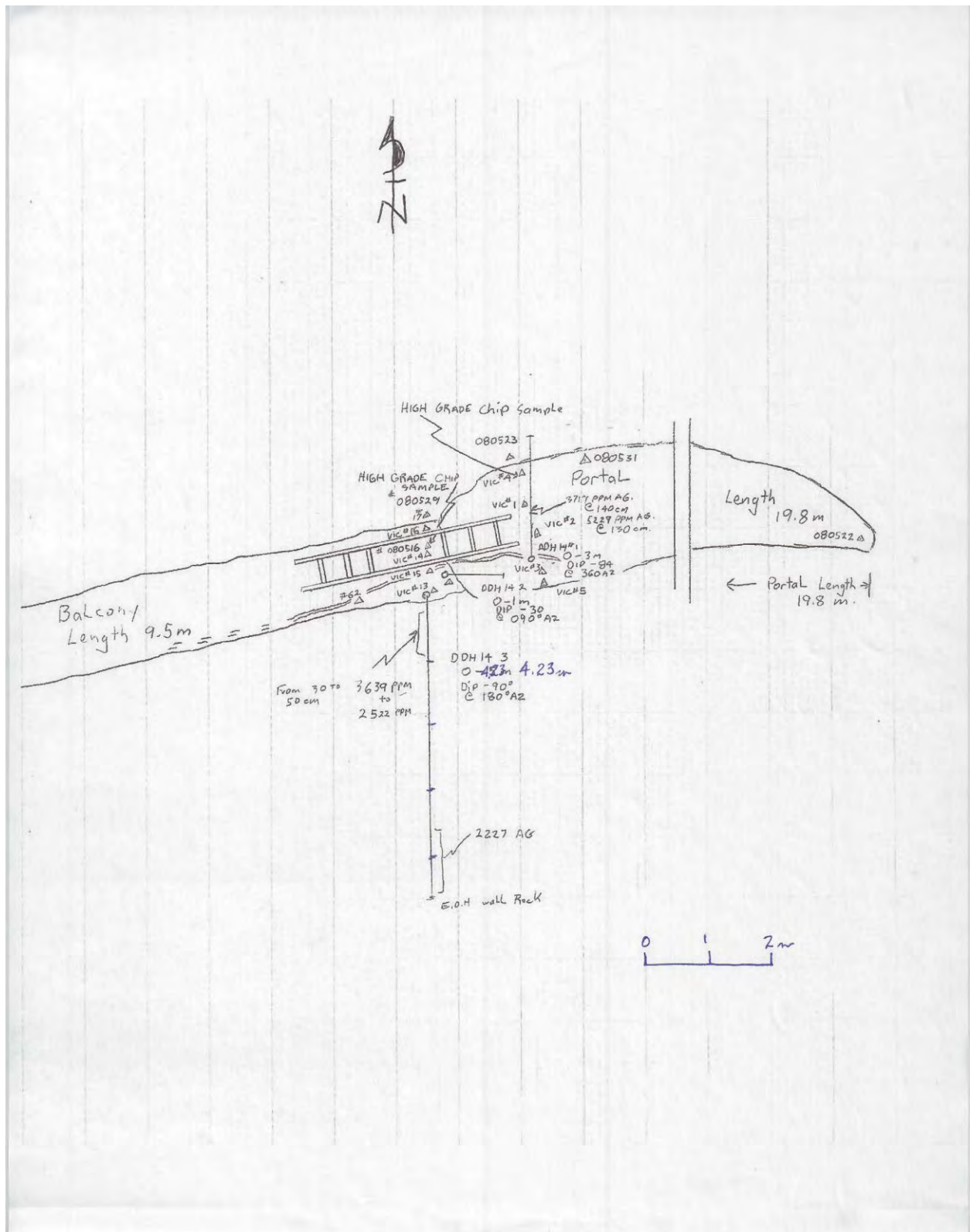
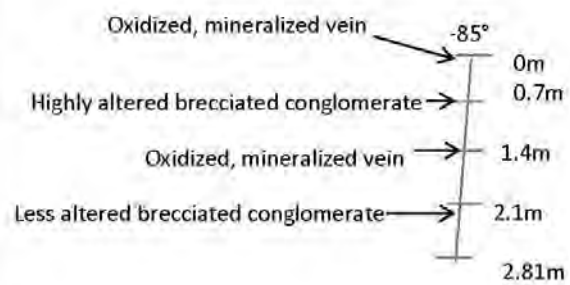


Figure 14c Silver Peak Project 2014 Details

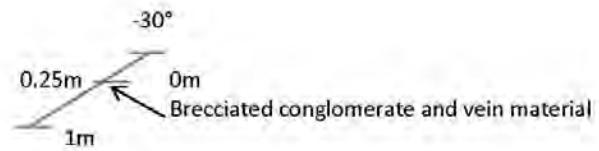


Cross Section DH14-1

Scale 1cm=1m

Figure 15a





Cross Section DH14-2

Scale 2cm=1m

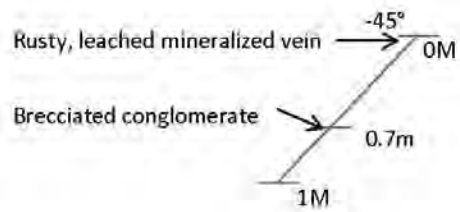
Figure 15b



Cross Section DH14-3

Scale 1cm=1m

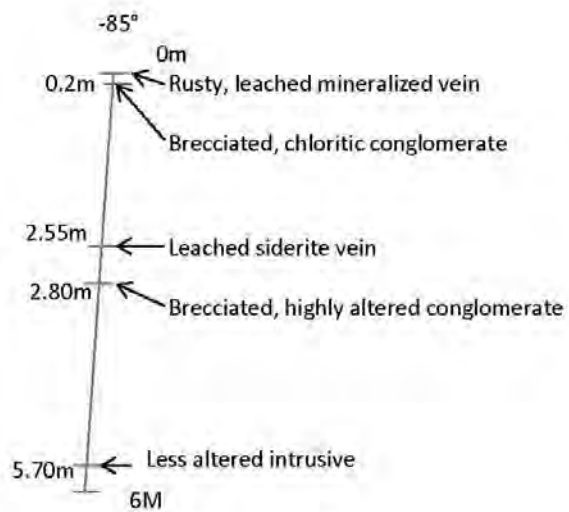
Figure 15c



Cross Section DH14-4

Scale 2Cm=1m

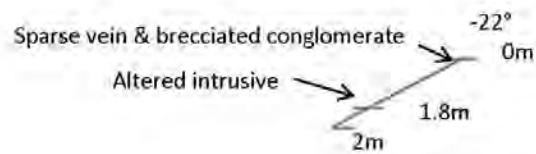
Figure 15d



Cross Section DH14-5

Scale 1cm=1m

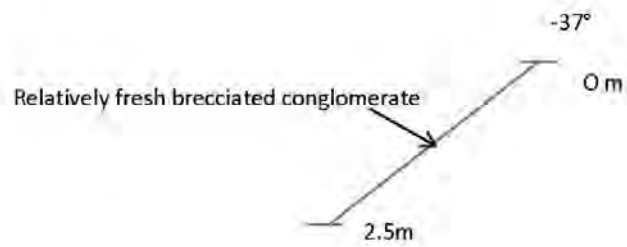
Figure 15e



Cross Section DH14-6

Scale 1cm=1m

Figure 15f



Cross Section DH14-7

Scale 1cm=1m

Figure 15g

## DRILLING 2014

Core drilling in 2014 was successful in delineating the continuity of the high-grade silver values and mineralogy within the vein system. A total of seven very short holes were completed.

Table 2  
Diamond Drill Holes 2014

Hole #	Northing	Easting	Dip	Azimuth	Elevation (m)	Length (m)
14-01	5462568	611654.85	-84°	360°	1783	2.81
14-02	5462567.9	611653.60	-30°	090°	1783	1.00
14-03	5462567.8	611653.10	-90°	180°	1780	4.23
14-04	5462566	0611627	-45°	180°	1734	1.00
14-05	5462566.9	611644.7	-85°	165°	1774	6.00
14-06	5462566.9	611630.7	-22°	123°	1754	2.00
14-07	5462566.5	611630.7	-37°	133°	1754	2.50

Total 19.73m

Drilling was completed using a Portable Shaw Drill giving E-size core. Drill logs are contained in Appendix IV.

Holes were mainly down-dip but demonstrated continuity of silver values.

Drill hole 14-03 was sawn in half and assayed at AGAT Labs. Weight average from 0 to 3.31m averages 3,496.91 g/tonne silver (102oz/ton Ag). Drill hole 14-01 also was split and sent to AGAT Labs and assayed a weighted average from 0-2.1m of 2,717.3g/tonne (108.44oz/ton). Numerous spot XRF assays using a hand held XRF Unit gave high silver values.

Assays were conducted by using an XRF Unit factory calibrated (Cert No. 0154-0557-1) on October 30, 2013, Instrument #540557 Type Olympus DPO-2000 Delta Premium. The instrument was calibrated using Alloy Certified reference materials by ARM1 and NIS5 standards. Only certified operators were employed and that were experienced in XRF assay procedures. Read times were 120 seconds or greater.

The core is stored at Unit 5 – 2330 Tyner Street, Port Coquitlam, BC.

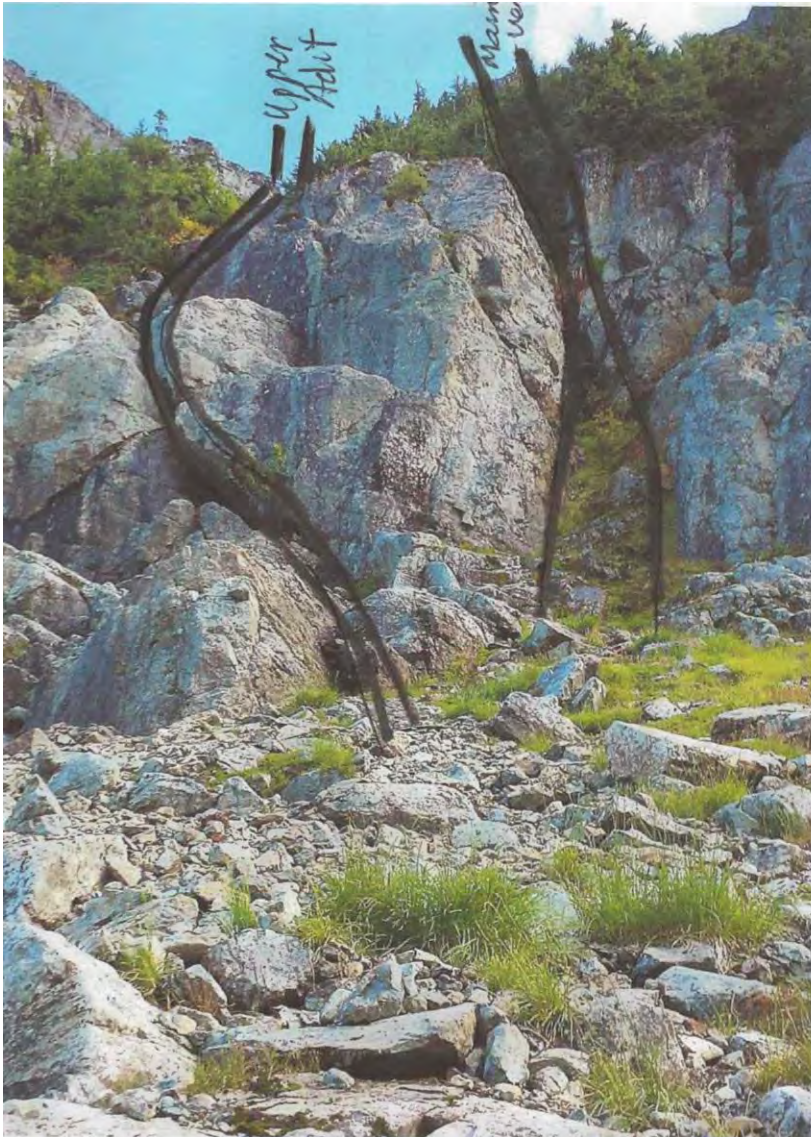


Photo 4: Upper Adit Veins at Lower Elevations

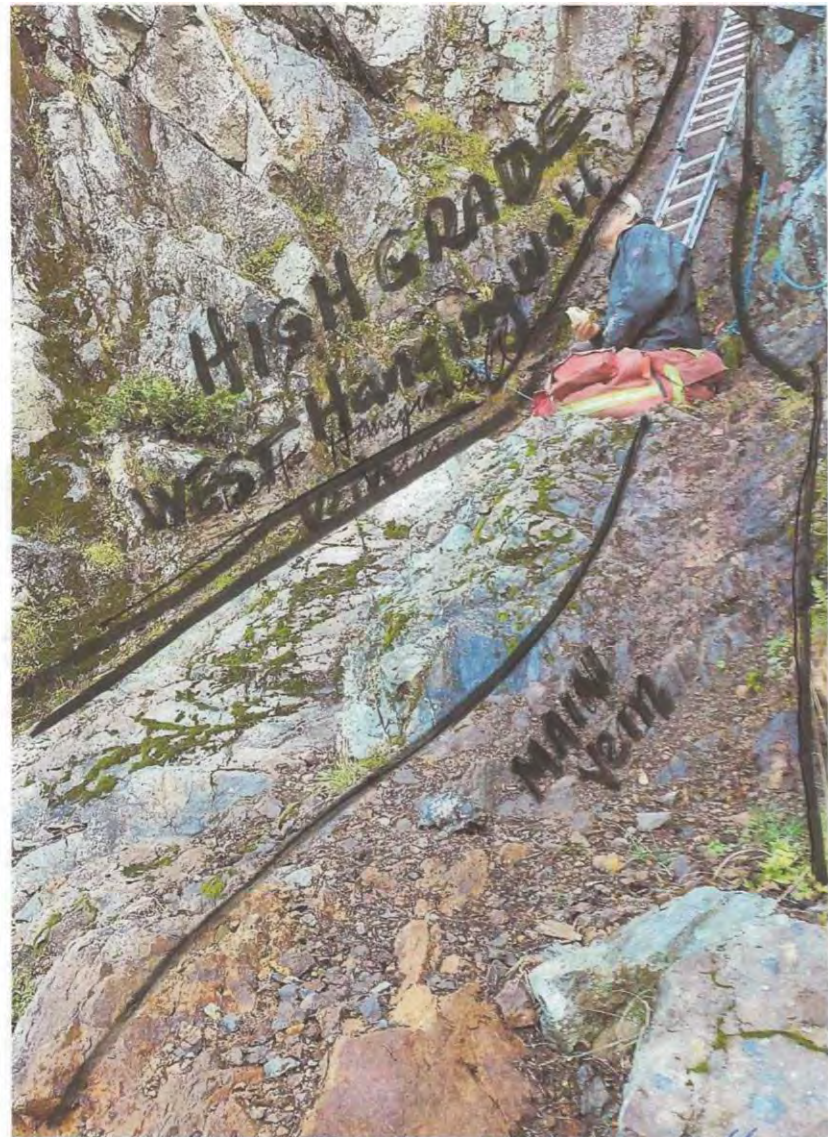


Photo 3: Joining of the West (high-grade) Hanging Wall Vein and the Low-Grade Main Vein





Photo 5: Bifurcating Vein System at the Lower Portal



Photo 6: Hole 14-03

## INTERPRETATION and CONCLUSIONS

The bifurcating nature of the vein system as observed above the lower Victoria Portal was confirmed at the Upper Adit and drilled area. The constituent veins branch and coalesce vertically as well as horizontally. The high grade vein is not a separate unrelated vein at some unknown relationship to the “main” vein but rather an integral part of the bifurcating nature of the entire Victoria vein system (see attached photos). The high-grade portion of the system can more accurately be referred to as the “West Hangingwall Branch” of the vein system.

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Samples collected from the lower extension (to be confirmed by XRF) of the high-grade hangingwall were found at least 110m in elevation below the drilled area (and 100m west of the Lower Portal). The area above the Upper Adit should also be prospected by Helicopter access. The old reports of high-grade at the “Glory Hole” should be quantified (to the west on the Eureka System but perhaps more related to the rhyolite sill).

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The shape of a larger drill program is emerging whereby drillsites can be located to the west (1) along the lower bench near the 1860’s cabin site; (2) build a drillsite west of the Lower Portal on the trail up to the 1860’s cabin site. These holes will cross-cut the 2 segments of the off-set vein systems.

The Eureka-Victoria Mine was the first Crown-granted mineral property in British Columbia. A substantial unknown quantity of high-grade oxidized silver ore was produced between 1868 and 1874. Grades of oxide material range up to 500-600 oz/ton silver. Primary mineralization consists of silver-rich tetrahedrite (friebergite) in a siderite-quartz gangue. Underground drifting in 1924, 1962, 1971 and 1981 has suggested a mineral inventory on the eastern portion of the Eureka vein of 54,000 tons averaging 13.10 oz/ton silver. The vein system consists of three main veins: (1) Eureka, (2) Victoria (formerly Van Bremmer) and the (3) Victoria West. The veins strike about 053° and dip steeply to the southeast. Several smaller veins are known at lower elevations. None of the veins has been tested at depth, although the Eureka Vein has been traced over 300 metres of dip length and is open down dip.

The mine has been developed on several levels and raises between the levels. Access is available by a combination of logging and mining roads that have recently been cleaned out and repaired in 2009. The road is now driveable to the workings.

Exploration in the past has been hampered by a lack of detailed survey control. Accurate survey control will be especially important as the vein system is tested at depth. A three-phase exploration program is recommended to establish transit and EDM survey control, geologically map the area around the vein system, diamond-drill to test the veins at depth and bulk sample the eastern part of the Eureka vein.

The portal of the Eureka drift requires stabilization and the raise in the Sunray Cross-cut needs ladders to access the Eureka level.

The Silver Peak Project encompasses about 1,464.1 ha in 8 claims. Current anniversary dates range from October 3, 2012 to October 30, 2014. Permits currently in good standing are MX-7-189 (Mine#0700610) with the Ministry of Energy, Mines and Petroleum Resources (MEMPR) covering exploration and bulk sampling up to 10,000 tonnes.

High grade silver veins were first discovered prior to 1868 and considerable ore was shipped up until 1874. Assays of remnant oxide material are recorded up to 658 oz./Ag per ton.

The property is located 6 km south of the Town of Hope, BC, Canada. A logging/mining road extends to the workings. Presently, access has been reopened and the workings are accessible by 4x4 vehicles.

The area is underlain by chloritized Eocene-age conglomerate on the east side of a major regional structure called the Hope Fault. To the east and south is granodiorite of the Oligocene to Miocene Mount Barr batholith. To the west is the Cretaceous quartz diorite of the Spuzzum Pluton. On the north is the zoned Eocene Silver Creek Stock composed of quartz diorite.

The mineralized zones are called the Eureka, Victoria (formerly the Van Bremer) and Victoria West. Numerous other minor zones cross the Glory Hole gulch below the Eureka lode which require investigation.

The Eureka vein has been traced across the summit of Silver Peak for about 668 metres striking 053°, varying in width from 1.5 to 6 metres and dipping steeply to the southeast (75°-80°SE). The Eureka Zone has been defined over 1,000 feet (300m) down dip. The zone is open down dip and along strike.

The Victoria Vein has been traced for about 625 metres on the southwestern slopes of Silver Peak. The depth to which the Victoria mineralization persists has not been defined by work to date nor has any resource been calculated for the Victoria. In 1924 a 1.4m adit was driven and a sample over 36cm assayed 399.43 g/tonne (11.65 oz./ton). About 70m above an adit was driven for 20m. A sample taken from the portal across 35.6cm assayed 22,574.59 g/tonne (658.43 oz./ton Ag). Further check samples have been collected.

The Victoria West Zone has traced approximately 366m. No previous work is known on the Victoria West Zone. Future exploration programs need to take into account the expected presence of new zones within the vein system and further define the Victoria West Zone.

Previous work, as documented by B.E. Spencer, P.Eng., May 25, 1982, gives estimates for two zones on the northeast portion of the Eureka vein of indicated and inferred of 54,000 tons at 13.10 oz./ton silver (449.15g/tonne), from close spaced underground sampling using a stoping width of 0.914m. Recent sampling in 2010 has confirmed these grades up to 874 g/tonne (25.55 oz/ton Ag).

To the northeast approximately 500m to 600m, there are anomalous silver values in soil suggestive that the zones might continue to the northeast under overburden cover and possibly even further.

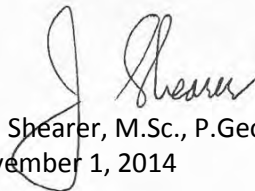
In summary, the Eureka Vein shows a documented preliminary resource over an explored 150m section of vein of about 54,000 tons. The vein is known over a distance of over 500metres of unexplored length and possibly covered for an equal length to the northeast suggestive of a permissive geological potential volume of an additional possible approximately 400,000 tons. The Victoria vein holds a similar geological potential as the Eureka Vein at somewhat higher grade of silver. The Victoria West is largely unknown. Given a down dip possibility of 450m or greater (the northeast extension is at an elevation 240m below the lower level workings), the geological potential of the Eureka and Victoria veins based on past exploration is approximately 1.35 million tonnes (both veins over a strike length of 1200m and a dip extent of 450m by an average 0.9m to 1.5m wide, ore shoots of 75m long, spaced 100m apart) with an average grade of 13oz/ton (could be higher due to the effect of the Victoria high grade) gives in the order of a global geological 17.7 million ounces of potential silver in each vein (or a total of about 35 million ounces of Ag). The reader should note that these figures are geological potential and not resources as per NI 43-101 standards. This appears on the basis of available data to be the order of magnitude of the potential mineralization at Silver Peak. A few kilometres to the west is a gold vein at much lower elevations. Gold content would be expected to increase at depth. The strike extent and down dip continuity is still open in this analysis.

In 2011, the road was further upgraded, the Upper Victoria drift was sampled and the Lower Adit was driven by company personnel and sampled.

The new Lower Victoria drift driven in 2011 by Homegold personnel returned generally low silver values (see Photo 1) demonstrates how the Lower Victoria splits and bifurcates over a wide horizontal distance. Future plans call for a raise up to the Upper Victoria drift. The high-grade demonstrate silver grades up to 15,517.0 g/tonne Ag, 4.3% Pb and 2.94% Cu. Bi ran 2756ppm.

An exploration program of bulk sampling at a cost of \$60,000 (see next page) and detail geological mapping, follow-up soil sampling, survey control and diamond drilling is recommended to test the mineral potential at a nominal cost of Phase II of \$246,000. Further work will be required contingent on success of Phase II.

Respectfully submitted,



J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)  
November 1, 2014

## RECOMMENDATIONS

Timing – September 2<sup>nd</sup> to October 15<sup>th</sup> 2014

Scope of Work:

Phase 1 – 100 tonnes

Phase 2 – 100 additional tonnes

Average Grade - >100oz/ton Silver

Rationale:

Approx. 13,300 oz. @ \$19 x 77% = \$195,135 (minus costs)

>3000g/tonne = 74%

>4000g/tonne = 77%

100 oz/ton = 3428g

117 oz/ton = 4000g

Treatment/refining

Assays control/containers - \$152/ton extra

Phase 1

(a)	Clean road old cabin to Lower Victoria and smooth out lower section Sept. 2-4, 3 days @ \$2000/day	\$ 6,000.00
(b)	Set up small fly camp?	1,000.00
(c)	Secure cableway (zipline)	5,000.00
(d)	Pluggger drill balcony to just inside Portal 1m wide x 20m long x 2m deep x 2.6 SG = 114 tonnes	3,000.00
(e)	Explosives	4,000.00
(f)	Hand muck to bags and down zipline	15,000.00
(g)	Truck downhill 5T per trip, 20 trips, 10 days (using smaller 5 ton truck)	3,000.00
(h)	Truck to crusher	2,000.00
(i)	Crush to 3/8 inch minus @ \$10 per tonne	1,000.00
(j)	Arms-length sampling (guestimate, might be less)	5,000.00
(k)	Deliver to container in Vancouver	1,000.00
(l)	Miscellaneous – ATV, light trucks for program, hotel, meals, food for camp, fuel, small bags, rope (?)	6,000.00
(m)	Put road to bed	3,000.00
(n)	Contingencies 10% (possible rental of XRF)	5,000.00
	<b>Total</b>	<b>\$ 60,000.00</b>

Note: We are then in a position to evaluate Phase 2. A platform anchored to the face will be required, might be better in 2015.

Technical Consulting

7,000

Chip and channel sampling, grade control	6,000
Assays	20,000
Office Staff/Accounting	14,000
Communication	1,400
Office Rent (Hope), Office equipment	3,500
Transportation	700
Equipment Lease	-
EIA and related costs	3,000
Permits & assoc. costs	15,000
Legal, Insurance & Other	24,000
<b>TOTAL</b>	<b>94,600</b>

## REFERENCES

British Columbia Minister of Mines, Annual Report:

1874, p.15; 1875, p.17; 1890, p.378; 1902, p.196; 1921, p.197;  
1924, p.138; 1926, p. 198; 1962, p.92; 1963, p.90; 1968, p.78.

Cairnes, C. E., 1921:

Coquihalla Area, British Columbia, Geological Survey of Canada, Sum. Rept., 1920, Pt A, pp 23-41.

1924a:

Reconnaissance of Silver Creek, Skagit and Similkameen Rivers, Yale District B.C., Geological Survey of Canada, Sum. Rept., 1923, Pt A, pp 46-80.

1924b:

Coquihalla Area, British Columbia, Geological Survey of Canada, Memoir 139, 187 pp.

1944:

Hope Area, Geological Survey of Canada, Map 737A, 1" = 4 miles, 1 sheet.

Krueckl, G. P., 1983:

Field Program Report on the Eureka-Victoria Property, Hope, B.C., Private Report for Vanstates Resources Ltd., dated December 12, 1983, 6 pp.

Lloyd, J., 1983:

VLF-EM Report on the Silver Peak Area. Assessment Report 11057 for Lynn Beard, Feb. 1983.

McTaggart, K. C. and Thompson, R. M., 1967:

Geology of part of the Northern Cascades in Southern British Columbia. Canadian Journal of Earth Sciences, Vol. 4, pp 1199-1228.

Monger, J. W. H., 1970:

Hope Map-Area, West Half, British Columbia, Geological Survey of Canada, Paper 69-47, 75 pp.

Richards, T. A. and McTaggart, K. C., 1976:

Granitic Rocks of the Southern Coast Plutonic Complex and Northern Cascades of British Columbia, Geological Society of America Bulletin, V87, pp. 935-953.

Shearer, J. T., 1983:

Diamond Drilling and Prospecting Report on the Hunter Group, 92H/5E + 6W. Assessment Report #18,235, October 8, 1983, 12 pp.

1996:

Geological and Prospecting Report on the Eureka-Victoria Mine.

1998:  
Summary Report on the Eureka-Victoria Mine, 16 pp.

2001:  
Geological and Prospecting Assessment Report on the Eureka-Victoria Mine, 18pp.

2011:  
Assessment Report on the Eureka-Victoria Mine, for Homegold Resources Ltd., 22pp.

Spencer, B. E., 1980a:  
Report on the Eureka-Victoria Property for Vanstates Resources Ltd., September 2, 1980, 9pp.

1980b:  
Progress Report on the Eureka-Victoria Property for Vanstates Resources Ltd., December 5, 1980, 8pp.

1981a:

Summary Report on the Eureka-Victoria Property, Private Report in the Vanstates Prospectus, dated February 5, 1981.

1981b:  
Report on the Lucky Chance Mineral Claims for Vanstates Resources Ltd., May 25, 1981, 3pp.

1981c:  
Report on the Eureka-Victoria Exploration Project for Vanstates Resources Ltd., June 9, 1981, 3pp.

1982a:  
Progress Report on the Eureka-Victoria Property for Vanstates Resources Ltd., May 25, 1982, (Ore Reserve Calculation and Witteck Metallurgical Reports).

1982b:  
Report on the Eureka-Victoria Property for Vanstates Resources Ltd., September 27, 1982, 10pp.

1982c:  
Report on the Eureka-Victoria Property, Hope, B.C., Private Report for Vanstates Resources Ltd., dated September 27, 1982, 10 pp.

Yorston, R., 1990:  
Assessment Report 20491 for Guinet Management, September 1990.



**APPENDIX I**

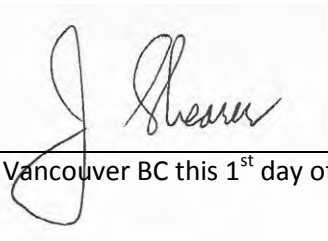
**STATEMENT of QUALIFICATIONS**

**NOVEMBER 1, 2014**

## STATEMENT of QUALIFICATIONS

I J. T. (Jo) Shearer, of Unit 5 – 2330 Tyner St. Port Coquitlam, BC, V3C 2Z1, do hereby certify that:

1. I am an independent consulting geologist and principal of Homegold Resources Ltd.
2. My academic qualifications are:
  - Bachelor of Science, Honours Geology from the University of British Columbia, 1973
  - Associate of the Royal School of Mines (ARSM) from the Imperial College of Science and Technology in London, England in 1977 in Mineral Exploration
  - Master of Science from the University of London, 1977
3. My professional associations are:
  - Member of the Association of Professional Engineers and Geoscientists in the Province of British Columbia, Canada, Member #19,279 and the APGO in Ontario, Member 1867.
  - Fellow of the Geological Association of Canada, Fellow #F439
  - Elected Fellow of SEG (Society of Economic Geologists)
4. I have been professionally active in the mining industry continuously for over 40 years since initial graduation from university. I have personally worked on several epithermal precious metal properties.
5. I am responsible for the preparation of all sections of the technical report entitled "Assessment Report on the Eureka-Victoria Mine Project, Westminster Mining Divisions dated November 1, 2014" for Homegold Resources Ltd. I have carried out mapping and sample collection and am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Silver Peak Project (Eureka-Victoria Mine) by examining in detail the available reports and maps and have discussed previous work with persons knowledgeable of the area.



Signed at Vancouver BC this 1<sup>st</sup> day of November, 2014

J. T. Shearer, M.Sc., P.Geo.  
Qualified Person

**APPENDIX II**

**STATEMENT of COSTS**

**NOVEMBER 1, 2014**

Appendix II  
Statement of Costs 2014

	Total
Wages	
J.T. Shearer, M.Sc., P.Geo., 8 days @ \$700/day, July, 11, 24, Aug. 3,5,6,10,15,18,19,25, 2014	\$ 5,600.00
Expenses	
Truck, Fully equipped 4x4, 23 days @ \$75/day	1,725.00
Food & Meals	904.69
Fuel	1,227.98
Supplies for Shaw Drill	4,095.43
Hotel	3,135.75
Milton Mankowske, 12 days @ \$375/day, June 24+26, Sept. 27, October 1-15, 2014	4,500.00
Milton Mankowske, Drilling, 21 Days @ \$375/day July 21, 28, Aug. 1-19, 2014	7,875.00
Jeremy Marlow, Drill Helper, 5 days @ \$300/day	1,500.00
Jared Put, Drill Helper, 12 days @ \$300/day	3,600.00
ATV, 19 days @ \$50/day	950.00
Genex	1,317.28
ATAT Laboratories, Invoices 14K55821M+14K58759M	1407.40
Tri-West Contracting, Invoices 2622 (storage)	100.00
Tri-west Contracting, Invoice 2592 (excavator work on road)	9,118.30
XRF Rental, Romquest Technologies	2,140.00
<b>Grand Total</b>	<b>\$ 49,196.83</b>

Event #	5527167
Date	October 20, 2014
File	\$33,936.12
PAC Debit	\$10,063.88
Total	\$44,000.00

**APPENDIX III**

**SAMPLE DESCRIPTIONS**

**NOVEMBER 1, 2014**

## Appendix III

### Sample Descriptions

Sample Interval	Description
DDH-14-1 0-0.7m	Oxidized Mineralized Vein – rubbly core, rusted leached appearance
DDH-14-1 0.7-1.4m	Highly Altered Brecciated Conglomerate – mineralized, quite rusty, come short sections of heavy vein near lower part
DDH-14-1 1.4-2.1m	Oxidized Mineralized Vein – very rusty, rubbly core, fragments in vein, some sections vuggy, leached
DDH-14-1 2.1-2.8m	Less Altered Brecciated Conglomerate – close packed pebbles, some rusty spots, some cross-cutting vein material
DDH-14-3 0-0.35m	Rubble; highly oxidized vein material, highly mineralized, at 0.34m XRF reading of 348g minor malachite
DDH-14-3 0.35-0.87m	Lower grade wall rocks, ore at 0° to core axis, wavy contact, undulating, rounded “breccia” fragments
DDH-14-3 0.87-1.95m	Grade at contact 3639g – very vuggy – xl lend chocolate brown, some metallic polishing
DDH-14-3 1.95-2.90m	Conglomerate (Eocene) broken and rusty
DDH-14-3 2.90-3.31m	Less altered fresher conglomerate, vugs right through core
DDH-14-3 3.31-3.81m	Less altered conglomerate, very vuggy; pyrite/siderite/arsenopyrite

Samples Analyzed by XRF (Assay results in Appendix V) Plotted on Figure 14

SP15-6 – SP15-10  
 SP Upper Vic1 to SP Upper Vic 81  
 DDH-14-1-1 to DDH-15-1-9  
 DDH-14-2-0 to DDH-14-2-1  
 DDH-14-3-0 to DDH-14-3-10  
 DDH-14-4-0 to DDH-14-4-2  
 Portal, High-grade vein

These samples are all vein material in and around the Upper Victoria Workings. Results are plotted on Figure 14. Spot XRF readings on the drill core are on heavy sulfide mineralization.

Sample Descriptions  
of Samples Collected at Lower Elevations of the Hanging Wall Vein

Yellow crust on Sample in vein material  
XRF Results

Le	44.40
Si	12.55
S	11.24
Pb	12.69
Fe	6.04
P	3242
Cl	2.36
Sb	3.58
Ca	3.11

As	9568
Ta	3975
K	3984
Ag	4191
Cu	561
Sn	746
Cd	610
Zn	398
Nb	328
Mo	134

Previous XRF on Yellow Crust  
XRF Results

127	
Cu	6.95
Fe	4.21
S	3117
Ag	151
As	171
Sb	156
Pb	553

Dyke, Igneous Dyke, feldspar phenos,  
fine grained dark matrix

XRF Results

Le	60.19
Si	28.29
Al	5.45
Fe	2.70
K	2.26
Ca	3207
P	2647
Ti	2027
S	1370
Mn	788
V	361
Zr	135
Zn	134
Rb	70
Sr	63
As	62
Cu	43
Y	25

**APPENDIX IV**

**DRILL LOGS**

**NOVEMBER 1, 2014**







# HOMEGOLD RESOURCES LTD.

## SILVER PEAK PROJECT

**SECTION:** DH-14-03

**Diamond Drill Log**

**DDH#:** DH 14 #3

Northing: 5462567.8  
 Easting: 611653.10  
 Elevation: 1780m  
 Azimuth: 180  
 Inclination: -90  
 Grid: N  
 Length (m): 4.23m  
 Core size: E-size  
 Contractor: Mankowske  
 Drill Type: Shaw Drill

Drill Hole survey		
Method: <u>Brunton</u>		
Azimuth	Dip	Depth
180	-90	Collar

Property: Silver Peak  
 NTS: 92H/6W  
 Claim: 336760  
 Date Started: Aug. 13, 2014  
 Date Completed: Aug. 13, 2014  
 Logged by: J.T. Shearer,  
M.Sc., P.Geo.

Samples Split: Logged on August 15, 2014

Purpose: To test down-dip continuity of vein mineralogy and grade

from (m)	to (m)	Description	from/to	width (m)	Ag g/tonne
0.00	0.34	Rubble; highly oxidized vein material, highly mineralized, at 0.34m XRF reading of 348g minor malachite	0-0.35	0.35	9,228
0.34	1.27	Lower grade wall rocks, ore at 0° to core axis, wavy contact, undulating, rounded "breccia" fragments Breccia pipe? Matrix supported?	0.35-0.87	0.52	4,685
1.27	1.75	Grade at contact 3639g – very vuggy – xl lend chocolate brown, some metallic polishing at 1.42; at 1.57 XRF 1101g; at 170 SRF 327	0.87-1.95	1.08	3,721
1.75	2.19	Conglomerate (Eocene) broken and rusty	1.95-2.90	0.95	211
2.19	3.29	Less altered fresher conglomerate, vugs right through core	2.90-3.31	0.41	4,610
3.29	3.62	High grade mineralization; XRF 2227g at 3.3.m, lower contact 10° to core axis			
3.62	3.99	Less altered conglomerate, very vuggy; pyrite/siderite/arsenopyrite	3.31-3.81	0.50	657
3.99	4.23	DYKE , porphyritic altered felsite; abundant quartz eyes, 5-10% mafics, orange feldspar, Granodiorite?			
<b>End of Hole 5m</b>					
NOTE: weighted average of 3,496.91 g/tonne over 3.31m (102oz/ton)					









**APPENDIX V**

**XRF RESULTS and LAB ASSAYS**

**NOVEMBER 1, 2014**



CLIENT NAME: HOMEGOLD RESOURCES LTD.  
UNIT# 5-2330 TYNER STREET  
PORT COQUITLAM, BC V3C2Z1  
(604) 696-1022

ATTENTION TO: JO SHEARER

PROJECT NO: Silver Peak Project

AGAT WORK ORDER: 14V879293

SOLID ANALYSIS REVIEWED BY: Ron Cardinall, Certified Assayer - Director - Technical Services (Mining)

DATE REPORTED: Aug 29, 2014

PAGES (INCLUDING COVER): 6

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

\*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



## Certificate of Analysis

AGAT WORK ORDER: 14V879293

PROJECT NO: Silver Peak Project

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: HOMEGOLD RESOURCES LTD.

ATTENTION TO: JO SHEARER

(202-064) Fire Assay - Au Ore Grade, Gravimetric finish

DATE SAMPLED: Aug 22, 2014

DATE RECEIVED: Aug 21, 2014

DATE REPORTED: Aug 29, 2014

SAMPLE TYPE: Drill Core

Analyte:	Sample Login Weight	Au
Unit:	kg	ppm
Sample ID (AGAT ID)	RDL:	0.01 0.05
DDH-14-3 0-0.35m (5723662)	0.06	0.20
DDH-14-3 0.35-0.87m (5723663)	0.13	0.83
DDH-14-3 0.87-1.95m (5723664)	0.26	0.93
DDH-14-3 1.95-2.90m (5723665)	0.25	<0.05
DDH-14-3 2.90-3.31m (5723666)	0.14	0.26
DDH-14-3 3.31-3.81m (5723667)	0.16	0.07
DDH-14-1 0-0.7m (5723668)	0.12	0.07
DDH-14-1 0.7-1.4m (5723669)	0.16	<0.05
DDH-14-1 1.4-2.1m (5723670)	0.16	1.05
DDH-14-1 2.1-2.8m (5723671)	0.15	0.07

Comments: RDL - Reported Detection Limit

Certified By:

*Ron Cardinal*



## Certificate of Analysis

AGAT WORK ORDER: 14V879293

PROJECT NO: Silver Peak Project

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: HOMEGOLD RESOURCES LTD.

ATTENTION TO: JO SHEARER

(202-066) Fire Assay - Ag Ore Grade, Gravimetric finish

DATE SAMPLED: Aug 22, 2014

DATE RECEIVED: Aug 21, 2014

DATE REPORTED: Aug 29, 2014

SAMPLE TYPE: Drill Core

Analyte:	Ag
Unit:	ppm
RDL:	5
Sample ID (AGAT ID)	
DDH-14-3 0-0.35m (5723662)	9228
DDH-14-3 0.35-0.87m (5723663)	4685
DDH-14-3 0.87-1.95m (5723664)	3721
DDH-14-3 1.95-2.90m (5723665)	211
DDH-14-3 2.90-3.31m (5723666)	4610
DDH-14-3 3.31-3.81m (5723667)	657
DDH-14-1 0-0.7m (5723668)	808
DDH-14-1 0.7-1.4m (5723669)	726
DDH-14-1 1.4-2.1m (5723670)	9618
DDH-14-1 2.1-2.8m (5723671)	124

Comments: RDL - Reported Detection Limit

Certified By:

*Ron Cardinal*



**AGAT** Laboratories

Quality Assurance - Replicate  
AGAT WORK ORDER: 14V879293  
PROJECT NO: Silver Peak Project

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: HOMEGOLD RESOURCES LTD.

ATTENTION TO: JO SHEARER

Parameter														



**AGAT** Laboratories

Quality Assurance - Certified Reference materials

AGAT WORK ORDER: 14V879293

PROJECT NO: Silver Peak Project

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: HOMEGOLD RESOURCES LTD.

ATTENTION TO: JO SHEARER

Parameter														

## Method Summary

CLIENT NAME: HOMEGOLD RESOURCES LTD.

AGAT WORK ORDER: 14V879293

PROJECT NO: Silver Peak Project

ATTENTION TO: JO SHEARER

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Sample Login Weight	MIN-12009		BALANCE
Au			GRAVIMETRIC
Ag	MIN-200-12004		GRAVIMETRIC

# XRF

x-ray fluorescence



## MEASUREMENT REPORT XMET7500 MINERALS LE

Name	Class	Date	Time	Duration				
sp 15 6	Soil_2Cond_FP	09/08/2014	17:04:01	61.2 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	19816	2298	2874	68	71	7339	54302	2343
±	179	62	34	25	20	31	156	22
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sb ppm	Pb ppm
	351	870	67	35	71	946	6912	8488
±	8	122	3	3	3	16	44	276

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp 15 7	Soil_2Cond_FP	09/08/2014	17:09:18	60.7 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	18059	3344	2659	72	11824	66644	5088	550
±	176	71	34	9	41	183	35	11
<b>Element</b>	As ppm	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sb ppm	Tl ppm
	2160	15	100	35	95	2959	15654	42
±	211	4	4	4	4	26	75	10
<b>Element</b>	Pb ppm							
	20228							
±	483							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp 15 8	Soil_2Cond_FP	09/08/2014	17:12:17	60.6 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	16839	3587	2479	72	12294	63319	4668	499
±	170	71	33	9	42	177	33	11
<b>Element</b>	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sb ppm	Tl ppm	Pb ppm
	1602	100	36	94	1854	14555	63	19864
±	203	4	3	4	21	70	10	464

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp 15 9	Soil_2Cond_FP	09/08/2014	17:20:28	62.6 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	23255	1831	4803	84	106	3980	47473	5511
±	192	58	41	30	24	23	138	31
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm
	165	438	70	32	86	391	65	2022
±	6	59	3	3	3	13	19	27
<b>Element</b>	Pb ppm							
	1983							
±	132							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp 15 10	Soil_2Cond_FP	09/08/2014	17:23:11	60.7 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	20687	1441	4281	94	107	3404	40610	4933
±	181	53	38	29	24	21	132	30
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm
	137	365	73	29	79	360	46	82
±	6	59	3	2	3	12	13	18
<b>Element</b>	Sb ppm	Ba ppm	Pb ppm					

± 1898 234 1986  
26 72 131  
PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp upper vic 1	Soil_2Cond_FP	10/08/2014	10:22:40	61.1 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	12166	5407	1669	40	15242	96696	9145	1179
±	153	84	30	10	50	229	51	17
<b>Element</b>	As ppm	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sb ppm	Tl ppm
	4602	23	96	43	109	1290	23252	212
±	319	5	5	5	6	25	103	15
<b>Element</b>	Pb ppm							
	36461							
±	738							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp upper vic 2	Soil_2Cond_FP	10/08/2014	10:25:49	61.2 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	6611	5259	877	35	10217	80555	12765	545
±	117	80	23	8	39	197	55	12
<b>Element</b>	As ppm	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm
	4271	14	43	15	51	4213	89	18235
±	211	4	3	3	3	27	22	78
<b>Element</b>	Tl ppm	Pb ppm						
	99	16118						
±	10	478						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp upper vic 3	Soil_2Cond_FP	10/08/2014	10:29:27	61.1 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	10849	4512	2251	57	8548	88406	6701	779
±	140	75	31	9	35	202	40	13
<b>Element</b>	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Tl ppm
	1909	41	40	50	1579	72	11662	53
±	164	3	3	4	19	21	59	8
<b>Element</b>	Pb ppm							
	11497							
±	371							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration				
sp upper vic 4	Soil_2Cond_FP	10/08/2014	10:32:48	61.1 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	13540	2300	2838	61	78	6199	57152	2195
±	146	57	32	24	20	28	154	21
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm
	336	626	31	39	46	426	60	3530
±	8	77	2	2	3	11	16	30
<b>Element</b>	Pb ppm							
	3261							
±	173							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:



Name	Class		Date	Time	Duration			
sp upper vic 5	Soil_2Cond_FP		10/08/2014	10:36:55	61.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	11743	4789	2844	54	7106	65164	3179	690
±	141	76	33	18	30	165	25	11
<b>Element</b>	As ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Ta ppm	Pb ppm
	980	49	57	263	77	1254	95	3887
±	90	3	3	13	21	27	29	201

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 6	Soil_2Cond_FP		11/08/2014	09:49:53	60.5 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	15684	889	2456	67	54	7539	59453	354
±	154	42	29	22	17	30	156	9
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Sb ppm	Pb ppm	
	316	868	54	27	57	222	261	
±	7	44	2	2	3	17	99	

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 7	Soil_2Cond_FP		11/08/2014	09:55:32	61.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	19240	991	3327	105	83	8080	82919	310
±	172	48	34	27	21	32	187	9
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Sn ppm	Sb ppm	Ba ppm
	492	892	68	43	59	82	346	244
±	10	57	3	3	4	19	22	74
<b>Element</b>	Pb ppm							
	783							
±	127							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 8	Soil_2Cond_FP		11/08/2014	10:03:44	60.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	13142	1055	2122	69	10306	30317	178	397
±	140	40	27	21	34	110	6	7
<b>Element</b>	As ppm	Rb ppm	Sr ppm	Zr ppm	Sn ppm	Sb ppm	Ba ppm	Pb ppm
	178	64	34	49	75	122	200	140
±	21	2	2	3	14	15	52	47

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 9	Soil_2Cond_FP		11/08/2014	10:07:49	61.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Mn ppm	Fe ppm	Ni ppm	Cu ppm
	15598	691	2908	68	9553	52157	18	270
±	156	39	31	24	34	146	5	8
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Sb ppm	Ba ppm	Pb ppm
	325	653	92	22	79	227	252	263
±	7	39	3	3	3	20	68	87

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 10	Soil_2Cond_FP		11/08/2014	10:11:59	61.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Ni ppm



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±	18830	1276	3130	87	76	5906	87374	35
	174	52	33	26	21	28	193	6
<b>Element</b>	Cu ppm	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Sn ppm	Sb ppm
	292	297	1310	100	57	189	87	150
±	9	8	58	4	3	4	22	24
<b>Element</b>	Ba ppm	Pb ppm						
	383	300						
±	83	128						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date		Time		Duration	
sp upper vic 11	Soil_2Cond_FP		11/08/2014		10:16:33		61.3 s	
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Mn ppm	Fe ppm	Ni ppm	Cu ppm
	11577	1624	3185	104	3947	33805	32	21
±	136	50	32	26	22	115	5	3
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Sn ppm	Sb ppm	Ba ppm
	69	186	48	79	92	68	70	271
±	3	18	2	2	3	14	15	53

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date		Time		Duration	
sp upper vic 12	Soil_2Cond_FP		11/08/2014		10:19:17		61.2 s	
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Ni ppm
	16878	1114	3210	86	85	7757	70335	18
±	162	48	33	26	22	31	170	5
<b>Element</b>	Cu ppm	Zn ppm	As ppm	Rb ppm	Sr ppm	Zr ppm	Sn ppm	Sb ppm
	219	562	519	74	35	60	85	275
±	8	10	48	3	3	3	18	21
<b>Element</b>	Ba ppm	Pb ppm						
	250	849						
±	68	108						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date		Time		Duration	
sp upper vic 13	Soil_2Cond_FP		11/08/2014		10:35:20		60.7 s	
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	12560	881	4582	90	8405	40245	16631	552
±	143	43	39	29	32	127	55	9
<b>Element</b>	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Ba ppm	Pb ppm
	42	64	54	113	52	69	195	57
±	2	2	3	10	16	17	61	24

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date		Time		Duration	
sp upper vic 14	Soil_2Cond_FP		11/08/2014		10:41:27		61.2 s	
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1290	6248	215	30	227	54257	26471	285
±	67	76	14	6	8	153	72	8
<b>Element</b>	As ppm	Rb ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Tl ppm	Pb ppm
	3304	20	23	1894	53	13445	23	8051
±	148	2	2	16	14	58	7	333

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date		Time		Duration	
sp upper vic 15	Soil_2Cond_FP		11/08/2014		10:48:40		60.9 s	
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm

±	1533	7088	300	17834	13894	17678	537	5965
	87	90	20	52	106	62	12	383
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
	118	123	56	140	2053	269	224	30069
±	6	6	5	6	28	25	33	121
<b>Element</b>	Au ppm	Hg ppm	Tl ppm	Pb ppm				
	248	129	350	63805				
±	17	14	15	914				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 16	Soil_2Cond_FP		11/08/2014	11:36:05	61.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1175	2398	206	107	9579	232692	8155	929
±	68	53	16	8	39	329	56	18
<b>Element</b>	As ppm	Rb ppm	Ag ppm	Sn ppm	Sb ppm	Pb ppm		
	1129	20	3430	139	8934	3233		
±	120	3	28	22	61	268		

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 17	Soil_2Cond_FP		11/08/2014	12:13:28	61.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	4573	12786	765	53	1508	173230	28442	1148
±	102	111	25	10	19	319	103	20
<b>Element</b>	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
	5861	58	18	45	10224	87	350	38882
±	208	5	4	5	48	23	33	138
<b>Element</b>	Au ppm	Pb ppm						
	228	5755						
±	18	462						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 18	Soil_2Cond_FP		11/08/2014	12:52:03	60.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	11464	2157	1301	41	2414	37336	3857	207
±	137	56	23	6	17	126	26	6
<b>Element</b>	As ppm	Rb ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Ba ppm	Tl ppm
	728	42	33	1295	95	5007	222	14
±	64	2	3	14	17	33	63	4
<b>Element</b>	Pb ppm							
	2099							
±	143							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 19	Soil_2Cond_FP		11/08/2014	13:04:47	60.7 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	10037	926	1365	90	24660	173750	2897	1658
±	130	45	25	8	60	278	32	21
<b>Element</b>	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Tl ppm	Pb ppm
	57	47	49	537	94	740	31	2810
±	4	4	4	17	23	29	7	201

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:





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± 80 601  
17 22  
PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 26	Soil_2Cond_FP		11/08/2014	14:32:56	60.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	21637	948	3370	67	50	235	44919	888
±	182	45	34	25	17	8	137	13
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Ba ppm
	119	778	61	38	138	61	105	222
±	5	41	2	3	10	15	16	57
<b>Element</b>	Pb ppm							
	292							
±	92							
PASS/FAIL: PASS (Spectrum similarity: 1.00) Reference:								

Name	Class		Date	Time	Duration			
sp upper vic 27	Soil_2Cond_FP		11/08/2014	14:36:42	60.6 s			
<b>Element</b>	Ca ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	Ag ppm
	1306	76	17689	167321	4331	223	1966	262
±	43	8	50	268	37	9	93	16
<b>Element</b>	Sn ppm	Sb ppm	Pb ppm					
	115	1933	939					
±	23	33	205					
PASS/FAIL: PASS (Spectrum similarity: 1.00) Reference:								

Name	Class		Date	Time	Duration			
sp upper vic 28	Soil_2Cond_FP		11/08/2014	14:39:18	60.7 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	20881	795	2140	2369	49744	1208	99	124
±	177	43	27	18	144	15	4	27
<b>Element</b>	Rb ppm	Zr ppm	Sn ppm	Sb ppm	Ba ppm	Pb ppm		
	84	53	80	85	306	366		
±	3	3	16	18	61	60		
PASS/FAIL: PASS (Spectrum similarity: 1.00) Reference:								

Name	Class		Date	Time	Duration			
sp upper vic 29	Soil_2Cond_FP		11/08/2014	14:40:46	31.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Ni ppm	Cu ppm
	14697	1303	264	2540	920	92012	107	3635
±	224	73	22	30	31	274	13	40
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Ag ppm	Sb ppm	Tl ppm	Pb ppm
	209	3396	54	38	127	280	38	6707
±	11	195	5	4	17	29	9	437
PASS/FAIL: PASS (Spectrum similarity: 1.00) Reference:								

Name	Class		Date	Time	Duration			
sp upper vic 30	Soil_2Cond_FP		11/08/2014	14:42:08	20.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	12362	991	1482	148	1190	193916	2041	475
±	267	88	46	50	27	466	43	20
<b>Element</b>	As ppm	Rb ppm	Zr ppm	Sb ppm				
	227	58	90	172				
±	55	6	7	43				
PASS/FAIL: PASS (Spectrum similarity: 1.00) Reference:								





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	155	196	110	43	56	143	151
±	10	39	6	5	6	33	36

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 37	Soil_2Cond_FP		11/08/2014	16:07:39	20.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	16159	710	2893	10819	74747	25	61	197
±	285	73	59	67	276	6	6	37
<b>Element</b>	Rb ppm	Zr ppm	Ba ppm					
	56	56	283					
±	4	4	85					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 38	Soil_2Cond_FP		11/08/2014	16:08:42	20.6 s			
<b>Element</b>	K ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	As ppm	Rb ppm	Zr ppm
	20390	953	343	12070	32	70	61	25
±	312	34	13	108	5	17	3	2
<b>Element</b>	Sb ppm	Ba ppm						
	74	201						
±	16	56						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 39	Soil_2Cond_FP		13/08/2014	12:59:34	31.1 s			
<b>Element</b>	K ppm	Ti ppm	Mn ppm	Fe ppm	Co ppm	Cu ppm	Zn ppm	Rb ppm
	6109	1935	8518	38058	110	216	110	34
±	149	37	44	168	23	9	6	3
<b>Element</b>	Sr ppm	Zr ppm	Sn ppm	Sb ppm	Pb ppm			
	19	39	78	164	172			
±	3	4	19	21	56			

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 40	Soil_2Cond_FP		13/08/2014	13:07:25	61.3 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	1145	1079	121	47	130	54992	234629	5489
±	67	43	14	14	8	93	315	47
<b>Element</b>	Zn ppm	Rb ppm	Sr ppm	Ag ppm	Sb ppm	Pb ppm		
	1581	12	16	288	664	167		
±	22	3	3	14	25	54		

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 41	Soil_2Cond_FP		13/08/2014	13:11:04	61.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	1013	1066	251	76	188	57566	326408	5078
±	69	45	17	18	32	104	392	53
<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
	1320	807	19	100	275	63	118	2132
±	25	140	5	6	20	22	29	43
<b>Element</b>	Pb ppm							
	3565							
±	311							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:







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	135	190	87	162	5715	555	434	47915
±	10	10	9	10	61	46	57	223
<b>Element</b>	Au ppm	Hg ppm	Tl ppm	Pb ppm				
	286	117	462	86191				
±	30	25	27	1543				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 50	Soil_2Cond_FP		13/08/2014	18:14:10		41.3 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	1869	8576	487	21330	50432	36206	1051	7796
±	103	125	28	79	254	125	23	663
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
	104	154	79	186	3858	466	286	44691
±	10	10	9	11	54	47	57	217
<b>Element</b>	Au ppm	Hg ppm	Tl ppm	Pb ppm				
	315	96	400	91747				
±	31	25	27	1585				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 51	Soil_2Cond_FP		13/08/2014	18:15:16		30.7 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	1888	8781	609	21749	76789	50097	1271	9071
±	114	147	36	97	340	187	32	900
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
	167	186	83	164	4826	554	413	51915
±	15	14	12	15	77	62	77	299
<b>Element</b>	Au ppm	Hg ppm	Tl ppm	Pb ppm				
	337	129	453	100993				
±	43	36	38	2145				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 52	Soil_2Cond_FP		13/08/2014	18:18:32		60.9 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	4063	11920	568	61	4788	138266	28788	1146
±	108	115	25	11	31	292	100	20
<b>Element</b>	As ppm	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm
	10407	52	112	33	92	12907	156	32284
±	372	7	6	5	6	60	40	138
<b>Element</b>	Au ppm	Tl ppm	Pb ppm					
	230	89	29562					
±	22	17	846					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 53	Soil_2Cond_FP		13/08/2014	18:22:30		60.9 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Co ppm	Cu ppm
	3856	12462	475	69	4930	166429	145	44377
±	97	117	24	12	34	345	46	137
<b>Element</b>	Zn ppm	As ppm	Se ppm	Rb ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm
	1202	13595	50	93	62	25155	50	613
±	23	419	8	7	7	88	31	46
<b>Element</b>	Sb ppm	Ta ppm	Au ppm	Tl ppm	Pb ppm			
	54602	534	236	150	26542			
±	201	139	26	20	945			



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PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 59	Soil_2Cond_FP		14/08/2014	09:46:15	60.8 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	2445	8053	257	109	18811	271206	38375	926
±	86	93	22	12	63	412	141	23
<b>Element</b>	As ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm	Pb ppm		
	14195	20228	113	438	36737	1669		
±	297	77	27	40	157	655		

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 60	Soil_2Cond_FP		14/08/2014	10:04:25	60.9 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Co ppm
	2320	1427	255	76	208	65466	371863	850
±	84	51	18	18	10	115	430	68
<b>Element</b>	Cu ppm	Zn ppm	As ppm	Rb ppm	Sr ppm	Ag ppm	Sn ppm	Sb ppm
	17252	2421	1147	65	79	1880	134	1877
±	103	36	133	7	7	32	34	48
<b>Element</b>	Pb ppm							
	2036							
±	295							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 61	Soil_2Cond_FP		14/08/2014	10:10:12	61.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Co ppm
	6677	1645	80	77	132	118247	163391	289
±	108	49	14	16	27	136	306	46
<b>Element</b>	Cu ppm	Zn ppm	As ppm	Sr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm
	6206	1642	5393	75	758	122	79	960
±	49	22	27	4	18	17	23	31
<b>Element</b>	Tl ppm							
	66							
±	8							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 62	Soil_2Cond_FP		14/08/2014	10:22:34	113.3 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	1645	5167	181	310	46511	10018	300	4776
±	49	52	10	6	110	33	6	166
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Hg ppm
	33	49	18	50	9087	129	18906	36
±	2	2	2	2	27	15	58	7
<b>Element</b>	Tl ppm	Pb ppm						
	157	23123						
±	7	381						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
sp upper vic 63	Soil_2Cond_FP		14/08/2014	10:32:15	60.8 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Co ppm	Cu ppm
	1162	4260	216	44	1370	125074	109	12270
±	65	64	14	7	15	237	30	57



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<b>Element</b>	Zn ppm	As ppm	Se ppm	Rb ppm	Zr ppm	Ag ppm	Cd ppm	Sb ppm
	746	2919	17	13	19	1413	49	9251
±	13	161	3	2	3	17	12	53

<b>Element</b>	Tl ppm	Pb ppm
	49	7844
±	8	360

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 64	Soil_2Cond_FP		14/08/2014	10:48:04		61.3 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1993	3691	272	49	34788	161270	11226	805
±	82	65	19	9	72	268	61	16

<b>Element</b>	As ppm	Sr ppm	Ag ppm	Cd ppm	Sb ppm	Tl ppm	Pb ppm
	2705	99	2520	60	6384	48	7817
±	174	4	23	14	50	9	389

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 71	Soil_2Cond_FP		14/08/2014	11:47:08		24.7 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	V ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm
	658	711	126	91	185	71719	393565	1285
±	106	67	26	29	50	188	694	53

<b>Element</b>	Zn ppm	As ppm	Rb ppm	Sr ppm	Sb ppm
	4842	1080	34	159	350
±	79	160	10	11	58

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 79	Soil_2Cond_FP		14/08/2014	13:26:26		31.2 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	767	1209	87	29219	15978	6780	774	1821
±	97	67	21	80	134	46	14	241

<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Sb ppm	Tl ppm	Pb ppm
	25	30	32	26	3487	154	20770
±	4	3	3	3	40	11	556

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 80	Soil_2Cond_FP		14/08/2014	13:28:36		61.3 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Co ppm	Cu ppm	Zn ppm
	3687	15060	539	870	65424	77	17231	364
±	88	115	19	13	185	25	65	10

<b>Element</b>	As ppm	Rb ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm	Pb ppm
	4686	54	33	8967	56	280	32264	1798
±	126	3	3	34	14	20	100	278

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time		Duration		
sp upper vic 81	Soil_2Cond_FP		14/08/2014	13:35:30		61.1 s		
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1742	4878	239	62	26339	124443	19415	1262
±	78	73	18	10	64	244	76	18

<b>Element</b>	As ppm	Se ppm	Rb ppm	Zr ppm	Ag ppm	Sb ppm	Tl ppm	Pb ppm
	6805	25	16	36	4037	11858	116	19007
±	269	5	4	4	31	70	13	609

PASS/FAIL: PASS (Spectrum similarity: 1.00)



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Reference:

Name	Class		Date	Time	Duration			
DDH 14 1	Soil_2Cond_FP		14/08/2014	20:30:00	31.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	2782	826	209	25	9951	49675	1253	515
±	101	49	18	8	47	187	20	11
<b>Element</b>	As ppm	Sr ppm	Ag ppm	Sb ppm				
	233	14	145	621				
±	30	1	7	15				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 1	Soil_2Cond_FP		14/08/2014	20:34:35	31.1 s			
<b>Element</b>	K ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	Rb ppm
	614	75	1133	17424	227	16	31	14
±	65	11	16	108	7	2	9	1
<b>Element</b>	Sb ppm							
	47							
±	5							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 2	Soil_2Cond_FP		14/08/2014	20:35:57	31.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1282	677	83	31	10720	68273	2224	188
±	76	45	15	7	49	220	28	8
<b>Element</b>	As ppm	Sb ppm						
	324	464						
±	38	14						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 3	Soil_2Cond_FP		14/08/2014	20:36:54	31.2 s			
<b>Element</b>	K ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	Sb ppm
	782	112	2378	22471	351	49	113	133
±	67	12	22	124	10	3	18	8

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 4	Soil_2Cond_FP		14/08/2014	20:38:01	30.6 s			
<b>Element</b>	K ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	1792	292	28	1932	73055	383	192	1295
±	93	18	9	22	236	13	8	13
<b>Element</b>	Rb ppm	Sb ppm	Tl ppm					
	22	99	21					
±	2	13	5					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 5	Soil_2Cond_FP		14/08/2014	20:39:18	31.1 s			
<b>Element</b>	K ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	Ba ppm
	475	45	1160	22162	121	38	40	48
±	59	10	16	122	6	3	10	14

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:



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Name	Class		Date	Time	Duration			
DDH 14 1 6	Soil_2Cond_FP		14/08/2014	20:40:25	31.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	9326	925	1399	173	28696	196980	3524	1404
±	185	67	37	13	95	406	50	28
<b>Element</b>	As ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	
	448	35	36	37	354	151	233	
±	62	5	5	6	23	31	34	

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 7	Soil_2Cond_FP		14/08/2014	20:41:46	31.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	5226	610	634	9517	41253	735	385	268
±	134	49	24	45	171	16	10	49
<b>Element</b>	Rb ppm	Sr ppm	Zr ppm	Sb ppm	Pb ppm			
	15	12	10	348	715			
±	2	2	2	14	110			

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 8	Soil_2Cond_FP		14/08/2014	20:42:45	30.6 s			
<b>Element</b>	K ppm	Mn ppm	Fe ppm	Cu ppm	Ba ppm			
	514	234	940	29	54			
±	58	8	25	3	16			

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 1 9	Soil_2Cond_FP		14/08/2014	20:44:03	32.6 s			
<b>Element</b>	K ppm	Ti ppm	Mn ppm	Fe ppm	Co ppm	Cu ppm	Zn ppm	As ppm
	4602	345	330	9989	38	2192	97	64
±	135	19	10	79	12	22	4	2
<b>Element</b>	Rb ppm	Zr ppm	Sn ppm	Sb ppm	Hg ppm			
	18	10	52	47	14			
±	2	2	13	14	3			

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 13	Soil_2Cond_FP		14/08/2014	20:47:03	30.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	8128	13093	853	102	3620	241936	23077	1966
±	182	168	39	17	40	547	147	41
<b>Element</b>	As ppm	Rb ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm	Pb ppm
	5386	53	37	5229	127	216	42770	3782
±	289	8	8	56	36	50	214	638

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 14	Soil_2Cond_FP		14/08/2014	20:48:19	31.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1971	3125	295	84	2095	241850	9121	1117
±	111	88	26	12	28	468	84	27
<b>Element</b>	As ppm	Rb ppm	Ag ppm	Sn ppm	Sb ppm			
	2118	22	3716	138	8071			
±	138	5	40	28	79			

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:





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	2238	44	3639	116	150	22379
±	173	8	48	32	49	154

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 3 4	Soil_2Cond_FP		14/08/2014	21:03:51	36.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	940	4446	282	106	2233	277158	5133	609
±	90	89	25	13	28	492	64	22
<b>Element</b>	As ppm	Rb ppm	Ag ppm	Sb ppm				
	5214	38	2521	19055				
±	213	6	36	122				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 3 5	Soil_2Cond_FP		14/08/2014	21:05:18	31.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	351	1072	93	110	995	220962	3141	757
±	87	62	22	12	20	436	48	22
<b>Element</b>	As ppm	Rb ppm	Ag ppm	Sn ppm	Sb ppm			
	3480	25	1100	131	4613			
±	164	6	27	32	62			

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 3 6	Soil_2Cond_FP		14/08/2014	21:07:11	31.1 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	1472	1036	201	34	532	110075	2617	325
±	91	59	22	11	15	299	35	12
<b>Element</b>	As ppm	Ag ppm	Sb ppm					
	2289	326	4439					
±	106	19	51					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 3 7	Soil_2Cond_FP		14/08/2014	21:08:46	31.2 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm
	6146	796	690	2827	45339	626	213	1927
±	157	63	27	27	189	15	8	82
<b>Element</b>	Rb ppm	Ag ppm	Sb ppm					
	24	373	2341					
±	4	16	36					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration			
DDH 14 3 8	Soil_2Cond_FP		14/08/2014	21:09:56	30.6 s			
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	649	2326	109	149	25347	364789	29220	2888
±	104	83	28	16	102	618	186	53
<b>Element</b>	As ppm	Rb ppm	Ag ppm	Sb ppm				
	5262	57	2226	10641				
±	272	9	49	122				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class	Date	Time	Duration
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DDH 14 3 9                      Soil\_2Cond\_FP                      14/08/2014                      21:11:38                      31.1 s

Element	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	532	838	190	33	1553	102174	2239	266
±	86	58	21	11	22	287	32	12
Element	As ppm	Ag ppm	Sb ppm	Pb ppm				
	2066	339	3598	1094				
±	114	19	48	253				

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name                      Class                      Date                      Time                      Duration  
DDH 14 3 10                      Soil\_2Cond\_FP                      14/08/2014                      21:13:25                      31.2 s

Element	K ppm	Mn ppm	Fe ppm	Cu ppm	As ppm	Rb ppm	Sn ppm	Sb ppm
	190	576	7585	17	52	23	21	69
±	54	12	71	3	12	1	6	7

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name                      Class                      Date                      Time                      Duration  
DDH 14 4 0                      Soil\_2Cond\_FP                      14/08/2014                      21:16:03                      30.5 s

Element	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	388	987	86	37	462	90196	1162	46
±	64	50	16	8	12	266	22	6
Element	As ppm	Ag ppm	Sb ppm					
	372	255	1713					
±	42	10	26					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name                      Class                      Date                      Time                      Duration  
DDH 14 4 1                      Soil\_2Cond\_FP                      14/08/2014                      21:17:29                      31.2 s

Element	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	327	1364	109	60	913	129944	3025	42
±	73	59	18	9	17	315	38	6
Element	As ppm	Sb ppm						
	1910	2095						
±	18	32						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name                      Class                      Date                      Time                      Duration  
DDH 14 4 2                      Soil\_2Cond\_FP                      14/08/2014                      21:18:36                      31.2 s

Element	K ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	Rb ppm
	9386	1849	556	17048	115	15	1533	37
±	180	37	14	115	7	4	66	3
Element	Zr ppm	Sb ppm						
	24	138						
±	3	23						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name                      Class                      Date                      Time                      Duration  
SP PORTAL 18                      Soil\_2Cond\_FP                      15/08/2014                      13:34:56                      20.5 s

Element	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm
	5657	1108	1693	75	31032	122841	1738	313
±	204	95	54	19	122	367	37	16
Element	As ppm	Rb ppm	Zr ppm	Ag ppm	Sn ppm	Sb ppm	Ba ppm	
	2069	176	94	107	183	179	641	
±	134	8	8	30	47	51	176	

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:





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Name	Class		Date	Time	Duration				
SP PORTAL 35	Soil_2Cond_FP		15/08/2014	17:51:19	60.8 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	
	2892	6760	453	4191	11594	22691	317	2003	
±	106	92	23	26	92	68	9	356	
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sn ppm	Sb ppm	
	111	110	44	124	5435	318	237	27519	
±	5	5	5	6	38	25	29	114	
<b>Element</b>	Au ppm	Hg ppm	Tl ppm	Pb ppm					
	279	128	456	62954					
±	15	12	14	851					

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration				
high gradw vein 1	Soil_2Cond_FP		16/08/2014	11:01:51	40.1 s				
<b>Element</b>	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	Se ppm	
	2079	91	5658	14140	6285	227	1995	36	
±	69	19	32	105	37	8	221	4	
<b>Element</b>	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sb ppm	Tl ppm	Pb ppm	
	31	18	41	1076	49	11704	209	24313	
±	3	3	3	17	14	64	10	514	

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration				
high gradw vein 3	Soil_2Cond_FP		16/08/2014	11:21:00	30.6 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	
	1306	9683	492	5177	68501	13867	719	3233	
±	151	162	40	47	311	92	23	717	
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sb ppm	Au ppm	
	103	183	90	189	3341	342	56592	299	
±	12	13	11	12	61	55	281	33	
<b>Element</b>	Tl ppm	Pb ppm							
	429	87934							
±	31	1719							

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration				
high gradw vein 4	Soil_2Cond_FP		16/08/2014	12:25:10	63.4 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	As ppm	
	962	4517	255	623	58751	8569	362	5689	
±	75	72	17	12	165	42	9	304	
<b>Element</b>	Se ppm	Rb ppm	Sr ppm	Zr ppm	Ag ppm	Cd ppm	Sb ppm	Au ppm	
	101	72	36	92	2930	12	20723	263	
±	4	4	4	4	26	18	88	12	
<b>Element</b>	Hg ppm	Tl ppm	Pb ppm						
	148	342	43761						
±	10	11	711						

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

Name	Class		Date	Time	Duration				
SP UPPWR VIC 59 11	Soil_2Cond_FP		16/08/2014	15:21:53	31.1 s				
<b>Element</b>	K ppm	Ca ppm	Ti ppm	Cr ppm	Mn ppm	Fe ppm	Cu ppm	Zn ppm	
	1341	1626	163	91	78901	209213	18363	1640	
±	109	75	25	14	161	424	122	35	
<b>Element</b>	As ppm	Ag ppm	Sb ppm	Tl ppm	Pb ppm				



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	1162	1035	2349	77	6898
±	236	30	54	16	528

PASS/FAIL: PASS (Spectrum similarity: 1.00)  
Reference:

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