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## CANADIAN EXPLORATION SERVICES LTD

## **GOLDEN VALLEY MINES LTD.**

Q2395 – Blue Mountain Project Prospecting

C Jason Ploeger, P.Geo. – June 20, 2017



## Golden Valley Mines Ltd. Mines de la Vallée de l'Or Itée

#### Abstract

CXS was contracted by Golden Valley Mines Ltd. to perform a prospecting/rock sampling campaign over their Blue Mountain Prospect. The target was to locate outcrop in the region of previously identified chargeability anomalies. This campaign was accomplished in mid- June and successfully located and sampled outcrops.

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### 1. SURVEY DETAILS

#### 1.1 PROJECT NAME

This project is known as the **Blue Mountain Prospect**.

### 1.2 CLIENT

Golden Valley Mines Ltd. 152 Chemin de la Mine Ecole Val D'Or, Quebec J9P 7B6

#### 1.3 LOCATION

The Blue Mountain Prospect is located approximately 12 km north of Kirkland Lake, Ontario. The survey area is located over portions of mining claims 4201311, 4274010, 3016380, and 4240769 located in Bernhardt Township, within the Larder Lake Mining Division.

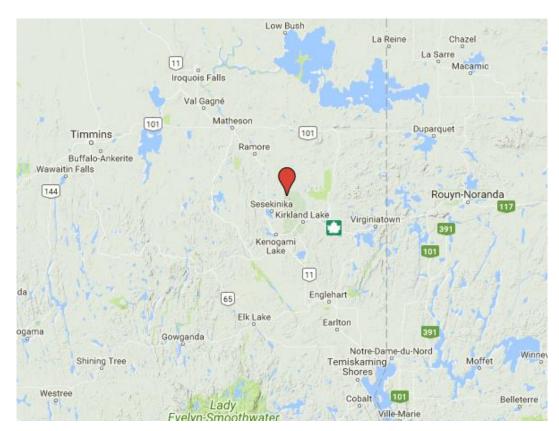


Figure 1: Location of the Blue Mountain Prospect





### 1.4 Access

Access to the property is gained by 4x4 truck by travelling westward on HWY 570 (Sesekinika Road). After travelling west on HWY 570 and travelling for about 1.5 km one turns north onto a series of forestry access roads. These roads are used for an additional 15.2 km.

#### 1.5 SURVEY GRID

The traversed lines were established using a GPS.

#### 1.6 REGIONAL GEOLOGY

The Blue Mountain Prospect is located in the south-western part of the Abitibi Greenstone Belt. This geological terrane lies within the Eastern Superior Province of the Precambrian Canadian Shield. The Abitibi Greenstone Belt is characterized by numerous Archean volcano-sedimentary belts and igneous intrusive complexes that are in some places cross cut by NNE to ENE striking Proterozoic diabase dikes. The general metamorphism degree is to greenschist facies.

The Neoarchean supracrustal rocks of the Kirkland Lake District are composed of komatiitic, tholeiitic, calc-alkalic and alkalic ultramafic, mafic, intermediate and felsic metavolcanic rocks; related subvolcanic intrusions, chemical and clastic metasedimentary rocks.

These supracrustal rocks are intruded by calc-alkalic intermediate and felsic intrusions composed of quartz diorite, quartz monzonite, tonalite and granodiorite. Alkalic intrusions composed of hornblendite, alkalic gabbro, syenite, quartz syenite and alkalic granite are the youngest Neoarchean intrusions in the area.

Within the Kirkland Lake District, gold deposits occur in east trending metasedimentary-metavolcanic formations, intruded by syenite stocks, proximal to major deformation zones with the same general trend. The deposits preferentially occur on sub parallel fault splays, to major deformation zones such as the Larder Lake Fault and the Destor Porcupine Fault.

Local to the Blue Mountain Prospect, the Winnie Lake Stock, about 9.7 kilometres long and 3.2 kilometres wide, occupies the southwestern corner of Bernhardt Township and adjacent areas. Porphyritic felsic dikes are abundant in an area about 3.2 kilometres wide around the stock, but are rare at greater distances.

Most of the Winnie Lake Stock is medium-grained equigranular hypidiomorphic granite, but in some places near the contacts are syenitic phases with a similar texture (Rupert and Lovell, 1970b). The dikes in the surrounding rocks are mainly less than 31 metres wide and consist of variable amounts of feldspar phenocrysts in a very





fine-grained pink or dark grey matrix.

#### 1.7 PROPERTY GEOLOGY

The majority of the outcrop exposures within the Blue Mountain Prospect consist of mafic to intermediate metavolcanic rocks in the form of massive and pillowed basalts and andesites. Located on a small intrusion of mafic volcanic rock within the Blue Mountain Prospect, is a mine shaft that has been sunk into a diorite outcrop hosting quartz, sulphide mineralization and magnetite.

#### 1.8 Previous Work

Challenger Gold Mining Company Limited 1920-1937 Stripping and blasting. 55 ft shaft was sunk

## Kinika Gold Mines Limited

1937

Sampling and de-watering

### Noranda Exploration Company Limited

1970

Magnetometer and EM

#### **Ajax Minerals Limited**

1972

Trenching

### Consolidated Beaumont Resources Ltd.

1974

Magnetometer, 8 diamond drill holes totalling 2856 feet

### Cedar Ridge Explorations Ltd

1980-1982

Magnetometer and VLF EM with trenching follow up

#### Premier Explorations Inc.

1985

Magnetometer

Overburden Stripping and sampling





## **Longbow Lake Exploration Syndicate**

1985-1986 Basal till sampling

### BHP-Utah Mines Ltd.

1989

Induced Polarization and VLF EM
Nine diamond drill holes totalling 1209 meters

### M. Gilbert, B. Kowalski, R. Lavoie and J.G. St. Pierre

1996

Dewatered the shaft and stripping

### Golden Valley Mines Ltd.

2005

Magnetometer and Induced Polarization Surveys

### 1.9 PROPERTY VEGETATION

The traverse areas were covered predominantly by black spruce and tamarack.





### 2. SURVEY WORK UNDERTAKEN

#### 2.1 Personnel

Bruce Lavalley of Britt, Ontario and Kevin Gingras of Virginiatown, Ontario performed the prospecting traverse and collected GPS waypoint data.

#### 2.2 SURVEY SPECIFICATIONS

The main purpose of the prospecting was to investigate areas of outcrop exposure for potential mineralization. Rock samples were collected from old trenches crossed during the traverses. These samples were taken and presented to Golden Valley Mines Ltd. for reference purposes.



### 3. OVERVIEW OF SURVEY RESULTS

## ALL SAMPLES WERE TAKEN FOR REFERENCE PURPOSES ONLY! ALL SAMPLES WERE PRESENTED TO GOLDEN VALLEY MINES LTD.

3.1 DAY-1 – JUNE 13, 2017 Sample 62816

NAD 83 - Zone 17N 563400E 5344768N



Figure 2: Picture of Sample 62816

Sample 62816 was collected from a small rise within a low area. The sample represents a mafic volcanic.

### **Sample 62817**

NAD 83 - Zone 17N 563433E 5344750N



Figure 3: Picture of Sample 62817

Sample 62817 was collected from a small rise within a low area. The sample represents a mafic volcanic. Trace pyrite can be observed in the sample.

### **Sample 62818**

NAD 83 - Zone 17N 563517E 5346065N



Figure 4: Picture of Sample 62818

Sample 62818 was collected from a small moss covered outcrop. The sample indicates a mafic volcanic with no mineralization.

### **Sample 85874**

NAD 83 - Zone 17N 563452E 5346097N



Figure 5: Picture of Sample 85874

Sample 85874 was collected from a small rise within a low area. The sample represents a mafic volcanic with some carbonate alteration. Trace pyrite can be observed in the sample.

## 3.2 DAY-2 – JUNE 14, 2017 Sample 62819

NAD 83 - Zone 17N 563371E 5346116N



Figure 6: Picture of Sample 62819

Sample 62819 was collected from a small outcrop. This outcrop represents a mafic volcanic. No mineralization is observed in the sample



### **Sample 62820**

NAD 83 - Zone 17N 563452E 5346133N



Figure 7: Picture of Sample 62820

This sample was collected from a trench muckpile. The sample represents an area of siliceous alteration. Fine grained pyrite up to 1% is observed in the silicious alteration. The mineralization appears to extend into the surrounding mafic volcanics.

### **Sample 62821**

NAD 83 - Zone 17N 563469E 5345649N



Figure 8: Picture of Sample 62821

Sample 62821 was collect from an outcrop located in a spruce stand. This sample represents a mafic volcanic. No mineralization was observed.

### **Sample 62822**

NAD 83 - Zone 17N 564164E 5345519N

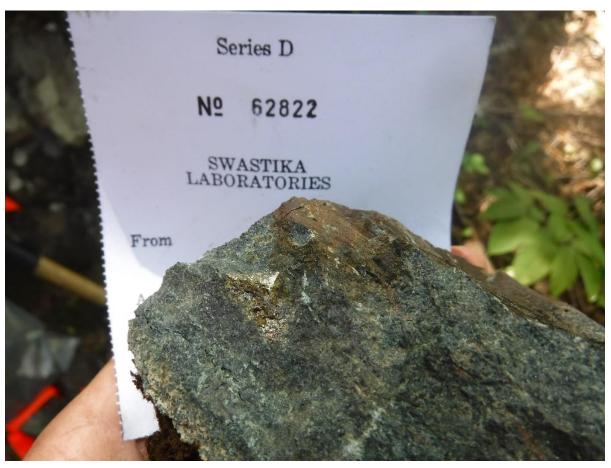


Figure 9: Picture of Sample 62822

Sample 62822 was collected from a large rise in a poplar stand. The sample represents a mafic volcanic. Stringers calcite are observed with strong hematite staining. Some patchy pyrite mineralization is observed.

### **Sample 62823**

NAD 83 - Zone 17N 564241E 5345229N

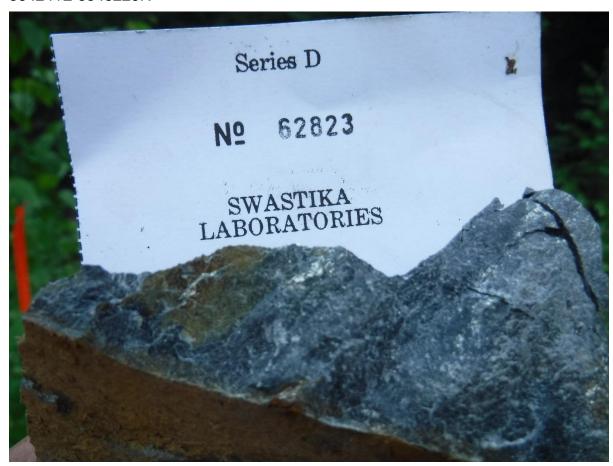


Figure 10: Picture of Sample 62823

Sample 62823 was collected from a small outcrop that was exposed from some forestry operations. This outcrop represents a mafic volcanic. No mineralization is observed in the sample.

### **Sample 85875**

NAD 83 - Zone 17N 563962E 5345894N



Figure 11: Picture of Sample 85875

Sample 85875 was collected from a small rise within a spruce stand. This sample represents a mafic volcanic. Trace pyrite along with hematite staining is noted in the sample.

### **Sample 85876**

NAD 83 - Zone 17N 564041E 5345920N



Figure 12: Picture of Sample 85876

Sample 85876 was collected from a small outcrop within a spruce stand. The sample represents a mafic volcanic with some carbonate alteration. Trace pyrite is also present in the sample.

### **Sample 85877**

NAD 83 - Zone 17N 564239E 5345283N

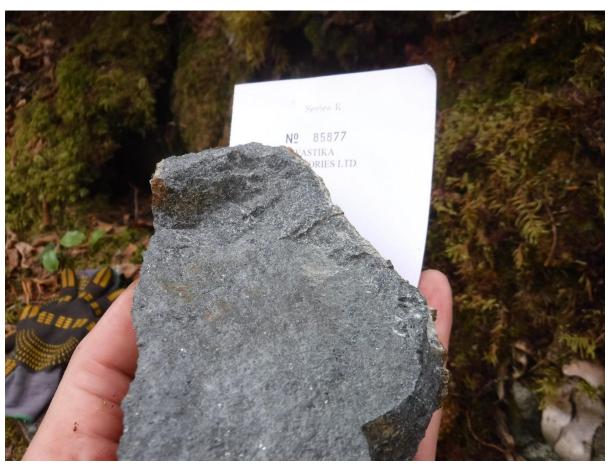


Figure 13: Picture of Sample 85877

Sample 85877 was collected from a small outcrop within a poplar stand. This sample represents a mafic volcanic. No mineralization is observed.

### **Sample 85878**

NAD 83 - Zone 17N 564240E 5345278N



Figure 14: Picture of Sample 85878

Sample 85878 was collected from a small outcrop. This outcrop represents a mafic volcanic. No mineralization is observed in the sample

### 3.3 CONCLUSION

The prospecting/rock collecting campaign over a portion of the Blue Mountain Prospect, successfully resulted in the locating and sampling of 13 different sites. The priority areas were designed to cover areas where a previous IP survey had identified anomalous chargeability regions. No outcrop was located near the chargeability zones targeted.

The samples were photographed and looked at for mineralization. From the 13 samples, samples 62818, 85875 and 85877 exhibited trace mineralization that may





provide a chargeability signature. Samples 62820, 62822 and 62823 exhibit signs of a stronger mineralization. These samples should produce a pronounced chargeability signature.





### **BRUCE LAVALLEY OF APPENDIX A**

#### STATEMENT OF QUALIFICATIONS

- I, C. Jason Ploeger, hereby declare that:
- I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Ltd. of Larder Lake, Ontario.
- 2. I am a Practicing Member of the Association of Professional Geoscientists, with membership number 2172.
- 3. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.
- 4. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.
- 5. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.
- 6. I do not have nor expect an interest in the properties and securities of **Golden Valley Mines Limited.**
- 7. I am responsible for the final processing and validation of the survey results and the compilation of the presentation of this report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.



C. Jason Ploeger, P.Geo., B.Sc. Geophysical Manager Canadian Exploration Services Ltd.

> Larder Lake, ON June 20, 2017





## **APPENDIX B**

### **GARMIN GPS MAP 62S**



Physical & Performanc	Physical & Performance:			
Unit dimensions, WxHxD:	2.4" x 6.3" x 1.4" (6.1 x 16.0 x 3.6 cm)			
Display size, WxH:	1.43" x 2.15" (3.6 x 5.5 cm); 2.6" diag (6.6 cm)			
Display resolution, WxH:	160 x 240 pixels			
Display type:	transflective, 65-K color TFT			
Weight:	9.2 oz (260.1 g) with batteries			
Battery:	2 AA batteries (not included); NiMH or Lithium recom- mended			
Battery life:	20 hours			
Waterproof:	yes (IPX7)			
Floats:	no			
High-sensitivity receiver:	yes			





Interface:	high-speed USB	and NMEA 0183 compatible
Maps & Memory:		
Basemap:		yes
Preloaded maps:		no
Ability to add maps:		yes
Built-in memory:		1.7 GB
Accepts data cards:		microSD™ card (not included)
Waypoints/favorites/loc	cations:	2000
Routes:		200
Track log:		10,000 points, 200 saved tracks
Features & Benefits:		
Automatic routing (turn	by turn routing	yes (with optional mapping for detailed
on roads):		roads)
Electronic compass:		yes (tilt-compensated, 3-axis)
Touchscreen:		no
Barometric altimeter:		yes
Camera:		no
Geocaching-friendly:		yes (paperless)
Custom maps compatil	ole:	yes
Photo navigation (navigate to ge-		yes
otagged photos):		
Outdoor GPS games:		no
Hunt/fish calendar:		yes
Sun and moon information:		yes





Tide tables:	yes
Area calculation:	yes
Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wire- lessly with similar units):	yes
Picture viewer:	yes
Garmin Connect™ compatible (online community where you analyze, categorize and share data):	yes

Specifications obtained from www.garmin.com





## **APPENDIX C**

## LIST OF MAPS (IN MAP POCKET)

Posted Traverse Plan Map (1:5000)

1) Q2395-GOLDENVALLEY-BLUE MOUNTAIN-TRAVERSE

**TOTAL MAPS = 1** 

