



## ASSESSMENT REPORT TITLE PAGE AND SUMMARY

### TITLE OF REPORT:

Geochemical Report on the Pilot Soil / Till Heavy Metal Concentrating Program on the Boleau Lake Project

**TOTAL COST:** \$1,872.50

AUTHOR(S): Eugene A. Dodd  
SIGNATURE(S):

A handwritten signature in black ink, appearing to read "E. Dodd", written over the signature line.

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): NA  
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5429142 / 29 January 2013

YEAR OF WORK: 2012

PROPERTY NAME: Boleau Lake Project

CLAIM NAME(S) (on which work was done): Brett North

COMMODITIES SOUGHT: gold, silver

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Vernon Mining Division  
NTS / BCGS: 082L/5  
LATITUDE: 50° 17' 22.8"  
LONGITUDE: 119° 37' 14.1" (at centre of work)  
UTM Zone: 11U EASTING: 313333 NORTHING: 5574124

OWNER(S): Eugene A. Dodd

MAILING ADDRESS: 561 Glenmary Road, Enderby BC, V0E 1V3

OPERATOR(S) [who paid for the work]: Billiken Gold Ltd.

MAILING ADDRESS: 561 Glenmary Road, Enderby BC, V0E 1V3

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**): epithermal gold, tertiary volcanics, Eocene volcanics, Brett deposit,

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:  
AR# 12030, AR#19100, AR#20226, AR#23473, AR#25351

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil	2 HMC Samples		\$1,472.50
Silt			
Rock			
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other - Report			\$400.00
		<b>TOTAL COST</b>	<b>\$1,872.50</b>

**Geochemical Report**  
**on the**  
**Pilot Soil / Till Heavy Metal Concentrating Program**  
**on the**  
**Bouleau Lake Project**

Tenure # 946051

Vernon Mining Division

British Columbia

N.T.S. 082L/5

50° 17' 22.8"N, 119° 37' 14.1"W

11N 313333 E, 5574124 N

---

Owner: Eugene A. Dodd

Operator: Billiken Gold Ltd.

Contractor: Billiken Gold Ltd.

561 Glenmary Road, Enderby,

BC, Canada, V0E 1V3

Author: Eugene A. Dodd, Project Manager

Date: April 8, 2013

## Table of Contents

Figures -----	3
Illustrations -----	3
Appendices -----	3
Summary -----	4
Introduction -----	5
Physiography -----	5
Claim Information -----	7
Location and Access -----	7
History of Previous Relevant Work in the Area -----	9
Regional Geology -----	11
Property Geology -----	11
Glaciation -----	11
Sampling Method -----	12
Field Observations -----	15
Analytical Procedures -----	16
Discussion of Megascopy -----	16
Discussion of Results -----	16
Case Histories -----	18
Conclusions -----	20
Recommendations -----	20
General Discussion -----	21
Statement of Qualifications -----	22
Bibliography -----	23

## Figures

<b>Figure 1</b> – Table of Claim Information .....	7
<b>Figure 2</b> – Table of Sample UTM's .....	14
<b>Figure 3</b> – Table of Soil Descriptions .....	15
<b>Figure 4</b> – Table of Microscopic Results .....	15
<b>Figure 5</b> – Table of Weights .....	15
<b>Figure 6</b> – Target Model Diagram .....	19

## Illustrations

Property Location Map .....	6
Claim Location Map .....	8
Brett North Sample Location Map .....	17

## Appendices

<b>Appendix A</b> – Detailed Cost Breakdown .....	25
<b>Appendix B</b> – Photographs .....	27
<b>Appendix C</b> – Billiken's HMC Flow Sheet .....	30

Geochemical Report  
on the  
Pilot Soil / Till Heavy Metal Concentrating Program  
on the  
Bouleau Lake Project  
Vernon M.D.  
Bouleau Creek Area, British Columbia

---

## Summary

The thin drift covering the upland plateau areas of the claim block provide an excellent medium for HMC methodology as these sediments likely reflect the last glaciation to affect the area. These thinner till deposits usually reflect a more proximal source area for the sediments.

A total of 2 HMC Soil / Till samples were gathered, including one traverse HMC over the NE corner of the property and one spot HMC on the Brett North mineral tenure belonging to Eugene A Dodd between July 17 to September 30, 2012 inclusive. A minor amount of geological / lithological observations were also made.

The approximate center of the Brett North tenure is about 1650 meters at 075° from the east end of Bouleau Lake. The tenure is situated about 26 km west of Vernon BC in the North Okanagan. Access is easily gained by two wheel drive vehicle via a series of logging roads that are in relatively good condition. The terrain consists of a bench area along the north boundary at an elevation of about 1645 meters and then drops down a fairly steep, but passable south slope towards Bouleau Lake. The elevation of the south boundary of the Brett North is at about 1550 meters. Most parts of the property, although steep, can be safely traversed on foot except for some steep cliffs along the more westerly part of the claim. About 30 % of the property has been logged and replanted. The new trees are about 3 to 5 meters tall and can be very thick in places and difficult to navigate on foot. First growth timber is mainly mature

Pine, Spruce, and Fir. The purpose of this Soil / Till HMC program is to try and locate an economic gold / silver deposit beneath the volcanic cap rocks and to delineate target areas worthy of further exploration.

The property is mainly underlain by Tertiary volcanics. Within the property, andesites have been observed to the west and vesicular basalts to the east. The volcanics are likely underlain by granodiorite of the Okanagan Batholith. The granodiorite in this area is host to auriferous gold veins and spotty but widespread gold geochemical anomalies. The area has seen a lot of exploration in the last 25 years and is prospective for epithermal gold.

## Introduction

This report summarizes the Pilot Soil / Till Heavy Metal Concentrating (HMC) Program conducted between July 17 and September 30, 2012 by Billiken Gold Ltd on behalf of the owner Eugene Dodd. The property is situated approximately 1.5 kilometers east - northeast of Bouleau Lake and about 26 kilometers east of Vernon in the Vernon Mining Division of British Columbia.

The object of this HMC project was to try and locate an economic gold / silver deposit on the Bouleau Lake property. The project is designed to delineate roughly areas of interest worthy of the high cost of geochemistry, geophysics and or trenching and drilling.

The program was not successful in delineating any areas of interest to be followed up. A follow up program of further HMC sampling down the slope and to the west of the upper road will hopefully find a dispersal plume that can lead to a blind or semi – hidden gold deposit.

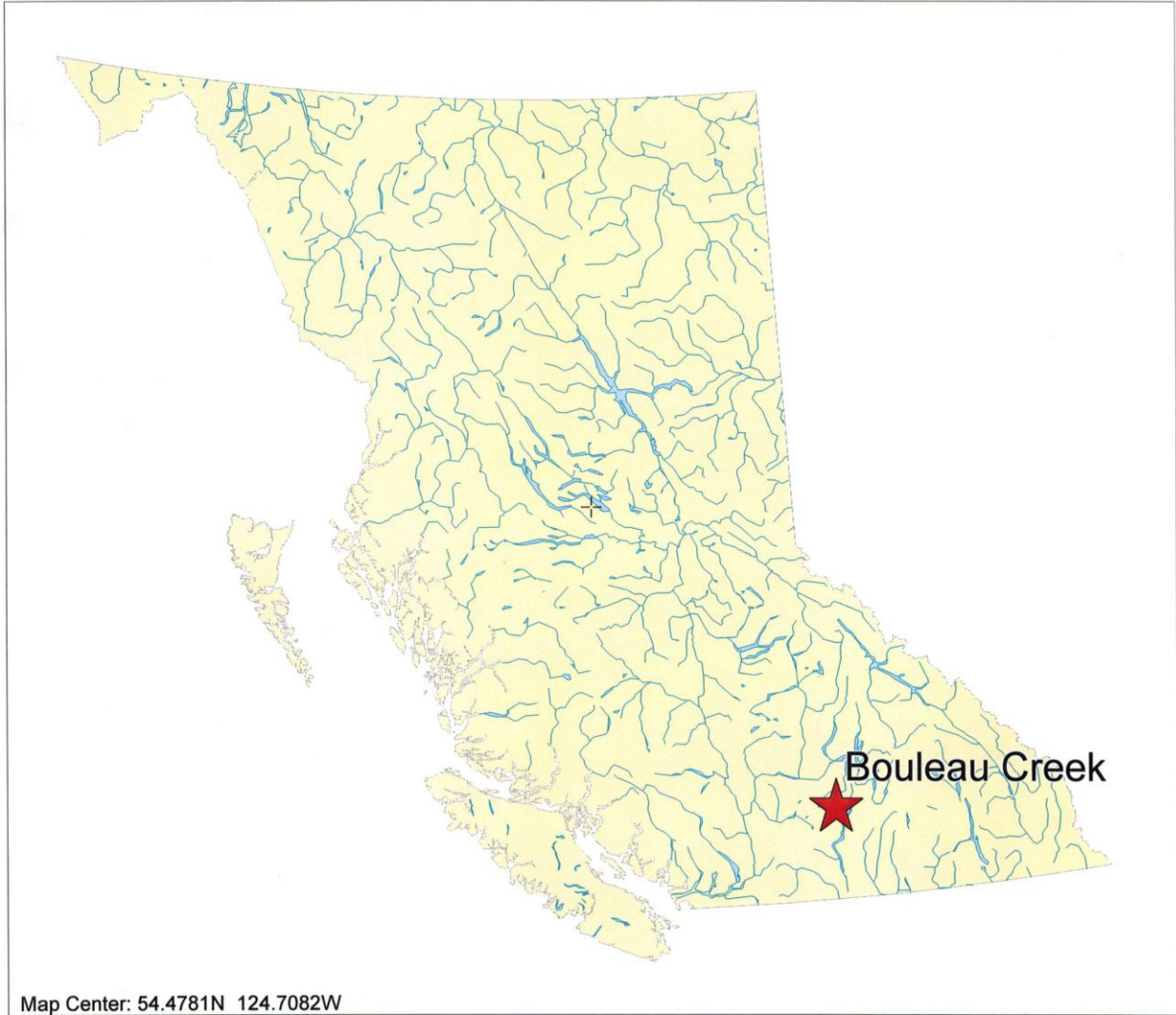
## Physiography

The Bouleau Lake Property lies at the southeast end of the major physiographic region known as the Thompson Plateau. The claim group is plateauish at higher elevations with moderate to steep slopes on the south and east.

Elevation varies between 1650 meters on the north part of the property to about 1550 meters at the south. Most areas can be traversed on foot but there are some cliffs to be avoided.

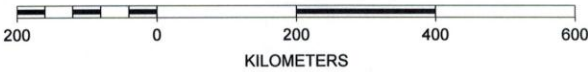
The principal water sources would be Bouleau Lake and Bouleau Creek both of which are year round sources with ample water for mining purposes. Most of the claim block is well drained and is transected by several small creeks which would provide enough water for diamond drilling. The area in general is quite sensitive environmentally as Bouleau Creek drains into Whiteman Creek which in turn drains into Okanagan Lake after cutting through a small section of I.R. # 1 (Okanagan Indian Band).

About 30% of the claim block has been logged approximately 10 to 12 years ago and has been replanted with trees that are now 3 to 5 meters tall. This new growth is thick and sometimes difficult to navigate in places. First growth timber generally consists of mature Pine, Spruce, and Fir and varies from close growing immature stands to more widely spaced mature trees.



Map Center: 54.4781N 124.7082W

SCALE 1 : 8,543,034



# Property Location Map

Billiken Gold Ltd. - Bouleau Lake Project



Figure 1 - Table of Claim Information

<u>Tenure Number</u>	<u>Type</u>	<u>Claim Name</u>	<u>Good Until</u>	<u>Area (ha)</u>
946051	Mineral	BRETT NORTH	20180202	41.29
Total Area: 41.29 ha				

## Claim Information

The property consists of one modified grid claim covering an area of 41.29 hectares. The claim is situated within the Vernon Mining Division on NTS Map sheet 082L.022.

The center of the property is located at approximately 50° 17' 22.8" N, 119° 37' 14.1" W, 11N 313333E, 5574124N.

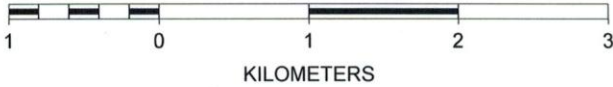
The claim is registered to Eugene Dodd of Enderby BC. They were located by Dillon S. Wade on February 02, 2012 and acquired by Eugene A. Dodd on March 25, 2012. This pilot geochemical program is an effort to locate an economically viable gold / silver deposit. The Brett North claim is in good standing until February 02, 2018. This expiry date is dependent on this Pilot Soil / Till Heavy Metal Concentrating Program being accepted for assessment work credit.

## Location and Access

The property is located in the North Okanagan Valley of British Columbia, Canada approximately 26 kilometers west of the city of Vernon. From Vernon, access to the property is gained by travelling around the north end of Okanagan Lake on Highway 97 and then down the west side of the lake on Westside Road approximately 19 kilometers to where the Whiteman Main logging road branches off to the right. After traveling up Whiteman Main about 8 km the Bouleau Main forest access road forks off to the right. At about the 22 kilometer point on the Bouleau Main forest access road you come to the eastern end of Bouleau Lake. To gain access to the property from Bouleau Lake continue on to the right for about another 2 kilometers then bear to the right. About 1.5 kilometers up this road turn right, putting you on to a network of good logging roads that take you up to the north and eastern sections of the claim block. These roads are in good condition and provide good access to the north central and south eastern part of the property.



SCALE 1 : 50,000



# Claim Location Map

Billiken Gold Ltd. - Bouleau Lake Project

Date: April 8, 2013

Centre of Claim Block: 11N 313333E 5574124N

## History of Previous Relevant Work in the Area

### Prior to 1898:

Limited exploration took place on the Klondike gold showings located on Whiteman Creek approximately 4 kilometers west of where it drains into Okanagan Lake. There were also some failed attempts to recover placer gold on Whiteman Creek between 1915 and 1954. Three ounces were reported to have been produced in the late 1930's.

### 1939:

Alf Brewer discovered gold on what is now the Brett - 1 mineral claim located to the southwest of the Brett North property about 7 kilometers. The Brett Property has since been the subject of some very extensive exploration work in the past 30 years, including soil geochemistry, diamond drilling, R. C. drilling, trenching, underground development and a substantial open cut culminating in a bulk shipment of 291 tonnes to the Cominco smelter at Trail BC in 1996.

Recovery from this bulk sample apparently yielded 27.74 grams Au / ton and 63.7 grams Ag / ton. Recently, the expanded property now owned by Running Fox Resource Corp. has seen minor diamond drilling in the past couple of years. In 2004 a geochemical survey was conducted under the supervision of S. M. Dykes M.Sc., P.Eng., on behalf of Running Fox Resource Corp. This gold geochemical survey covering part of the Brett 5 mineral claim appears to infer the extension of a northeast striking anomalous gold trend.

### 1987:

Discovery Consultants carried out Heavy Metal sampling on several tributaries draining into Bouleau Creek. Anomalies of up to 57 ppm gold were returned from panned concentrates of stream samples. Claims were staked to cover some of the highland areas and anomalous tributaries.

### 1988 - 1990:

Several geochemical surveys were conducted over portions of North Bay Resources Inc.'s property by various companies which produced some rather widespread gold anomalies, but no zones of economic tonnage or grade were ever delineated.

### January 01, 1989 Boul Claims:

K. L. Daughtry and W. R. Gilmour point out that "much of the property is covered by glacial overburden and that follow up of the soil anomalies will require careful attention to the difficulties inherent in exploration on till covered ground".

### September 1989:

Antelope Resources Inc., Bob Yorke - Hardy P.Eng., finds structures favorable to epithermal gold mineralization similar to those at the Brett occurrence. Mr. Yorke - Hardy also located jasperoid alteration and highly anomalous gold and arsenic values in creeks draining the eastern slopes of tenure # 733522.

## September 18, 1989:

Stetson Resource Management Corp., J. F. Wetherill B.A., B.Sc., Geologist concludes in his report that the 1988 - 1989 exploration program has outlined a large tuffaceous zone containing anomalous gold and silver values and that further work is warranted. Sample #355418 for example ran 5550 ppb / Au. Sample #355425 also ran 960 ppb / Au.

## 1991:

Inco Exploration and Technical Services Ltd. conducted a mapping and prospecting program over various locations on or near parts of the property which focused on areas with gold and or silver anomalies defined from 1988 to 1990.

November 1991 Mark Slauenwhite Geologist (Inco) states: “quartz, occurring as veins is the only lithology on the property that carries significant amounts of gold and silver. Wall rock adjacent to the veins is barren of gold and silver mineralization. Veins that sometimes form small stockworks contain less than 5 g/t gold. Veins that occasionally host more than 5 g/t gold invariably occur as lone entities”. Mr. Slauenwhite goes on to say that “despite the high number of anomalous veins (>100ppb gold) it is concluded that the veins are sub economic and are not worthy of follow up”. Mr. Slauenwhite also points out that the source of the gold in the soil (at least on the northwest half of the property) is explained by the anomalous quartz veins which invariably occur nearby. The soil anomalies on the southeast half of the claim block are likely related to glacial transport in which the till that blankets the property was derived from the northwest.

## 2005:

S. M. Dykes M.Sc., P.Geo., states on page 6 of his report dated, October 05 2005, that in 1983 Charles Brett encountered significant concentrations of angular gold while panning the subsidiary tributaries of Whiteman Creek and subsequently staked the present (2005) claim group, transferring the claim group to Huntington Resources Inc. the same year.

## Regional Geology

A detailed description of the Regional Geology is beyond the scope of the author so a more general description is given here. A lot of excellent work has been performed by very competent geologists, B. N. Church 1981 - 82 for example from which the following abbreviated version has in part been derived.

Okanagan Valley and Okanagan Lake are physical expressions of a major fault system which forms the boundary between the Omineca Tectonic Belt on the east and the Intermontane Belt on the west. The Brett North claim is located near the southeast margin of the Intermontane Belt. This belt of rocks includes Paleozoic and Mesozoic layered rocks which have been intruded by granitic plutons and have been overlain by erosional remnants of Tertiary volcanics and lesser sedimentary rocks of Eocene age. A Syenitic stock on Whiteman Creek is believed to be a feeder for some of the Tertiary volcanics found in the area.

Epithermal gold and silver deposits and several occurrences in Tertiary volcanics have been the main focus of much recent exploration. Several significant deposits have been located in this geological setting in the North Okanagan. Near OK Falls: Dusty Mac – Au / Ag. NW of OK Falls: The Vault – Au / Ag. One of the more important and significant recent discoveries, the Brett has been the stimulus for a considerable amount of exploration in the Whiteman Creek / Bouleau Lake area for the past 25 years. Exploration is still ongoing in the area by several companies including North Bay Resources Inc.

## Property Geology

The property appears to be andesites on the western half and vesicular basalts on the east. These are likely Eocene. Geological mapping has not been done on the property and the above noted rocks were not prospected in any detail. Jurassic granodiorite likely underlies the Eocene volcanics at depth on the Brett North claim. The general area around the property is considered to be prospective for epithermal gold (Church).

## Glaciation

The Whiteman and Bouleau Creek area has seen at least four and possibly more periods of glaciation in the last two million years (Dr. Murray A. Roed May 2001). In a discussion with Dr. Roed he has stated that the most recent and important ice movement in the area of Whiteman and Bouleau Creek was definitely north to south.

In ARIS Report # 21,877 written for Inco, dated November 1991 Mark Slauenwhite, Geologist, indicates that the transport of till in the area was from northwest to southeast. In my discussion with Dr. Roed it was indicated that the movement from northwest to southeast took place about a million years ago therefore it would not have as much relevance as the more recent north to south direction.

## Sampling Method

After becoming familiar with the property, roads and trails in areas to be tested are chosen that will give the best and most promising samples. Soil type and availability on different sections of roads and trails can be very important. Some properties are more suited than others for this type of sample program.

The ideal soil condition of course would be undisturbed residual soil; however, it should be kept in mind that soil cover forms the medium or carrier which could contain the particles of gold radiating from a lode deposit. The soil conditions therefore can be less than ideal for the sample program to be successful.

Quads are generally used to gain access and transport the samples. A crew of four men on two quads usually forms the sampling crew. A 20' construction trailer was used to transport the quads and the sampling gear.

### **Step 1 Taking the Sample**

To produce a sample, soil is gathered along roads or skid trails by taking a shovel full of the most promising looking soil every 5 to 10 meters or so and placing it into a 30x30x50 centimeter plastic tote bin. The shovels full are generally taken as close to bedrock as possible and usually from the high side of the road. Some till covered areas have a small amount of residual soil development immediately above bedrock and this is what we try to sample when possible.

When the tote bin is full, (usually after a traverse of 200 meters or so depending on soil conditions) the end of the sample interval is marked on the ground and recorded on a tablet with GPS capabilities. To identify the sample bins a piece of flagging is marked with the sample number and dropped into the bottom of the bin before any sample is put in. When the bin is full another piece of numbered flagging is buried in the top of the sample as a further precaution. The sample number is also written on the bin with a permanent type felt pen.

Sometimes a full box of sample is taken all from one location (at a gossan zone or shear zone for example). This sample type we refer to as a **Spot Sample**. A sample taken along a section of road or trail is simply called a **Traverse Sample**.

### **Step 2 Screening the Bulk Sample**

A tote bin of **Bulk Sample** begins processing with a brief description of the soil forming the sample. The remainder of the **Bulk Sample** is then vibrated through a 12.5 mm (1/2 inch) screen to remove any of the larger rocks. This **Plus 12.5 mm** fraction of rocks is discarded after a quick examination for anything of interest (i.e.: mineralization, vein material, alteration etc.). Any rocks of interest are put in a sample bag, labeled with the sample number and set aside for closer examination later. A representative **Soil Sample** is then taken and placed into a wet strength Kraft paper bag, and labeled (i.e.: NB - 35 Soil). This representative **Soil Sample** fraction is cataloged and put into storage for further examination or analysis if desired.

The **Minus 12.5 mm** fraction is then weighed and the weight recorded. At this stage the screened sample (**Minus 12.5 mm fraction**) usually weighs about 35 to 40 kg on average. After each sample is screened the screen is removed and pressure washed completely clean to avoid cross contamination between samples.

### Step 3 Concentrating

The samples are then transported to the nearest small creek and put very slowly through a small sluice box. The sluice box is 21cm wide x 10cm deep and 125cm long (8" wide x 4" deep x 48" long) and is of wood construction lined with aluminum so that it can be completely cleaned out to eliminate cross contamination. The sluice box has been fitted with special rubber matting full of small pockets which are very effective at catching small gold particles. At the head or feed section of the sluice box there is a hopper fitted with a 6.3 mm (1/4 inch) stainless steel screen.

The ideal slope of the sluice box is about 10 to 12 degrees and the volume of water should be about 25 Liters per Minute (LPM). Here again consistency must be maintained between all samples to avoid varied results. The sample is slowly fed through the hopper using the water flow and a small garden shovel to create the slurry. Sluicing the sample has to be done very slowly. It usually takes a good hour to concentrate each sample. After each sample has been sluiced the plastic bin that held the sample is carefully rinsed into the sluice box in case any particles have worked their way to the bottom of the bin during transport.

The slow and careful completion of this and all steps in the concentrating process is crucial to ensure that very small particles of micron gold are not washed away. If for example there are only three small particles of "low transport gold" in an entire sample program one always has to be certain not to lose them by accident or sloppiness once they have been gathered in the field.

As the sample is being worked slowly through the screened hopper on the sluice box a careful watch is kept for vein material, mineralization, alteration etc. in the plus fraction. The **Plus 6.3 mm** fraction from the hopper is placed in a new plastic food container with a soft aluminum tag denoting the sample number and is further marked **Sluice Reject**. The lid is then placed on and duct taped in place to avoid accidental spillage. The lid of the container is then further marked with the sample number and "**Sluice Reject**". A small **Sluice Reject** sub sample is set aside for megascopy at a later date.

After all of the **Minus 12.5 mm** fraction has been put through the sluice box, the sluice concentrate is then rinsed thoroughly and completely out of the box and into a clean container. Pressurized water is used to clean out the sluice box and rubber matting as it must be absolutely clean. At this point, the sluice concentrate is washed through an 850 micron sieve (No. 20 ASTM). The **Plus 850 Micron** fraction is examined, labeled and set aside as **Pan Reject**.

All weights from here on are determined with a Fischer Scientific torsion balance.

The remaining **Minus 850 Micron** fraction is then panned down to 100 to 200 grams. The size depends on how much heavy fraction is layered in the pan. A coarse fraction (850 Micron) was chosen as we are looking for short transport gold such as that derived from disintegrated vein material.

This initial panning usually takes 1 to 1.5 hours to complete. The panning is done using clean water between each sample in a spotlessly clean plastic tote bin. A couple of drops of detergent are added to the water as a surfactant. The pan reject is thoroughly rinsed from the bin and added to the **Pan Reject** and the **Pan Con** is placed into a clean plastic container labeled with the sample number and "**Pan Con**". A careful watch is kept for particles of gold while this initial panning is taking place but closer inspection comes later.

#### Step 4 Pan Con Fractioning

This initial **Pan Con** sample is then examined wet under a microscope before being dried and the weight recorded. After being dried and weighed the next step is to remove the magnetic fraction carefully using a sheathed magnet. The **Pan Con Magnetic** fraction is then weighed, labeled and set aside. The remainder of the **Pan Con** is then passed through a 300 micron (Tyler 50 mesh) sieve. The plus fraction is labeled weighed and set aside for microscopy as the **Plus 300 Micron** fraction.

The remaining **Minus 300 Micron** fraction is then re - panned by an experienced and patient panner down to about 20 to 35 grams (It can take up to and sometimes more than an hour to do this careful panning). The panning is done in a thoroughly clean plastic tote bin using fresh clean water. During the re - panning the **Re Pan Reject** is thoroughly rinsed from the bin and then both **Re Pan Reject** and the **Re Pan Con** are thoroughly dried, and set aside. At this time 0.5 grams is removed from the **Re Pan Con** labeled and placed in inventory for further reference or examination if needed.

The **Re Pan Con** fraction is visually inspected for gold particles during the panning and again when panning is completed. Any particles spotted are examined under a Bausch & Lomb microscope and photographed.

#### Step 5 Analysis

Having reached this point you have nine fractions at the forefront namely:

- Soil Sample (representative 200 to 300 grams)
- Sluice Reject
- Sluice Reject Sub Sample that was sent for megascopic analysis and returned to inventory
- Pan Reject
- Pan Con Magnetic Fraction
- Plus 300 Micron Fraction (Pan Con Non - magnetic Fraction)
- Re Pan Reject Fraction
- Re Pan Con Fraction
- 0.5 grams of Re Pan Con in inventory

The fractions are photographed and decisions are made as to what analytical methods if any to proceed with.

Figure 2 – Table of Sample UTM's

Sample Number	Start		Finish	
	Easting	Northing	Easting	Northing
TRAVERSE BNHMC-1	10 U 313599	5574122	11 U 313898	5573981
SPOT BNHMC-2	11 U 313351	5574135		



## Field Observations

One of the great things about this process is that a pretty good evaluation of the sample takes place on the spot, in the field after the first panning. This HMC method gives some results (i.e. visible gold or no visible gold in the field). With the aid of a microscope the colors that you find can be examined closely to determine whether they are low transport gold (pristine particles) or rounded off and hammered placer products. Survey grids and sample sites can be immediately adjusted in the field according to these results as they become available.

If for example, 15 sample intervals have no visible gold in them but the 16th one obviously has low transport gold then efforts can be concentrated uphill or up ice depending on soil type (i.e. residual or glacial till). Typically, more sampling followed by trenching takes place. If a Geochemical survey is chosen, then the grid and sample locations can at least be more wisely placed.

### Figure 3 – Table of Soil Description

<b>Sample Number</b>	<b>Description of Plus 12.5 mm</b>
BNHMC-1	brownish decomposed basalt, basalt pebbles
BNHMC-2	same as above

### Figure 4 – Table of Microscopic Results

<b>Sample Number</b>	<b>Microscopy of Pan Con fraction</b>	<b>Microscopy of Plus 300 Micron fraction</b>	<b>Microscopy of Re Pan Con fraction</b>
BNHMC-1	No visible gold	No visible gold	No visible gold
BNHMC-2	No visible gold	No visible gold	No visible gold

### Figure 5 – Table of Weights

<b>Sample Number</b>	<b>Minus 12.5 mm fraction weight (kilograms)</b>	<b>Pan Con weight (grams)</b>	<b>Pan Con Magnetic fraction weight (grams)</b>	<b>Plus 300 Micron fraction weight (grams)</b>	<b>Re Pan Reject fraction weight (grams)</b>	<b>Re Pan Con fraction weight (grams)</b>
BNHMC-1	35	100	15.75	5.31	45	32
BNHMC-2	6.63	71.76	6.65	15.67	16	33

## Analytical Procedures

No assaying was done on either of these samples

## Discussion of Megascopy

Megascopic examination of the Sluice Reject samples was not performed as they contained only decomposed pieces of vesicular basalt.

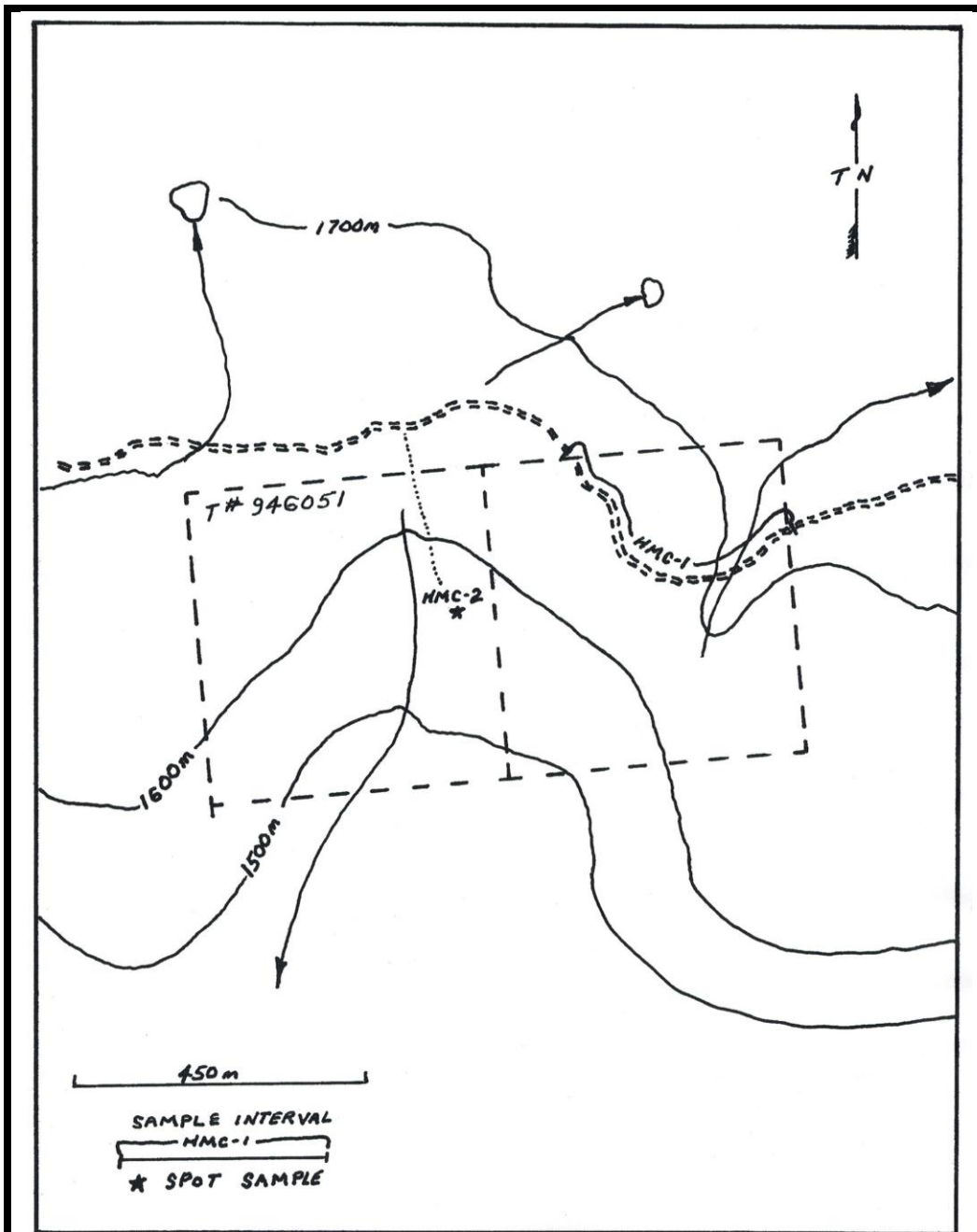
## Discussion of Results

The two HMC samples taken on the Brett North claim failed to produce any encouraging results. No gold particles of any description were found.

Both the south and western parts of the property need to be sampled and prospected.

Previous conventional geochemical surveys in the general area of the Brett occurrence and the Brett North claim have not given definitive results but seem to point at widespread spotty and poorly developed gold anomalies. Considering the number of placer gold particles we have found in the soil / till during our previous sampling programs in the map area I have to conclude that most of the gold anomalies have likely been caused by placer gold as opposed to dispersion plumes originating from an in situ gold occurrence. Soil / Till HMC creates meaningful target definition in these environments because of the ability to moderate the nugget effect that plagues conventional soil sampling methods in areas covered with glacial till.

Previous test runs were made on the Brett Main Shear Zone to see if in fact a signature does exist using our HMC method. Our case history test in close proximity to the main shear zone of the Brett deposit yielded definite signatures.



## Sample Location Map

Billiken Gold Ltd. – Bouleau Gold Project

Area: Brett North

Date: April 08, 2013

Drawn by: EAD

## Case Histories

Of relevant interest are two HMC case history signatures of mesothermal / epithermal gold occurrences in the Vernon camp from our previous studies.

### Kalamalka Mine Site

ARIS Report # 21,454 dated April 20 1991 the author conducted a test to see if a geochemical signature exists using Soil / Till HMC on the Kalamalka gold deposit east of Vernon BC. Traverse HMC samples were taken immediately down slope from the main occurrence and yielded high gold values.

It is important to note that these traverse samples from the Kalamalka were about 75kg or twice the size of the ones from the Brett.

- Sample # 1 – 90 ppm
- Sample # 2 – 1000 ppm (included some soil from right below the dump likely contaminated by mine muck)
- Sample # 7 – 32 ppm
- Sample # 8 – 23 ppm

### Brett Main Shear Zone

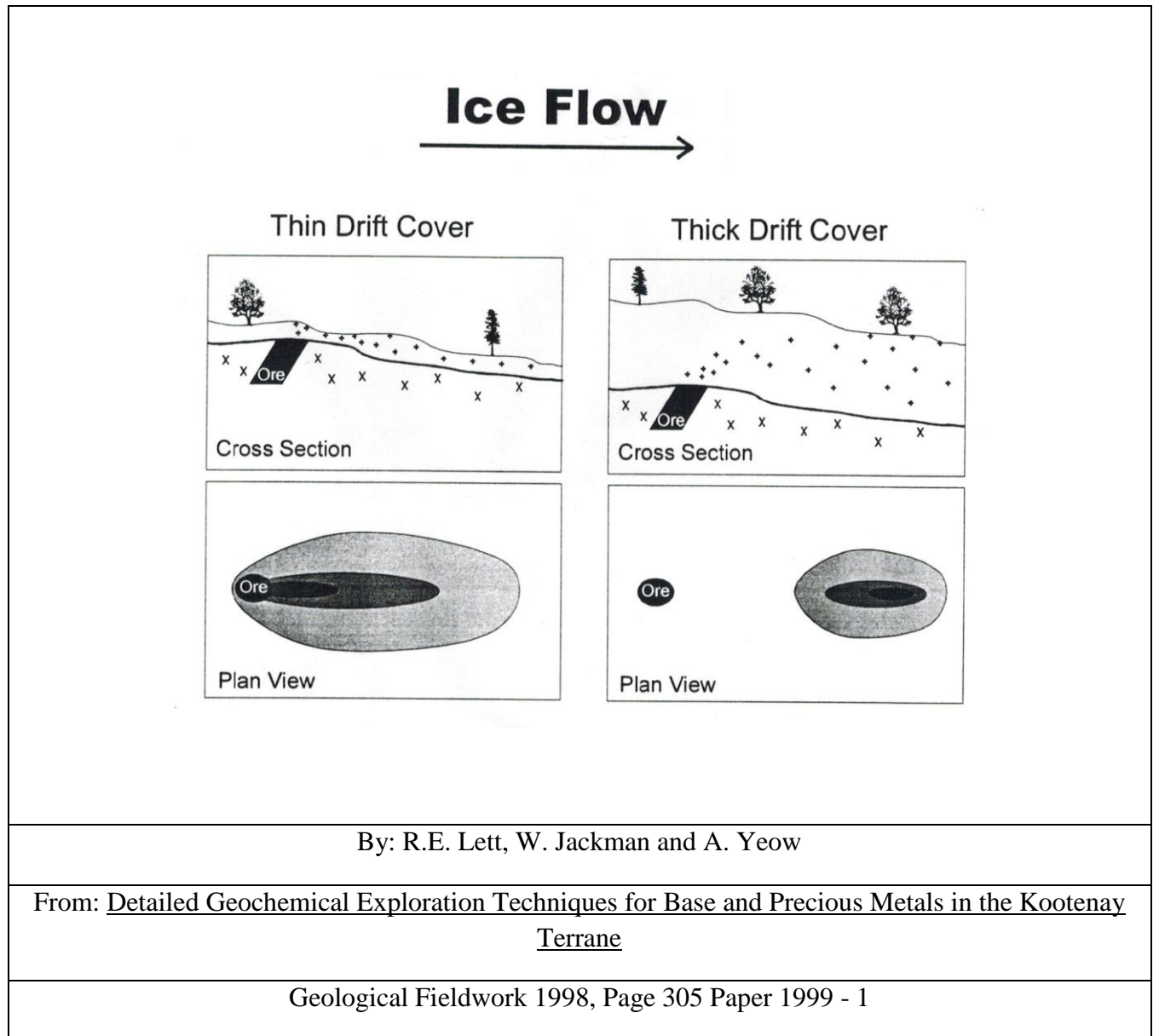
Our case history test was conducted in close proximity to the main shear zone of the Brett deposit and produced definite signatures. The results are listed below. These traverse samples weighed about 35 kilograms or half the weight of the ones from the Kalamalka.

**Sample # 1124 (traverse sample):** Some very fine particles of gold were seen in the **Re Pan Con.** This sample was taken immediately above the main shear zone and assayed 11.15 ppm in a 30 gram fire assay with a gravimetric finish.

**Sample # 1125 (traverse sample):** This sample covered a distance of about 75m and was taken 50m downslope from the main shear zone of the Brett deposit. Visible particles of gold could be seen in the **Re Pan Con.** Total metallic analysis was chosen for this sample which yielded 10.05 ppm in the total metallic plus fraction.

**Sample # 1126 (traverse sample):** Taken along the east side (not downslope) of open cut and assayed 4.28 ppm in a 30 gram fire assay with a gravimetric finish.

Figure 6 – Target Model Diagram



“The average gold content of most soils is low, but the element is enriched in certain types of soils and in a variety of glacial and weathered products in the vicinity of gold – bearing rocks or auriferous deposits” (Boyle, 1979).

## Conclusions

The Brett occurrence was initially indicated by highly anomalous HMC samples found in tributaries of Whiteman Creek. The main shear zone on the Brett and the RW vein were both discovered during road construction (ARIS Report # 28,177 page 6) and not while trenching a high definition gold anomaly per se. The often intense exploration of the Whiteman / Bouleau Creek areas in the last 25 years has not been particularly productive to date. Many thousands of dollars have been spent on conventional soil geochemical surveys and the follow up thereof without the discovery of an economically viable deposit of any sort or even a close call.

Exposed areas of outcrop have likely been adequately explored, in most cases by some very competent geologists in the past. If there is an economically viable gold deposit in the above mentioned areas it is likely completely masked by overburden.

In ARIS Report # 18,541 dated January 31 1989, K.L. Daughtry and W.R. Gilmour point out that “much of the property is covered by glacial overburden and that follow up of the soil anomalies will require careful attention to the difficulties inherent in exploration on till covered ground”.

Taking this statement and other factors into consideration there is a strong possibility that most of the widespread, spotty gold anomalies found to date originate from a previously glaciated gold deposit or any number of other models that would explain such a pattern.

This Soil / Till HMC method hopes to bring a new set of useful information to the present data base. The strong case history signatures of the main shear on the Brett and the Kalamalka, increase the possibility of following a Soil / Till HMC lead to a previously undiscovered blind gold deposit and is a reasonable expectation in spite of the widespread spotty gold values. Concentration of our bulk HMC samples tends to reduce the nugget effect and therefore the possibility of being misled by the many problems inherent with gold geochemistry in areas covered by glacial till.

## Recommendations

The unprospected areas on the property should be prospected and mapped. Areas that look promising should be sampled using HMC methodology. Any alteration zones should be sampled and thin sections should be prepared and studied to try and determine where both alteration and mineralizing events have taken place.

## General Discussion

I first began using Soil / Till HMC about 1981. This process provided a way to explore gold properties when there were little or no funds to pay for assaying. Originally we used to run about 75kgs of soil sample through a sluice box. Over time we concluded that 75kg of sample was just too heavy to handle and we gradually (but reluctantly) reduced the size of our sample down to about 35kgs (the size of our samples today).

Samples sometimes have to be carried a long way out on foot and consequently these samples range from 5 to 10 kgs. They are generally called a “**post - hole**” sample. Post - holing is an Australian method whereby the sampler digs a hole with a shovel about 0.5 to 1 m deep (depending on conditions) and then takes all of the sample from the very bottom of the hole.

After sluicing the sample, the sluice con was then carefully panned and visually inspected. If we thought we could see minute gold particles and could afford to assay the sample we would. With some samples it became obvious that there was absolutely no gold in the sample and with other samples you could say for sure you were seeing gold particles. Originally, we didn't realize the importance of determining whether the particles were low transport or placer.

In short, every time we conduct a HMC program changes are being made. We try to reduce the enormous amount of labour involved, speed things up, and continue to derive meaningful data, while keeping the process cost effective. Certainly, more improvements can and will be made as we continue to conduct HMC programs. I know that there is more information that we can glean from this process as we spend more time and energy on each fraction.

In the area of the Brett deposit we have established that our **Plus 300 Micron** fraction shows up as a very distinct “Buff” colour. This has also proven to be true throughout the sample area whenever we were near alteration zones. From this I believe we are able to surmise that we can detect alteration zones even when they are completely masked by overburden. I know of no other tool in use at present that can do this. In all environments locating alteration zones is very useful, especially if the alteration zone proves to be gold bearing.

There are many people who specialize in the science of gold particles, glaciation, heavy minerals, etc. Their understanding of certain aspects of this methodology far surpasses my ability to do so. I welcome any comments, questions or concerns that the reader may have about our HMC process. Any further discussion can only help us to continue to improve our methodology.

This HMC process may change the previous idea that soil samples are just gathered and sent to the lab. By processing the soil sample, and separating out the fractions before assaying a whole new level of information is being revealed. I believe the whole story may be hidden in these soils once we have learnt how to read it.

My official duty on this and past programs is that of a data gatherer. The samples in this program were gathered and carefully processed to the very best of my ability. My conclusions and recommendations come from the experiences gained from each of the many HMC projects completed to date.

## Statement of Qualifications

I Eugene Allan Dodd of Enderby, British Columbia do hereby certify that:

1. I am an experienced prospector having commenced prospecting professionally full - time in the North West Territories on February 15, 1968.
2. I am both President and Chief Exploration Manager for Billiken Gold Ltd. A position I have held for the past 2 years.
3. I am both President and Chief Exploration Manager for Trans Arctic Explorations Ltd. A position I have held for more than 45 years.
4. I was Chief Instrument Operator and then President of Columbia Airborne Geophysical Services Ltd. for 7 years. Specializing in detailed low level combined airborne geophysical surveys in rugged terrain.
5. I have successfully completed at UBC, a course titled: Geophysics in Mineral Exploration. The course included detailed technical aspects of most types of geophysical surveys including some practical interpretation.
6. I have operated and understand the principles of conducting a wide variety of ground and airborne geophysical surveys. I have experience as both an instrument operator and helper on I.P. and S.P. surveys.
7. I have gained my experience by conducting numerous exploration programs for a wide variety of mining companies, oil and gas companies and consulting geologists and geophysicists.
8. I have supervised projects in the North West Territories, British Columbia, Ontario, Quebec, Labrador, Yukon, Washington, Oregon, Alaska, California, Idaho, Nevada, and Montana.
9. For 10 years I owned and operated a contract drilling division in Matheson Ontario. We operated two medium depth unitized drill rigs for a variety of mining companies.
10. As well as my practical experience I am constantly reading and researching the technical aspects of exploration (geological, geophysical, and geochemical).
11. I am the Author of this report, which is based on my personal observations made while in the field, and from knowledge gained from the works cited in my bibliography.

Dated at Enderby BC.  
This 8<sup>th</sup> day of April 2013



---

Respectfully submitted  
Eugene A. Dodd  
President - Billiken Gold Ltd.



## BIBLIOGRAPHY

Belik, G.D., M.Sc., Geochemical Report on the Bolo Claims Vernon and Nicola Mining Divisions, British Columbia. For Prebble Resources Inc. ARIS Report # 15,296.

Boyle, R.W., 1979, The Geochemistry of Gold and its Deposits pages 50 to 57. For Energy Mines and Resources Canada. Geological Survey Bulletin 280.

Butrenchuk, S.B., Geochemical Assessment Report on the Heavy Property (Heavy 1 and 2) Whiteman Creek Area Vernon Mining Division, British Columbia. For Chevron Minerals Ltd. ARIS Report # 18,998.

Carter, N.C., P. Eng., Geochemical Report on the Nash Property Vernon Mining Division, British Columbia. For Prosperity Gold Corporation. ARIS Report # 23,473.

Carter, N.C., P. Eng., Geological Report on the Nash Property Vernon Mining Division, British Columbia. For Prosperity Gold Corporation. ARIS Report # 20,226.

Casselmann, S.G., 1988 – 1989 Exploration Program On the Whiteman Creek Property Nicola and Vernon Mining Division, British Columbia. For Western Canadian Mining Corporation. ARIS Report # 18,884.

Daughtry, and Gilmour, Geochemical Assessment Report on the Boul Property (Boul 1, Boul 4, Boul 5, Boul 1 Fr, Boul 2 Fr, Boul 3 Fr, Boul 4 Fr, Mess Fr, Boul 5 Fr, more Boul Fr) Bouleau Creek Area Vernon Mining Division, British Columbia. For Chevron Minerals Ltd. ARIS Report # 18,541.

Daughtry, K.L., Geochemical & Prospecting Assessment Report on the Gold Star Claim Whiteman Creek Vernon Mining Division, British Columbia. For Brican Resources Ltd. ARIS Report # 12,854.

Dykes, S.M., P.Geo., 2004 Exploration Program Assessment Report for 514526 Formerly Brett #5 Claim Brett gold Property Vernon Mining Division, British Columbia. For Running fox Resources Corp. ARIS Report # 28,177.

Fairbairn, D., April 1985, Cutting the Nugget Effect: sacred cows are led to slaughter. Canadian Mining Journal.

Geological Survey Bulletin, 1359, Geology and Mineral Resources of the Northern Part of the North Cascades National Park, Washington. "Mineral Resources".

[http://www.cr.nps.gov/history/online\\_books/geology/publications/bul/1359/sec2b.htm](http://www.cr.nps.gov/history/online_books/geology/publications/bul/1359/sec2b.htm)

Gilmour, W.R., P.Geo., Geophysical Assessment Report on the Wedge Property (Wedge, Wedge 1-8 Claims) Vernon Mining Division, British Columbia. For K.L. Daughtry. ARIS Report # 26,450.

Gilmour, B., P.Geo., The Use of Heavy Minerals in Mineral Exploration.  
<http://www.discoveryconsultants.com/heavy-minerals.html>

Gruenwald, W. B.Sc., Summary Report on the Brett Gold Project Vernon Mining Division. For Explore BC Program and Huntington Resources Inc. ARIS Report # 25,351.

Jenkins, D.M., P.Geo., Geological and Geochemical Report on the Lark1 and Lark2 Mineral Claims Vernon Mining Division, British Columbia. For Commonwealth Gold Corp. ARIS Report # 20,359.

Johnson, J.C.F., F.G.S., 1898, Getting Gold: A Practical Treatise for Prospectors, Miners and Students. Chapter I and II. <http://geology.com/publications/getting-gold/>

Kelowna Geology Committee Geology of the Kelowna Area and Origin of the Okanagan Valley British Columbia

Kyba, B.W., Daughtry, K.L., Geochemical Assessment Report on the Gold Star Claim Whiteman Creek Vernon Mining Division, British Columbia. For Brican Resources Ltd. ARIS Report # 15,394.

Leishman, D.A., B.Sc., Geophysical and Geochemical Report on the Bolo Claims Vernon and Nicola Mining Divisions, British Columbia. For Getchell Resources Inc. ARIS Report # 17,870.

Lett, Jackaman, and Yeow, 1999, Detailed Geochemical Exploration Techniques for Base and Precious Metals in the Kootenay Terrane. British Columbia Geological Survey Branch, Eagle Bay Project.

Lett, Bobrowsky, Cathro, and Yeow, 1998, Geochemical Pathfinders for Massive Sulphide Deposits in The Southern Kootenay Terrane. British Columbia Geological Survey Branch.

Matich, T.R., B.Sc., Appendix Report on Geophysical Surveys on the Nash Group Claims Vernon Mining Division, British Columbia. For Stetson Resource Management Corp. ARIS Report # 19,100.

Morrison, M.S., B.Sc., Reverse Circulation Drilling Assessment Report on the Gold Star Claim Group Whiteman Creek Area Vernon Mining Division, British Columbia. For Doublestar Resources Ltd. ARIS Report # 25,600.

Morrison, M.S., B.Sc., Geochemical Assessment Report on the Gold Star Claim Group Whiteman Creek Area Vernon Mining Division, British Columbia. For Southern Gold Resources Ltd. ARIS Report # 24,634.

Nelles, D.M., B.Sc., Assessment Report on Geological, Prospecting and Geochemical Surveys Nash Claim Group Vernon Mining Division, British Columbia. For Golden Porphyrite LTD. ARIS Report # 12,030.

Paulen, Bobrowsky, Lett, Bichler and Wingerter, 1999, Till Geochemistry in the Kootenay, Slide Mountain and Quesnel Terranes. British Columbia Geological Survey Branch, Eagle Bay Project.

Plouffe, Bednarski, Huscroft and Mccuaig, 2009, Gold Grain Content of Till in the Bonaparte Lake Map Area South Central British Columbia (NTS 92P). Geological Survey of Canada. Open File 6047.

Roed, M.A., PhD., Geological History of Okanagan Valley and Origin of Lake Okanagan, British Columbia. <http://www.geoscapes.ca/pov/okhistory.html>

Slauenwhite, M., Geologist, Report of Mapping and Prospecting on the Bouleau Property Vernon Mining Division, British Columbia. For Inco Exploration and Technical Services Inc. ARIS Report # 21,877.

Theobald, P.K.JR., May 1956, The Gold Pan as a Quantitative Tool. For the United States Department of the Interior Geological survey.

Wetherill, J.F., B.A., B.Sc., Geological, geophysical and Geochemical Report on the Nash Property Vernon Mining Division, British Columbia. For Prosperity Gold Corporation. ARIS Report # 19,100.

Yorke-Hardy, R.W., A.Sc.T, 1989 Exploration Program Prospecting & Sampling on the Moby Claim Group Vernon Mining Division, British Columbia. For Antelope Resources Inc. ARIS Report # 19,089.

# Appendix A

Detailed Cost Breakdown  
Bouleau Lake Project

Soil / Till Heavy Metal Concentrating

Bouleau Lake Project

Labour

July 17 2012

E. Dodd (Supervisor) ½ day @ \$325/day -----	\$162.50
D.Goossen (Crew Chief) ½ day @ \$300/day -----	\$150.00
B. Mainprize (Sampler) ½ day @ \$250/day -----	\$125.00
J. Cross (Sampler) ½ day @ \$250/day-----	\$125.00
Two 4x4 trucks ½ day @ \$100.00/day per truck -----	\$100.00
Two Quads ½ day @ \$100.00/day per quad -----	<u>\$100.00</u>
Sub Total	\$762.50

September 30 2012

E. Dodd (Supervisor) ½ day @ \$325.00/day -----	\$162.50
B. Mainprize (sampler) ½ day @ \$250.00/day -----	\$125.00
One 4x4 truck ½ day @ \$100/day-----	<u>\$ 50.00</u>
Sub Total	\$337.50

Sample Processing

15.75 hours @ \$20.00 / hour -----	\$315.00
------------------------------------	----------

<u>Report</u> -----	\$400.00
---------------------	----------

Miscellaneous

Bins, containers, flagging etc.-----	<u>\$ 57.50</u>
--------------------------------------	-----------------

Total                    \$1872.50

(Taxes not included)

Dated: April 8 2013

---

Respectfully submitted  
Eugene A. Dodd, President  
Billiken Gold Ltd.

# Appendix B



Brad Mainprize taking BNHMC-2 Spot Sample from under the fir stump.

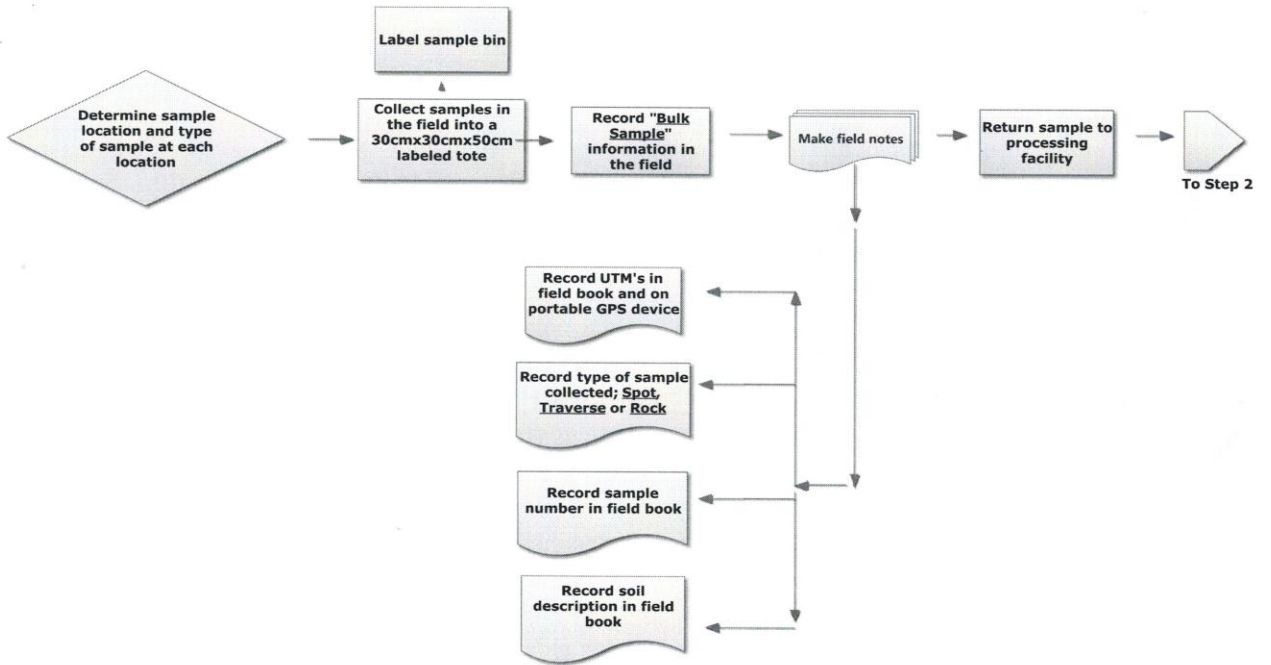


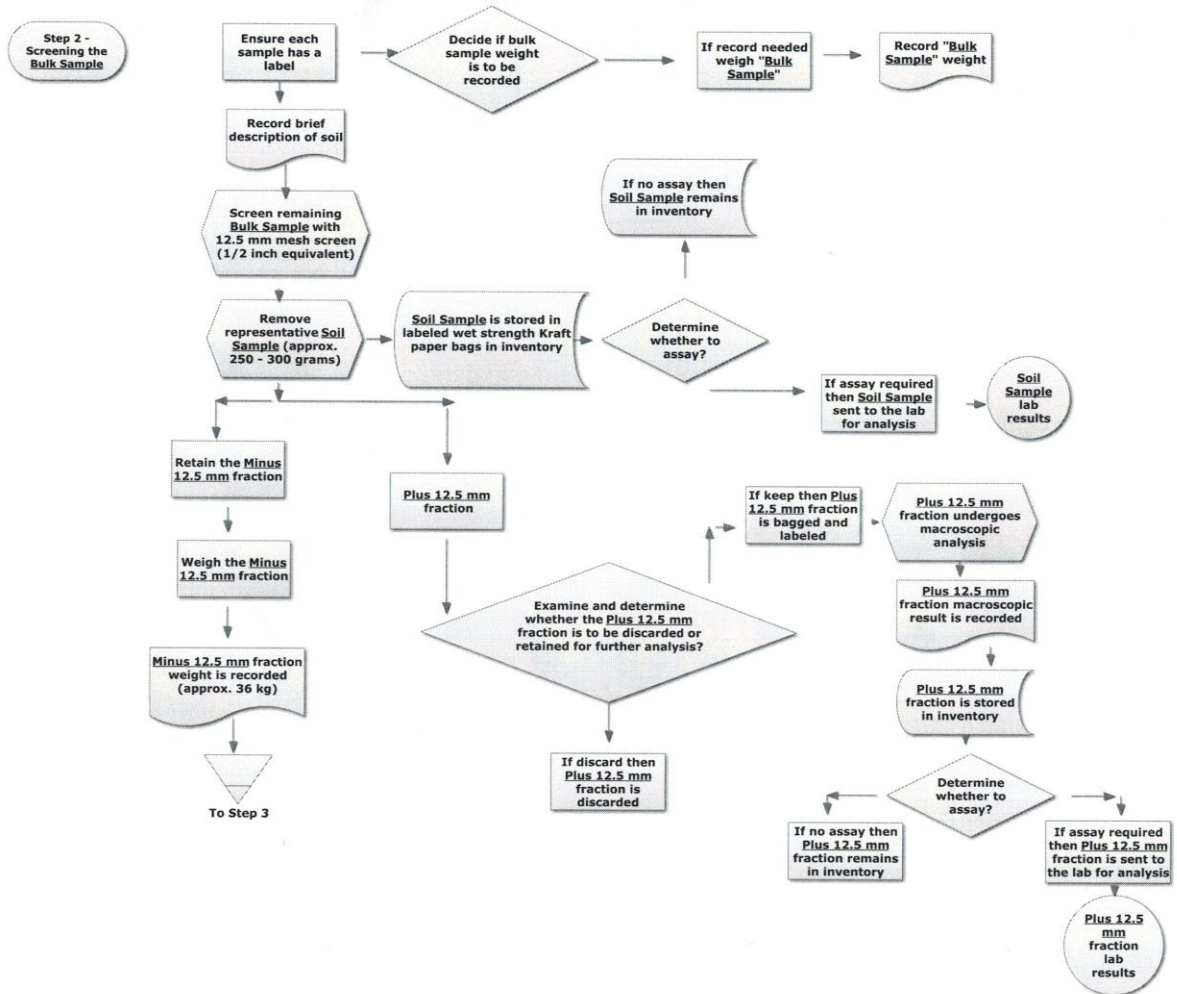
BNHMC-2 – decomposed vesicular basalt

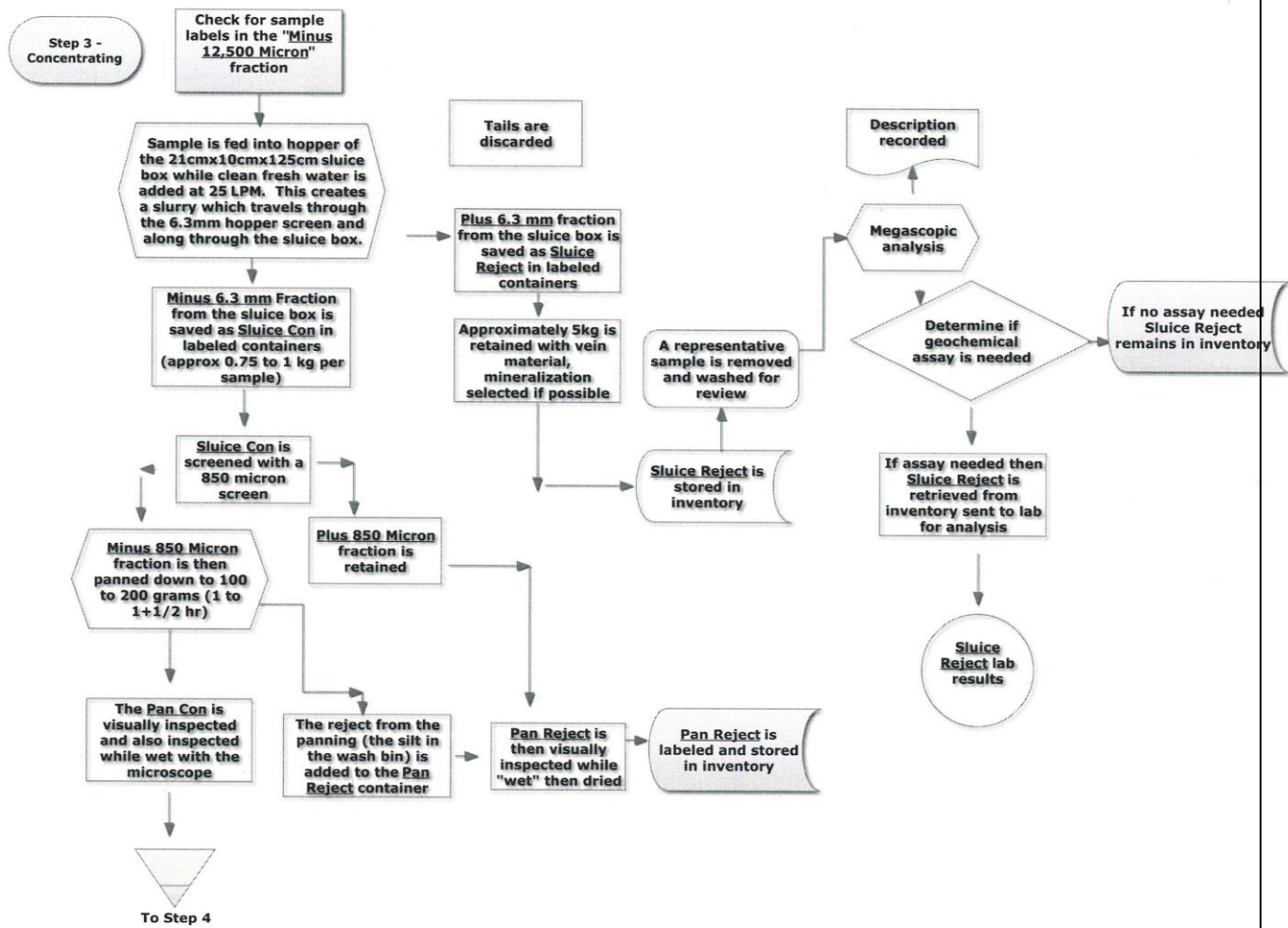
# Appendix C

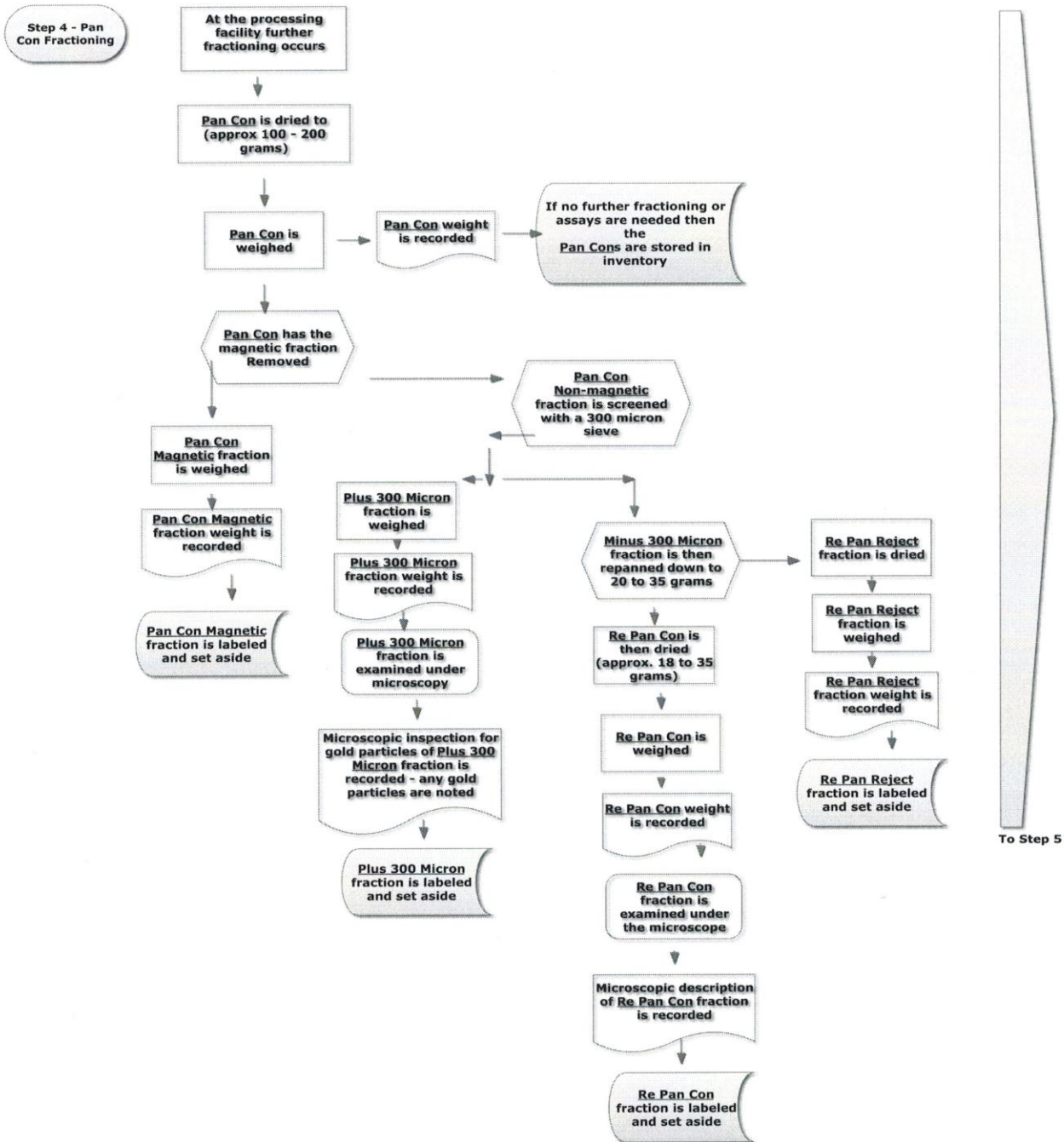


**Step 1  
Taking the  
Sample**









To Step 5

Step 5 - Analysis

At this point there are ten fractions for each sample;

- Soil Sample
- Plus 12.5 mm
- Sluice Reject
- Sluice Reject sub sample for megascopy
- Pan Reject
- Pan Con Magnetic
- Plus 300 Micron
- Re Pan Con
- Re Pan Reject
- 0.5 grams of Re Pan Con labeled and in inventory

