

**Geochemical Report**  
**on the**  
**Pilot Soil / Till Heavy Metal Concentrating Program**  
**on the**  
**Brett West Gold Project**

Event Numbers: 5457160 and 5468607

Tenure #'s: 739502, 739522, 1010947, 1010825

Vernon Mining Division

British Columbia

N.T.S. 082L.022

50° 13' 52" N, 119° 40' 46" W

NAD 83 11U 308500m. E. 5567766m. N.

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**Owner: North Bay Resources Inc.,**

PO Box 162, Skippack,

PA, 19474, USA.

Operator: North Bay Resources Inc.,

Contractor: Billiken Gold Ltd.,

561 Glenmary Road, Enderby,

BC, Canada, V0E 1V3

Author: Eugene A. Dodd, Project Manager

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on the  
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on the  
Brett West Gold Project  
Vernon, M.D.  
Whiteman Creek Area, British Columbia

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## Summary

A total of 40 Spot HMC samples and 6 Traverse HMC samples were gathered over various portions of the Brett West gold property belonging to North Bay Resources Inc. between May 14<sup>th</sup> and July 1st inclusive, 2013. The property is situated about 29 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 moderate to steep south slope situated along the north side of Whiteman Creek. A large part of the property is reasonably easy to traverse on foot. First growth timber is mainly mature Pine, Spruce, and Fir.

The purpose of this HMC program is to try and locate an economic gold / silver deposit on the property and to delineate target areas worthy of further exploration. 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 are a reasonable expectation in spite of the widespread spotty gold values that occur in this area. Concentration of our bulk HMC samples reduces the nugget effect and therefore the possibility of being misled by the many problems inherent with gold geochemistry in areas covered by glacial till.

As a result of the sampling this year, a target area, found during the 2011 HMC program, has been greatly expanded and further delineated. This area is referred to as **Area - A**. A completely new and previously undiscovered target area was found about 400 metres west of **Area - A**. This new area is referred to as **Area - B**.

## Introduction

This report summarizes the Pilot Soil / Till Heavy Metal Concentrating (HMC) Program conducted during the months of May & June 2013 by Billiken Gold Ltd on behalf of North Bay Resources Inc. on their Brett West Gold project situated near the headwaters of Whiteman Creek in the Vernon Mining Division of British Columbia.

The object of this HMC project is to try and locate an economic gold / silver deposit on North Bay Resources Inc.'s Brett West Gold 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 largely successful in delineating two areas of interest to be followed up with further HMC sampling and trenching. These two targets have not been clearly delineated so far. A follow up program of sampling and trenching will hopefully develop a dispersal plume that will lead to a blind or hidden gold deposit.

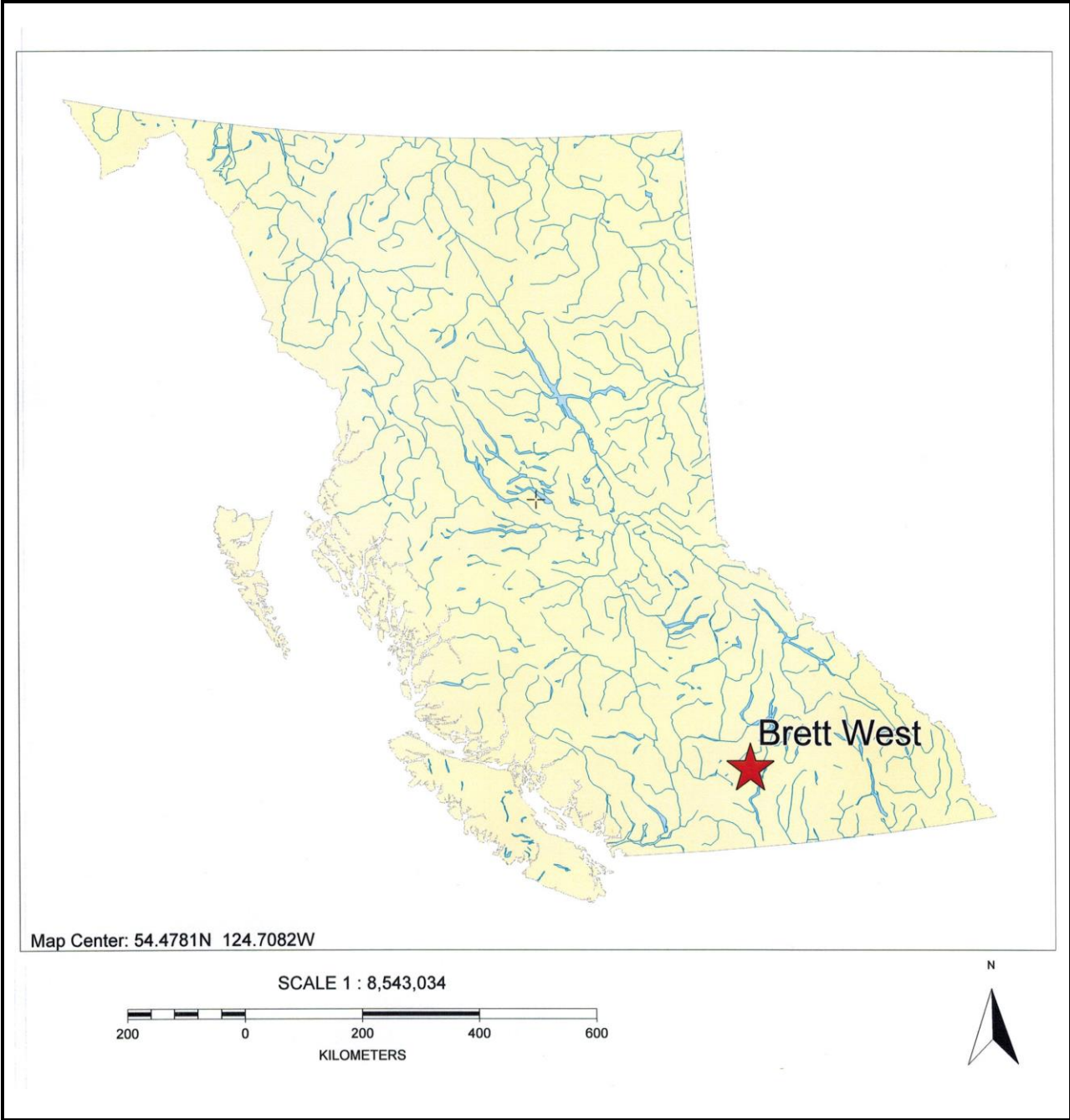
## Physiography

The Brett West gold property lies at the southeast end of the major physiographic region known as the Thompson Plateau. The claims mostly cover a south slope on a moderate to steep hillside occurring along the north side of Whiteman Creek.

Elevation on the property varies between 1020 m where Whiteman Creek cuts through the eastern edge of the claim block to about 1500 m at the northwest corner. Most areas can be traversed on foot but it can be tough going in places because of dead falls.

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

Approximately 60% of Tenure # 1010825 has been logged about 10 years ago. The rest of the claim blocks are primarily covered with first growth timber generally consisting of mature Pine, Spruce and Fir and varies from close growing immature stands to more widely spaced mature trees.



# Property Location Map

North Bay Resources Inc. – Brett West Gold 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>
739502	Mineral	Brett West	20161128	186.02
739522	Mineral	Brett NW	20180117	61.99
1010947	Mineral	Brett NW2	20160710	82.66
1010825	Mineral	Brett W2	20160705	247.98
Total Area: 578.65 ha				

## Claim Information

The property consists of 4 modified grid claims covering an area of 578.65 ha. The claims are situated within the Vernon Mining Division on NTS Map sheet 082L022.

The centre of the property is located at approximately, 11U 308500m. E., 5568800m. N.

The claims are registered to North Bay Resources Inc. of Skippack, Pennsylvania USA. The property has been maintained both by paying cash in lieu of work and performing pilot geochemical programs. This year's pilot geochemical program is an effort to move the property data base ahead. The above mentioned expiry dates are dependent on this Pilot HMC program being accepted for assessment work credit.

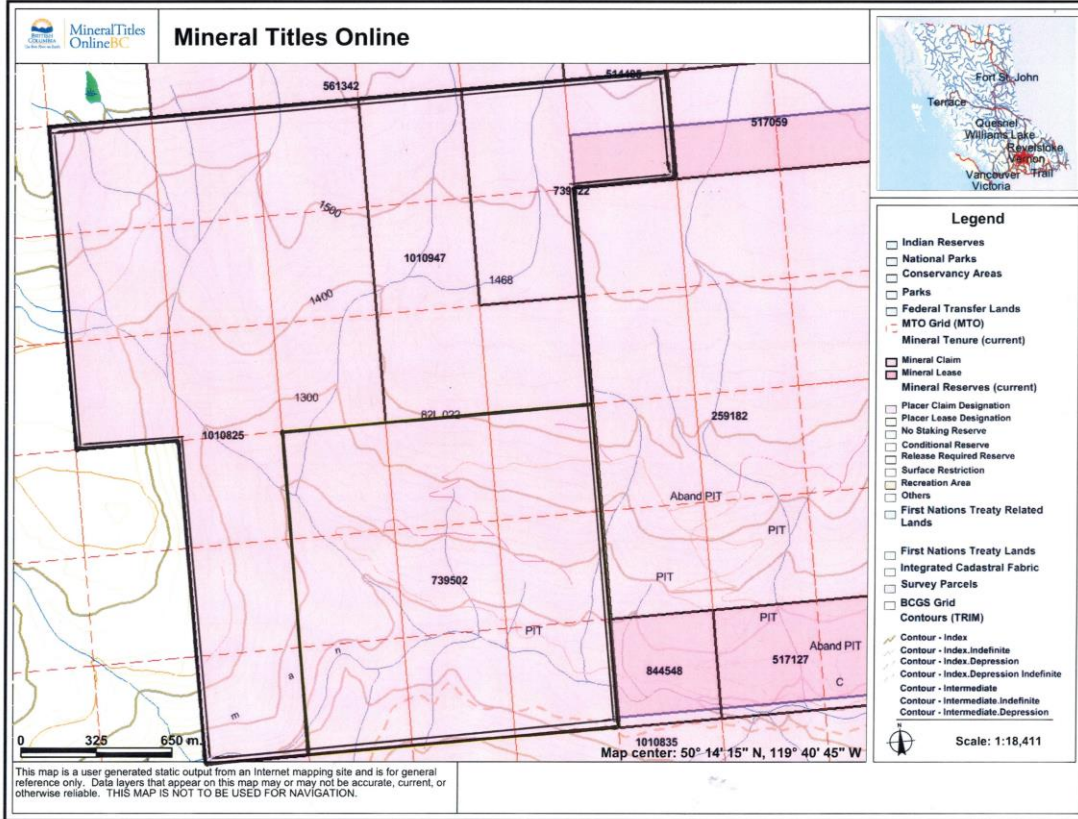
## Location and Access

The property is located in the North Okanagan Valley of British Columbia, Canada approximately 29 km west of the city of 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 km where Whiteman Main logging road branches off to the right. After traveling up Whiteman Main about 19 km to the third bridge, a gate on the right marks the start of a trail that transects the southern part of the claims and continues on to the north east corner. These roads are in poor condition but provide access with quads to the central and north western parts of the property as well.

To gain access to the north eastern part of the property, continue on to the right up the hill after going through the gate. During the freshet of 2012 the road was washed out just inside of this gate but is still passable on foot and could quite easily be made passable for quads with a little effort. After heading uphill for about 2 km you come to the open cut on the Brett main shear, continuing on a short distance you come to the northeast corner of the Brett West claim.

To gain access to the western part of the claim area continue on past the gate about 5-6 km then take a right hand turn onto the Seaton lake, Morrison lake road. Go about 1 km. up the Seaton lake road and then take the first good road on the right and it will take you through Tenure # 1010825 and on to the western portion of Tenure # 739502.

Quads are the best way to get around on the property.



## Claim Location Map

North Bay Resources Inc. – Brett West Gold Project

Tenure #: 739502, 739522, 1010947, 1010825

Date: September 22, 2013

Centre of Claims: 11U 308500 E 5567766 N



## 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 km 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 which adjoins the Brett West claim to the east. 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 has been interpreted to infer the extension of a northeast striking anomalous gold trend onto North Bay's Tenure # 733522.

### December 07, 1984:

K. L. Daughtry in his ARIS Report # 12,854 in the spring of 1984 Ken Daughtry conducted a small but well focused exploration program on the Gold Star claim which covered the same area as the current Brett West claim. Daughtry collected 5 HMC samples, 6 standard silt samples, 25 soil samples, and 12 rock chip samples. Two of the HMC samples contained highly anomalous amounts of gold. A sample from Whiteman Creek contained 8200 ppb gold. A second sample taken just south of our NB – 60 produced 6400 ppb gold. The source of this gold in Mr. Daughtry's opinion is apparently on the south facing slope of the valley above the sample point. None of the other samples in his program yielded anomalous values.

### December 02, 1986:

B. W. Kyba in his ARIS Report # 15,394 conducted a geochemical survey over the property (566 soil samples). Weakly anomalous gold values indicated five areas of interest.

### 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”. I think this precaution is relevant to the Brett West claim.

## December 30, 1997:

M. S. Morrison B.Sc. in his ARIS Report # 25,600 outlines previous work on the property as;

- 1987 – 7 D.D. holes (721.5 m)
- 1988 – 13 km of IP survey
- 1988 – 15 R.C. percussion drill holes (1,785 m)
- 1988 – 3 D.D. holes to test IP anomalies. Mr. Morrison’s conclusions are “although several of the drill holes on the property intercepted tens of meters of alteration, only one diamond drill hole 88 – 8 returned any significant gold values (2,150 ppb over 3 meters)”.
- 1994 – 4 D.D. holes (660 m). Completed by Huntington Resources Inc. to test IP and arsenic anomalies. The results of the 4 D.D. holes were the same as previous, lots of alteration but no significant gold values.
- 1996 – Southern Gold Resources Ltd. tests the extension of the Brett main shear. A narrow grid was established along the projection of the main shear and 81 soil samples were collected.
- 1997 – 5 R.C. drill holes were drilled to test the extension of the main shear. The best values in this drill program yielded 25 ppb over 60 meters in hole 97 – 6. However, Mr. Morrison recommends further drilling to test the Brett main shear at depth.

## 2005:

S. M. Dykes M.Sc., P.Geo., states on page 6 of ARIS Report # 28,177 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.

Mr. Dykes goes on to state “a road constructed into the area uncovered a very strong, steeply dipping, shear zone approximately two meters wide. This is now referred to as the main shear zone. A significant quartz vein (R.W. Vein) was also exposed during road construction. The vein strikes parallel to the main shear about 15 meters to the west. A chip sample from the R.W. Vein assayed 62.9 ppm over a 1.4 meter width (1.84 oz Au / ton over 4.6 feet)”.

## 2011

### North Bay Resources Inc.

North Bay conducted a pilot HMC program in 2011 over a small portion of T#739502. During this survey an area of intensely altered and bleached out zone was discovered very close to sample number NB - 60. NB - 60 produced a spectacular pristine particle of gold with sharp corners that likely had not traveled very far from the bedrock source.

## 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 West 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 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

This property geology is a brief but adequate description by K. L. Daughtry in his ARIS Report # 12,854.

“The property appears to be underlain by a large hydrothermally altered zone, possibly related to the Tertiary pluton to the east. The Tertiary volcanic rocks and the Jurassic quartz monzonite are intensely fractured, bleached, pyritized, and in places, silicified. The most intense alteration is associated with areas of the most intense fracturing and faulting.”

## Glaciation

The Whiteman Creek 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 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 is often used to transport the quads and the sampling gear to the property.

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

To produce a Traverse 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 30x30x50cm plastic tote bin. Each shovel full of sample is 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 200m 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, contact 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 or container, labeled with the sample number and set aside for closer examination later. A representative **Soil Sample** is sometimes 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, a photograph is taken and the sample is briefly described. 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 or as in this case returned to our facility 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 any chance of cross contamination between samples. 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 kept at about 25 Liters per Minute (LPM). Here again consistency must be maintained between all samples to avoid varied results. The sample is fed through a 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 a sample including clean up. 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 "angular 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 between 100 to 200 grams. The pan con size depends on how much heavy fraction is layering in the pan. A coarse fraction (850 Micron) was chosen as we are looking for short transport gold such as that derived from residual disintegrated gold bearing vein material.

This initial panning usually takes 1 to 1.5 hours to complete and 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** container 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. A two part process has been developed to remove the magnetic fraction that ensures fine gold particles are not caught up and removed accidentally in the process. 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 further examination 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. After 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 when possible 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.

## Field Observations

One of the great things about this process is that a pretty good evaluation of the sample can take 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 particles 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 2 - Table of Sample Type and Locations

Sample Number	Type of Sample	UTM Start 11U	UTM Finish
NB – 101	Spot	E308146 N5568600	
NB – 102	Spot	E308488 N5568586	
NB – 103	Spot	E308536 N5568579	
NB – 104	Spot	E308536 N5568607	
NB – 105	Spot	E308561 N5568639	
NB – 106	Spot	E308529 N5568633	
NB – 107	Spot	E308518 N5568604	
NB – 108	Spot	E308509 N5568623	
NB – 109	Spot	E308525 N5568687	
NB – 110	Spot	E308513 N5568774	
NB – 111	Spot	E308534 N5568772	
NB – 112	Spot	E308588 N5568776	
NB – 113	Spot	E308615 N5568879	
NB – 114	Spot	E308572 N5568870	
NB – 115	Spot	E308556 N5568867	
NB – 116	Spot	E308574 N5568964	
NB – 117	Spot	E308604 N5568991	
NB – 118	Spot	E308629 N5569004	
NB – 119	Spot	E308711 N5569000	
NB – 120	Spot	E308740 N5569038	
NB – 121	Spot	E308752 N5569062	
NB – 122	Spot	E308855 N5569166	
NB – 123	Spot	E308819 N5569087	
NB – 124	Spot	E308840 N5569049	
NB – 125	Spot	E307987 N5568483	
NB – 126	Spot	E307965 N5568463	



NB – 127	Spot	E308030 N5568400	
NB – 128	Spot	E308084 N5568422	
NB – 129	Spot	E308110 N5568460	
NB – 130	Spot	E308926 N5569008	
NB – 131	Spot	E308979 N5569077	
NB – 132	Spot	E309009 N5569120	
NB – 133	Spot	E308934 N5569178	
NB – 134	Spot	E308670 N5568960	
NB – 135	Spot	E308673 N5568905	
NB – 136	Spot	E308620 N5568836	
NB – 137	Spot	E308614 N5568741	
NB – 138	Spot	E308588 N5568625	
NB – 139	Spot	E308580 N5568567	
NB – 140	Spot	E308551 N5568512	
NB – 160	Traverse	E308557 N5568985	E308420 N5568882
NB – 161	Traverse	E308420 N5568882	E308348 N5568743
NB – 162	Traverse	E308348 N5568743	E308306 N5568612
NB – 163	Traverse	E308306 N5568612	E308171 N5568550
NB – 164	Traverse	E308171 N5568550	E308021 N5568485
NB – 165	Traverse	E307970 N5568465	E307961 N5568269

Figure 3 - Table of Sample Weight and Descriptions

<b>Sample Number</b>	<b>Description of Sample Location</b>	<b>Weight of minus 12,500 micron fraction (kg)</b>	<b>Description of the minus 12,500 micron fraction</b>
NB – 101	On bank west side of creek	7.25	Brown, sandy loam
NB – 102	Next to creek	7.71	Brown, sandy loam
NB – 103	Under fir stump good sandy soil	9.75	Brown, sandy rocky
NB – 104	Sandy loam on little bench	7.9	Brown, sandy less rocks
NB – 105	Sandy loam under 2 balsam trees	9.52	Brown, sandy loam
NB – 106	Gravel under stump east side of creek	9.52	Brown, sandy loam, darker color
NB – 107	Gravel 3m east of creek under fir tree	9.97	Brown loam, chunky, lots of small pebbles
NB – 108	Sandy soil	9.07	Sandy Loam
NB – 109	Sandy soil just below top of bank on west side of creek	7.25	Brown, clay sticky lumps
NB – 110	Under old tree stump	11.11	Sandy clay loam
NB – 111	No comments	9.75	Sandy clay loam
NB – 112	Dark brown soil under large tree	7.9	Sandy clay loam
NB – 113	Under uprooted tree	10.2	Sandy clay loam
NB – 114	At creek under tree	8.6	Sandy clay loam
NB – 115	Dark brown gravelly soil	9.3	Sandy clay loam
NB – 116	Gravel	11.11	Sandy clay loam
NB – 117	Gravel at creek	10.2	Sandy clay loam
NB – 118	Gravel and clay	11.11	Sandy clay loam
NB – 119	Black soil under fir tree	8.16	Sandy clay loam
NB – 120	Gravel in creek	7.48	Dark, sandy clay loam
NB – 121	Sandy with clay	11.56	Sandy clay loam / vein material quartz
NB – 122	Gravel under big rock in draw	8.6	Sandy clay soil
NB – 123	Gravel and clay	10.4	Grey, sandy clay loam
NB – 124	Light brown sandy soil	7.9	Brown, sandy loam

NB – 125	East side of creek above bridge	10.4	Sandy clay soil
NB – 126	Stream sediment under bridge	12	Stream sediment
NB – 127	Under stump on west side of creek	9.97	Grey, sandy clay loam
NB – 128	On side of creek under huge fir stump	10.65	Grey, sandy clay loam
NB – 129	Just below cut block	9.3	Clay hard pan
NB – 130	Light brown soil	5.67	Brown, sandy soil
NB – 131	Sandy clay and gravel in creek	7.48	Grey, sandy gravelly
NB – 132	Clay and sand	6.57	Sandy clay soil
NB – 133	Gravel at creek from tree root	7.9	Gravel
NB – 134	No comments	9.07	Duff and “A” layer/poor sample
NB – 135	Clay, sand and gravel	12	Sandy clay soil
NB – 136	Sand and gravel	13.6	Sandy clay soil
NB – 137	Gravel	8.84	Sandy clay soil
NB – 138	Clay with some gravel	9.07	Clay and sand
NB – 139	Sandy loam	6.8	Grey, sandy loam
NB – 140	Sandy gravel	9.3	Grey, sandy loam
NB – 160	Till with poor soil development	41.7	Brown, sandy loam
NB – 161	Till with poor soil development	46	Grey, sandy loam/roots
NB – 162	Till with poor soil development	43.9	Sandy basaltic soil/altered basalt
NB – 163	Till with poor soil development	54.8	Sandy
NB – 164	Till with poor soil development	48.9	Grey clay, poor soil
NB – 165	Till with poor soil development	60.1	Grey, sandy loam/clay balls

Figure 4 - Table of Fraction Weights

<b>Sample Number</b>	<b>Pan Con Magnetic Fraction Weight (grams)</b>	<b>- 300 Micron Fraction Weight (grams)</b>	<b>+300 Micron Fraction Weight (grams)</b>	<b>Weight of Sample Sent for Analysis (grams)</b>
NB – 101	17.2	61.37	3.52	508
NB – 102	22.08	57.32	6.1	62
NB – 103	16.74	50.03	4.74	62
NB – 104	9.11	37.19	1.95	62
NB – 105	14.12	48.14	3.2	62
NB – 106	20.4	73.59	12.83	62
NB – 107	15	87.35	15.55	62
NB – 108	18.3	57.48	25.46	62
NB – 109	12.87	100.45	7.16	62
NB – 110	9.95	94.4	33.67	62
NB – 111	11.44	119.17	7.86	62
NB – 112	13.45	87.34	21.9	62
NB – 113	16.73	89.18	6.3	62
NB – 114	10.6	97.43	13.3	62
NB – 115	10.16	116.92	15.2	62
NB – 116	38	101.49	9.14	62
NB – 117	22.19	106.75	11.37	62
NB – 118	14	109.75	29.49	62
NB – 119	14.5	131.35	27.11	62
NB – 120	12.89	17.57	43.15	62
NB – 121	20.24	123.36	31.51	62
NB – 122	14.64	95.12	46.83	508.2
NB – 123	16.6	75.78	27.92	62
NB – 124	16	89.7	20.34	62

NB – 125	9.51	67.13	20.12	62
NB – 126	15.83	53.12	24	507
NB – 127	7.63	45.04	16.91	62
NB – 128	12.89	87.24	21.97	62
NB – 129	8.21	80.08	24.82	62
NB – 130	7.12	72.34	25.96	62
NB – 131	9.86	97.2	22.33	507
NB – 132	10.89	80.72	27.52	62
NB – 133	14.1	85.03	26.87	62
NB – 134	6.59	67.78	37.32	62
NB – 135	18.97	62.12	6.94	62
NB – 136	28.26	76.03	8.59	62
NB – 137	24.21	54.45	23.8	509
NB – 138	10.61	62.15	15.43	62
NB – 139	7.78	69.1	40.22	62
NB – 140	15.05	81.34	25.2	62
NB – 160	39.31	75.26	13.52	62
NB – 161	45.68	78.23	10.8	62
NB – 162	40.66	83.44	12.13	62
NB – 163	46.25	82.05	14.77	506
NB – 164	53.58	85.5	8.71	62
NB – 165	35.9	92.39	17.28	62

Figure 5 – Table of Microscopy and Panning Observations

Sample Number	Microscopy of Re Pan Con fraction	First Panning Observations	Pan Thru of Plus 300 Micron fraction	Re Panning of Minus 300 fraction
NB – 101	No visible gold	Possibly 3 very fine specks	No visible gold	No visible gold
NB – 102	No visible gold	No visible gold	No visible gold	No visible gold
NB – 103	No visible gold	1 fine speck	No visible gold	2 very small specks
NB – 104	No visible gold	No visible gold	No visible gold	No visible gold
NB – 105	No visible gold	No visible gold	No visible gold	2 or 3 very small specks
NB – 106	No visible gold	2 very small specks	No visible gold	2 very small specks
NB – 107	Black cubes	Possibly 2 very small specks	No visible gold	1 to 3 very small specks
NB – 108	No visible gold	No visible gold	No visible gold	No visible gold
NB – 109	No visible gold	No visible gold	No visible gold	No visible gold
NB – 110	Lots of pyrite cubes**	No visible gold	2 small specks	No visible gold
NB – 111	No visible gold	No visible gold	No visible gold	No visible gold
NB – 112	No visible gold	No visible gold	No visible gold	No visible gold
NB – 113	No visible gold	Possibly some very fine specks	No visible gold	No visible gold
NB – 114	No visible gold	Possibly some very fine specks	No visible gold	No visible gold
NB – 115	No visible gold	No visible gold	No visible gold	No visible gold
NB – 116	No visible gold	No visible gold	No visible gold	No visible gold
NB – 117	No visible gold	No visible gold	No visible gold	No visible gold
NB – 118	No visible gold	No visible gold	No visible gold	No visible gold
NB – 119	No visible gold	No visible gold	No visible gold	No visible gold
NB – 120	No visible gold	No visible gold	No visible gold	No visible gold
NB – 121	No visible gold	No visible gold	No visible gold	No visible gold
NB – 122	No visible gold	No visible gold	2 very small specks	No visible gold

NB – 123	No visible gold	No visible gold	No visible gold	1 very small speck
NB – 124	No visible gold	No visible gold	No visible gold	No visible gold
NB – 125	No visible gold	3 fine specks	No visible gold	1 very small speck
NB – 126	No visible gold	Possibly some very fine specks	No visible gold	Lots of fine particles (5 to 10)
NB – 127	No visible gold	No visible gold	No visible gold	No visible gold
NB – 128	No visible gold	No visible gold	No visible gold	2 specks
NB – 129	No visible gold	1 very fine speck	No visible gold	No visible gold
NB – 130	No visible gold	No visible gold	No visible gold	No visible gold
NB – 131	No visible gold	No visible gold	No visible gold	3 small particles
NB – 132	No visible gold	No visible gold	No visible gold	No visible gold
NB – 133	No visible gold	No visible gold	No visible gold	No visible gold
NB – 134	No visible gold	No visible gold	No visible gold	No visible gold
NB – 135	No visible gold	No visible gold	No visible gold	No visible gold
NB – 136	No visible gold	2 very small specks	No visible gold	1 very small speck
NB – 137	No visible gold	Several fine specks	No visible gold	3 small particles
NB – 138	No visible gold	2 specks	No visible gold	1 small particle
NB – 139	No visible gold	No visible gold	No visible gold	1 small particle
NB – 140	No visible gold	No visible gold	No visible gold	1 small speck
NB – 160	No visible gold	No visible gold	No visible gold	No visible gold
NB – 161	No visible gold	2 fine specks	No visible gold	No visible gold
NB – 162	No visible gold	2 very fine specks	No visible gold	No visible gold
NB – 163	No visible gold	No visible gold	No visible gold	4 very small particles
NB – 164	No visible gold	2 specks	No visible gold	2 small particles
NB – 165	No visible gold	No visible gold	No visible gold	2 extra fine specks

\*\*Note that NB – 110 was the only sample on the property that had lots of pyrite cubes

## Megascopy

Mr. Murray S. Morrison, B.Sc. Geologist, completed megascopic examination of the selected Sluice Reject samples and the plus 850 Fraction as they contain important information about both the composition of the bulk HMC samples and their Provenance. Prior to any further exploration programs this megascopic information should be fully understood and considered. Mr. Morrison, did a very careful and thorough examination of both the sluice reject and the plus 850 fraction samples. His sample descriptions are very detailed and contain some very useful descriptions derived in part from his over 30 years experience in the Whiteman creek area.

The full documents from Mr. M. Morrison B.Sc. Geologist are contained in the following appendices:

- Appendix B contains the Report of Megascopic Examination Sluice Reject Samples.
- Appendix C contains the 11 pages of detailed sluice reject sample descriptions.
- Appendix D contains the Report of Megascopic Examination Plus 850 Fraction Samples.
- Appendix E contains the 6 pages of detailed plus 850 fraction sample descriptions.

## Analytical Procedures

All samples were shipped to ALS in North Vancouver for analysis. A secure chain of custody was always maintained and at no time were the samples in a position to be tampered with.

Re Pan Con samples: The 40 Re Pan Con samples were first crushed pulverized split to 85% < 75 um. Au values were determined by 30 g fire assay with an AA. finish. ALS code: (Au-AA23)

Sluice Reject samples: 14 samples were first crushed – 70% < 2 mm riffle split, then pulverized to 85% < 75 um.

- Au values were determined by 30 g fire assay with an AA finish. ALS code:(Au-AA23).
- Silver and copper values were determined by 35 Element Aqua Regia ICP - AES. ALS code: (ME-ICP41)

Re Pan Con samples (with visible gold): 6 Samples were analyzed using (ALS code Au-SCR21) Precious Metal Analysis – Screen Metallics Gold, Double Minus.

ALS Canada Ltd.: Appendices I, J and K contain the following; Invoice, Certificate of Analysis, Sample Preparation and Finalized Results.



## Assay Results

Figure 6 – Table of Re Pan Con Fractions

<b>Sample Number</b>	<b>WEI-21 Received Weight (kg)</b>	<b>Au-AA23 Au (ppm)</b>	<b>Sample Number</b>	<b>WEI-21 Received Weight (kg)</b>	<b>Au-AA23 Au (ppm)</b>
<b>NB – 102</b>	0.06	0.298	<b>NB – 123</b>	0.06	0.887
<b>NB – 103</b>	0.06	0.619	<b>NB – 124</b>	0.06	0.222
<b>NB – 104</b>	0.06	0.055	<b>NB – 125</b>	0.06	1.250
<b>NB – 105</b>	0.06	0.367	<b>NB – 127</b>	0.06	0.198
<b>NB – 106</b>	0.06	1.525	<b>NB – 128</b>	0.06	0.315
<b>NB – 107</b>	0.06	1.255	<b>NB – 129</b>	0.06	0.909
<b>NB – 108</b>	0.06	0.384	<b>NB – 130</b>	0.06	0.006
<b>NB – 109</b>	0.06	0.268	<b>NB – 132</b>	0.06	0.128
<b>NB – 110</b>	0.06	0.086	<b>NB – 133</b>	0.06	0.075
<b>NB – 111</b>	0.06	0.017	<b>NB – 134</b>	0.06	0.006
<b>NB – 112</b>	0.06	0.022	<b>NB – 135</b>	0.06	0.256
<b>NB – 113</b>	0.06	0.069	<b>NB – 136</b>	0.06	0.743
<b>NB – 114</b>	0.06	0.336	<b>NB – 138</b>	0.06	1.225
<b>NB – 115</b>	0.06	0.177	<b>NB – 139</b>	0.06	0.401
<b>NB – 116</b>	0.06	0.062	<b>NB – 140</b>	0.06	0.212
<b>NB – 117</b>	0.06	0.685	<b>NB – 160</b>	0.06	0.465
<b>NB – 118</b>	0.06	0.079	<b>NB – 161</b>	0.06	1.160
<b>NB – 119</b>	0.06	0.220	<b>NB – 162</b>	0.06	1.600
<b>NB – 120</b>	0.06	0.125	<b>NB – 164</b>	0.06	2.53
<b>NB – 121</b>	0.06	0.015	<b>NB – 165</b>	0.06	0.912

Figure 7 - Table of 14 Sluice Reject Samples (rock)

HR Sample Number	WEI-21	Au-AA23	ME-ICP41	ME-ICP41
	Received weight Kg	Au ppm	Ag ppm	Cu ppm
NB – 110	0.34	0.060	<0.2	9
NB – 112	0.36	0.057	<0.2	8
NB – 116	0.44	0.012	<0.2	15
NB – 117	0.44	0.012	<0.2	10
NB – 121	0.42	0.011	<0.2	11
NB – 122	0.44	0.009	<0.2	9
NB – 125	0.42	0.009	<0.2	8
NB – 127	0.40	0.042	<0.2	11
NB – 128	0.40	0.041	<0.2	7
NB – 131	0.60	<0.005	<0.2	11
NB – 136	0.44	0.037	<0.2	7
NB – 140	0.50	<0.005	0.3	7
NB – 163	0.44	0.046	0.3	8
NB – 164	0.62	0.102	<0.2	6

Figure 8 - Table of Total Metallics Results

Sample Number	Au-SCR21 Au total ppm	Au-SCR21 Au (+) F ppm	Au-SCR21 Au (-) F ppm	Au-SCR21 Au (+) M mg	Au-SCR21 Wt + FR grams	Au-SCR21 Wt - FR grams	Au-AA25 Au ppm	Au-AA25D Au ppm
NB - 101	0.14	1.16	0.13	0.003	2.59	501.2	0.15	0.11
NB - 122	0.25	0.34	0.25	0.002	5.94	490.5	0.33	0.16
NB - 126	0.48	8.20	0.28	0.104	12.68	487.9	0.31	0.25
NB - 131	0.16	3.94	0.05	0.058	14.73	476.3	0.04	0.05
NB - 137	0.17	9.75	<0.05	0.070	7.18	491.6	0.03	0.04
NB - 163	0.36	2.29	0.21	0.080	34.91	458.4	0.29	0.13

## Discussion of Results

### Total Metallics

6 of the samples contained obvious visible gold in the **Re-Pan Con** and therefore were screened for metallic, see Table 8.

### Sluice Reject Samples

14 of the **Sluice Reject Samples** (angular rocks in the soil) were analyzed for gold, silver and copper in an effort to find vein material or altered silicified rocks that are gold bearing. HR-NB-164 (Murrays pick) had the highest gold value 0.102 g/t Au. Of the 14 samples the highest silver value was 0.03 ppm and the highest copper value was 15 ppm.

### Designated Area's A & B

As a result of the sampling this year a target area found during the 2011 HMC program has been greatly expanded and further delineated. This area is referred to as **Area - A**.

A completely new and previously undiscovered target area was found about 400 metres west of **Area - A** (upslope from NB - 60 (2011)). This new area is referred to as **Area - B**.

Area - A: At least 5 samples in **Area - A** (NB - 106, NB - 107, NB - 126, NB - 137 and NB - 138) confirmed and further delineated the presence of highly anomalous gold particles in the soil upslope from both NB - 60 and the large alteration zone discovered in the (2011) HMC program. NB - 137 produced an assay of 9.75 g/t (the highest of all 46 samples).

Area - B: High gold values from samples NB - 126, 8.0 g/t, NB - 163, 2.29 g/t, and NB - 164, 2.53 g/t are all very close together and indicate a new target area upslope requiring further sampling in an attempt to locate a primary gold dispersal plume.

Of the 14 sluice reject samples (rock fragments) fire assayed, NB - 164 gave the highest value by quite a margin: 0.102 g/t. This means that the angular vein material and or rock fragments in the sample are gold bearing and appear to be from a source area very close by.

### Additional Sample Information

Some **Pan Con** samples had a small amount of magnetic fraction whereas others had much more. The difference in appearance and proportion of the various fractions, from each sample after processing, holds a lot of useful information.

### Colour of the Plus 300 fraction

The case history samples from the main shear on the Brett produced a noticeable and distinct buff colored **Plus 300 Micron** fraction. Samples taken near alteration zones on the rest of the North Bay properties produced a distinctly buff colored **Plus 300 Micron** fraction as well. This correlation leads me to propose that the buff colored **Plus 300 Micron** fractions may be a useful indicator of blind alteration zones. Mr. Morrison concludes the same in his July 16, 2013 communication:

“On page 20 of your February 24, 2012 report on the **Brett NW Claim**, (p-20, conclusions, paragraph 6) I read that you recognized the distinct buff coloured **Plus 300 Micron Fraction** that was associated with the Brett and some of the other North Bay Properties. The buff coloured samples are comprised of hydrothermally clay altered volcanic lavas and tuffs that (**at least at the Brett Property**) host the gold vein systems. The altered and silica-replaced rocks also contain fine grained pyrite that has partially weathered out to form limonite which produces some of the buff colouration. It is the buff coloured lava and/or the silicified tuff rock fragments (that sometimes contain quartz veinlets) that can lead you back to the source of the hydrothermal vent (which could be a Brett Type gold bearing system)...*The Buff coloured fragments are the key for finding another Brett Type Deposit at Whiteman Creek.*”

During a personal discussion with Mr. Morrison on the completion of the megascopic examination of our **Sluice Reject** samples he said he was “impressed with how different the pebbles in the **Sluice Reject** sub samples were from each other in some cases.” This indicates that a wide range of information exists. Some of this information may prove to be very useful, and our process will move further towards gathering, interpreting and utilizing this information as time goes on.

### Pyrite in NB - 110

During the microscopic examination of the **Re Pan Con** of NB - 110 a lot of pyrite was seen. This is the only sample that I examined with the microscope that contained any amount of pyrite. The importance of this is indicated in Murray Morrison’s July 16, 2013 letter where he points out that:

“The altered and silica replaced rocks also contain fine grained pyrite that has partially weathered out to form limonite which produces some of the buff colouration. It is the buff coloured lava and / or the silicified tuff rock fragments (that sometimes contains quartz veinlets) that can lead you back to the source of the hydrothermal vent (which could be a **Brett Type** gold bearing system).”

## 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 35kg, 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.

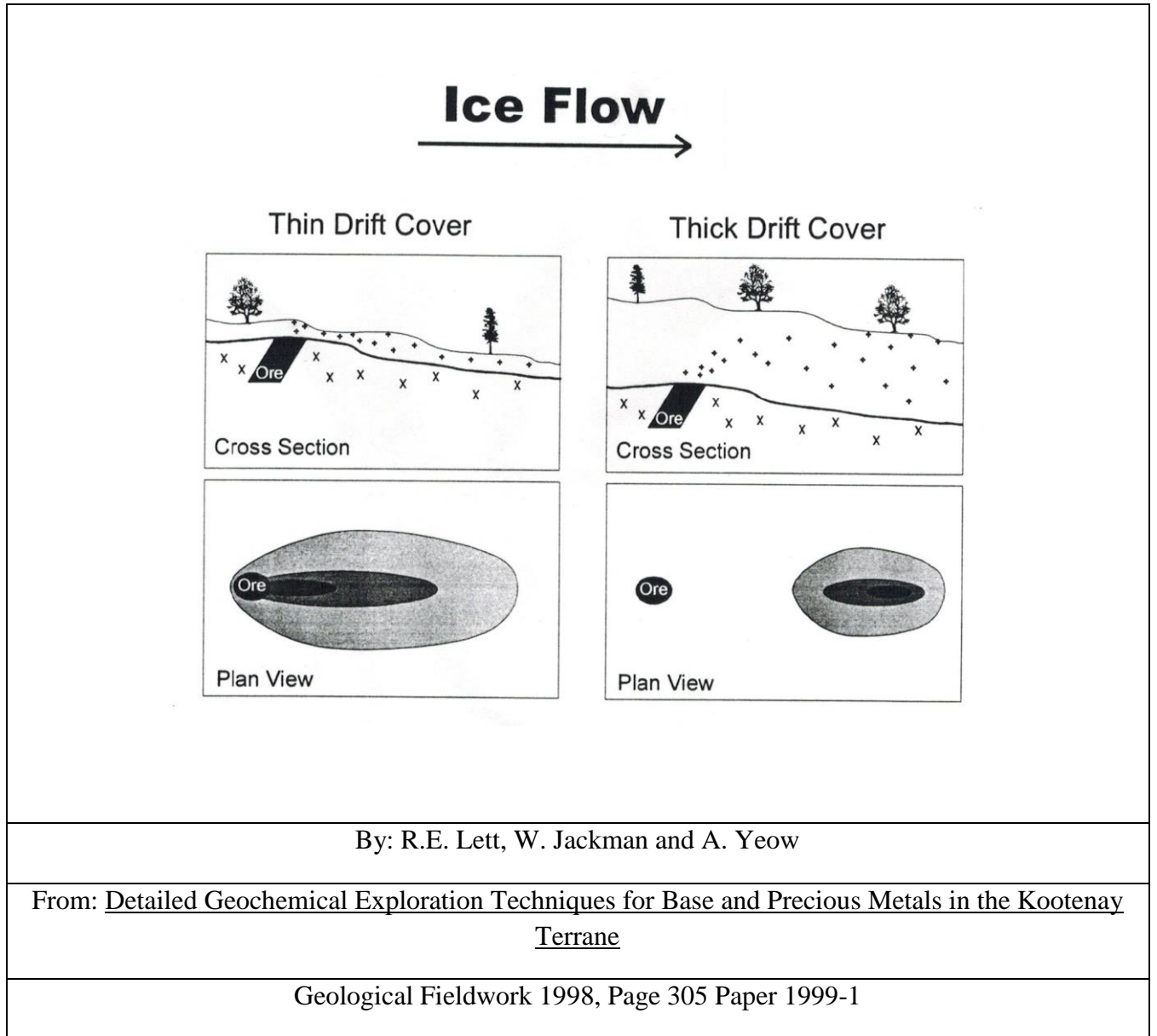
**Sample # 1126 (traverse sample):** Taken along the east side (not downslope) of open cut and assayed 4.28 ppm in a 30 gram fire assay with a gravimetric finish.

### Comparing NB - 137 (2013) to Brett Main Shear Zone Sample # 1125

- Sample # 1125 yielded 10.05 g/t from a **35 kg** traverse sample taken just below the Brett deposit.
- NB - 137 yielded 9.75 g/t from a **8.86 kg** spot soil HMC taken from above both NB - 60 and the alteration zone on North Bay's property.

Thus if we had a 35kg sample of the NB - 137 the assay results could possibly be 4 times greater (39 g/t) than the case history signature of the Brett deposit.

Figure 9 – 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 low transport gold particles found in HMC samples from 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 geochemistry 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 to date.

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. There is a strong possibility that most of the widespread, spotty gold anomalies found in the area to date originate from a previously glaciated gold deposit or any number of other models that would explain such a pattern.

The 2013 Soil / Till HMC brings a new set of useful information to the present data base. As a result of the sampling this year a target area, found during the 2011 HMC program, has been greatly expanded and further delineated. This area is referred to as **Area - A**. A completely new and previously undiscovered target area was found about 400 metres west of **Area - A**. This new area is referred to as **Area - B**.

The **Area - A** results of this HMC program were extremely positive and encouraging. At least 5 samples (NB - 106, NB - 107, NB - 126, NB - 137, NB - 138) confirmed and further delineated the presence of highly anomalous gold particles in the soil upslope from both NB 60 and the large alteration zone discovered in the (2011) HMC program. Notably NB - 137 produced an assay of 9.75 g/t (the highest of all 46 samples).

The new very positive results in **Area - B** were discovered about 400m west and upslope from NB-60 (2011). High gold values from three samples (NB - 126, 8.0 g/t, NB - 163, 2.29 g/t, NB - 164, 2.53 g/t) were all very close together. This indicates a new target area upslope requiring further sampling in an attempt to locate a primary gold dispersal plume.

The exceptional assay results from **Area - B** also correlate with Murray Morrison's (B.Sc. Geo) pick as the most promising of the rocks found in the sluice reject samples during his megascopic examination. Mr. Morrison described sample NB - 164 in the following manner:

“Sample NB - 164 (Murray's pick) was the top rated Sluice Reject sample with 7% of the sample comprised of quartz and buff coloured silicified tuff fragments.”

Of the 14 sluice reject samples (rock fragments) fire assayed, NB - 164 gave the highest value by quite a margin: 0.102 g/t. This means that the angular vein material and or rock fragments in the sample are gold bearing and appear to be from a source area very close by.

## Recommendations

Historically, conventional geochemical surveys in the Brett and surrounding area have not given definitive results but seem to point at widespread, spotty, poorly developed gold anomalies. Considering the geological history of the area and the wide spread spotty nature of these results, it is, in my opinion, difficult if not impossible to determine the source of the gold from conventional soil sample anomalies.

Soil / Till HMC creates meaningful target definition in these environments because of its ability to moderate the nugget effect by concentrating. Concentrating the sample first creates a higher threshold and eliminates the spotty highs that plague conventional soil sampling methods. Further Soil / Till HMC programs are therefore recommended.

NB - 60 (2011) offered some very spectacular looking angular gold particles that points to the likelihood of a nearby source. NB - 137 a spot soil HMC weighed 8.86 kg's and assayed 9.75 g/t au in the plus fraction of the concentrates. The upslope area from NB - 60 and upslope from samples NB - 106, NB - 107, NB - 138, NB - 126 and NB - 137 needs to be further explored with a systematic sampling program followed by trenching in the most anomalous areas.

Up slope from **Areas A and B** should be thoroughly prospected and or mapped-although no outcrops have been found to date. Areas showing promise should be covered by HMC sampling. 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. Road building and trenching should be carried out east (upslope) from **Area - A** in an attempt to locate the bedrock source of the gold particles. It would probably be money well spent to cut a road through this area to enable HMC sampling to take place as close to bedrock as possible. The original discovery of the Brett was made during road construction.

The purpose of this future sampling program will be to try and identify a dispersal plume such as that found immediately downslope from the Main Shear on the Brett. Particular attention should be paid to all areas where bedrock is masked by overburden.

Mr. Willard D. Tompson P.Ge., letter report of February 24, 2012.

Mr. Tompson recommends that "structural geological interpretation and studies of host rock alteration in conjunction with aerial photograph information may help to identify fracture systems in the andesites which could have functioned as conduits for mineralizing hydrothermal solutions". These recommendations could be very useful in delineating targets for future HMC sampling.



## 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 are usually about 10 kg's. Sample numbers 101 to 140 incl. were all carried out on foot for this program. These samples are generally called a "Post-Hole" or "Spot" sample. Post - holeing is likely 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 products.

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 of the different fractions.

In the area of the Brett deposit we have clearly 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 long practiced 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 and interpret 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 3 years.
3. I am both President and Chief Exploration Manager for Trans Arctic Explorations Ltd. A position I have held for more than 46 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 24th day of Sept 2013



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

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# Appendix A

Hi Gene,

I have read your Feb. 24, 2012 report on the **Brett NW Claim** and I see how work-intensive and thorough your **Till Heavy Metal Concentrating Program** can be.

I also read (on page 20, Conclusions, paragraph 6) that you recognized the distinct buff colored **Plus 300 Micron Fraction** that was associated with the **Brett** and some of the **North Bay Properties**.

The buff colored samples are comprised of hydrothermally clay altered volcanic lavas and tuffs that (**at least at the Brett Property**) host the gold vein systems. The altered and silica-replaced rocks also contain fine grained pyrite that has partially weathered out to form limonite which produces some of the buff coloration.

It is the buff colored lava and/or the silicified tuff rock fragments (that sometimes contain quartz veinlets) that can lead you back to the source of the hydrothermal vent (which could be a **Brett Type gold bearing system**).

**The buff colored fragments are the key for finding another Brett Type Deposit at Whiteman Creek.**

\*\*\*\*\*

I have a proposal that would simplify the process to track down a **Brett Type** gold system on the Whiteman Creek area properties.

I would run a series of traverse lines with stations\* and dig down just 30 to 45 cm with a mattock to obtain rock fragments and quickly determine (by angularity) as to how local they may be. I would identify and note the most angular rock fragments. I would also look for the buff colored, altered tuffs and lavas or quartz fragments.

After my preliminary observations I could possibly be able to make a fairly good guess with regard to the composition of the local geology and maybe also be able to determine the direction of origin of the buff colored altered tuff or quartz fragments.

I would collect just small samples of the angular (local?) rock fragments, and/or buff colored altered samples, and/or quartz at each sample site for the record, and with a light load of specific samples be able to test several sites in a day.

Based on my two main criteria\*\* I could possibly be able recommend select areas for follow-up **Heavy Metal Concentrating** and eliminate others areas of low priority.

**Notes:** \* sample spacing on traverse lines could be 50 metres apart.

\*\* the two main criteria are the angularity of rock chips that may represent local geology and the amount of buff coloured, clay altered, and/or silica replaced tuff or lava at each site.

Murray Morrison,  
July 16, 2013



Gene Dodd &lt;dodd.gene@gmail.com&gt;

**Discussion re: Sample Results**

2 messages

**murray morrison** <msmorrisongeol@hotmail.com>  
To: "dodd.gene@gmail.com" <dodd.gene@gmail.com>

Wed, Sep 4, 2013 at 11:23 AM

Hi Gene,

I received the assays and map okay and I have been reviewing the data in detail. I have not arrived at any solid conclusions yet, but I see that the pan concentrate samples yielded some very promising results and it appears that there must be a source area of the gold somewhere nearby.

Most of the andesite, granodiorite and syenite fragments in the sluice reject samples were rounded to subrounded which indicates that they have moved a considerable distance from their source area (probably an area well to the north). The trachyte rock fragments in the samples are generally angular to slabby and very angular and they are believed to have travelled very little from their source area. There is also a fairly good correlation between the higher gold values and the samples with angular trachyte fragments (i.e. NB- 165,164,163,162,161,160, 136, 138, 139 and 123). The volcanic rocks mapped on my original Goldstar mineral claim immediately to the east of your sampled area is made up of a sequence of volcanic flows and ash (tuff). It is probable that one of the flow units is trachyte and it may cross your sample area somewhere between the 1300 and 1450 metres elevations.  
Best Regards, Murray



# Appendix B

Report of Megascopic Examination  
Sluice Reject Samples

Whiteman Creek-Bouleau Creek Area, Veron Mining Division British Columbia

**Discussion:**

This discussion is based on a review of 46 sluice reject samples submitted to me for examination by North Bay Resources Limited.

I have listed the samples below in four groups depending on the most dominant rock type in the respective samples:

Samples in which andesite fragments are the most dominant include: **NB-101,102, 106,108,109,110,111,114,115,116,117,118,119,121,122,125,129,131,133,134, and 160.**

The andesites are generally of mixed colours and types and their degree of rounding indicates travel amounting to some considerable distance from their source.

Samples in which granodiorite fragments are dominant include: **NB-103,104,105,107, 126 and 127.**

The granodiorite fragments are generally sub-rounded to sub-angular and their degree of rounding indicates less travel than the andesites in most samples.

Samples in which trachyte fragments are dominant include: **NB-112,113,120,123,124, 128,130,132,135,136,137,138,139,140,161,163 (part felsic tuff) 164 and 165.**

The trachyte fragments are most often very angular and indicate a nearby source.

There are just two samples in which felsic tuff is dominant: **NB- 162 and 163 (50%).** The felsic tuff fragments are very angular and they are soft enough to break without a hammer and are obviously of very local origin.

**Rating of Samples:**

I have rated the samples with a rating of 0 to 4 with a rating of 4 being the most interesting with respect to finding a source area of gold mineralization.

My rating is based on:

- (a) the number and size of specimens comprised of quartz and/or silica-replaced tuff fragments in each sample.
- (b) the degree of angularity of the specimens.
- (c) evidence of more than one phase of quartz veining or silica-replacement in the specimens.
- (d) the degree of limonite, hematite or manganese staining the specimens.

**Note:** Pyrite and other sulphide minerals were extremely rare in all samples.

Samples with a rating of zero are: **NB-108 and 123.**

Samples with a rating of one are: **NB-101,102,104,110,113,114,115,120,124 and 134.**

Samples with a rating of two are: **NB-103,105,106,107,109,111,118,119,126, 129,130,132,133,135,137,138,139,160,161,162,165.**

Samples with a rating of three are: **NB-112,121,122,131,136,140, and 163.**

Samples with a rating of four are: **NB-116,117,125,127,128, and 164.**

Please see page 2

**Page 2 Discussion continued**

It would be interesting to see how these ratings match up with the gold particles sluiced from the original samples.

I do not have the GPS coordinates for any of the samples, but it would also be interesting to see how the rated samples look on a map and see if they point in any favored direction.

The only conclusions that I can draw from the samples (without a map) is that the samples with large amounts of angular fragments of trachyte, or felsic tuff originated from a very local source, whereas the samples comprised of large amounts amounts of sub-angular fragments of granodiorite or mixed grey and black andesites originated from bedrock sources some distance from the sample sites.

Murray Morrison, B.Sc. geology, UBC, 1969  
July 5, 2013

# Appendix C

Report of Megascopic Examination  
Sluice Reject Samples  
Whiteman Creek-Bouleau Creek Area, Vernon Mining Division, British Columbia

Sample Number	Description of Sample
NB-101	<p>5% sub-rounded granodiorite, 93% mix of angular, sub-angular and sub-rounded black, tan and green andesites some of which are porphyritic.</p> <p><b>Specimens of interest:</b>  <b>One white 8 mm sub-rounded silica-replaced very fine grained tuff fragment.</b>  <b>A 4x8 mm fragment of quartz with distinct crystal faces that have grown into a vug.</b>  <b>A vein of glassy quartz with crystal faces that have grown into an open fracture in trachyte.</b></p>
NB-102	<p>10% sub-rounded and angular granodiorite, 85% mix of angular and sub-angular fragments of green and black andesites, 2% siltstone.</p> <p><b>Specimens of interest:</b>  <b>Two sub-rounded white fragments (of 1 and 2 cm size) of silica replaced tuff .</b>  <b>A 6x2 mm angular fragment of quartz.</b></p>
NB-103	<p>90% sub-rounded and angular granodiorite, 5% angular fragments of pink trachyte with limonite and hematite staining, and 5% mixed andesites.</p> <p><b>Specimens of interest:</b>  <b>One sub-angular 3x4 cm quartz fragment with a 25 mm wide early phase of pitted quartz that probably replaced tuff and a later 8 mm quartz vein with vugs on one side of the fragment.</b>  <b>One 1x2 cm angular fragment of tan and pink quartz that appears to have replaced a fine grained tuff.</b>  <b>One 5x10 mm angular fragment of white to glassy quartz.</b>  <b>One 5x10 mm angular fragment of milky white quartz.</b></p>
NB-104	<p>85% sub-rounded and angular fragments of granodiorite, 10% angular fragments of black andesite and 3% angular fragments of pink trachyte.</p> <p><b>Specimens of interest:</b>  <b>Two angular fragments of limonite stained tuff, one is 10 mm in size and the other is 4x15 mm.</b></p>
NB-105	<p>70% subrounded to angular granodiorite, 10% angular to sub-angular pink and tan trachyte, 15% black sub-angular andesite fragments and 5% specimens.</p> <p><b>Specimens of interest:</b>  <b>Two sub-angular fragments of milky white quartz, one of 15x10 mm size, and one of 8x8 mm.</b>  <b>One 15 mm angular fragment of quartz with 10% pits and vugs.</b>  <b>One 5x10 mm sub-angular fragment of quartz with weak limonite staining.</b>  <b>One 1 cm angular fragment of silica replaced tuff.</b></p>

Sample Number	Description of Sample
NB-106	5% sub-rounded granodiorite, 93% sub-angular to angular black and grey andesites, and 1% angular pink trachyte fragments. <b>Specimens of interest:</b> <b>One 10x10x5mm quartz vein fragment, and a 6x9 mm sub-rounded quartz fragment.</b> <b>One 3.5x1x1 cm fragment of white and pink sugary banded quartz.</b>
NB-107	70% sub-rounded and angular granodiorite, 20% tan and purple angular trachyte, and 10% black and grey angular andesite fragments. <b>Specimens of interest:</b> <b>One 2 cm sub-angular fragment of milky white and glassy quartz with weak brown limonite and black manganese staining.</b> <b>Seven sub-angular quartz fragments averaging 1 cm in size. They include both milky white and glassy quartz, with some of the glassy quartz crystals filling voids, weak limonite staining.</b>
NB-108	75% angular pink trachyte, 23% sub-angular and angular black and grey andesite, and 2% sub-rounded granodiorite fragments. <b>The sample contains no quartz or fragments with silica replacement.</b>
NB-109	80% of the sample is a mix of sub-rounded 1 to 2 cm fragments comprised of black, grey and green andesites. There are also 10% angular purple trachyte fragments of <1 cm, and 10% sub-rounded granodiorite fragments. <b>Specimens of interest:</b> <b>Five 1-2 mm angular chips of quartz and one 2 mm quartz veinlet on the edge of a granodiorite fragment.</b> <b>One sub-rounded 1 cm fragment with a 7 mm glassy quartz veinlet adjacent silica-replaced tuff.</b>
NB-110	75% sub-rounded and sub-angular grey and black andesite, 20% very angular pink and purple trachyte and 5% sub-rounded granodiorite fragments. <b>Specimens of interest:</b> <b>A trace of pyrite on a 4 mm granodiorite fragment.</b> <b>One 1 cm sub-rounded fragment with gray and brown fine-banded chalcedony.</b>
NB-111	60% angular to sub-angular black, grey and green andesite, 30% angular purple trachyte, and 10% angular granodiorite fragments. <b>Specimens of interest:</b> <b>One 2 cm sub-rounded quartz pebble with weak limonite staining tight fractures.</b> <b>One 1 cm sub-rounded pebble that appears to be a silica-replaced very fine grained tuff.</b> <b>One 1.5 cm angular fragment of limonite stained, partially silica-replaced tuff with some very fine grained biotite and hornblende crystals still intact.</b>

Sample Number	Description of Sample
NB-112	<p>35% purple and 35% grey angular trachyte fragments, 20% mix of sub-rounded pebbles of black and grey andesites, and 10% sub-rounded granodiorite fragments.</p> <p><b>Specimens of interest:</b></p> <p><b>One 1 cm angular fragment of glassy to smokey quartz with distinct crystal faces.</b></p> <p><b>One 1.5 cm angular fragment of white banded quartz with weak limonite staining between bands.</b></p> <p><b>One 1 cm fragment with several phases of silica (chalcedony) replacing tuff (?).</b></p> <p><b>One 5 mm quartz fragment.</b></p>
NB-113	<p>80% angular brown and purple trachyte, 10% sub-angular grey andesite, 5% sub-rounded black andesite and 5% sub-rounded granodiorite fragments.</p> <p><b>The sample includes only one 10x3 mm angular fragment of glassy quartz.</b></p>
NB-114	<p>60% mix of sub-rounded grey and black andesites, 20% angular to sub-angular purple trachyte, 15% sub-rounded syenite and 5% sub-rounded granodiorite fragments.</p> <p><b>The sample includes one 1 cm angular fragment of silica-replaced tuff (?).</b></p>
NB-115	<p>65% sub-rounded black andesite, 20% mix of black and grey angular andesites, and 15% angular purple trachyte fragments.</p> <p><b>Only one 1 cm angular fragment of silica-replaced tuff.</b></p>
NB-116	<p>85% mix of sub-rounded (well travelled) to sub-angular fragments of gray, black and green andesites, 14% angular fragments of grey and purple trachyte, and 1% angular fragments of granodiorite.</p> <p><b>Specimens of interest:</b></p> <p><b>One 2x1.5x1 cm angular fragment of silica-replaced and limonite stained tuff with fine banding representing successive sequences of silica replacement.</b></p> <p><b>One 2x1x0.5 cm angular fragment of silica-replaced tuff with fine banding of pink and grey representing successive sequences of silica replacement.</b></p> <p><b>One 1 cm angular fragment of white silica-replaced tuff.</b></p> <p><b>Two angular fragments of white and gray banded silica-replaced tuff, one of 1.5x1x0.5 cm size and the other 1x1 cm in size.</b></p> <p><b>One 1x1 cm subrounded milky white quartz pebble.</b></p> <p><b>One 5x5 mm angular fragment of glassy quartz.</b></p>

Sample Number	Description of Sample
NB-117	<p>58% mix of sub-angular to sub-rounded black and grey (well travelled) andesites, 30% angular and pitted purple trachyte, 10% silica-replaced tuff and 2% granodiorite fragments.</p> <p><b>Specimens of interest:</b></p> <p><b>One 3x2x1.5 cm sub-rounded fragment of white and grey silica-replaced tuff (?), some subtle banding.</b></p> <p><b>One 2x1x1 cm subrounded fragment of white and smokey gray silica-replaced tuff (?).</b></p> <p><b>One 10x5 mm angular fragment of silica-replaced tuff, some weak limonite staining.</b></p> <p><b>One 10x5 mm angular fragment of silica-replaced tuff with minor banding and weak limonite staining.</b></p> <p><b>One 10x8x3 mm angular fragment of silica-replaced tuff with distinct banding indicative of successive phases of silica replacement.</b></p>
NB-118	<p>85% sub-rounded to angular mix of black, light and dark gray andesite fragments, 10% angular purple trachyte fragments with limonite staining, and 2% granodiorite fragments.</p> <p><b>Specimens of interest:</b></p> <p><b>One 2x1.5 cm rounded milky white quartz pebble.</b></p> <p><b>One 1.5x1.5x0.5 cm angular fragment of silica-replaced tuff with weak limonite staining.</b></p> <p><b>One 8 mm sub-rounded white pebble of silica-replaced tuff.</b></p> <p><b>One 5x4 mm angular fragment of silica-replaced tuff.</b></p> <p><b>One 5x4 mm angular fragment of milky vein quartz.</b></p>
NB-119	<p>80% sub-angular and angular black, grey and dark green andesite fragments, 15% sub-angular and angular purple trachyte fragments, and 2% granodiorite fragments.</p> <p><b>Specimens of interest:</b></p> <p><b>One 4x2x2 cm subangular fragment of silica-replaced tuff with weak limonite staining pits and the outlines of replaced crystals throughout.</b></p> <p><b>One 15x10x5 mm angular fragment of silica-replaced tuff with limonite similar to that described above.</b></p> <p><b>One 8 mm angular fragment of silica-replaced tuff with sugary white quartz.</b></p>
NB-120	<p>85% 4x4x0.5 cm angular slabs and 1 to 2 cm fragments of purple trachyte, 14% sub-angular light and dark grey andesites (well travelled), and 1% sub-angular granodiorite fragments.</p> <p><b>The sample contains only one 10x5x4 mm angular fragment of limonite stained quartz.</b></p>



Sample Number	Description of Sample
NB-121	<p>75% mix of sub-angular to sub-rounded (well travelled) light and dark grey, black and green andesite fragments, 10% angular purple trachyte fragments, 10% very angular brown porphyritic andesite (with 20% plagioclase phenocrysts) fragments, and 5% quartz and silica replaced tuff fragments as described in detail below.</p> <p><b>Specimens of interest:</b>  <b>One 2x1x1 cm sub-rounded pebble of silica replaced tuff.</b>  <b>One 1.5x1x1 cm angular fragment of limonite stained sugary quartz.</b>  <b>One 1x1x1 cm angular fragment comprised of glassy quartz crystals and voids with strong limonite staining.</b>  <b>One 1x1x1 cm angular fragment of sugary white quartz.</b>  <b>Three 5x5x5 mm angular fragments of silica-replaced tuff with weak limonite staining.</b></p>
NB-122	<p>75% mix of sub-angular and sub-rounded (well travelled) grey and black andesite fragments, 10% angular purple trachyte fragments, 10% angular 5x4x0.5 cm slabs of pink syenite, and 4% sub-angular granodiorite.</p> <p><b>Specimens of interest:</b>  <b>One 2x2x1 cm sub-angular white pitted silica-replaced tuff fragment.</b>  <b>One 2x1.5x1 cm angular fragment of both white and glassy quartz.</b>  <b>One 1.5x1x1 cm angular fragment of white quartz with weak limonite staining.</b>  <b>One 1x1x0.5 cm angular fragment of pink sugary quartz.</b>  <b>One 1x1x0.5 cm angular fragment of both white and glassy quartz.</b>  <b>One 1x1x0.7 cm angular fragment of limonite stained quartz.</b></p>
NB-123	<p>50% angular fragments of purple trachyte, 30% angular fragments of brown and purple vesicular trachyte with 5% silica lining the vesicles and strong limonite staining, 10% mix of sub-angular fragments of grey, black and green andesites, and 10% sub-angular fragments of granodiorite.</p> <p><b>No quartz or silica-replaced fragments in this sample.</b></p>
NB-124	<p>70% angular purple and brown vesicular trachyte fragments, and 30% mix of sub-rounded (well travelled) light and dark grey and black andesite fragments.</p> <p><b>Specimens of interest:</b>  <b>Two angular fragments of silica-replaced tuff: one of 10x5x5 mm size and the other of 5x5x5 mm size.</b></p>
NB-125	<p>90% mix of sub-angular to sub-rounded (well travelled) grey, black and brown andesite and trachyte fragments, also 5% angular syenite and 5% angular granodiorite fragments.</p> <p><b>Specimens of interest:</b>  <b>One 1.5x1x1 cm sub-rounded fragment of limonite stained silica-replaced tuff.</b>  <b>One 5x3x1.5 cm sub-angular fragment of white-banded, silica-replaced tuff with some late 1 mm quartz veinlets parallel the banding.</b>  <b>One 3x2x1 sub-angular fragment of gray banded silica-replaced tuff.</b>  <b>One 2x2x1 cm angular grey quartz fragment with late banded smoky quartz veinlets.</b>  <b>One 1.5x1x0.5 cm sub-angular fragment of limonite stained silica-replaced tuff.</b></p>

Sample Number	Description of Sample
NB-126	80% angular to sub-angular fragments of granodiorite, 10% angular to sub-angular fragments of trachyte, 8% mix of sub-rounded fragments of black and gray andesites, and 2% silicified tuff fragments. <b>Specimens of interest:</b> <b>One 3x2x1 cm angular fragment of silica-replaced tuff with strong limonite and manganese staining on one side.</b> <b>One 2x1.5x1 cm angular fragment of silica-replaced tuff with weak limonite staining.</b>
NB-127	35% sub-angular fragments of granodiorite, 15% angular fragments of syenite, 20% angular fragments of porphyritic trachyte, 25% mix of sub-rounded to sub-angular fragments of grey and green andesites, and 5% quartz and silica-replaced fragments as described below. <b>Specimens of interest:</b> <b>One 2.5x1.5x1 cm angular fragment of silica-replaced tuff with 10% quartz filling voids.</b> <b>One 2x1.5x1 cm angular fragment of limonite stained trachyte with 10% quartz filling voids.</b> <b>One 1 cm sub-rounded fragment of silica-replaced tuff with limonite and strong manganese staining.</b> <b>One 1.5x1x0.5 cm angular fragment of silica-replaced tuff with a 1 mm quartz veinlet.</b> <b>One 10x10x3 mm sub-rounded white silica-replaced tuff pebble.</b>
NB-128	50% angular and sub-angular fragments of purple and grey trachyte, 30% angular and sub-angular fragments of granodiorite, 15% mix of sub-rounded to angular gray and black andesites, and 5% angular quartz or silica-replaced tuff fragments. <b>Specimens of interest:</b> <b>One 3x2x1 cm angular fragment of silica-replaced tuff with a 2 mm smoky quartz veinlet in the center.</b> <b>Two 2 cm angular fragments of chalky white silica-replaced tuff.</b> <b>One 1 cm sub-rounded pebble of white silica-replaced tuff.</b> <b>Eight 5 to 8 mm angular fragments of silica-replaced tuff; some with weak limonite staining.</b> <b>One 10x5x5 mm angular fragment of quartz.</b>

Sample Number	Description of Sample
NB-129	<p>35% mix of sub-angular to sub-rounded (well travelled) fragments of gray and black andesites, 35% sub-rounded to angular fragments of granodiorite, 10% sub-angular fragments of syenite, 15% angular fragments of purple trachyte, plus 5% angular fragments of quartz and silica-replaced tuff as noted below.</p> <p><b>Specimens of interest:</b>  <b>One 2 cm rounded white and grey pebble comprised of silica-replaced tuff.</b>  <b>One 1.5 cm angular fragment of sugary white quartz.</b>  <b>Three 5 to 10 mm angular quartz fragments; one with weak limonite staining.</b>  <b>Four 5 to 10 mm angular fragments of silica-replaced tuff; only one with weak limonite staining.</b></p>
NB-130	<p>40% sub-rounded (well travelled) fragments of brown and black andesites, 60% angular to sub-angular fragments of brown and purple intermediate volcanic rocks including some trachyte (possibly?).</p> <p><b>Specimens of interest:</b>  <b>Two 10x8x5 mm angular fragments of gray silica-replaced tuff.</b>  <b>One 5x5x4 mm angular fragment of pink quartz.</b></p>
NB-131	<p>95% total mix of sub-rounded to sub-angular (well travelled) fragments of black and purple andesites, &lt; 1% granodiorite.</p> <p><b>Specimens of interest:</b>  <b>One 4x4x2 cm sub-angular fragment of gray trachyte with 5% glassy quartz filling voids and narrow fractures; weak limonite staining.</b>  <b>One 2 cm sub-rounded fragment of silica-replaced tuff.</b>  <b>Two 1.5x1x0.5 cm angular fragments of silica-replaced tuff with weak limonite staining.</b>  <b>One 10x8x6 mm angular fragment of silica-replaced tuff.</b>  <b>Two 5 mm angular fragments of silica-replaced tuff.</b>  <b>One 7 mm angular fragment of smoky quartz.</b>  <b>One 5 mm angular fragment of milky white quartz.</b>  <b>One 7 mm angular fragment of partially silica-replaced tuff, strong limonite staining.</b></p>
NB-132	<p>50% angular fragments of purple trachyte, including three large fragments of up to 10x10x2 cm and several smaller fragments of 0.5 to 1 cm. 45% mix of sub-rounded (well travelled) and sub-angular fragments of black and gray andesites. Less than 1% fragments of granodiorite.</p> <p><b>Specimens of interest:</b>  <b>One 2 cm sub-rounded fragment of partially silica-replaced tuff with glassy and green quartz on one side.</b>  <b>One 5x3x3 mm angular fragment of grey and pink quartz.</b>  <b>One 6x5x3 mm angular fragment of silica-replaced tuff with weak limonite staining.</b></p>

Sample Number	Description of Sample
NB-133	<p>60% mix of sub-rounded (well travelled) fragments of black, gray and brown andesites, 30% angular to sub-angular fragments of grey trachyte, and 10% angular fragments of red to purple trachyte (?).</p> <p><b>Specimens of interest:</b>  <b>One 1x1x0.5 cm angular fragment of sugary quartz.</b>  <b>One 5 mm angular quartz fragment.</b>  <b>Two 7 to 10 mm angular fragments of silica-replaced tuff with weak limonite staining.</b></p>
NB-134	<p>95% mix of sub-rounded (well travelled) fragments of light and dark gray andesites, 5% angular fragments of purple trachyte stongly stained with red hematite and black manganese.</p> <p><b>Only one specimen:</b>  <b>One 10x6x4 mm sub-rounded fragment of white silica-replaced tuff.</b></p>
NB-135	<p>60% angular purple trachyte fragments, and 40% mix of sub-angular to sub-rounded (well travelled) light and dark grey andesites.</p> <p><b>Specimens of interest:</b>  <b>One 2x1x1 cm sub-rounded fragment of gray silica-replaced tuff.</b>  <b>One 10x8x5 mm angular fragment of white silica-replaced tuff.</b>  <b>One 6x6x5 mm angular fragment comprised of 50% gray silica-replaced tuff and 50% white quartz vein.</b>  <b>Three 5 to 7 mm angular fragments of silica-replaced tuff.</b></p>
NB-136	<p>70% angular to sub-angular fragments of purple and brown trachyte (some stained with limonite), 25% sub-rounded to angular fragments of light and dark gray andesite, and 5% sub-angular fragments of granodiorite.</p> <p><b>Specimens of interest:</b>  <b>One 2x1.5x0.8 cm angular fragment of trachyte with a 3 to 4 mm banded quartz vein in the center.</b>  <b>Two 15x10x3 mm angular fragments of silica-replaced tuff one with moderate limonite staining and one without staining.</b>  <b>Two angular fragments of silica-replaced tuff: one of 7 mm size and the other of 5 mm size.</b>  <b>Two angular fragments of white quartz: one of 5 mm size and the other 4x8 mm in size.</b></p>
NB-137	<p>35% angular fragments of purple trachyte (some with silica lining vesicles), 25% angular fragments of limonite stained trachyte, 20% sub-rounded to sub-angular granodiorite fragments, and 20% mix of sub-rounded (well travelled) fragments of grey and green andesites.</p> <p><b>Specimens of interest:</b>  <b>Three 10x5x5 mm angular fragments of silica-replaced tuff with vugs.</b>  <b>One 15x10x5 mm angular fragment of silica-replaced tuff.</b></p>

Sample Number	Description of Sample
NB-138	<p>60% angular to sub-angular fragments of purple and gray trachyte            20% mix of sub-rounded (well travelled) to sub-angular fragments of grey and black andesites, plus one 4 cm sub-rounded granodiorite fragment, and one 2.5 cm sub-angular syenite fragment.</p> <p><b>Specimens of interest:</b>  <b>One 1 cm angular fragment of chalcedony.</b>  <b>One 1 cm angular fragment of silica-replaced tuff.</b>  <b>Four 1 to 1.5 cm angular fragments of silica-replaced tuff; pitted and stained with limonite.</b></p>
NB-139	<p>50% large (up to 4x5 cm) angular fragments of purple trachyte ( some well stained with limonite and hematite), 15% sub-angular fragments of granodiorite (one fragment with jagged remnants of a quartz vein on one side), 5% sub-angular fragments of syenite, and 30% mix of sub-rounded to sub-angular fragments of grey andesites.</p> <p><b>Specimens of interest:</b>  <b>Two grey 8 mm sub-angular fragments of silica-replaced tuff with weak limonite staining.</b>  <b>One 1 cm sub-angular fragment of quartz (two phases).</b>  <b>One 6 mm angular fragment of gray quartz.</b></p>
NB-140	<p>30% sub-angular to angular fragments of syenite, 5% sub-angular to angular fragments of granodiorite, 30% angular fragments of purple trachyte, 10% angular fragments of chalky white altered and limonite stained felsic tuff, and 20% mix of sub-rounded to sub-angular fragments of assorted volcanic rocks most of which are mafic.</p> <p><b>Specimens of interest:</b>  <b>One 4x3x1.5 cm gray sub-angular fragment of silica-replaced tuff. Pitted with quartz crystals lining vugs and voids.</b>  <b>One 2x2x1.5 cm gray angular fragment of silica-replaced tuff with one late 1 to 3 mm quartz veinlet with crystal faces meeting in the center.</b>  <b>One 8 mm angular fragment of glassy quartz.</b>  <b>One 5 mm angular fragment of white and gray quartz.</b>  <b>One 12 mm angular fragment of silica-replaced tuff with strong limonite and hematite staining.</b></p>
NB-160	<p>40% mix of angular to sub-rounded fragments of multicoloured volcanic flow rocks including several light and dark gray felsic and mafic types, 40% angular fragments of purple trachyte, and 20% angular fragments of vesicular gray andesites with limonite and manganese staining.</p> <p><b>Specimens of interest:</b>  <b>One 5x3x0.3 cm very angular fragment of very siliceous rock (rhyolite?) with a white 1x4cm siliceous patch on one side with red hematite staining.</b>  <b>One 2x2x1.5 cm angular fragment of gray silica-replaced tuff with minor limonite and manganese staining.</b></p>

Sample Number	Description of Sample
NB-161	<p>70% large (up to 5 cm) angular fragments of purple and gray trachyte (red hematite staining some), 15% sub-angular to sub-rounded fragments of granodiorite, and 15% mix of sub-angular to sub-rounded fragments of gray and brown andesites.</p> <p><b>Specimen of interest:</b>  <b>One 4x4x1 cm angular fragment of white felsic tuff stained with hematite, limonite and manganese.</b></p>
NB-162	<p>90% very angular (local) fragments of light green, porous felsic tuff with <b>strong limonite and manganese staining</b> on weathered surfaces, 5% angular fragments of mixed andesites and 5% specimen samples as noted below.</p> <p><b>Specimens of interest:</b>  <b>One 3x2x1 cm angular fragment of sugary white quartz.</b>  <b>One 12x8x4 mm sub-angular fragment of both white and glassy quartz.</b>  <b>One 3x2.5x1.5 cm sub-angular fragment of silica-replaced tuff with weak limonite staining.</b>  <b>One 14x8x8 mm sub-angular fragment of silica-replaced tuff.</b></p>
NB-163	<p>a total mix of sub-angular to sub-rounded fragments including intrusives: granodiorite (5%) and syenite (5%), volcanic rocks: andesites (35%), trachytes (35%) and felsic tuff (15%) and specimens (5%) as listed below.</p> <p><b>Specimens of interest:</b>  <b>One 2.5x1.5x1 cm angular fragment of banded white and gray quartz.</b>  <b>One 3x2x1.5 cm angular fragment of banded white and gray quartz.</b>  <b>One 2x1x0.8 cm angular fragment of quartz.</b>  <b>One 1.5x1x1 cm angular fragment of quartz.</b>  <b>Two 14 mm and one 1 cm angular fragments of quartz.</b>  <b>One 2x1x1 cm angular fragment of silica-replaced tuff with weak limonite staining.</b></p>
NB-164	<p>45% angular fragments of grey and purple vesicular trachyte with limonite stained quartz lining vesicles, 20% sub-angular fragments of granodiorite, 5% sub-angular fragments of syenite, 23% mix of sub-angular to sub-rounded gray andesites and 7% quartz and silica-replaced tuff as noted below.</p> <p><b>Specimens of interest:</b>  <b>One 2x1.5x1.5 cm sub-rounded fragment of gray banded quartz.</b>  <b>One 2.5x1.5x1.5 cm angular fragment of white sugary quartz.</b>  <b>Seven 1 to 2 cm sub-angular fragments of white silica-replaced tuff with weak limonite staining</b>  <b>Four 1 to 1.5 cm angular fragments of silica-replaced tuff with notable banding and 0.5-1 mm late quartz veinlets.</b>  <b>One 1 cm angular fragment of white and pink quartz.</b>  <b>One 5 mm angular fragment of white quartz.</b>  <b>One 2x1x0.5 cm angular fragment; most of which is a gray quartz vein.</b></p>

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Sample Number	Description of Sample
NB-165	<p>50% large (up to 6 cm) angular fragments of brown and purple trachyte, 25% large (up to 6 cm) angular fragments of black andesite, 15% sub-rounded fragments of granodiorite, and 10% mix of sub-angular fragments of grey andesites.</p> <p><b>Specimens of interest:</b></p> <ul style="list-style-type: none"><li><b>One 1 cm angular fragment of white quartz with slight limonite staining.</b></li><li><b>One 10x8x3 mm angular fragment of silica-replaced tuff with limonite staining.</b></li><li><b>One 1 cm angular fragment of brown trachyte with a 1 mm layer of limonite stained quartz on two surfaces.</b></li></ul>

Murray Morrison, geologist  
July 4, 2013

# Appendix D



**Report of Megascopic Examination  
Plus 850 Micron Fraction Samples  
Whiteman Creek-Bouleau Creek Area, Vernon Mining Division, British Columbia**

**Discussion:**

This discussion is based on a review of 46 Plus 850 Micron Fraction Samples submitted to me for examination by North Bay Resources Limited.

**Rating of Samples.**

I have rated the samples with a rating of 1 to 4 with a rating of 4 being the most interesting with respect to finding a source area of gold mineralization.

My rating is based on:

- (a) the number and size of fragments of quartz and/or silica-replaced tuff in each sample,
- (b) the degree of angularity of the fragments, and
- (c) the amount of limonite and/or manganese staining on the quartz or tuff fragments.

Samples with a rating of one are: **NB-101,102,103,104,106,110,111,112,113,114,115,117,118,121,122,124,130,132,133,134,135,136,137,138,139,140,160,161,162,164 and 165.**

Samples with a rating of two are: **NB-105,107,108,109,116,119,123,131 and 163.**

Samples with a rating of three are: **NB-120.**

Samples with a rating of four are: **NB-125,126,127,128 and 129.**

There is good agreement between the the ratings that I listed for the Sluice Reject Samples and the Plus 850 Micron Samples for only 16 of the 46 samples. The 16 samples are: **NB-101,102,104,105,107,109,110,113,114,115,119,124,125,127,128 and 134.**

There is moderate agreement between the ratings that I listed for the Sluice Reject Samples and the Plus 850 Micron Samples for 17 of the 46 samples. The 17 samples are **NB-103,106,111,118,130,131,132,133,135,137,138,139,160,161,162,163 and 165.**

There is poor agreement between the ratings that I listed for the Sluice Reject Samples and the Plus 850 Micron Samples for 13 of the 46 samples. The 13 samples are: **NB-108,112,116,117,120,121,122,123,126,129,136,140 and 164.**

The Plus 850 Micron Samples up-graded the rating of only four samples with respect to the rating given them after a study of the Sluice Reject Samples. The 4 samples are: **NB-108,120,123 and 129.**

Samples with a rating of four for both the Sluice Reject Samples and the Plus 850 Micron Samples are: **NB-126 and NB-129.**

Samples **NB-125,126,127,128 and 129** of the Plus 850 Micron Fraction were for the most part comprised of sand size particles and all had 3 to 7% quartz fragments and 3 to 7% silica-replaced tuff fragments. The Sluice Reject Samples for **NB-125,126,127,128 and 129** also contained considerable quartz and silica-replaced tuff specimens.

After a combined study of both the Slice Reject Samples and the Plus 850 Micron Samples I would list samples **NB-116,117,125,126,127,128,129 and 164** as the most interesting with respect to tracking down a source area of gold mineralization.

Samples **NB-112,120,121,122,131,136,140 and 163** could also be considered for follow-up exploration.

I do not have the UTM co-ordinates for any of the samples, but it would be interesting to see how the rated samples look on a map and see if they point in any favored direction.

In general I feel that the Sluice Reject Samples provide the best data. The rock fragments are large enough to give a better indication of the percentages of the dominant rock types and some of the quartz and silica-replaced tuff fragments are also of sufficient size to see important features such as late secondary veining or multiple phases of silicification.

Murray Morrison, B.Sc. Geology, UBC, 1969  
July 26, 2013.

# Appendix E

**Report of Megascope Examination  
Plus 850 Micron Fraction Samples  
Whiteman Creek-Bouleau Creek Area, Vernon Mining Division, British Columbia**

**Introduction.**

The percentages of the dominant rock types identified in the **Plus 850 Micron Fraction Samples** and the general angularity of the various rock types was similar to those studied in the **Sluice Reject Samples** in general, and the reader may refer to my list of the **Sluice Reject Sample** descriptions (dated July 4, 2013) for a more detailed account of the dominant rock types in each sample.

A few of the **Plus 850 Micron Fraction Samples** had compositions quite different from the **Sluice Reject Samples** and I have put an asterisk (\*) next to these sample numbers on the list below.

Some of the samples were comprised of sand size particles and it was impossible to determine the dominant rock types in these samples. I have copied the dominant rock types from the Sluice Reject Sample list for these sandy samples.

Sample Number	Description of Sample
NB-101	99% mix of angular to sub-rounded fragments of purple, brown, grey, black and green andesites, <b>plus: 1/2% 1-2 mm angular to sub-rounded fragments of white, sugary and glassy quartz and 1/2% 1-2 mm fragments of white silica-replaced tuff.</b>
NB-102	99% mix of andesites like those described above for Sample NB-101, <b>plus 1% 1-3 mm angular fragments of white, pink, buff and glassy quartz.</b>
NB-103	90% angular fragments of granodiorite, 3% angular fragments of pink and purple trachyte, 5% angular fragments of mixed colored andesites, <b>plus: 2% 1-7 mm angular fragments of white and pink quartz (some with weak limonite staining).</b>
NB-104	85% angular fragments of granodiorite, 10% angular fragments of black and gray andesites, 3% angular fragments of pink trachyte, <b>plus: 2% 0.5-3mm angular fragments of white and pink quartz (some with weak limonite staining).</b>
NB-105	angular fragments of granodiorite (80%), black and gray andesites (10%) and pink trachyte (6%), <b>plus: 4% 1-3 mm angular fragments of white, pink and glassy quartz (some with limonite staining).</b>
NB-106	93% angular to sub-angular fragments of black and gray andesites, 5% sub-rounded fragments of granodiorite, and 1% angular fragments of pink trachyte, <b>plus: 1/2% fragments of white and sugary quartz and 1/2% sub-angular silica-replaced tuff with weak limonite staining.</b>
NB-107	70% angular fragments of granodiorite, 15% angular fragments of purple and tan trachyte, 10% sub-angular fragments of black and gray andesites, <b>plus: 4% sub-angular to angular fragments of white and glassy quartz (some with minor limonite and manganese staining) and 1% sub-rounded fragments of silica-replaced tuff with limonite staining.</b>
NB-108	75% angular fragments of purple and pink trachyte, 22% angular to sub-rounded black and gray fragments of andesite, <b>plus: 2% 0.5-3 mm angular fragments white sugary and glassy quartz (some with manganese and limonite staining) and &lt;1% sub-angular fragments of silica-replaced tuff with weak limonite staining.</b>

<b>Sample Number</b>	<b>Description of Sample</b>
NB-109	80% sub-rounded fragments of black, gray and green andesites and 17% angular fragments of purple trachyte, <b>plus: 2% 0.5-10 mm angular fragments of white sugary and glassy quartz (most of the fragments are less than 2 mm) and 1% 3-10 mm angular fragments of buff silica-replaced tuff with weak limonite staining (one tuff fragment of 10 mm is strongly stained with manganese).</b>
NB-110	75% angular to sub-rounded fragments of gray and black andesites and 23% angular to sub-angular fragments of purple and pink trachyte, <b>plus &lt;1% angular quartz fragments and 1% 1-3 mm angular fragments of silica-replaced tuff with limonite staining.</b>
NB-111	60% angular to sub-rounded fragments of black, gray and green andesites, 30% angular fragments of purple trachyte and 8% angular fragments of granodiorite, <b>plus: 1% angular fragments of white quartz and 1% sub-rounded fragments of limonite stained silica-replaced tuff.</b>
NB-112	70% angular fragments of purple and gray trachyte, 20% sub-rounded fragments of andesites of mixed colors and 8% fragments of granodiorite, <b>plus: 1/2% angular quartz fragments, and 1% sub-angular limonite stained silica-replaced tuff fragments.</b>
NB-113	80% angular fragments of brown and purple trachyte, 15% sub-angular to sub-rounded fragments of gray andesite, and 5% sub-rounded fragments of granodiorite, <b>plus: 1/2% 0.3-3 mm angular fragments of white, pink and glassy quartz and 1% sub-angular fragments of limonite stained silica-replaced tuff.</b>
NB-114	60% mix of sub-rounded gray and black andesites, 20% angular to sub-angular fragments of purple trachyte, 15% sub-rounded fragments of syenite and 5% sub-rounded fragments of granodiorite, <b>plus: 1/2% 0.3-4 mm angular fragments of glassy and sugary white quartz with weak limonite staining, and 1/2% angular fragments of silica-replaced tuff with weak limonite staining.</b>
NB-115	65% sub-rounded fragments of black andesite, 18% angular fragments of a mix of black and gray andesites and 15% angular fragments of purple trachyte, <b>plus: 1% angular fragments of white sugary and glassy quartz and 1.5% sub-angular fragments of silica-replaced tuff with limonite staining.</b>
NB-116	80% mix of sub-rounded (well travelled) to sub-angular fragments of gray, black and green andesites, 16% angular fragments of grey and purple trachyte, and 1% angular fragments of granodiorite, <b>plus: 1% 0.3-2 mm angular fragments of glassy and white sugary quartz (some with manganese staining) and 2% 1-5 mm angular fragments of buff silica-replaced tuff with limonite staining.</b>
NB-117	66% mix of sub-angular to sub-rounded (well travelled) fragments of black and gray andesites, 30% angular fragments of purple trachyte and 2% fragments of granodiorite, <b>plus: 1/2% 0.3-2 mm angular fragments of white and glassy quartz and 1.5% 1-5 mm sub-angular fragments of buff silica-replaced tuff.</b>
NB-118	85% angular to sub-rounded mix of black, gray and brown andesite fragments, 10% angular fragments of purple trachyte, and 3% fragments of granodiorite, <b>plus: 1/2% 0.3-5 mm angular fragments of glassy and white quartz, and 1.5% 1-8 mm sub-angular fragments of buff silica-replaced tuff.</b>

Sample Number	Description of Sample
NB-119	80% angular to sub-angular fragments of black, gray and dark green andesites, 15% angular to sub-angular fragments of purple trachyte and 2% fragments of granodiorite, <b>plus: 1.5% 0.2-8 mm angular fragments of glassy and white quartz (some with manganese staining) and 1.5% 1-8 mm sub-angular fragments of buff silica-replaced tuff.</b>
NB-120*	40% sub-angular to sub-rounded fragments of gray and black andesites and 57% angular fragments of purple trachyte, <b>plus: 1% 0.2-10 mm angular fragments of white and glassy quartz (some with limonite staining) and 1.5% sub-angular fragments of buff silica-replaced tuff (some with limonite and manganese staining).</b>
NB-121	75% mix of sub-angular to sub-rounded (well travelled) fragments of gray, black and green andesites, and 23% angular fragments of purple trachyte, <b>plus: 1/2% 3-4 mm angular fragments of glassy quartz (some stained with limonite) and 1.5% sub-rounded fragments of white and buff silica-replaced tuff.</b>
NB-122*	75% mix of sub-angular and sub-rounded (well travelled) fragments of gray and black andesites, and 23% angular fragments of purple trachyte, <b>plus: 1/2% 0.2-4 mm angular fragments of white and glassy quartz (some stained with limonite) and 1% sub-angular fragments of white and buff silica-replaced tuff.</b>
NB-123	70% angular fragments of purple and brown trachyte, and 27% mix of sub-angular fragments of gray, black and green andesites, <b>plus: 1% 0.2- 4 mm angular fragments of white and glassy quartz (some with limonite staining) and 1.5% 0.3-8 mm sub-angular fragments of white and buff silica-replaced tuff (most with limonite staining).</b>
NB-124	70% angular fragments of purple and brown trachyte and 30% mix of sub-rounded (well travelled) fragments of gray and black andesites, <b>plus: 1/4 % 0.2-5 mm angular fragments of white and glassy quartz and 1/4% 0.2-4 mm sub-angular fragments of buff silica-replaced tuff.</b>
NB-125	The sample is comprised of sand size particles and therefore it is very difficult to determine the dominant rock types. The dominant rock types in the <b>sluice reject NB-125 sample</b> were recorded as a 90% mix of sub-angular to sub-rounded (well travelled) fragments of gray, black and brown andesites and trachyte, 5% angular fragments of syenite and 5% angular fragments of granodiorite (excluding 15% quartz and silica-replaced specimens). The Plus 850 Micron Sample contains <b>7% 0.2-4 mm angular to sub-angular fragments of white and glassy quartz ( some with limonite and manganese staining) and 7% 0.2-3 mm angular to sub-rounded fragments of buff silica-replaced tuff.</b>
NB-126*	The sample is comprised of sand size particles and therefore it is very difficult to determine the dominant rock types. The dominant rock types in <b>sluice reject sample NB-126</b> were recorded as 80% angular to sub-angular fragments of granodiorite, 10% angular to sub-angular fragments of trachyte, 8% mix of sub-rounded fragments of black and gray andesites, and 2% silicified tuff fragments. The Plus 850 Micron Sample contains 20% recognizable (2-10 mm) sub-angular to sub-rounded fragments of black and gray andesites, <b>plus: 5% 0.2-4 mm angular fragments of white and glassy quartz (some with limonite and manganese staining) and 5% sub-angular fragments of buff silica-replaced tuff.</b>

**Sample  
Number**

**Description of Sample**

- NB-127** This sample is comprised of sand size particles and therefore it is very difficult to determine the dominant rock types. The dominant rock types in the **sluice reject sample NB-127** were recorded as 35% sub-angular fragments of granodiorite, 15% angular fragments of syenite, 20% angular fragments of porphyritic trachyte, 25% mix of sub-rounded to sub-angular fragments of gray and green andesites, and 5% quartz and silica-replaced fragments. The Plus 850 Micron Sample contains: **5% 0.2-5 mm angular fragments of white and glassy quartz (some with limonite and manganese staining) and 5% 2-5 mm sub-angular fragments of buff silica-replaced tuff with limonite and manganese staining.**
- NB-128** 50% angular to sub-angular fragments of purple and gray trachyte, 30% angular and sub-angular fragments of granodiorite, 14% mix of sub-rounded to angular gray and black andesites, **plus: 3% 0.2-3 mm angular fragments of white and glassy quartz (some with limonite and manganese staining) and 3% 2-5 mm sub-angular fragments of buff silica-replaced tuff (some with limonite and manganese staining).**
- NB-129** This sample is comprised of sand size particles and therefore it is very difficult to determine the dominant rock types. The dominant rock types in the **sluice reject sample NB-129** were recorded as: 35% mix of sub-angular to sub-rounded (well travelled) fragments of gray and black andesites, 35% sub-rounded to angular fragments of granodiorite, 10% sub-angular fragments of syenite, 15% angular fragments of purple trachyte, and 5% angular fragments of quartz and silica-replaced tuff. The Plus 850 Micron Sample contains: **5% 0.2-3 mm angular fragments of white and glassy quartz (some with limonite and manganese staining) and 3% 2-5 mm angular fragments of buff silica-replaced tuff (some with limonite and manganese staining).**
- NB-130** 40% sub-rounded (well travelled) fragments of brown and black andesites, 60% angular to sub-angular fragments of brown and purple intermediate volcanic rocks including some trachyte (possibly?), **plus: 1% 0.2-5 mm angular to sub-rounded white and glassy quartz (some with limonite and manganese staining). No tuff in this sample.**
- NB-131** 95% total mix of sub-angular to sub-rounded (well travelled) fragments of black and purple andesites, <1% granodiorite, **plus: 1% 0.2-4 mm angular fragments of white and glassy quartz (some with limonite and manganese staining) and 1% 1-5 mm sub-rounded fragments of silica-replaced tuff (some with limonite and manganese staining).**
- NB-132** 54% angular fragments of purple trachyte, and 45% mix of sub-rounded (well travelled) and sub-angular fragments of black and gray andesites, **plus: 1% 0.2-10 mm angular fragments of white, glassy and smoky glassy quartz (some with limonite staining). No notable tuff fragments.**

**Sample  
Number**

**Description of Sample**

- NB-133** 60% mix of sub-rounded (well travelled) fragments of black, gray and brown andesites, 30% angular to sub-angular fragments of gray trachyte, and 10% angular fragments of red to purple trachyte (?), **plus: 1/2% 0.2-5 mm angular fragments of white and glassy quartz (some stained with limonite), and 1/2% 2-5 mm sub-angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-134** 95% mix of sub-rounded (well travelled) fragments of light and dark gray andesites, 4% angular fragments of purple trachyte, **plus: 1/2% 0.2-2 mm angular fragments of white and glassy quartz and 1/2% 2-5 mm sub-angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-135** 60% angular fragments of purple trachyte and 40 % mix of sub-angular to rounded (well travelled) light and dark gray andesites, **plus: 1/2% 0.2-4 mm angular fragments of white and glassy quartz and <1/2% 2-3 mm sub-angular fragments of buff silica-replaced tuff.**
- NB-136** 70% angular to sub-angular fragments of purple and brown trachyte, 25% sub-rounded to angular fragments of light and dark gray andesites and 5% sub-angular fragments of granodiorite, **plus: 1% 0.2-6 mm angular fragments of white and glassy quartz and 1/2% 2-5 mm sub-angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-137** 60% angular fragments of purple trachyte, 20% sub-rounded to sub-angular granodiorite fragments and 20% sub-rounded (well travelled) fragments of gray and green andesites, **plus: 1% 0.2-5 mm angular fragments of white and glassy quartz (some with limonite staining) and 1/2% 1-3 mm sub-angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-138** 75% angular to sub-angular fragments of purple and gray trachyte, 25% mix of sub-rounded (well travelled) to sub-angular fragments of gray and black andesites, **plus: 1% 0.2-2 mm angular fragments of white and glassy quartz and <1% sub-angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-139** 50% angular fragments of purple trachyte, 15% sub-angular fragments of granodiorite, 5% sub-angular fragments of syenite and 30% mix of sub-rounded to sub-angular fragments of gray andesite, **plus: 1/2% 0.2-3 mm angular fragments of white, pink and glassy quartz and <1/2% 1-5 mm angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-140** 30% sub-angular to angular fragments of syenite, 5% sub-angular to angular fragments of granodiorite, 30% angular fragments of purple trachyte, 15% angular fragments of felsic tuff, and 20% mix of sub-rounded to sub-angular fragments of assorted volcanic rocks most of which are mafic, **plus: 1/2% 0.2-3 mm angular fragments of white and glassy quartz and 1/2% 2-7 mm angular fragments of buff silica-replaced tuff with limonite staining.**
- NB-160** 40% mix of angular to sub-rounded fragments of multicolored volcanic flow rocks including several light and dark grey felsic and mafic types, 40% angular fragments of purple trachyte, and 20% vesicular gray andesites, **plus: 1/2% 0.2-3 mm angular fragments of white and pink quartz (many stained with limonite) and <1/2% 1-2 mm sub-angular fragments of buff silica-replaced tuff.**



Page 6

Sample  
Number

Description of Sample

- NB-161** 70% angular fragments of purple and gray trachyte, 15% sub-angular to sub-rounded fragments of granodiorite, and 15% mix of sub-angular to sub-rounded fragments of gray and brown andesites, **plus: 1/2% 0.2-2 mm angular fragments of white and pink quartz and <1/2% 1-2 mm sub-angular fragments of silica-replaced tuff with limonite staining.**
- NB-162\*** 50% angular fragments of purple and pink trachyte and 48% mix of sub-rounded fragments of gray, black and brown andesites, **plus: 1% 0.2-5 mm angular fragments of white and glassy quartz and 1% 1-5 mm angular fragments of buff silica-replaced tuff.**
- NB-163** a total mix of sub-angular to sub-rounded fragments including 5% granodiorite, 5% syenite, 40% trachyte, 40% andesites and 8% felsic tuff, **plus: 1.5% 0.2-5 mm angular fragments of white, glassy and pink quartz (some with limonite staining) and 1/2% 1-5 mm sub-angular fragments of buff silica-replaced tuff**
- NB-164** 50% angular fragments of gray and purple trachyte, 20% sub-angular fragments of granodiorite, 5% sub-angular fragments of syenite and 25% mix of sub-angular to sub-rounded fragments of gray andesites, **plus: 2% 0.2-5 mm angular fragments of white quartz and <1% sub-angular fragments of buff silica-replaced tuff.**
- NB-165** 50% angular fragments of brown and purple trachyte, 25% angular fragments of black andesite, 10% mix of sub-angular fragments of gray andesites and 15% sub-rounded fragments of granodiorite, **plus: 1.5% 0.1-5 mm angular fragments of white, glassy and (minor) pink quartz and <1/2% 1-3 mm sub-angular fragments of buff silica-replaced tuff with limonite staining.**

Murray Morrison, Geologist  
July 25, 2013

# Appendix F

Detailed Cost Breakdown  
Brett West Gold Project

Soil / Till Heavy Metal Concentrating Program

Brett West Gold Project

Labour

E. Dodd (Supervisor) May 14 & 29  
2 Days @ \$350.00 ----- \$700.00

D. Goossen (Crew Chief) May 14, 28, 29 & 30  
4 Days @ \$325.00 ----- \$1,300.00

B. Goossen (Sampler) May 28, 29 & 30  
3 Days @ \$250.00 ----- \$750.00

B. Mainprize (Sampler) May 29  
1 Day @ \$275.00 ----- \$275.00

Truck

¾ Ton 4x4 May 14, 28, 29 & 30  
4 Days @ \$125.00 ----- \$500.00

2<sup>nd</sup> ¾ Ton 4x4 May 29  
1 Day @ \$125.00 ----- \$125.00

Quads

May 14, 28, 29 & 30  
1 Quad 4 Days @ \$150.00 ----- \$600.00

May 29  
1 Quad 1 Day @ \$125.00 ----- \$125.00

Camp

Meals etc. 9 days @ \$50.00 ----- \$450.00

Sample Processing

6 - 35 kg HMC Samples x 9 hours = 54 hours @ \$25.00 / hour ----- \$1,350.00

40 – Spot HMC Samples x 8 hours = 320 hours @ \$25.00/ hour ----- \$8,000.00

Bins and containers ----- \$419.00

Megascopy

M. Morrison B.Sc. Geologist ----- \$639.40

Report

----- \$700.00

Assays

----- \$1,711.98

Total \$17,645.38

(Taxes not included)

Dated: September 22, 2013

---

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

# Appendix G



Line up of fractions showing **Sluice Reject**, **Sluice Con**.



NB - 105



Spot Sample





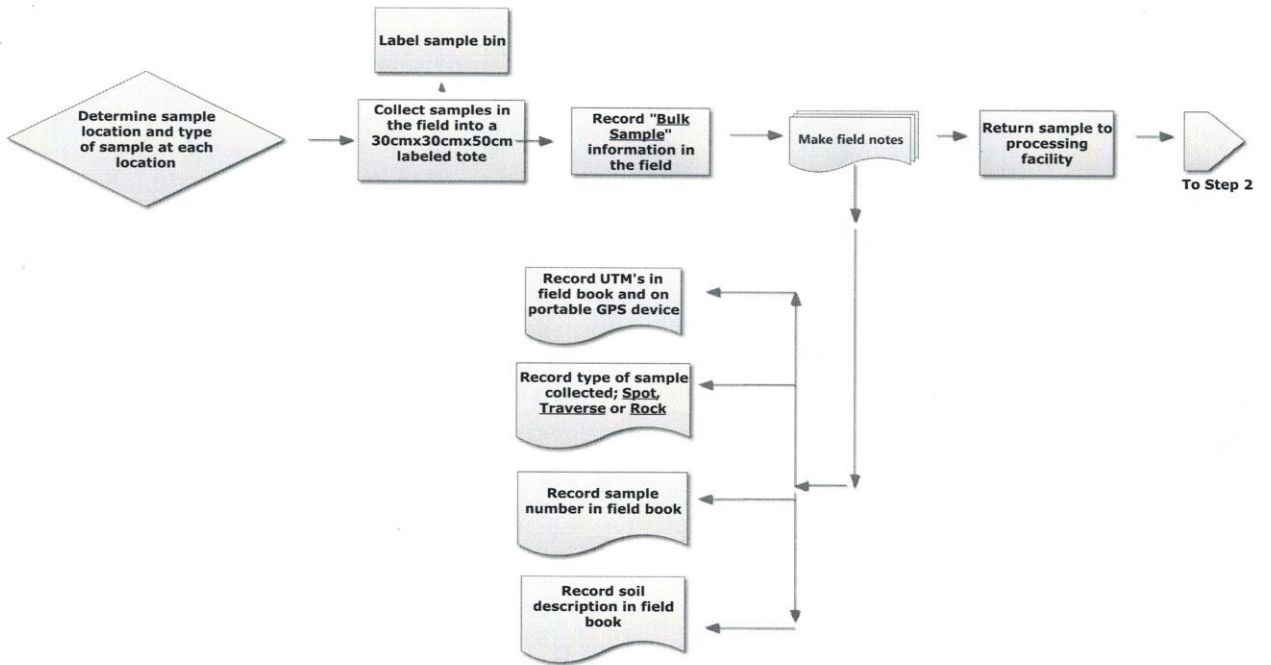
NB – 126 small speck

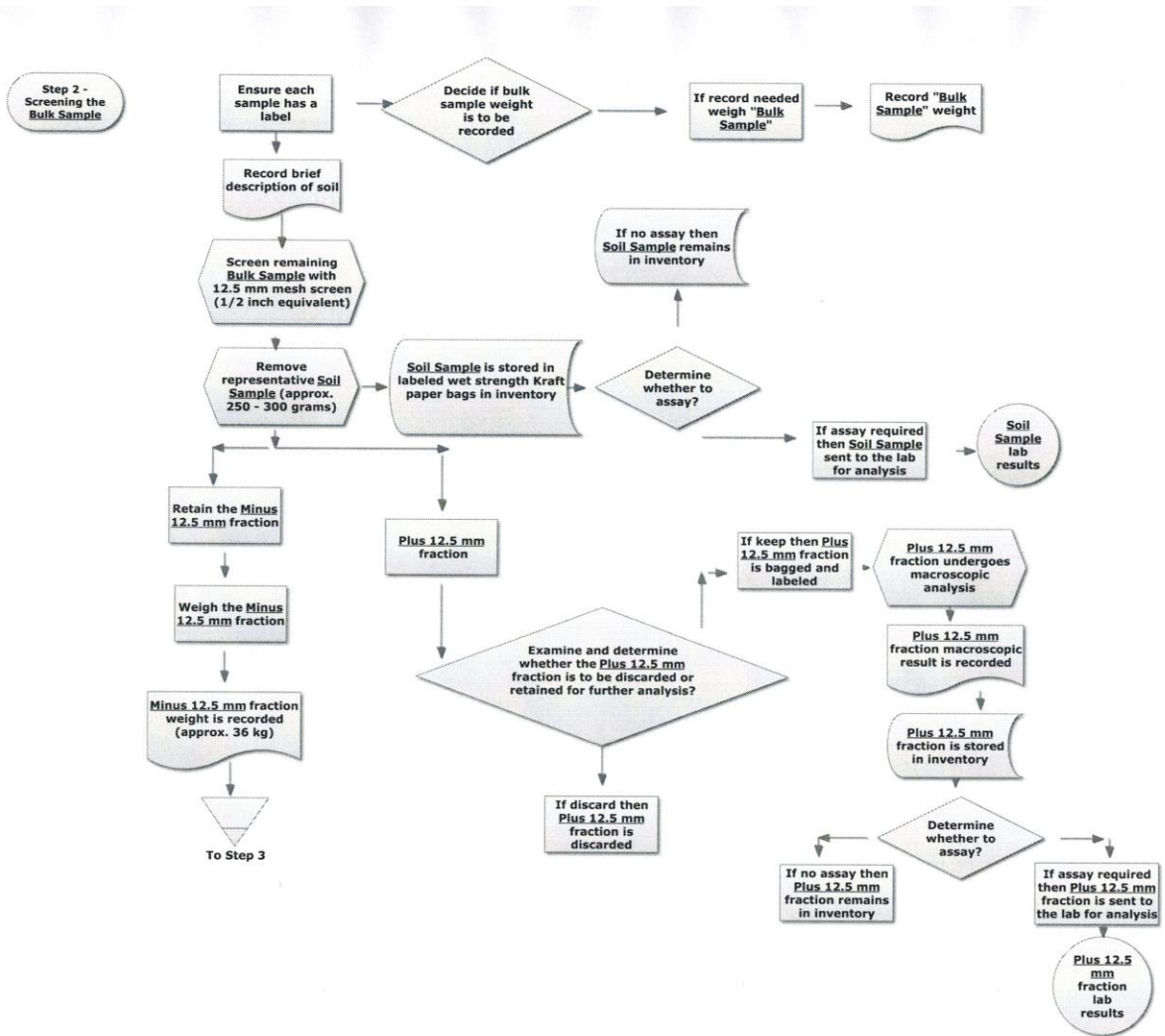


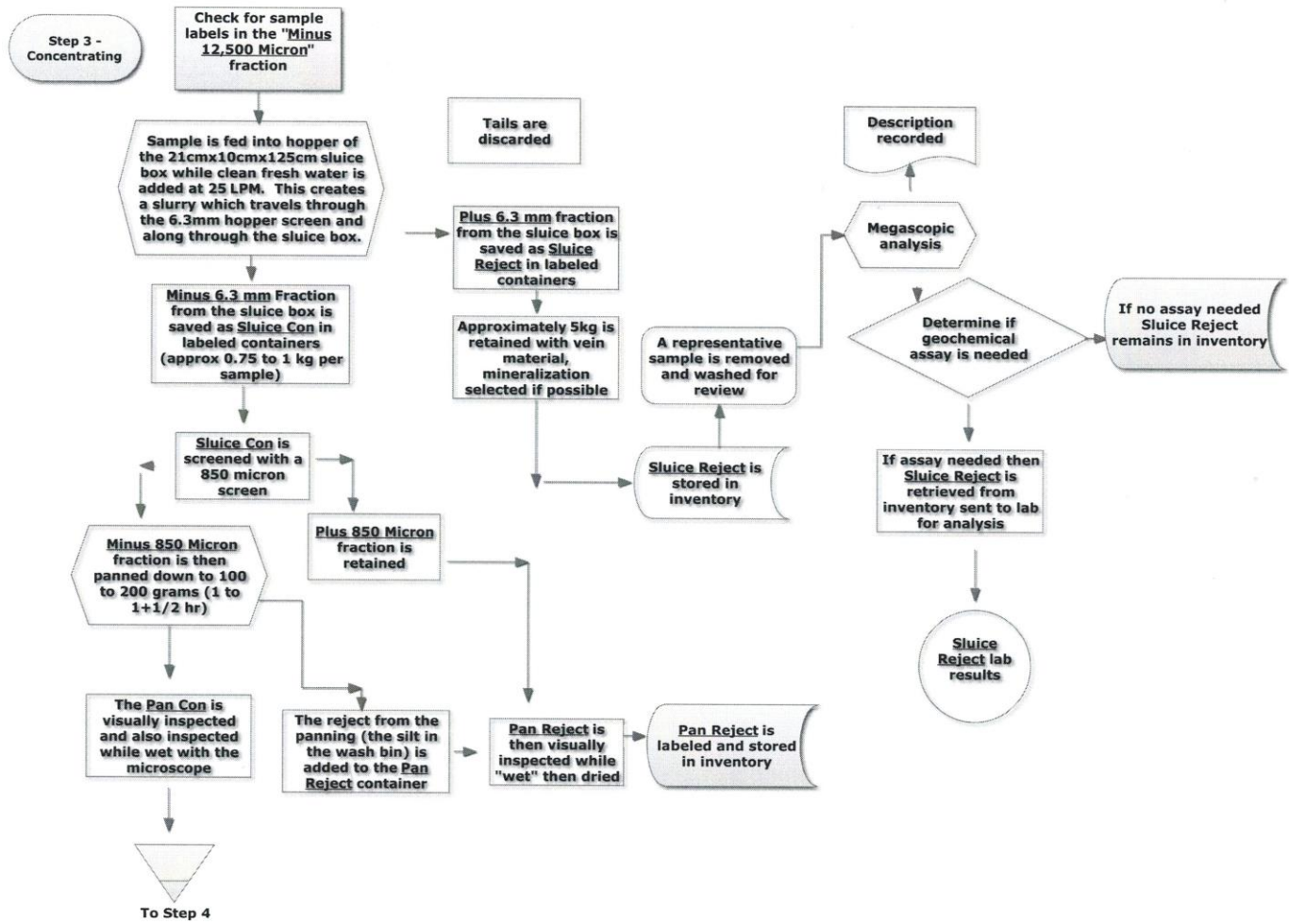
Typical insolubles Whiteman Creek area

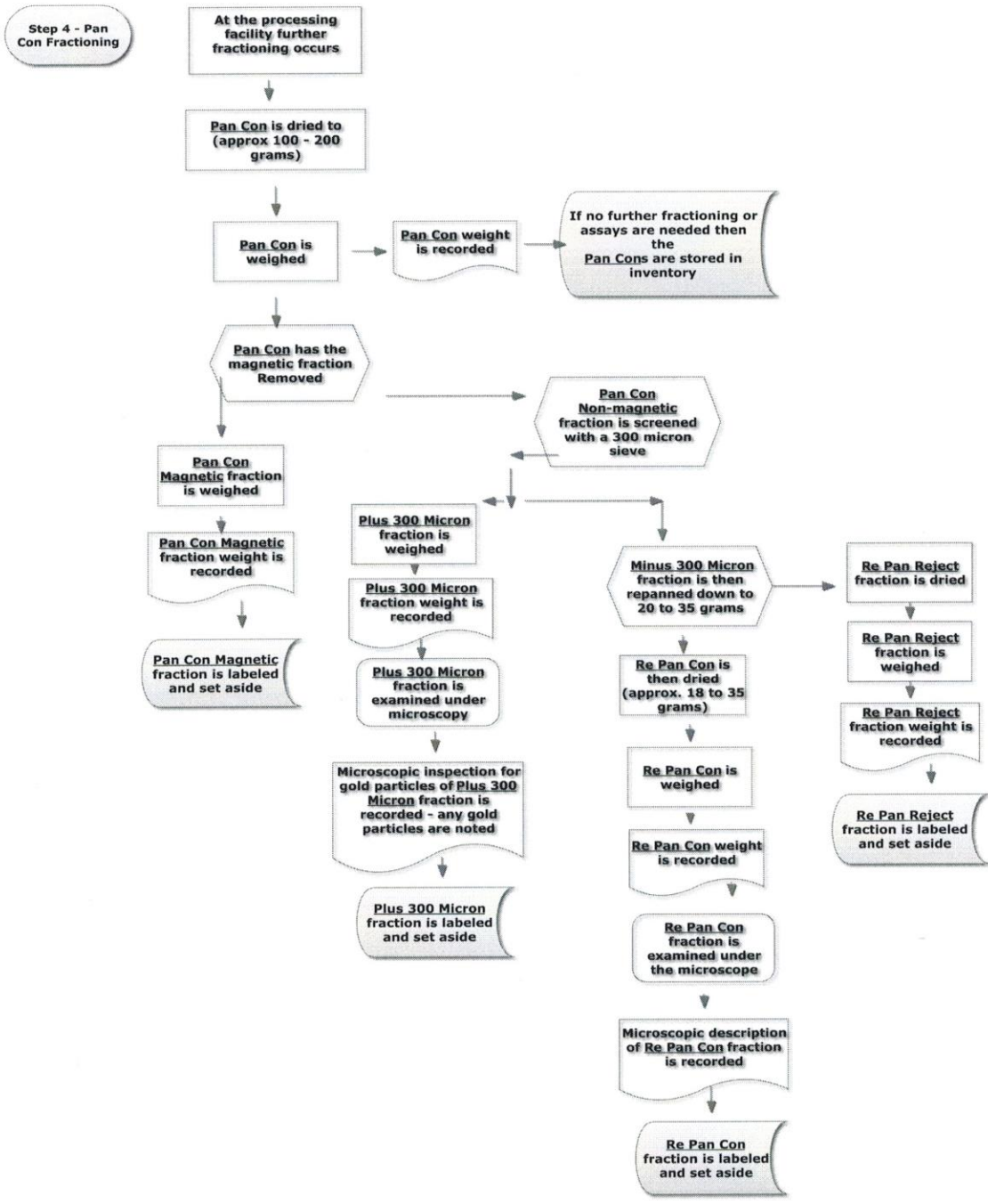
# Appendix H

**Step 1  
Taking the  
Sample**







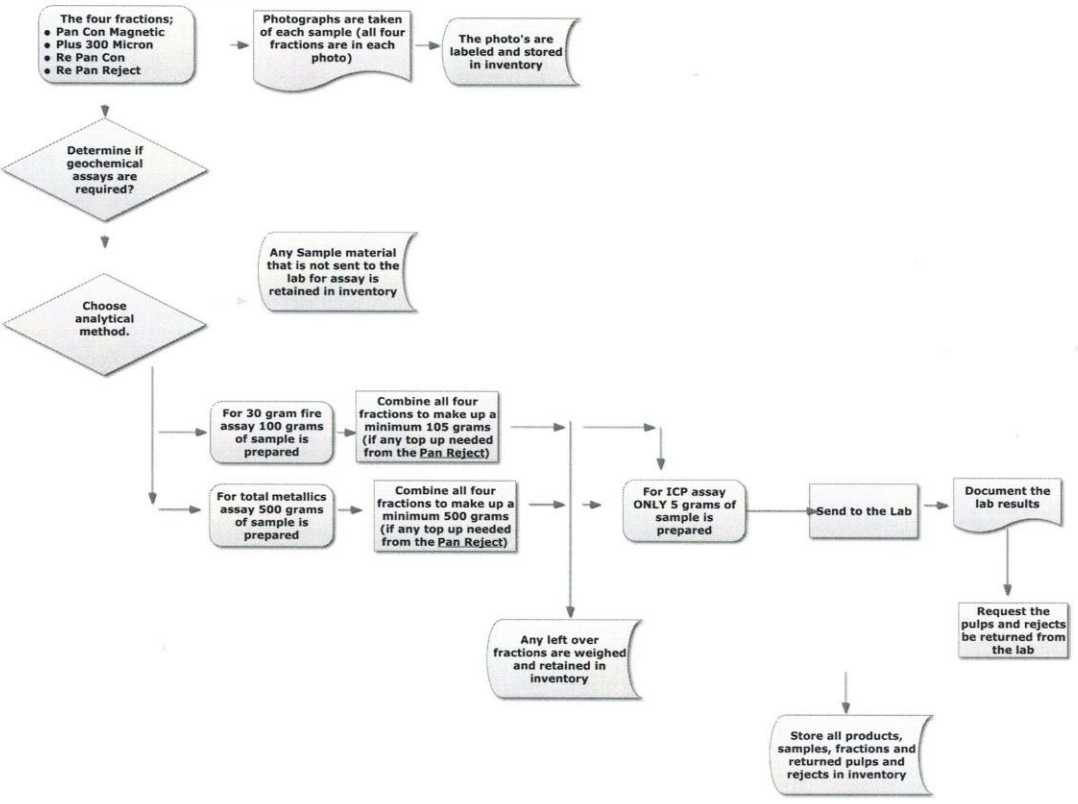


To Step 5

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





# Appendix I

ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

To: **NORTH BAY RESOURCES**  
2120 BETHEL ROAD  
LANSDALE PA 19446

Fax: 775 355 0179 www.alsglobal.com



**INVOICE NUMBER 2970991**

BILLING INFORMATION	
Certificate:	<b>VA13146231</b>
Sample Type:	<b>Sand</b>
Account:	<b>NORBAY</b>
Date:	<b>21-AUG-2013</b>
Project:	
P.O. No.:	
Quote:	
Terms:	<b>Due on Receipt</b>
Comments:	<b>C3</b>

QUANTITY	CODE	ANALYSED FOR DESCRIPTION	UNIT PRICE	TOTAL
1	BAT-01	Administration Fee	33.10	33.10
40	LOG-22	Sample log in - Rcd w/o BarCode	1.20	48.00
40	PUL-31	Pulverize split to 85% <75 um	4.30	172.00
40	AU-AA23	Au 30g FA-AA finish	16.05	642.00

SUBTOTAL (USD) \$ 895.10

To: **NORTH BAY RESOURCES**  
ATTN: GENE DODD  
2120 BETHEL ROAD  
LANSDALE PA 19446

**TOTAL PAYABLE (USD) \$ 895.10**

Payment may be made by: Check or Bank Transfer

Beneficiary Name: ALS USA Inc.  
Bank: Royal Bank of Canada  
SWIFT: ROYCCAT2  
Address: Vancouver BC CAN  
Account: 003-00010-4001384  
For transfers from USA banks use Intermediary Bank  
Intermediary Bank: JP Morgan Chase Bank  
Intermediary Address: New York, NY, USA  
Intermediary Routing: ABA: 021000021

Please Remit Payments To :  
**ALS USA Inc**  
4977 Energy Way  
Reno NV 89502

ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

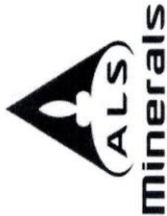
Fax: 775 355 0179 [www.alsglobal.com](http://www.alsglobal.com)

To: NORTH BAY RESOURCES  
2120 BETHEL ROAD  
LANSDALE PA 19446

Page: Appendix 1  
Total # Appendix Pages: 1  
Finalized Date: 21-AUG-2013  
Account: NORBAY



CERTIFICATE OF ANALYSIS VA13146231	
<b>CERTIFICATE COMMENTS</b>	
Applies to Method:	<b>LABORATORY ADDRESSES</b>  Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. LOG-22 AU-AA23  WEI-21



ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

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LANSDALE PA 19446

Page: 1  
Finalized Date: 21 -AUG- 2013  
This copy reported on  
22 -AUG- 2013  
Account: NORBAY

**CERTIFICATE VA13146231**

Project:

P.O. No.:

This report is for 40 Sand samples submitted to our lab in Vancouver, BC, Canada on 12-AUG-2013.

The following have access to data associated with this certificate:

GENE DODD

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
PUL-31	Pulverize split to 85% < 75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
AU-AA23	Au 30g FA-AA finish	AAS

To: NORTH BAY RESOURCES  
ATTN: GENE DODD  
2120 BETHEL ROAD  
LANSDALE PA 19446

**Signature:**   
Colin Ramshaw, Vancouver Laboratory Manager

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.  
\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

ALS USA Inc.  
 4977 Energy Way  
 Reno NV 89502  
 Phone: 775 356 5395

Fax: 775 355 0179 www.alsglobal.com

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Page: 2 - A  
 Total # Pages: 2 (A)  
 Plus Appendix Pages  
 Finalized Date: 21 - AUG - 2013  
 Account: NORBAY



**minerals**

**CERTIFICATE OF ANALYSIS VA13146231**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd WL. Au ppm 0.005	Au-AAZ3 Au ppm 0.005
NB-102		0.06	0.298
NB-103		0.06	0.619
NB-104		0.06	0.055
NB-105		0.06	0.367
NB-106		0.06	1.525
NB-107		0.06	1.255
NB-108		0.06	0.384
NB-109		0.06	0.268
NB-110		0.06	0.086
NB-111		0.06	0.017
NB-112		0.06	0.022
NB-113		0.06	0.069
NB-114		0.06	0.336
NB-115		0.06	0.177
NB-116		0.06	0.062
NB-117		0.06	0.685
NB-118		0.06	0.079
NB-119		0.06	0.220
NB-120		0.06	0.125
NB-121		0.06	0.015
NB-123		0.06	0.887
NB-124		0.06	0.222
NB-125		0.06	1.250
NB-127		0.06	0.198
NB-128		0.06	0.315
NB-129		0.06	0.909
NB-130		0.06	0.006
NB-132		0.06	0.128
NB-133		0.06	0.075
NB-134		0.06	0.006
NB-135		0.06	0.256
NB-136		0.06	0.743
NB-138		0.06	1.225
NB-139		0.06	0.401
NB-140		0.06	0.212
NB-160		0.06	0.465
NB-161		0.06	1.160
NB-162		0.06	1.600
NB-164		0.06	2.53
NB-165		0.06	0.912

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

# Appendix J

ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

Fax: 775 355 0179 www.alsglobal.com

To: NORTH BAY RESOURCES  
2120 BETHEL ROAD  
LANSDALE PA 19446



INVOICE NUMBER 2971036

BILLING INFORMATION	
Certificate:	VA13139679
Sample Type:	Sand
Account:	NORBAY
Date:	23-AUG-2013
Project:	
P.O. No.:	
Quote:	
Terms:	Due on Receipt
Comments:	C3

QUANTITY	CODE	ANALYSED FOR DESCRIPTION	UNIT PRICE	TOTAL
6	LOG-22	Sample login - Rcd w/o BarCode	1.20	7.20
6	PUL-32	Pulverize 1000g to 85% < 75 um	6.20	37.20
6	BAG-01	Bulk Master for Storage	1.20	7.20
6	AU-SCR21	Au Screen Fire Assay - 100 to 106 um	16.70	100.20
6	AU-AA25	Ore Grade Au 30g FA AA finish	16.70	100.20
6	AU-AA25D	Ore Grade Au 30g FA AA Dup	16.70	100.20
6	SCR-21	Screen to - 100 to 106 um	5.55	33.30

To: NORTH BAY RESOURCES  
ATTN: GENE DODD  
2120 BETHEL ROAD  
LANSDALE PA 19446

SUBTOTAL (USD) \$ 385.50

TOTAL PAYABLE (USD) \$ 385.50

Payment may be made by: Check or Bank Transfer

Beneficiary Name: ALS USA Inc.  
Bank: Royal Bank of Canada  
SWIFT: ROYCCAT2  
Address: Vancouver BC CAN  
Account: 003-00010-4001384  
For transfers from USA banks use Intermediate Bank  
Intermediary Bank: JP Morgan Chase Bank  
Intermediary Address: New York, NY, USA  
Intermediary Routing: ABA: 021000021

Please Remit Payments To :  
**ALS USA Inc**  
4977 Energy Way  
Reno NV 89502



ALS USA Inc.  
 4977 Energy Way  
 Reno NV 89502  
 Phone: 775 356 5395

Fax: 775 355 0179 www.alsglobal.com

To: NORTH BAY RESOURCES  
 2120 BETHEL ROAD  
 LANSDALE PA 19446

Page: Appendix 1  
 Total # Appendix Pages: 1  
 Finalized Date: 23-AUG-2013  
 Account: NORBAY

**CERTIFICATE OF ANALYSIS VA13139679**

<b>CERTIFICATE COMMENTS</b>	
<p>Applies to Method:</p>	<p><b>LABORATORY ADDRESSES</b></p> <p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.          AU-AA25          LOG-22</p> <p>AU-AA25D          PUL-32</p> <p>SCR-21</p> <p>BAG-01          WEI-21</p>





ALS USA, Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

Fax: 775 355 0179 www.alsglobal.com

To: NORTH BAY RESOURCES  
2120 BETHEL ROAD  
LANSDALE PA 19446

Page: 1  
Finalized Date: 23-AUG-2013  
This copy reported on  
26-AUG-2013  
Account: NORBAY

**CERTIFICATE VA13139679**

Project:  
P.O. No.:  
This report is for 6 Sand samples submitted to our lab in Vancouver, BC, Canada on  
12-AUG-2013.  
The following have access to data associated with this certificate:  
GENE DODD

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
SCR-21	Screen to -100 to 106 um
LOG-22	Sample login - Rcd w/o BarCode
PUL-32	Pulverize 1000g to 85% < 75 um
BAG-01	Bulk Master for Storage

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Au-SCR21	Au Screen Fire Assay - 100 to 106 um	WST-SIM
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
Au-AA25D	Ore Grade Au 30g FA AA Dup	AAS

To: NORTH BAY RESOURCES  
ATTN: GENE DODD  
2120 BETHEL ROAD  
LANSDALE PA 19446

**Signature:**   
Colin Ramshaw, Vancouver Laboratory Manager

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.  
\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

Fax: 775 355 0179 www.alsglobal.com

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2120 BETHEL ROAD  
LANSDALE PA 19446

Page: 2 - A  
Total # Pages: 2 (A)  
Plus Appendix Pages  
Finalized Date: 23-AUG-2013  
Account: NORBAY



**CERTIFICATE OF ANALYSIS VA13139679**

Sample Description	Method Analyte Units LOR	WEI-21 Recrd Wt. kg	Au-SCR21 Au Total ppm	Au-SCR21 Au (-) F ppm	Au-SCR21 Au (-) F ppm	Au-SCR21 Au (-) m mg	Au-SCR21 Au-SCR21 WT. + Fr g	Au-SCR21 Au-SCR21 WT. - Fr g	Au-SCR21 Au-SCR21 Au ppm	Au-SCR21 Au-SCR21 Au ppm
NB-101		0.52	0.14	1.16	0.13	0.003	2.59	501.2	0.15	0.11
NB-122		0.52	0.25	0.34	0.25	0.002	5.94	490.5	0.33	0.16
NB-126		0.52	0.48	8.20	0.28	0.104	12.68	487.9	0.31	0.25
NB-131		0.52	0.16	3.94	0.05	0.058	14.73	476.3	0.04	0.05
NB-137		0.52	0.17	9.75	<0.05	0.070	7.18	491.6	0.03	0.04
NB-163		0.52	0.36	2.29	0.21	0.080	34.91	458.4	0.29	0.13

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

# Appendix K

ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

To: **NORTH BAY RESOURCES**  
2120 BETHEL ROAD  
LANSDALE PA 19446

Fax: 775 356 0179 www.alsglobal.com



**INVOICE NUMBER 2970993**

BILLING INFORMATION	
Certificate:	<b>VA13146230</b>
Sample Type:	<b>Rock</b>
Account:	<b>NORBAY</b>
Date:	<b>22-AUG-2013</b>
Project:	
P.O. No.:	
Quote:	
Terms:	<b>Due on Receipt</b>
Comments:	<b>C3</b>

QUANTITY	CODE	ANALYSED FOR DESCRIPTION	UNIT PRICE	TOTAL
14	PREP-31	Crush, Split, Pulverize	7.45	104.30
6.26	PREP-31	Weight Charge (kg) - Crush, Split, Pulverize	0.70	4.38
14	AU-AA23	Au 30g FA-AA finish	16.05	224.70
14	ME-ICP41	35 Element Aqua Regia ICP-AES	7.00	98.00

SUBTOTAL (USD) \$ 431.38

To: **NORTH BAY RESOURCES**  
ATTN: GENE DODD  
2120 BETHEL ROAD  
LANSDALE PA 19446

**TOTAL PAYABLE (USD) \$ 431.38**

Payment may be made by: Check or Bank Transfer

Beneficiary Name: ALS USA Inc.  
Bank: Royal Bank of Canada  
SWIFT: ROYCCATZ  
Address: Vancouver BC CAN  
Account: 003-00010-4001384  
For transfers from USA banks use Intermediate Bank  
Intermediary Bank: JP Morgan Chase Bank  
Intermediary Address: New York, NY, USA  
Intermediary Routing: ABA: 021000021

Please Remit Payments To:  
**ALS USA Inc**  
4977 Energy Way  
Reno NV 89502



ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

Fax: 775 355 0179 [www.alsglobal.com](http://www.alsglobal.com)

To: NORTH BAY RESOURCES  
2120 BETHEL ROAD  
LANSDALE PA 19446

Page: Appendix 1  
Total # Appendix Pages: 1  
Finalized Date: 22-AUG-2013  
Account: NORBAY

**CERTIFICATE OF ANALYSIS VA13146230**

<b>CERTIFICATE COMMENTS</b>	
Applies to Method: AU-AA23 ME-ICP41 WEI-21	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. CRU-31 PUL-31  LABORATORY ADDRESSES CRU-QC PUL-QC  LOG-22 SPL-21

ALS USA Inc.  
4977 Energy Way  
Reno NV 89502  
Phone: 775 356 5395

Fax: 775 355 0179 www.alsglobal.com

To: NORTH BAY RESOURCES  
2120 BETHEL ROAD  
LANSDALE PA 19446

Page: 1  
Finalized Date: 22-AUG-2013  
This copy reported on  
23-AUG-2013  
Account: NORBAY



**CERTIFICATE VA13146230**

Project:  
P.O. No.:

This report is for 14 Rock samples submitted to our lab in Vancouver, BC, Canada on  
12-AUG-2013.

The following have access to data associated with this certificate:

GENE DODD

**SAMPLE PREPARATION**

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% < 2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% < 75 um

**ANALYTICAL PROCEDURES**

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES
Au-AA23	Au 30g FA-AA finish	AAS

To: NORTH BAY RESOURCES  
ATTN: GENE DODD  
2120 BETHEL ROAD  
LANSDALE PA 19446

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

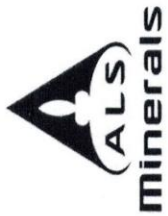
\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**Signature:**   
Colin Ramshaw, Vancouver Laboratory Manager

To: NORTH BAY RESOURCES  
 2120 BETHEL ROAD  
 LANSDALE PA 19446

ALS USA Inc.  
 4977 Energy Way  
 Reno NV 89502  
 Phone: 775 356 5395 Fax: 775 355 0179 www.alsglobal.com

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 Plus Appendix Pages  
 Finalized Date: 22-AUG-2013  
 Account: NORBAY



**CERTIFICATE OF ANALYSIS VA13146230**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	AU-AA23 Au ppm 0.005	ME-ICP41 Ag ppm 0.2	ME-ICP41 Cu ppm 1
HR-NB-110		0.34	0.060	<0.2	9
HR-NB-112		0.36	0.057	<0.2	8
HR-NB-116		0.44	0.012	<0.2	15
HR-NB-117		0.44	0.012	<0.2	10
HR-NB-121		0.42	0.011	<0.2	11
HR-NB-122		0.44	0.009	<0.2	9
HR-NB-125		0.42	0.009	<0.2	8
HR-NB-127		0.40	0.042	<0.2	11
HR-NB-128		0.40	0.041	<0.2	7
HR-NB-131		0.60	<0.005	<0.2	11
HR-NB-136		0.44	0.037	<0.2	7
HR-NB-140		0.50	<0.005	0.3	7
HR-NB-163		0.44	0.046	0.3	8
HR-NB-164		0.62	0.102	<0.2	6

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*