

**Report on the  
Reconnaissance Mapping and Geochemical  
Program on the  
Law Group  
for Karl H. Bauer**

Event Number: 5722184

Tenure Numbers: 1046261, 1046264, 1046265, 1046266 and 1056981

Nicola Mining Division

British Columbia

N.T.S. 092I016

50.114N, 120.913W

10U 649154 mE, 5553446 mN

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Owner: Karl H. Bauer,

2741 Tranquille Road, Kamloops, BC, V2B7Y3

Operator: Karl H. Bauer

Contractor: Billiken Gold Ltd.,

Author: Eugene A. Dodd, Project Manager

Date: January 7, 2019

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## Summary

This program was conducted in an attempt to locate the trench from which a shipment of 73 tons of “crude ore” was made by Copper Hill Mining and Exploration Ltd. in 1967 and to try and determine if there were values of economic importance in any of the previously located trenches.

The Law group of 5 mineral claims covers an area of 504.54 hectares and is located 8 km west of Merritt in the Nicola mining division of British Columbia. The claims were staked for Karl H. Bauer of Kamloops, BC over top of and surrounding Minfile Number 092ISE148. During this program a total of 10 man days were spent clearing out roads with power saws, searching for pits, trenches and any other signs of important historical exploration.

A considerable amount of time was spent trying to locate the trench mentioned above. One spot, found close to where the Minfile is plotted, was full of water but appeared at first evaluation to be natural. However in retrospect, I will have to return to this spot next season and have a much closer look for the diabase dyke.

11 soil samples and 11 hard rock samples that were gathered in 2016 and 2017 were delivered to Actlabs in Kamloops for geochemical analysis on November 7, 2018.

Results of the assaying produced some common, elevated, multi element values in several of the samples. In addition, soil sample number SS16-1 was over limit for gold (ICP or greater than 1 ppm). Sample L16 HR-1, a rock sample, produced 414 ppm gold (ICP.) Upon receiving these results, it was noted that these 2 samples contained higher gold values. A decision was made to reassay samples SS16-1 and L16 HR-1 using a fire assay with an AAS finish in order to get a more representative result.

The results of the fire assays gave 17 ppb gold for the remainder of soil sample SS16-1 and 0.963 ppm gold for rock sample L16 HR-1. Samples SS16-1 and SS16-2 also had elevated values in arsenic, cobalt and copper. Sample L16 HR-1 also contained 576 ppm copper.

The analysis was successful in that several samples had common, elevated, multi element determinations. These results may be meaningful if more samples are taken to establish what could be considered anomalous. The fact that gold was definitely present in soil sample SS16-1 (over limit for ICP) is encouraging. In sample L16 HR-1 (a hard rock sample from trench 5) there was just under 1 gram/ton gold which is considerable in a high tonnage per day open pit mine operation.

The few samples analyzed, although very encouraging, do not provide enough information to draw any meaningful conclusions other than that more sampling should definitely be done.

**Report on the  
Reconnaissance Mapping and Geochemical  
Program  
on the  
Law Group**

Nicola, M.D.

Merritt, British Columbia

Event number: 5722184

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**Introduction**

This report covers the reconnaissance exploration program conducted during the month of July 2018 by Billiken Gold Ltd. for Karl H. Bauer on the Law group of claims located 8 km west of Merritt, BC.

A total of 10 man days were spent clearing out roads with power saws, searching for pits, trenches and any other signs of historical exploration. The work was routine in that it is a large area and there is little in the way of concrete historical information to focus on. Outcrops were noted as well as any signs of historical exploration such as pits and trenches. A considerable amount of time was spent trying to locate the trench from which a shipment of 73 tons of “crude ore” was made by Copper Hill Mining and Exploration Ltd. in 1967.

A total of 11 soil samples and 11 hard rock samples that were gathered in 2016 and 2017 were sent to Actlabs in Kamloops for geochemical analysis on November 7, 2018. The goal was to determine if minerals of economic importance could be found in some of the widespread pits, trenches and outcrops. All of the soil and hard rock samples were spot samples.

The bibliography cites the works from which information was gathered for the planning and implementation of this program. The author has worked on the property previously and has worked in the Merritt / Highland Valley / Skwakum Mountain areas several times over the past 40 years.

The following Aris Reports: 33141, 35335, 34527, and 35335 as well as all published data were reviewed prior to the implementation of this program.

## Physiography

The Law claim group lies at the more southern end of the Interior Plateau, a major physiographic region which is comprised of the central and south central portion of southern British Columbia. The claim group is moderately steep on the western half of the claim block. The east half is on a plateau with gentle to moderate slopes. All of the property is easily passable on foot. There are some areas that have a lot of blow-down near old cut blocks making foot travel more difficult. The area near the big trenches is also so thickly grown in with scrub brush that travel between the trenches can be slow and frustrating. However, most of the property is open and a pleasure to work in. Creeks and sloughs found on the property could provide enough water to supply one diamond drill. For programs greater than one diamond drill the water would be available from Morgan Lake or Lindley Creek.

## Location and Access

The property is located about 8 km west of Merritt, British Columbia. Merritt is a full facility city with many of the services required for exploration and preliminary development. Accommodation, meals, fuel and all other necessities are readily available at very reasonable rates. Any larger or more industrial items are available in Kamloops which is 86 km or about 1 hour north on highway 5. The northern portion of the property can be reached in a two wheel drive vehicle by heading northwest from Merritt on Highway 8 for about 12 km until you reach Sunshine Valley Road. Turn left on Sunshine Valley Road and follow it until it crosses the Nicola River. Continue on for about 1 km and you will come upon a house on the left (back about 100 m from the road). This property belongs to Lloyd Gavelin who resides in Merritt and should be contacted if you plan on using this road.

Quads are the best way to travel up this road as 4 wheel drives can cause a lot of damage, especially when it's wet. This network of roads will take you up to Morgan Lake and provide access to most of the claim block.

Quads were used to gain access to all parts of the property. Traverses on foot were made in some cases to search areas that could not be reached by quad. There are what appears to be about 3 different generations of roads and trails found on the property. Some of the roads are in pretty good shape and are the result of logging in the past 30 years. The age of the logging in the upper north side of Lindley Creek area has to be at least 50 years old. There are also cut blocks in this same area that are only about 12 to 15 years old. Most of these roads (trails might be a better term), had grown in or were covered with deadfall and had to be cut out in places to get through with quads. Generally, with a little effort you can get pretty close to where you want to go by quad before having to travel on foot.

There is also another route that you can take which leads you to the headwaters of Lindley Creek via the Middy Valley Road which leaves Merritt over the Nicola River Bridge south of the sawmill in town. The Middy Valley Road has a lot of washboard but it is solid based and is otherwise in very good condition. The headwaters of Lindley Creek could be reached in a car but a 4 wheel drive is always a better choice. There are enough roads passable by quad to get at all parts of the property. There are many old partially grown in roads and skid trails from logging over the past 70 years. Most of these roads could easily be made suitable for the mobilization of drilling equipment with a small dozer and / or excavator.

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>
<a href="#">1046261</a>	Mineral	LAW2	20210702	207.2141
<a href="#">1046264</a>	Mineral		20210131	207.2082
<a href="#">1046265</a>	Mineral	LAW3	20210702	103.6081
<a href="#">1046266</a>	Mineral	LAW4	20210131	103.6037
<a href="#">1056981</a>	Mineral	LAW 5	20210702	82.9112

Total Area: 704.5453 ha

## Claim Information

The above noted expiry dates are dependent on this work program - Event Number: 5722184 being accepted for assessment credit.

The property consists of 5 contiguous claims covering an area of 704.5453 ha. The claims are situated within the Nicola Mining Division on BCGS Map 092I016 and are registered in the name of Karl H. Bauer. The center of the property is located at approximately 50° 6' 52" N, 123° 54' 49" W or 10U 649154 mE, 5553446 mN.

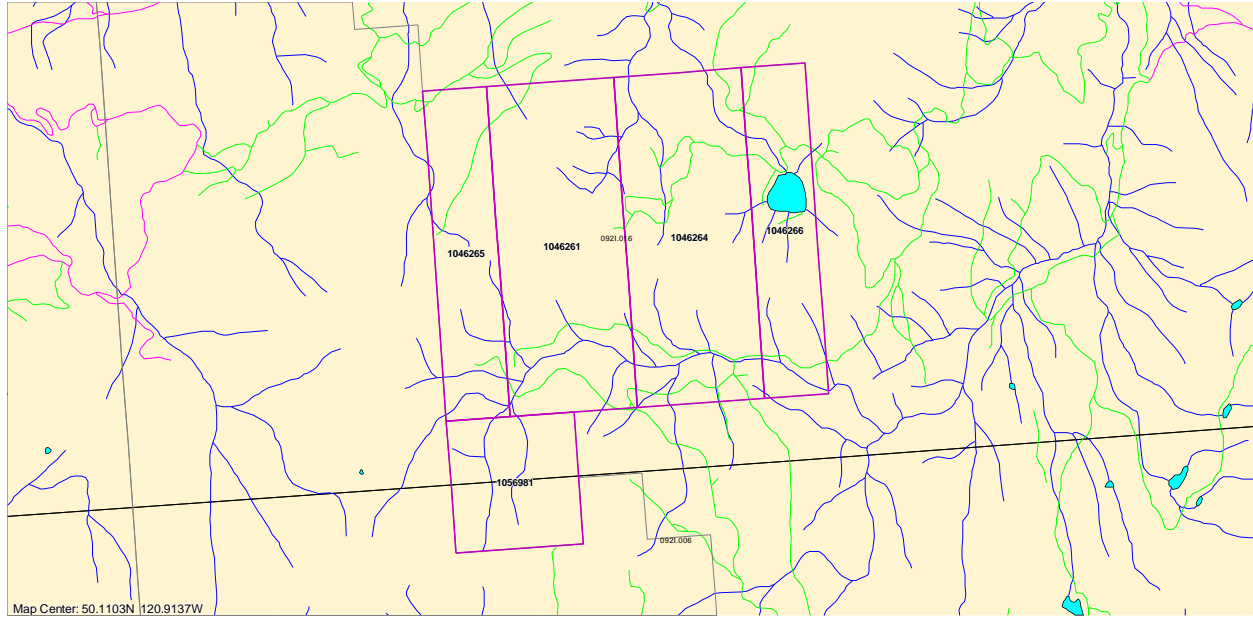


Map Center: 54.4781N 124.7082W

## Property Location Map

Karl H. Bauer – Law Group





## Claim Location Map

Karl H. Bauer – Law Group

Date: January 07, 2019

Center of Claim Block: Zone 10 649154 mE, 5553446 mN

## Climate

The rainfall in Merritt can be significant, with precipitation even during the driest months. The temperature averages 7.2 °C and about 388 mm of precipitation falls annually. I would consider this area to best be described as semi - arid as it borders on the dry desert interior zone in spite of the rainfall that takes place.

For the past several years, the weather in the Merritt area has been very hot and unusually dry in the summer with little to no precipitation. Temperatures can be as high as the low 40's (Celsius) in July and August. Hot dry periods can be relentless causing extreme fire hazard conditions and forest closures for long periods of time. For the past 3 years, the conditions have gone from freshet straight into fire season without a moderate break in between. This is problematic, because during freshet quads and 4x4's should not be used on the property as they can damage the clay based roads. After that it quickly becomes risky to use any type of motorized transport because of the tall, very dry, grass from the previous year that has grown on all the roads on the property. This creates a very high likelihood of starting a grass / forest fire by using any motorized transport.

A similar situation also exists in the fall when you go from bone dry fire season to snow in a very short period of time. These recent weather conditions are a handicap as they dictate two very narrow windows where quads can be used to cover the large size of this property. British Columbia in general has experienced several years in a row of severe forest fire conditions that greatly reduce when you can use motorized transportation in many off road areas in the south and central interior of the province.

## Regional Geology

The following Regional Geology was taken from "Geology of the Nicola Group between Merritt and Princeton" which was published in 1979 and was written by Vic Preto.

"Within this area the Nicola Group consists of three north-trending structural belts bounded by major faults and including rock units of varied lithology but similar composition and mode of origin.

The Central Belt, exemplified by subaerial and submarine assemblages in the Aspen Grove area, comprises extensive pyroxene and plagioclase-rich andesitic and basaltic flows, breccia, conglomerate, and lahar deposits. Comagmatic intrusive rocks are mostly diorite and subordinate syenite.

The Eastern Belt consists of submarine volcanic sedimentary rocks in the north but is dominated in the south by extensive lahar deposits, some basaltic flows and high-level syenitic stocks.

The Western Belt consists of flow and pyroclastic rocks ranging in composition from andesite to rhyolite and interbedded with limestone, volcanic conglomerate, and sandstone which contain marine fossils of Lower and Middle Norian age.

Central and Eastern Belt rocks include both alkali and calc - alkalic suites which were derived from comagmatic intrusions within these belts. Western Belt rocks, though mapped only in limited extent, appear to be distinctly calc - alkaline and derived from sources outside the study area.

Younger stratified rocks, ranging in age from Lower-Middle Jurassic to Recent, lie either in fault contact with Nicola strata or overlie them unconformably. The most conspicuous of these later suites is a succession of Lower Cretaceous intermediate to acid continental volcanic rocks with associated sedimentary and intrusive rocks which correlates with the Kingsvale Group.

Most Nicola rocks are massive, non-foliated, and weakly metamorphosed. Metamorphic assemblages range from the quartz - prehnite subfacies of the prehnite - pumpellyite facies, locally transitional to greenschist facies, to rocks which are barely altered. Analcite phenocrysts are still preserved in some trachybasalt flows.

The structure of the study area is dominated by two major fault systems: the Alleyne-Summers Creek system to the east and the Allison system to the west. These faults are interpreted to represent an ancient, long-lived rift system which determined the extent and distribution of Nicola rocks and along which basins of continental volcanism and sedimentation formed in Early Tertiary time.

Copper mineralization is widespread in Nicola rocks and all deposits of economic importance are considered to be related to these strata in their origin. Within the study area, the Central Belt is the richest in mineral occurrences, though appreciable mineralization is also found in the southern part of the Eastern Belt. Eleven groups of mineral occurrences and deposits, separated on the basis of mineralogy, host rocks, and mode of occurrence, are outlined in this report”.

## Property Geology

The Law Group of mineral claims are underlain by Mesozoic - Lower Cretaceous andesitic volcanic rocks on the western portion of the property including amygdaloidal basalt, black aphanitic andesite, mafic volcanic breccia and present, but rarely seen, epiclastic rocks. The Mesozoic to early Cretaceous rocks have been assigned to the Spences Bridge Group by P. Schiarizza and B. N. Church. These rocks were observed both south and west of the headwaters of Lindley Creek as well as on the road cuts both east and west of Logan Creek particularly at higher elevations.

The eastern half of the property is underlain by Cenozoic - Eocene andesitic rocks. Mafic and felsic volcanic rocks in this area have been assigned to the Princeton Group by P. Schiarizza and B. N. Church. Felsic volcanic rocks were observed at several locations north, south, east and west of Morgan Lake. Some of these exposures were quite heavily pyritized and considerable trenching was observed in many places. Mineralization of economic importance was not seen during this brief property examination.

## Glaciation

Portions of the property are covered by a well-developed layer of residual soil. In the valley bottom, of Lindley Creek, glacial till was found in the creek bed itself and is probably in the order of at least 10 to 30 m deep. On the west and north side of the ridge, on which the Law Minfile is plotted, piles of unsorted till are seen in several locations. These observations are by no means complete and some effort should be put into better understanding the surficial geology.

## Mining History

The Merritt area is host to a large number of mineral occurrences and showings. The closest major producer, Craigmont (now closed), is 9 km away and produced 426 million kilograms of copper over 2 decades of production between 1962 and 1982. The deposit is a copper / magnetite skarn that occurs in Triassic Nicola Group Rocks. Chalcopyrite and magnetite are the 2 principal ore minerals. The Craigmont mine site is where Nicola Mining Inc.'s fully permitted 200 TPD gravity / flotation mill is located. The mine / mill site is easily visible from the Law Group and would be an important factor when it comes to the economic recovery of any smaller ore deposits found. Although many showings and occurrences are found in the general area, none have so far proven to be economically viable.

## History of Previous Relevant Work on the Law Group

### 1966

ASARCO performed 15 line miles of IP and magnetometer surveys and completed 11 percussion drill holes totaling 1115 feet. Drilling produced values in the range of 0.02 to 0.04 % copper with the exception of DDH - 1 where values of 0.16 and 0.10 % copper over widths of 10 feet were reported. None of these records have been found.

### 1967

Copper Hill Mining and Exploration Ltd. shipped 73 tons of "crude ore" from somewhere on the property from which 6 ounces of gold, 681 ounces of silver and 2041 pounds of lead were recovered. Zinc veinlets and weak disseminations of chalcopyrite and bornite were reported but there is no record of either zinc or copper being recovered from this shipment. After much searching on the ground the exact location from where this shipment came, has still not been found so far by our crews.

### **1968**

In 1968 the results of an aeromagnetic survey was published as Geophysics paper 5209. Terrain clearance was stated as 1000 feet or 305 m. The map of aeromagnetic contoured data however, appears to have been dramatically influenced by terrain effect. The magnetic highs and lows were difficult to transfer on to our base map as the topographic contours of the aeromag map are very difficult to identify.

### **1969**

In 1969 Mr. Bourgh put down 3 short diamond drill holes and carried out a reconnaissance geochemical survey. DDH - 1 is reported to have assayed 0.005 oz/t gold, 0.60 oz/t silver, 1.05 % lead and 0.86 % zinc to a depth of 90 feet. DDH - 3 is reported to have cut a 25 foot section assaying 0.3 % copper. The geochemical survey indicated several copper and zinc anomalies. None of these records have been found.

### **1971**

Sunnex International Resources Ltd. optioned the property.

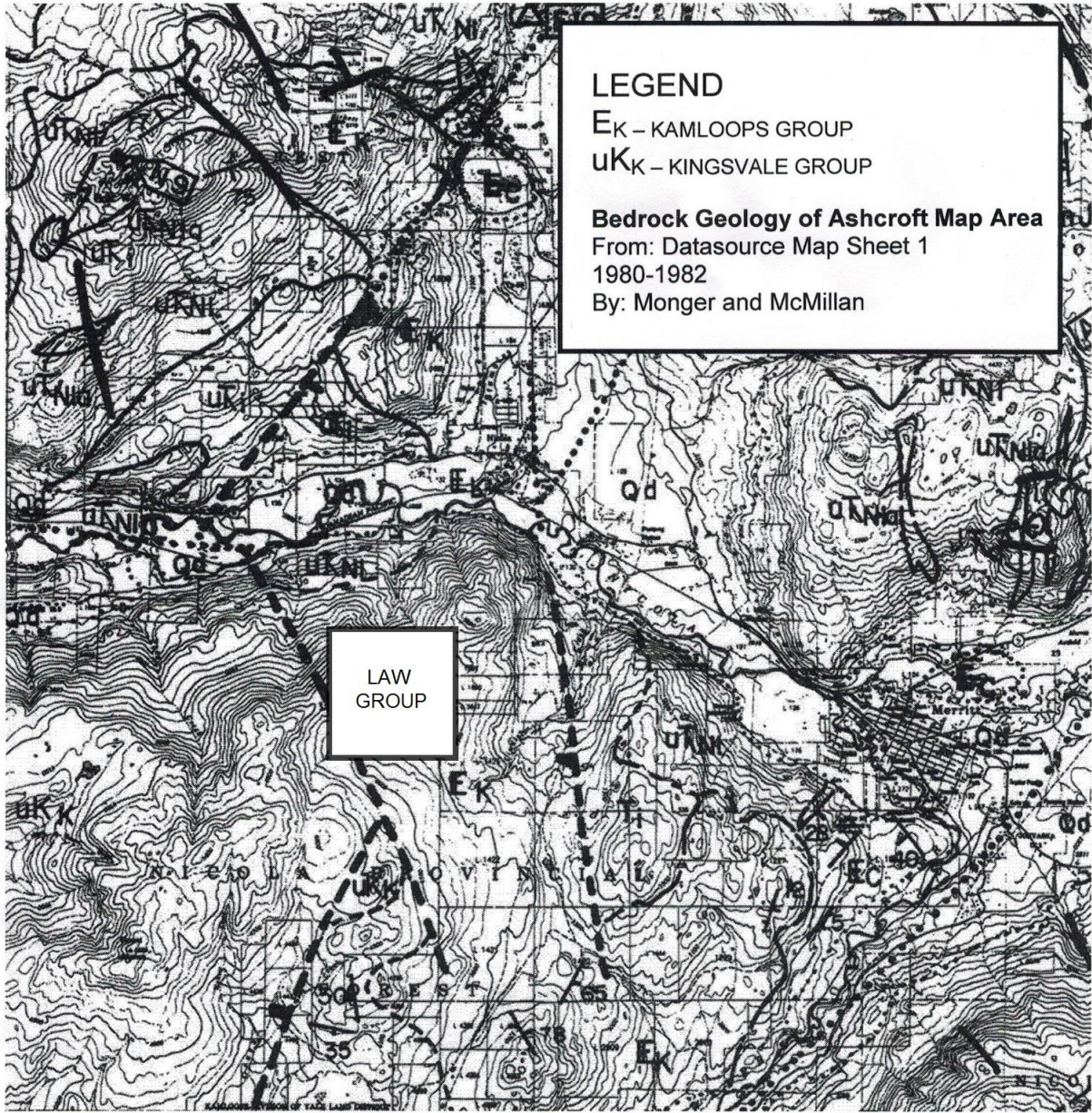
### **2012, 2013 and 2015**

ARIS reports numbers 34527 and 35335: Ken Ellerbeck staked 5 tenures in an unsuccessful attempt to locate the trench from which the shipment was made. Three hard rock grab samples were sent to ALS for analysis by Mr. Ellerbeck. Results were as follows:

- Sample number: Law-5. Outcrop, taken near the south end of the property, copper: 19.7 ppm, lead: 8.5 ppm, zinc: 38 ppm, gold: less than 0.20 ppm, silver: 0.03 ppm.
- Sample number: Law-9. From trench-1, copper: 83.9 ppm, lead: 3.9 ppm, zinc: 5 ppm, gold: less than 0.20 ppm, silver: 0.08 ppm.
- Sample number: Law-10. From trench-3. Copper: 3.7 ppm, lead: 0.08 ppm, zinc: 55 ppm, gold: less than 0.20 ppm, silver: 0.02 ppm.

### **2016 and 2017**

Karl H. Bauer retained Billiken Gold Ltd. to conduct 2 separate data gathering programs which are the subject of a previous report. Event number 5660496, a 3 day program in October and November of 2016 and Event number 5676903 a 6 day program carried out in October of 2017. As much data was gathered as quickly as possible to produce a base map of the more important information found. Many pits, trenches, outcrops etc. were discovered and their exact locations noted as UTM co-ordinates. 18 hard rock samples were gathered from various locations for future study or analysis. A total of 19 soil samples were also gathered; 10 samples over top of an aeromagnetic high located at the headwaters of Lindley Creek and 6 samples just north of the cluster of bulldozer trenches and 3 samples in the trenches themselves (southwest of Morgan Lake).



## Property Geology Map

## 2018 Program Details

The work covered by this report was carried out in order to gather as much data as possible over the property in the short time available. Efforts were focused on locating the diabase dyke from which Copper Hill Mining and Exploration Ltd. shipped 73 tons of “crude ore” in 1967.

Many of the trails are of the right age and character to be recognized as having been utilized for drilling, trenching and exploration purposes in the late 1960’s to early 70’s. A few drill pad set-ups were found as well as the collar of 1 HW casing that was left in the ground. Ten or more very large bulldozer trenches were located and some of their UTM’s were recorded in order to find them again as they are in very dense scrub brush. All of the overburden trenches are in the same area and strike east / west which is an indication that whatever the target was, it likely had a north / south strike. This cluster of bulldozer trenches are no doubt the ones referred to in earlier reports as being in the area where “most of the work was done”.

A total of 18 hard rock samples and 19 soil samples were gathered during previous programs. 22 of these samples were delivered to Actlabs in Kamloops on November 07, 2018 for analysis. A total of 8 man days were spent on the property by Darcy Goossen and Gene Dodd between July 8<sup>th</sup> and 12<sup>th</sup> inclusive 2018. Karl Bauer also spent a further 2 days, July 11<sup>th</sup> and 12<sup>th</sup>. A total of 10 man days.

The bibliography found at the back of this report cites the works from which information was gathered for the planning and implementation of this program. The author has worked on the property previously and has also worked in the Merritt / Highland Valley / Skwakum Mountain area several times over the past 40 years.

## Purpose of the Program

The Law group is being explored on behalf of Kael Bauer of Kamloops, BC for the following reasons:

- to locate as many pits, trenches and other signs of historical exploration importance, and
- to determine if any metals of economic importance are present in some of the trenches found on the property.

The main objective of this program was to try and locate the trench from which a shipment of “Crude Ore” totaling 73 tons was made as outlined in Minfile Number 092ISE148. The Minister of Mines and Petroleum Resources Annual Report for the year ended December 31, 1967 (under the heading of Lode Metals on page A 54, Table 12) reports on the Len and Law claims held by Copper Hill Mining and Exploration. A shipment of “Crude Ore” totaling 73 tons was made which yielded 6 ounces of gold, 681 ounces of silver and 2041 pounds of lead. Minfile Number

092ISE148, which is where the shipment apparently came from, is mapped as being within the present claim boundaries and states;

“The Nicola Group rocks are intensely altered and chloritized. Lenses of crystalline limestone host skarn development. A dark grey 3 metre wide diabase dyke strikes 040 degrees and dips 80 degrees to the west. It contains minor magnetite, chalcopyrite and specular hematite along widely spaced fine fractures. Small sphalerite veinlets and weak disseminations of pyrite, chalcopyrite and bornite are exposed at widely separated locations in Nicola Group rocks and their skarn equivalents.”

History of Exploration and Development, Mineral Resources Branch, Dept. EMR Ottawa 1972 (under the heading of Description of Deposit) states “Most of the exploration work has been carried out over a large aeromagnetic anomaly centred around Lot 5 & 6 claims. It is represented on the ground by an extensive magnetite skarn zone at the contact between an intrusive diorite stock and Nicola greenstones.” This geological setting represents a highly favourable environment for the deposition and concentration of minerals of economic importance. The report also points out 3 induced polarization anomalies within the (high) aeromagnetic anomaly. Drilling in these anomalies returned values in the range of 0.02 % to 0.04 % copper with the exception of holes 1 and 2 where values of 0.16 % and 0.10 % copper over widths of 10 feet were reported.

In 1969, three short diamond drill holes were completed. DDH - 1 is reported to have assayed 0.005 oz/gold/ton, 0.60 oz/silver/ton, 1.0 % lead and 0.86 % zinc to a depth of 90 feet. DDH - 3 is reported to have cut a 25 foot section assaying 0.3 % copper. The geochemical survey also indicated several copper and zinc anomalies.

The Law Group of mineral tenures is located within sight (just across the valley) of Nicola Mining’s 200 tonne per day mill fully permitted for custom milling ore. The close proximity of the mill along with the skilled work force living in the area, make the Law Group an attractive and timely exploration target. The close proximity of the claims to the fully permitted mill belonging to Nicola Mining Inc. allows for smaller ore bodies to be mined at a profit more readily.

The Craigmont deposit occurs within a magnetite skarn similar to the one described above on the Law claims. Craigmont produced 34 metric tonnes at 1.3 % copper making it the highest grade major copper mine in North American history ([www.nicolamining.com](http://www.nicolamining.com)). Craigmont also produced 1,167,000 dry tonnes of magnetite up until 1912 by reprocessing the tailings.

There are several open pit mines that have less than 1 gram gold in their mill feed. An example is the Eagle Gold Mine now under construction and 60 % complete in the Yukon. Their published reserves are 116 metric tonnes grading 0.66 grams of gold per ton. Although, the results obtained so far on the Law claims are sub economic there remains a distinct possibility



that these grades can be improved using modern exploration methods. To the best of my knowledge an informed property evaluation has not taken place in more than 50 years.

## Trench Descriptions

There is a minimum of at least ten trenches centered on 649150 mE, 5553250 mN, about 2.25 km south west of Morgan Lake. All of these trenches are bulldozer trenches that were likely built with a D-6 cat for ASARCO in 1966. They are quite badly sloughed in and need to be cleaned out with an excavator in order to be properly sampled. Most are between 25 and 30 m in length and 3 to 4 m in depth. At least one of them is about 45 to 50 m in length and 4 to 5 m deep. There is a good chance that there are at least a few more to be found as the underbrush is very thick and dense so they are well hidden. All of the trenches strike roughly east - west, indicating to me that whatever they were trying to expose must have had a north south strike. Most, if not all of the trenches seemed to reach bedrock, which is a light coloured blue / grey dacite (possibly) with abundant pyrite. The soil and bedrock is iron stained everywhere and the rock is very leached out looking in most places. It's difficult to get a fair assay of original metal content without getting a fresh exposure. These trenches need to be reopened, mapped and sampled in order to be properly evaluated.

Elsewhere on the property, there are a few open cuts that have been blasted out of bedrock. These open cuts are in fairly fresh looking feldspar porphyry and at a glance are all well pyritized. Time did not permit detailed examination for economic minerals but samples were gathered for further examination by a skilled geologist. All open cuts found were noted and their UTM's recorded and plotted on the base map.

## Sampling Methods

Overburden on the property is glacial till in places and residual soil in others. All of the soil samples were either taken from the B layer in well-developed residual soil or as in the case of soil samples taken in the trenches, from decomposed bedrock. Soil samples were gathered using a small shovel and placed in high strength Kraft paper sample bags. The sample number was clearly written on the outside of the bag with a black permanent felt pen. Soil samples were strung on a circular piece of coat hanger wire for ease of handling in the field. GPS co-ordinates were entered into a field book along with information describing relevant conditions at each sample location. Hard rock samples were gathered from some of the trenches. Sampling of hard rock was done so as to be representative of the bedrock found in the open cut or trench. Care was taken not to gather "selected" samples. Representative samples were placed in heavy duty poly sample bags along with an aluminum tag inscribed with the sample number. The sample bag was then secured at the top with a ty wrap. UTM eastings and northings for both soil and hard rock samples were determined using either a Garmin 60cx GPS or a Samsung Galaxy Tablet and recorded in a waterproof field book.

All of the samples were carefully handled and the chain of custody was never broken. Upon returning to our facility the soil samples were hung up and allowed to dry slowly and thoroughly.

## Geochemistry

There has been no preliminary survey to test which soil horizon would be best to sample in this area so the B horizon was chosen. None of the soil samples were taken in till covered areas. The objective of the geochemical sampling was to begin evaluating metal content in some of the trenches and soil on the property.

A total of 11 soil samples and 11 hard rock samples that were gathered in 2016 and 2017 were sent to Actlabs in Kamloops for geochemical analysis on November 07, 2018.

## Results

The results of the ICP-MS analysis (Actlab code UT-1M) produced some common elevated multi element results in several of the samples. In addition, sample SS16-1 was over limit for gold or greater than 1 ppm. Rock sample L16 HR-1 produced 0.414 ppm gold. ICP-MS on these 2 samples is not considered to be representative of the gold contained because of the small (0.5 gram) sample size analyzed. Upon receiving the ICP results it was noted that 2 of the samples contained higher gold values so it was decided to re assay samples SS16-1 and L16 HR-1 using a fire assay with an AS finish (Actlabs code 1A2). The results of the fire assays gave 17 ppb gold for the remainder of soil sample SS16-1 and 0.963 ppm gold for rock sample L16 HR-1.

Samples SS16-1 and SS16-2 also had elevated values in arsenic, cobalt and copper. Sample L16 HR-1 also contained 576 ppm copper. The few samples analyzed although very encouraging, do not provide enough information to draw any meaningful conclusions other than more sampling should be done.

## Discussion of Results

The results of the sample analysis were successful in that several samples had common elevated multi element determinations that may be meaningful. The fact that gold was definitely present in soil sample SS16-1 (over limit for ICP) is an encouraging fact. In sample L16 HR-1 (a hard rock sample from trench 5) there was just under 1 gram/ton gold which is considerable in a high tonnage per day open pit mine operation.

## Mineralization

One gram of gold per ton along with low grade copper, zinc lead or silver would likely be economically viable in an open pit mine on this property. Many open pit mines have less than 1

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ppm gold in their mill feed. The proposed New Prosperity Mine for example has proven reserves of 481 metric tonnes grading 0.46 g/t gold and 0.26 % copper.

Previous and recent work on the area now covered by the Law Group of claims has revealed wide spread, low grade, copper, gold, silver, lead and zinc over a distance of at least 2000 m. Although this mineralization is sub economic further work should focus on finding a concentrating event such as the extensive magnetite skarn earlier mentioned. Future work should focus on locating this magnetite skarn.

The felsic volcanic rocks are heavily pyritized in all outcrops of this rock type seen so far. Low grade copper, silver, gold, lead and zinc mineralization has been found in soil samples, trenches and drill core in the past. A large aeromagnetic anomaly, 3 induced polarization anomalies, several coincident copper / zinc anomalies reported by previous operators are said to occur as well within the claim group.

The most desirable model for a deposit is mentioned in the following write up and is said to occur within the claim boundaries. History of Exploration and Development, Mineral Resources Branch, Dept. EMR Ottawa 1972 describes a magnetite/skarn/diorite on the property: “Most of the exploration work has been carried out over a large aeromagnetic anomaly centered on Lot 5 and 6 claims. It is represented on the ground by an extensive magnetite skarn zone at the contact between an intrusive diorite stock and Nicola greenstones.” This extensive magnetite skarn zone represents a very desirable and worthwhile target to pursue.

## Conclusions

A number of exploration programs have been conducted on the claim group in the late 1960's to early 1970's yielding low grade copper, lead, zinc, silver, and gold. These low grade values were from trenches, drill core and more recently a bedrock sample (ARIS Report Number 34527 page 32). Induced polarization anomalies coincident with soil geochemistry anomalies were also reported in the late 1960's. Low grade mineralization has been found over a large area measuring at least 2000 m. Although there is no proof, that the mineralization is continuous or economic, not enough sampling has been completed to prove that this is not the case either. No one seems to have taken a serious look at this property in almost 50 years.

The results obtained in the historic work did not prove to be encouraging enough to warrant further work at the time. However, factors have changed, metal prices have increased, recovery methods have improved and mining and milling methods of low grade deposits have become more cost effective. Major improvements to geophysical surveys, instrumentation and data interpretation since the late 1960's are significant. Increased penetration of IP surveys, for example have greatly improved target delineation, particularly on this type of property.

The most important outcome of the 2018 program was establishing gold mineralization in the area of the big trenches. The result was almost 1 gram per ton (sample L16 HR-1) from trench number 5. The ICP results for sample SS16-1 (taken a short distance north of the trenches) also

---

indicated more than 1000 ppb or 1 gram gold per ton in the soil. I would consider these results to be very encouraging. Several of the samples also shared elevated multi element determinations as well.

## Recommendations

I would recommend the following:

- Detailed geological mapping should be carried out by someone completely familiar with the Nicola Group in an effort to locate the extensive magnetite skarn as well as the diabase dyke from which the “crude ore” shipment was apparently taken.
- A ground magnetometer survey should be completed beginning about 200 metres east of the big trenches and should be continued up and over the top of the ridge where the Minfile has been plotted. The base line should be north south with east west crosslines at 50 metre intervals. Line spacing should not be greater than 50 metres with 25 metre station intervals for a total of about 25 line kilometres.
- Soil samples should also be gathered at each station on the crosslines where residual soil is found.
- Power saws should be used to cut out a trail between all of the big trenches which would make it much easier to evaluate them.
- An excavator should be used to open up the bulldozer trenches for re-evaluation, mapping and sampling as they are located near the “aeromagnetic high” and because of the considerable gold values found in the 2018 program.
- Continue searching for the trench location where the Mineral Resources Branch has reported the 73 ton shipment of “crude ore” came from.
- A geological engineer with experience in this environment should be retained to supervise the next phase of exploration.

## 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 7 years.
3. I am both President and Chief Exploration Manager for Trans - Arctic Explorations Ltd. A position I have held for more than 50 years.
4. I was Chief Instrument Operator and then President/owner of Columbia Airborne Geophysical Services Ltd. for 7 years. Purchased by competitor. Specializing in detailed low level combined airborne geophysical surveys in rugged terrain.
5. President of Hydro-Logic Industries Ltd. 1988 to 1995. Company was sold. Ground water development/Environmental drilling/monitoring and remediation programs.
6. 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.
7. 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.
8. 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.
9. I have supervised projects in the North West Territories, British Columbia, Ontario, Quebec, Labrador, Yukon, Washington, Oregon, Alaska, California, Idaho, Nevada, and Montana.
10. 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.
11. As well as my practical experience I am constantly reading and researching the technical aspects of exploration (geological, geophysical, and geochemical).
12. 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 1st day of September 2018



---

Respectfully submitted  
Eugene A. Dodd  
President - Billiken Gold Ltd.  
President - Trans-Arctic Explorations Ltd.

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# Appendix A - Table of Sample Information

Sample Number	Sample Type	Sample Description	Easting	Northing
SS16-1	Soil	Residual	649108	5553410
SS16-2	Soil	Residual	649141	5553417
SS16-3	Soil	Residual	649191	5553419
SS16-4	Soil	Residual	649230	5553404
SS16-5	Soil	Residual	649269	5553433
SS16-6	Soil	Residual	649313	5553432
SS16-TR2	Soil	Stained, leached, altered	649185	5553295
SS16-TR3	Soil	Stained, leached, altered	649167	5553180
SS16-TR4	Soil	Iron stained, leached, altered	649104	5553331
SS17-1	Soil	Taken near Agglomerate with drusy calcite, agate and quartz	648317	5553266
SS17-2	Soil	Residual	648300 (estimated)	5553200 (estimated)
L16 HR-1	Rock	Altered rusty volcanic	649152	5553380
L16 HR-2	Rock	Feldspar porphyry	649220	5553310
L16 HR-3	Rock	Feldspar porphyry	649621	5554025
L16 HR-4	Rock	Ash tuff lahar	650710	5553300
L16 HR-5	Rock	Feldspar porphyry	650710	5553300
L16 HR-7	Rock	Feldspar porphyry	649621	5554025
L16 HR-8	Rock	Feldspar porphyry	649910	5554516
HR L17-2	Rock	Feldspar porphyry	649853	5552009
HR L17-4	Rock	Pyroclastic rocks, ash and agglomerate (Lahar)	648553	5554648
HR L17-6	Rock	Possibly an intrusive	650061	5553729
HR L17-7	Rock	Flow banded drusy in places	648317	5553266



## **Appendix B – Detailed Cost Breakdown**

## Detailed Cost Breakdown

### Law Project

Reconnaissance Mapping and Sampling Program  
Merritt Area, Nicola, M.D.  
Event # 5722184

### Labour

E. Dodd (Supervisor) – @ \$350 per day		
July 8 – ½ day -----	\$	175.00
July 9, 10, & 11 – 3 days -----	\$	1,050.00
July 12 – ½ day -----	\$	175.00
D. Goossen (Sampler) – @ \$300 per day		
July 8 – ½ day -----	\$	150.00
July 9, 10, & 11 – 3 days -----	\$	900.00
July 12 – ½ day -----	\$	150.00
K. Bauer (Helper) – @ \$275 per day		
July 10, & 11 – 2 days -----	\$	550.00
Labour Sub Total -----	\$	3,150.00

### Equipment

1/2 Ton 4x4 truck – 4 days @ \$100 per day (mileage and fuel included) -----	\$	400.00
3/4 Ton 4x4 truck – 2 days @ \$125 per day (mileage and fuel included) -----	\$	250.00
1 Ton 4x4 truck – 4 days @ \$150 per day (mileage and fuel included) -----	\$	600.00
1 Quads – 4 days @ \$150 per quad, per day (mileage and fuel included) -----	\$	600.00
1 sidexside – 2 days @ \$150 per quad, per day (mileage and fuel included) -----	\$	300.00
1 Quad Trailer – 2 days @ \$50 per day each -----	\$	100.00
GPS, Tablet, Radios, Flare guns, Flagging, Power saw – 4 Days @ \$50 per day -----	\$	200.00
Equipment Sub Total -----	\$	2,450.00

### Camp

Meals and Accommodation 10 Man Days @ \$135 per day -----	\$	1,350.00
Camp Sub Total -----	\$	1,350.00

### Miscellaneous Costs

Assaying (before taxes) -----	\$	568.15
Shipping, printing, drafting and consumed items -----	\$	370.00
Report -----	\$	1,000.00
Miscellaneous Sub Total -----	\$	1,938.15

<b>Grand Total</b> (taxes are not included in this total) -----	\$	<u>8,888.15</u>
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# Appendix C – Photographs

# TRENCH - 1







# Appendix D – Geochemical Analysis

Quality Analysis ...



Innovative Technologies

This is your final copy. If you require an original to be mailed by post please advise, otherwise this email will be deemed sufficient.

Invoice No.: **A18-17032**  
Purchase Order:  
Invoice Date: **21-Dec-18**  
Date submitted: **07-Nov-18**  
Your Reference: **2018-11-07**  
GST #: **R121979355**

**Billiken Gold Ltd.**  
**561 Glenmary Rd.**  
**Enderby BC V0E 1V3**  
**Canada**

ATTN Eugene Dodd

### INVOICE

No. samples	Description	Unit Price	Total
11	S1 DIS(KAMLOOPS)	\$ 3.75	\$ 41.25
11	RX1-T (Kamloops)	\$ 11.50	\$ 126.50
22	UT-1M-Kamloops	\$ 17.75	\$ 390.50
22	Disposal -Kamloops	\$ 0.45	\$ 9.90
Subtotal: :			<b>\$ 568.15</b>
GST-BC-5% :			\$ 28.41
<b>AMOUNT DUE: (CAD) :</b>			<b>\$ 596.56</b>

Net 30 days. 1 1/2 % per month charged on overdue accounts.

Thank you for your payment!  
Charged MC Dec 24 2018  
Auth#:024471 JR

Please reference the invoice number when making a payment by Bank/Wire transfer. Intermediary Bank Fees are the responsibility of the client. If payment is made by direct/wire transfer, please send payment notifications to [ancaster@actlabs.com](mailto:ancaster@actlabs.com) Thank you!

**ACTIVATION LABORATORIES LTD.**

41 Bittern Street, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or  
+1.888.228.5227 FAX +1.905.648.9613

E-MAIL [ancaster@actlabs.com](mailto:ancaster@actlabs.com) ACTLABS GROUP WEBSITE <http://www.actlabs.com>





Quality Analysis ...



Innovative Technologies

Date Submitted: 07-Nov-18

Invoice No.: A18-17032

Invoice Date: 17-Dec-18

Your Reference:

Billiken Gold Ltd.  
561 Glenmary Rd.  
Enderby BC V0E 1V3  
Canada

ATTN: Eugene Dodd

### CERTIFICATE OF ANALYSIS

22 Rock and Soil samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-1M-Kamloops Aqua Regia ICP/MS

REPORT A18-17032

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Note: Au by this package is not reliable and you should have Au by Fire Assay done if you need accurate Au values.

CERTIFIED BY:

A handwritten signature in black ink, appearing to be "Emmanuel Esemé", written over a horizontal line.

Emmanuel Esemé, Ph.D.  
Quality Control

ACTIVATION LABORATORIES LTD.  
9989 Dallas Drive, Kamloops, British Columbia, Canada V2C 6T4  
TELEPHONE +250 573-4484 or +1 888 228 5227 FAX +1 905 648 9613  
E-MAIL Kamloops@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

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Results

Activation Laboratories Ltd.

Report: A18-17032

Analyte Symbol	Ag	Al	As	Au	B	Ba	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P
Unit Symbol	ppm	%	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.1	0.01	0.5	0.5	20	0.5	0.1	0.01	0.1	0.1	1	0.2	0.01	1	0.01	0.01	1	0.01	1	0.1	0.001	0.1	0.001
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SS16-1	0.6	2.56	20.8	> 1000	< 20	244	0.3	2.74	0.7	13.6	26	81.8	3.14	6	0.04	0.21	9	0.72	2450	1.3	0.031	21.0	0.061
SS16-2	0.5	2.20	38.8	13.4	< 20	98.7	0.2	3.13	0.4	13.0	22	81.8	3.06	6	0.06	0.14	8	0.87	2400	0.8	0.032	14.3	0.039
SS16-3	0.3	1.34	6.7	5.9	< 20	112	< 0.1	1.47	0.2	8.0	17	51.5	1.69	4	0.07	0.16	6	0.48	745	1.1	0.032	12.2	0.043
SS16-4	0.3	1.38	2.8	3.4	< 20	119	0.1	0.93	0.3	9.1	16	46.4	1.81	4	0.06	0.15	7	0.41	955	1.2	0.031	13.5	0.044
SS16-5	0.3	1.74	3.7	2.9	< 20	164	0.1	0.88	0.4	10.4	21	58.4	2.36	5	0.05	0.26	10	0.49	887	0.9	0.030	15.8	0.059
SS16-6	0.4	1.91	3.8	5.1	< 20	170	0.1	0.91	0.4	11.4	24	70.4	2.47	5	0.03	0.24	11	0.50	980	0.8	0.032	17.6	0.077
SS16-TR2	0.3	1.88	5.9	2.0	< 20	162	0.2	0.86	0.3	11.9	29	58.6	2.89	5	0.02	0.20	10	0.58	857	0.8	0.035	19.3	0.079
SS16-TR3	0.3	1.90	4.2	1.9	< 20	157	0.1	0.81	< 0.1	12.4	34	79.0	3.04	6	< 0.01	0.15	11	0.77	613	0.8	0.045	22.1	0.057
SS16-TR4	0.3	2.25	11.1	3.1	< 20	146	0.2	0.81	< 0.1	16.4	33	77.0	4.41	7	0.02	0.14	12	0.97	1150	1.0	0.033	18.9	0.061
SS17-1	0.3	2.63	0.7	< 0.5	< 20	160	0.1	0.56	< 0.1	11.3	120	35.0	2.18	6	< 0.01	0.16	5	0.88	578	0.2	0.056	36.9	0.034
SS17-2	0.3	2.93	< 0.5	0.6	< 20	160	< 0.1	0.81	< 0.1	10.1	57	36.3	2.74	8	0.02	0.32	7	1.02	649	0.3	0.067	27.0	0.020
L16 HR-1	0.4	2.22	17.5	414	< 20	51.1	0.2	0.52	0.1	14.1	43	57.6	5.45	10	< 0.01	0.21	6	1.68	1320	1.3	0.065	20.4	0.105
L16 HR-2	0.3	2.76	28.4	3.1	< 20	145	1.2	0.09	< 0.1	3.6	52	69.7	6.94	11	0.05	0.25	9	1.10	333	1.0	0.087	12.8	0.089
L16 HR-3	0.2	1.89	1.8	3.1	< 20	69.0	0.1	0.52	< 0.1	9.7	18	10.1	3.75	7	< 0.01	0.13	5	1.37	806	1.1	0.051	5.2	0.079
L16 HR-4	0.3	0.87	2.2	4.0	< 20	35.8	< 0.1	4.31	< 0.1	6.4	5	5.9	2.19	3	< 0.01	0.18	4	0.47	573	1.3	0.059	2.8	0.041
L16 HR-5	0.4	0.89	13.8	1.0	< 20	75.0	0.1	0.18	< 0.1	8.6	23	21.9	6.42	7	0.02	0.12	4	0.43	697	0.8	0.134	5.6	0.069
L16 HR-7	0.4	1.37	17.3	2.0	< 20	32.8	0.2	0.17	< 0.1	9.8	31	22.7	6.52	8	< 0.01	0.09	3	0.98	623	1.0	0.103	10.7	0.070
L16 HR-8	0.4	1.16	21.0	2.0	< 20	53.8	0.3	0.03	< 0.1	4.2	35	28.3	6.79	9	< 0.01	0.07	4	0.86	539	0.6	0.097	9.5	0.081
HR L17-2	0.3	1.82	5.4	1.4	< 20	58.9	< 0.1	1.33	< 0.1	11.6	11	30.3	3.42	8	< 0.01	0.08	9	1.16	722	0.5	0.146	5.5	0.081
HR L17-4	0.1	1.46	1.1	1.0	< 20	96.2	0.2	0.76	< 0.1	11.1	118	30.0	2.18	4	< 0.01	0.09	6	0.97	284	0.2	0.243	56.7	0.041
HR L17-6	0.3	1.23	3.3	< 0.5	< 20	770	< 0.1	1.41	0.2	10.9	10	12.8	3.40	5	0.02	0.29	12	0.48	958	0.7	0.073	5.1	0.063
HR L17-7	0.3	2.14	0.9	< 0.5	< 20	493	< 0.1	1.40	< 0.1	9.9	52	36.3	2.38	4	< 0.01	0.43	13	0.90	560	0.7	0.122	28.2	0.090

Results Activation Laboratories Ltd.

Report: A18-17032

Analyte Symbol	Pb	S	Sb	Sc	Se	Sr	Te	Th	Ti	Tl	V	W	Zn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
Lower Limit	0.1	1	0.1	0.1	0.5	1	0.2	0.1	0.001	0.1	2	0.1	1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SS16-1	10.0	<1	2.0	7.4	0.7	107	<0.2	1.0	0.088	<0.1	58	0.3	361
SS16-2	9.0	<1	2.6	7.3	0.5	73	<0.2	0.9	0.098	<0.1	62	0.3	276
SS16-3	6.8	<1	0.4	3.4	<0.5	87	<0.2	0.7	0.063	<0.1	37	0.2	95
SS16-4	6.7	<1	0.2	3.2	<0.5	66	<0.2	0.5	0.054	<0.1	39	0.2	119
SS16-5	6.2	<1	0.2	4.6	<0.5	62	<0.2	0.7	0.066	<0.1	48	0.3	127
SS16-6	7.2	<1	0.3	4.1	<0.5	69	<0.2	0.5	0.059	<0.1	50	0.3	112
SS16-TR2	6.4	<1	0.4	4.7	<0.5	72	<0.2	0.5	0.067	<0.1	68	0.2	82
SS16-TR3	6.2	<1	0.5	7.2	<0.5	80	<0.2	1.8	0.099	<0.1	73	0.2	59
SS16-TR4	6.4	<1	0.7	11.3	0.5	73	<0.2	1.6	0.077	<0.1	99	0.3	86
SS17-1	7.7	<1	<0.1	5.9	<0.5	91	<0.2	1.9	0.162	<0.1	47	0.2	53
SS17-2	6.6	<1	<0.1	8.1	<0.5	164	<0.2	1.6	0.299	<0.1	65	0.2	76
L16 HR-1	5.9	<1	0.3	12.1	<0.5	17	<0.2	1.4	0.010	<0.1	186	0.2	179
L16 HR-2	4.1	<1	0.9	6.9	1.9	34	0.2	1.3	0.001	0.2	163	0.2	20
L16 HR-3	2.3	<1	0.1	5.1	0.7	25	<0.2	1.2	0.091	<0.1	56	0.3	59
L16 HR-4	2.7	<1	0.2	6.6	<0.5	27	<0.2	1.5	0.004	<0.1	46	0.2	12
L16 HR-5	10.5	<1	0.3	8.5	1.0	25	0.5	0.3	0.053	<0.1	151	0.2	178
L16 HR-7	8.2	<1	0.3	11.5	0.8	15	0.6	0.3	0.077	<0.1	181	0.2	245
L16 HR-8	10.1	<1	0.3	11.9	0.7	14	0.4	0.3	0.025	<0.1	200	0.2	171
HR L17-2	6.2	<1	0.4	5.4	<0.5	108	<0.2	1.2	0.194	<0.1	93	0.5	51
HR L17-4	4.5	<1	<0.1	5.4	<0.5	124	<0.2	1.4	0.061	<0.1	47	0.2	33
HR L17-6	5.4	<1	0.2	7.1	<0.5	59	<0.2	4.1	0.036	<0.1	75	0.2	73
HR L17-7	6.3	<1	<0.1	7.5	<0.5	892	<0.2	2.0	0.250	<0.1	75	0.3	65

Quality Analysis ...



Innovative Technologies

This is your final copy. If you require an original to be mailed by post please advise, otherwise this email will be deemed sufficient.

Invoice No.: **A18-17032B**  
Purchase Order:  
Invoice Date: **11-Jan-19**  
Date submitted: **07-Nov-18**  
Your Reference: **2018-11-07**  
GST #: **R121979355**

**Billiken Gold Ltd.**  
**561 Glenmary Rd.**  
**Enderby BC V0E 1V3**  
**Canada**

ATTN Eugene Dodd

### INVOICE

No. samples	Description	Unit Price	Total
2	1A2-Kamloops	\$ 17.00	\$ 34.00
Subtotal: :			<b>\$ 34.00</b>
GST-BC-5% :			\$ 1.70
<b>AMOUNT DUE: (CAD) :</b>			<b>\$ 35.70</b>

Net 30 days. 1 1/2 % per month charged on overdue accounts.

Thank you for your payment!  
Charged MC Jan 11 2019  
Auth#:011880 JR

Please reference the invoice number when making a payment by Bank/Wire transfer. Intermediary Bank Fees are the responsibility of the client. If payment is made by direct/wire transfer, please send payment notifications to [ancaster@actlabs.com](mailto:ancaster@actlabs.com) Thank you!

**ACTIVATION LABORATORIES LTD.**

41 Bittern Street, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or  
+1.888.228.5227 FAX +1.905.648.9613

E-MAIL [ancaster@actlabs.com](mailto:ancaster@actlabs.com) ACTLABS GROUP WEBSITE <http://www.actlabs.com>



Quality Analysis ...



Innovative Technologies

Date Submitted: 07-Nov-18  
Invoice No.: A18-17032-Au  
Invoice Date: 09-Jan-19  
Your Reference:

Billiken Gold Ltd.  
561 Glenmary Rd.  
Enderby BC V0E 1V3  
Canada

ATTN: Eugene Dodd

### CERTIFICATE OF ANALYSIS

22 Rock and Soil samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-Kamloops Au - Fire Assay AA

REPORT A18-17032-Au

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Elitsa Hrischeva". The signature is written in a cursive style and is positioned above a horizontal line.

Elitsa Hrischeva, Ph.D.  
Quality Control

ACTIVATION LABORATORIES LTD.  
9999 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4  
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**Final Report**  
**Activation Laboratories**

Report Number: A18-17032

Report Date: 9/1/2019

Analyte Symbol	Au
Unit Symbol	ppb
Detection Limit	5
<u>Analysis Method</u>	<u>FA-AA</u>
SS16-1	17
L16 HR-1	963

# Sample Preparation

The largest source of error in any sampling program is the sample collection stage. To obtain meaningful analytical results, it is imperative that this stage, as well as sample preparation be done properly. **Actlabs can advise on sampling protocol for your field program if requested.**

Once the samples arrive in the laboratory, Actlabs will ensure that they are prepared appropriately. As a routine practice with rock and core, the entire sample is crushed to a nominal minus 2 mm, mechanically split (riffle) to obtain a representative sample and then pulverized to at least 95 % minus 105 microns (  $\mu$  m). All of our steel mills are mild steel and do not induce Cr or Ni contamination.

As a routine practice, we will automatically use cleaner sand between each sample at no cost to the customer. Quality of crushing and pulverization is routinely checked as part of our quality assurance program. Samples submitted in an unorganized fashion will be subject to a sorting surcharge and may substantially slow turnaround time. Providing an accurate detailed sample list by e-mail will also aid in improving turnaround time and can be used for Quality Control purposes.

See pages 5 and 6 of the [pricelist](#) for preparation and additional fees.

**Our Sample Preparation Pricing is all-inclusive. This includes sorting, drying, labeling, new reject bags, using cleaner sand between each sample and crushing samples up to 7Kg (for RX1).**

## Rock, Core, and Drill Cuttings

Package	Description
RX1	Crush (<7kg) up to 80 % passing 2 mm, split (250 g) and pulverize (mild steel) to 95 % passing 105 $\mu$ m
RX1-ORE	Crush up to 90 % passing 2 mm
RX1+500	500 grams pulverized
R X1+800	800 grams pulverized
RX1+ 1000	1000 grams pulverized
RX1-SD	Crush (<7 kg) up to 80 % passing 2 mm, rotary split (250 g) and pulverized (mild steel) to 95 % passing 105 $\mu$ m
RX1-SD-ORE	Crush up to 90 % passing 2 mm
RX3	Oversize charge per kilogram for crushing

RX4	Pulverization only (mild steel) (coarse pulp or crushed rock) (<800 g)
RX5	Pulverize Ceramic (100 g)
RX6	Hand pulverize small samples (agate mortar & pestle) (< 5 g)
RX7	Crush and Split (<5 kg)
RX8	Sample Prep only surcharge, no analyses
RX9	Compositing (per composite) dry weight
RX10	Weight (kg) as received
RX11	Checking Quality of pulps or rejects prepared by other labs and issuing reports
RX12	Ball Mill preparation
RX13	Rod Mill preparation
RX14	Core cutting
RX15	Special Preparation/Hour
RX16	Specific Gravity on Core
RX16-W	Specific Gravity (WAX) on friable samples
RX17	Specific Gravity on pulps
RX-17-GP	Specific Gravity on pulps by gas pyncometer



# UT-1M - Aqua Regia - ICP/MS

A 0.5 g sample is digested in aqua regia at 90 C in a microprocessor-controlled digestion block for 2 hours. Digested samples are diluted and analyzed by Perkin Elmer Sciex ELAN 6000, 6100 or 9000 ICP/MS. One blank is run for every 68 samples. An in-house control sample is run every 33 samples. Digested standards are run every 68 samples. After every 15 samples, a digestion duplicate is analyzed. Instrument is recalibrated every 68 samples.

**Code UT-1M** - Elements and Detection Limits (ppm, except where noted)

Element	Detection Limit	Upper Limit	Element	Detection Limit	Upper Limit	Element	Detection Limit	Upper Limit
Ag	0.1	100	Fe	0.01 %	30 %	S <sup>+</sup>	1 %	20 %
Al	0.01 %	8 %	Ga	1	1,000	Sb	0.1	500
As	0.5	10,000	Hg	0.01	50	Sc	0.1	10,000
Au	0.5 ppb	1,000 ppb	K	0.01 %	5 %	Se	0.5	10,000
B	20	2,000	La	1	10,000	Sr	1	5,000
Ba	1	10,000	Mg	0.01 %	10 %	Te	0.2	500
Bi	0.1	2,000	Mn	1	10,000	Th	0.1	200
Ca	0.01 %	50 %	Mo	0.1	10,000	Ti	0.001 %	10 %
Cd	0.1	2,000	Na	0.001 %	5 %	Tl	0.1	500
Co	0.1	5,000	Ni	0.1	10,000	V	2	1,000
Cr	1	10,000	P	0.001 %	5 %	W	0.1	200
Cu	0.2	10,000	Pb	0.1	5,000	Zn	1	5,000

**Note:**

Assays are recommended for values which exceed the upper limits.

Au is semi-quantitative due to the small sample size.

Extraction of each element by Aqua Regia Digestion is dependent on mineralogy.

+ Sulphide sulphur and soluble sulphates are extracted.

# 1A2 - (1A2-30 or 50) Au Fire Assay - AA

## Fire Assay Fusion

A sample size of 5 to 50 grams can be used but the routine size is 30 g for rock pulps, soils or sediments (exploration samples). The sample is mixed with fire assay fluxes (borax, soda ash, silica, litharge) and with Ag added as a collector and the mixture is placed in a fire clay crucible. The mixture is then preheated at 850°C, intermediate 950°C and finish 1060°C with the entire fusion process lasting 60 minutes. The crucibles are then removed from the assay furnace and the molten slag (lighter material) is carefully poured from the crucible into a mould, leaving a lead button at the base of the mould. The lead button is then placed in a preheated cupel which absorbs the lead when cupelled at 950°C to recover the Ag (doré bead) + Au.

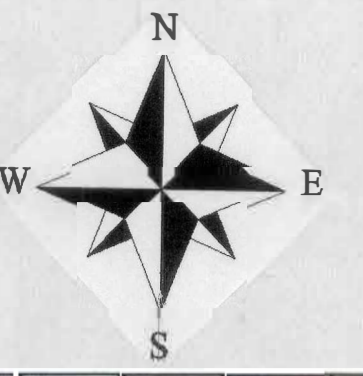
## AA Finish

The entire Ag dore bead is dissolved in aqua regia and the gold content is determined by AA (Atomic Absorption). AA is an instrumental method of determining element concentration by introducing an element in its atomic form, to a light beam of appropriate wavelength causing the atom to absorb light. The reduction in the intensity of the light beam directly correlates with the concentration of the elemental atomic species. On each tray of 42 samples there is two blanks, three sample duplicates and 2 certified reference materials, one high and one low (QC 7 out of 42 samples). We generally rerun all gold by fire assay gravimetric over 5,000 ppb to ensure accurate values.

## Code 1A2 (Fire Assay-AA) Detection Limits (ppb)

Element	Detection Limit	Upper Limit
Au	5	5,000

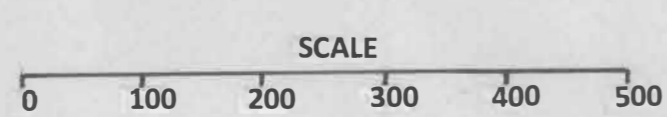
Note: If value exceeds upper limit, reanalysis by Fire Assay-Gravimetric (Code 1A3) is recommended.



Analyte Symbol	Ag	Au	Cu	Pb	Zn
Unit Symbol	ppm	ppb	ppm	ppm	ppm
Lower Limit	0.1	0.5	0.2	0.1	1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
SS16-1	0.6	> 1000	81.8	10.0	361
SS16-2	0.5	13.4	81.8	9.0	276
SS16-3	0.3	5.9	51.5	6.8	95
SS16-4	0.3	3.4	46.4	6.7	119
SS16-5	0.3	2.9	58.4	6.2	127
SS16-6	0.4	5.1	70.4	7.2	112
SS16-TR2	0.3	2.0	58.6	6.4	82
SS16-TR3	0.3	1.9	79.0	6.2	59
SS16-TR4	0.3	3.1	77.0	6.4	86
SS17-1	0.3	< 0.5	35.0	7.7	53
SS17-2	0.3	0.6	36.3	6.6	78
L16 HR-1	0.4	414	576	5.9	179
L16 HR-2	0.3	3.1	69.7	4.1	20
L16 HR-3	0.2	3.1	10.1	2.3	59
L16 HR-4	0.3	4.0	5.9	2.7	12
L16 HR-5	0.4	1.0	21.9	10.5	179
L16 HR-7	0.4	2.0	22.7	8.2	245
L16 HR-8	0.4	2.0	28.3	10.1	171
HR L17-2	0.3	1.4	30.3	6.2	51
HR L17-4	0.1	1.0	30.0	4.5	33
HR L17-6	0.3	< 0.5	12.8	5.4	73
HR L17-7	0.3	< 0.5	36.3	6.3	65



SAMPLE LOCATION ●  
 FOOT TRAVERSE - - - - -  
 TRENCH ————  
 OUTCROP X



NOT EXACTLY TO SCALE

TO ACCOMPANY A REPORT BY E.A. DODD

SAMPLE LOCATION MAP		
KARL H. BAUER - LAW GROUP		
Area: Merritt	Map: 0921016	Nicola M.D.
NAD: 83	Zone: 10U	Law Group
Date: January 07, 2019	To Accompany report by: EAD	Drawn by: EAD