

# **GEOLOGICAL AND GEOCHEMICAL REPORT**

**2018 Kelli Claim Group Exploration Program  
50% funded through the  
Yukon Mineral Exploration Program**

**KELLI CLAIM GROUP  
Whitehorse Mining Division**

NTS: 115G/12 61°33' N Lat., 139°37' W Long.

Report by: G. Gutrath, Geologist, P.Eng.

Date: January 24, 2019

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## INTRODUCTION

This report outlines the 2018 exploration program carried out on the Kelli Claim Group as well as the results and recommendations for the continued program in 2019.

The exploration program was carried out under a YESAB Class 3 Permit issued on February 13, 2018.

This report reinstates a considerable amount of information from previous reports by the writer from 2011 to 2018.

## ACKNOWLEDGEMENTS

The writer was assisted by Mr. Fred Erler, President of Kelli-Reed Creek Resources Ltd. Mr. Erler has been working with the writer on the property since 2014. He is a member of BC Search and Rescue, first aid qualified and a keen outdoorsman.

Mr. Lorne Smith, (87 years old) was not able to assist in 2018 as he had undergone a major operation and was unable to return to the Yukon until September, 2018. His son, Glen Smith, resident of Haines Junction assisted in the operation on the Argo, trail clearing and as a geological assistant.

Mr. Larry Haner, of Rayleigh, B.C. and a former resident of the Yukon agreed to come to the Yukon and fill in for Mr. Lorne Smith. The 1955 D8 Caterpillar bulldozer on site required critical repairs and Mr. Haner carried out this work as well as operating the D8.

One of the Kelli-Reed Creek Resources Ltd.'s shareholders, Mrs. Louise 'Toots' Bouvier provided a 'standby' ATV stored at her property at Destruction Bay. She is also the owner of the camp and D8 bulldozer on the property.

Mr. Dennis Dickson of Burwash Landing provided a crane truck to lift a welder into the bank of his 8-wheel Argo that Kelli-Reed Creek Resources Ltd. rented for the project.

In July, 2018 Strategic Metals Ltd. ('Strategic Metals'), a company controlled by Archer Cathro & Associates (1981) Ltd. ('Archer Cathro'), entered into an agreement with Kelli-Reed Creek Resources Ltd. to advance the exploration of the Kelli Claim Group. Strategic Metals Ltd. carried out a program of geochemical mapping in August, 2018. The data from this program has been provided to the writer and is a very important addition in the advancement of the Kelli Claim Group project. The Kelli Claim Group is surrounded to the south by the Vault Claims that are owned by Strategic Metals Ltd.

The continued mapping of the glaciations of the northern Kluane Range was carried out by the Yukon Geological Survey in 2018.



Mobilizing in Dennis Dickson's yard, Burwash Landing

Photo 1



HWY 1 trailhead, loaded and ready to cross the Shakwak Trench to Camp

Photo 2

Ms. Kathie Jaworski, Mapping and GIS, compiled the base maps for the 2018 exploration program.

A very important factor in the exploration of the Kelli Claim Group over the last 10 years has been the funding provided through the Yukon Mineral Exploration Program (YMEP). Many thanks to Mr. Derek Torgerson, Manager of the Program, for his assistance.

#### **OUTLINE OF WORK CARRIED OUT ON THE KELLI CLAIM GROUP IN 2018**

On June 28, 2018 the writer and Glen Smith of Haines Junction proceeded to Burwash Landing. Dennis Dickson's Argo was rented and trailered to the start of the trail from Highway 1. There was no problem crossing the Shakwak Trench, although standing water was deep and Murray Creek was at a flood stage (2 m deep) with the creek washing over the log bridge. The Reed Creek crossing was no problem with a normal stream depth of  $\pm 0.4$  m.

The purpose of the trip was to determine if there had been any damage to the trailer camp over the winter. The camp was found to be in good condition. As part of the YESAB Class 3 permit the electric fence was rebuilt around the trailer camp, septic field and burn barrel. A solar panel was also installed on the roof of the trailer to maintain the 12V battery that charges the electric fence.

The ATV trail was hiked from the camp to the Upper Canyon crossing to determine if there were any serious washouts over the winter. There was minimal talus slide material on the trail and there was only one small washout. In addition, a total of 8 float rock samples were collected for analysis along the trail and in the canyon area.

On August 1, 2018 the camp was closed with the electric fence operational. The Argo was returned to Burwash Landing the same day. The flow of water in Murray Creek was greatly reduced to a normal depth of  $\pm 0.25$  m.

#### **Mobilization**

1. On July 26, 2018 field gear, two ATV's, fuel and camp supplies were mobilized in Whitehorse. Larry Haner, a master mechanic, welder and D8 operator joined the crew in Whitehorse. All the equipment and crew were mobilized from Whitehorse to the camp in one day. Two ATV's were trailered from Whitehorse to the Hwy 1 - Shakwak trailhead. Dennis Dickson's 8-wheel Argo plus a welder and oxygen-acetylene kit were loaded on a trailer and taken to Hwy 1 - Shakwak trailhead. Glen Smith trucked an ATV from Haines Junction to the turnoff.

#### **Bulldozer, Road Upgrading, and Trenching**

2. The D8 bulldozer was repaired in two days and another 3 days were spent clearing and upgrading the trail from the camp to 1 km to the south of the Forks and from the camp 3 km north. One day was spent constructing 3 trenches along the edge of the 1980's placer mine cuts for geological mapping and sampling. On August 3, 2018 the D8 bulldozer was parked. Larry Hanes was taken out to Hwy 1 by the Argo driven by

Glen Smith. Larry Haner took the Jeep on site back to Whitehorse. Glen Smith returned to camp by ATV that had been left at the highway.

### **ATV Trail Clearing**

3. Extension of the ATV trail 1.3 km from the bulldozed trail at the Forks to the south where the 1980's trail was deeply dissected by a flash flood. The trail was grown in with alders and they were cleared by Fred Erler and Glen Smith. When this work was completed Glen Smith went over to his camp at the Swede Johnson-Smith's Claim Group 5 km west of the Kelli Claim Group.

### **Geological Mapping and Geochemical Sampling**

- 4) a) While the bulldozer work was being carried out the writer mapped the surficial geology and exposed bedrock geology from the north end of the Lower Canyon to 2 km north of the camp on a scale of 1:500 (Map 3). This map will serve as a base for future bulldozer trenching, geological mapping, placer sampling and placer reserve calculations and rock sampling to be carried out along the edge of the 1980's placer mine cuts.
- b) Additional geochemical sampling and geological mapping was also carried out in the area between the Upper Canyon Pup 1 (Map 1) and Pup 8 on the east side of Reed-Kelli Creek. Numerous highly anomalous gold samples had been collected from this area without finding the bedrock source.
- c) Pup 1 north and Pup 2 were also silt/soil sampled and the outcrop geology mapped by the writer with the assistance of Fred Erler.
- d) Soil sampling and geological mapping was also carried out to the south of the Forks to the boundary of the Vault Claim Group and then traversing up Pup 26 and crossing to the north in alpine terrain and descending via Pup 21 to Reed-Kelli Creek.
- e) Soil and silt sampling were also collected from Pup 1 on the west side of Reed-Kelli Creek.
- f) Archer Cathro on behalf of Strategic Metals collected 214 soil samples contouring primarily above the limits of glaciations at an elevation of 1380 m and 1450 m on both the east and west slopes of Reed-Kelli Creek. This program was carried out under the agreement between Strategic Metals and Kelli-Reed Creek Resources Ltd. Strategic Metals has provided the writer with a comprehensive report of their exploration program and the results will be summarized in this report.
- g) The surficial geological mapping plotted on a scale of 1:3000 of the Reed-Kelli Creek outwash fan was a continuation of the mapping started in 2017 and has now been largely completed to Reed Creek. The purpose of this program was to determine if exploration work and future mining activity generating a silt load in Reed-Kelli Creek would have a negative impact on Reed Creek, which has a grayling population. The other objective was to see if Historic Trail #9 could be located since under the YESAB Class 3 Permit the Trail is not to be disturbed.



KELLI-REED CREEK RESOURCES

FIGURE 1

Atled Exploration Management Ltd

**PROPERTY LOCATION**

**KELLI PROPERTY**

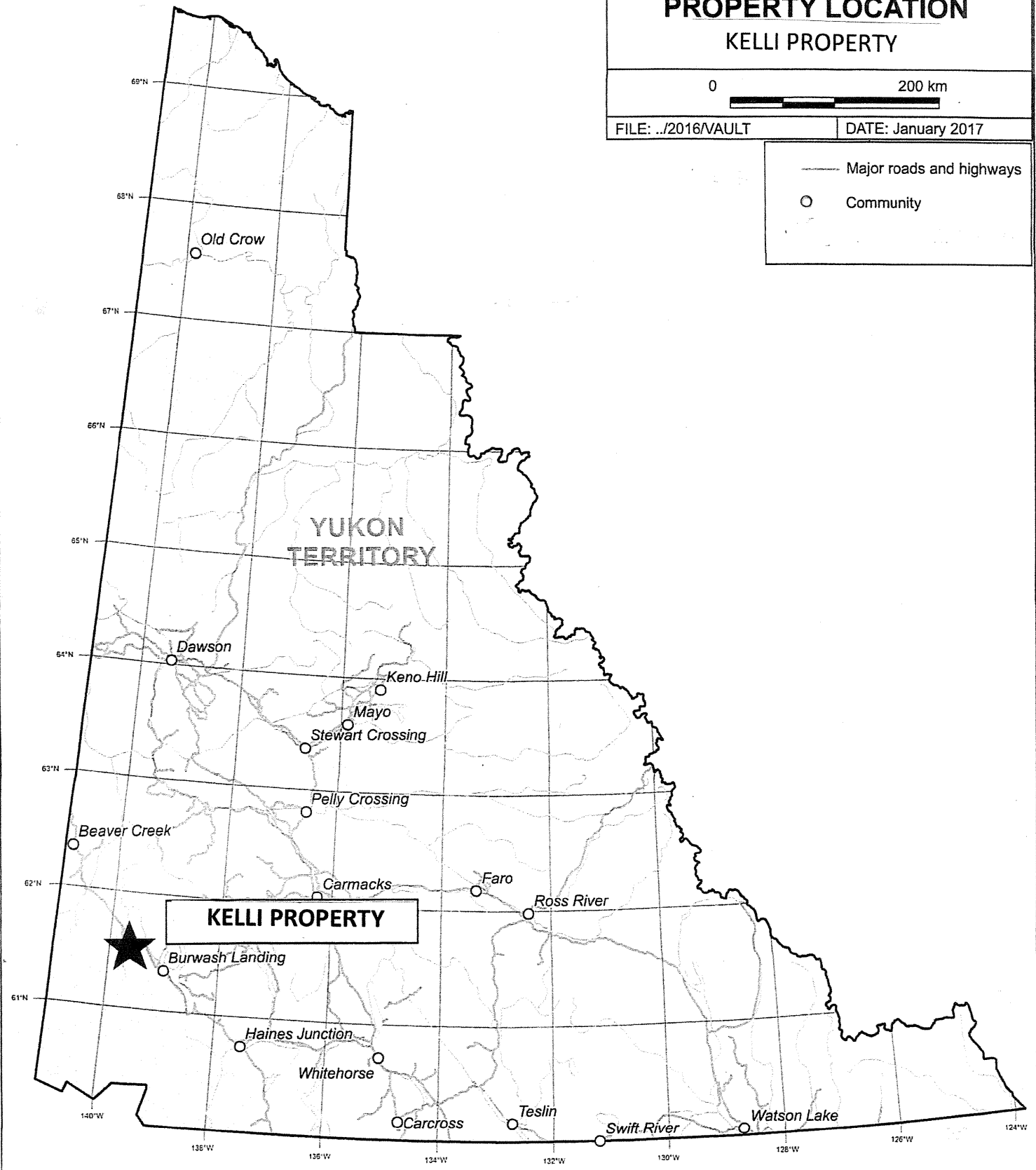
0 200 km



FILE: ../2016/VAULT

DATE: January 2017

- Major roads and highways
- Community



## LOCATION

The Kelli Claim Group is located on the northwest facing slope of the Kluane Range and is within the Kluane Game Sanctuary. The centre of the Kelli Claim Group is approximately UTM Coordinate 682400 N 573000 E, Zone 7, NAD 83 located on NTS Map 115/12. (*Fig. 1*)

## CLAIMS

There are 89 contiguous claims (*Fig. 2*) and they are listed under *Appendix A*. The Toots 1 to 12 claims are in good standing until January 28, 2024 and the majority of the claims are in good standing until January 28, 2026 to 2031.

## PHYSIOGRAPHY

The Kelli Claim Group is centered on a north-northwesterly flowing tributary of Reed Creek (Reed-Kelli Creek) that joins the westerly flowing Reed Creek proper on the south side of Shakwak Trench. The south boundary of the Kelli Claim Group is at an elevation of 4,500 feet (1,372 m) and the north boundary is at an elevation of 2,600 feet (792 m).

The primary focus of historic mineral exploration and placer gold mining has been within the steep 'V' walled canyon referred to as the Lower, Middle and Upper Canyon that extend over a distance of 1000 m and over an elevation interval of 150 m.

Vegetation is predominantly stunted black spruce in areas of muskeg (permafrost). Tall, large diameter spruce border the thawed outwash channel. The Canyon area of Reed-Kelli Creek to the Forks is bordered by thick alder as well as the adjoining slopes to an elevation of 4,000 feet (1,220 m). At an elevation above 5,000 feet (1,524 m) open grassland and willow predominate representing an alpine environment.

## CLIMATE

The Kelli Claim Group is located on the east flank of the St. Elias Mountains and in theory is protected from direct coastal weather. However, weather is funneled from the coast along the low valleys that follow the Denali Fault/Shakwak Trench. As a result, there is considerable yearly variation in summer rainfall. Both the summer of 2011 and starting in July, 2013 the rainfall was abnormally high. In 2014, during the August exploration program weather conditions were ideal. There were only a few rain showers and the creek levels were low.

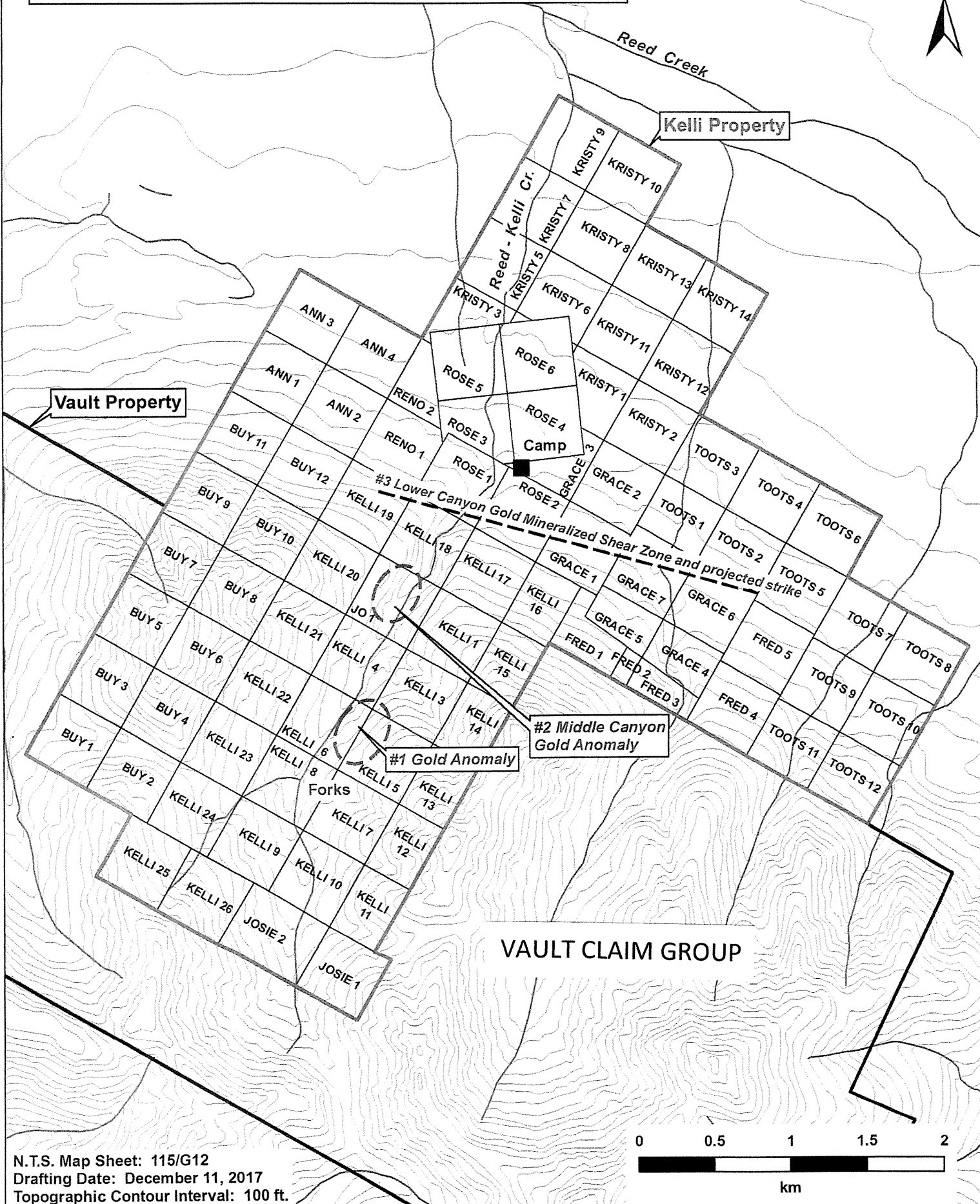
The range of annual temperature in the Kluane Lake area is  $-20^{\circ}\text{C}$  in December, the coldest month to  $+13^{\circ}\text{C}$  in July, the warmest month of the year.

The average annual rainfall is 20 cm and snowfall is 18 cm. The Reed-Kelli Creek area is at a higher elevation and will have colder winter weather and greater accumulated snowfall and rain.

The weather during the 2018 exploration period in August was very good with only a few showers.

# KELLI PROPERTY - EXPLORATION TARGETS

## Whitehorse Mining Division



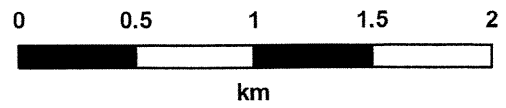
Kelli Property

Vault Property

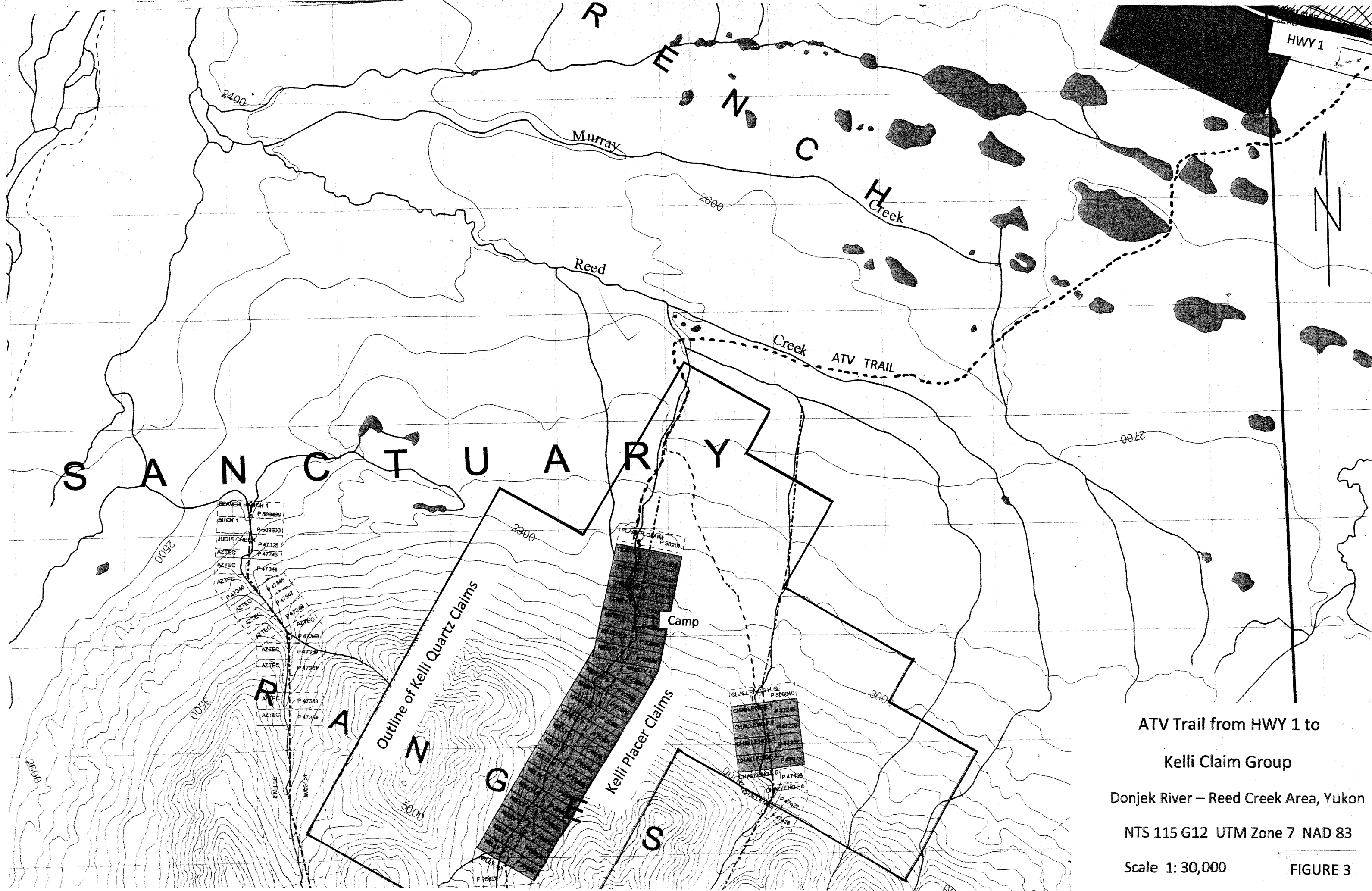
#2 Middle Canyon Gold Anomaly

#1 Gold Anomaly

VAULT CLAIM GROUP



N.T.S. Map Sheet: 115/G12  
Drafting Date: December 11, 2017  
Topographic Contour Interval: 100 ft.



ATV Trail from HWY 1 to

Kelli Claim Group

Donjek River – Reed Creek Area, Yukon

NTS 115 G12 UTM Zone 7 NAD 83

Scale 1: 30,000

FIGURE 3

## ACCESS

The turnoff from the Alaska Highway to the winter heavy equipment trail/summer ATV trail is at UTM coordinate 580651 E 6830392 N, 340 km west of Whitehorse or 170 km from Haines Junction. The trail crosses 10 km of the Shakwak Trench through continuous swamp, skirting small lakes and crossing three streams reaching the Reed-Kelli Creek gravel fan at approximately 3 km from the campsite.

Helicopter service is available from Haines Junction with a suitable staging area on the Alaska Highway at Mile 1118. There is a good helicopter pad at the campsite.

Starting in 2014 access from the Alaska Highway to the Kelli Camp has been by an 8 wheel Argo rented from Mr. Dennis Dixon of Burwash Landing. Mr. Lloyd Smith operated the Argo, carrying approximately 300 kilos of supplies and navigating the Shakwak Swamp and the washed out road to the Kelli Camp with no problems. The road from the Reed-Kelli Creek fan to the camp was built in the 1990s and was in good condition in 2011. However, in 2013 the road was 90% destroyed by a flash flood making it very slow and difficult to gain access to the Kelli Camp. On site transportation was provided by three ATVs that followed the Argo into the property.

In 2018 the bridges built in 2015 and the upgraded ATV trail following the outwash fan to the camp were all in good condition. The access trail from Highway 1 to the Kelli Camp is shown on *Fig.3* Kelli Claim Group.

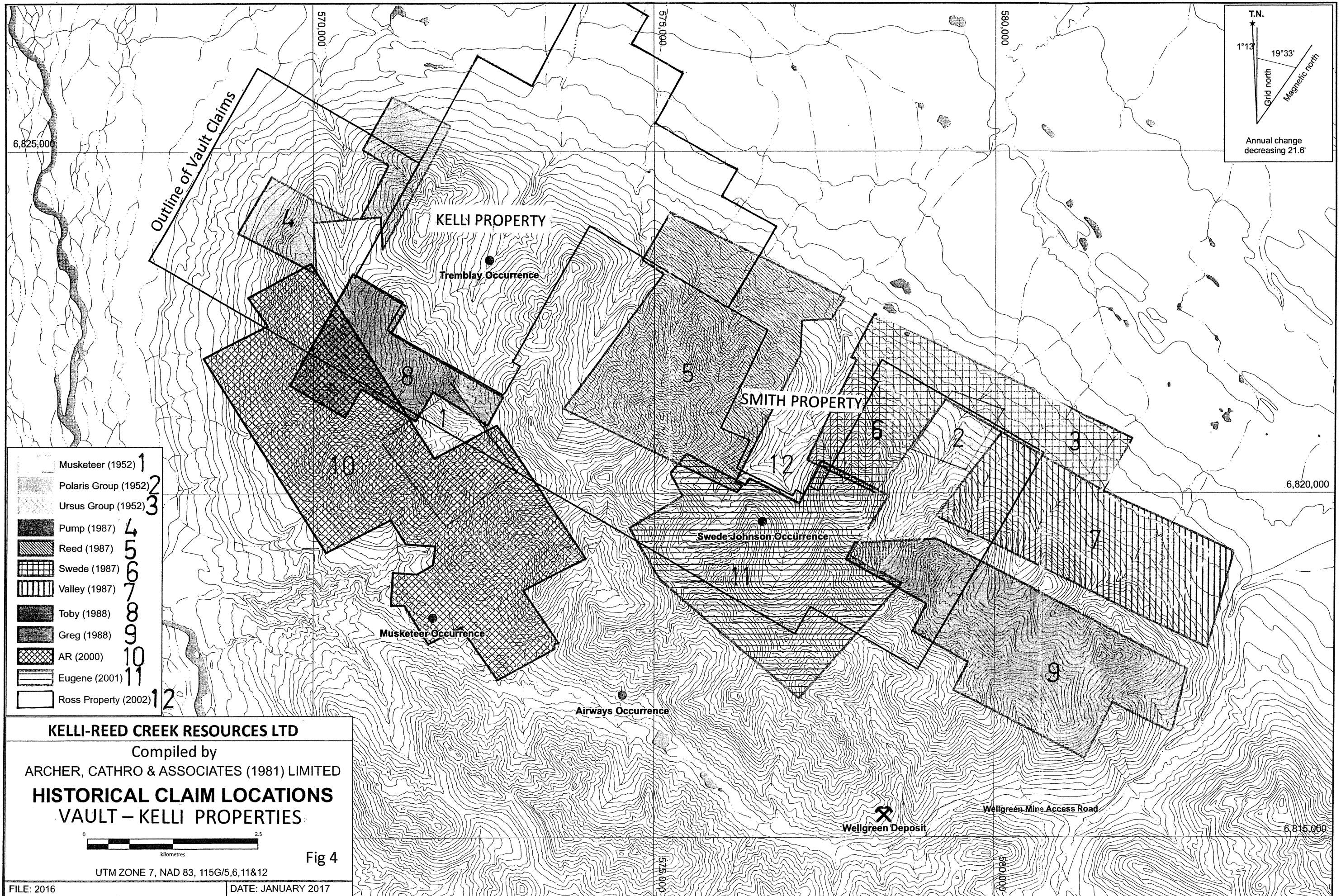
## HISTORY

The Reed-Kelli Creek has had a long history of placer gold mining starting in the early 1900s and again in the period 1935 to 1939. The more recent mining was carried out by Dublin Gulch Placers under the onsite direction of Darrel Duensing between 1983 and 1988. Overall production from the creek gravels is very uncertain but is probably in the range of 3,000 oz. to 5,000 oz. of gold.

Larry Tremblay, project manager and claim owner, carried out an extensive trenching program in the Lower and Middle Canyons. In 2004 Mr. Tremblay and associates drilled five BQ holes in the Lower Canyon.

The most important historical review of the Kelli Claim Group property was given in a report by Dr. Jennifer Getsinger in October, 1998. At the time of her property examination both Mr. Larry Tremblay and Mr. Darrel Duensing were available on-site to assist in the property evaluation. Mr. Tremblay was the majority claim owner and project manager. He also had a great deal of experience in the area as he was Chief Park Warden for the Klauane National Park, based in Haines Junction. Both Mr. Tremblay (2007) and Mr. Duensing (2012) have passed away.

Mr. Tremblay's overview of the local history in the area of the Kelli Claim Group was recorded by Dr. Getsinger. He provided detailed information starting in the early 1900s through to the 1980s of the various groups that placer mined on Reed-Kelli Creek. Reference: Gutrath, G. January 16, 2012, *Geological Report Kelli Claim Group*.



Outline of Vault Claims

KELLI PROPERTY

Tremblay Occurrence

SMITH PROPERTY

Swede-Johnson Occurrence

Musketeer Occurrence

Airways Occurrence

Wellgreen Mine Access Road

Wellgreen Deposit

- 1 Musketeer (1952)
- 2 Polaris Group (1952)
- 3 Ursus Group (1952)
- 4 Pump (1987)
- 5 Reed (1987)
- 6 Swede (1987)
- 7 Valley (1987)
- 8 Toby (1988)
- 9 Greg (1988)
- 10 AR (2000)
- 11 Eugene (2001)
- 12 Ross Property (2002)

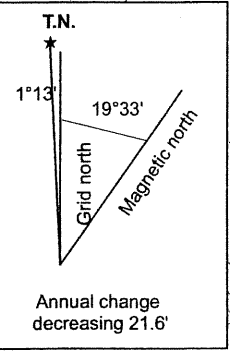
**KELLI-REED CREEK RESOURCES LTD**  
 Compiled by  
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**HISTORICAL CLAIM LOCATIONS**  
**VAULT - KELLI PROPERTIES**

0 2.5  
 kilometres

UTM ZONE 7, NAD 83, 115G/5,6,11&12

FILE: 2016 DATE: JANUARY 2017

Fig 4



6,815,000

575,000

575,000

580,000

580,000

6,825,000

In 2004, Mr. Tremblay carried out a diamond drilling program at the start of the Lower Canyon. Five BQ holes were drilled totaling 305 m. This program is reviewed in this report and is summarized in Appendix F, 2004 Diamond Drilling Program.

In 2005, a trenching program using a Cobra drill and dynamite was carried out in the Middle Canyon in the area of the “old timers’ workings”.

It was reported to the writer that limited placer mining was carried out between the camp and the start of the Lower Canyon in 2004 and possibly 2005 using a backhoe, bulldozer and a sluice plant.

In Strategic Metals Ltd. YMEP Evaluation Exploration Proposal regarding the Vault Property, March 24, 2017, there is an excellent review of the history of the various exploration projects in the area and the outline of related claim groups. The map of the Historical Claim Locations, Vault Property, Figure 4 is included in this report as it is very relevant to the Kelli Claim Group. It demonstrates the large amount of exploration activity in the Kelli – Vault Claim area. The majority of the exploration programs were focused on the nickel-copper-PGM mineralization similar to the Wellgreen deposit with little emphasis on gold mineralization. However, in 1987 the Toby Claims that adjoin the Kelli Claims on the south were soil sampled. A total of 93 soil samples returning 130 ppb gold and 350 ppm arsenic and 125 ppb gold and 1000 ppm arsenic. Seven other samples returned anomalous gold values between 50 ppb and 95 ppb (Makkonen, 1988 and reported by Morton, Strategic Metals Report, 2017).

#### **GLACIATION/SURFICIAL GEOLOGY**

Glacial Limits, depth of glacial deposits and extent of scouring have a profound effect on the geological mapping and geochemical sampling in the Kelli Claim Group area.

Recent field programs in the Kluane Range by the Yukon Geological Survey are providing valuable information regarding glaciation in the northern Kluane Range with continued work planned in the Kelli Claim Group area in 2018.

The most recent glacial advance was 15,000 to 20,000 years ago. The Shakwak Trench was covered by a large ice sheet moving northwest truncating the north face of the Kluane Range. This event would have had little effect on the north-south incised Reed-Creek Valley, which would have been filled with glacial deposits flowing from the south and dammed by the Shakwak Glacier. The elevation of the glacial limit within the Kelli Claim Group area is in the range of 1350 m to 1450 m (asl). When the Shakwak Glacier receded it allowed Reed-Kelli Creek to resume its normal course eroding through the glacial debris that filled the valley. An additional flow of water may have been added from a small cirque glacier on the north facing heighth of land between the forks of the creek.

From the Upper Canyon to the Lower Canyon there is extensive continuous outcrop exposed that provides an excellent cross-section of the geology. From the Upper Canyon south to the Forks and beyond the valley has a broad ‘V’ shape with outcrop largely obscured by glacial material varying from coarse boulder to pebble clay/silt rich till. At the Forks, on both sides of the valley, the creek has exposed steep faced glacial till in the order of 50 m thick. The

thick glacial deposits continue to the south as a gently rising bench to an elevation of approximately 1450 m which marks the foot of the mountain range to the south.

This section of the Reed-Kelli Creek valley from the Upper Canyon to the Forks has very little rock exposure. There is none in the valley bottom but there are scattered small rock outcrops in the stream channels flowing into the valley on both its east and west sides.

## REGIONAL GEOLOGY

The Kelli Claim Group is located on the north flank of the Kluane Range that is composed of Late Paleozoic to Middle Mesozoic rocks of the Wrangellia Terrane and portions of the Alexandria Terrane. Late Mesozoic-Cenozoic strike-slip faulting offset this terrane by as much as 400 km. This event is referred to as the Denali Fault and is represented in the Kelli-Quill Creek area by the Shakwak Trench. The Kelli-Vault Claim areas as shown in *Figure 2* is underlain by Wrangellian Terrane and contains much of the Late Paleozoic to Upper Triassic stratigraphy (abridged description after Israel, S. and van Zeyl, D. 2004).

## PROPERTY GEOLOGY

**General** (After Israel, S. and van Zeyl, D. 2004 Yukon Geological Survey)

**The general geology of the Kelli Claim Group area, as reported by Israel, S. and van Zeyl, D. 2004 is shown on Map 1 Fig 3, 1:40,000:**

The oldest formation is of Paleozoic Age and is predominantly the Skolai/Station Creek formation (CPS5) that underlies the northern two-thirds of the property. The lower section of this assemblage is andesite volcanics that grade upwards to argillaceous limestone with discontinuous beds of conglomerate, greywacke and sandstone. The southern third of the property is underlain by Skolai/Hansen Creek formation that forms a thrust fault contact with the northern Station Creek formation. The Hansen Creek sedimentary formation grades upwards from limestone, conglomerate, greywacke to sandstone. Another major regional northwesterly thrust fault has been traced across the southern edge of the claim group. These thrust faults represent a complex assemblage of both faulting and folding that are related to the Denali Fault system.

To the west of Reed-Kelli Creek is a prominent ridge that is shown as being underlain by Mesozoic Nikolai basal conglomerates. It is bounded to the north by the northwesterly trending thrust fault contact.

To the east of Reed-Kelli Creek on the border of the Kelli Claim Group with the Vault Claim is a very visible white landmark ridge that has been mapped as Skolai/Hansen Creek carbonate-limestone.

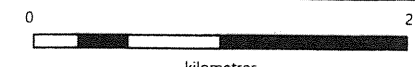
On *Fig. 5* an elliptical shaped body of Mesozoic Age Maple Creek (LTrK2) gabbro is shown starting at the Forks and extending northward for 800 m and over a width of 500 m. It is centered on Reed-Kelli Creek and is transected by the Station Creek – Hansen Creek thrust fault contact.



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**GEOLOGY**  
VAULT-KELLI PROPERTIES

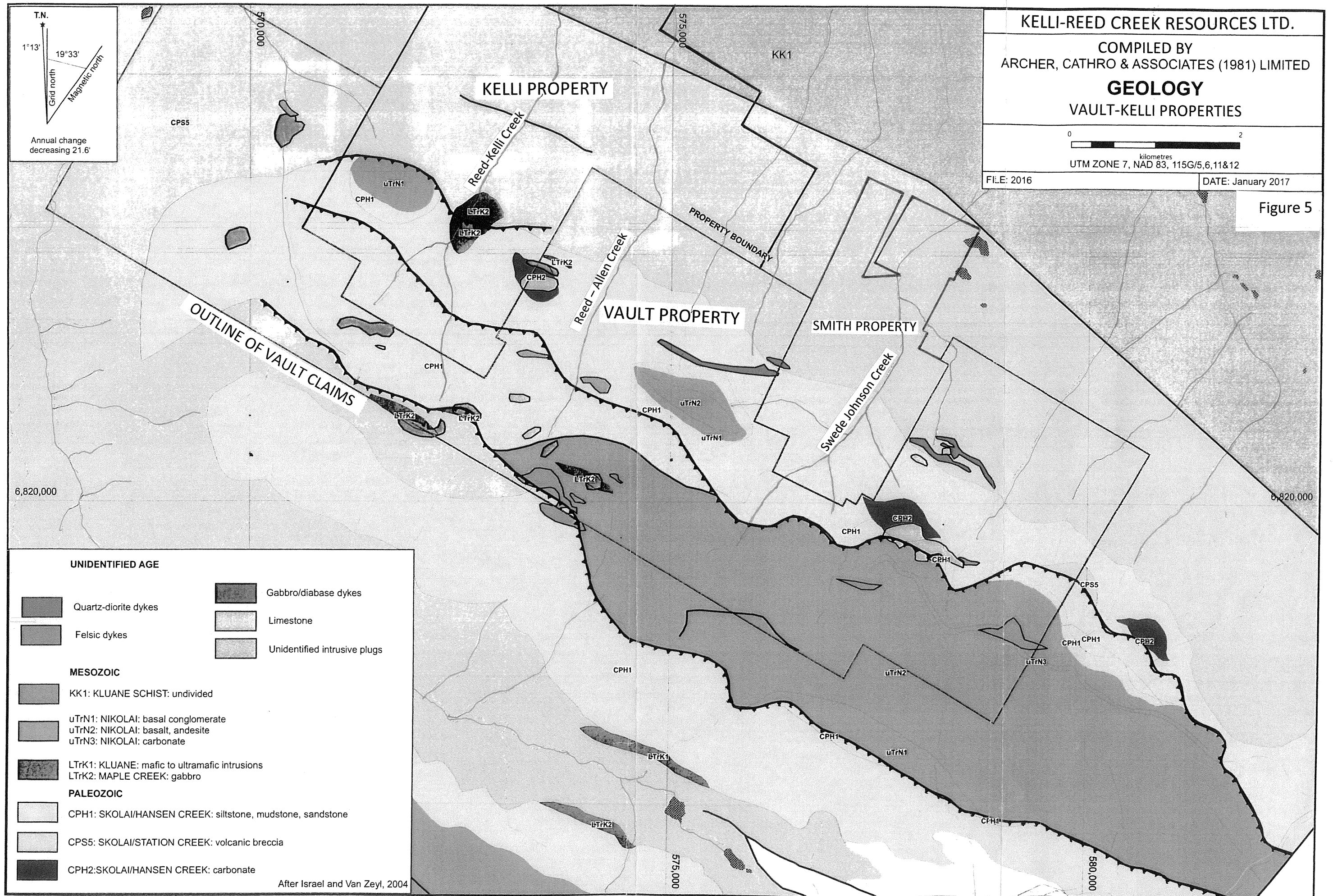


UTM ZONE 7, NAD 83, 115G/5,6,11&12

FILE: 2016

DATE: January 2017

Figure 5



**UNIDENTIFIED AGE**

- |  |                      |  |                              |
|--|----------------------|--|------------------------------|
|  | Quartz-diorite dykes |  | Gabbro/diabase dykes         |
|  | Felsic dykes         |  | Limestone                    |
|  |                      |  | Unidentified intrusive plugs |

**MESOZOIC**

- KK1: KLUANE SCHIST: undivided
- uTrN1: NIKOLAI: basal conglomerate
- uTrN2: NIKOLAI: basalt, andesite
- uTrN3: NIKOLAI: carbonate
- LTrK1: KLUANE: mafic to ultramafic intrusions
- LTrK2: MAPLE CREEK: gabbro

**PALEOZOIC**

- CPH1: SKOLAI/HANSEN CREEK: siltstone, mudstone, sandstone
- CPS5: SKOLAI/STATION CREEK: volcanic breccia
- CPH2: SKOLAI/HANSEN CREEK: carbonate

After Israel and Van Zeyl, 2004

## 2018 Exploration Mapping Program

The exploration programs carried out on the Kelli Claim Group from 2014 to 2016 were primarily focused on the Lower to Upper Canyon of Reed-Kelli Creek. Geological mapping outlined outcrop distribution and detail mapping was carried out on a scale of 1:1000 and when deemed necessary, at 1:500. Extensive rock sampling was carried out in an attempt to find the source of gold that produced the high grade placer deposit in Reed-Kelli Creek.

The geological mapping in 2017 – 2018 was combined with the geochemical soil and silt sampling between the Upper Canyon and the Forks and on both sides of the Reed-Kelli Creek valley to the south Kelli Claim Group boundary. Bedrock exposures are limited to the creek channels that have cut through the glacial till exposing rock formations over a short distance. The mapped area is uniformly covered by muskeg and thick alder with scattered stands of stunted black spruce.

The interpretation of the geology was aided by field work by T. Bremner, 1991, J. Getsinger, 1998, J. Pautler, 2001, S. Israel and D. van Zeyl Yukon Geological Survey, K. Wilms and J. Morton, Strategic Metals Ltd.

### Intrusive Rocks

The layered rocks are intruded by dikes and sills of Oligocene to Miocene age (date of 23 Ma, ref. Bremner, 1991. Both Getsinger and Bremner agree that this intrusive is a feldspar hornblende porphyry. The writer mapped the intrusive as two separate rock types.

- dd** light orange weathering dacite dike, fine grained to aphanitic with an absence of porphyritic texture. In the fresh, fine grained dacite crystalline hornblende “blades” make up 1% to 2% of the ground mass (this intrusive unit was not found in the 2017 map area between the Upper Canyon and the Forks)
- fp di** grey to light cream-orange colour with subhedral medium grained feldspar phenocrysts in an aphanitic to fine grained feldspar rich ground mass, less than 1% fine grained pyrite and very little magnetite, blocky coarse jointing **di** diorite: this intrusive occurs as dikes in numerous locations throughout the Kelli Claim Group as well as the area mapped in 2017. It is fine to medium grained, grey, equal mafics and plagioclase and usually no porphyritic.
- ga** (LTrK2: Maple Creek gabbro after Israel, S. and van Zeyl, D. 2004) dark grey-brown, massive to moderately foliated, fine grained pyroxene 30% to 40% in a fine grained plagioclase groundmass. Fine grained disseminated pyrite 2% to 4%, fine to medium grained pyrrhotite in one outcrop area. No magnetite. (This rock type was originally mapped as andesite.)

### Statigraphy (2017 Map Area 1)

- gs** dark brown andesite often foliated to a chloritic schist with fine pyrite 1% to 5% and discontinuous quartz veining. Magnetite very low to nil.
- pc** light grey to black (carbonaceous) commonly finely bedded, complex folded phyllitic carbonate limestone (Upper Canyon – south end of map area).
- bgpl** black graphitic phyllitic, argillaceous-calcareous, thin discontinuous quartz veining paralleling schistosity-fine grained disseminated pyrite 2% - 5%. (Typical location is at the outlet of the Lower Canyon but small outcrops were noted in two creek channels at the base of the slope of the east side of the valley.)

The very limited amount of outcrop in the 2017 - 2018 map area makes it difficult to interpret the geology.

### Structure

The Kelli Claim Group general geology summarized from the mapping by S. Israel and D. van Zeyl, 2004 and plotted on a 1:40000 scale map (*Fig. 5*). The major Structure 2 that is outlined by a distinct topographic feature crosses Reed-Kelli Creek valley at the south end of the Upper Canyon. There is extensive outcrop in this area of highly foliated phyllitic carbonate that forms classic “mullion structure” (J. Getsinger, 1998). Dr. Getsinger interprets these structures as representing a hinge zone of regional extent and notes that Structure 2 is a “tectonic slide displacement uplift of the Kluane Range”.

K. Wilms, B.Sc. in his Vault Assessment Report, Nov. 2018, summarized the structural geology as follows:

“Faults on the property are largely attributed to Tertiary strike-slip displacement along the Denali Fault and the re-activation of earlier thrust faults, which produced high strain zones and locally increased metamorphic grade. Mapped thrust faults, shear zones and folds on the property typically trend northwesterly, following the orientation of regional structures, while smaller-scale extensional faults strike northeasterly and dip steeply. Thrust faults on the property juxtapose Nicolai Formation basalts with members of the Hansen Creek Formation and Station Creek Formation.”

### Mineralization

Fine grained pyrite is commonly associated with the thin discontinuous quartz veins that occupy fracture filling in all rock types including the gabbro. Pyrite from 1% to 5% is also found disseminated in the chlorite schist. Variable amounts of chalcopyrite are sometimes associated with the pyrite but judging from the analytical results is a random and a minor constituent.

High copper values are not coincident with gold values. Low arsenic values occur in gold mineralized zones but are not directly related to gold values. Pyrrhotite has only been found in one outcrop of gabbro. Magnetite is a rare constituent even in the more basic rocks.

### Rock Analysis

During the July, 2018 visit to the property eight float samples were collected on a traverse from the camp to the Upper Canyon. The search for the bedrock source of the gold in the high grade placer gold deposits and extensive strong gold geochemical anomalous values is a continuing project.

Sample #	Description
98595	graphitic schist with quartz veining graphite 75% quartz 25% disseminated pyrite 1% to 4%. Friable Fe 7.55%, As 59.4 ppm, Au <0.5 ppb
98596	thin quartz veins in layered graphitic schist coarse grained clots of pyrite 5% Fe 2.64%, As <0.5 ppm, Au 1.1 ppb
98597	highly oxidized, fine grained 1% pyrite Fe 1.48%, As 1.2 ppm, Au <0.5 ppb
98598	coarse grained vuggy weathering, Siliceous Py 3% Fe 1.48%; As 1.2 ppm, Au 4.9 ppb
98599	lustrous, fissile, dark green chlorite schist layered thin quartz stringers, Py 2.3% Fe 4.78%, As <0.5 ppm, Au 9.6 ppb
98600	Middle Canyon, quartz veinlets cutting, chlorite schist, Pyrite 2% - 3%, Chalcopyrite ? Cu 28.0 ppm, Ni 187.8 ppm, Fe 7.75%, Au 19.3 ppb
98637	Middle Canyon, yellow stained white quartz 3% black oxidized pyrite Fe 2.66%, As 1.1 ppm, Au 1.7 ppb
98638	Upper Canyon, oxidized chert, fine pyrite 1% Fe 4.03%, As 0.6 ppb, Au 432.5 ppb (anomalous)

The following samples were collected during the August, 2018 geological and geochemical program.

Sample #	Waypoint #	Description
98640	352	Pup 5, angular talus, chlorite schist, slightly magnetic, Pyrite 1% - 3% Fe 5.08%, As 2.2 ppm, Au 1.6 ppb
98641	529	light grey, 'glassy' appearing 'chert' orange oxides on fractures, 1% pyrite irregular grab samples along trench-bank outcrop exposure on edge of 1980's placer mine cut Fe 6.74%, As 15.8 ppm, <u>Au 25,553.7 ppb (highly anomalous)</u>
98642	365	oxidized float (talus) intense shearing, 1% - 2% pyrite Fe 0.66%, As 1.1 ppm, Au 62.8 ppb
98643	361	angular white quartz vein float in the creek, brittle, 1% fine pyrite Fe 4.80%, As 0.8 ppm, Au 39.8 ppb
98644	452	dark, ox-gossan, angular float Fe 4.69%, As <0.5 ppm, Au 1.6 ppb
98645	451	clotted quartz, oxidized, black-manganese Fe 2.92%, As 0.8 ppm, Au 2.4 ppb
98646	443	highly oxidized – red on fractures HCl <sup>++</sup> , from large outcrop Fe 5.41%, As 3.8 ppm, Au 6.3 ppb, Ca 4.02%
98647	506	5 kl. float, 10% - 20% coarse pyrite in siliceous ground ass. This is the highest sulphide (pyrite) content in all the samples Cu 55 ppb, Fe 8.26%, As 37.8 ppm, Au 3.5 ppb
98648	514	oxidized, siliceous quartz vein Cu 309.8 ppb (highest Cu), Fe 5.85%, As 32.5 ppm, Au 3.5 ppb
98649		float on road south of Forks, dark orange brown, massive, No Ca, clots of pyrite 3%, No magnetite Fe 5.0%, As 20.5 ppm, Au 1 ppb

**GEOCHEMICAL SAMPLING**

In 2018, 68 soil and silt samples were collected by stainless steel trowel and placed in Kraft paper bags. The samples were delivered to Bureau Veritas Corporation sample preparation facilities in Whitehorse. The sample preparation and analytical procedures are given on the Bureau Veritas cover page as well as the results under *Appendix D, 2018 Geochemical Soil and Silt Sample Analysis.*

Archer Cathro collected 281 soil samples, 214 on the Kelli Claim Group above the elevation of glaciation. Since they have a much larger number of samples the writer will use their determination of geochemical thresholds as follows:

Soil Geochemical Thresholds					
Element	Weak	Moderate	Strong	Peak results	2018 Peak results
Gold (ppb)	≥ 10 < 50	≥ 50 < 100	≥ 100	>10,000	1695
Arsenic (ppm)	≥ 50 < 100	≥100 < 200	≥ 200	5990	1105

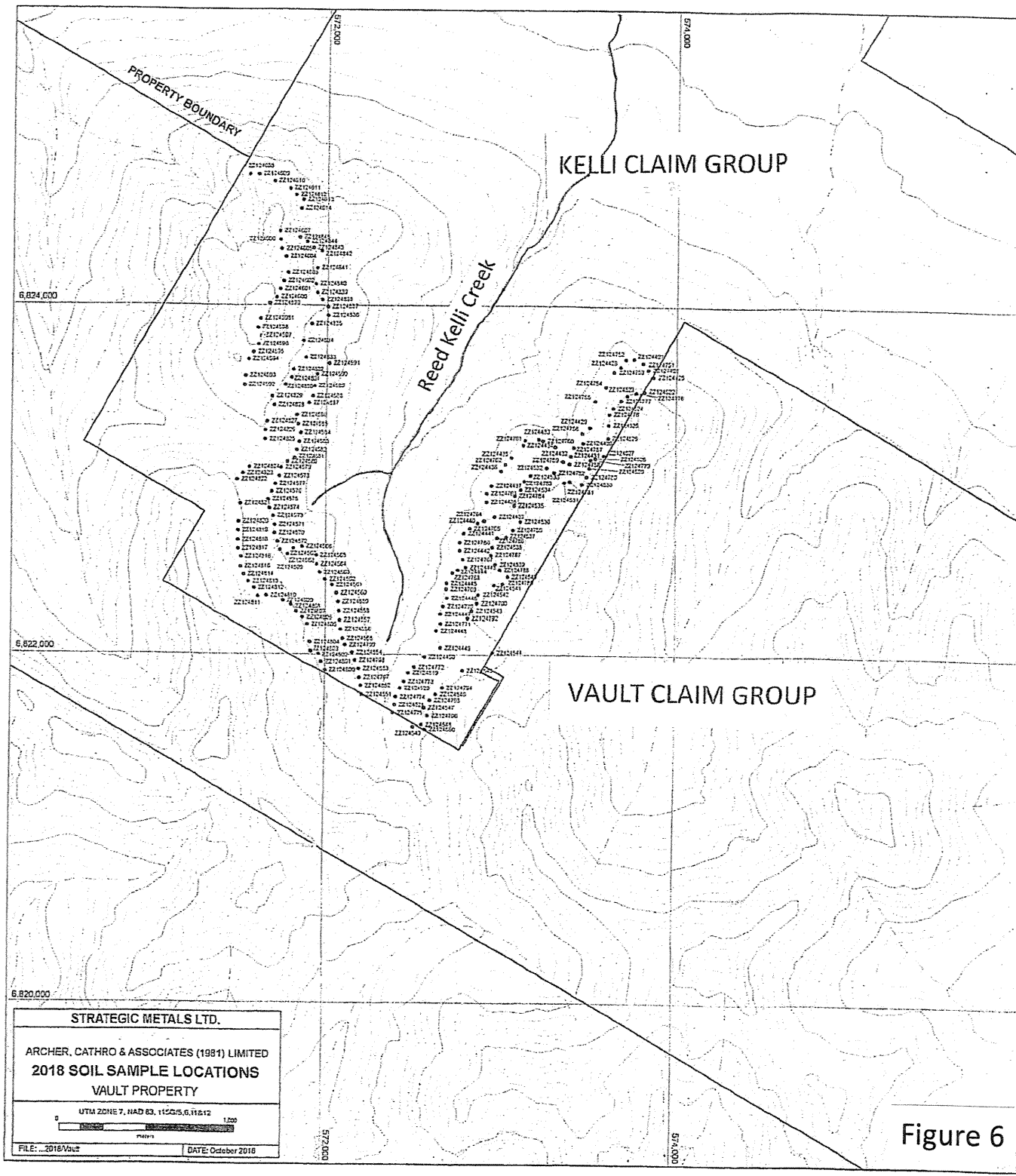
**2018 EXPLORATION MAPPING PROGRAM AND COMMENTS INTEGRATED WITH 2017 EXPLORATION RESULTS**

Geological mapping of outcrops was combined with the collection of geochemical samples. The outcrops and sample locations were surveyed by a GPS attached to an antenna located in a pocket on the back of a survey vest. The GPS unit was operated continuously to insure rapid and more accurate coordinate readings. Considerable detail is included on the actual traverses to provide future explorationists where outcrops are located in this very difficult and steep terrain made more difficult by thick alder growth.

**Part 1 Geological Mapping and Geochemical Sampling**

The initial program was focused on the east side of Reed-Kelli Creek between the Upper Canyon and the Forks. Previous silt and soil sampling had located a significant gold anomaly starting in Pup 4 and continuing to the southwest through Pup 5 and Pup 6, a distance of 120 m. Pup 8 to the south has only low gold anomalous values of 81 ppb and 74 ppb. On the south side of the slide in Pup 10 there are no gold anomalous values in the stream below an elevation of 1190 m. There are two small outcrops between elevations 1160 m and 1170 m of chlorite carbonate schist (calcite 5% - 15%) with 2% - 3% pyrite. Rock sample of outcrop at WP460 was Au <5 ppb. At elevation 1190 m a silt sample ran 54 ppb gold and upstream (north fork) 20 m a silt sample adjacent to a feldspar porphyry dike ran 304 ppb gold.

The south fork of Pup 10 had anomalous gold values in four silt and soil samples at the 1220 m elevation to 1270 m elevation and over a distance of 100 m. There are extensive outcrops of gabbro with ‘patches’ of pyrrhotite in this section of Pup 10. This is the only location where pyrrhotite was noted. In 2017 a pyrrhotite mineralized rock sample of gabbro analysed 105.5 ppb gold.



<b>STRATEGIC METALS LTD.</b>	
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED	
<b>2018 SOIL SAMPLE LOCATIONS</b>	
<b>VAULT PROPERTY</b>	
UTM ZONE 7, NAD 83, 112Q/5, 6, 11&12	
FILE: ...2018/Vault	DATE: October 2018

Figure 6

Soil samples from Pup 13 to the east of this outcrop area were anomalous with a high of 582 ppb gold and 121 ppb gold. The geochemical sampling did not extend upstream above 1200 m.

In summary, the area of consistent high geochemical gold values is from Pup 4 to Pup 6 and extending from an elevation of 1130 m (Reed-Kelli Creek) to an elevation of 1230 m. If the gold anomalous area is optimistically extended upstream to the south it would cover a distance of 400 m and from the creek up slope to the east a horizontal distance of 150 m.

In 2018 Pup 1 (south) was sampled. This stream flows into a bulldozed trench area on the east side of Reed-Kelli Creek. Mr. Larry Tremblay referred to this area as the site of 'old timers' (1900s) workings. In the 1980s Dublin Gulch Placer's bulldozer trenched the area starting at the edge of the creek at WP371 and continuing a blade width to WP372, a distance of 20 m. Steep, high piles of round boulders bordered both sides and the south end of the trench. A small area of outcrop is exposed in the middle of the trench. The stream channel that extends from the north end of the trench has been bulldozed across a bench to WP376 at the base of the steep slope and start of the creek channel. At WP375, a 'silt' sample from the bottom of the bulldozer trench analysed 63 ppb gold. The bulldozed banks of boulders on both sides of the trench are in the order of 4 m to 5 m high.

Going up the stream channel ( $\pm 15^\circ$ ) to WP377 a soil sample (So3) was taken from the 1.5 m high bank and analysed 294 ppb gold. The slope outside of the stream channel is muskeg,  $+25^\circ$  covered by alder and scattered black spruce. At WP378 10 m further up the stream channel a good silt sample (18Si4) from the edge of the flowing stream with 30% volcanic ash ran 92 ppb gold. Twenty metres further up the stream channel at WP379 a diorite dike 2 m wide cuts across the creek at  $+20^\circ$  with a steep dip. Five metres upstream at WP380 there is a small outcrop of chlorite schist with an attitude of  $280^\circ$  dipping  $40^\circ$  south.

At WP381, 5 m upstream a silt sample (18Si5) ran 452 ppb gold (estimate 10% volcanic ash). Continued upstream but the channel becomes 'choked' with alder and spruce windfall so the traverse went south out of the creek to WP382, which is on a ridge of open muskeg with scattered alder, buck brush and spruce.

At WP 383 the traverse goes back into the stream channel that is deeply incised, 15 m wide at the bottom with the north bank at  $+50^\circ$  and south bank  $+35^\circ$ , with muskeg and tall scattered spruce. Silt sample 18Si6 At WP384 ran 55 ppb gold, continued upstream channel for 50 m to WP385 and took silt sample 18Si7 that ran 60 ppb gold. Then the traverse went out of the creek as it was blocked again by alder slide and fallen spruce to WP387 on the open ridge. Then back into the creek channel at WP388/389. This is a small tributary stream filled with thick willow and alder. Silt sample 18Si8 is damp-sandy-silt and ran 799 ppb gold.

The stream is the south fork of Pup 1 (north) and was thought to be the primary channel. The fork to the north was not sampled. The traverse then came out by the Pup 1 drainage and crossed to the south over the ledge at WP390/391 and down into the Pup 2 drainage. At WP392 a narrow steep sided gully was sampled (18So4) and it ran 95 ppb gold. At WP393 a soil sample (18So5) was taken from a gully just before the creek and it ran 102 ppb gold.





WP 408 PUP2 1m in diameter boudin in chlorite schist shear zone (shallow dipping fault zone) Photo 3



WP403 PUP 2 oxidized chlorite schist at base of talus slope – 107ppb gold

Photo 4

WP394 is actually located in the stream channel with numerous massive boulders. The sample was a dry-sandy-silt and ran 467 ppb gold.

Downstream at WP394 there is a large boulder of andesite pyroclastics cut by irregular quartz veinlets. The surface of the boulder is oxidized to a reddish-orange colour (Sp399). Downstream 30 m (WP400) a soil sample (18So6) ran 69 ppb gold. At WP401, 35 m downstream, silt sample (18Si10) ran 84 ppb gold. The stream channel is composed of massive andesite pyroclastic boulders with some quartz boulders. The stream is bordered by thick alders.

WP402 marks the start of a large outcrop area on the south side of the creek. A chlorite-sericite schist with a strike of 280° and dipping 75° south. The outcrops face going down into the creek is 10 m to 12 m vertical. At WP403 on a talus-slide area soil sample 18So7 ran 107 ppb gold.

At the base of the talus slope the slide material is finally 'laminated' chlorite schist. Some sections of the chlorite schist are a fine platy fissile material coated with orange iron oxides (Photo4). At WP407 on the north edge of the creek is a diorite dike. This dike outcrops again at WP409 and probably continues downstream following the structural zone of weakness subparallel or within a fault-shear zone. On the south bank is a large steep outcrop of intensely sheared chlorite schist, with a strike of 300° and dipping at ±20° S. This relatively flat structure may represent a thrust fault. Within the shear zone in a light grey coloured, 1 m in diameter sub-rounded 'boudin' (note photo3).

In 2017 the downstream section of the stream channel from the massive outcrop area was silt sampled. There were no outcrops noted except a diorite dike at WP173 (WP411- 2018) Three silt samples starting at WP409 (2018) 80 ppb, WP175 (2017) 207 ppb, WP173 (2017) 160 ppb, and WP170 (2017) 331 ppb are gold anomalous over a stream (slope) distance of 150 m. From WP170 (2017) the stream runs through a massive fan (bench) of large rounded glacial boulders, this bench extends downstream to Pup 1 (north) in the area of the bulldozer trench.

The geochemical sampling results from Pup 2 and Pup 1 north indicate fairly continuous gold anomalous values below an elevation of 1150 m. There are anomalous values above this elevation at WP394 (elevation 1230 m – 1240 m) of up to 476 ppb gold. From the Archer Cathro data there are two rock samples taken from the stream channel at elevations of 1280 m and 1300 m that ran 0.0025 ppm and 0.103 ppm gold. One of Archer Cathro's soil samples (573400E / 5823200N) from a ridge 40 m to the northwest of the creek channel ran plus 500 ppb gold.

Going to the south from Pup 2 the east slope of the alley is muskeg covered by thick alder with scattered stunted black spruce. There is no obvious visual or LiDAR defined stream channels. The first stream channels, Pup 4, are approximately 250 m to the south of Pup 2. WP554 at the start (east end up slope) is 0.5 m wide and 2 m to 3 m deep with a slope of minus 15° to 20°. Silt sample 18Si34 (WP554 is also the location of the silt sample at WP204 (73 ppm gold) taken on 8/15/2017 and the start of a steep outcrop cliff face of competent dark green chlorite schist, with 2% to 4% pyrite in very thin, irregular quartz veinlets paralleling the foliation planes (Sp 556). The shearing strikes 120° and dips 70° south. WP557 is at the base of a steep cliff face. Silt and soil samples taken from this section of the stream channel over a distance of 120 m are highly gold anomalous, with two samples of 261 ppb and 275 ppb and a

high of 1125 ppb gold. At WP344 to WP346 the two stream channels are paralleling the ATV trail. A soil sample taken on the edge of the dry channel ran 142 ppb gold.

Pup 5 is 70 m to 80 m to the south of Pup 4. WP347 to WP348 is a bench with thick alder and willow. WP349 is at the top of an angular talus slope primarily composed of dark green chlorite schist with 2% pyrite, fine grained and strongly magnetic (Sp 349). However, magnetic distribution is not consistent throughout the chlorite schist. Continue up the stream channel adjacent to the talus slope to WP350, silt sample Si14 ran 92 ppb gold. A rock sample 98640 (WP352) of the chlorite schist ran 1.6 ppb gold. A small outcrop 2 m by 2 m on the north side of the canyon at WP359 is a dark green chlorite schist striking 60° and dipping 15° south. A massive outcrop (10 m by 2 m) on the south side of the canyon is composed of a fine laminated chlorite schist striking 300° and dips 25° south.

Pup 6 is 20 m to the south of Pup 5 and is separated by a rounded ridge of muskeg and thick alder and scattered spruce. The stream channel is narrow and in August dry and filled with angular talus. From WP358 to WP359, silt sample 18Si2 ran 88 ppb gold. This is the start of a steep (+20°) channel bordered by walls at +35° of dark green chlorite schist, shearing 60° strike and a dip of 10° to 20° S. At WP360 there is a massive outcrop on the south side of the canyon of chlorite schist with an attitude of 300° and a dip of 25° S. There is an angular quartz vein float in the creek. The quartz is brittle with 1% fine pyrite. A sample (98643) at WP361 ran 40 ppb gold. At WP362 in the creek there is a good outcrop 1 m by 1 m and is the same chlorite schist as found downslope at WP360. At WP364 there is massive outcrop upstream with irregular quartz veining up to 0.2 m thick, white with +1% pyrite (Sp 364). The traverse then went north and missed the north fork of Pup 5, which was to be resampled and to check the 1160 ppb gold silt sample as well as the large quartz vein 'slab' just upstream of the silt sample. WP365/366 was near the east end of Pup 5 and is at the top of a very steep slide with quartz vein fragments. Sample 365 (98642) is oxidized (5% pyrite) float from the talus slope and ran 63 ppb gold. 2018 WP365 is the same location as WP445 8/14/2016 that ran 746 ppb gold.

Pup 8 is approximately 70 m south of Pup 6 and borders on the north by the large 2011 organic slide. At WP568 silt sample Si35 ran 150 ppb gold. There is massive angular talus in the creek, gabbro(?) with no magnetite. Going east upstream at WP561 silt sample Si36 ran 50 ppb gold. At WP562 there is a small slide on the south side of the creek of angular talus identified as gabbro. At WP563 there is a large outcrop of massive gabbro.

Going up the creek to WP565 there is a 3 m by 1 m possible float or outcrop of white weathering limestone (highly effervescent in dilute HCl), At WP568 on the south side of the creek is a partially buried large quartz boulder (no pyrite). At WP570 the creek gully is only 0.25 m deep and 1 m wide in thick alder. The traverse goes north to WP571, WP572 crossing a muskeg slope with alder, willow and scattered spruce. WP573 is located in the southern channel of Pup 6 at an elevation of 1240 m. This is the same location as 2017 WP186 silt sample Si6 that ran 17 ppb gold. There is no sampling upstream in Pup 6. The Archer Cathro sampling at elevations from 1380 m – 1400 m 300 m to the southeast had soil values of plus 5 to plus 200 ppb gold. The traverse went down the channel past WP2017-187 silt sample that ran 39 ppb gold to WP574 18Si30 ran 44 ppb gold. At WP575/576 the 2017 WP188 silt sample of 27 ppb gold.

## Comment

This completes the geological mapping and geochemical sampling of the most significant area of consistent high gold anomalous values from soil and silt sampling. The area covers the east side of Reed-Kelli Creek from the south end up the Upper Canyon at Pup 1S and Pup 1 700 m south to Pup 13 and over a horizontal width of approximately 150 m.

## Part 2 Geological Mapping and Geochemical Sampling

The next section of the geological mapping and geochemical sampling is from Pup 13 south to the boundary of the Kelli – Vault claim groups. The 2018 program was carried out primarily on the east side of Reed-Kelli Creek as it is considered to be the most prospective. However, additional geochemical sampling in 2018 was carried out on the west side of the valley by Archer Cathro above an elevation of 1400 m (upper limit of glaciation).

### a) Result from West Side of Reed-Kelli Creek

The results were consistently low in the order of 20 ppb gold to 50 ppb gold. There was one sample taken at the forks of Pup 19 that ran plus 200 ppb to 500 ppb gold at an elevation of 1420 m. Two other samples from the headwaters of the forks at plus 1520 m ran 50 ppb to 100 ppb gold, while other samples were under 50 ppb. Three samples from the forks of Pup 7 at an elevation of 1530 m ran 100 ppb to 200 ppb gold. The Archer Cathro sampling across the most westerly ridge had five anomalous values. One near the top of the ridge at 1700 m ran plus 500 ppb gold. There is an interesting quartz-graphitic outcrop on the ridge to the north that is a very distinct landmark. Jean Paulter examined it in 2001 and reported on two occurrences of quartz veining in graphitic phyllite. On the most southerly outcrop she took 5 samples over 5 m and the analysis ranged from 50 ppb gold to 120 ppb gold with arsenic of 210 ppm. Archer Cathro took 3 samples from the same outcrop area with results of 0.053 ppm, 0.155 ppm and 0.053 ppm gold. The majority of Archer Cathro soil samples were gold anomalous from plus 50 ppb to a high of plus 200 ppb.

Downslope 300 m to the south Kelli-Reed Creek Resources Ltd. in 2014 silt sampled a deeply incised north flowing stream channel that starts on the ridge. Thirteen samples were taken and none were gold anomalous. In 2018 Pup 1 was silt/soil sampled that also originates on the ridge near the Paulter/Archer Cathro sampling and flows easterly into Reed-Kelli Creek. There were a number of gold anomalous samples and one silt sample SI17 at WP470, that ran **4992 ppb gold**. There was only one soil sample upstream at WP471, SO22 and it only ran 25 ppb gold. As a result Si17 is suspected of having included a placer gold particle resulting in the very high gold content. However, soil sample 22 is from the base of a 2017 snow slide that blocks the north fork of the stream and is not believed to be representative of the stream channel.

**b) Results from West Side, Reed-Kelli Creek Forks (572400E / 6823000N) South to Kelli – Vault Claims Boundary (*Map 2*)**

Kelli-Reed Creek Resources soil and silt sampled Pup 21 and Pup 26 drainages. Archer Cathro soil sampled along two contour lines at 1380 m elevation and 1460 m elevation.

The traverse starts in Pup 26, WP498 in a dry stream bed. The first 4 silt samples are very low in gold, 2 ppb to 8 ppb. At WP501 an Archer Cathro soil sample ran +50 ppb gold and at WP502 Si23 ran 145 ppb gold. Five silt samples covering the forks of Pup 26 were all very low in gold varying from 3 ppb to 10 ppb. At WP506 a float sample had 15% - 20% pyrite in a siliceous groundmass. It was analysed (98647) but only ran 3.5 ppb gold and 55 ppb copper. This area at the forks of the creek looked very prospective as there was a great deal of oxidized float in the drainage. Four samples from the headwater forks of Pup 26 ranged from 3 ppb gold to 6 ppb gold.

The traverse then crossed to the south across a ridge covered by thick willow and buck brush. Archer Cathro have two lines of soil samples across this ridge subparallel to elevations 1380 m and 1460 m. There was one sample at the headwaters of Pup 23 that ran 100 ppb to 200 ppb gold. The rest of the samples were under 50 ppb gold.

The 8 silt samples taken from Pup 21 range from 5 ppb to 17 ppb gold and are not anomalous.

From Pup 21 north to the Archer Cathro soil sampling, particularly the line at the 1380 m to 1400 m elevation does have numerous samples that are gold anomalous in the range of 100 ppb to plus 200 ppb. This range of values continues on the 1380 m elevation sampling almost to the east Vault – Kelli claims boundary to the north of Pup 1. The majority of the anomalous values on the 1470 m elevation samples start on the south side of Pup 2 and continue north to the boundary of the Vault claims.

**Map 3, Scale 1:500 Geological Mapping, Trenching and Surficial Geology**

1. 2015 Panel Sampling

In 2015 a bulldozer trench cleared the west edge of the 1980s placer mining cut located in the southwest corner of Map3 at the north end of the Lower Canyon. Panel samples were taken at 0.61 m horizontal 0.30 m vertical over a distance of 20 m. The individual sample analysis indicated 10 anomalous gold samples of plus 100 ppb gold and 13 threshold anomalous plus 50 ppb gold. These results were of interest but what really created the interest was the report of coarse gold in sericite schist from the same formation in the 1980s.

The crushed reject samples were stored in Whitehorse with no further work being done because of limited financing. In 2018 Kelli-Reed Creek Resources Ltd. entered into the option agreement with Strategic Minerals Ltd. and it was agreed that they would proceed to have New Era Engineering Corporation process the samples to see if there was any free gold in the sample rejects. A comprehensive heavy mineral program was carried out, but no free gold particles were observed. The results of this program are under *Appendix E, Bulk Test for Free Gold in Sample Rejects*.

In 2016 the trench was continued along the edge of the placer mine cut for another 70 m. Eight selective samples of intense foliated oxidized quartz graphite sericite schist were sampled and averaged 134 ppb gold. The last most northerly series of 5 samples averaged 148 ppb gold with a high of 295 ppb gold.

## 2018 Bulldozer Trenching

Three areas were trenched along the southeast side of the 1980s placer mined cuts.

### Trench 1

The trench is the most northerly. It starts at WP527 (573616 E / 6824892 N) and goes north 45 m to WP479 (573642 E / 6824930 N). From WP527 to WP480 the trench exposes the bedrock in the original drain (floor of 1980s placer mine cut) but does not cut the east edge of the mined cut. Starting at WP303 the bulldozer cuts into the toe of the high tailings pile and exposes the bedrock edge of the mine cut and continues to WP479, a distance of 15 m.

This is poorly exposed bedrock in the drain starting at WP527 and continuing to Trench 1. At WP527 the bedrock is a black brecciated limey argillite and an orange weathering carbonate. Angular fragments in the drain are primarily an orange-oxide stained chert with 1% fine disseminated pyrite. The light grey 'chert' has a glassy appearance. Black, highly fractured/brecciated limestone is interlayered. All the fracture planes are coated with a light orange coloured oxide. At WP530 a spring comes out of a shear zone on the east side of the trench and to the north is in contact with 'gummy' water saturated graphitic schist interlayered with chert. This is believed to represent a major east-west trending lineament defined by a broad gully to the east.

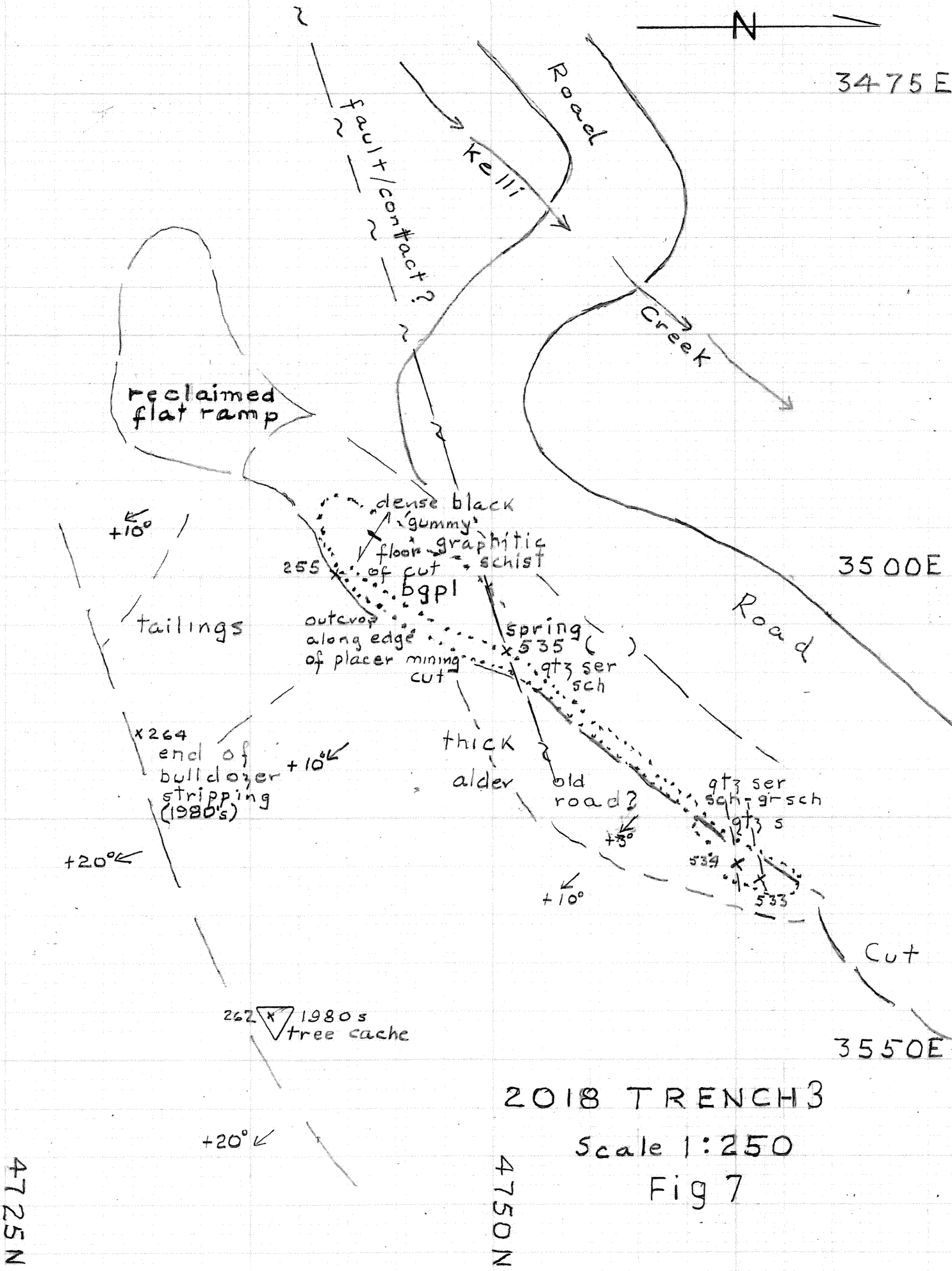
**Sample #68641 – 25.6 grams** gold is described as a series of grab samples over an approximate distance of 7 m between WP479 and WP529 along the east outcrop wall of the trench. The samples were collected well below the gravel-bedrock contact but there is always the possible risk of placer gold contaminating the rock sample.

Because of the exceptional high gold content, Randy Clarkson, P.Eng. of New Era Engineering Corporation, was retained to carry out a Gravity Analysis of the rejects from sample #68641. Mr. Clarkson's report is attached under *Appendix F*, Gravity Analysis of Sample WHI800087.1. – 98641. The sample evaluation determined that the gold was most likely lode gold and not placer gold.

### Trench 2

The trench exposed bedrock on the east wall but only at the base of a steep unstable face of overburden and tailings. The outcrop face was only 0.2 m to 0.3 m above the outcrop in the floor of the trench representing the original placer mined cut. This face could not be sampled because of the high probability of placer gold in the bedrock section.

The bedrock is a graphitic schist interbedded with orange weathering more competent carbonate beds.



2018 TRENCH 3  
 Scale 1:250  
 Fig 7

### **Trench 3**

This is the most southerly trench and exposes bedrock over 40 m. the bedrock in the trench is the original placer mined 'cut'. The bedrock exposure is too shallow to allow sampling but there is good outcrop exposure.

The outcrop in the trench is incompetent graphitic schist in the central part of the trench and interlayered to the mouth by quartz sericite schist with 2% - 3% disseminated fine pyrite. An intense 'gummy' graphitic shear zone represents a lineament that can be extended to the southwest to the 2015 trench on the west side of the creek. Both locations produce a substantial flow of water. The spring from the west trench has dried up over the past two years and has left a white deposit of CaCO<sub>3</sub> on the outcrop.

### **Geological Mapping (Map 3) 1:500**

The outcrops along the creek south of Trench 3 were mapped in detail to the start of the Lower Canyon. From Trench 3 to WP247 (573429 E / 6824668 N) outcrops are graphitic schists interlayered with quartz sericite schist with a predominant shear attitude east-west and dipping steeply. From 1% to 5% pyrite is disseminated in the schist and irregular thin quartz veins range from 5% to 20% of the schist. At the start of the Lower Canyon and marking the north contact of the graphitic schist is a light grey-brown thin bedded limestone bordered to the south by sericite schist striking east-west and dipping vertically. A massive formation of dark green andesite outcrops on the west wall of the canyon and also outcrops in the creek.

This geology correlated very well with mapping of the 2015 trench on the west side of the road from the creek crossing to the start of the Lower Canyon.

At WP335 (573583 E / 6824895 N) there is a large outcrop area on the west side of the creek that parallels the creek. The outcrop is intensely foliated graphitic schist interlayered with orange weathering carbonate. The outcrop is cut by diorite dikes that subparallel the east-west steep dipping trench of the schist. This geology does not correlate well with the Trench 1 geology 40 m to the east.

### **SURFICIAL GEOLOGY**

#### **1. Map 3, Scale 1:500**

The mapping outlines the extent of the Reed-Kelli Creek gold bearing gravels that have the potential to be explored and developed into economic placer reserves. The placer sampling to date has been positive.

#### **2. Map 4, Scale 1:3000**

This mapping has two goals, one to locate Historic Trail #9 that under the YESAP Permit 3 the company is not to disturb. The Trail has not been located but will continue to be investigated in the future. The second goal is to determine the risk of silt discharge reaching Reed Creek, a marginal grayling stream. The mapping



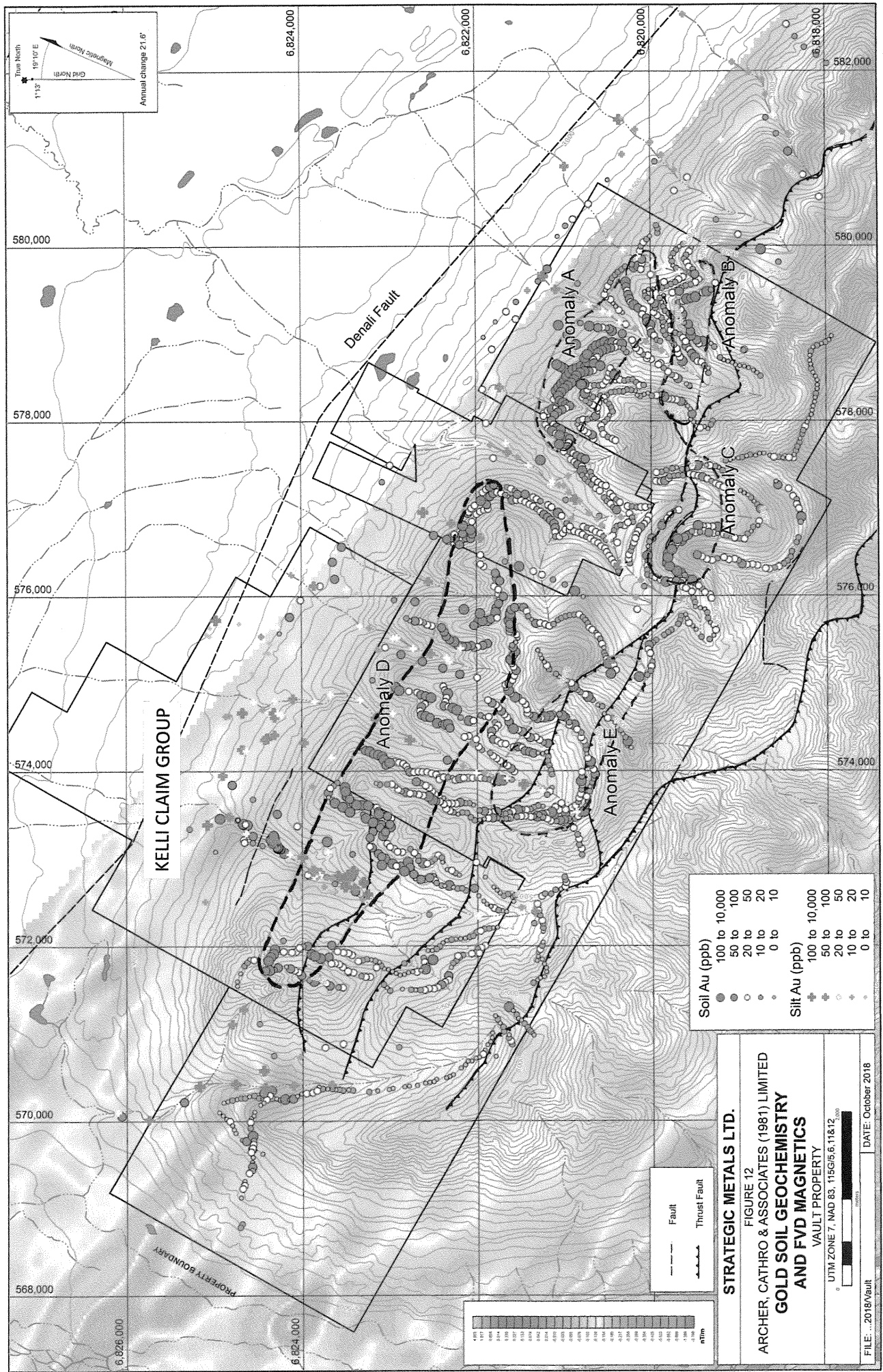


Fig 8

has demonstrated that Reed-Kelli Creek flows underground in the outwash gravel fan for a large part of the summer and there should be minimal risk to the Reed-Creek grayling population or any other fish species that may inhabit Reed Creek.

## CONCLUSION, REVIEW AND COMMENTS

The Kelli-Reed Claim Group was the focus of two exploration programs in 2018. One being conducted by Kelli-Reed Creek Resources Ltd. and the other by Archer Cathro and Associates Ltd. on behalf of Strategic Metals Ltd. under an agreement entered into with Kelli-Reed Creek Resources Ltd. on May 10, 2018.

Archer Cathro carried out a geochemical soil sampling program at elevations above the limit of glaciations. This work identified a gold anomalous area within the central core of the Kelli Claim Group that correlated with work by Kelli-Reed Creek Resources Ltd. (Fig. 8 – Anomaly D). They also advanced the understanding of the geology of the Kelli Claim Group. Strategic Metals funded the Bulk Test for free gold in rejects from a 2015 panel sampling program at the outlet of the Lower Canyon. This was a comprehensive test carried out by Randy Clarkson, P.Eng. of New Era Engineering Corporation. There was abundant pyrite in the gravity concentrate but no visible free gold. The analysis of the various gravity fractions also indicates anomalous but non-economic gold values.

In 2018 Kelli-Reed Creek Resources Ltd. carried out a continuing exploration program that was initiated in 2014 to soil and silt sample the tributary streams in the Kelli Claim Group. In conjunction with the geochemical sampling the outcrop geology was mapped. The majority of this sampling was done at an elevation below the level of glaciations. As a result most of the samples were collected from streams eroding glacial deposits that may contain placer gold that could produce a gold anomaly not reflective of bedrock in the immediate area. However, there is the risk in having no idea if an area is gold anomalous as outcrop exposure is very poor away from the Lower to Middle Canyon and on the ridges. Muskeg and alder cover all the slopes below an elevation of 1400 m with little or no outcrop on the ridges between stream channels. The geochemical sampling results must be weighed against a random gold anomalous soil or silt value and a series of gold anomalous values in adjacent subparallel stream channels.

The area outlined on the Kelli Property–Exploration Target Map and titled as the #1 Gold Anomaly is outlined on Map 1. The initial samples taken from Pup 4, 5 and 6 in this area were gold anomalous but because of the dense alder the outcrop area that is believed to be the origin of these anomalous samples was not recognized. The outcrop area cannot be seen from the ATV trail. The LiDAR survey does define the stream channels but only as very subtle indentations. The origin of these streams is largely from localized spring snow melt and thawing of permafrost during the summer. They initially start as a small trickle in a channel less than 1 m wide and 2 m deep, However when they reach the much steeper, -20° to -45°, outcrop area they become very pronounced and have eroded a much deeper channel.

The 2018 program has defined the extent of the outcrop area with some indication as to the geology and source of potential gold mineralization. In the north fork of Pup 6 there is a large ‘slab’ of quartz approximately 1 m by 2 m by 0.25 m thick. It is very similar to the quartz veins in the Middle Canyon. A soil/silt sample taken

immediately downstream of the quartz slab ran 1610 ppb gold with numerous samples further downstream being highly anomalous. Quartz vein fragments have also been found at the headwaters of Pup 4. The outcrop area is largely chlorite schist with some graphitic schist interlayered with mottled black-grey limestone. Specimen 556 from the outcrop in Pup 4 is a dark green competent chlorite schist with very thin (1 mm – 2 mm) irregular quartz veinlets with 1% - 3% fine grained pyrite. The foliation planes are highly oxidized. Soil and silt samples from Pup 4 downstream of the outcrop (Sp/WP556) were highly gold anomalous, 274 ppb, 1125 ppb, 261 ppb and 139 ppb. There has not been enough geological mapping and rock sampling done in this outcrop area to determine if economic gold values are present. It is concluded that this is a high priority exploration target.

### **#2 Middle Canyon Gold Anomaly**

No work was done in this area in 2018. It has received detailed geological mapping, rock sampling and geochemical sampling in 2016 and 2017. It remains an important exploration target that warrants additional work.

### **#3 Lower Canyon to Camp (Map 3, 1:500)**

The graphitic quartz sericite schist formation at the outlet of the Lower Canyon has been bulldozer trenched and panel sampled over the first 20 m. There are gold anomalous values from extensive channel sampling by different individuals but no economic gold values. A panel sample program and gravity bulk test of 297 kg did not recover free gold and the analysis of the tailing fractions were gold anomalous but no economic values. Historically this has been an important exploration target because of reported free gold associated with sericite schist.

Three bulldozer trenches exposed bedrock along the edge of the 1980s placer mined cuts.

#### **Trench 1**

The bulldozer trench exposed bedrock in the drain along the east side of the placer mined area. A series of small grab samples over 7 m assayed 25.6 grams of gold, an unexpected and exceptionally high grade result. It was thought that placer gold had been inadvertently included in the samples. However, a gravity analysis of the sample rejects indicated that the gold is lode gold and not placer gold.

The geological setting of graphitic schist plus a much larger component of chert with oxidized fractures, 1% - 4% fine grained pyrite had not been viewed as a prime target for gold mineralization. However, there is also a float sample from the Upper Canyon WP180 that is described as a grey chert, highly oxidized on fractures with fine grained disseminated pyrite. This was not considered to be a prime gold mineralized specimen but it ran 432.5 ppb gold, which is definitely anomalous. This is a very small sample population but in the future this geological formation of pyritic oxidized chert must be sampled.

### **Trenches 2 and 3**

These trenches could not be sampled because the potential risk of placer gold contaminating the sample. However, the geological mapping confirmed the continuity of the geology on both sides of Reed-Kelli Creek.

This series of trenches is a part of the #3 Lower Canyon Gold Mineralized Shear Zone and its projected strike easterly into the Grace and Toots claims and across Reed-Nelson Creek where placer gold has been mined in the past. Reconnaissance exploration by Kelli-Reed Resources has indicated positive results and continued exploration is warranted.

### **RECOMMENDATIONS**

#### **1) #1 Gold Anomaly Exploration Target**

- a) Detailed geological mapping and rock sampling.
- b) Traverse the lower slopes along the 1150 m elevation contour between Pup 4 and Pup 5 as there may be another stream channel exposing bedrock(Photo 6) in this area, as there is a subtle LiDAR topographic survey feature that may represent a stream channel. This traverse should be continued to the north but at a lower elevation, say the 1130 m contour.

#### **2) #2 Middle Canyon Gold Anomaly**

The quartz vein swarm on the west side of the canyon has been mapped along with extensive geochemical sampling. The geochemical sampling indicates that the area is 'shedding' colluvial gold and the selvedge of the quartz veins is anomalous. However, the sampling of the quartz veins indicates very low gold values.

A bulk sample of the quartz veins from a drill-blasted trench would provide fresh material well away from surface leaching. This bulk sample would be crushed and gravity processed for free gold plus sulphide concentrates analysed(Photo 6)

There is an ideal location for a trench just off the ATV road at coordinate 573220E / 6824340N in the Middle Canyon. The bulk sample can be bagged and taken to the camp site by ATV and then transported to Highway 1 by Argo or helicopter and then trucked to Whitehorse for processing.

#### **3) Pup 1, WP470: Sample 18Si 7, 4992 ppb gold**

In order to get a better evaluation and possible extent of this very anomalous sample it is recommended that the immediate stream channel be resampled and the slopes on both sides of the channel be soil sampled and examined for outcrops that may be gold mineralized. The sampling should be continued up the North Fork of the stream channel above the snow slide.



Pup 5/6 stream channel in talus slope at base of outcrop. Note alder jungle

Photo 5



Crenulated-fractured quartz veins in Middle canyon. Proposed site for a bulk quartz vein sample. Photo 6

4) **#3 Lower Canyon to Camp (Map 3, 1:500)**

a) Lower Canyon to Camp (Map 3 1:500)

The bulldozer trenches #2 and #3 should be deepened along the east edge of the 1980s placer mine cuts. This would allow sampling below the placer gold concentration on the bedrock-gravel contact.

Trench #1 should be extended, deepened and resampled in order to confirm the very high grade gold sample from this trench. This program of trenching is very easy to do and at low cost as the bulldozer is on site and access is ideal to all three trench sites.

b) The extension of Gold Mineralized Shear Zone to the east of Reed-Kelli Creek and crossing Reed-Allen Creek is a grassroots exploration program and is not a priority for 2019.

Respectfully submitted,



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Gordon Gutrath, B.Sc., P.Eng. Geologist

**ENGINEER'S CERTIFICATE**

I, GORDON GUTRATH, of 702 – 181 Athlete's Way in the city of Vancouver in the Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a geologist with a business address of 702 – 181 Athlete's Way, Vancouver BC V5Y 0E5
2. That I am a graduate of the University of British Columbia where I obtained by B.Sc., in geological science in 1960.
3. That I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia
4. That I have practiced my profession as a geologist for the past fifty-nine years.

DATED at the city of Vancouver, Province of British Columbia, this 28th day of January, 2019.

  
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Gordon G. Gutrath, B.Sc., P.Eng.

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## **APPENDIX A**

### **Claim Status Report**



# Claim Status Report

14 January 2019

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s	Grouping	Permit
ANN 1 - 4	YB35476 - YB35479	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
BUY 1 - 12	YA96221 - YA96232	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
FRED 1 - 2	YF46657 - YF46658	2027/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
FRED 3 - 5	YF46654 - YF46656	2026/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
GRACE 1 - 7	YA97463 - YA97469	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
JO 1	YB24070	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KELLI 1	YA93845	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KELLI 3 - 8	YA93847 - YA93852	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KELLI 9 - 18	YA95337 - YA95346	2032/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KELLI 19 - 26	YA96352 - YA96359	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KRISTY 1 - 2	YB26868 - YB26869	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KRISTY 3	YB35800	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
KRISTY 5 - 14	YB35801 - YB35810	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
RENO 1 - 2	YA97470 - YA97471	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
ROSE 1 - 4	YA95976 - YA95979	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
ROSE 5	YA95980	2031/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082
ROSE 6	YA95981	2028/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, CIQ00082

Total claims selected : 87

Left column indicator legend:

- R - Indicates the claim is on one or more pending renewal(s).
- P - Indicates the claim is pending.

Right column indicator legend:

- L - Indicates the Quartz Lease.
- F - Indicates Full Quartz fraction (25+ acres)
- P - Indicates Partial Quartz fraction (<25 acres)
- D - Indicates Placer Discovery
- C - Indicates Placer Codiscovery
- B - Indicates Placer Fraction



# Claim Status Report

14 January 2019

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s	Grouping	Permit
TOOTS 1 - 12	YF46659 - YF46670	2024/01/28	Kelli-Reed Creek Resources Ltd.	100.00	115G12	HW07714	LQ00473, C1Q00082

### Criteria(s) used for search:

CLAIM DISTRICT: 100004 CLAIM STATUS: ACTIVE & PENDING DOCUMENT NUMBER: LQ00473 REGULATION TYPE: QUARTZ

### Left column indicator legend:

- R - Indicates the claim is on one or more pending renewal(s)
- P - Indicates the claim is pending.

### Right column indicator legend:

- L - Indicates the Quartz Lease.
- F - Indicates Full Quartz fraction (25+ acres)
- P - Indicates Partial Quartz fraction (<25 acres)

Total claims selected : 87

- D - Indicates Placer Discovery
- C - Indicates Placer Codiscovery
- B - Indicates Placer Fraction

## **APPENDIX B**

### **Waypoint List**

## Waypoint List

Map Name : Blank Map  
Map File :

Datum : NAD83

Waypoint File : C:\OziExplorer\Data\2018

2018-10-21 3:58:32 PM

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168	168	7V	573634	6825533	901	
169	169	7V	573651	6825571	898	
170	170	7V	573659	6825648	893	
171	171	7V	573663	6825674	891	
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294	294	7V	573489	6824786	964	
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344	344	7V	572811	6823621	1126	
345	345	7V	572806	6823600	1131	
346	346	7V	572810	6823603	1131	501 142
347	347	7V	572789	6823542	1138	
348	348	7V	572784	6823530	1138	
349	349	7V	572780	6823527	1139	

# Waypoint List continued .....

Num	Name	geo	Au	Zone	Easting	Northing	Alt(m)	Description
350	350			7V	572777	6823525	1140	
351	351			7V	572774	6823515	1142	
352	352	98640	16	7V	572774	6823509	1146	Rock
353	353			7V	572778	6823495	1152	
354	354	502	395	7V	572785	6823493	1155	✓
355	355			7V	572774	6823509	1149	
356	356			7V	572892	6823825	1100	
357	357			7V	572777	6823479	1156	
358	358			7V	572787	6823467	1163	
359	359			7V	572793	6823460	1171	
360	360			7V	572795	6823460	1177	
361	361			7V	572792	6823455	1177	
362	362			7V	572803	6823449	1180	
363	363			7V	572809	6823443	1187	
364	364			7V	572808	6823444	1187	
365	365			7V	572825	6823463	1194	Sample 98642
366	366			7V	572822	6823462	1190	
367	367			7V	572820	6823468	1185	not qv. sch - gabbro?
368	368			7V	572812	6823475	1179	
369	369			7V	572799	6823483	1166	
370	370			7V	572943	6823906	1049	514458/14/16
371	371			7V	572954	6823901	1059	
372	372			7V	572946	6823884	1071	
373	373			7V	572963	6823886	1075	
374	374			7V	572964	6823884	1075	
375	375			7V	572965	6823887	1080	
376	376			7V	572985	6823884	1090	
377	377	503	294	7V	572996	6823865	1104	
378	378			7V	573001	6823857	1108	
379	379			7V	573018	6823841	1123	
380	380			7V	573023	6823835	1126	
381	381	515	452	7V	573029	6823836	1129	
382	382			7V	573045	6823799	1153	
383	383			7V	573073	6823787	1154	
384	384	516	55	7V	573072	6823786	1152	
385	385	517	60	7V	573104	6823750	1163	
386	386			7V	573089	6823720	1186	
387	387			7V	573189	6823634	1231	
388	388			7V	573255	6823646	1185	
389	389			7V	573257	6823647	1198	
390	390	518	799	7V	573292	6823566	1264	
391	391			7V	573293	6823565	1264	
392	392	504	95	7V	573243	6823516	1246	
393	393	505	102	7V	573226	6823520	1247	
394	394	519	467	7V	573226	6823524	1244	
395	395			7V	573224	6823513	1244	
396	396			7V	573224	6823511	1245	
397	397			7V	573223	6823510	1245	
398	398			7V	573223	6823510	1244	
399	399			7V	573205	6823525	1234	
400	400	506	69	7V	573181	6823544	1221	
401	401	510	84	7V	573155	6823564	1211	
402	402			7V	573136	6823596	1205	
403	403	507		7V	573126	6823591	1208	
404	404			7V	573115	6823597	1203	
405	405			7V	573108	6823598	1202	
406	406			7V	573099	6823597	1204	
407	407	511	107	7V	573084	6823607	1197	
408	408			7V	573063	6823615	1203	
409	409	508	86	7V	573053	6823641	1197	
410	410			7V	573048	6823650	1193	
411	411			7V	572994	6823728	1159	
412	412			7V	572400	6821835	1325	
413	413			7V	572406	6821529	1398	
414	414			7V	572406	6821534	1404	
415	415			7V	572409	6821544	1410	
416	416			7V	572411	6821550	1410	
417	417			7V	572645	6821110	1509	
418	418			7V	572705	6820866	1539	
419	419			7V	572767	6820792	1548	
420	420			7V	572761	6820845	1553	
421	421	5012	57	7V	572776	6820943	1556	



# Waypoint List continued .....

Num	Name	Zone	Easting	Northing	Alt(m)	Description
422	422	7V	572779	6820958	1555	
423	423	7V	572782	6821024	1552	
424	424	7V	572780	6821060	1560	
425	425	7V	572779	6821077	1563	
426	426	7V	572772	6821111	1562	
427	427	7V	572765	6821126	1562	
428	428	7V	572762	6821212	1559	
429	429	7V	572808	6821214	1571	
430	430	7V	572808	6821262	1582	
431	431	7V	572759	6821303	1566	
432	432	7V	572742	6821319	1565	
433	433	7V	572720	6821340	1557	
434	434	7V	572691	6821333	1550	
435	435	7V	572659	6821397	1534	
436	436	7V	572609	6821450	1520	
437	437	7V	572588	6821429	1504	
438	438	7V	572576	6821432	1498	
439	439	7V	572558	6821433	1491	
440	440	7V	572501	6821471	1472	
441	441	7V	572391	6821555	1420	
442	442	7V	572403	6821832	1376	
443	443	7V	573047	6824165	1059	
444	444	7V	573038	6824146	1062	
445	445	7V	573012	6824113	1072	
446	446	7V	573006	6824084	1074	
447	447	7V	572932	6823924	1095	
448	448	7V	572885	6823855	1102	
449	449	7V	572863	6823876	1111	
450	450	7V	572850	6823881	1116	
451	451	7V	572841	6823887	1119	
452	452	7V	572833	6823894	1126	
453	453	7V	572825	6823898	1130	
454	454	7V	572809	6823917	1132	
455	455	7V	572787	6823943	1153	
456	456	7V	572762	6823949	1156	
457	457 <i>Si12 151</i>	7V	572763	6823959	1166	✓
458	458 <i>Si13 50</i>	7V	572727	6823963	1184	✓
459	459	7V	572713	6823963	1182	
460	460	7V	572693	6823976	1192	
461	461 <i>Si14 64</i>	7V	572691	6823956	1195	✓
462	462	7V	572683	6823957	1188	
463	463	7V	572650	6823982	1194	
464	464	7V	572618	6823998	1208	
465	465	7V	572607	6824012	1215	
466	466	7V	572568	6824029	1221	
467	467	7V	572555	6824024	1218	
468	468	7V	572539	6824044	1219	
469	469	7V	572526	6824051	1223	
470	470 <i>Si17 4992</i>	7V	572501	6824056	1237	✓
471	471	7V	572464	6824072	1250	
472	472	7V	572461	6824060	1253	
473	473	7V	572446	6824065	1262	
474	474	7V	572423	6824068	1272	
475	475	7V	572417	6824060	1265	
476	476 <i>Si17 80</i>	7V	572410	6824059	1265	✓
477	477	7V	572397	6824060	1270	
478	478 <i>Si24 323</i>	7V	572385	6824066	1274	<i>Si4/92</i> ✓
479	479	7V	573642	6824930	932	
480	480	7V	573636	6824928	933	
481	481	7V	573585	6824852	949	
482	482	7V	573580	6824844	951	
483	483	7V	573511	6824770	962	
484	484	7V	573507	6824767	963	
485	485	7V	573463	6824759	967	
486	486	7V	573461	6824754	970	
487	487	7V	573460	6824749	970	
488	488	7V	573470	6824767	970	
489	489	7V	573478	6824778	969	
490	490	7V	573486	6824783	967	
491	491	7V	573489	6824786	966	
492	492	7V	573492	6824793	965	
493	493	7V	573493	6824802	965	

Waypoint List continued .....

Num	Name #	PPb	Zone	Easting	Northing	Alt(m)	Description
494	494		7V	573465	6824791	974	
495	495		7V	573442	6824750	977	
496	496		7V	573434	6824721	978	
497	497		7V	572414	6822076	1331	
498	498	Si 19	8	572460	6822106	1331	
499	499	Si 20	6	572521	6822106	1345	
500	500	Si 21	2	572568	6822090	1357	
501	501	Si 22	4	572637	6822040	1376	
502	502	Si 23	145	572714	6822027	1393	
503	503	So 25	10	572749	6822003	1413	
504	504		7V	572831	6822010	1430	
505	505	Si 24	3	572855	6822011	1432	
506	506	Sp	7V	572856	6822006	1436	Specimen / Py in float (+20% Py)
507	507	Si 25	4	572871	6821990	1451	oxidized rock fragments
508	508	Sp	7V	572880	6821947	1465	SP
509	509	Si 26	4	572897	6821946	1463	
510	510		7V	572922	6821999	1458	
511	511	Si 27	6	572927	6822010	1452	
512	512	So 26	18	572878	6822049	1452	
513	513	?	7V	572961	6822417	1454	
514	514		7V	572984	6822436	1446	Sp 514 (Sample 98648)
515	515	Si 28	17	572988	6822446	1444	
516	516		7V	572943	6822465	1431	
517	517	Si 29	5	572909	6822471	1418	
518	518		7V	572860	6822481	1406	
519	519		7V	572834	6822488	1400	
520	520		7V	572834	6822486	1387	
521	521	Si 30	14	572816	6822491	1381	
522	522		7V	572779	6822500	1373	
523	523	Si 31	9	572688	6822521	1349	
524	524		7V	572659	6822517	1344	Sp 524 ga?
525	525	Si 32	16	572583	6822539	1324	
526	526	Si 33	11	572499	6822631	1297	
527	527		7V	573616	6824892	944	
528	528		7V	573639	6824949	946	
529	529	98641	7V	573639	6824925	949	Rock, 25, 553.7 ppb Au
530	530		7V	573634	6824914	948	
531	531		7V	573629	6824912	949	
532	532		7V	573621	6824898	951	
533	533		7V	573516	6824764	967	
534	534		7V	573516	6824764	966	
535	535		7V	573504	6824751	967	
536	536		7V	573515	6824763	966	
537	537		7V	573498	6824740	967	
538	538		7V	573451	6824735	974	
539	539		7V	573408	6824669	982	
540	540		7V	573403	6824666	982	
541	541		7V	573401	6824661	983	
542	542		7V	573394	6824661	984	
543	543		7V	573386	6824652	985	
544	544		7V	572774	6823513	1139	
545	545		7V	572787	6823498	1154	
546	546		7V	572777	6823477	1156	
547	547		7V	572788	6823472	1163	
548	548		7V	572804	6823453	1178	
549	549		7V	572813	6823443	1187	
550	550		7V	572818	6823437	1195	
551	551		7V	572823	6823434	1198	
552	552		7V	572828	6823429	1207	
553	553		7V	572824	6823414	1215	
554	554	Si 34	83	572934	6823487	1214	
555	555		7V	572904	6823507	1199	
556	556		7V	572900	6823514	1196	
557	557		7V	572837	6823544	1153	
558	558	Si 35	150	572721	6823428	1158	
559	559		7V	572721	6823428	1159	
560	560		7V	572741	6823409	1171	
561	561	Si 36	50	572742	6823409	1171	
562	562		7V	572761	6823395	1184	
563	563	Si 214	7V	572769	6823395	1190	
564	564	So 214	7V	572774	6823376	1199	(8/16/17)
565	565	Si 37	7V	572783	6823364	1211	

Waypoint List continued .....

Num	Name	Zone	Easting	Northing	Alt(m)	Description
566	566	7V	572793	6823350	1219	
567	567 18 S; 37,	56 ppb 7V	572793	6823350	1217	
568	568	7V	572791	6823346	1223	
569	569	7V	572798	6823345	1224	
570	570	7V	572802	6823346	1227	
571	571	7V	572836	6823347	1240	
572	572	7V	572877	6823366	1245	
573	573	7V	572880	6823377	1243	
574	574 S; 38	44 ppb 7V	572856	6823405	1226	
575	575	7V	572843	6823413	1219	
576	576	7V	572838	6823412	1219	
577	577	7V	573595	6824913	1004	
578	578	7V	573591	6824909	1003	
579	579	7V	573591	6824912	987	
580	580	7V	573594	6824910	980	
581	581	7V	573600	6824923	976	
582	582	7V	573570	6824826	961	
583	583	7V	573563	6824816	963	
584	584	7V	573571	6824830	962	
585	585	7V	573668	6825934	878	
586	586	7V	573265	6824333	974	
587	587	7V	573711	6826032	847	
588	588	7V	573724	6826044	858	
589	589	7V	573905	6826693	817	
590	590	7V	573894	6826756	815	
591	591	7V	574152	6827373	793	
592	592	7V	574168	6827486	792	
593	593	7V	574164	6827521	797	
594	594	7V	574125	6827658	795	
595	595	7V	574105	6827710	794	
596	596	7V	574097	6827715	793	
597	597	7V	574023	6827793	789	
598	598	7V	573992	6827767	790	
599	599	7V	573990	6827768	790	
600	600	7V	573883	6827868	787	
601	601	7V	573857	6827891	788	
602	602	7V	573651	6828022	784	
603	603	7V	573626	6828023	783	
604	604	7V	573604	6828020	783	
605	605	7V	573601	6827890	785	
606	606	7V	573585	6828075	781	
607	607	7V	573549	6828076	779	
608	608	7V	573513	6828105	780	
609	609	7V	573485	6828160	779	
610	610	7V	573443	6828206	778	
611	611	7V	573332	6828241	777	
612	612	7V	573234	6828317	775	
613	613	7V	573176	6828368	775	
614	614	7V	573092	6828403	775	
615	615	7V	573018	6828434	773	
616	616	7V	573002	6828447	773	
617	617	7V	572979	6828434	772	
618	618	7V	573975	6827673	789	
619	619	7V	573937	6827608	791	
620	620	7V	573860	6827465	796	
621	621	7V	573847	6827432	797	
622	622	7V	573863	6827420	798	
623	623	7V	573849	6827367	799	
624	624	7V	573865	6827311	800	
625	625	7V	573881	6827255	801	
626	626	7V	573858	6827204	804	
627	627	7V	573858	6827153	805	
628	628	7V	573855	6827043	807	
629	629	7V	573831	6826958	810	
630	630	7V	573849	6826909	812	
631	631	7V	573880	6826853	814	
632	632	7V	573876	6826809	816	
633	633	7V	573876	6826808	816	
634	634	7V	573850	6826783	817	

## **APPENDIX C**

### **Bureau Veritas – Rock Sample Analysis**



**BUREAU VERITAS**  
MINERAL LABORATORIES  
Canada

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

**Client:** **Atled Exploration Management Ltd.**  
702-181 Athletes Way  
Vancouver British Columbia V5Y 0E5 Canada

Submitted By: Gordon Guttrath  
Receiving Lab: Canada-Whitehorse  
Received: July 04, 2018  
Report Date: September 10, 2018  
Page: 1 of 2

*Kelli Fols  
2018*

**CERTIFICATE OF ANALYSIS**

WHI18000252.1

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 8

**SAMPLE DISPOSAL**

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: **Atled Exploration Management Ltd.**  
**702-181 Athletes Way**  
**Vancouver British Columbia V5Y 0E5**  
**Canada**

CC:

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	8	Crush, split and pulverize 250 g rock to 200 mesh			WHI
AQ202	8	1:1:1 Aqua Regia digestion ICP-MS analysis	30	Completed	VAN
SHP01	8	Per sample shipping charges for branch shipments			VAN
BAT01	8	Batch charge of ~20 samples			VAN

**ADDITIONAL COMMENTS**



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. \*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.













**BUREAU VERITAS**  
MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client:** **Atled Exploration Management Ltd.**  
702-181 Athletes Way  
Vancouver British Columbia V5Y 0E5 Canada

Submitted By: Gordon Gutraath  
Receiving Lab: Canada-Whitehorse  
Received: September 10, 2018  
Report Date: October 20, 2018  
Page: 1 of 2

**CERTIFICATE OF ANALYSIS**

WHI18000871.1

**CLIENT JOB INFORMATION**

Project: None Given  
Shipment ID:  
P. O. Number  
Number of Samples: 11

**SAMPLE DISPOSAL**

DISP-PLP Dispose of Pulp After 90 days  
PICKUP-RJT Client to Pickup Rejects

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: **Atled Exploration Management Ltd.**  
**702-181 Athletes Way**  
**Vancouver British Columbia V5Y 0E5**  
**Canada**

CC:

**KERRY JAY**  
Geochem Project Specialist

**SAMPLE PREPARATION AND ANALYTICAL PROCEDURES**

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	11	Crush, split and pulverize 250 g rock to 200 mesh			WHI
AQ202	11	1:1:1 Aqua Regia digestion ICP-MS analysis	30	Completed	VAN
SHP01	11	Per sample shipping charges for branch shipments			VAN

**ADDITIONAL COMMENTS**

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. "\*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.







**BUREAU VERITAS**  
Canada

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Atled Exploration Management Ltd.**

702-181 Athletes Way  
Vancouver British Columbia V5Y 0E5 Canada

Project: None Given

Report Date: October 20, 2018

Page: 1 of 1

Part: 1 of 2

# QUALITY CONTROL REPORT

WHI18000871.1

Method Analyte Unit	WGT	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
MDL	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
Pulp Duplicates																					
98641 Rock	1.38	0.4	181.2	19.8	103	3.1	15.5	29.9	1433	6.74	15.8	25553.7	0.2	267	0.3	0.1	0.7	62	5.38	0.142	
REP 98641 QC		0.4	177.2	19.5	100	3.1	15.7	29.2	1440	6.62	15.3	25166.5	0.3	259	0.4	0.1	0.7	61	5.28	0.134	
98642 Rock	0.82	0.3	22.8	10.1	10	<0.1	1.5	1.9	204	0.66	1.1	62.8	4.8	41	<0.1	<0.1	<0.1	6	0.94	0.010	
REP 98642 QC		0.3	23.0	9.5	10	<0.1	1.4	1.9	199	0.66	1.3	40.8	4.5	38	<0.1	<0.1	<0.1	6	0.95	0.010	
Reference Materials																					
STD DS11 Standard		15.6	152.4	135.8	333	1.7	82.0	14.3	1053	3.20	44.5	82.5	7.8	69	2.5	7.2	11.0	54	1.11	0.073	
STD DS11 Standard		13.6	150.9	145.2	344	1.7	81.3	13.6	1017	3.13	42.2	94.6	7.8	59	2.3	7.7	11.1	47	1.03	0.068	
STD OXC129 Standard		1.4	28.4	6.1	43	<0.1	83.7	21.4	433	3.16	0.7	197.2	1.8	215	<0.1	<0.1	<0.1	57	0.78	0.097	
STD OXC129 Standard		1.3	27.2	6.4	40	<0.1	80.6	20.1	405	3.00	0.6	194.2	1.9	167	<0.1	<0.1	<0.1	49	0.56	0.098	
STD OXC129 Expected		1.3	28	6.2	42.9		79.5	20.3	421	3.065	0.6	195	1.9					51	0.684	0.102	
STD DS11 Expected		14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701	
BLK Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001	
BLK Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.001	
Prep Wash																					
ROCK-WHI Prep Blank		0.8	5.2	42.2	42	<0.1	1.1	4.0	547	1.76	1.3	1.1	2.2	26	0.1	<0.1	<0.1	27	0.75	0.041	
ROCK-WHI Prep Blank		0.9	6.1	49.3	46	<0.1	1.0	3.7	548	1.78	1.3	<0.5	2.4	27	0.1	<0.1	<0.1	26	0.76	0.040	



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PHONE (604) 253-3158

**Client: Atled Exploration Management Ltd.**  
702-181 Athletes Way  
Vancouver British Columbia V5Y 0E5 Canada

Project: None Given  
Report Date: October 20, 2018

Page: 1 of 1 Part: 2 of 2

# QUALITY CONTROL REPORT

WHI18000871.1

Method	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te			
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm			
MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2			
Pulp Duplicates																				
98641	2	4	2.11	77	0.006	2	1.29	0.067	0.22	0.2	<0.01	10.7	<0.1	2.38	4	1.1	0.8			
REP 98641	2	4	2.07	75	0.006	2	1.27	0.064	0.21	0.2	<0.01	10.8	<0.1	2.35	4	0.7	0.8			
98642	3	1	0.17	38	0.003	<1	0.22	0.079	0.12	<0.1	<0.01	1.3	<0.1	0.16	<1	<0.5	<0.2			
REP 98642	3	1	0.17	36	0.003	<1	0.22	0.079	0.11	<0.1	<0.01	1.2	<0.1	0.16	<1	<0.5	<0.2			
Reference Materials																				
STD DS11	19	63	0.87	374	0.103	7	1.26	0.079	0.42	2.9	0.26	3.6	5.0	0.29	5	1.9	5.1			
STD DS11	16	60	0.81	345	0.087	7	1.10	0.072	0.40	2.9	0.25	3.1	5.0	0.27	5	2.3	4.9			
STD OXC129	12	56	1.61	54	0.423	<1	1.72	0.621	0.38	<0.1	<0.01	1.0	<0.1	<0.05	6	<0.5	<0.2			
STD OXC129	12	52	1.50	48	0.378	<1	1.48	0.582	0.36	<0.1	<0.01	0.9	<0.1	<0.05	5	<0.5	<0.2			
STD OXC129 Expected	12.5	52	1.545	50	0.4	1	1.58	0.59	0.3655			1.1			5.5					
STD DS11 Expected	18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56			
BLK	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2			
BLK	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2			
Prep Wash																				
ROCK-WHI	6	2	0.47	53	0.081	2	0.98	0.071	0.09	<0.1	0.01	3.5	<0.1	<0.05	4	<0.5	<0.2			
ROCK-WHI	7	2	0.47	58	0.092	1	0.98	0.071	0.09	<0.1	0.01	3.5	<0.1	<0.05	4	<0.5	<0.2			

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval, preliminary reports are unsigned and should be used for reference only.

**APPENDIX D**

**Bureau Veritas –**

**Geochemical Soil and Silt Sample Analysis**

Kelli



**BUREAU VERITAS**  
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Bureau Veritas Commodities Canada Ltd.  
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PHONE (604) 253-3158

**Client:** **Atled Exploration Management Ltd.**  
702-181 Athletes Way  
Vancouver British Columbia V5Y 0E5 Canada

Submitted By: Gordon Gutraith  
Receiving Lab: Canada-Whitehorse  
Received: September 10, 2018  
Report Date: September 28, 2018  
Page: 1 of 4

# CERTIFICATE OF ANALYSIS

# WHI18000872.1

## CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 66

## SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
PICKUP-RJT Client to Pickup Rejects

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
DY060	66	Dry at 60C			WHI
SS80	66	Dry at 60C sieve 100g to -80 mesh			WHI
SVRJT	66	Save all or part of Soil Reject			WHI
AQ201	66	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
SHP01	66	Per sample shipping charges for branch shipments			VAN

## ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

68  
77

Invoice To: **Atled Exploration Management Ltd.**  
702-181 Athletes Way  
Vancouver British Columbia V5Y 0E5  
Canada

KERRY JAY  
Geochem Project Specialist

CC:

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. \*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.





















**APPENDIX E**

**New Era Engineering Corporation**

**Bulk Test for Free Gold in Sample Rejects**

**November 2, 2018**

Gordon Gutrath's Bulk Test for Free Gold in Sample Rejects

4-Aug-18

Number	Sample	Portion	Gross lb	Gross kg	Net kg	Colour	Bulk Density
				2.205	0.12		
ROCK-WHI	RJ01	1/2		0.27	0.15	lt grey	1.76
ROCK-WHI	RJ01	2/2		0.27	0.15	lt grey	1.76
	2451	RJ02		2.03	1.91	yellow	1.75
	2452	RJ02		1.64	1.52	med grey	1.63
	2453	RJ03		1.28	1.16	yellow	1.75
	2454	RJ03		1.91	1.79	lt grey	1.76
	2455	RJ04		1.96	1.84	lt grey	1.76
	2456	RJ04		1.29	1.17	yellow	1.75
	2457	RJ05		1.37	1.25	lt grey	1.57
	2458	RJ05		1.11	0.99	yellow	1.75
	2459	RJ06		1.69	1.57	lt grey	1.76
	2460	RJ06		1.65	1.53	lt grey	1.76
	2461	RJ07		0.87	0.75	lt grey	1.76
	2462	RJ07		1.36	1.24	yellow	1.75
	2463	RJ08		0.91	0.79	lt grey	1.76
	2464	RJ08		2.2	2.08	yellow	1.75
	2465	RJ09		1.61	1.49	lt grey	1.76
missing?							
	2467	RJ10		2.6	2.48	lt grey	1.57
	2468	RJ10		1.6	1.48	lt grey	1.76
	2469	RJ11		1.14	1.02	lt grey	1.76
	2470	RJ11	8.2		3.60	yellow	1.75
	2471	RJ12	14.6		6.51	dk grey	1.58
	2472	RJ12	14		6.23	dk grey	1.58
	2473	RJ13	16.6		7.41	dk grey	1.58
	2474	1/2+2/2	14.8		6.60	dk grey	1.58
	2475	RJ14		1.65	1.53	lt grey	1.76
	2476	RJ15	15.8		7.05	yellow	1.75
	2477	RJ15	16		7.14	lt grey	1.57
	2478	RJ16	16		7.14	lt grey	1.57
missing?							
	2480	RJ17	16.4		7.32	lt grey	1.57
	2481	RJ17	14.8		6.60	lt grey	1.63
	2482	RJ18	15.2		6.78	lt grey	1.63
	2483	RJ18	17.2		7.68	lt grey	1.57
	2484	RJ19	17		7.59	yellow	1.75
	2485	RJ19	21.4		9.59	med grey	1.63
	2486	RJ20	16.6		7.41	lt grey	1.76
	2487	RJ20	18.6		8.32	lt grey	1.57
	2488	RJ21	16.6		7.41	med grey	1.51
	2489	RJ21	17.2		7.68	lt grey	1.63
	2490	RJ22	20		8.95	lt grey	1.57
	2491	RJ22	16.4		7.32	lt grey	1.57

**Gordon Gutrath's Bulk Test for Free Gold in Sample Rejects**

2492	RJ23	1/2	17.6		7.87	lt grey	1.63
2493	RJ23	2/2	16.8		7.50	lt grey	1.63
2494	RJ24	1/2	16		7.14	lt grey	1.63
2496	RJ25	1/2	19.6		8.77	lt grey	1.76
2497	RJ25	2/2	18.8		8.41	yellow	1.75
2498	RJ26	1/2	17.6		7.87	yellow	1.75
2499	RJ26	2/2	18.2		8.14	med grey	1.63
100	RJ27	1/2	19		8.50	med grey	1.51
101	RJ27	2/2	19.8		8.86	med grey	1.51
102	RJ28	1/2	19.4		8.68	lt grey	1.57
103	RJ28	2/2	23		10.31	lt grey	1.63
104	RJ29	1/2	n/a			lt grey	1.57
105	RJ29	2/2	21.6		9.68	lt grey	1.57
106	RJ30	1/2	20.8		9.32	lt grey	1.57
107	RJ30	2/2		2.73	2.61	med grey	1.51
108-109	RJ31	1/2+2/2	20.6		9.23	med grey	1.51
110	RJ32	1/2		0.67	0.55	lt grey	1.76
111	RJ32	2/2		0.75	0.63	yellow	1.75
112	RJ33	1/1		1.02	0.90	lt grey	1.76

Totals

297.3 kg

Averages

1.66

**Test Sluice Concentrates:**

+8#	1.710	kg	Mostly pyrite and silicate gangue rocks
-8#	0.260	kg	No free gold particles observed in concentrates
Total	1.970		

4 small samples of tailings taken & dried  
for fire assay by client

**Gravity Reduction Ratio:**

151 to 1

**Conclusions:** Sixty samples of ground sample assay rejects were weighed, combined and processed on a test sluice to determine the presence of free gold particles. The average bulk density of the ground sample was 1.66. The 300 kg of composite sample were concentrated to 2 kg. There was abundant pyrite in the sluice concentrate but no visible free gold.

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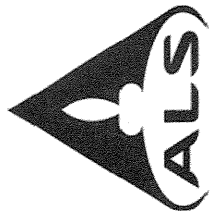
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Page: 2 - A  
 Total # Pages: 2 (A - D)  
 Plus Appendix Pages  
 Finalized Date: 2-NOV-2018  
 Account: MTT

Project: VAULT - KELLI

**CERTIFICATE OF ANALYSIS WH18247691**

Method Analyte Units LOD	WEI-21 Recvd Wt. kg	ME-MS61 Ag ppm	ME-MS61 Al %	ME-MS61 As ppm	ME-MS61 Ba ppm	ME-MS61 Be ppm	ME-MS61 Bi ppm	ME-MS61 Ca %	ME-MS61 Cd ppm	ME-MS61 Ce ppm	ME-MS61 Co ppm	ME-MS61 Cr ppm	ME-MS61 Cs ppm	ME-MS61 Cu ppm	ME-MS61 Fe %
Sample Description	0.02	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
Guthrath Fine Tails	0.89	0.52	7.45	85.5	740	0.90	0.13	3.99	0.31	26.2	12.8	44	0.75	138.0	4.46
Guthrath Sluice Cons#8	0.27	0.50	5.41	36.8	350	0.47	0.25	7.39	0.31	17.95	14.5	39	0.35	142.0	4.36
Guthrath Coarse tails#4	0.78	0.57	5.86	61.2	470	0.58	0.19	5.27	0.32	20.0	11.2	31	0.45	156.0	3.93
Guthrath Sluice Cons#18	1.72	1.20	6.38	746	110	0.59	0.66	4.38	0.39	21.3	62.0	37	0.48	294	9.43
Guthrath Coarse tails#2	0.79	1.60	5.91	74.1	480	0.52	0.16	6.03	0.34	19.90	11.4	35	0.43	210	4.14
Guthrath Coarse tails#3	0.63	0.50	6.21	75.8	470	0.55	0.17	5.02	0.26	21.2	12.4	37	0.47	109.5	4.31
Guthrath Coarse tails	0.86	0.81	6.24	56.0	480	0.61	0.14	4.29	0.33	21.4	11.0	29	0.49	120.5	3.93



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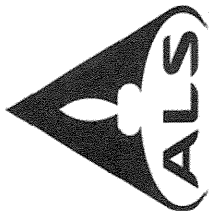
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**CERTIFICATE OF ANALYSIS WH18247691**

Method Analyte Units LOD	ME-MS61 Ca ppm	ME-MS61 Ge ppm	ME-MS61 Hf ppm	ME-MS61 In ppm	ME-MS61 K %	ME-MS61 La ppm	ME-MS61 Li ppm	ME-MS61 Mg %	ME-MS61 Mn ppm	ME-MS61 Mo ppm	ME-MS61 Na %	ME-MS61 Nb ppm	ME-MS61 Ni ppm	ME-MS61 P ppm	ME-MS61 Pb ppm
Guthrath Fine Tails	16.40	<0.05	0.3	0.057	1.50	12.7	18.5	1.44	873	1.52	2.15	4.3	26.9	1030	8.0
Guthrath Sluice Cons#8	11.35	<0.05	0.2	0.050	0.81	9.3	10.2	1.51	1080	1.25	1.78	2.5	21.6	800	8.8
Guthrath Coarse tails#4	11.30	0.08	0.2	0.042	0.91	9.7	13.0	1.30	1050	1.61	2.13	2.9	23.8	830	10.7
Guthrath Sluice Cons#18	13.25	0.10	0.1	0.059	1.13	10.4	11.3	1.58	950	1.63	1.96	2.8	56.5	850	16.0
Guthrath Coarse tails#2	11.60	0.09	0.3	0.044	0.89	10.1	13.2	1.39	1040	1.37	2.03	3.0	24.4	830	8.5
Guthrath Coarse tails#3	12.45	0.07	0.7	0.047	0.92	10.4	13.8	1.38	1050	1.57	2.16	3.1	25.5	860	7.9
Guthrath Coarse tails	12.15	0.09	0.3	0.042	0.95	10.3	13.0	1.24	1050	1.43	2.36	3.0	21.6	860	8.8



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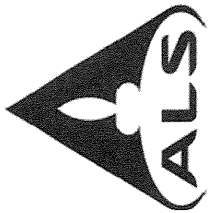
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Project: VAULT - KELLI

**CERTIFICATE OF ANALYSIS WH18247691**

Method Analyte Units LOD	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Tl % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1
Guthrath Fine Tails	38.0	0.002	0.41	0.43	15.7	1	0.8	418	0.29	0.07	2.21	0.302	0.33	0.4	145
Guthrath Sluice Cons#8	21.6	0.003	0.89	0.50	14.2	1	0.5	580	0.16	0.15	1.34	0.233	0.16	0.6	123
Guthrath Coarse tails#4	23.9	<0.002	0.43	0.59	11.0	2	0.5	483	0.20	0.11	1.63	0.223	0.19	0.4	99
Guthrath Sluice Cons#18	30.6	0.002	6.14	1.11	16.9	11	0.6	322	0.19	0.66	1.58	0.234	0.24	0.4	140
Guthrath Coarse tails#2	24.3	0.002	0.43	0.43	11.9	2	0.5	522	0.19	0.09	1.63	0.227	0.19	0.5	107
Guthrath Coarse tails#3	25.4	0.002	0.46	0.47	12.3	1	0.6	466	0.21	0.10	1.72	0.227	0.19	0.5	109
Guthrath Coarse tails	25.4	0.003	0.39	0.35	11.1	2	0.5	453	0.21	0.09	1.77	0.218	0.22	0.3	99



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 Total # Pages: 2 (A - D)  
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**CERTIFICATE OF ANALYSIS WH18247691**

Sample Description	Method Analyte Units LOD	ME-MS61						ME-MS61		ME-MS61		Au-AA26	
		W ppm	Y ppm	Zn ppm	Zr ppm	Au ppm	ppm	ppm	Au ppm	ppm	ppm	ppm	
Guthrath Fine Tails		4.3	7.3	102	3.7	0.33							
Guthrath Sluice Cons#8		1.9	9.9	65	7.7	0.11							
Guthrath Coarse tails#4		2.9	7.6	84	19.9	0.23							
Guthrath Sluice Cons#18		2.3	8.8	90	5.3	0.89							
Guthrath Coarse tails#2		2.6	7.9	84	8.6	0.14							
Guthrath Coarse tails#3		2.8	8.0	84	16.3	0.17							
Guthrath Coarse tails		2.9	6.9	84	5.3	0.34							

**APPENDIX F**

**New Era Engineering Corporation**

**Gravity Analysis of Sample WH1800087.1-1 98641**

**November 24, 2018**





# NEW ERA Engineering Corporation

*Mining and Small Hydro Specialists*

71 Fireweed Drive, Whitehorse, Yukon, Canada Y1A 5T8, 867-668-3978 cell 334-9842

November 24, 2018

Gordon Gutrath  
[g@gutrath.com](mailto:g@gutrath.com)  
604-730-5080

Hello Gordon Gutrath:

RE: Gravity Analysis of Sample WHI18000871.1 – 98641

The attached Bureau Veritas Certificate of Analysis indicates that sample 98641 assayed 25,553.7 ppb Au (25.5 g/tonne gold) and 3.2 ppm Au (3.2 g/tonne silver). The check assay was very similar at 25,166 ppb Au.

I understand that you took the sample from the same property that I did the gravity processing work (300 kg combined sample) in August of this year. That the sample is not from the same location but from bedrock on the edge of a placer mined cut and you suspect the gold might be placer (alluvial) deposited gold. At this high grade if the gold is placer it should be readily visible in gravity concentrate and appear as distinct separate grains of gold, generally with some evidence of transport such as rounded or flattened particles or flakes.

In order to check this I screened the 1.38 kg pulverized sample reject from Bureau Veritas in Whitehorse at 8 and 30 mesh, weighed the fractions and then carefully hand panned each sample size fraction twice. Then I dried, weighed and examined the samples with a hand held magnifying glass and later with a digital microscope. I was able to reduce the sample down to 6.8 grams of pyrite concentrate from the -30 mesh portion of the sample. The +8 mesh and +30 mesh particles did not have any visible gold. I could not detect any gold particles in the -30 mesh concentrate with the hand lens but was able to see botryoidal (grape-like shaped) native gold attached to quartz gangue particles at 60 x magnification (see attached images). The fine size, shape of the gold, high fineness (89%) and its attachment to irregular grains of quartz indicates that it is most likely a lode gold sample and not placer gold.

As there is only 6.8 grams of this concentrate, it was too small to fire assay but I was able to submit the tailings samples from each size fraction to Bureau Veritas for fire assay in order to source the gold by particle size. It would be better to keep the 6.8 grams of -30 mesh concentrate for more optical analysis. Once Bureau Veritas has completed the fire assays of the tailings I can do a metallurgical balance and calculate the grade of the concentrate.

I am overseas until late December but am always accessible by email.  
Please email me if you have any questions or comments.

Regards,

Randy Clarkson P.Eng.  
Encl - attachments

Gordon Gutrath - Preliminary Analysis

2-Nov-18

Gross wt g	Net wt g	wt %	Kelli	Assay Au g/t	Calc mg	Distribution
98641	ATLED		WHI18000871-RJ01 (4/13)			
			Tare for lg samples			
	6.7					
63.7	57.0	5%	+8 mesh tailings	25.8	0.001471	6% Insufficient Sample
169.6	162.9	16%	-8+30 mesh tailings	25.8	0.004203	16%
8.4	6.8	0.7%	-30 mesh pan cons	741.3	0.006227	23%
15.1	8.4	0.8%	-30 mesh pan tails	22.8	0.000192	1%
599	592.3	57%	-30 mesh tails	22.8	0.013504	51%
165.6	158.9	15%	-200 mesh recovered slimes	12.3	0.001954	7%
	986.3	95%	Subtotal			
	51.7	5%	lost slimes	12.3	0.000636	2%
	1038.0	100%	Total	25.5537	0.026525	100%

Conclusions:

The calculated grade for the gravity concentrates is 741.3 g/t hence the visible gold in the microscope.

The gravity concentrates contain 23% of the gold in 0.7% of the weight of the sample.  
 The -30 mesh tails and pan tails contain 51% of the gold in 58% of the weight of the sample.  
 The -8+30 mesh tailings contain 16% of the gold in 16% of the weight of the sample.

The sample contains relatively coarse gold particles locked to quartz gangue minerals recoverable by gravity and finer gold particles locked to quartz gangue minerals likely recoverable with finer grinding and cyanide/flotation. More sample and tests would be required to confirm these observations.

Note: The -30 mesh pan tails and -30 mesh tails were combined for fire assay.  
 The +8 mesh tailings were deemed to be of insufficient size for assay.

Assumptions: The +8 mesh slimes have the same assay as the -8+30 mesh tailings.  
 The lost slimes have the same assay as recovered slimes.