YMEP
Assessment Report

Project Location:
Hunker Creek High-Level Bench
Hunker Creek Area, Dawson Mining District
NTS: 115 O15
Location of central claim area: 64,00,85'N, 139, 05,12'W

Submitted by:
Jim Coates for
Kryotek Arctic Innovation Inc.
2180 2nd Avenue
Whitehorse, Yukon Y1A 5N6
Tel: 867-336-2606
Date: February 12, 2020

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Executive Summary

This project sought to explore a high-level bench deposit on the right limit of Hunker Creek. Evidence indicates that gravels were laid down during the initial high-energy stage of White Channel gravel development rather than later aggradation phases.

We proposed to use a combination of electrical resistivity geophysics, lightweight drilling, test pitting and potentially bulk sampling to prove the resource for mining in 2020. Due to time and access constraints only electrical resistivity geophysics and sampling of test pits was conducted.

Introduction

This project sought to thoroughly explore a high-level bench deposit on the right limit of Hunker Creek. The deposit appears to be White Channel Gravel and is 3-4 m deep. Gold has been panned from test pits across the property, including 50 mg+ nuggets. The property consists of a single claim that encompasses almost the entirety of the bench deposit. The bedrock elevation is identical to that of high-grade deposits in other areas of Hunker Creek, indicating that gravels were laid down during the initial high-energy stage of White Channel gravel development rather than later aggradation phases with lower gold grades.

The program was reduced due to access and timing constraints. It consisted of one electrical resistivity tomography survey and extensive surface prospecting. Surface prospecting showed the usefulness of a handheld metal detector in locating concentrations of flake gold and the widespread incidence of flake gold. The geophysics showed depth to bedrock that matched that of existing test pits. The geophysics also identified the existence of a deep incised channel almost 50 feet in depth. This is identified as a potential gold concentration mechanism.

A total of five days was spent; two were spent in travelling to the site, one in accessing the site using a UTV from the Hunker Creek Road along a difficult trail. One day was spent prospecting and one day was spent on geophysics.

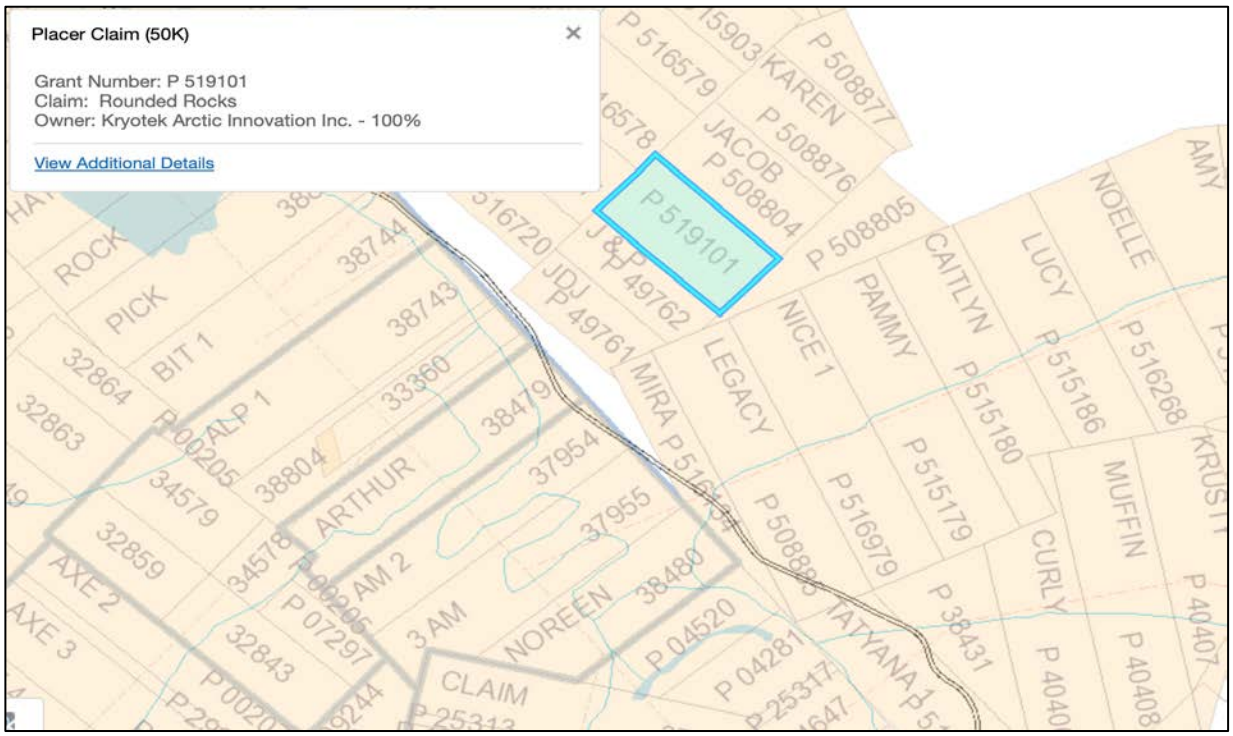

FIGURE 1. LOCATION OF ROUNDED ROCKS CLAIM RELATIVE TO HUNKER CREEK.

Location and Access

The property is 11 km south of Dawson City, located on the right limit of Hunker Creek between Wet Gulch and 4-above Pup. It is a single bench claim covering the entire span of the flat hilltop. There is an excavator access road on the north side of the hill, a switchback ATV road on the south face of the hill and widely spaced trees suitable for foot or ATV travel on the west side. Access is via the Hunker Creek Road and North Klondike Highway.

Placer Tenure

The property consists of single claim, Rounded Rocks, owned 100% by Kryotek Arctic Innovation Inc.

Quartz Tenure

The area is blanketed by quartz claims. Claims under the Rounded Rocks placer claim are owned by YF04419 Claim Label: Wet 5 Owner: Sylvain Montreuil - 25%, Erini Petroutsas - 25%, RST Klondike Discoveries Ltd. - 50%

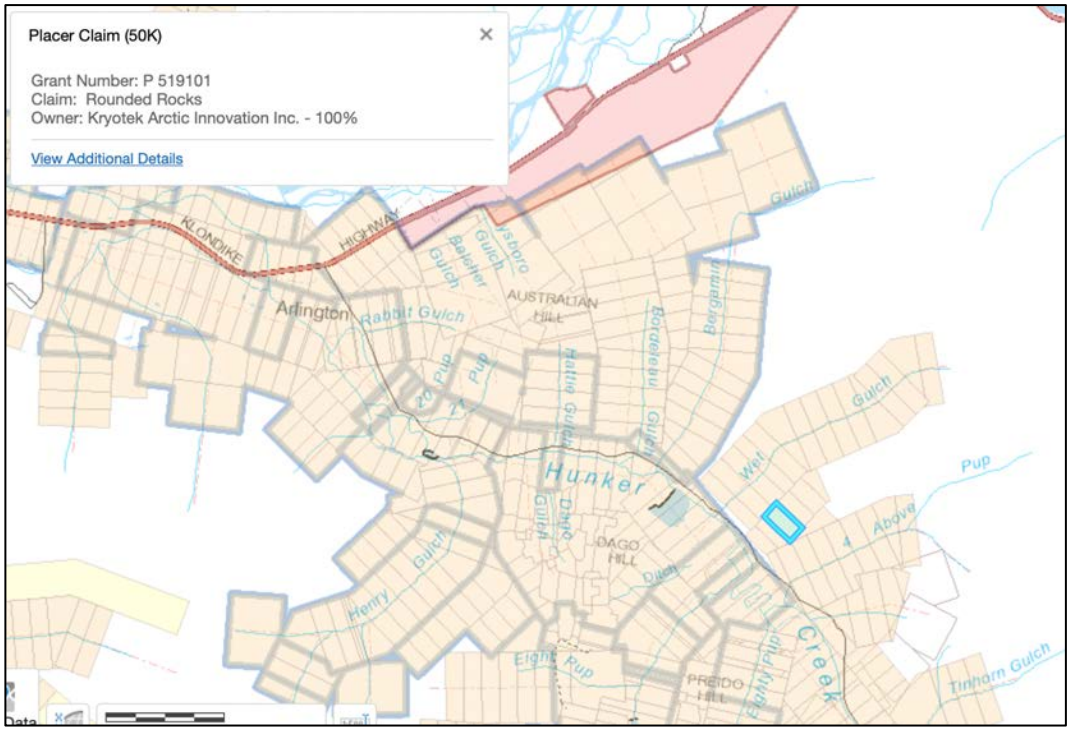

FIGURE 2. LOCATION OF CLAIM RELATIVE TO KLONDIKE VALLEY

History of Exploration and Mining

Mining in this area began in 1897. Gold was discovered on Bonanza Creek in 1896 and exploration on surrounding creeks including Hunker Creek swiftly followed. Hand mining took place predominantly on Hunker Creek from 1897 to 1902. Dredging on Hunker Creek followed from 1902 to 1966.

Numerous modern mechanised placer mining operations have been active on Hunker Creek and its high-level benches from the early 1900s to the modern day. Large open-pit mines on the high-level White Channel bench deposits of Paradise and Priedo Hills have been particularly rich, producing grades of up to $1,500 per cubic yard. The recently documented Paradise Wash gravel is a particularly intriguing.

Churn holes were drilled by the Yukon Consolidated Gold Company in preparation for dredging. Data from these drill holes were recently compiled by the Yukon Geological Survey.
High grades were located 300 m directly downhill and downstream from the Rounded Rocks Claim.

Modern Exploration

No evidence of modern mining has been found on the claim. Test pitting by Joel Gagne was conducted in 2017. 5 test pits were excavated with a compact tracked excavator to bedrock. Gravels began at the surface beneath a thin organic layer and extended to 3-4 m depths. Bedrock was decomposed Klondike schist.

Regional Bedrock Geology

The bedrock geology under the Rounded Rocks claim is mapped as dark grey to black carbonaceous metasedimentary rocks and metachert, however decomposed Klondike Schist was found in test pits.

Local Bedrock Geology and Mineral Occurrences

450 m uphill from the Rounded Rocks claim is an unmapped 6 km x 3 km porphyry stock of probable Eocene age. This is the Unexpected Minfile Occurrence and exhibits round quartz eyes in an aphanitic ground mass and contains traces of purple fluorite, topaz and miarolitic zeolites. Disseminations and discontinuous stringers of fluorite are inferred to have been produced by late or post-magmatic streaming of volatiles (Mortensen et al., 1992).

The open cut on the Unexpected claim exposed a purple-stained quartz porphyry plug that assayed 1.4 g/t Au and 2.1 g/t Ag across 0.9 m. A grab sample collected in 1972 assayed 0.102 g/t Au, 1.4 g/t Ag and 4.12% F. This may have been a local source of placer gold independent of the larger White Channel deposition.

FIGURE 3. BEDROCK GEOLOGY OF HUNKER CREEK. CLAIM HIGHLIGHTED IN RED. NOTE MINFILE OCCURRENCE TO NORTHWEST.

Physiography and Vegetation

The claim is located in the Hunker Creek Valley at an elevation of about 500 meters elevation. There is bedrock outcrop nearby, but none has been found on the claims. The terrain is a high hilltop with well-drained soils and widely spaced trees. Poplar, spruce, and willow are moderately dense.

Flat and south-facing slopes are thawed to bedrock with 1 m of seasonal frost penetration. Up to 0.3 m of groundwater is present in gravels just above bedrock. North-facing slopes are frozen and thaws down about a meter in the summer months. Ground water collects in low-lying areas and forms small ponds above the permafrost. Black bears, grizzly bears, moose, lynx, coyotes, wolves, hawks, owls, ducks and brown bats frequent the area.

Exploration Target

The exploration target is a White Channel bench deposit located on a hill on the right limit of Hunker Creek. The property comprises a single claim (Rounded Rocks). Test pitting on the claim in 2017 by Joel Gagne revealed 3-4 m depths to bedrock, unfrozen ground and quartz-rich cobble gravels. Gold in the 50-mesh size range was recovered from all pits.

In 2018 Jim Coates and Astrid Grawehr panned 4-6 colors/pan from samples in all of the test pits. In 2018 Jeremiah Hartman dug a test pit on the north end of the property and panned several pieces of coarse gold from a small sample (see photos).

The location, gravel type and incidence of gold have led us to believe that there may be a White Channel Gravel deposit on this hilltop that has not been mined historically or in modern times. The steep hillsides below and lack of water source on the property likely discouraged mining in the past. The unfrozen soils and high-water table would have made shafting and drifting difficult.

The shallow depth to bedrock and unfrozen soils make this a good exploration target. We intend to explore the property in 2019 to determine if it is suitable form mining in 2020. Class 1 approval has been granted for this property.

We believe this single claim to be an un-mined and largely unexplored White Channel target. If there are suitable gold grades for mining (above $20/cubic yd in the upper 3 feet of bedrock and lower 3 feet of gravel) there is the potential for over 100,000 cubic yards of pay with $2,000,000 revenue.

Geological Description and Previous Work

History of the Area

Hunker Creek is one of the most heavily prospected and mined regions in the Klondike. High level benches along Hunker Creek have yielded some of the highest gold values in the Klondike. These benches have been heavily mined along the left limit Hunker Creek but only in a few locations on the right limit. The right limit has been considered to be off the main paystreak and not have the same high gold grades. Historical exploration occurred during lower gold prices when the grades on the right limit may not have been economic.

Surficial Geology

The 'White Channel gravel' (WCG) found within the drainages of the Klondike district are economically important auriferous high bench gravel deposits. The gravels are within the drainages of Bonanza and Hunker Creeks, both of which flow into the Klondike River. The WCG deposits sit uncomformably on the White Channel strata, an eroded bedrock surface composed mainly of Klondike Schist of the Yukon-Tanana terrane, at heights of 10 m to 200 m above the modern creeks (Lowey, 2004).

The WCG deposits in Bonanza and Hunker Creeks are locally overlain by loess ('black muck') and colluviums (Lowther et al, 2014). The current proposed mode of deposition for the WCG involves continuous deposition by shallow gravel-bed braided river systems in the paleo-creeks (Morison, 1985; Morison and Hein, 1987; Lowey, 2004; 2006). The braided river system that deposited the WCG was initially a larger river system with a low aggradation rate, which produced large gravel bars (Table 1) that were largely erosive as they migrated and stacked (Lowther et al, 2014).

Placer mining activities generally concentrate on processing the lowest stratigraphic levels in the WCG and it is generally accepted that the highest gold grades are found at the bedrock contact. This observation is consistent with a prolonged erosional phase in which gold particles accumulated in bedrock imperfections, while most other clasts were swept through the system (Lowther et al, 2014).

The sedimentary architecture of the lower WCG unit suggests the concentration of gold continued within a slowly aggrading system that processed a large amount of material, selectively retaining the coarse gold particles, therefore, producing high gold grades. In contrast, the placers which formed above the organic rich layer accumulated in a rapidly aggrading system, and consequently gold grades are relatively low (Lowther et al, 2014). The initial stage involved downcutting and formation of a gold placer through winnowing in an aggressive fluvial regime. A second stage is defined by a change to an aggradational system, although gold placer formation continued within this sedimentary environment. A third stage, defined by an organic-rich mud horizon is interpreted as a lacustrine environment, established during a hiatus in deposition that was succeeded by a fourth stage, in which gravels aggraded rapidly in a new fluvial system (Lowther et al, 2014).

Previous Work on the Property

There is no evidence of modern or old-timer workings on the claim. The claim was likely prospected during the 1898 gold rush, however there is no visible evidence of pitting, shafting or sluicing. This is likely due to the small deposit size, high water table and lack of flowing water for sluicing. Test pits by Joel Gagne in 2017 have shown fine and coarse gold to be present in gravels above bedrock.

Exploration Rationale

This single claim is located on one of the few deposits of White Channel gravels on the right limit of Hunker Creek. This area was identified by McConnell as a White Channel Gravel deposit and is at the edge of the original White Channel boundary. Some of the highest grades of gold in YCGC drilling were found within 300 m of this claim in the bottom of Hunker Creek.

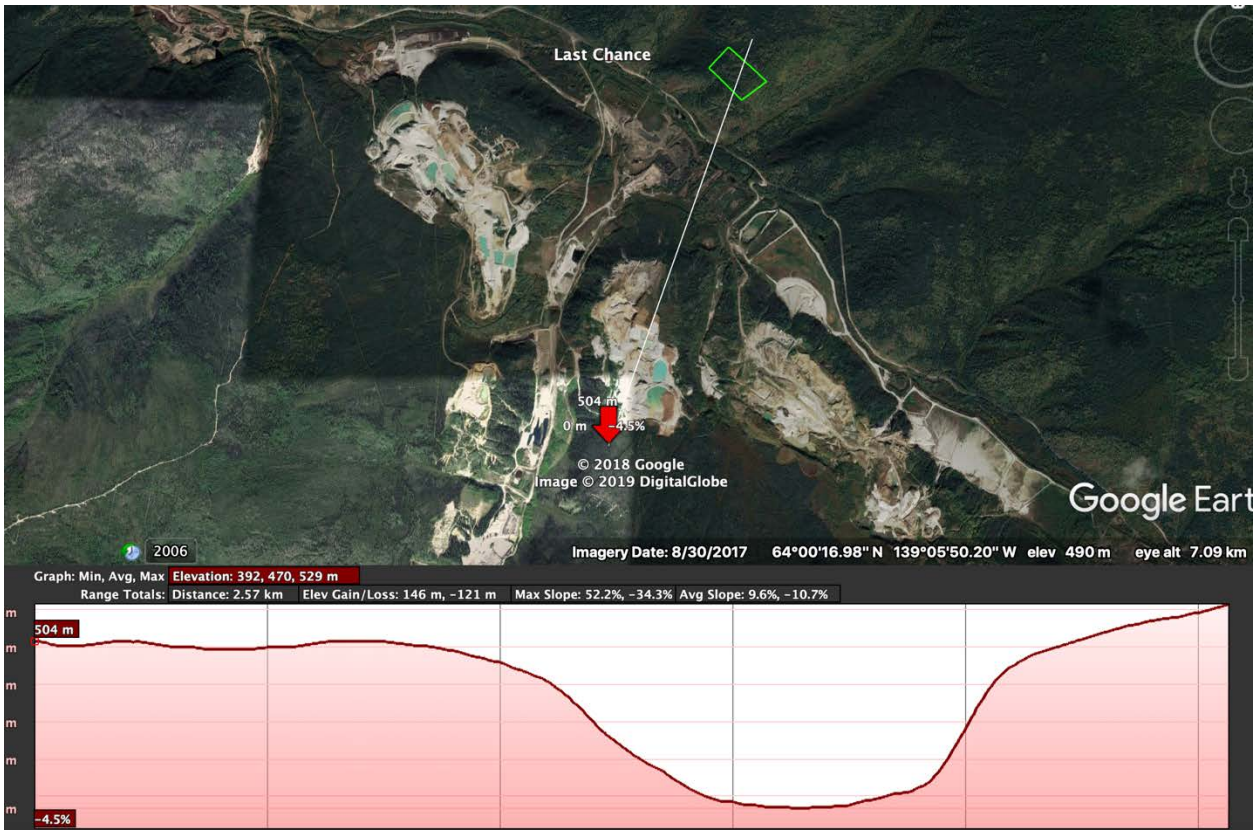

FIGURE 4. ELEVATION PROFILE SHOWING DEPOSIT ALIGNMENT WITH RICH DEPOSITS ON PREIDO HILL ACROSS HUNKER CREEK.

The bedrock elevation on this claim is exactly (500-504 m) the same as bedrock on Paradise and Preido Hills located across the Hunker Creek valley where extremely rich gold deposits have been mined. This indicates that the Rounded Rocks gravels were likely laid down during the same depositional event and timespan.

Given the elevation similarity to Preido Hill, geomorphic similarity to other thin White Channel gravel deposits, proximity to high-grade gold values and presence of both fine and coarse gold in recent test pitting we feel that this is an exploration target with good potential to yield an economic deposit. Our exploration program is focussed on defining the potential for minable reserve calculations.

FIGURE 5. LOCATION OF CLAIM DIRECTLY ACROSS FROM THE MOUTH OF LAST CHANCE CREEK. VIEW LOOKING NORTHEAST.

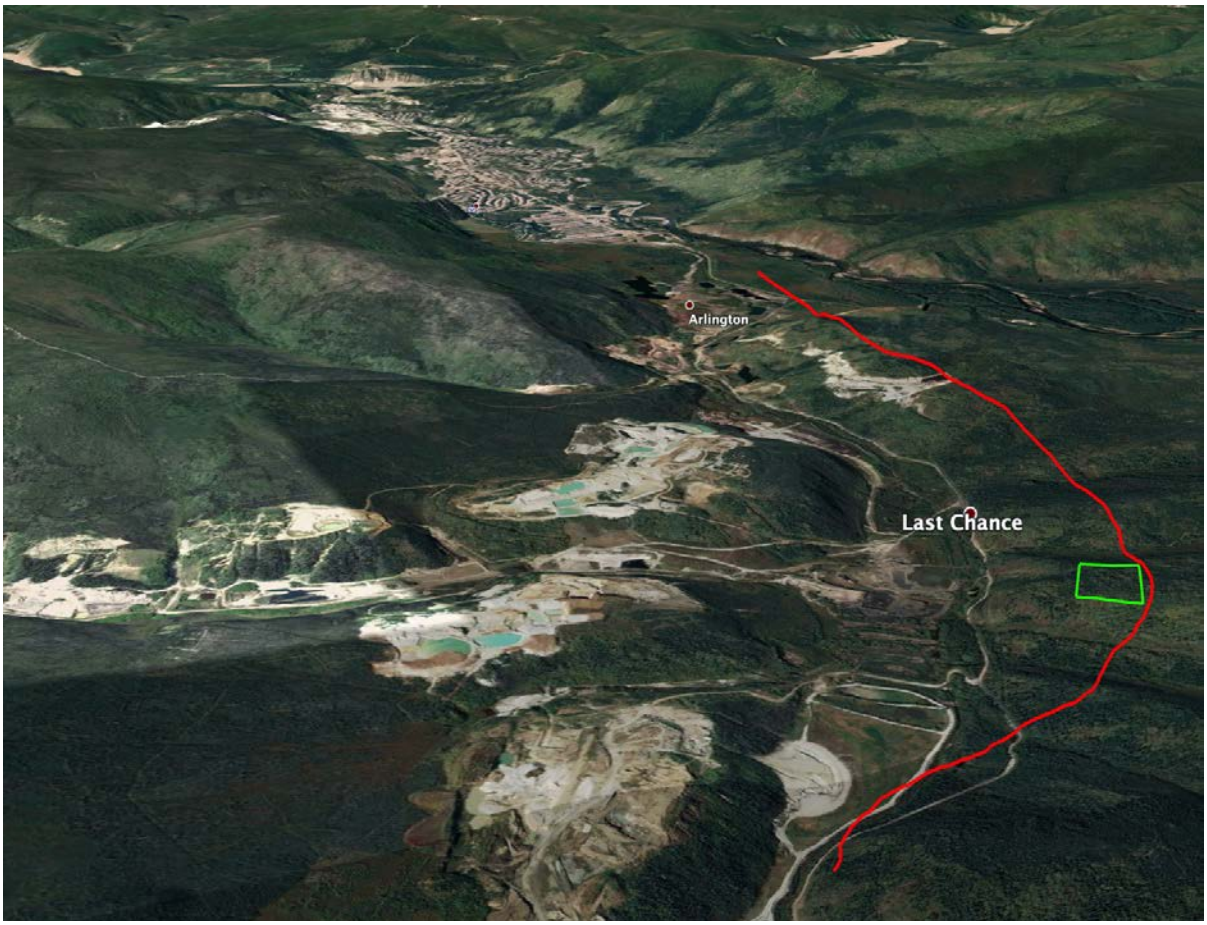

FIGURE 6. OBLIQUE VIEW LOOKING DOWNSTREAM TOWARDS THE KLONDIKE RIVER. ORIGINAL WHITE CHANNEL BOUNDARY IN RED, CLAIM IN GREEN.

FIGURE 7. COARSE GOLD PANNED FROM TEST PIT ON CLAIM AUGUST 2018.

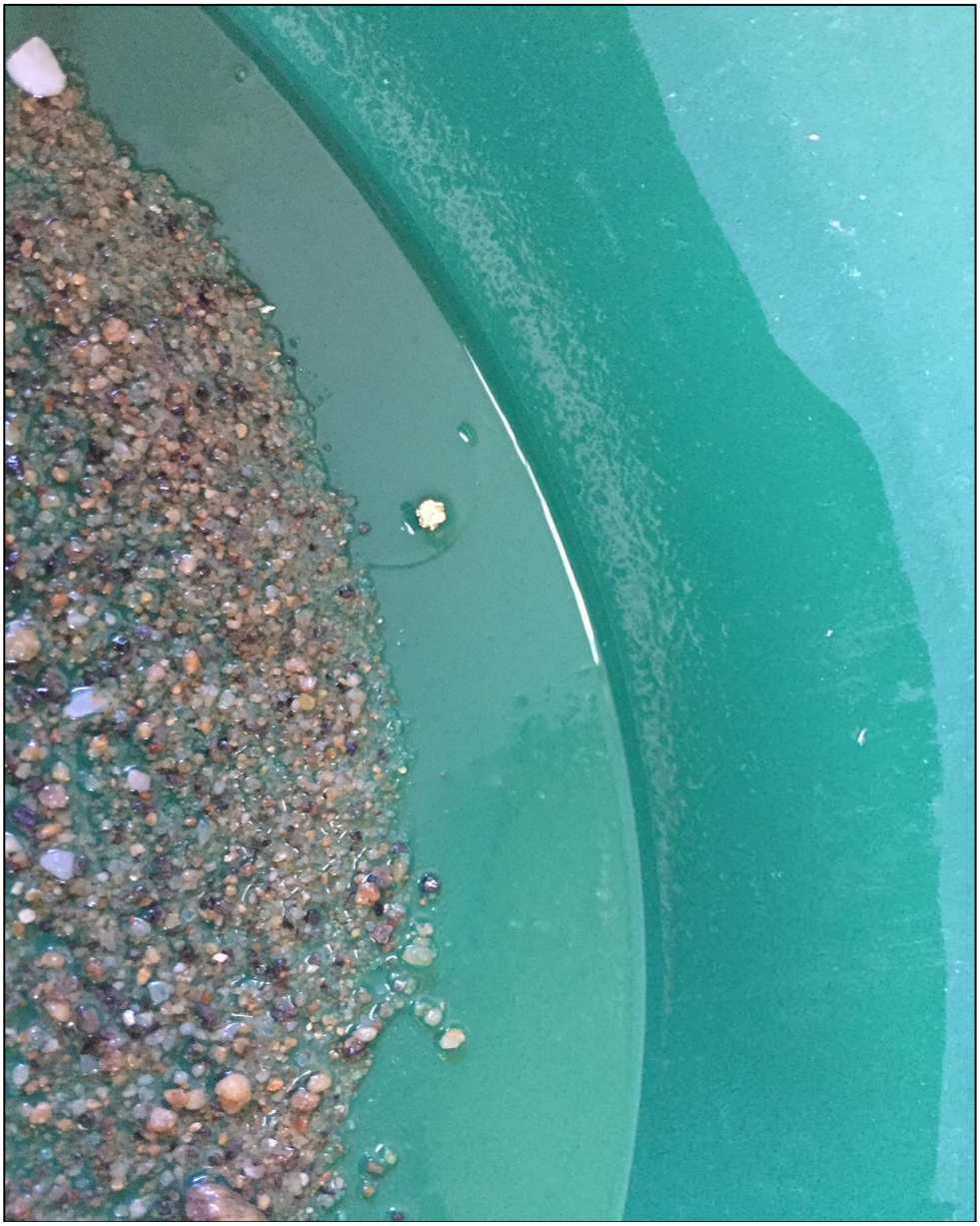

FIGURE 8. COARSE GOLD PANNED FROM TEST PIT ON CLAIM AUGUST 2018.

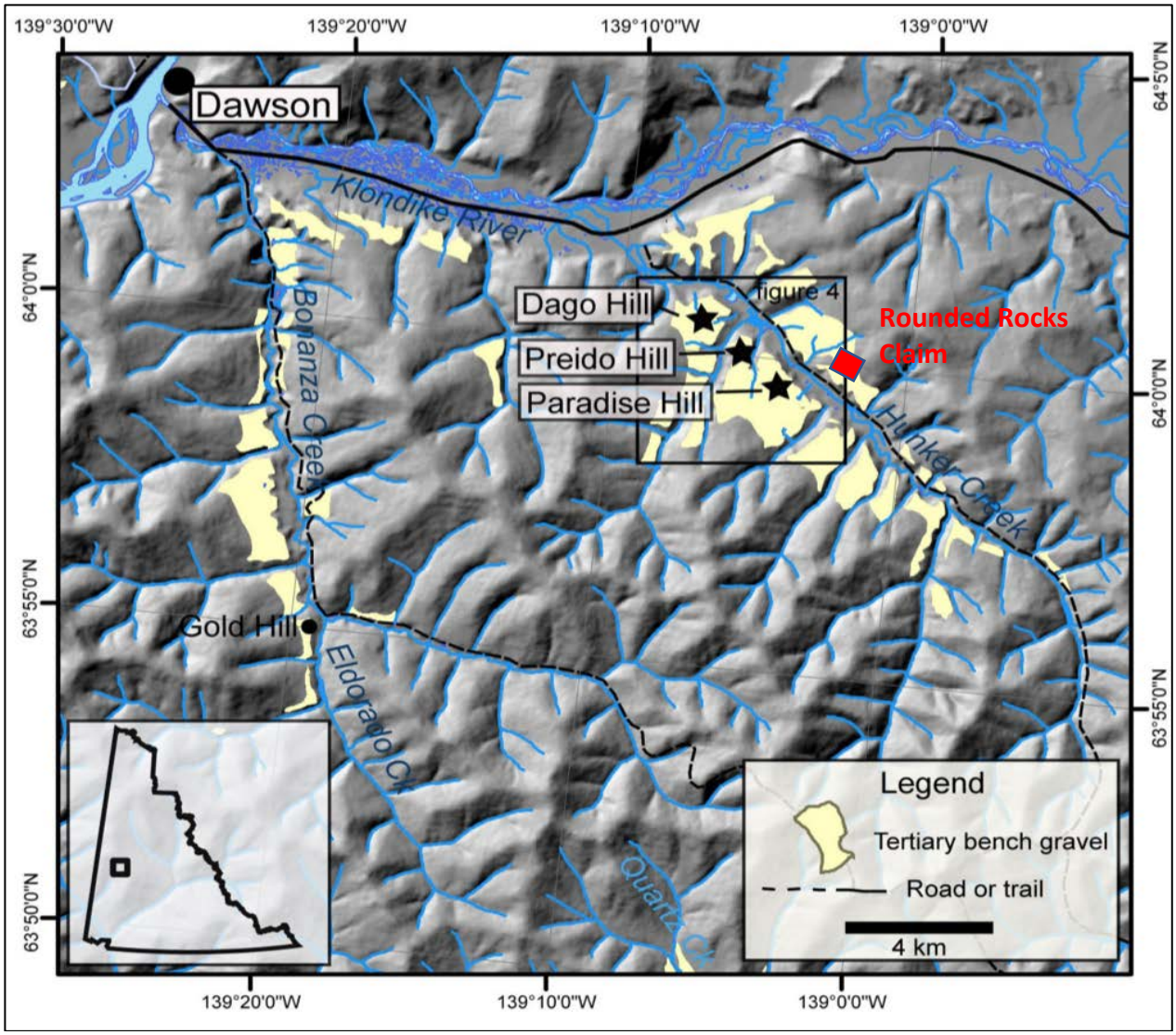

FIGURE 9. MAP SHOWING CLAIM LOCATION IN RELATION TO TERTIARY BENCH GRAVEL MAP OF HUNKER AND BONANZA CREEKS.

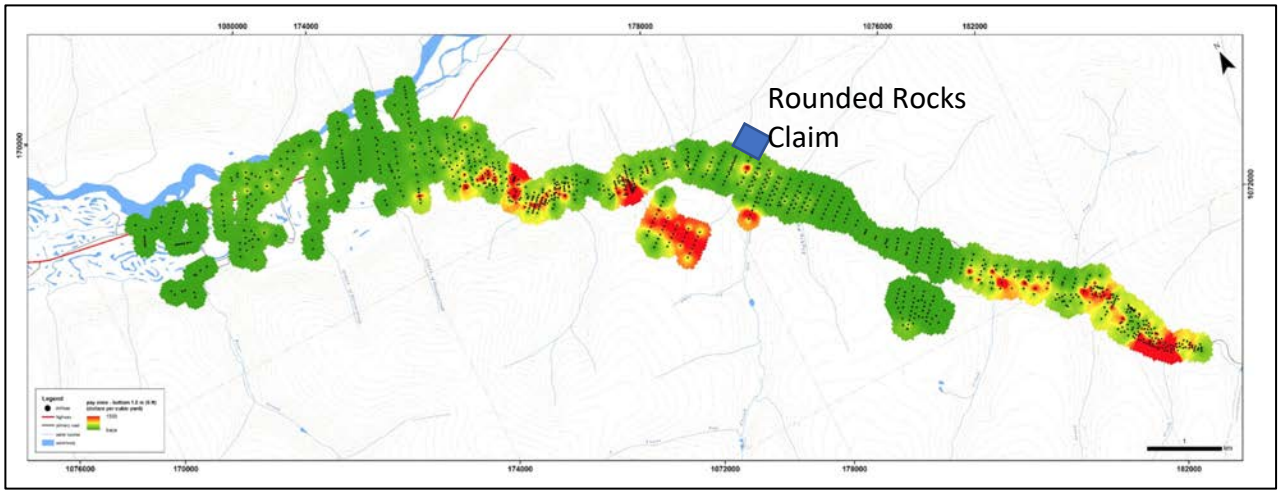

FIGURE 10. CLAIM LOCATION ON HUNKER CREEK YCGC DREDGE DRILLING MAP.

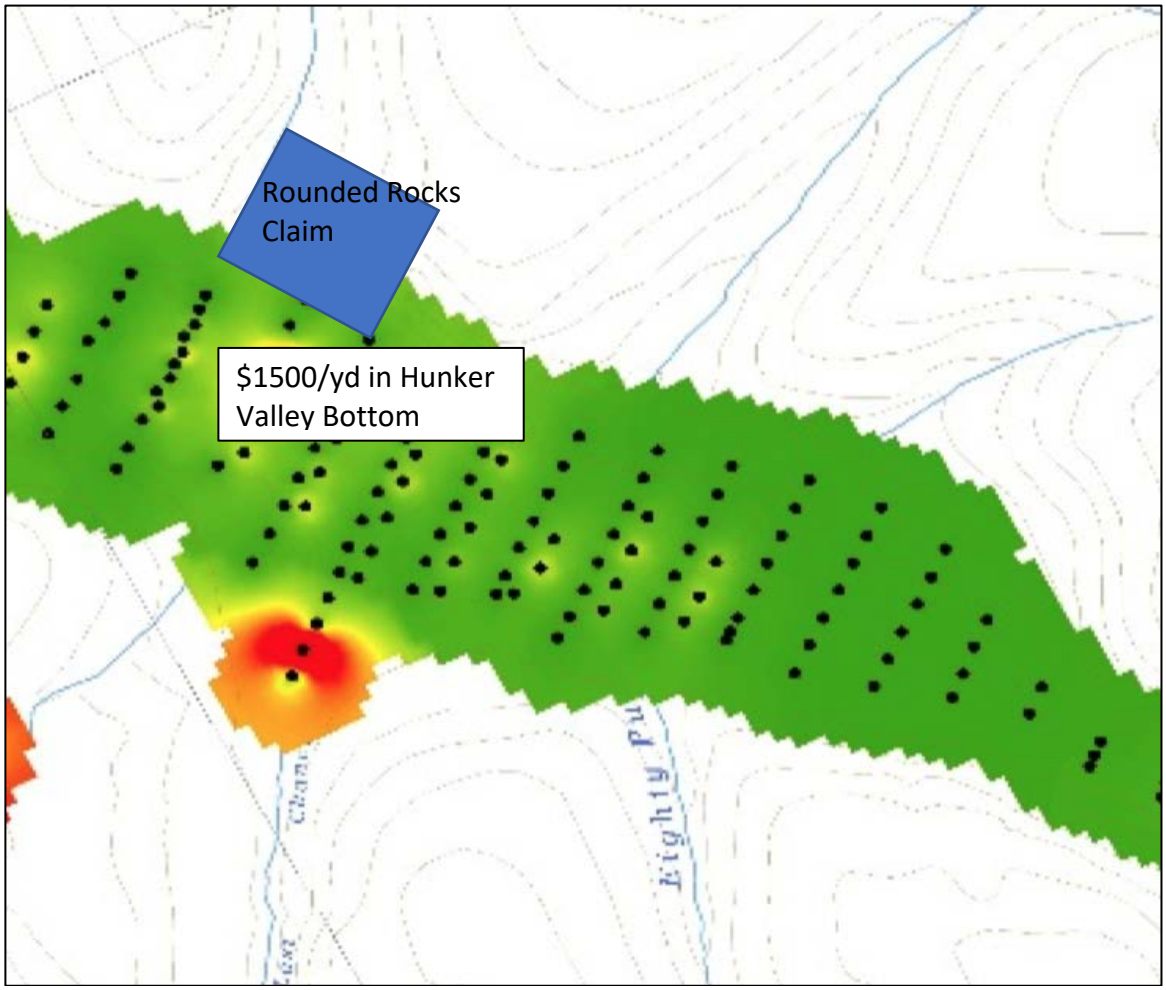

FIGURE 11. DETAIL OF MAP ABOVE SHOWING EXTREMELY HIGH GOLD GRADES THAT WERE IDENTIFIED BY YCGC DRILLING DIRECTLY DOWNHILL OF THE ROUNDED ROCKS CLAIM.

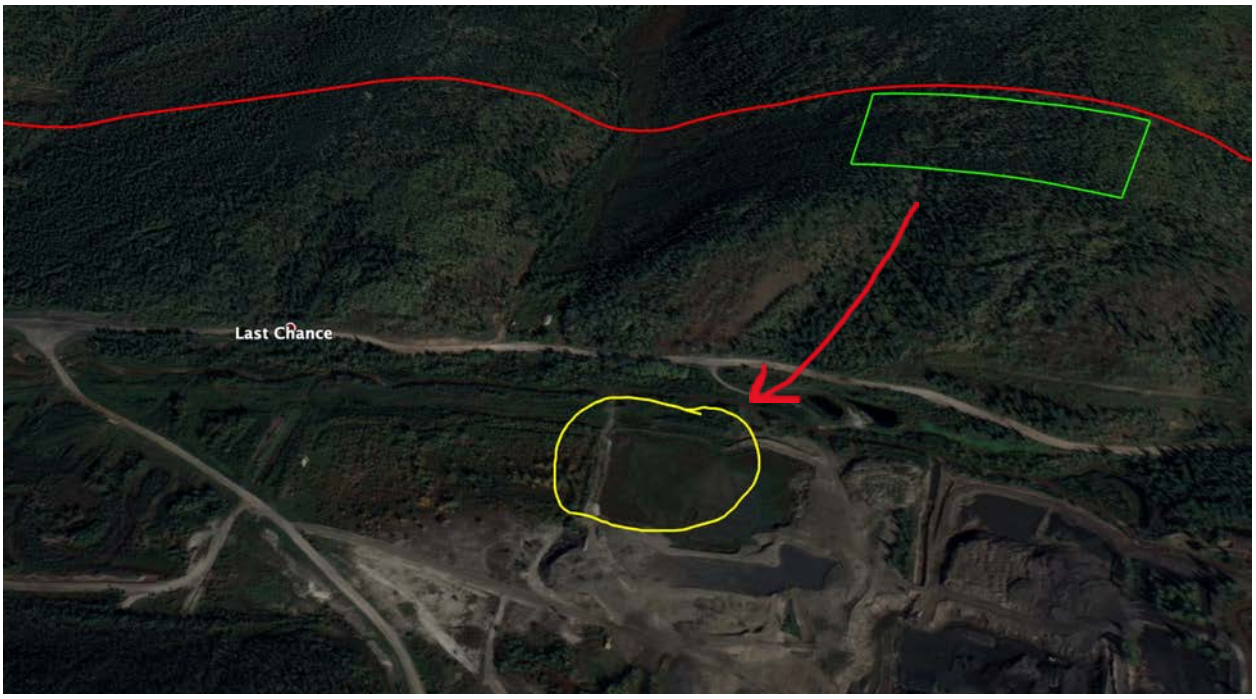

FIGURE 12. HIGH GRADE GOLD IN RELATION TO ROUNDED ROCKS CLAIM. CLAIM OUTLINED IN GREEN. APPROXIMATE ORIGINAL WHITE CHANNEL GRAVEL BOUNDARY IN RED. $1,500/YD GRADES FOUND 300M DIRECTLY DOWNHILL FROM THE ROUNDED ROCKS CLAIM. POTENTIAL EROSIONAL PATH INDICATED BY RED ARROW. OBLIQUE VIEW LOOKING EAST.

Detailed Work Plan

The work plan focussed on determining the extent of the gravel deposits and gold grades. 2D electrical resistivity tomography has proven to be an effective technique in the area for distinguishing between bedrock and surficial gravels. We propose to use this coupled with induced polarization to determine bedrock profile, especially the presence of paleochannels. The presence of an incised bedrock channel was determined using the ERT. This is a good target for exploration and elevated gold values.

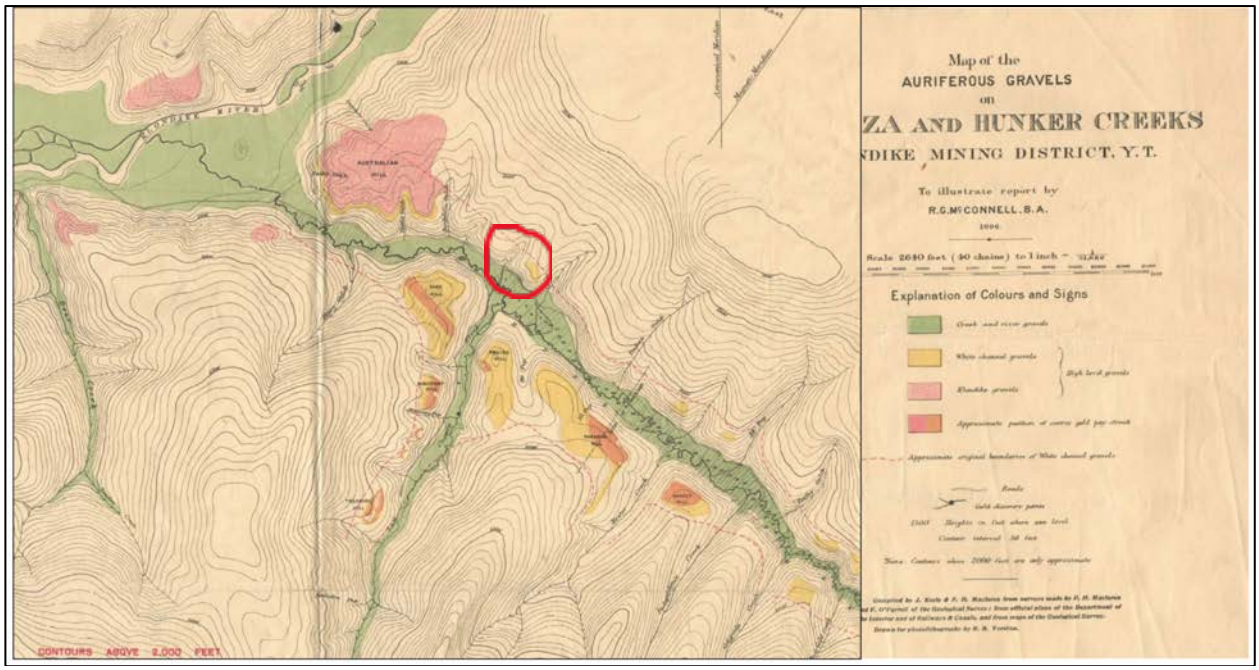

FIGURE 13. MCCONNELL MAP SHOWING WHITE CHANNEL PAYSTREAK AS WELL AS ORIGINAL BOUNDARY OF WHITE CHANNEL GRAVEL. AREA OF CLAIM SHOWS A POCKET OF WHITE CHANNEL GRAVELS OUTLINED IN RED.

Electrical Resistivity Geophysics

One Lippman 4-point AC Electrical Resistivity and Induced Polarization Surveys was conducted over the areas of interest to determine depths to bedrock and define the length and width of the gravel deposit. We were interested in finding any paleochannels that have been incised into bedrock. Work was conducted in late April-early May 2019.

Geophysics Results

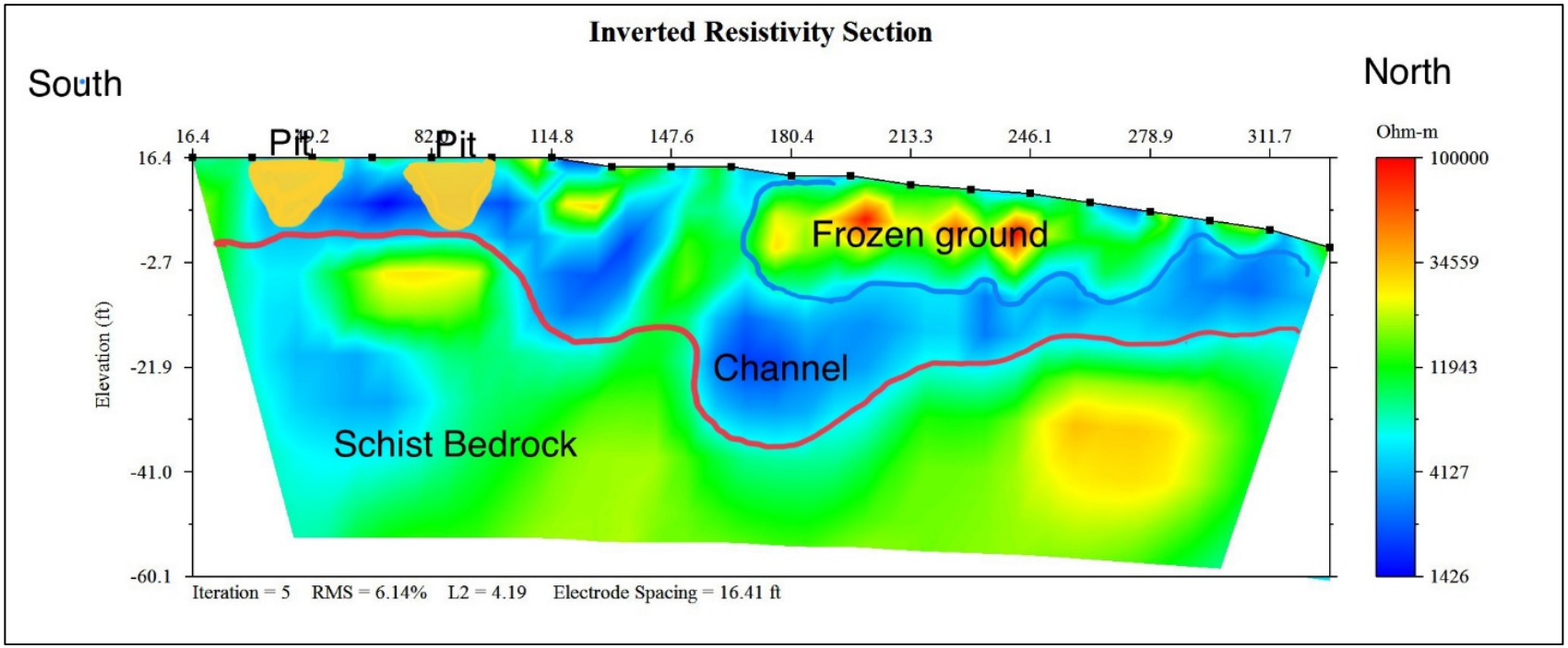

FIGURE 14. SURVEY RR1 TOMOGRAM

Survey RR1 was run across the middle of the claim from south to north. At the south end of the survey were two test pits that reached schist bedrock at approximately 12 feet (3.5m). Both of these pits had gold incidence from 1-5 colors/pan. The image shows bedrock at approximately 12 feet in depth at the location of these pits. This was used to calibrate the bedrock contact (red line) for the rest of the image. Bedrock drops sharply to the north of the two test pits, descending to over 30 feet in depth in a step roughly 50 feet wide. Bedrock then drops a further 15 feet into a deep channel incised into bedrock. This channel is likely 40-50 feet in width and almost 50 feet in depth. Bedrock then rises gently towards the north end of the survey until it is 6-10 feet below the surface. Seasonal frost was found in some locations and shallow near-surface permafrost appears from surface to 20-foot depths near the north end of the survey. Test pitting showed that the majority of this ground is thawed.

As there is good gold incidence in the two test pits at the bedrock interface the deep channel is an appealing exploration target. The channel is much deeper than anything else seen on the property and would act as a strong gold concentration mechanism. The channel appears to run east/west and may have been a secondary right-limit channel of the ancestral White Channel watercourse. It may also have been an outside bend of that river. It may also be the remains of a tributary to the White Channel system where the rest of the watercourse has been eroded away.

This deep channel is an excellent exploration target as it has the potential to be a secondary concentration mechanism for gold in the White Channel gravels. If it is similar to other concentrations in the Hunker region gold will be concentrated in the upper 3-5 feet of bedrock and lower 6 feet of gravel. Further exploration will target these strata. Exploring the channel will require drilling with a large auger or air-rotary drill capable of reaching these depths. 2020 exploration will use a tracked auger drill to systematically explore the deposit.

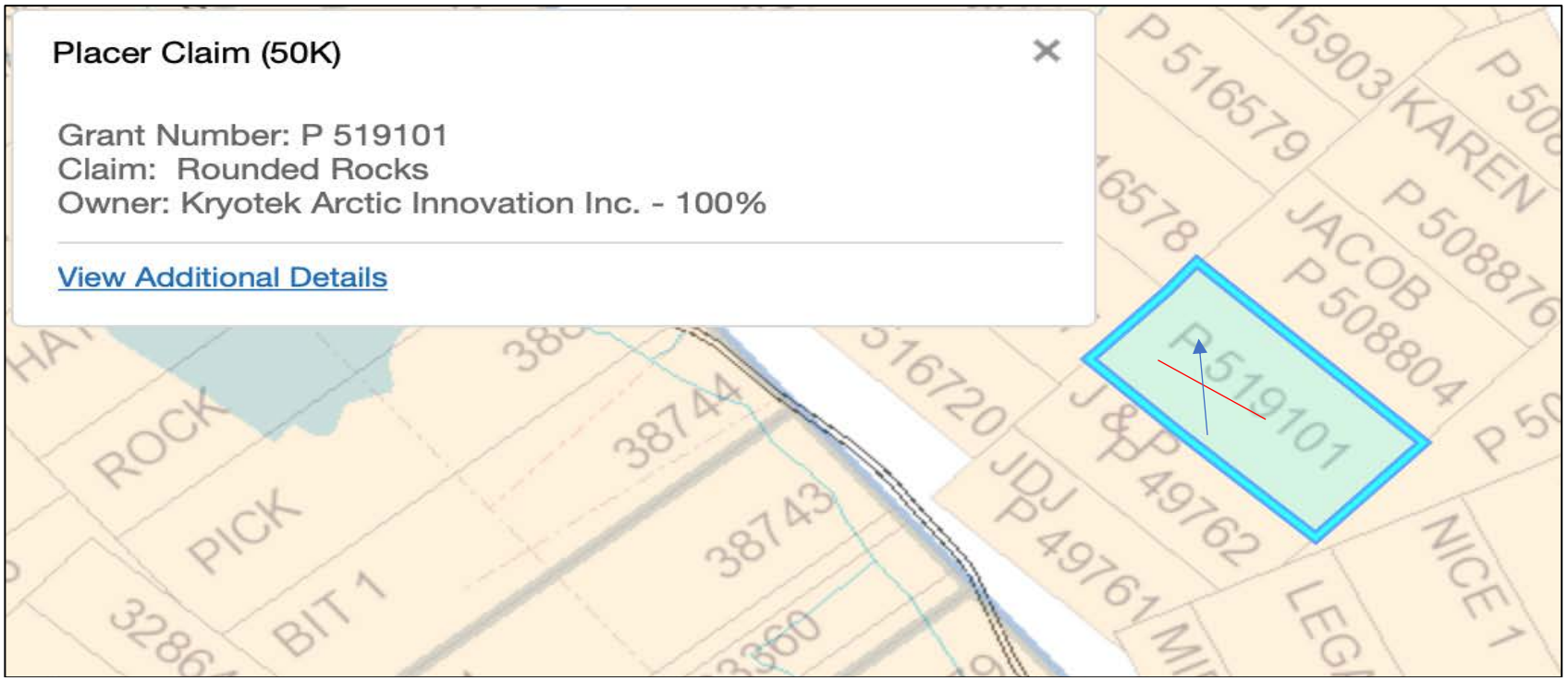

FIGURE 15. LOCATION OF GEOPHYSICS SURVEY (RED LINE) AND INFERRED CHANNEL DIRECTION (BLUE ARROW)

Summary

One electrical resistivity geophysics survey was conducted on the Rounded Rocks claim. Access over steep, treed terrain and frozen ground complicated the survey. Test pits were sampled, and the property was thoroughly surface prospected. A handheld metal detector was trialed to detect magnetic black sand concentrations and nuggets within the test pit material. The metal detector was successful in detecting flake gold.

The electrical resistivity survey was successful in delineating a deep channel almost 50 feet deep and incised into bedrock. This channel will be explored in the future with drilling.

Project Budget

Kryotek Arctic Innovation Inc.
2180 2nd Avenue
YT Y1A5N6
867-336-1597
agrawehr@kryotekinc.com
http://kryotek.ca/
GST/HST Registration No.: 817746712

KRYOTEK

INVOICE

INVOICE TO
Government of Yukon
Whitehorse YT

INVOICE # YG2020A
DATE 10-02-2020
DUE DATE 11-03-2020
TERMS Net 30

DETAILS	LOCATION	PROJECT NAME
YMEP Costs	Rounded Rocks Claim	Placer Exploration

DESCRIPTION	QTY	RATE	TAX	AMOUNT
Truck	5	50.00	Exempt	250.00
ATV	5	40.00	Exempt	200.00
Tub Trailer	5	10.00	Exempt	50.00
Trailer	5	16.00	Exempt	80.00
Chainsaw	5	10.00	Exempt	50.00
Generator	5	15.00	Exempt	75.00
Camp Costs (Field Expenses)	10	100.00	Exempt	1,000.00
Senior Geologist	5	500.00	Exempt	2,500.00
Technician	5	350.00	Exempt	1,750.00
Lippmann 4-point Resistivity/IP Rental 100 electrode system (75% of commercial rental rate)	1	2,500.00	Exempt	2,500.00
Advanced Geosciences Earth Imager 2D Software Rental (75% of commercial rental rate)	1	200.00	Exempt	200.00
Kilometers	1,300	0.60	Exempt	780.00
Reporting (10% of total)	1	1,000.00	Exempt	1,000.00

Payment is due March 11, 2020. 2% interest will be charged on accounts later than 30 days.

SUBTOTAL	10,435.00
TOTAL	10,435.00
BALANCE DUE	**$10,435.00**

Statement of Qualifications

James Coates – Senior Geomorphologist and Geophysicist

I, James Coates DO HEREBY CERTIFY THAT:

1. I am a Consulting Geomorphologist with current address at 2180 2nd Ave Whitehorse, Yukon, Y1A 5N6.

2. I am a graduate of the University of Calgary (B.Sc., 2004, Geography) and the University of Ottawa (M.Sc., 2008, Geography), University Laval PhD (Deferred, 2011).

3. I have practiced my Profession as a Geomorphologist continuously since 2008.

4. I am a former Placer Geological Technician with the Yukon Geological Survey and Co-Author of the Yukon Placer Atlas.

5. I am a specialist in the use of Electrical Resistivity Tomography for placer gold exploration.

Astrid Grawehr- Field Technician and Logistics

I, Astrid Grawehr DO HEREBY CERTIFY THAT:

1. I am a practicing geoscience technician with current address at 2180 2nd Ave Whitehorse, Yukon, Y1A 5N6.

2. I am a geophysics technician with over 1,000 hours of field time conducting resistivity/IP surveys.

3. I am a graduate of Bishop's University (B.A. Geography, 2008).

4. I am Director of Operations of Kryotek Arctic Innovation Inc.

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Appendix 1

Geophysics Overview

Resistivity and Induced Polarization Geophysics will be used for this area as the electrical properties of gravel, schist bedrock and mineralized fault systems are distinct and easily definable. A Lippmann 4-point Resistivity System will be used. This system allows up to 40 m of depth penetration. This system has been used by Kryotek for mineral exploration and subsurface definition in 2013 at the Casino property, Dawson goldfields area, Burwash Landing, Whitehorse area, Mt Nansen, Norman Wells and Fairbanks, Alaska.

Data will be collected and inverted using AGI Earth Imager 2D software. Noisy data points and electrodes with poor contact resistance will be removed and data will be filtered for spikes or depressions in resistivity. The software will produce two-dimensional tomograms using a smoothed, least squares damped and robust inversion parameters. Preliminary interpretations will be conducted on the processed data.

DC Electrical Resistivity Tomography

This technique injects a direct electrical current into the ground surface, and then measures the voltage that remains at a number of distances from the injection point. As different soils have different resistances to electrical current, a tomogram (subsurface diagram) of resistivity can be produced.

Induced Polarization Tomography

This technique is conducted simultaneously with the DC electrical resistivity. As the electrical current is injected into the ground, a charge is retained in soil and rock materials and then decays as a function of time. This differs according to the electrical properties of the ground materials and can be useful in differentiating subsurface material types and boundaries.

Earth Imager 2D Software

Earth Imager 2D software (Advanced Geosciences Inc.) will be used to invert and process the geophysics data. This software produces two-dimensional tomograms of resistivity data. The images will be processed using both smoothed and robust inversion parameters in order to clarify transitions between material types as well as resistivity properties of those materials.