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March 31, 2020

DAWSON CREEK (115N08)

2019 - 2020

Final Technical Report for YMEP19-031.

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Introduction

This is a Final Technical Report of placer gold exploration on Dawson Creek, (115N08 and 115N09. Yukon Mineral Exploration Program YMEP19-031.

Exploration from June 23 – September 18, 2019 consisted of panning, prospecting, mapping, m³ scale sluicing and drone imaging.

From February 17 – 26, 2020 the first phase of a shafting program was completed. The second phase of shafting was completed from March 25-30, 2020.

Placer gold in surface gravels at various locations for over 10km along Dawson Creek has been discovered. One section where m³ sluicing followed up on panning hotspots has identified surface gravels that average 200 mg Au/m³ sluiced for 300m along the creek.

Shafting work showed that bedrock was only 12 ft deep near the lower end of Dawson creek.

Source Documents

Sources of information are detailed below and include available public domain information and private company data.

- Research using Mining Map Viewer at <http://mapservices.gov.yk.ca/Mining/Load.htm> :
 - Minfile
 - Land Tenure
 - Mineral Title
 - Bedrock Geology
 - Satellite and Aerial Imagery
 - First Nations Settlement Lands
 - Assessment Reports
 - Access Roads and Trails
 - Placer Stream Classification
- Research and GIS data using Yukon Geological Survey's Integrated Data System (YGSIDS) at <http://data.geology.gov.yk.ca/>
- Morgan Fraughton's personal experience from mineral exploration in Yukon
 - 2006 to 2008 - Diamond Drilling at the Minto Mine in 2006 and working other Drilling projects in Northern Canada; Uranium City, NWT Diamonds, British Columbia Porphyry

- 2009 to Present- Leading crews and personally staking tens of thousands of hardrock claims in the Yukon 2009-Present.
 - 2009 to 2013 - Project Manager for Ground Truth Exploration (Shawn Ryan) operating RC drills, Managing 20+ person camps, 200,000+ soil sample collection programs. QV Project, JP Ross, White Gold, Coffee Creek, Ida Oro, Kluane area and many other Shawn Ryan mineral properties in the Yukon.
 - 2017 to 2018 - Placer prospecting and shafting on creeks (Gemini and Soda) that drain into North Ladue River Valley on Mapsheets 115N07 and 10.
 - 2013 to Present - Prospecting to Placer Mining on Swede Creek.
 - 2012 to 2019 Prospecting and trenching on Mariposa Property (Scroggy Creek) with Jean Pautler
 - 2013 to Present – Owner operator of Spere Exploration Inc. a company dedicated to prospecting and developing placer and hardrock properties as well as providing grassroots type prospecting services to others.
- Review of Mining Recorder documents for Matson creek area and claim groupings from the main Matson creek mine (1977-Present).
 - GIS data available from <ftp://ftp.geomaticsyukon.ca/>
 - Research Using Google Earth imagery
- Review of geological maps and reports completed by the Yukon Geological Survey or its predecessors.
 - Review of published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.
 - Review of the news releases, website of, and publicly available data on various companies that operated in the Area historical to present
 - Work on, and examination of, the property by Morgan Fraughton from June 23-29, 2019, August 13-20, 2019, September 9-18, 2019, February 17-26, 2020 and March 25-30, 2020.

Claim Tenure and Stream Classification

The Daw 1-52 claims are 100% owned by Spere Exploration Inc. Prospecting lease ID01786 is 100% owned by Morgan Fraughton. Morgan Fraughton is 100% shareholder of Spere Exploration Inc.

All of Dawson creek and its tributaries are classified as LOW habitat Suitability in the Yukon Placer Stream Classification. LOW classification is ideal for placer mining because one can move the creek if need be.

Dawson creek is part of the Sixty Mile River Watershed.

Access

For prospecting trips (June 23-29 and August 13-20, 2019) access was gained by pickup truck from Dawson City to Matson Creek. Then, a helicopter from Dawson City picked us and our gear up from Matson Creek. Then we dropped nightly food and supplies at pre-determined locations. Then we would get out of the helicopter to start the multi-day prospecting traverse back to the truck. Once back to the truck we drove back to Dawson City.

Portions of the current road from Sixty Mile River to Matson creek were originally created (late 1970's and early 1980's) for uranium exploration by Eldorado Nuclear Ltd. who had various exploration properties between the Sixty Mile River and Matson Creek. Aerial imagery from 1988 and 1989, found as layers on the Mining Map Viewer, show how these exploration roads looked before the current Sixty Mile to Matson road was created.

The existing road to Matson Creek from Sixty Mile River is a mix of the older Eldorado Nuclear Ltd. exploration roads and newer roads that extend off them to reach Matson creek. No detailed available record could be found to determine who upgraded and extended this road to Matson creek.

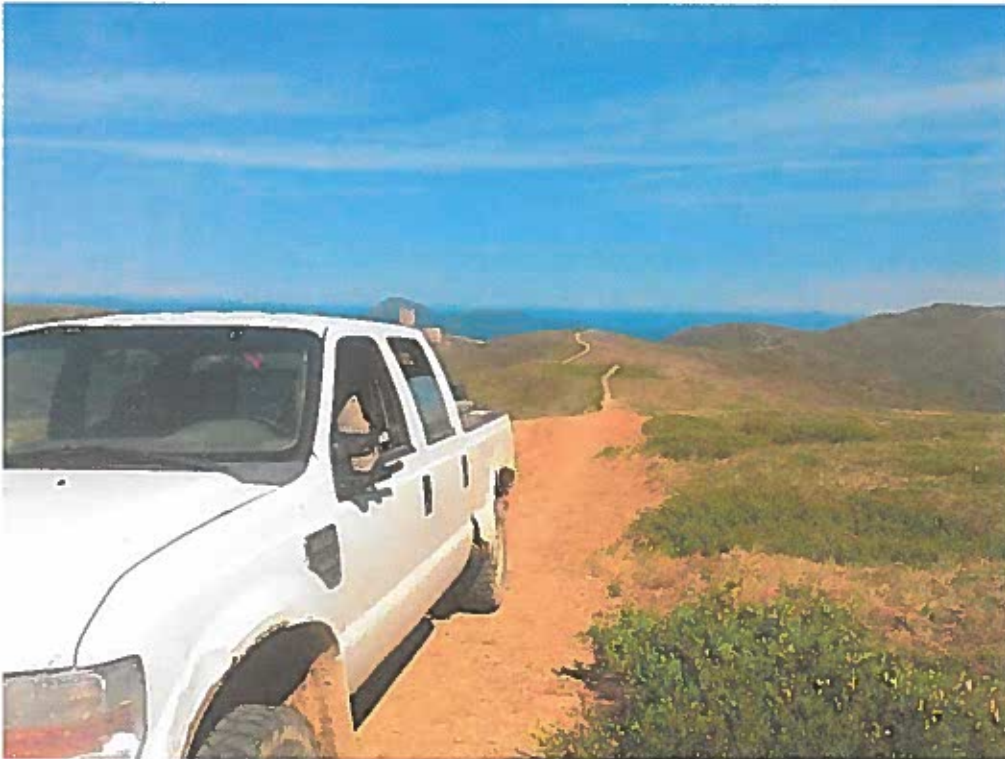


Figure 1 - Sixty Mile River to Matson Creek road is in excellent condition.

A pickup truck road from Matson creek to Dawson creek exists and for the most part is in excellent condition for pickup truck.; except for where its climbs out of Matson creek and then again when it descends into Dawson creek. The road in these locations needs to be cleaned up with excavator or bulldozer in order to be usable by pickup truck again. Once out of the Matson creek valley the road runs along a ridge for almost 10 km to Dawson creek.



Figure 2 - Dawson creek road section looking down to Matson creek is in disrepair.



Figure 3 - Road section between Matson and Dawson creek is in very good condition along the ridgetops.



Figure 4 - Road section that descends to Dawson creek is in disrepair.

Aerial imagery from 1988 and 1989 (Mining Map Viewer) shows no Matson to Dawson creek road. The historical imagery slider on Google Earth was used to determine when the road from Matson Creek to Dawson Creek was created. Imagery from 2013 shows no road. Imagery from 2014 shows a road. Therefore, the road was created in summer or fall 2013 or 2014. Google Earth imagery specifies an imagery date of December 30, 2013 and 2014 but obviously the imagery on Google Earth is not from those dates because there is no snow on the ground in the imagery; these images were taken in the summer.

By helicopter Dawson creek is 80 km from Dawson City. During this exploration program Horizon Helicopters and Fireweed Helicopters were contracted. Helicopters used were EC120 and ASTAR, and Fireweed 206 Long Ranger.

There is a gravel airstrip at Matson Creek where planes can land. This airstrip was not utilized during this exploration program but in the future this airstrip could be utilized to ferry in supplies and personnel. If the road was opened from Matson Creek to Dawson Creek the airstrip would be 15 km by road from Dawson creek.

A clear trail line is visible from the air going up on Marion creek over the pass in to Twenty Mile Creek. This is probably a trapping line it may be possible to access this line with snowmobile from Dawson City; up

Yukon River, up Sixty Mile River, up Twenty Mile River over the pass down Marion Creek then up Dawson Creek.

Other historical routes exist such as the road going from 14 km (from ferry landing) on The Top of the World Highway down to Swede Creek then back up to the ridges and spurs leading into the mouth of Matson Creek on the Sixty Mile River. Then the road goes up Matson creek all the way to the current mine site. It is rumored that this road was built as a winter road to get equipment into the Matson creek mine site in the late-70's early-80's(?). This road can be seen on Google Earth or Yukon Government maps with aerial imagery layers.

Summary of Previous investigations

Matson creek is named after Johnny Matson, notarized for marrying Klondike Kate. Johnny Matson mined a claim near the mouth of Matson Creek. He died on his claim in 1946 at the age of 82. His body was found scattered around his cabin and had been mostly eaten by wolverines. The cause of his death is not known. Supposedly Klondike Kate had a headstone made for him and had him buried in the hills above his cabin on Matson creek, but I have also read reports that he is buried in the Hillside Old Public Cemetery in Dawson city. Johnny worked alone and lived at his claim and trapline year-round by himself. He must have had a great spot for pulling out gold in order to finance his wife's lavish lifestyle; or so I thought but other reports say that Johnny did not produce much for gold but more enjoyed the summer mining and winter trapping lifestyle. I cannot find any detailed information on Mr. Matson and his workings.

This is the first time I have explored Dawson creek. In the area, I have completed shafting on Gemini creek, (not named on the Yukon maps). Gemini creek is 20 km to the west of Dawson creek and flows from east to west into the North Ladue river. I have also staked hardrock claims in the area and done hardrock prospecting to the north of Matson creek and other areas to the south, west and east of Dawson creek.

Aerial imagery of 1988/89 shows some work near the mouth on a bench area of the right limit of Dawson Creek. A trench like clearing and machinery trail to it is visible. I was not able to inspect this area during this exploration program.

As far as I can tell, two men who have spent significant time mining on Matson creek mine were; Albert Tierney Savage of Edmonton Alberta passed away in Edmonton in September 2017 and Murray Walter Orbanski died on October 21, 2013 in Hnausa, Manitoba. Online obituaries show this information. Robert Hilker is also a contract geologist name that comes up often in documents relating to Matson Creek and other North Ladue Exploration programs of the late 70's early-80's. Robert George Hilker died April 23, 2013.

The mine on Matson creek and tributaries is currently owned by 500722 N.B. Ltd., a holding company, that had Donald Long as a director until his death in 2011. At his death the director changed to his surviving wife; Myra Long. At the writing of this report I just received contact information from the Mining Recorder in Dawson for Myra and plan on contacting her for some information. The company was not mining from

2017-2019. It is not clear how or why this company obtained the Matson creek mine. Only that they currently own it. They are not mining it. The last time it was mined was in 2016 under lease by Jerry Radford. This is another person who may know more about Matson Creek and Dawson creek that I did not contact.

Another interesting fact is the relation that Matson Creek mine has to Magna North Gold Ltd and relationship that company had to Gary Sorenson and Milowe Brost who were convicted in 2015 of "the largest Ponzi type scheme" in Canadian history.

The claims Daw 1-52 (same name as current but different grant numbers) were previously held by North American Tungsten Corp. (NATC) and predecessors of the NATC since 1977. The Daw 1-52 claims owned by NATC expired December 18, 2019. When the claims were let to lapse each claim had 11 years excess banked credits at the mining recorder. When the claims had not been renewed at the mining recorder, I set out to stake a 5-mile lease over the expired claims on January 25, 2019. At the time NATC had until June 6, 2019 to renew their claims in penalty and get them back from me but that date came and went with no renewal from them. NATC was put into protection from its creditor in 2015 and is being managed by a trustee company until 2020. I did not contact NATC for information on Dawson creek for fear they would try to renew.

I spent some time researching past recorded assessment work on Dawson Creek. The claims Daw 1-52 were grouped in with the main Matson creek mine grouping and that is where they received their banked assessment credits; applied through the grouping. I was not able to determine when the Daw 1-52 claims that were owned by NATC were ungrouped from the main Matson Creek Mine grouping and made into their own grouping or why NATC owned the claims at all. What do they know? Must be something after having kept the claims active for almost 50 years. NATC filed for creditor protection in 2015 while it restructures. The initial stay of proceedings has been extended until April 30, 2020. I am guessing that due to NATC being in restructuring initiatives under Alvarez and Marsal Canada Inc. the Daw 1-52 claims were overlooked and accidentally let to lapse.

Some hardrock exploration has been done in the Dawson creek drainage in the past. The in 1970 PAX anomaly (MINFILE 115N 029) was a porphyry copper target and was again followed up in 2011 by a Metal Creek Resources.

In 2011 Metals Creek Resources did a soil, silt, and rock sampling program on the FOGO claims. This program returned only one soil that was 19.2 ppb Au and only 4 samples greater than 10 ppb. Rocks and silts had no significant assays. It appears that Metals Creek Attempted to cover the old PAX showing with their claims and soil sampling. From reviewing their work, it seems that they missed the target! Clearly the area where the FOGO claims and soil samples were completed missed the old PAX occurrence by about a kilometer too far. FOGO claims and soil samples were taken much too far to the north of the PAX occurrence to cover the old occurrence. Their claim block and sampling program should have shifted about 2km to the south in order to cover the findings described in the PAX showing. In the attached map the PAX occurrence's best samples were taken almost 1km to the south of the FOGO property boundary! The FOGO samples even seem to get more mineralized as they approach the PAX occurrence.

In the application for this YMEP19-031 I indicated that a helicopter pilot I had talked to who set Gerry Radford out at a location where he was able to pan out gold easily from the creek. I talked to that pilot again and he reconfirmed the story again with more detail. The place where they panned was in the creek next to the old excavator pits. Gold was easily panned from the creek here according to Vince Edmonds. While we were prospecting through this area, multiple pans were taken from the creek as well as from the old pit piles themselves. No gold was recovered. But this is the issue with panning. I personally know from working on a high grade placer gold deposit on Swede creek that you can be in a place where washing high volumes of gravel the gold grade is 1.5 grams + per m³ but panning from the same area can return no gold at all for many pans then have a few flakes in a few pans. So, anytime you can find any gold whatsoever in a gold pan it bodes extremely well for potential returns when you wash higher volumes.

Excavator pits have been dug on Dawson creek near the middle of the length of the creek. These pits were probably dug when the Matson to Dawson Creek road was built; 2013-2014.



Figure 5 - Old excavator pit. From 2013/2014?

Bedrock Geology

QUARTZ FELDSPAR PORPHYRY (QFP) AKA ITR2 REGIONAL UNIT 48-58 MA



Figure 6 - Quartz Feldspar Porphyry (QFP)

Quartz feldspar porphyry (QFP) is by far the most visible and abundant bedrock of the area. From the forks where Dawson creek meets its main left limit tributary to its mouth the entire south side of the creek is made up of QFP talus sliding in from the hilltops to the creek. Also, indicated by geophysics and walking up the road towards matson creek from Dawson creek you can see the extent of the QFP on the west side of the valley as well.

Yukon Government maps have mapped this QFP as a tertiary rhyolite/porphyry and this has proven to be an accurate description. The area on the Government map seems to be quite accurate compared to my field observations but I have made some adjustments based on field observations. The QFP is typically a whitish matrix but can sometimes be brown, red, green and or black. Always with black quartz inclusions and feldspar.

Gravel in Dawson creek is mostly QFP from claim Daw 52 downstream, especially on surface. It seems the QFP "floats" because it is lighter than the hornblende rich rocks from the gneiss package.

HORNEBLENDE TO BIOTITE GNEISS/SCHIST(?) UNIT MQSR 345-355 MA??

The second most abundant bedrock material is a biotite-hornblende (hbl) schist/gneiss to hbl gneiss (BHSG-HG). The gneiss was viewed in bedrock upstream from the PAX anomaly and in creek gravels. While descending the left limit tributary of Dawson creek it was obvious that we were walking from a gneiss into a contact metamorphic zone between the gneiss and the QFP.

To me the gneiss closely resembles the MqSR regional unit as described in the Yukon Geological Survey's bedrock map of the area around the top end of Scroggy/Mariposa Creek. I have spent significant time trench sampling, prospecting, and learning the bedrock of the Mariposa property with Jean Pautler over the years. Starting in 2012 and working on the project in 2016, 2017, 2018, and 2019.

I believe that this gneissic bedrock on Dawson creek can be divided in two rock types that may be part of the same layered gneiss package. One is hornblende rich gneiss/schist with occasional biotite that can almost be referred to as an amphibolite. This hornblende rich section of the gneiss package forms most of the ridge and spurs in the area because it is so hard and weather resistant.

The other layer in the gneiss package is a near schistose biotite rich foliated bedrock that contains zones of muscovite alterations resulting from hydrothermal alteration such as quartz veining and silicification. I suspect that like the Mariposa/Scroggy area, gold mineralization in bedrock is directly associated to these silicified, altered quartz veining areas of this biotite schist like sections of the gneiss package.

Hornblende rich gneiss (Amphibolite(?)) is seen in creek gravels and also viewed as outcropping on hills around Dawson creek. A very hard, and heavy hornblende rich rock. This also closely resembles the Mariposa project in that around Mariposa and Scroggy area the ridgetops are quite frequently made of hard amphibolite that is in contact with hornblende gneiss and a biotite like schist package. Quartz veins and areas of hydrothermal alteration (muscovite, silicification) in the biotite schist package are the target for gold mineralization. There is probably an similar geological situation to Mariposa/Scroggy going on in the Dawson creek area.

In the contact zone as the gneissic rocks get close the QFP, in the gneiss, there are quartz veinlets cross cutting floatation, silicification, pyrite, bornite and chalcopyrite were found. This is a contact metamorphism zone and should be further investigated for porphyry style copper mineralization. The PAX anomaly was discovered with basic rock, soil, and stream sediment sampling in 1970. Bedrock mapping on the PAX anomaly reports a porphyry granite at the top of the hill. I was not able to get to the top of the hill during this exploration program to explore this feature as the focus of this program was on placer gold.

BASALT(?)

In two separate locations, over 7km apart from each other,



Figure 7 One of the basalt showings discovered on Dawson creek.



Figure 8 Attempt at a close-up photo of the basalt.

outcroppings of a grey/black, fine grain, basalt like rock was found in outcroppings on creek shoulders.

This rock does not make up a significant portion of the creek gravels unless immediately downstream from these outcroppings and seemingly does not contain minerals of interest. But its presence is noteworthy for the construction of a property scale bedrock/surficial geological map.

The picture here shows a poorly focused close-up and more visible background rock. This rock for me is difficult to describe. Is it a Basalt, Shale, Slate? Old reports from 1921 describe lignite coal float being found in placer workings on Matson creek. The report generally describes it as potentially originating from a conglomerate base from the Carmacks group is this that conglomerate base?

BRECCIA

Breccia was discovered in two location and breccia was also previously mapped in 1970. One breccia on the main branch of Dawson creek looks to originating from the gneiss rock of the area. The other breccia discovered looks to be a QFP breccia.



Figure 9 - Breccia(?). Possible conglomerate(?) from the main branch of Dawson creek.



Figure 10 - QFP Breccia from the left limit tributary of Dawson creek. Contact zone metamorphic inclusions of QFP.

UNIT PDS1 A QUARTZITE???

PDS1 was not observed on the property as described by the YGS Bedrock map compilation. It may be that it is there, but I did not view any rocks that resembled this Snowcap assemblage description. My bedrock polygons and interpretations therefore do not include this unit at all.

Surficial Geology

Surficial geology in Dawson creek is that of a typical drainage in the Klondike Plateau. Permafrost dominates. Surficial deposits of frozen organics, silt and muck form the top layer to a layer of poorly sorted

gravels. The image below identifies a surficial material profile on Matson creek, which is identical to that of the shaft dug on Dawson creek.

The project is in the Klondike plateau which has not seen the effects of glaciation for more than 3 million years. Being unglaciated has helped to create surficial geology of well sorted layers where fluvial action has freed the gold in bedrock units and deposited it locally as placer gold; typically, on the bedrock gravel interface. Unglaciated terrain makes placer exploration predictable in that the main driver of gold

deposition has been gravity and fluvial action on the bedrock. This makes the bedrock/gravel interface the priority target for all placer gold exploration in the area.



Figure 11 - Matson Creek Reuben French standing next to untouched overburden profile left after mining has gone through. Water surface here is about 4ft under bedrock gravel interface (BGI). Profile goes: 0-5ft organics and silts, 5-12ft sands and smaller gravel layering then grading to sorted larger gravel. BGI at 12ft. Dawson creek overburden profile is expected to be near identical. Digging out and panning material at the BGI here in this photo did not reveal any gold.

Summary of This Investigation

PROSPECTING TRIP 1 (JUNE 23 TO JUNE 29, 2019)

Day 1 –

Prospecting trip #1 started June 23, 2019. Morgan and Reuben drove from Dawson City to Matson Creek. Expecting to be able to drive the road from Matson to Dawson creek, once there we discovered that the road was not passable because of deteriorating road conditions. So, we setup camp and decided to base out of there while we investigated and fixed up the road.

Day 2 –

Spent the day walking the Matson to Dawson creek road and cutting it for truck access. After a day of road work and attempting to open it up, it was apparent that a machine was necessary to make the road passable again for pickup truck access. Spent the night in the same camp.

Day 3 –



Figure 12- Typical backpack for daily traverses between camp locations.

Pickup from Horizon helicopters EC120. We scouted out a few areas on the creek and looked for the location where we thought previous stakes and landing zones were possible and where previous panning spoken of that contained gold in the pan (See application for YMEP19-031). Set down at a few locations and did some panning and observations. Dropped out food supplies for the next few days. Then got set out up above the PAX anomaly on left limit tributary of Dawson creek and started to prospect down to our first supply drop.



Figure 13- Typical nightly prospecting camp scene.

Day 4 –

Spent entire day panning and prospecting on the unnamed left limit tributary of Dawson creek. Ended day at stash at the confluence of UNLLT of Dawson creek and Dawson creek proper.

Day 5 –

Full day prospecting down Dawson creek from UNLLT to area where the road come into Dawson creek.

Day 6 –

Some prospecting on Dawson creek area then walked the entire road from Dawson creek back to truck on Matson creek. Road is in very good condition except for where it drops into Dawson creek and Matson creek. These sections need to be cleaned up with an excavator or dozer before trucks can once again use the access road.

Day 7 –

Driving back to Dawson from Matson creek.

PROSPECTING TRIP 2 (AUGUST 13 TO AUGUST 20, 2019)

Day 1

Drive out to Matson creek from Dawson

Day 2

Drone the mouth of Dawson creek road where it goes into Matson creek. Wanted to drone most of the road but had significant problems with the drone and picture taking on this day.

Day 3

Helicopter pickup from Fireweed helicopters. Dropped out supply stashes along the creek. Got out up on a hill above the top end of Dawson creek. Did some prospecting and camped at stash spot 1. Got good gold in the creek on this day. A few flecks per pan in one area at the very top end of Dawson creek.

Day 4

Prospected down Dawson creek to stash spot 2 next to old excavator pit piles. Came on to the stash and found that a wolverine had devoured and destroyed everything in it. No choice but to hike down to stash spot 3 for the night. Unfortunately, we had to skip that section of the creek for more detailed prospecting.

Day 5

Spent day in this location trying to dig a shaft. Dug down to approximately 4ft and hit water table. Then dug into water table about 2ft. No gold and could not keep going deeper due to the water table.

Day 6

Prospecting, mapping and panning down Dawson creek to our next stash spot. Found good gold in the creek on this day.

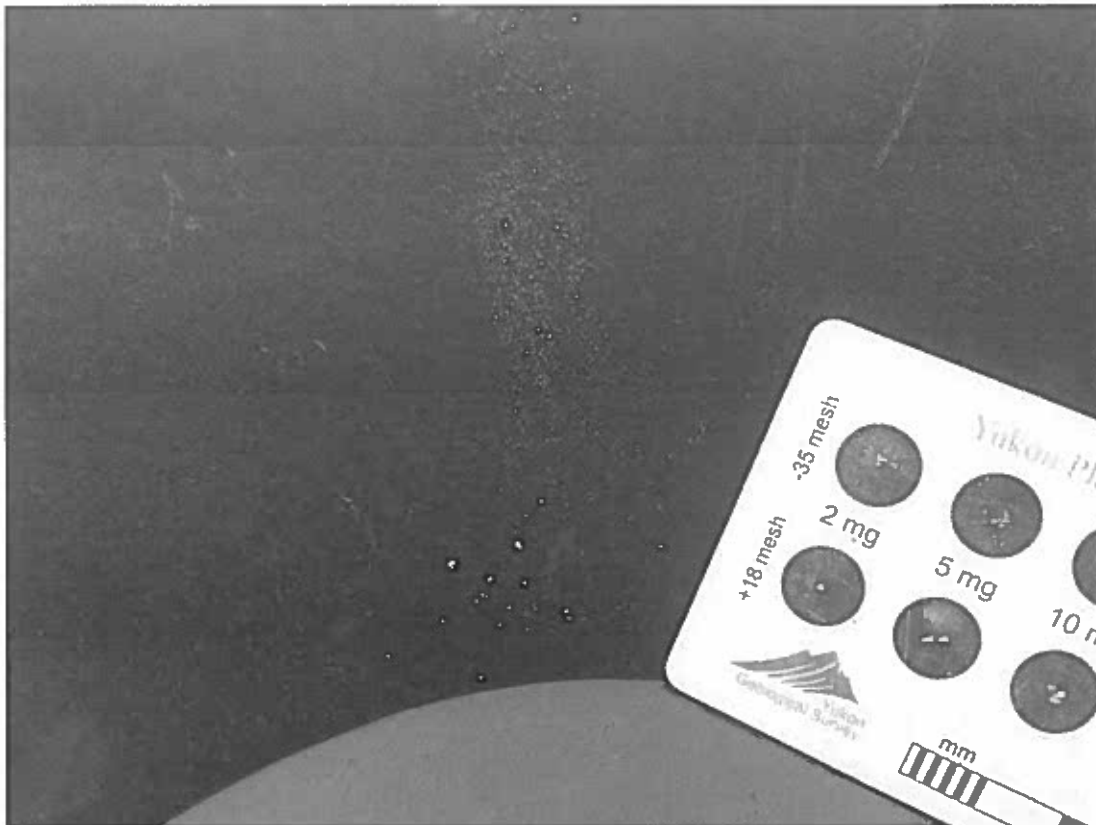


Figure 14 - Best gold in pan from prospecting traverses.



Figure 15 - Best gold in pan location marked with stick and flagging.

Day 7

Prospecting remaining amount of ground down to the mouth of Dawson creek. Then hiked back to truck from mouth of Dawson to Matson creek. Arrived at truck and spent night there.

Day 8

Driving back to Dawson from Matson creek.

SAMPLING AT THE CUBIC METER SCALE (SEPTEMBER 9 TO SEPTEMBER 18)

Day 1

Fly to Dawson creek from Dawson City. Setup camp and acquire firewood, Sample 1 m³, sample #1

Performed definition and step out panning on the original bar where gold was discovered to learn where the best distribution of gold was on the bar and where to start sluicing.

Sample #1 – pit dug on the bar that is 3.5 m parallel to the creek x 1.0 m perpendicular to the creek x 0.3 m deep = 1 m³ was dug out of the bar and measured into a bin that is 0.33 m³. 3 bins were and sluiced. Panning the heavies from the sluice run returned a visual estimate of 80 mg of small flake gold dust. Assuming a gold purity of 0.80 and a gold value on March 16, 2020 of \$67 CAD/gram of pure gold, this return is worth \$4 CAD/m³ sluiced. The pan also contained heavies of magnetite, garnet, and hematite. Magnetite is abundant

Day 2

Sample #2 – from same pit created by Sample #1 but went 0.3 m deeper. The result was a reduction in the gold and heavies recovered was only 30 mg.

Sample #3 – taken downstream of sample #1 and #2. This sample was taken using more surface material and digging less depth. Dimensions 3.5 m long x 1.5 m wide x 0.2 m deep = 1 m³. 100 mg of gold was recovered at a value of \$5/m³.



Figure 16 - Measuring out Sample #1,2 and 3.

Day 3

Panning in intervals upstream from Sample #1, 2, and 3 for 300 m and downstream 100m. Virtually no gold was found downstream. For 300 m upstream gold was panned out of surface gravels along a straight section of the creek from the original gold find to a beaver dam. Gold values seemed to increase as we went further upstream. Later panning above the beaver dam did not return any gold.

Moved sluicing setup upstream to a bar close to the beaver dam and setup then sluiced 1 m³ in a location where the strongest gold/pan values were recovered – Sample #4.

Sample #4 – from last bar before beaver dam. Sluiced 1 m³ and recovered a visually estimated 200 mg of gold for a value of \$11/m³.

Day 4

Droning work in the morning and sluicing 2 m³ in the afternoon.



Figure 17 - X2Q Vertical Takeoff and Landing Mapping Drone. By XCraft of Coeur d'alene, Idaho.

Sample #5 – taken from the same bar as Sample #4. 2 m³ sluiced returned a visual estimate of 0.4 grams gold for a value of \$11/m³. Later this sample was cleaned completely by getting the heavies out of the gold as much as possible with fine water movements. Then the gold was picked out from other heavies using tweezers and a magnifying glass. This process was tedious and took all day the gold weighed in on the scale at 0.4 g. This shows how accurate the visual estimates were. Visual estimates were based on the Yukon Geological Survey's wallet sized, Yukon Placer Gold Scale card – seen in images of this report.

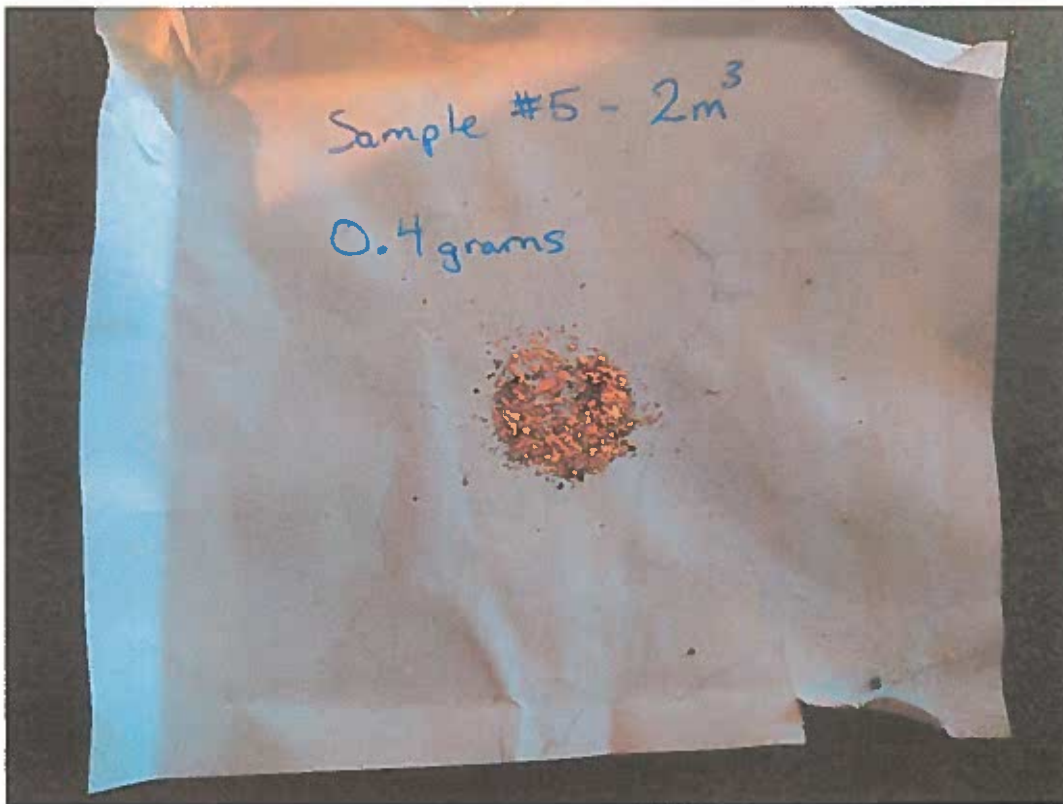


Figure 18 sample #5 after it had been sluiced and concentrated to gold only.

Day 5

Droning work in the morning and sluicing Sample #6, 3 m³ - in the afternoon.

Sample #6 – sample number six was washed on the same bar as Sample #4 and 5. Sample #6 sluiced 3 m³ and returned a visual estimate of 600 mg gold.

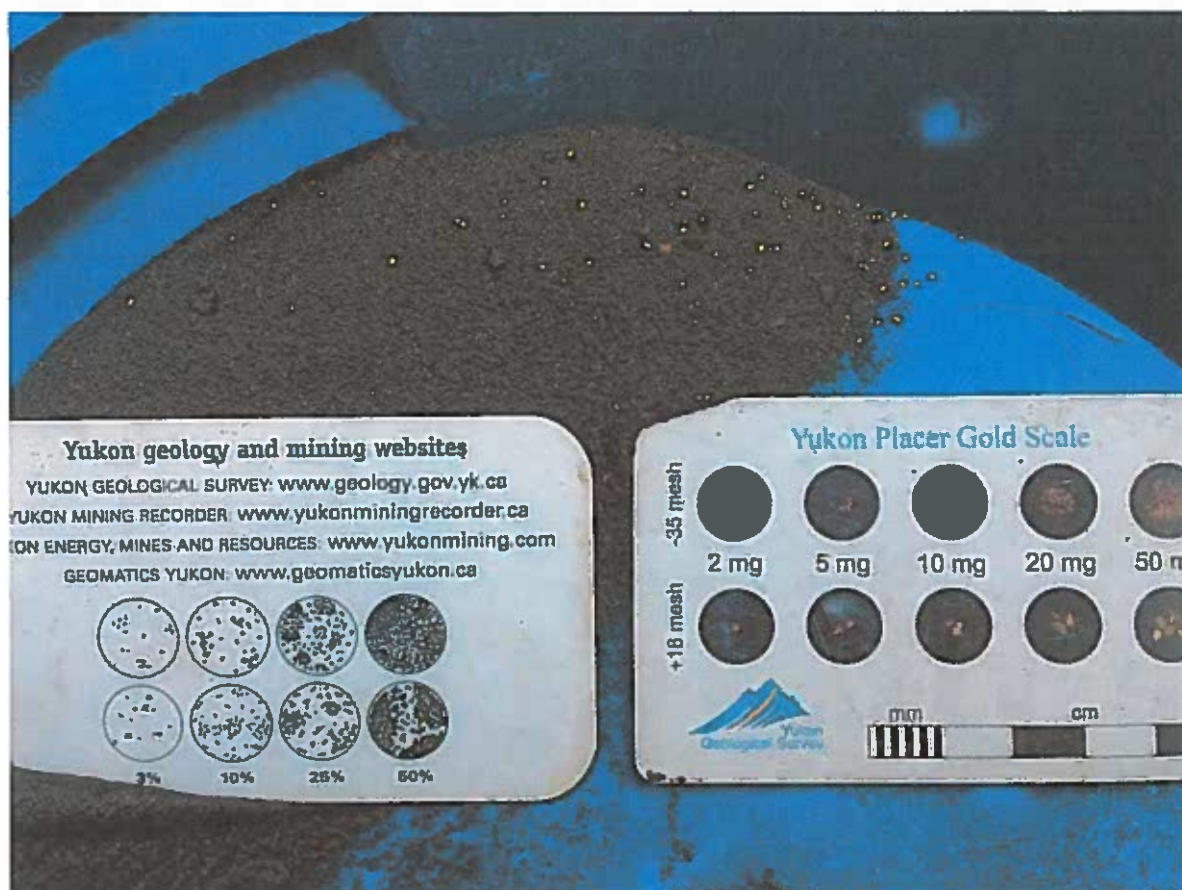


Figure 19 - Panning sample #6 down. At this point there is so much magnetite, hematite and garnet that it becomes extremely difficult to pan down further to expose gold without losing gold.

Day 6

Drone flights took all day today. We walked upstream from camp 2 km and launched a few flights from there then walked back. Worked on data collection organizing and processing for the remainder of the day.



Figure 20 - Walking up the creek with drone to launch from different areas.

Day 7

Staking claims on Dawson creek; Daw 1-52.

Day 8

Staking claims on Dawson creek; Daw 1-52

Day 9

Staking claims on Dawson creek; Daw 1-52

Day 10

Breakdown camp and pack it up. Stashed parts of camp like wall tent and stove and other for long term storage so we could use it again this winter for a shafting program. Clear out helicopter landing pad. Picked up by helicopter and taken back to Dawson City.

SHAFTING TRIP 1 (FEBRUARY 17 TO FEBRUARY 26, 2020)

Day 1

Fly out to Dawson creek. Setup camp. Make trails. Scout shafting locations. Cut enough firewood for 10 days and hauled it back to camp.

Day 2

Start shaft #1. 0-3ft below surface. Not panning as the material in the shaft was frozen muck and fine sediment.

Day 3

Continued digging on Shaft#1. Dug 3 – 6ft. Still in frozen muck and sands.

Day 4

Dug 6-8ft. Frozen gravel layer starting at 7 ft deep. Gravel is a typical mixture of QFP and Gneiss. Gravel layer at 8ft became thawed and was wet. Was easily able to dig out for 1 ft more (to 9ft) until our pump could not keep up with the water inflow and the water level was beginning to be over our boots. Had to abandon the hole until we return next time with a bigger pump. Shaft was 9 ft deep. Took 20 L of material from bottom of shaft and panned it out. No gold. Some garnet, magnetite, and hematite.

Day 5

Moved shafting gear 300m upstream to start Shaft #2 where the m³ samples were sluiced in the fall. Dug down to 3 ft from surface in a very narrow hole in frozen gravels. Panned 10 L of material from bottom of hole. No gold. Heavies here are larger than usual which indicated that bedrock is close.

Day 6

Back to Shaft #2. Opened it up to a 4 ft wide x 4 ft long x3 ft deep hole so we could dig deeper. Water started coming into the hole just after 3ft. Pumped water for a while and tried to get deeper but the inflow of water was too quick to dig any deeper. At 4 ft digging any deeper was impossible because of the frozen gravel under the water. Approximately 40 L of material was panned from 4 ft and only one piece of gold was recovered. Meanwhile if one went up the shaft to near surface level and panned from the wall then each pan would contain 10 small flecks of gold. Gold in the area is float gold. Near 4 ft there was no bedrock observed but the heavies were getting bigger, the material seemed to contain more fine clay, and the gravel seemed to contain much less to no QFP and significantly more of it was dark green hornblende, garnet, mica, gneiss; signs that bedrock is close. In my research of the area I noticed a mention that gold on Matson creek was not situated in gravels above bedrock but only on and in the bedrock. Where many other creeks may have a pay layer a foot or so above bedrock and into it.

Day 7

Did a step out shaft #3 up on the bank about 20 m to the east of Shaft#2. The idea was that maybe the water level wouldn't interfere with the shaft and also wanted to test gravels at the same level that gravels on the creek bar were paying 10 pieces old per pan. Dug hole down to water level at 4ft in one day mostly thawed gravel under surface. Water was too fast to pump out. Panned many pans from varying layers and bottom of hole. No gold. Little heavies. No gold here indicates that the float gold discovered in surface gravels on the bars of the creek is restricted to the surface gravels on the bars of the creek and is not distributed at depth or at width from the creek bars. Gold only exists on current creek bar surface gravels.

Brought all shafting Gear back to camp location.

Day 8

Started work on Shaft#4. Located 100m to the east of camp, on the east side of Dawson creek. Completed 3 ft of Shafting in frozen muck.

Day 9

More shafting work on Shaft#4. Completed another foot of depth in frozen muck. Then prepared the hole for a fire. Light the fire and let it burn for a while hoping that it was an easy way to widen out the shaft. After burning the walls were thawed for approximately 6 inches and there were only a couple inches of thaw on the bottom of the shaft. Mucked it out and prepared it for waiting till the next time we come out and continue shafting.

Day 10

Packup camp and fly back to Dawson city.

SHAFTING TRIP 2 (MARCH 25 TO MARCH 30, 2020)

Day 1

Fly out to camp. Unload gear and supplies. Setup gear and start shafting on Shaft #1. After leaving the shaft open for almost 1 month the water in the shaft completely froze. Cut firewood and haul it back to camp.

Day 2

Shafting on Shaft 1 all day. After doing more work in the shaft it was apparent that the water that was flowing in last month is no longer flowing and is completely frozen. Once all the ice and fallen material was cleared out no more water was coming into the hole. It was possible to jackhammer without having to pump water out. This was a good thing. Shaft dug to 11ft.

Day 3

Continuing to shaft in Shaft #1. Material is frozen gravels and going is very slow. Reached what I thought was bedrock through a very narrow opening. Was able to get enough to fill one pan and panned the material. No gold and some heavies. Lit a fire at the bottom of the hole to thaw the gravel and open it wider so I could continue to dig deeper.



Figure 21 - Piece of greenish QFP from bedrock at bottom of Shaft#1

Day 4

Fire worked well to thaw some of the gravels at the bottom of the hole. Opened the shaft up to full width and down to bedrock at 12ft. Was able to get fifteen 20 L buckets of material at the bedrock gravel interface out of the hole to bring to the tent to thaw out overnight with plans for sluicing it the next day. Bedrock is made of a light green matrix quartz feldspar porphyry.



Figure 22- Shaft #1 going down 12ft to bedrock, 4 ft wide X 4 ft long.

Day 5

Spent the day setting up a sluicing pump and hose line through a hole in the creek ice then sluicing fifteen 20 L buckets of material through a small long tom. Panned the heavies down at the end. Hardly any gold 3 pieces of very small gold and a small number of heavies considering I was on bedrock.



Figure 23- Sluice setup. Pump in hole in ice in the background. 1" hose coming to small long tom next to tent. Shaft gravels were brought in to tent overnight to thaw for washing.

Day 6

Deconstructing camp and packing it up. Picked up by helicopter and flown back to Dawson.

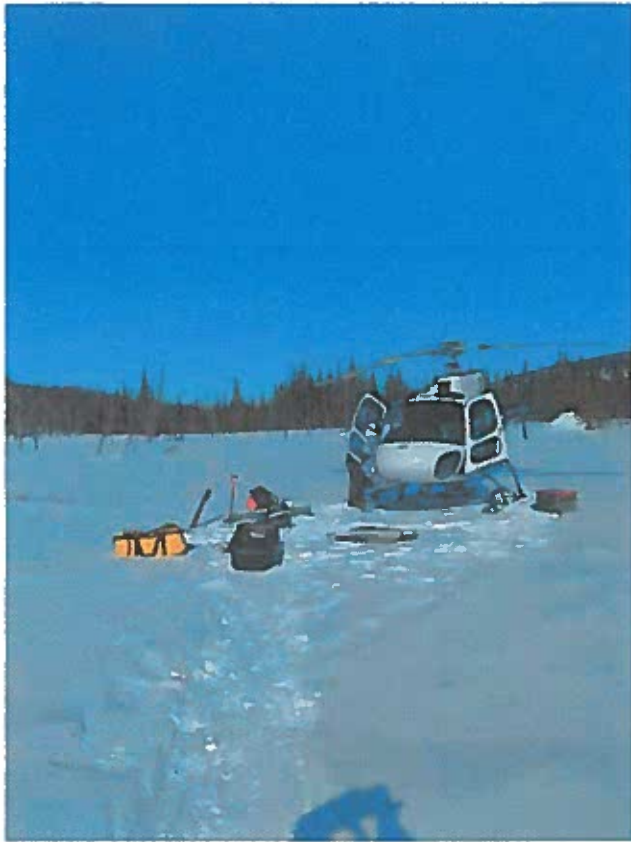


Figure 24- Loading the helicopter and going home. Landing pad on a swamped out beaver pond. Beaver house in background.

Conclusions

The gold recovered from all sampling, including the m^3 tests, was fine and flour. It seems to be a surface gold only because in the m^3 sluicing tests and shafting and panning the deeper you go from surface the less gold there is. After panning and sampling > 0.3 m below surface no more gold is recovered even in shaft # 1 which had $0.3 m^3$ of gravel sluiced at bedrock.

When surface gold was recovered it was of a fine and flakey nature. It is assumed that a significant amount of gold was lost because of the sluice box used and the difficult nature of recovering such fine gold in heavy black sands. It is assumed that using a sluice better suited for fine gold would increase recovery. There was also a lot of black sand (magnetite, garnet, and hematite) and the gold was very difficult to separate from it.

Gold seemed to increase in size going upstream from the main area where m³ scale sluicing was completed but was eventually blocked by a beaver dam.

Gold values obtained show that surface material – up to 30cm below surface on the bars can pay at a rate of \$11/m³ when gold prices are \$67/gram.

More exploration work needs to be completed upstream (kilometers) in order to discover the source of the fine gold sluiced from surface gravels in the creek bars during the m³ tests. It would be ideal to move all the way upstream in Dawson creek just above the confluence of Dawson creek proper and its main left limit tributary (left side when going down stream). Shafting work should be completed where the bedrock is known to be biotite schist/gneiss and not QFP. The gold discovered in Dawson creek has a source that exists somewhere upstream from where the shafts and bulk samples were completed. It is probably up near the headwaters where there is favorable bedrock.

One consideration is that Dawson creek valley where the Shafts were sunk is quite wide. There is a chance that gold exists in benches off the existing creek flow. The creek is cutting down in the valley making its way deeper towards the eastern side of the valley. It may be possible that older benches towards the western side of the valley contain a more original pay streak but shafting or digging to bedrock under the frozen cover would be needed to investigate this.

This map is created by Morgan Fraughton from field observations, in 2019/2020 and also using older maps created from field work by W.O.K (1970). Also, geophysics and aerial/satellite imagery was used.

Legend

 Shaft and Cubic Meter Samples Locations

Field Mapping Points

 Panning with no gold

 biotite-hornblende schist/gneiss to hbl gneiss (BHSG-HG)

 Contact Zone Alteration in Gneiss

 Breccia

 QFP

 Basalt

 Pans With Gold

 Klondike Schist

 Biotite Schist

 2013 or 2014(?) Excavator Pits

 Matson to Dawson Creek Road

 YGS Faults

Bedrock Interpretations

 Quartz Feldspar Porphyry

 biotite-hornblende (hbl) schist/gneiss to hbl gneiss (BHSG-HG)

 biotite schist/gneiss (BSG)

 Basalt(?)

 Leucogranite & Porph. Granite

 Klondike Schist

 Mineralization

 Strike and Dip on Outcrop

 Interpreted Fault from Geophysics