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SWEDE CREEK HLFT PLACER GOLD EXPLORATION 2019

Final Technical Report for YMEP No. 19-032.
Submitted January 31, 2020

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Introduction

This is the Final Technical Report for 2019 Exploration on Swede Creek High Level Fluvial Terrace (HLFT) - YMEP19-032.

YMEP application 19-032 was granted up to $15,000 of $40,000 requested. The YMEP 19-032 application proposed to explore the HLFT and Empire creek. The program was reduced and modified to include only HLFT Excavator exploration and the proposed 2-person crew was cut to a single prospector for the entire program.

Summary of Previous Investigations

More detailed descriptions of past exploration can be seen in placer gold exploration reports (YMEP 15-078 and 18-032) and hardrock exploration reports (YMEP14-029 and 15-077).

PANNING THE CREEK

Panning in Swede creek started in fall 2013. While cutting brush on an existing trail, to get access for staking hardrock claims, gravels panned from one of the bars on Swede Creek returned some interesting placer gold. A more thorough investigation discovered exposed bedrock in the creek. The bedrock was exposed because of unusually low water. I picked apart the bedrock and panned the material from the bedrock crevasses. There were good nice gold flakes in each pan taken from this bedrock exposure. This was the first sign that there could be a mineable deposit of placer gold in Swede Creek.

A 5-mile placer lease to prospect was staked June 6, 2014.

In 2014 panning was performed along the entire length of the 5-mile lease (Swede 1-48). Swede 26 downstream to claim Swede 1 gold could be panned from surface gravels in small amounts. From Swede 26 to 48 no gold was found in surface gravels.

ROAD BRUSHING

Road brushing has been completed each year since exploration on Swede Creek started in 2013. Road/access brushing has been completed for either hardrock exploration or placer exploration but both exploration programs benefit from AVT and truck access created by road brushing.

In 2013 access from the mouth of Swede creek and the Top of The World Highway had been overgrown so much that an ATV could not pass; even walking along the roads was difficult. Each road or ATV trail shown on the map attached in Appendix: A has been brushed out in some way as there was near complete overgrowth of the road and trail network when I started exploring in 2013.

Initially, brushing alder and willow overgrowth on the roads descending from the Top of The World Highway (TWH) at km14 and the Old Glacier Creek access road (Prior to TWH) was done for ATV and Snowmobile access for staking hardrock claims and prospecting.

The alder grows all over the road and roads edge, but the way in which it grows from the uphill side of the road berm and juts horizontally into the road is especially challenging. These alders are thick and tough. Removal is difficult. There is a lot of extra rock and abrasive sediments in road overgrowth that dull cutting equipment.

Road brushing work has cleared out trails for trapping concessions #24 (Bruce Taylor) and #406 (Dawson District Renewable Resources Council). New trapping activity, for the first time in many years, was noticed each time a trail or road was re-opened.

In 2019 no road brushing was completed. In areas where new trail was made for excavator access it was possible to walk the excavator through without significant cutting work. The ATV was able to follow these excavator paths to access the excavator daily during exploration in 2019.

HARDROCK EXPLORATION

Information learned from hardrock gold exploration in the surrounding area has complimented the search for placer gold and vice versa. Therefore, it is important to note

past hardrock exploration work and how it relates to the understanding of Swede creek placer gold exploration.

From August 2013 hard rock exploration has been completed in phases. In 2013 over 300 hardrock claims were staked; JPL claims. Rock grab samples were assayed. There were a few samples that contained elevated gold, silver, copper, lead, zinc chloritic schists. One grab sample from a piece of quartz rock sticking out of the road cut returned an assay of 9g-Au/ton. Followup sampling of more quartz from the area assayed at 29g-Au/t.

Work pertaining to hardrock exploration was completed under YMEP14-029 and YMEP15-077.

Below are short descriptions of previous hardrock investigations.

Soil Sampling

Ridge and Spur soil sampling was completed in 2014 under YMEP14-029. Follow-up grid soil sampling was completed in 2015 under YMEP 15-077.

Reconnaissance soil sampling of the ridges and spurs in 2014 revealed large alluvial gravel benches in the High-Level-Fluvial-Terraces (HLFT) above Swede Creek – area currently covered by the NB1 1-20 and NB2 1-21 placer claims.

Follow-up grid soil sampling needs to be done on the anomalies from ridge and spur sampling of 2014. Also, trenching work needs to be completed on gold-in-soil anomalies revealed by 2015 grid soil sampling in the area of the 29g-Au/t rock sample from 2013.

Mapping

While prospecting or traversing on the property I have collected over 350 simple mapping points describing location, rock note and pictures. In rare cases when bedrock outcropping is discovered it is possible to measure a strike and dip of the outcrop.

Unfortunately, I do not have these points compiled into a current bedrock map. GIS work is needed to create the interpreted bedrock map possible from the collection of these points. This work will be completed soon, and a detailed property scale map of bedrock geology will be the result. 350 mapping points combined with 125 rock samples and 1064 assayed soil samples and other data learned from placer exploration a very good map will be created.

Airial Magnetometer Survey

An excellent aerial magnetometer survey (DawsonTaylor) was completed over this area by the Yukon government and the data is publicly available online. This data set shows clear magnetic anomalies that separate rock units and distinct QFP dykes/sills that run for kilometers in a northwest direction from the south end of the Swede creek area to the Top of the World Highway and beyond.

These mag surveys are a great tool for interpreting hardrock units in the area and understanding gold distribution as it relates to magnetics in bedrock.

Sediment Sampling

In 2015 there was Stream Sediment Sampling of Swede Creek and tributaries as part of a hard rock gold exploration program, YMEP15-077. Samples showed elevated gold in stream sediment. One sample assayed over 2400ppb Au in sediment (Over 2g/t Au). Other stream sediment samples corroborated the area where gold can be panned from the creek gravels; claim Swede 25 downstream to Swede 1.

MINI-EXCAVATOR TRENCHING AND PITS

In Fall 2014 a PC75 (9ton) excavator was rented for 2 weeks and used to test as far downstream as Swede 20. Between Swede 24 and Swede 20 the excavator dug in a few locations only to be met with impenetrable permafrost. An area that was free of permafrost, was located on Swede 24 that was more than 30m from the highwater mark of Swede creek – Swede Creek has a 30m riparian zone setback for any exploration/mining activity. Gravel was tested by digging two trenches approximately 50m long X 2m wide X 2.5m deep.

The PC75 had a digging depth of 2.5m and did not reach bedrock – depth of bedrock unknown at the time. A water table was encountered at 2.5 meters below surface. Material was taken from around the water layer and run through a hand operated high banker type sluice box. $3m^3$ of material was washed and gold was recovered at a rate of $0.3g/m^3$ sluiced. After the initial panning discovery in 2013 this result showed there could be mineable placer gold deposits on Swede creek.

Late in 2014 a Candig Mini Excavator was used to dig a small pit that went only 1.5m deep; at the water table. When the water table was reached some pans were taken of the gravel there. Small amounts of gold were identified in each pan. Further investigation for placer gold must be completed in this downstream section.

SHAFTING

From early winter 2015 to 2019 I have completed multiple shafts in the Swede creek project. See map for various locations and appendix of tables for shaft descriptions. Shafting was instrumental in discovering bedrock depth for the first time and really highlighted the potential gold values on Swede 23. In other cases, shafting has been used to test the HLFT bench gravels and complete much needed assessment work for assessment value.

Two small shafts were sunk in winter of early 2015. The hope was to find bedrock. The first was sunk on the bottom of one of the open trenches. Only a few feet down a suspected bedrock layer was encountered and a sample was taken. As soon as the sample was taken the hole filled with ground water and it was impossible to clear the water out and therefor no more sample could be retrieved. Panning this sample revealed a significant amount of gold (probably a few grams). It was almost unbelievable, so I tossed that pan and went back to get another sample from the pit but realized it has flooded and I couldn't get the water out.

So I went and dug another shaft from surface in a different spot close by. This shaft totaled 3m deep from surface to bedrock. The ground water was frozen in this area and it was possible to jackhammer out. Pans in this shaft at 3m at the Bedrock Gravel Interface (BGI) were returning excellent amounts of coarse gold.

No matter how good it was I knew digging it by hand would never be profitable so the idea to drill the area to determine volumes and grades of the gold bearing gravels would be the next step in proving a mineable deposit of placer gold on Swede creek. It was also thought that ground penetrating radar over a large area of the creek in conjunction with drill holes could develop a property scale calculation of gold reserves available in the Swede Creek gravels.

GPR

In 2015 a significant amount of time and cost was put in to contracting Ground Truth Exploration Inc. to perform Ground Penetrating Radar (GPR); crossing the Swede creek valley every 100m and some HLFT areas. In total there was 14.7km of creek valley GPR and 2.3km of HLFT GPR.

The results of the GPR program performed by Ground Truth Exploration Inc. (GTE) were inconclusive. Elevation values recorded by the field technician were not of high enough accuracy. Such low accuracy positions are unable to account for subtle differences in underlying bedrock surfaces. Meter scale undulations in the surface of Swede creek valley along the GPR lines mean it was impossible for any results to be accurate.

GPR is not recommended for placer exploration unless it can accurately map on the sub 10cm scale – which it can't. If one wants to understand bedrock depth it is better to sink a shaft or drill hole that will give you stratigraphic info and can at the same time test for gold content. After this and visual inspection of the valley it should be possible to interpret bedrock depths in large areas. GTE needs confirmed drill holes to confirm GPR results. GPR as it was delivered in 2015 by Ground Truth Exploration, is a not an effective placer gold exploration tool. Maybe in the future it will be possible to map bedrock surface accurately (better than 10cm accuracy) without digging or drilling.

Although the GPR program failed to produce usable results other exploration techniques used during 2015 had positive impacts on discovering placer gold in Swede creek.

DRONE IMAGING

Drone imaging was complete in 2015 by Ground Truth Exploration Inc. The resulting orthoimage is portrayed on the attached map.

The orthoimage on the map has been used extensively in exploration planning and interpretation on Swede creek. Drone images are RGB Visual Light Data Maps. Visual Light Data can be consumed by the human eye in combination with on the ground experience to conclude many things about potential mining and exploration areas. Such as surficial vegetation which reveals the state of the ground under the vegetative mat; wet, frozen, well drained, thawed, permafrost, flood patterns, water high-level marks, past stream channels…. The list goes on.

Drone imaging is an indispensable tool for modern exploration and should be used as a first order exploration tool.

DRILLING: 6-INCH, 4-INCH, RAB

As part of YMEP 15-078 drilling of various types was performed on Swede creek and HLFTs.

A 4-inch diameter skid mounted ATV movable drill Owned by Low Impact Drilling (Shawn Payne) was employed at first to start the drilling program proposed. Not long after the start of the program it was clear that this drill was not capable of completing the amount of drill holes that needed to be completed. The 4-inch diameter drill started work on the HLFT and was the only drill to have worked up there to date. 399ft of total drilling in 30 different holes was completed. Results were inconclusive as it was unsure whether bedrock had ever been reached or even if the drill was returning cuttings from the bottom of the hole or not.

A 6-inch diameter drill rig mounted on a 10-ton tracked bombardier machine operated by Clint Tracy of Gateway Drilling was employed. This machine was limited. It was good at drilling in non-frozen, dry ground. If the drill encountered frozen gravel it was not capable of drilling into it. If the drill encountered wet gravel it was not capable of returning a sample. In total there was 256ft drilled with this machine and 13 drill holes. With insufficient drill results in the valley areas that were frozen under permafrost it was clear we needed another drill capable of drilling into permafrost areas.

A 4-inch diameter Rotary Air Blast (RAB) drill was employed through Ground Truth Exploration Inc. The machine drilled through permafrost gravels to bedrock or even into bedrock . This drill gave high confidence in stratigraphy including BGI depth. This drill was also exceptional at returning material for sampling in all drilling conditions; wet, frozen, thawed, dry, bedrock. When processed many of the samples contained gold. 11 holes were drilled totaling 283ft.

The RAB drill was fairly expensive compared to the other drills at $88/ft including sampling time and expensed compared to $59/ft and $43/ft for the 4- and 6-inch augers. But the RAB was the only drill that could return confident results every time. In the

future auger drills should only be used in shallow, dry, thawed ground. For frozen ground, a RAB or RC drill is a must.

Drill program showed that gold in gravels in economic quantities existed in a large area on Swede 22, 23, and 24. The drilling also revealed a picture of bedrock depth from surface in the Swede creek valley. This was the first indication that Swede creek could be mined. The next step was to get some bulk samples from the areas of the good drill holes and shafts.

DIFFICULTY WITH PARTNER

From fall 2013 to Fall 2015 Spere Exploration Inc. (Morgan Fraughton of Dawson City, Yukon) worked in partnership with OK Creek Mining and Exploration Inc. (Henry Vincent of Los Angeles, USA).

Spere Exploration provided exploration services and funding while OK Creek Mining and Exploration provided some funding to complete exploration. In 2015 and 2016 OK Creek Mining and Exploration did not deliver on its commitments to support the exploration of the Swede placer property.

After an attempt by Henry Vincent of OK Creek Mining and Exploration to con Morgan Fraughton of Spere Exploration Inc. out of all claims on Swede Creek an agreement was reached and signed to split the claims 50/50 between OK Creek and Spere. Spere received Swede 1-24 and the Hound claim on Empire Creek while OK Creek received Swede 25-48 and the Imp claim on North Walker Fork.

All other placer and hardrock claims that were held jointly by OK Creek and Spere were lapsed by the time an agreement could be made. It was impossible to do work on the claims during this period of turmoil; until late in the 2016 season.

The fight to keep my claims was draining and difficult. The attempted theft was an incredible setback to the development of the property. If Henry Vincent had not attempted to steal the claims the Swede Creek property would have gone into production in 2017.

RESTAKING AND STARTING AGAIN

After receiving clarity and signing the agreement to split the claims with OK Creek. I decided to re-stake the bench claims to the north of Swede creek (now NB1 and NB2 Claims) and stake up Discovery pup and extend the claim holding up Empire Creek about 2 miles.

This season (2019) more claims (TW 1-3) were staked up 20 Pup to cover alluvial gravel of that drainage. More claims (DB 1-4 and NB3 1) were staked on the right limit bench of Discovery Pup to cover newly identified zones of HLFT gravels.

Empire creek lease ID01672 expired because it was impossible to get exploration assessment work completed on time so a new lease ID01768 has been staked in its place (2019).

The current claim and lease package on Swede creek and tributaries is 100% owned by Morgan Fraughton of Spere Exploration Inc.

BULLDOZER DIGGING AND SAMPLE

In 2017, after the agreement to split claims between OK Creek and Spere was signed, I was able to get a 1959 D7 Caterpillar bulldozer in to claim Swede-23 where previous trenching, drilling, shafting and sampling had indicated a target for further placer exploration.

I used the dozer to create a cut that was 15m wide X 20 m long X 2.5 meters deep - where the water table was encountered. Then I dug down to the 3.5-meter depth with one blade width and pushed the resulting material up on to a dry area out of the water. $1m^3$ of material from this dozer scrape at the BGI was washed though a hand shovel fed Keene high-banker sluice. 1.5g of raw placer gold was recovered from this test. This test indicated a rich pay layer at bedrock.

EXCAVATOR AND SLUICE BULK SAMPLE

In 2018 a $300m^3$ sample was completed using a Hitachi EX200 excavator and a $10m^3$/hr sluice box. The area of the 2017 bulldozer trench was sampled at the BGI. $300m^3$ of

paydirt was removed from the bottom of the pit and piled on the banks of the pit then sluiced using a 10m^3/hr sluice box.

Water for sluicing came out of the pit that was dug. The sluice suction pulled water from the pit and the sluice effluent and tailings were washed directly back into the pit in 100% recycled system where no water was being pulled from the creek and no sediment was being returned into the creek.

When the BGI was opened up by the excavator 1m^3 of material was scraped off the BGI using hands and a pick/shovel and measured into a container that is 0.33m^3. Three containers of material were hand shoveled through a high-banker sluice. 8g of coarse gold was recovered. This reflects the grade available right at the bedrock gravel interface. 8g-Au/m^3 of gravel sluiced! This probably reflects a small approximately 20cm horizon 10cm above bedrock and 10 cm in to decomposed bedrock. Mining in 2020 will shed light on this and further our understanding of the nature of the pay gravels on Swede creek.

The result of the 300m^3 test was 400g raw gold. This was from material 33cm into the bedrock, and 66cm above the bedrock gravel interface for a total sampled depth of 1m across the area of the open pit. The concentrate from the sluice box was cleaned by Don Kenzie - gold cleaner in Dawson City. The cleaned raw gold was taken to Instant Gold Buyers, located in the Callison Industrial subdivision of Dawson City. Instant Gold Buyers melted the gold to an 11.6 oz and assayed the resulting bar to be 0.73 pure gold. The gold was sold to Instant Gold Buyers at the rate of the day on Sept 2018.

The results obtained from the 300m^3 test of 400g raw-gold is 1.3g of raw-gold/m^3 sluiced. This result proved that a mineable deposit of placer gold exists in the area. The next step was to obtain a Class 4 Mining Permit and Water Use License.

CLASS 4 MINING PERMIT AND WATER LICENCE

Though talks started earlier, Dec 5th, 2017 I had hired Bud Davis from Midnight Permitting as an agent for assistance with the Class 4 mining Permit and Water License applications for the Swede creek property.

- Gathering all information and making formal application submissions by September 21, 2018.

- YESAB public comment period started on November 21, 2018 and was set to close on December 5, 2018.
- On November 28, 2018 Kathy Sutherland, Whitehorse District Mining Lands Officer, submitted a request to YESAB to have the comment periodetended; the comment period was extended to December 12, 2018.
- On December 12, 2018 the comment period was extended again due to a request from TH Government. Extension granted until December 21, 2018.
- The public comment period did not close on December 21 but was closed on December 24, 2018 when the Review Period began.
- The YESAB public comment period went on for 33 days!
- After the Review Period was complete the Preparing Recommendation stage started on January 7, 2019.
- On January 21, the Recommendation Preparation period was extended.
- On January 22, 2019 the YESAB recommendation document was issued.
- On April 8, 2019 The Yukon Government decision document was issued after 76 days!!
- The decision document is supposed to take 25 days with a possible extension of 7 days for very specific reasons. The time for the document to be issued was over double the amount of time legislated. After decision document was issued it was over to the Waterboard for public comment and decision.
- Water License was approved and signed on June 28, 2019. The Class 4 Mining Land Use Permit and Water Use License (PM18-053) is active until June 5, 2029.

This is extremely frustrating for a prospector attempting to mine their property. Due to the extended permitting timelines the mining project was postponed from starting in Summer 2019 to Summer 2020. This created heavy burdens to me, extra claim fees, no income, restructure and scramble to find income for the lost year, difficulty in doing enough work on the claims to keep them active. Loss of income, insecurity, increased costs without the revenue stream. The delays had very negative effects on me.

MINING AND FINANCING AGREEMENTS

M2 Mining (Mike Langtry and Michael Cawood) has agreed to provide all financing, equipment, and expertise for me to start mining on Swede creek. This agreement is set to last for 3 years starting in 2020.

Bedrock Geology

The Swede Creek property is located in Yukon-Tanana Terrane of the Intermontane Tectonic Element. Property scale bedrock that underlies Swede creek and HLFT gravels as *described by the Yukon Geological survey* are:

- *Regional Unit DMF3, Finlayson Assemblage, ~350 Ma, a dark grey to black carbonaceous metasedimentary rock.* On Swede creek this unit is usually well foliated with varying degrees of waviness, commonly with concordant quartz veins ranging in size from mm to meter width. In cliff faces on the north side of Swede creek this unit is clearly visible and can be seen in contact zones with PK2 Regional Unit. Often there can be significant amounts of cubic pyrite (<mm to cm) disseminated throughout a grab sample. When weathered, the pyrite can create significant amounts of limonite. Sometimes, as can be seen on 20 pup, a rusty gossan like staining can be seen in the creek. Other than significant amounts of pyrite, the DMF3 unit has not been associated with interesting minerals - gold or other. Many samples have been assayed from this unit and have never produced anomalous results for economic metals.
- *Regional Unit PK2, Klondike, ~260 Ma, silvery grey muscovite chlorite quartz phyllite, micaceous quartzite.* Quartz-Sericite-Schist.
    - this unit can be seen as a dark to light green chlorite schists with foliation and some level of muscovite alteration and quartz veining.
    - Hydrothermal alterations of the green chlorite-schist in this unit is seen on swede creek area as quartz-muscovite-schist (QMS) - A slippery, golden-silvery yellowish limonitic muscovite rich schist. This hydrothermally altered area of PK2 is proven to host high grade gold in quartz veins as well as other minerals like copper, lead, zinc, silver. One quartz vein assayed at 29g/t Au. Gold nuggets from the creek contain quartz inclusions. The placer gold on the property most likely comes from this alteration area of PK2 – the Muscovite/limonite alteration of the chlorite schists.
- Other property scale bedrock on the property is limited to alterations of these units and meter to multi-meter wide Quartz Feldspar Porphyry (QFP)

dykes/sills(?). These QFP intrusions can be identified on regional (km) scale aerial magnetometer maps (DawsonTaylor) with a 10's of km long Northwest trend. On Swede creek the QFP dykes are mm to cm scale quartz and feldspar with varying matrix colors in different locations. The size and scale of the QFP units indicate major planes of weakness in the areas bedrock geology which is great for providing the plumbing for gold and other mineralization. The QFP is much younger (~60 Ma?) intrusion that penetrates both the DMF3 and PK2 unit. No interesting mineralization in or near the QFP dykes have been noted from prospecting and assayed rocks of QFP and rocks in contact zones with the QFP.

The DMF3 and PK2 are in contact in various locations along the length of the property. Contact zones are seen with varying degrees of alteration, quartz veining, fault gauging clay, etc. There does not seem to be any interesting mineralization directly related to the areas of alteration within the contact zones. One area, where the road comes on the Swede creek valley from 20 pup, the cliff on the north side of the valley exposes a zone of contact between the DMF3 and PK2 units. This contact has been investigated and many rocks assayed with no significant anomalies to report.

Gold (and other) mineralization in the PK2 unit is directly related to a quartz veining event that has hydrothermally altered the Chlorite-schists in to the QMS. These mineralized sections of PK2 are thought to have been created by hydrothermal events associated to the plumbing along faults and QFP sills where the altering fluids contacted areas of chlorite-schist PK2 they also dumped gold mineralization.

A few definitions I use when describing rocks on this property:

1. **KLONDIKE SCHIST (KS) of PK2**
    a. **Chlorite Schist (CS).** A dark to light green chlorite schist depending on the amount of silicification/quartz veining. This rock typically does not produce assays with anomalous metals of interest. The CS rocks are thought to be the unaltered version of the QMS.
    b. **Quartz Muscovite Schist (QMS)**. A golden yellowish muscovite rich schist that is most likely hydrothermal alteration of the dark to light green color chlorite schist of the PK2 (Klondike Schist). QMS and their quartz veins are thought to be heavily linked with gold in bedrock and therefore gold in alluvial gravels.

2. **FINLAYSON**
    a. **Graphitic Schist (GS).** A dark back graphitic schist of bedrock identified by YGS as Finlayson, DMN3. This rock is very prevalent on the property. One can see where areas of GS come in to contact with areas of the KS on the cliff faces to on the North of the swede valley especially where the road from 20 Pup comes to Swede creek.
3. **QUARTZ FELDSPAR PORPYRY (QFP)** A unfoliated younger quartz feldspar porphyry is visible in many forms and locations throughout the property. It is a dyke or sill (probably sill) that intrudes through the Klondike Schist (PK2) and the Finlayson (DMN3). It is not associated directly to interesting mineralization.

Summary of This Investigation

2019 HLFT EXCAVATOR TRENCHING AND TEST PITS

Mobilization and Access

Mobilization of the EX200 Hitachi Excavator from Henderson Corner to KM14 on the Top of the World Highway took place on May 28, 2019. Mobilization was completed by Gammie Trucking. Once the excavator was located at KM14 of the TWH it was walked down to the first area targeted for exploration pits.

Interval Pits Along the Road

Pit digging was done on a near daily basis from May 28 to June 16, 2019. Each day I drove my truck from Dawson to KM14 then used ATV to access the excavator location to perform work. Each day consisted of prospecting, trail scouting and flagging, excavator walking, excavator digging, sample/data collection, sample panning and reclamation of the site.

The initial pit digging line followed the existing on claim road section that descends into Swede along 20 Pup. The road was an ideal location to define and test the High-Level-Fluvial-Terrace (HLFT) gravels. The road, as it descends 20 Pup drainage, cuts the major HLFT to the North of Swede perpendicularly. The road was tested at the highest elevation until alluvial gravels were uncovered as opposed to decomposed bedrock this location was identified as the uphill elevation extent of the HLFT.

Excavator pits were dug to bedrock at 25-meter intervals going down the road for almost 400m; perpendicular to the flow-direction of the ancient HLFT. In most cases the BGI was reached. Some pits needed to be repeatedly returned to after initially opening them up because of permafrost; returning every few days to dig the pit a little deeper after it was exposed to open air temperatures and the permafrost began to thaw.

Results from the road pit program have been tabulated and the pit locations are displayed on the Map and in the Appendix. This program tested positive for small amounts of gold (-35 mesh). It is possible that bulk samples of some of these pits may return economic gold values and one or two of the best results should be followed up with a test of at least $1m^3$. For example, on claim 23 where the BGI pay layer is very rich (up to $8g\text{-}Au/m^3$) one can do a few pans without recovering any gold but when the material is washed on a larger scale you find the coarse nuggets and higher pay grades. A bulk sample on any of these pit areas will be difficult due to the distance that the pits are from a water source. Equipment large enough to carry cubic meters of gravel down to the creek or pumping water to the pit site might be possible but difficult.

From the Road Intervals up to the Top of the HLFT

After Road interval sampling was complete the excavator moved up the hill on a trail to the top of the HLFT area. Pits were dug on the way up and down the hill. The idea was to find the bedrock gravel interface and take samples of that material. After the excavator left the road and made its way up the HLFT no pits could be dug deep enough to find the BGI. A

Of all the samples up on top of the HLFT none reached nor looked like they were close to bedrock. It was attempted to get down some of these spurs in to places as low on the hill as possible without jeopardizing the excavator. Some steep spots were obtained but, in these areas, the BGI was still too deep and out of reach of the excavator digging depth. Samples were taken from the bottom of the pits and then the pits were reclaimed before the excavator left the site.

Trench and Pits on HLFT near the Mouth of Empire Creek.

The next task was to dig a trench and pits on the east ridge of the HLFT at the mouth of Empire creek. Prospecting this ridge revealed a location where alluvial gravel and bedrock contact at or near surface.

Work was done to dig progressively uphill with a trench and then pits to determine the where the BGI gets too deep for the excavator (>6m). Samples were tested along all bedrock encountered in the trench and pits were sampled in the manner described.

Progressive uphill trenching and pits defined the location where the BGI was >6m below surface. The BGI quickly got too deep for the excavator. From the start location where BGI was inches below surface to where it was 5meters below surface and out of reach of excavator the distance is only 70m. The material here can only be considered to be sluff from above and not intact gravel beds.

Where the material has sluffed down the HLFT on the perimeter it is assumed this material and bedrock is not representative of gold grades that may exist at the BGI of the areas where the HLFT gravels are still in their original position before the hill erosion sluffed them in to the creek valley. The goal is to reach the BGI at these un-sluffed locations but so far exploration has not been able to get deep enough in to the HLFT where it is intact.

Demobilization And Reclamation

The excavator was trucked away from KM14 on the Top of the World Highway back to Henderson Corner on October 15, 2019 by Graf Enviro Services (Toby Graf).

Conclusion

Sampling methods need to be improved for better quality of picture data from each pit sampled. It was difficult to get photos of stratigraphy because of the dangerous nature of some of the deep pits. Better imaging might be possible with drones and stitching together a proper image. Getting good quality imagery records of each pit would be a valuable data asset for future reference. Better stratigraphy data should be kept along with more detailed sample material descriptions. But since the general idea of sampling programs like this is to find gold or not sometimes the extra burden of detailed data recording can add too much of a time burden to the overall process.

Some pits and trench samples have tested for gold and these areas should be followed up with higher volume of testing material.

This program identified that the HLFT gravel deposits are very large and that they contain gold. More exploration work needs to be done to determine gold grades at the

BGI where HLFT's are undisturbed and potential pay streaks like the one on Swede 23 may exist.

This program indicates that on deep HLFT gravel deposits like this one are probably best explored with RC or RAB drills. Excavators cannot dig deep enough in order to test the BGI where it matters the most. The excavator was only able to expose BGI where the HLFT gravels were very sluffed and disturbed from their original position.

Pit SP19-046 was located near the middle of the HLFT gravels. The final depth of this hole is 7m and makes it the deepest hole on the HLFT and there is still no indication that bedrock is close in this hole.

After a sample was obtained from a pit/trench, reclamation work to fill the pit/trench back to its initial state was immediately completed before the excavator moved on to the next location.

TOOLS AND EQUIPMENT FOR THE JOB AND METHODS USED FOR SAMPLING

Pit/trench digging tools

All pits were dug with an Hitachi EX200 Excavator. The excavator was equipped with a digging bucket and did not have a thumb.

Pits and trenches were sampled using a GeoTool type hammer, and an Eastwing mattock for digging out samples from the pits or material brought to surface by the excavator. Each sample was taken by filling a bag 10-inch wide x 12-inch-long clear plastic ore bag. The ore bag is tied off with a plastic flagging tape then a marker is used to label the bag and flagging with a sample identifier. Then each sample was brought to a water source where the contents of the ore bag were emptied in to a 16-inch diameter gold pan and the material was panned down to reveal the heavy material and gold content in the sample. Gold content weight was visually estimated based on the Yukon Placer Gold Scale card – a wallet sized plastic card that can be seen in some appendix pictures. Notes were taken on each sample using a Garmin Monterra handheld GPS/Computer with digital forms customized for this type of data collection. Pit location is also recorded along with

stratigraphy information and depth values. Pictures of each site and material to be sampled was taken.

Pictures of the tools used can be viewed in various pictures attached.

Each hole was, measured using a measuring tape for depth. Each hole was wide enough for the bucket to go down and length changed depending on the depth of the hole. Longer for deeper hole and shorter for shallower holes. One ore bag o was filled and then panned that day. Ore bags were filled mostly from material at the bottom of each hole or sometimes taken from interesting stratigraphic changes.

Conclusions and Recommendations

From the fall of 2013, when I took the first pan on Swede Creek, to the Winter of 2020 where I have permitting, financing, and expertise to back the mining phase, exploration for placer gold on Swede creek has been successful. The 300m^3 sample was the culmination of all exploration completed on Swede creek during the past 6 years of sporadic but progressive exploration.

- Panning Creek
- Access Creation
- Hardrock Exploration
    - Soil Sampling
    - Bedrock Mapping
    - Prospecting
    - Stream Sediment Sampling
    - Aerial Magnetometer Survey
- Ongoing Surficial Mapping and Prospecting
- Mini-Excavator Trenching and Pits
- Shafting
- Ground Penetrating Radar
- Drone Imaging
- Drilling: , 4-inch Auger, 6-inch Auger, Rotary Air Blast
- Difficulty with partner
- Re-staking and Regrouping

- Bulldozer Digging and 1m^3 Sample
- 300m^3 Bulk Sample
- Class 4 Mining Permit and Water License
- 2019 HLFT Excavator Exploration
- Mining Expertise, Equipment and Financing Agreement

This 6-year exploration, permitting and financing showed me what worked and what didn't. This program culminated in mining on only one target identified by initial exploration. Further knowledge from the 2020 mining season about the nature and size of the deposit on Swede creek will guide future exploration of the property and other properties to be explored.

Mining and sluicing upwards of 20,000m^3 in 2020 mining season will give true gold/m^3 values and data accumulated from mining at the end of 2020 will reveal the complete picture.

Although mining will begin on the Swede creek property the exploration work is not complete. Exploration work to guide future mining must still be completed for:

- downstream areas in the Swede Creek valley available for mining from claim 22 and below.
- south side of creek contained mostly in Swede 24 needs to be tested. The best method would be to start with excavator exploration
- All HLFT's need more exploration. The HLFT areas have been defined and are large in area and depth – upwards of 30m deep and 500m wide. Intact gravels of the HLFT's must be tested at the Bedrock Gravel Interface (BGI). This could be done by shafting/drifting or drilling. Drilling with a RAB or RC drill is recommended due permafrost and expected depth. Excavator pits may be possible if the BGI proves to be less than 15 meters deep - unlikely.
- Exploration of Discovery Pup, 20 pup and Empire Creek needs to be done. Bedrock on these tributaries to Swede is favorable for gold deposition. These tributaries contain significant areas of permafrost. Excavator testing should be completed. These creeks are estimated at 5-7 meters from surface to BGI. Empire creek is the highest priority target because it is the biggest drainage and underlain by altered KS bedrock - QMS.

Exploration work on the HLFT during 2019 defined a rough width, length, and depth of the gravel deposit on the North side of Swede creek between Empire Creek and 20 pup. Gold recovered from all samples was of a small and unorganized nature as if it were just caught up either in sluffing off the hill or disseminated in layers that are well above the BGI. RAB or RC drilling needs to be done on the HLFT's.

On the eastern ridge, at the mouth of Empire Creek, trenching uncovered small bits of gold. If there was ever a way to bulk sample this area of the trench it should be done. Small bits of gold in the trench indicate that a bulk sample could reveal more interesting gold results. The location of the gravels makes it very hard to wash a bulk sample. The material would need to be transported from the ridge to the creek or water would need to be pumped up the hill. Either is a significant undertaking but can be simplified with the right equipment.

Appendix A: Maps and Figures

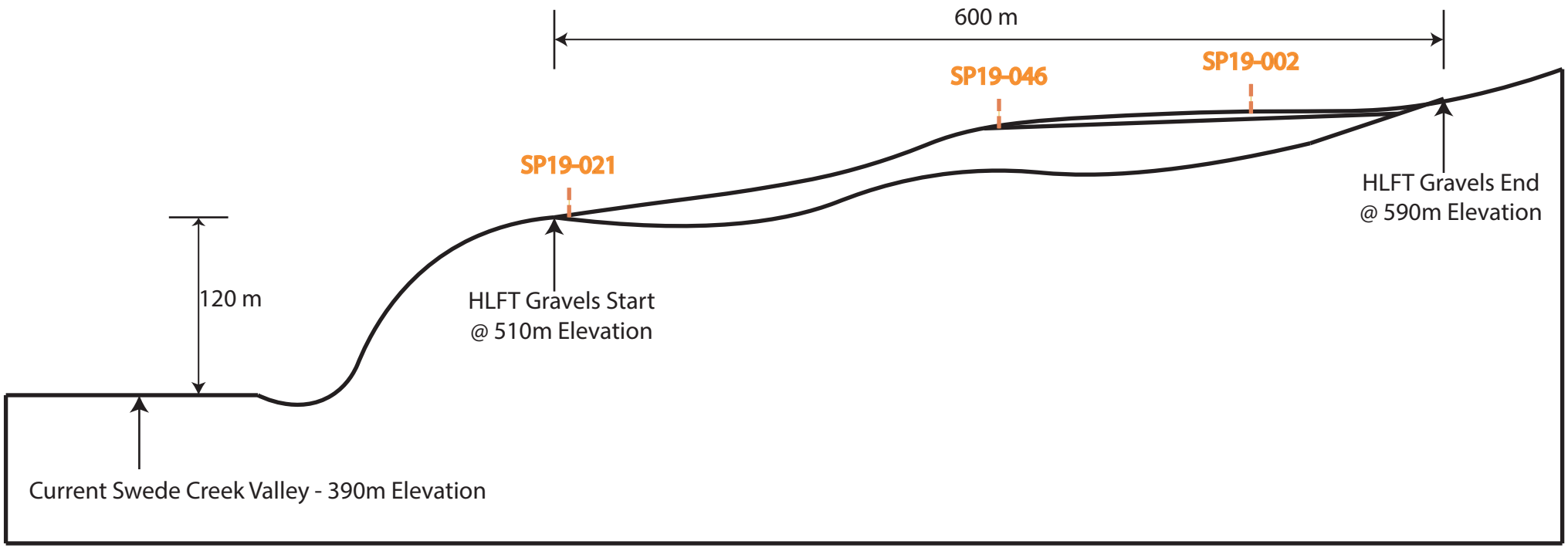
Appendix B: Photos

Appendix C: Tables for Pits and Trenches

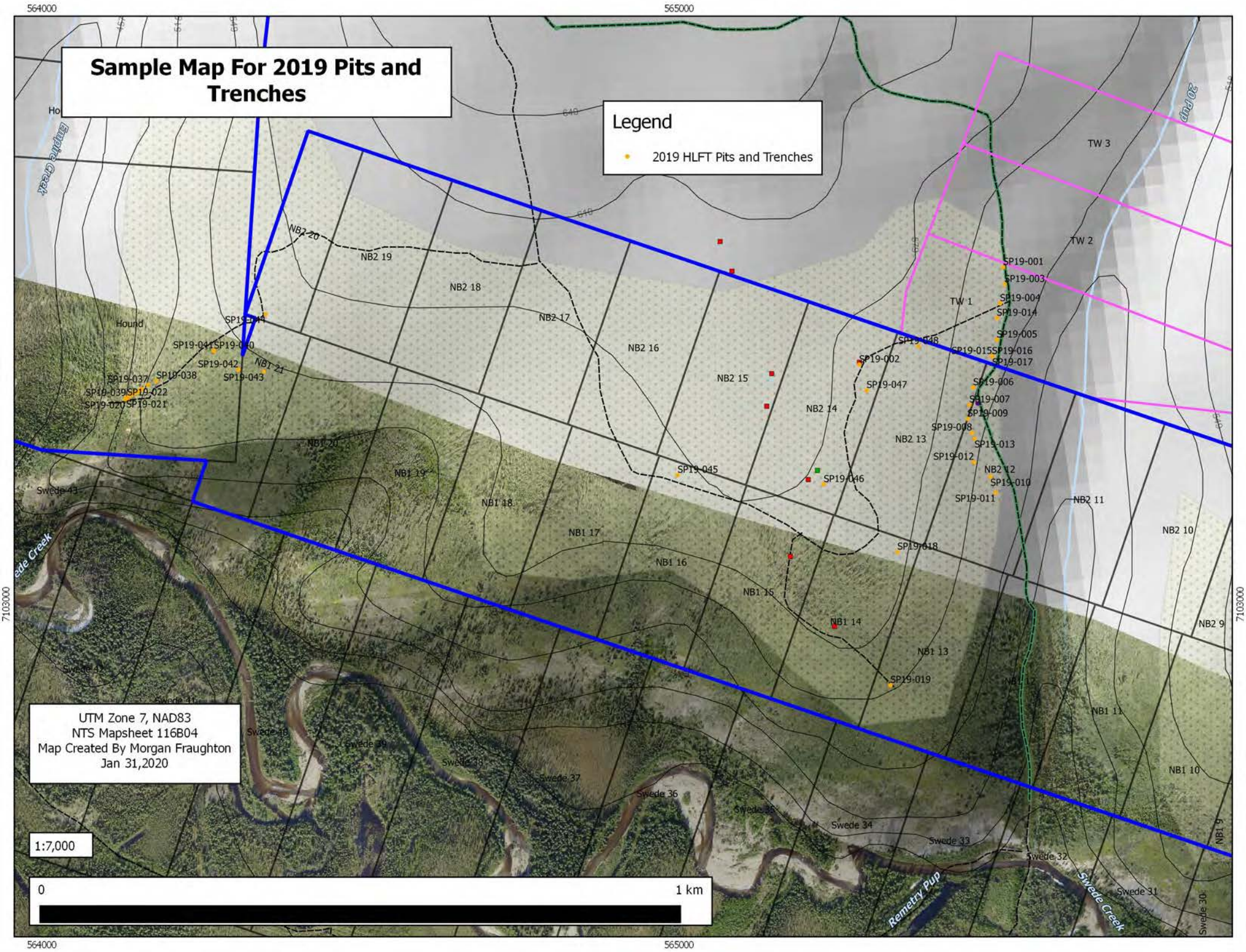
Appendix D: Timesheet

2019 Excavator Pits
Legend
Excavator Pits
Google Earth
Image © 2020 Maxar Technologies
Image Landsat / Copernicus
N
500 m

Idealized Cross-Section of Swede Creek HLFT Looking East (Upstream)



2019 Past and Present Exploration Overview
Legend
2019 EX 200 Pits and Trenches
2017 Dozer Pit and 2018 Bulk Sample
2015 RAB Drill Holes
2015 6-inch Auger Holes
2015 4-Inch Auger Drill Holes
2014 Candig Pit
2014 PC75 Pits and Trenches
2014 29g-Au/t Rock Sample
2013 Inital Gold Panning Discovery
ATV Road
4x4 Truck Roads
Estimated HLFT Footprint
Current Placer Claims and Leases
2019 New Claims and Lease Staked
Tr'ondek Hwech'in Settlement Lands
Water Licence PM18-053
N
S
E
W
Swede Creek
North Walkers Fork
Remetry Pup
Discovery Pup
Becker Pup
TR'ONDK HWCH'IN
Blackjack
UTM Zone 7 - Nad83
NTS Mapsheet 116B04
Created By Morgan Fraughton
January 31, 2020
0
500 m
1:20,000


Sample Map For 2019 Pits and Trenches
Legend
2019 HLFT Pits and Trenches
564000
565000
7103000
Empire Creek
Hound
NB2 20
NB2 19
NB2 18
NB2 17
NB2 16
NB2 15
NB2 14
NB2 13
NB2 12
NB2 11
NB2 10
NB2 9
NB1 21
NB1 20
NB1 19
NB1 18
NB1 17
NB1 16
NB1 15
NB1 14
NB1 13
NB1 12
NB1 11
NB1 10
NB1 9
TW 1
TW 2
TW 3
20 Pup
SP19-001
SP19-003
SP19-004
SP19-014
SP19-005
SP19-048
SP19-015
SP19-016
SP19-017
SP19-002
SP19-047
SP19-006
SP19-007
SP19-009
SP19-008
SP19-013
SP19-012
SP19-010
SP19-011
SP19-018
SP19-019
SP19-045
SP19-046
SP19-044
SP19-041
SP19-040
SP19-042
SP19-043
SP19-037
SP19-038
SP19-039
SP19-022
SP19-020
SP19-021
Swede 43
Swede 42
Swede 41
Swede 40
Swede 39
Swede 38
Swede 37
Swede 36
Swede 35
Swede 34
Swede 33
Swede 32
Swede 31
Swede 30
Remetry Pup
Swede Creek
UTM Zone 7, NAD83
NTS Mapsheet 116B04
Map Created By Morgan Fraughton
Jan 31,2020
1:7,000
0
1 km

SP19-002, 6m deep, No bedrock

2019-003

SP-004

SP1-004

SP19-005

SP19-006

SP19-007

SPIDER-0008

017

SP19-009

SP19-010

SP19-012

SM-012

CID-013

Sp19-014

كسلا-٥١٩

SP19-016

SP19-017

SP19-018

SP19-019

0-1m

SP19-020
0-1m

1-2 m

1-2m
SP19-02

-2 m
SP19-021

2-3 m.

SP19-022 2-3m

3-4m

SP19-023

SP19-023 4-5

SPN-023
3-4m

SP19-024 4-5m

SP19-024 4-6m

SPIN OFF
5-6m

SP19-025 5-6m

SP19-025

SP19-025 5-6m

SP19-027 6-7 m

SP19-027

SP19-027 6-7 m

7-8m

7-8m SP19-028

8-9m, SP19-029

SP01-029
8-9m

9-10 m

9-10m
SP19-030

SP19-03f 10-11m

SP19-031 10-11m

SP19-032 11-12m

SP19-032 11-12 M

SP19-033 12-13m

SP19-033 12-13m

SP19-034 13-14m

SP19-034 13-14m

SD19-034
13-14

SP19-035 14-15m.

SP1-005
14-15m.

SP19-035 14-15m

SP19-036 15-16m

SR19-036 15-16"

SP19-036
15-16m

SP19-037

SP19-037

SP19-038

White Channel?

SP19-039

SP19-039

SP19-040

SP19-04

SP19-041

SP19-041

SP19-042

HITACHI

SP19-082

SP19-043

5P19-043

SP19-044

HITACHI
TACHI

Yukon Placer Gold Scale

10 mg

20 mg

50 mg

Yukon Placer Gold Scale
-35 mesh
2 mg
5 mg
10 mg
20 mg
50 mg
+18 mesh
Yukon
Geological Survey
mm
cm

KEENE
ENGINEERING
KEENE
ENGINEERING

HITACHI
KEENE

HITACHI

HITACHI

SP19-027
6-7m

US-SONIC-500
4026
500gx0.1g

KEENE
ENGINEERING
KEENE
ENGINEERING

HITACHI
TACHI

HITACHI

Yukon Placer Gold Scale
-35 mesh
2 mg
5 mg
10 mg
20 mg
50 mg
+18 mesh
Yukon
Geological Survey
mm
cm

SP19-017
SP19-015

Yukon Placer Gold Scale

mg

5 mg

10 mg

20 mg

50 mg

Yukon
ological Survey

mm

cm

HITACHI

2014-029

sample_id	Easting	Northing	total_depth	BGI_depth_	bedrock_type	panned gold	notes	HLFT_area	date
SP19-001	565509	7103529	1.5	1.2	GS	none	Sluff from uphill. Bedrock-Gravel Interface (BGI). Graphitic Schist (GS) of the Finlayson assemblage (DMN3) bedrock. White to yellow-rusty clay seams in bedrock.	ecending road contour down to 20 pu	Wednesday, May 29, 2019
SP19-002	565283	7103376	6	na	GS	none	Too dangerous to get in. Sample from 6m deep. Gravel and sand layers. Sidehill bench area. Not on bedrock. Excavator max depth is 6m. Rocks up to 10 cm long. Some heavies in pan - Magnetite and tiny garnet.	ing Trail from HLFT top down to 20 pi	Wednesday, May 29, 2019
SP19-003	565511	7103502	1	0.9	GS	none	Loess organic to 80 cm. Gravel 80 - 90cm. Some heavies.	ecending road contour down to 20 pu	Friday, May 31, 2019
SP19-004	565504	7103472		2.4	GS	none	0 to 1.3m loess and organics. 1.3 to 2.4 m gravel. Berdock of graphitic Schist at 2.4m. Slight slope on bedrock.Decent heavies but no gold in pan. Rusty gravels of Klondike Schist (KS) GS mix	ecending road contour down to 20 pu	Friday, May 31, 2019
SP19-005	565499	7103415	3.4	2.6	KS	1 piece	Organic and loess to 50cm. 50 to 260cm gravel. Of rusty brown alluvial of KS and bedrock of chlorite schist greenish with rusting and white greenish clay at interface. BGI not very sloped. Panned. 1 piece very small gold.	ecending road contour down to 20 pu	Saturday, June 1, 2019
SP19-006	565462	7103340	2.2	2	KS	none	Sloped surface. 0 - 40cm organic and loess. Gravels, sand 40-120cm. Clay gravel 120-200cm. Some heavies. Very rusty clayey.	ecending road contour down to 20 pu	Saturday, June 1, 2019
SP19-007	565456	7103313	3.8		GS/KS?	none	3.8m. Surface is very sloped but bedrock does not seem very sloped. 0-60 cm loess and gravel. 60-320cm alluvial gravels increasing in size to bedrock up to 40cm diameter. At 320 cm bedrock of green Chloritic Schist with muscovite. Possibly altered graphi	ecending road contour down to 20 pu	Saturday, June 1, 2019
SP19-008	565460	7103269	1.9	1.7	GS	none	0-30 cm loess and organics. 30-140 cm graphitic Schist gravels. 140-170 cm clayey gravel mix. 170 cm graphitic Schist bedrock. Slope of bedrock seems quite less than slope of hill. Panned. No gold. Very little heavies.	ecending road contour down to 20 pu	Sunday, June 2, 2019
SP19-009	565453	7103291	2	1.9	GS	1 piece	0-10cm loess organics. 10-110 cm brownish sandy alluvial gravels. 110-190cm graphitic Schist and rusty gravels layers to clay of rusty color. 190 decomposed bedrock. Panned. 1 piece very small gold. Some heavies. Gravel is ks and GS mix. Some clay. Ligh	ecending road contour down to 20 pu	Monday, June 3, 2019
SP19-010	565489	7103200	1.1	0.8	GS	1 piece	steeper hill. 0-10cm organics and loess. 10-80cm. Mixed loess, roots and gravels. Boring brown. Bedrock or dark black graphitic Schist at 80-110cm. Panned. 1 piece very small gold. Some magnetite (heavies).	ecending road contour down to 20 pu	Monday, June 3, 2019
SP19-011	565497	7103175	1.1	0.8	GS	none	0-10 cm loess and organics. 10-80 cm Graphitic Schist gravels and sand mixed with loess and organics. Bedrock at 80 cm to 110. Probably not in place gravels, sluffed from above. Panned. No gold. Practically all graphitic Schist. Barely any heavies	ecending road contour down to 20 pu	Monday, June 3, 2019
SP19-012	565463	7103223	1.2	1.1	GS	none	0-10cm loess and organics. 10-90 cm probably sluff. Brownish gravels and sand. 90-110 cm lighter greyish/whitish gravels. Possibly in place. Sloped bedrock of clayish graphitic schist 110-120cm. Panned. No gold very small amount of heavies.	ecending road contour down to 20 pu	Monday, June 3, 2019
SP19-013	565464	7103260	1.5	1.3	GS	none	0-20 cm organic and loess. 20-110 cm gravel with organics and silt. 110-130 cm gravel light with sand. Mostly frozen. Bedrock of graphitic Schist 130-150 cm. Panned. No gold. Mix of graphitic and chloritic Schist. Barely any heavies.	ecending road contour down to 20 pu	Monday, June 3, 2019
SP19-014	565499	7103449	2.8	2.4	GS	1 piece	2.8 m deep. 0-120 cm organics and loess. 120-240 cm gravels to bedrock. Bedrock starts at 240 as 5cm of clayish graphitic Schist then clayey whiteish rusty degraded bedrock goes to 280 cm. Not much of a slope at bedrock. Pan had some black sand and 1 sma	ecending road contour down to 20 pu	Monday, June 3, 2019
SP19-015	565491	7103389	3.2	2.6	GS	1 piece	3.2m deep. 0-100 loess and organics and some gravels fallen from slope above. 100-120 fine loess and wind blown layer. 120-230 lighter color sandy gravels. Lighter flow? 230-260 rusty clayey layer with larger bits of gravel and angular rock on top of fi	ecending road contour down to 20 pu	Tuesday, June 4, 2019
SP19-016	565491	7103389	3.2	2.6	GS	none	Taken from 270-280cm in same hole as SP19-015 and 17. Just under the bigger rocks under the ash layer. Panned. No gold.	ecending road contour down to 20 pu	Tuesday, June 4, 2019
SP19-017	565492	7103389	3.2	2.6	GS	none	Taken from same pit as SP19-016 and 015. At 250-260. In gravels right above ash layer. Rusty clayey. No gold. Not much heavies.	ecending road contour down to 20 pu	Tuesday, June 4, 2019
SP19-018	565343	7103082	5.2	na	na	none	Poplar slope. Thawed gravel of the same type all the way from 50cm to 5.2m. Could not dig deeper because of slope. Panned. No gold. Hardly any heavies.	ecending road contour down to 20 pu	Tuesday, June 4, 2019
SP19-019	565332	7102873	5.5	na	na	none	Sandy and gravels layers the whole way down. Not many differences between layers. Not on bedrock. Panned. No gold. Barely any heavies.	ecending road contour down to 20 pu	Wednesday, June 5, 2019
SP19-020	564131	7103321	1.5	0.3	KS	none	Trench section 0-1 m. Organic roots and sands. Thin layer alluvial here dug to 150cm and 30-150 cm is weathered bedrock of Klondike Schist (KS). White sand line color at bottom and rusty clayey near BGI. Panned. No gold. Little heavies.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-021	564133	7103323	1.5	0.4	KS	1 piece	Trench section 1-2 m. Same gravels as last. Panned. One piece flat flake gold (+18mesh). Biggest piece of gold found on HLFT so far.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-022	564134	7103324	1.5	0.7	KS	none	Trench section 2-3m. . Larger boulders up to 80 cm came out of tench here. Slope of BGI here face uphill against the slope of overburden on the hill. Panned. No gold.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-023	564136	7103325	1.5	1.1	KS	none	Trench section 3-4m. Same gravel. Slope seems to have bottomed around 110cm an then rises like bedrock bowl. Boulders in the wall are 30cm diameter . Panned. No gold. Little heavies.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-024	564137	7103326	1.5	1	KS	1 piece	Trench section 4-5m. BGI at 100cm and rising with the hill. Same kind of gravels as last. Panned. Tiniest bit of gold. Little heavies.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-025	564139	7103327	1.5	0.9	KS	none	Trench section 5-6m. BGI at 90 cm same slope as hill. Panned. No gold. Little heavies.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-027	564141	7103329	1.5	0.7	KS	none	Trench section 6-7m. BGI at 70 cm to surface. Same gravels. Panned. No gold. Little heavies.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-028	564143	7103330	1.5	0.6	KS	none	Trench section 7-8m. BGI at 60cm. Same gravels. Panned. No gold.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-029	564145	7103331	1.5	0.5	KS	none	Trench section 8-9m. BGI 50-60 cm deep. Same gravels. Seems bedrock slope crests her and starts to descend against slope going against overburden slope. Panned. No gold.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-030	564147	7103331	1.5	0.7	KS	none	Trench section 9-10m. BGI at 70 cm. Same gravels. Dropping in to another bedrock bowl. Panned. No Gold.	Trench on Empire area HLFT	Sunday, June 9, 2019
SP19-031	564149	7103332	1.5	1.4	KS	none	Trench section 10-11m. BGI 140cm. 0-10 cm organics. 10-50 must surface gravels with roots. 50-140cm typical greyish whitish gravels. Dip seems to bottom right at 11m. Panned. No gold.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-032	564151	7103333	1.5	1.2	KS	none	Trench section 11-12m. BGI 120 at 12m. Rising. Same gravel profile. Panned. No gold.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-033	564152	7103334	1.5	0.9	KS	none	Trench section 12-13m. BGI 90cm. Same gravels. Panned. No gold.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-034	564154	7103335	1.5	0.6	KS	none	Trench section 13-14m. BGI 60cm. Same gravels. Panned. No gold.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-035	564156	7103337	1.5	0.6	KS	1 piece	Trench section 14-15m. BGI 60cm. Same gravels. On very rusty clayey weathered bedrock. Panned. 1 very small piece gold. Maybe 2. Panning was rustier coloration.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-036	564158	7103338	1.5	0.5	KS	2 piece	Trecnch section 15-16m. BGI 50cm. Thicker layer of sandy whitish green yellow material between BGI and rusty clayey decomposed bedrock of greenish white (asbestos?) Wavy Schist with sericite. Panned. 2 piece very small. Angular? Gold	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-037	564167	7103344	2	1.6	KS	none	BGI 160cm. Bedrock is very whitish Chloritic sericite schist. Gravels at BGI very whitish. Almost White Channel like. Little to no slope. Large 30-40cm boulders. Panned. No gold. Hardly any heavies.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-038	564180	7103350	4.8	na	KS	none	Maybe close to bedrock. Frozen ground at this depth. White channel? Boulders up to 80 cm. Panned. No gold.	Trench on Empire area HLFT	Monday, June 10, 2019
SP19-039	564133	7103323	same as 021	same as 021	same as 021	none	Went back and took an excavator bucket from 1-2m in trench. Where SP19-021 was taken. Panned. No gold.	Trench on Empire area HLFT	Wednesday, June 11, 2019

SP19-040	564271	7103398	5	na	na	1 piece	Sample taken at 5m deep. Not on bedrock. Gravel looks to be KS. Mixed sericite schists quartz. Some rusty decomposed QFP providing clay. 0-20cm organics fines. 20-40cm brown sandy gravels. 40-150 sandy clayey rusty gravels. 150cm to 5m uniform gravel.	vay up hill on Trench on Empire area	Wednesday, June 11, 2019
SP19-041	564270	7103398	5	na	na	1 piece	Sample of contact layer described in SP19-040; same pit. 150cm deep fine clayey contact between rusty sandy layer on top and gravels below. Taken on top of contact in rusty sands. Panned. 1 very small piece gold.	vay up hill on Trench on Empire area	Wednesday, June 11, 2019
SP19-042	564309	7103368	5	na	na	none	5m deep. Sandy rust profile to 1.5 m. Darker GS to 2m. Then sandy rusty 20cm. 220-350 GS type gravels. 350 to 500 cm rusty color gravels sandy KS? Not on bedrock. Panned. No gold.	vay up hill on Trench on Empire area	Wednesday, June 11, 2019
SP19-043	564349	7103365	5	na	na	none	5m deep. No bedrock. Similar gavels to last 2. Panned. No gold.	vay up hill on Trench on Empire area	Wednesday, June 11, 2019
SP19-044	564352	7103455	5	na	na	none	5m deep. No bedrock. Shoulder of hill. GS/KS. Sandy gravels. Panned. No gold.	ll acending above Trench on Empire a	Wednesday, June 11, 2019
SP19-045	564998	7103203	3	na	na	2 pieces	Panned. 2 pieces very small gold. 3m deep. Frozen gravels.	Up on top of flat area of HLFT	Sunday, June 12, 2019
SP19-048	565376	7103405	3	na	na	none	3m deep. Frozen. No bedrock. Little heavies. Liminitic Klondike schist gravels.	ing Trail from HLFT top down to 20 p	Sunday, June 16, 2019
SP19-047	565295	7103336	5	na	na	none	5m deep. No bedrock. Little heavies. Unsorted graphitic schist gravels.	ing Trail from HLFT top down to 20 p	Sunday, June 16, 2019
SP19-046	565227	7103188	8	na	na	none	7 meters deep. No bedrock, black graphitic schist like gravel. No sign of bedrock. Panned no gold. Little heavies.	Up on top of flat area of HLFT	Sunday, June 14, 2019

Date	Personel	Mandays		Excavator Time (hrs)	ATV	Truck
28-May	Morgan	1	MOBILIZATION of Excavator and tools to Swede Creek HLFT	7	1	1
29-May	Morgan	1	Dig, sample, reclaim SP19-001 and SP19-002. Some digging in pits that encountered permafrost and left open to thaw	6	1	1
30-May	Morgan	1	Digging, sampling, reclaiming and panning SP19-001 and SP19-002	4	1	1
31-May	Morgan	1	Digging, sampling, reclaiming and panning SP19-003 and SP19-004 digging around other pits and exposing frozen ground to thaw.	4	1	1
1-Jun	Morgan	1	Digging, sampling, reclaiming, testing, SP19-05, 06 and 07	4	1	1
2-Jun	Morgan	1	Dig, sample, reclaim, pan SP19-08. Opened a few other holes that were frozen and worked more on previos pits that were left to thaw.	3	1	1
3-Jun	Morgan	1	Dig, sample, reclaim, pan SP19-09, 10, 11, 12, 13 and 14	3	1	1
4-Jun	Morgan	1	Dig , sample, reclaim, pan SP19-015, 16, 17 and 18. Worked a bit on already open pits that were thawing.	4	1	1
5-Jun	Morgan	1	Prospecting for digging spots and acces on the South side of the HLFT. Dug, sampled, reclaimed and tested SP19-019	4	1	1
6-Jun	Morgan	1	Scouting for access and walking excavator through difficult terrain to access Empire creek ridge area. Got within 300 meters of my destination.	4	1	1
7-Jun	Morgan	1	Finished walking excavator to ridge above Empire creek mouth. Prospected and scraped around the area. Started digging a trench to sample the shallow bedrcok gravel interface of the area.	4	1	1
8-Jun	-	-	-	-	-	-
9-Jun	Morgan	1	Finished digging remainder of trench and sampling SP19-031 to 36	3	1	1
10-Jun	Morgan	1	Reclaimed trench area and dug, sampled, reclaimed, tested pits for SP19-037 and 038	4	1	1
11-Jun	Morgan	1	Walked excavator up hill and dug, sampled, reclaimed, tested SP19-039 to 044	4	1	1
12-Jun	Morgan	1	Walked excavator back to main trail from Empire area ridge. Slow difficult going on rough trial. Trying to leave no trace. Dug an SP19-045. Frozen a 3m but took sample anyway. Only possible sample from this area and wasn't planning on coming back soon.	4	1	1
13-Jun	Morgan	1	Walked excavator back to site of Shaft 1 and Pit18-01 of 2018 year to dig a deeper pit. Started clearing area to dig 2 meter hole that the excavator could get in to.	4	1	1
14-Jun	Morgan	1	Kept clearing and digging the pit for SP19-046. took sampel and tested the sample	4	1	1
15-Jun	-	-	-	-	-	-
16-Jun	Morgan	1	Walked excavator down to main20 pup road and dug pits on the way, Dug, sampled, reclaimed and tested SP19-047 and 048	4	1	1
11-Jul	Morgan	1	Staking Lease on Empire Creek		1	1
24-Jul	Morgan	1	Staking claims on 20 PUP		1	1
8-Oct	Morgan	1	Walking excavator back to Top of World highway	6	1	1
14-Oct	Morgan	1	Demobilizing and trucking excavaotr and tools out of Swede.		1	1
15-Oct	Morgan	1	Staking Claims on Bench of Discovery Pup.		1	1