

YMEP 2020-112 Final Report

PATTON CREEK PLACER PROPERTY

on

ALEX 1-31 (P 516012-P 516042), ALEX CODISCOVERY (P 521159),

ALEX CODISCOVERY 1 (P 521158), IRINA (P 515225), MILA (P 515224)

GROUPING GD 01631

by

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Geoplacer Exploration Ltd.

Location of property: 63°18'36"N to 63°19'26"N and 138°58'46"W to 139°4'22"W
NTS map sheets: 115O/06, 115O/07
Mining District: Dawson
Date: January 27, 2021

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Executive Summary

The following is the final report for 2020 placer exploration conducted under grant #YMEP2020-112 on Patton Creek by Geoplacer Exploration Ltd. The Patton Creek Property is located on an un-named right-limit tributary of Maisy May Creek, which is locally known as Patton Creek. The placer claims of the Patton Creek Property are all adjoining. Maisy May Creek is a right limit tributary of the lower Stewart River, located in central Yukon approximately 100 km by air south of Dawson City, Yukon. Access to the property can be gained by fixed-wing air or summer road. The total road distance from Dawson City to the Patton Creek placer claims is approximately 140 kilometres.

The 2020 exploration program included access construction, electrical resistivity geophysical surveys, auger drilling, excavator test-pitting, and aerial drone imagery.

The 2020 geophysical surveys (five lines totalling 925 m) returned good quality data although discontinuous permafrost and variable groundwater saturation complicated interpretation of the geophysical results. Several new targets were identified, and these are on trend with targets on the low-level bench that were identified in the 2019 exploration program.

The 22 auger drill holes totalling 403 ft. correlated well with the interpretations of the bedrock contacts on both the 2019 and 2020 geophysical surveys. The bedrock in the main valley is shallow and within easily mineable depths between 5 ft and 25 ft from surface. The gold sampling results from the auger drill program were promising, including drill hole 20-12 with 45 mg of gold recovered and drill hole 20-7, with 158 mg of placer gold recovered. Drill hole 20-12 is the farthest upstream hole and the gold results here show that there is significant placer gold potential on the untested portions of Patton Creek up valley. Gold results from a 3 yd³ sample from Test Pit 2020-1 were quite promising, with several coarse gold pieces weighing 0.472g recovered along with substantial amounts of coarse-grained heavy minerals.

The overall coarseness of the gold recovered in previous and current sampling programs demonstrates that larger bulk samples are necessary to recover a representative amount of gold from Patton Creek. This may also be a factor in some of the drill samples recovering no gold at all, as it is well-known that the coarser the placer gold is within a drainage, the more difficult it is to sample accurately with a drill program.

Significant amounts of gravel are on the low- and high-level terraces on Patton Creek which have not been sampled but may be host to economic placer gold. These should be bulk sampled in a series of pits along the left limit, with samples not less than 20 cubic yards each. Resistivity geophysics should be used as a guide to target potential bedrock depressions and areas where gravel is the thickest.

Initial results in the main Patton valley are promising enough to justify stripping a larger area and processing a large bulk sample of at least 500 cubic yards. The most logical place for this is centred on Test Pit 2020-1 on the ALEX 3 claim. If results continue to be promising, then a full-scale mining operation should be initiated. Resistivity geophysics along with auger drilling may be used to guide the operation as it progresses upstream.

Introduction

The following is the final report on 2020 exploration of the Patton Creek property conducted under grant number YMEP2020-112 of the Yukon Mineral Exploration Program (YMEP), placer module. The 2020 program included access construction, resistivity surveys, auger drilling, excavator test pitting and drone imagery. The Patton Creek property is 100% owned by Geoplacer Exploration Ltd.

Location and Access

The Patton Creek Property is located on an un-named right-limit tributary of Maisy May Creek, which is locally known as Patton Creek. The placer claims of the Patton Creek property are all adjoining.

Maisy May Creek is a right limit tributary of the lower Stewart River, located in central Yukon approximately 100 km by air south of Dawson City, Yukon (Figure 1). The extent of the current property is 63°18'36"N to 63°19'26"N and 138°58'46"W to 139°4'22"W; on NTS map sheets 1150/06 and 1150/07, in the Dawson Mining District (Figure 2).

Access to the property can be gained by fixed-wing air or summer road. Surface access is via secondary gravel roads - the usual route runs along Hunker Creek to King Solomon Dome, down Sulphur Creek to Indian River, then up Eureka Creek to Eureka/Black Hills Dome. From Eureka/Black Hills Dome, a relatively new access road forks right (southwest) towards Rosebute Creek and Henderson Dome. At Henderson Dome, a south-fork turn leads south across the ridgeline and then down Maisy May Creek road towards the property. The total road distance from Dawson City to the Patton Creek placer claims is approximately 140 kilometres. A 600 metre-long "bush" airstrip is located in the valley of Maisy May Creek a distance of 1.4 km from the Patton Creek property. The geographic coordinates of the airstrip are 63°20'05"N and 138°59'02"W.

Placer Tenure

Table 1 shows a summary of the current claims grouped under GD01631 on Patton Creek.

Permitting

Geoplacer Exploration Ltd. currently holds Class 4 Water License PM13-053 and Class 4 Mining Land Use Permit AP13053 on Patton Creek. Both permits are valid until February 24, 2024.

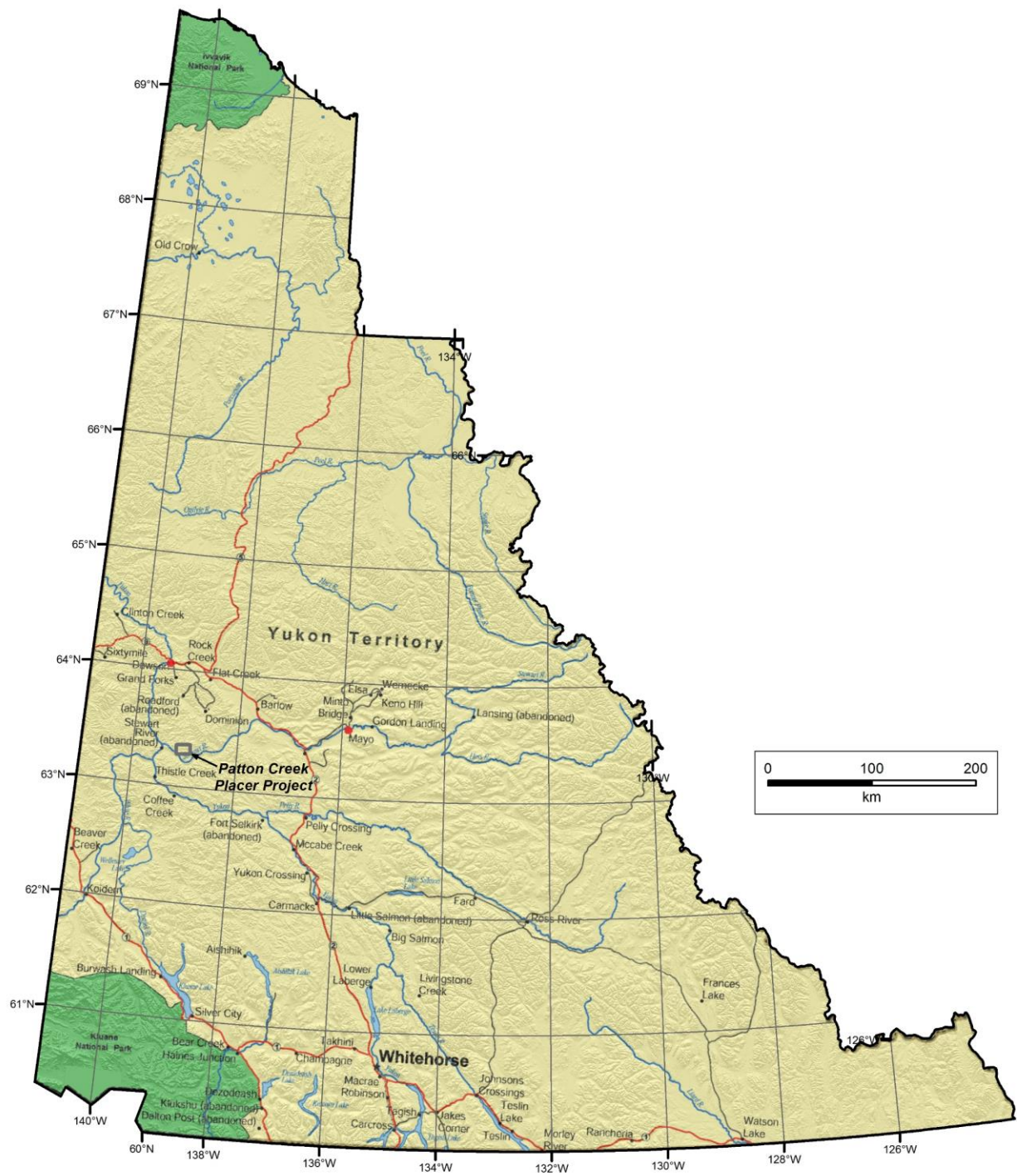


Figure 1 - General Location of Patton Creek Project, Yukon.

Table 1 - Claim status, Patton Creek property. All claims currently grouped under certificate GD01631.

Grant	Tenure	Claim	Owner Name	Staking Date	Recorded	Expiry Date
P 516012	Active	Alex 1	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516013	Active	Alex 2	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516014	Active	Alex 3	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516015	Active	Alex 4	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516016	Active	Alex 5	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516017	Active	Alex 6	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516018	Active	Alex 7	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516019	Active	Alex 8	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516020	Active	Alex 9	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516021	Active	Alex 10	Geoplacer Exploration Ltd - 100%	31/05/2014	03/06/2014	03/12/2021
P 516022	Active	Alex 11	Geoplacer Exploration Ltd - 100%	01/06/2014	03/06/2014	03/12/2021
P 516023	Active	Alex 12	Geoplacer Exploration Ltd - 100%	01/06/2014	03/06/2014	03/12/2021
P 516024	Active	Alex 13	Geoplacer Exploration Ltd - 100%	01/06/2014	03/06/2014	03/12/2021
P 516025	Active	Alex 14	Geoplacer Exploration Ltd - 100%	01/06/2014	03/06/2014	03/12/2021
P 516026	Active	Alex 15	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516027	Active	Alex 16	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516028	Active	Alex 17	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516029	Active	Alex 18	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516030	Active	Alex 19	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516031	Active	Alex 20	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516032	Active	Alex 21	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516033	Active	Alex 22	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516034	Active	Alex 23	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516035	Active	Alex 24	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516036	Active	Alex 25	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516037	Active	Alex 26	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516038	Active	Alex 27	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516039	Active	Alex 28	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516040	Active	Alex 29	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516041	Active	Alex 30	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 516042	Active	Alex 31	Geoplacer Exploration Ltd - 100%	02/06/2014	03/06/2014	03/12/2021
P 521158	Active	Alex Co Disc 1	Geoplacer Exploration Ltd - 100%	04/05/2019	06/05/2019	06/11/2021
P 521159	Active	Alex Co Disc	Geoplacer Exploration Ltd - 100%	04/05/2019	06/05/2019	06/11/2021
P 515225	Active	Irina	Geoplacer Exploration Ltd - 100%	12/06/2013	13/06/2013	12/12/2021
P 515224	Active	Mila	Geoplacer Exploration Ltd - 100%	12/06/2013	13/06/2013	12/12/2021

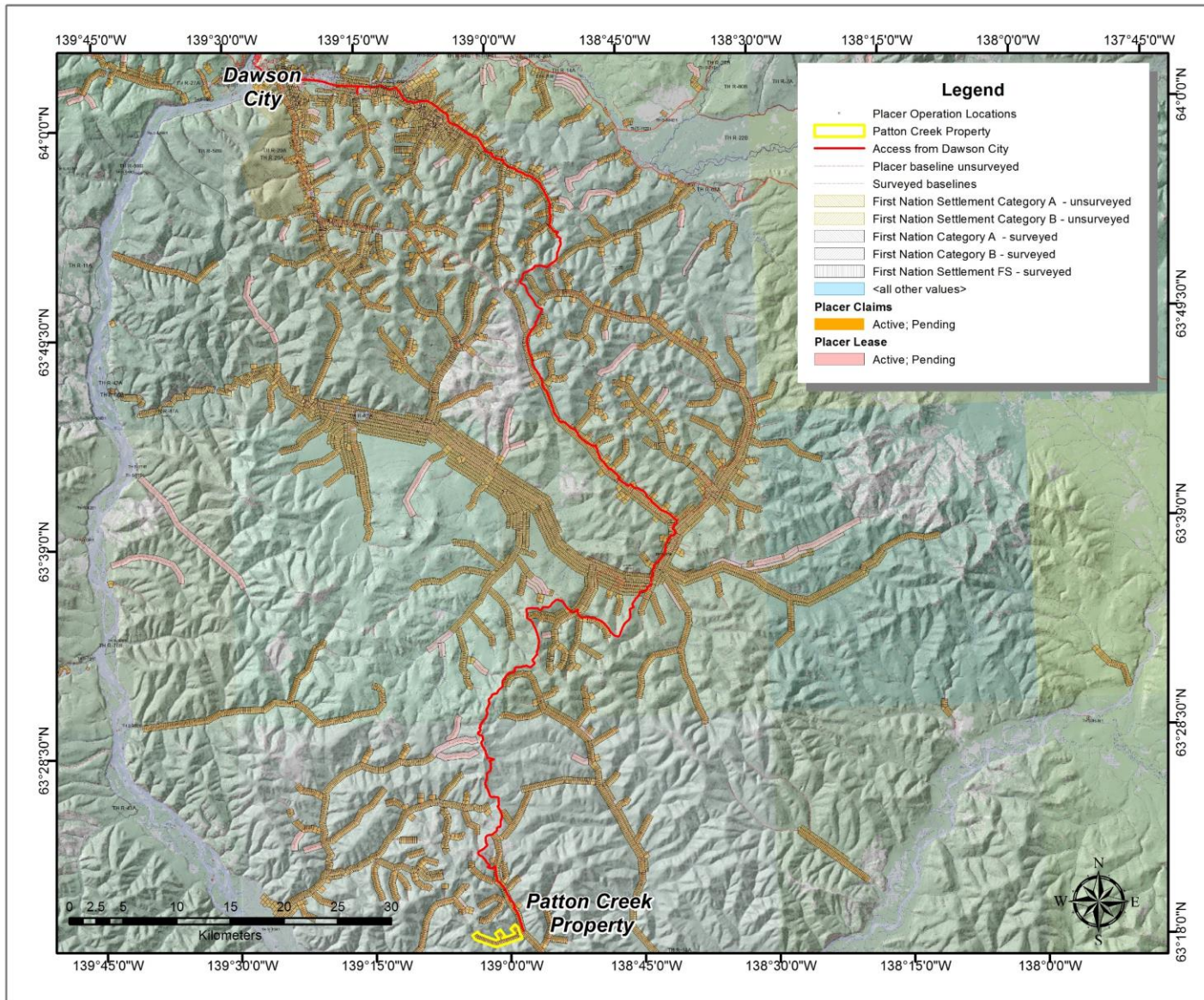


Figure 2 – Location of Patton Creek claims and Dawson region placer tenures.

History of Exploration and Mining – Maisy May Creek

In the early 1930s and again in the late 1970s, Mr. J. McDiarmid and partners (Maisy-May Mines Ltd.) dug hand shafts on Maisy May Creek beginning 1 mile from the confluence with Stewart River (Queenstake 1987a, 1987b). The best values encountered both times were at the mouth of Patton Creek (Queenstake, 1987a).

Maisy May Mines Ltd. also operated from 1980 to 1983 at a location about 11.7 km upstream of the confluence with the Stewart River.

According to Government royalty records, Maisy May Creek produced at least 25,926 crude ounces of gold between 1980 and 2010 (LeBarge, 2007; LeBarge and Nordling, 2011). The majority of that gold (19,202 crude ounces) was produced by Queenstake Resources in the period 1984 to 1989 (LeBarge, 2007).

Based on the work done during the 1984 season, Queenstake estimated that with selective mining, there were (pre NI43-101, non “compliant”) “reserves” of 200,000 cubic yards (152, 911 cubic metres) of gravel with a recoverable grade of 0.012 ounces of fine gold per cubic yard (0.488 grams per cubic metre) at the property (LeBarge, 2007).

From 1990-1994, Jasper Equipment continued mining upstream from where Queenstake had finished mining in 1989, recovering approximately 2,650 crude ounces (LeBarge, 2007).

From 1993 to 1998, John VanEvery and Richard Fitch intermittently mined under VanEvery Inc. upstream near the headwaters of Maisy May Creek (LeBarge, 2007). Art Christiansen operated a small mine in the same area from 2007 to 2009 (LeBarge and Nordling, 2011). Mr. Christiansen was active in the area again in 2013, 2014 and 2015 and intermittently until 2019.

35249 Yukon Inc. mined Maisy May Creek approximately 3.5 miles (5 km) upstream from its confluence with the Stewart River from 2001 until 2003. Maisy Mae Mining Inc. bought the operation in 2006 and processed a mine cut in 2007 and 2008 located about 4 miles (7 km) upstream of the confluence (LeBarge and Nordling, 2011). The claims were later returned to 40419 Yukon Inc, which conducted a limited test program in late 2014.

H.C. Mining Ltd. conducted a test mining program on an upper right-limit Maisy May tributary in 2012, 2013 and 2014.

In 2013, Bedrock Mining Company Inc. bought many of the Maisy May Creek claims (in the middle reaches) from 40419 Yukon Inc., and subsequently conducted a program of camp and access construction as well as limited test mining. In 2014, the test mining was expanded to an area on Maisy May creek downstream of the confluence of Candace Creek and just upstream of the 2014 test cut of 40419 Yukon Inc. The operation was active again in this area from 2015 to 2019 (Van Loon and Bond, 2014; Bond and Van Loon, 2018).

Candace Creek Mining Ltd. conducted a placer testing program on Maisy May left-limit tributary Candace Creek (also known as Moosetooth Creek) in 2013, 2014 and 2015. The program consisted of access construction, resistivity geophysics, sonic drilling, auger drilling, bulldozer trenching and excavator test-pitting.

Previous Exploration History – Patton Creek

Queenstake Resources (1987a, 1987b) mention that hand-mining took place on a left-limit bench at the mouth of Patton Creek, beginning in the 1920s. This work was done by a Mr. Patton, for whom the creek is named. Reportedly 500 crude ounces were recovered during this time, although this is not recorded in any government royalty records. Workings on the bench in this area can be discerned on airphotos taken in the 1940s.

Queenstake Resources Ltd. had Patton Creek staked as a one-mile lease (PL6352) in 1987. Although no work by Queenstake is known on Patton Creek, a mining cut on Maisy May just downstream of the mouth of Patton Creek was the highest grade gravel they encountered (Queenstake 1987a; G. Gutrath 2013 pers. comm.). A total of 3892 fine ounces (at a fineness value of 780) was recovered in this area over a 300 foot mining width. The average grade was 0.016 fine oz/cubic yard (0.65 grams/cubic metre) although grades were encountered up to 0.019 fine oz/cubic yard (0.773 grams/cubic metre). This mined area is shown in Queenstake's report.

Mr. Wayne Lerner also staked Patton Creek as a one-mile prospecting lease on Sept. 14, 1992. Some evidence of small collapsed excavations can be seen although no documented results of that work have been found.

Between 2013 and 2015, Geoplacer Exploration Ltd. conducted exploration on Patton Creek including limited resistivity geophysical surveys, excavator test-pitting and auger drilling. Placer gold was recovered from all of the test pits including from samples taken near the surface.



Figure 3 - View of Patton and Mila Creeks showing the 2015 test pits and access road from Maisy May Creek. Also shown is the downstream left-limit bench where 500 ounces was reportedly mined by hand. Photo taken September 20, 2015.



Figure 5 - Sample PATT15-1 was a single pan at the top of the gravel layer in pit PATTON 2015-01. A hackly coarse gold grain and several small colours were recovered along with abundant crystalline magnetite and garnet.



Figure 4 - Sample PATT15-3 from test pit PATTON 2015-01 contained coarse to medium sized hackly gold grains as well as magnetite and rutile.

Regional Bedrock Geology

The project area is situated within the Yukon-Tanana terrane, an accreted pericratonic sequence that covers a large part of the northern Cordillera from northern British Columbia to east-central Alaska (Gordey and Ryan, 2005; Colpron and Nelson, 2006). The Yukon Tanana Terrane consists of Paleozoic schist and gneiss that were deformed and metamorphosed in the late Paleozoic, and intruded by several suites of Mesozoic intrusions that range in age from Jurassic to Eocene (Colpron and Nelson, 2006). The Paleozoic rocks are pervasively foliated with at least two overprinting fabrics (MacKenzie and Craw, 2010; MacKenzie et al, 2008). During Late Permian to Early Jurassic time these rocks were tectonically-stacked along thrust faults which were parallel to regional foliation. Later tensional-extensional tectonics occurred during the mid-Cretaceous, and this resulted in brittle fracture of the Paleozoic rocks, which is likely responsible for structurally-controlled gold mineralization in the south Klondike area including the White Gold exploration camp (MacKenzie et al, 2008; MacKenzie and Craw, 2010; MacKenzie and Craw, 2012).

Local Bedrock Geology

Maisy May Creek area bedrock is mapped as several metamorphic, metaplutonic and volcanic bedrock types (Figure 6). These include Late Proterozoic clastics and marble (map units PDS1 and PDS2); Devonian-Mississippian mafic volcanic rocks and serpentinite (map units DMF1 and DMF6); Late Devonian tonalite and diorite - orthogneiss (map unit MgSR); middle Permian Sulphur Creek quartz monzonite gneiss (map unit PgS); Late Triassic/early Jurassic Minto Suite intrusives (map unit LTrEJgM); and Upper Cretaceous Carmacks volcanics (map unit uKC3).

The most recent map by Yukon Geological Survey (2018) shows that the Patton Creek transects Late Proterozoic Snowcap clastics - schist (PDS1) at the mouth; Late Devonian tonalite and diorite – orthogneiss (map unit MgSR) in the mid-reaches; and Late Proterozoic Snowcap assemblage marble (map unit PDS2) in the mid- to upper reaches. Geological contacts trend N-S and NNW-SSE. Recent mapping by MacKenzie and Craw (2012) shows a thrust fault trending SE-NW along Maisy May Creek and several associated E-W and W-NW trending faults. One fault which appears to be a splay from the Maisy May thrust fault transects the lower portion of Patton Creek from SE to NW, roughly following the valley of the upper part of the lowermost left-limit tributary of Patton Creek (Figure 6).

Quaternary History

Most of the south Klondike region has not been glaciated (Duk-Rodkin, 1999) and in fact strong evidence exists that all of Maisy May creek and most of Black Hills Creek escaped glaciation altogether (Jackson et al., 2001). As such, the south Klondike region is dominated by colluvium on the upper slopes and ridges, variably-buried Tertiary to Late Pleistocene alluvial terraces in mid-slope reaches and Late Pleistocene to modern alluvial fans, stream complexes and gulch deposits in the lowermost points of valleys (Jackson, 2005a; 2005b).

Major trunk valleys such as the Stewart River were the locale for meltwater channels during the Pleistocene glaciations and contain glaciofluvial terraces well beyond the maximum extent of the Cordilleran ice, however these did not affect most major tributaries (such as Black Hills, Maisy May and Henderson creeks) except at their confluence.

Property Surficial Geology

Along Patton Creek lie surficial units of several ages and types, as mapped by Jackson (2005a, 2005b) and shown in Figure 7. These include: CEaP/AtT (Pleistocene Colluvial-Aeolian sediments overlying Tertiary Alluvial Terrace sediments) on the left limit of Patton at the confluence with Maisy May Creek; CEaP (Pleistocene Colluvial-Aeolian sediments) along the southern slope of the valley (right limit); and Cb-v (Colluvial blanket-veneer) on the hills above the creek. Much of the valley centre is mapped as Cx (Colluvial complex); however recent field examination by the author revealed that the centre of the narrow valley should be mapped as ACxP (Pleistocene Alluvial Complex sediments) and Ax (alluvial complex sediments). In addition, field observations reveal that the buried Tertiary alluvial terrace found at the mouth continues up the valley some distance, and therefore parts of the valley on both sides should be mapped as CEaP/AtT (Pleistocene Colluvial-Aeolian sediments overlying Tertiary Alluvial Terrace sediments). The scale of regional mapping by Jackson (2005a, 2005b) was too large to include that level of detail in the published surficial maps.

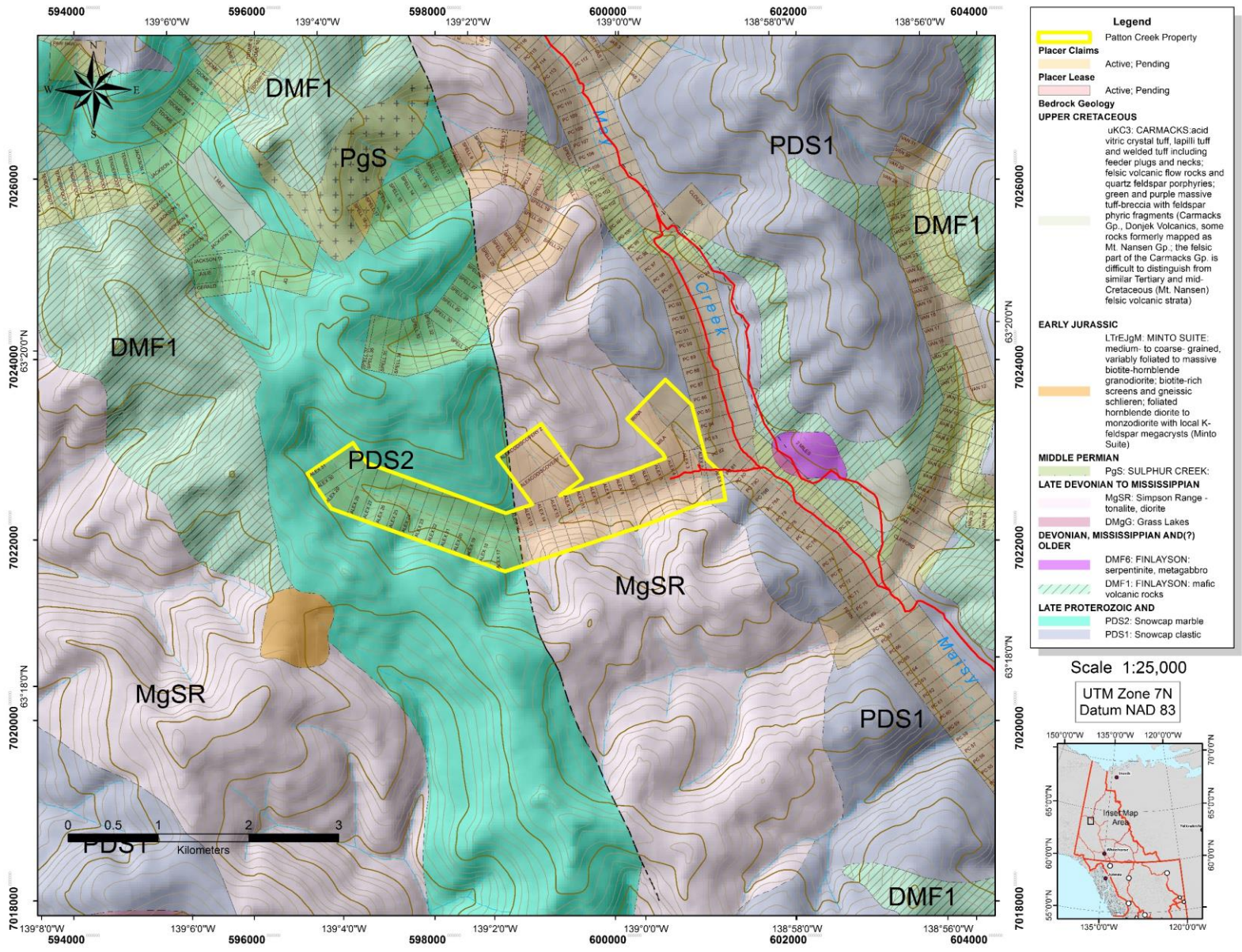


Figure 6 - Bedrock Geology of Patton Creek area, after Yukon Geological Survey (2018).

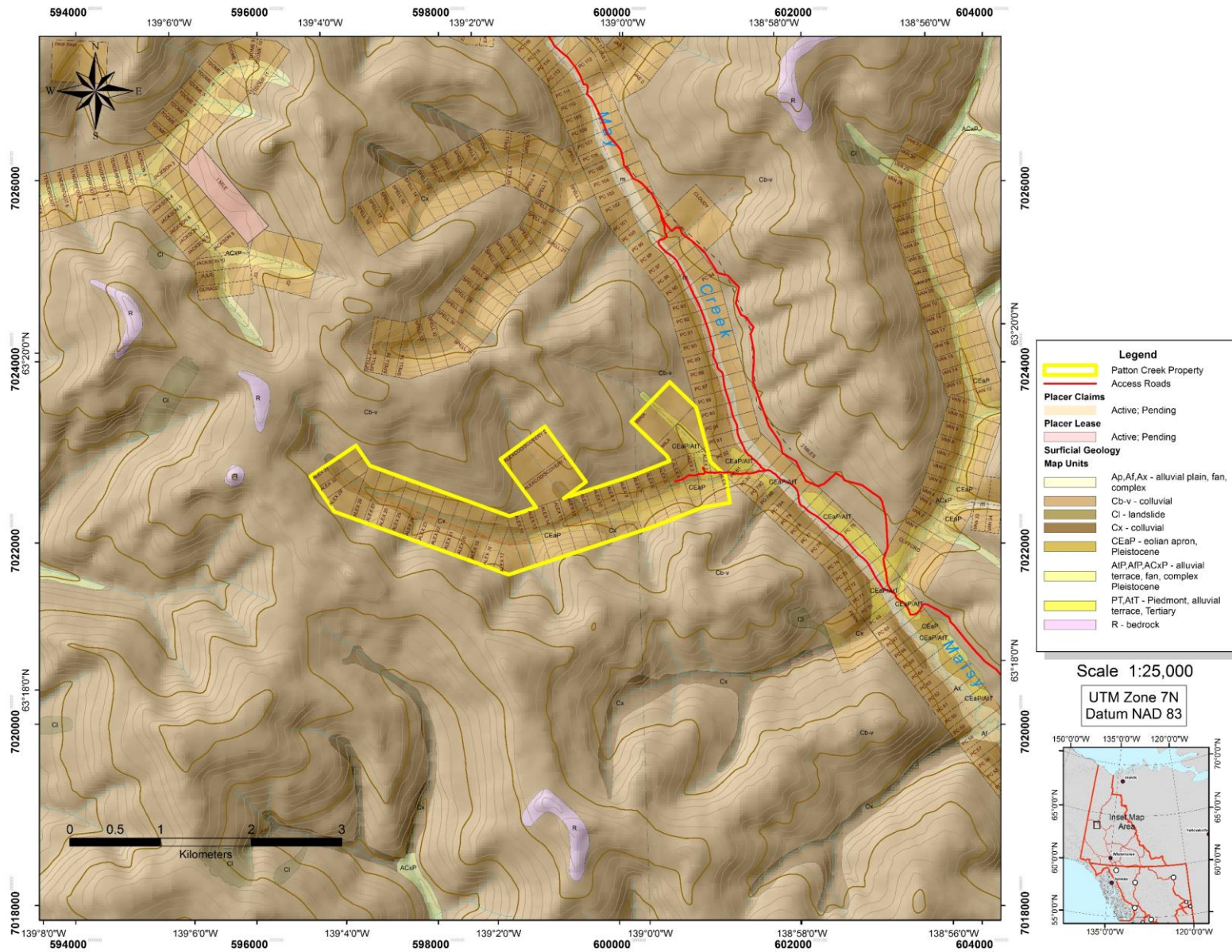


Figure 7 - Surficial Geology, Patton Creek, after Jackson (2005b).

2019 Placer Exploration Program

Drone Survey

In order to facilitate exploration and accurately plot the location of test pits and geophysical surveys, a drone survey was flown over the Patton Creek claims. The survey covered 1.272 creek-miles. A Mavic Pro was used to fly the survey, and the images were processed using specialized drone imagery software.

Resistivity Surveys

Introduction

Six resistivity lines totalling 1415 metres were surveyed by William LeBarge and Selena Magel of Geoplacer Exploration Ltd, between September 24 and 27, 2019.

Results

Contact resistivity was generally low in the survey which provided good quality data. However, the presence of discontinuously thawed surface areas within the permafrost increased the uncertainty of the interpreted results, as those parts of the valleys which had been disturbed were usually associated with high water saturation. In these areas, contrasts between low and high resistivity values were partially or wholly a reflection of varying groundwater and permafrost conditions, rather than strictly lithological boundaries.

The geographic coordinates of the endpoints of the surveyed lines are shown in Table 2. The lines are plotted on Figure 11, and the interpreted profiles are shown as Figures 12-17.

Table 2 – 2019 resistivity survey line endpoint coordinates, grant numbers and lengths, Patton Creek.

Survey Name	Grant Number (s)	Start Point		End Point		Length (m)
		Latitude	Longitude	Latitude	Longitude	
RES19-ALEX2-01	P 516012, P 516013	63.319403	-138.986444	63.319506	-138.982603	200
RES19-ALEX4-01	P 516015	63.319539	-138.991847	63.318006	-138.990922	200
RES19-ALEX5-01	P 516016	63.319698	-138.995835	63.3174	-138.99451	300
RES19-ALEX7-01	P 516018, P 516019	63.318545	-139.001613	63.316026	-139.001558	310
RES19-ALEX7-02	P 516018, P 516019	63.318283	-138.999786	63.318038	-139.003667	200
RES19-ALEX7-03	P 516018	63.317401	-138.999143	63.319128	-139.000235	200

Excavator Test Pits

The 2019 exploration program included 12 excavator test pits totalling 282 cubic yards. A Caterpillar 345C excavator was used to dig the test pits. The locations of the pits are shown on Figure 11, and coordinates and pit dimensions are given in Table 3.

Table 3 - Coordinates and dimensions of excavator test pits, Patton Creek, 2019.

Trench number	Vol_cu_yd	Depth_yd	Width_yd	Length_yd	Latitude	Longitude
2019-01	30	5	2	3	63.319753	-138.995636
2019-02	12	3	2	2	63.318953	-138.995432
2019-03	40	5	2	4	63.318954	-138.996208
2019-04	12	3	2	2	63.318061	-138.995071
2019-05	40	4	5	2	63.318579	-138.991773
2019-06	18	3	2	3	63.319283	-138.991541
2019-07	12	3	2	2	63.319904	-138.991419
2019-08	30	3	2	5	63.318837	-138.991314
2019-09	24	3	2	4	63.3205	-138.990309
2019-10	40	4	5	2	63.319069	-138.988835
2019-11	12	3	2	2	63.319392	-138.981199
2019-12	12	3	2	2	63.31949	-138.981139



Figure 8 - Trench 2019-01 on a left-limit bench 75 m above Patton Creek encountered a buried tephra layer within a thick silt/loess unit. This is likely stratigraphically above the gravel layer from Trench 2019-03, below.



Figure 9 - Trench 2019-03 was excavated near Resistivity survey RES19-ALEX 5-01. A well-sorted, clast-supported cobble-pebble gravel (approximately 2 m thick) was found on bedrock, with 3 metres of silt/loess overlying it.



Figure 10 - View of Trench 2019-03, showing 2 m of Mn-stained, well-sorted, stratified, imbricate cobble-pebble gravel lying on bedrock, overlain by 3 metres of silt/loess. This mature bench gravel is thawed, and likely early Pleistocene or older in age.

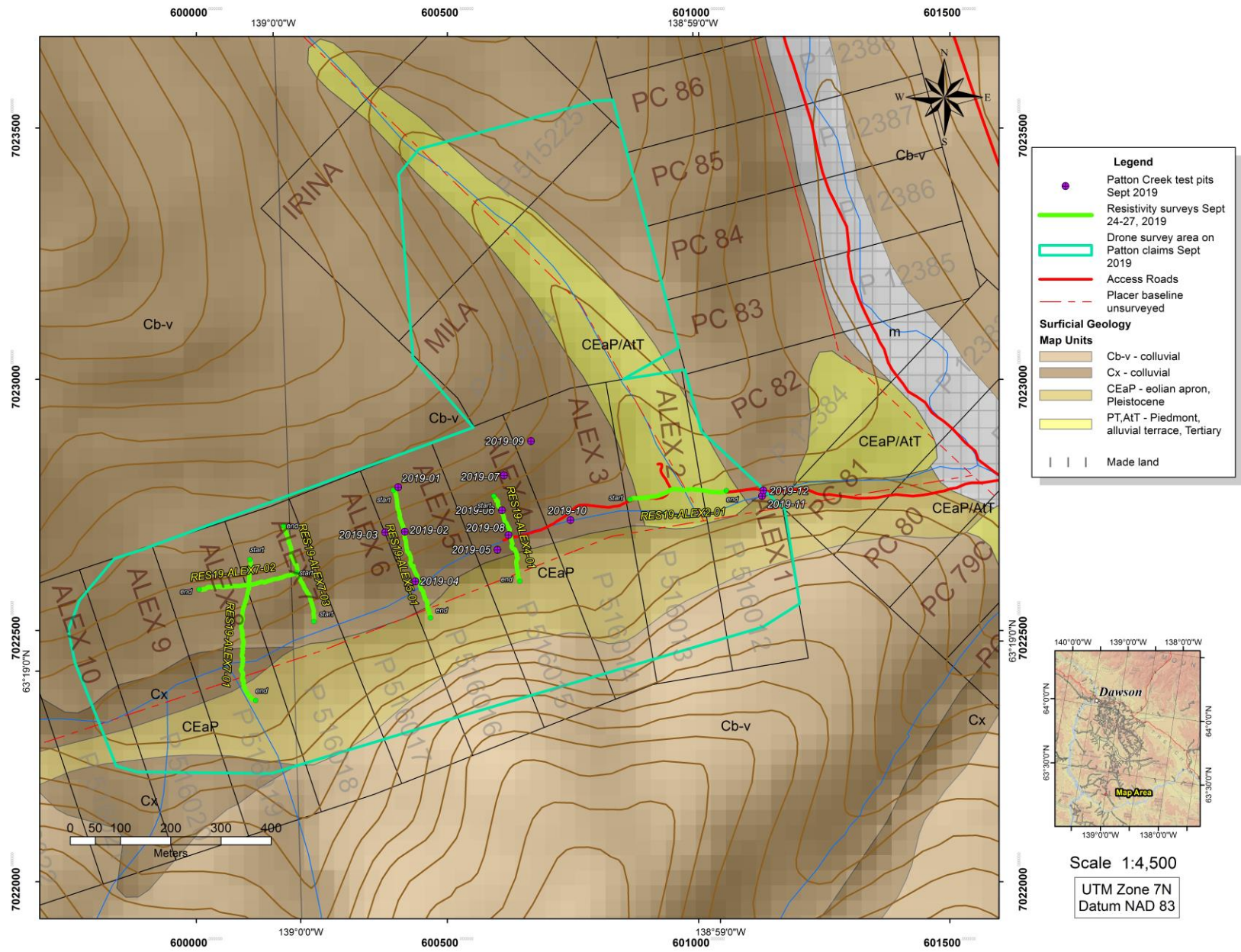


Figure 11 - Surficial map of Patton Creek property (after Jackson, 2005a, 2005b) showing resistivity surveys and test pits from the 2019 program.

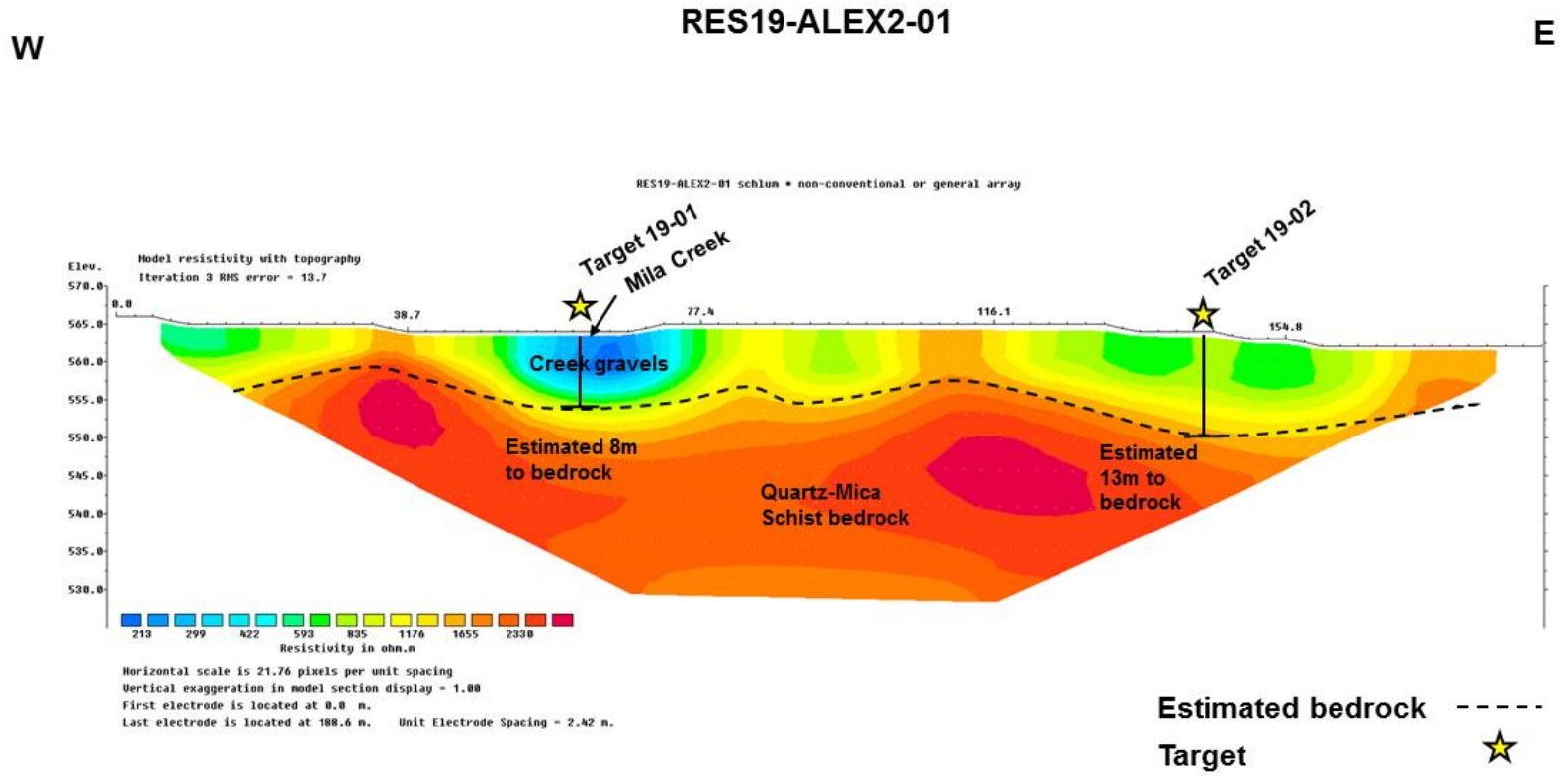


Figure 12 – Resistivity line RES19-ALEX2-01 on Patton Creek. Two drill targets were chosen with estimated depths of 8 and 13 metres to bedrock below surface.

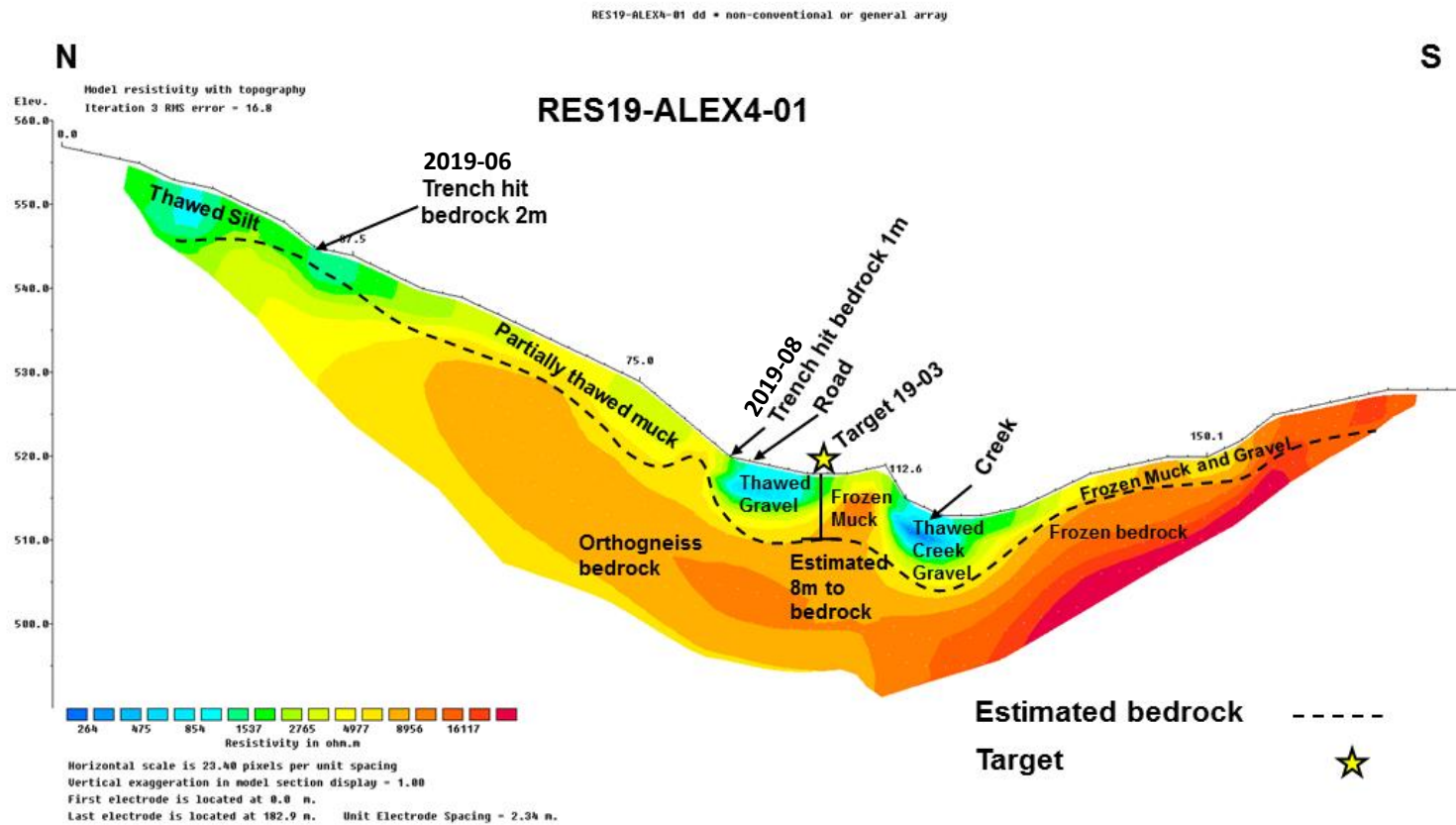


Figure 13 - Resistivity line RES19-ALEX4-01 on Patton Creek. One drill target has been chosen with an estimated depth of 8 metres to bedrock below surface.

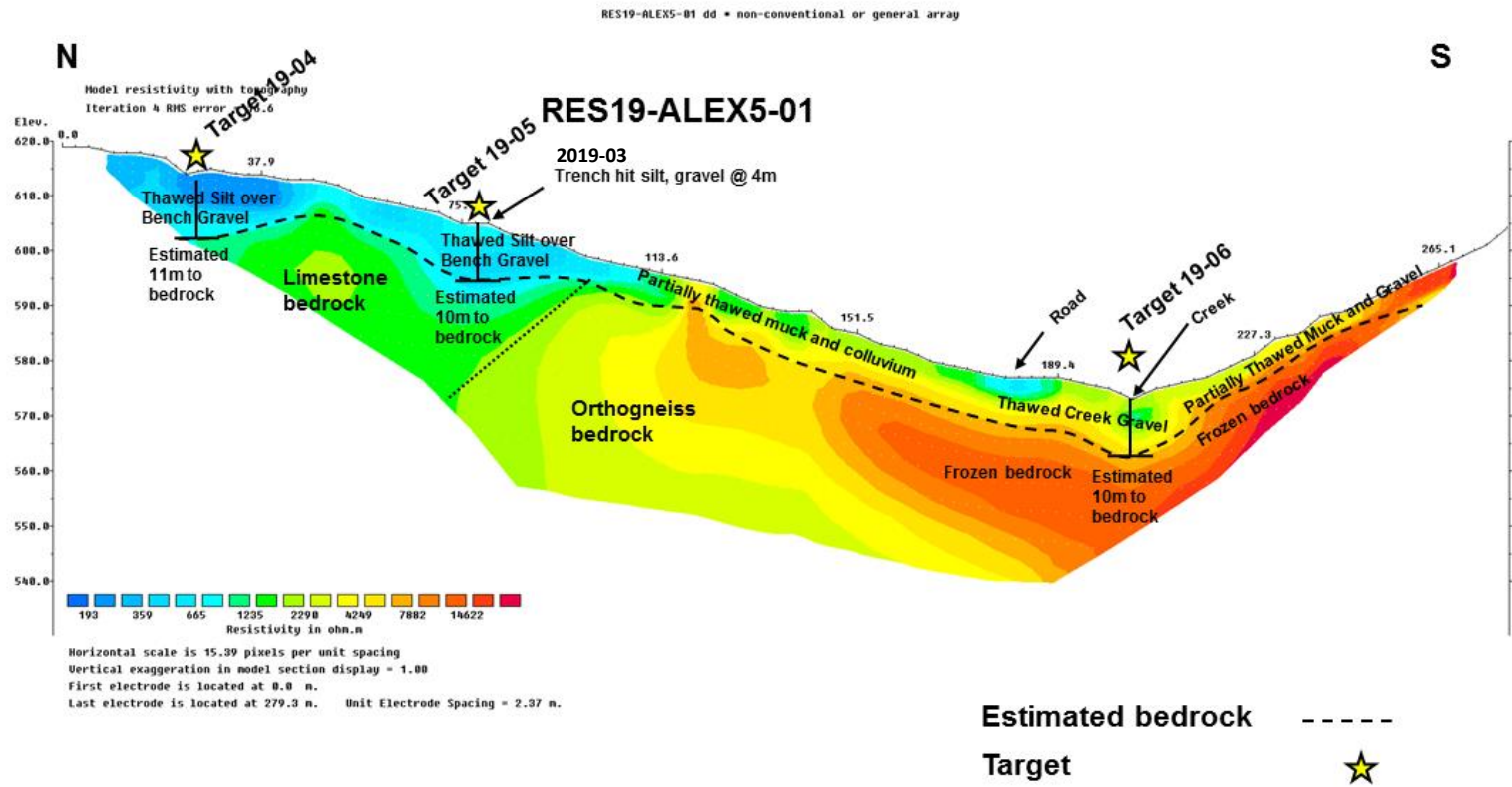


Figure 14 - Resistivity line RES19-ALEX5-01 on Patton Creek. Three drill targets have been chosen with estimated depths of 10 to 11 metres to bedrock below surface.

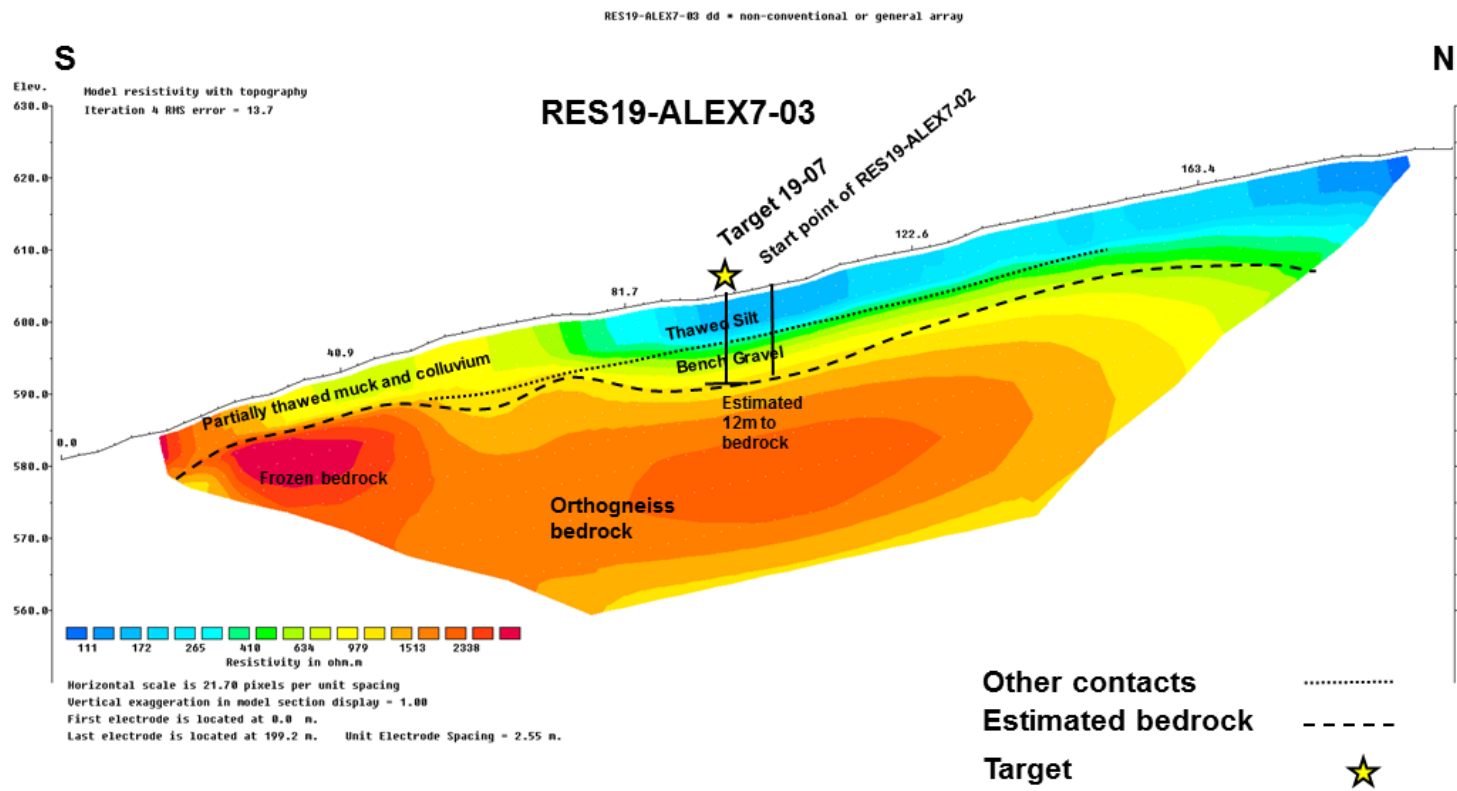


Figure 15 - Resistivity line RES19-ALEX7-03 on Patton Creek. One drill target has been chosen with an estimated depth of 12 metres to bedrock below surface.

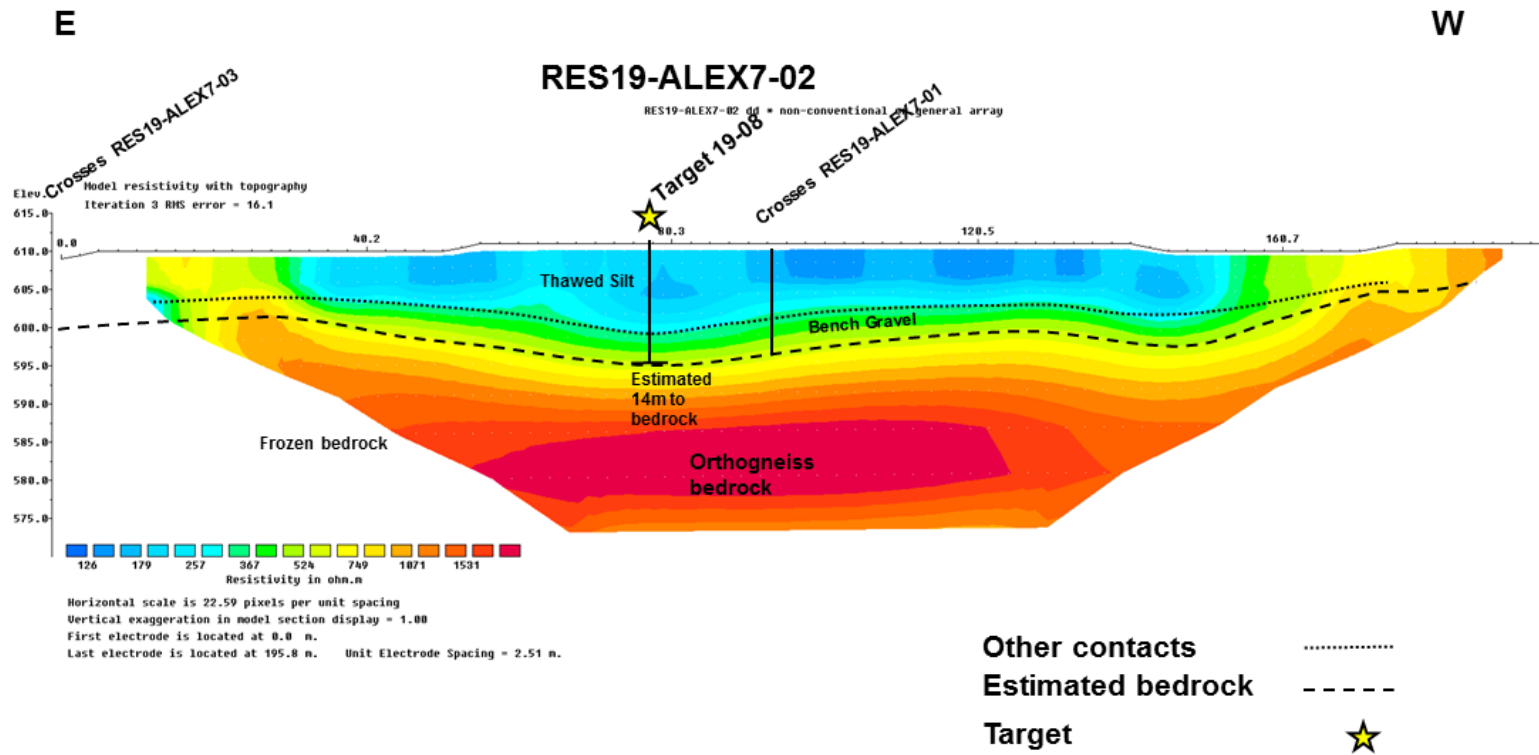


Figure 16 - Resistivity line RES19-ALEX7-02 on Patton Creek. One drill target was chosen with an estimated depth of 14 metres to bedrock below surface.

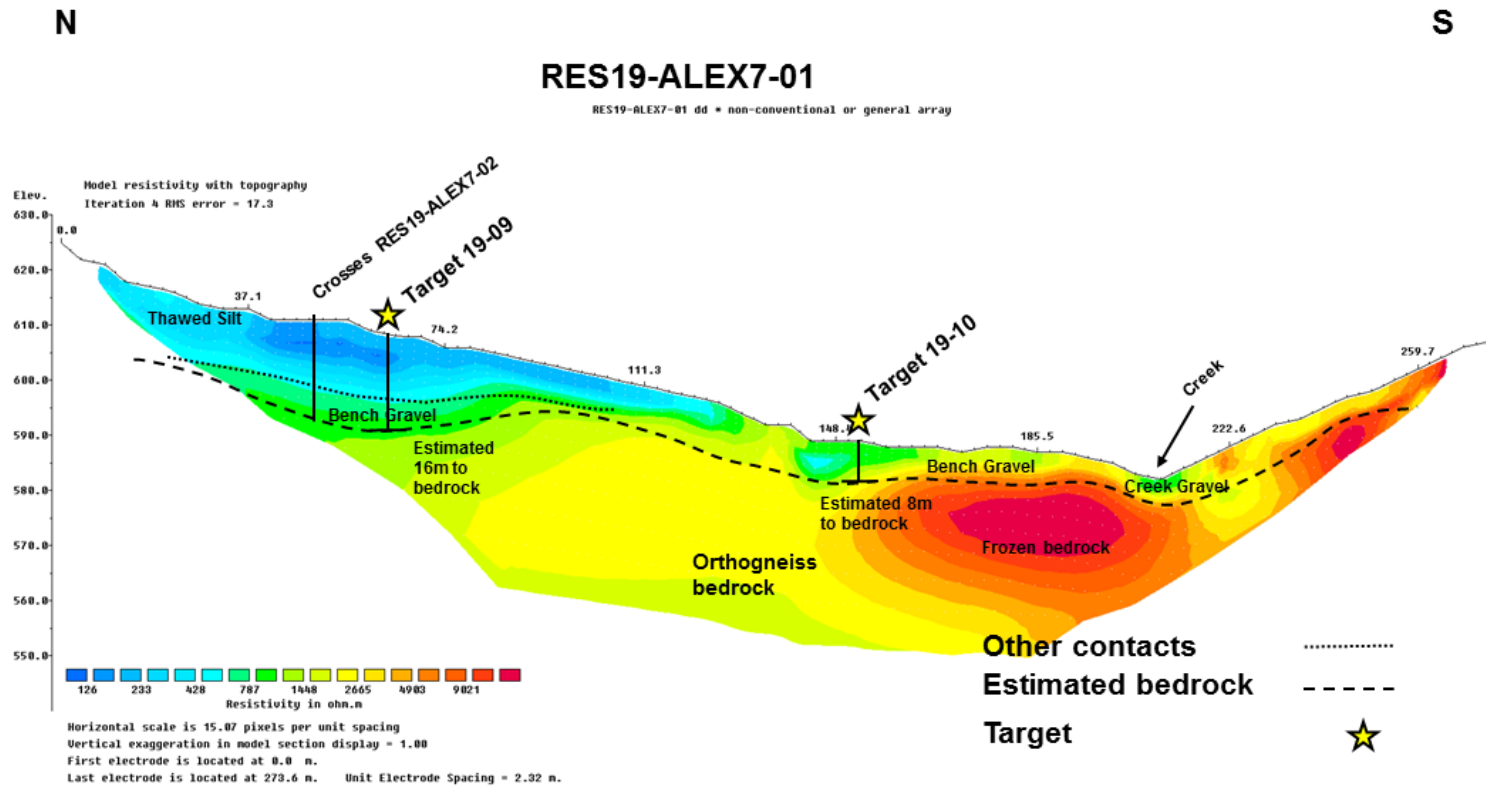


Figure 17 - Resistivity line RES19-ALEX7-01 on Patton Creek. Two drill targets have been chosen with estimated depths of 8 and 16 metres to bedrock below surface.

Conclusions and Recommendations

The resistivity surveys appear to delineate bedrock contacts varying between 8 and 16 metres below the surface.

Of particular note is the presence of a high-level left limit bench, which runs parallel to the Patton Creek valley and can be discerned as a low-resistivity (thawed) layer of silt overlying gravel and bedrock at depths of between 10 and 16 metres. This bench was confirmed to have a mature gravel underlying silt/loess in test pits 2019-01 and 2019-03, which were excavated near resistivity line RES19-ALEX 5-01.

Another bench (low-level) can be seen on some of the profiles which cross to the south (north-facing) part of Patton Creek valley. This bench is frozen, as are most of the sediments and bedrock near the centre of the valley. Most, if not all, of the north-facing slope of Patton Creek is also frozen. This was confirmed by most of the excavator test pitting which was done near the active stream, with the exception of a narrow thawed zone where the actual stream course flows.

Several potential drill targets have been chosen on the profiles. These were mainly selected at low points in bedrock both in the valley and on the bench, which may represent buried paleochannels.

Coordinates and interpreted depths for the drill targets are shown in Table 3 below. These targets are plotted on Figure 18.

Table 4 - Coordinates for the drill targets generated from the 2019 Resistivity profiles.

Target Name	Survey Line	Latitude	Longitude	Approximate Depth to bedrock (m)
19-01	RES19-ALEX2-01	63.319476	-138.985173	8
19-02	RES19-ALEX2-01	63.319522	-138.983506	13
19-03	RES19-ALEX4-01	63.318742	-138.991206	8
19-04	RES19-ALEX5-01	63.319472	-138.995701	11
19-05	RES19-ALEX5-01	63.319036	-138.995481	10
19-06	RES19-ALEX5-01	63.318021	-138.994878	10
19-07	RES19-ALEX7-03	63.318239	-138.999705	12
19-08	RES19-ALEX7-02	63.318124	-139.001309	14
19-09	RES19-ALEX7-01	63.317947	-139.001749	16
19-10	RES19-ALEX7-01	63.317119	-139.001983	8

Further geophysical surveys, auger drilling, and excavator test-pitting should be conducted to determine the extent of any gold-bearing paleochannels on the bench and in the valley. This should be followed up by increasingly larger size bulk samples to determine the economic potential of any prospective alluvial gravels.

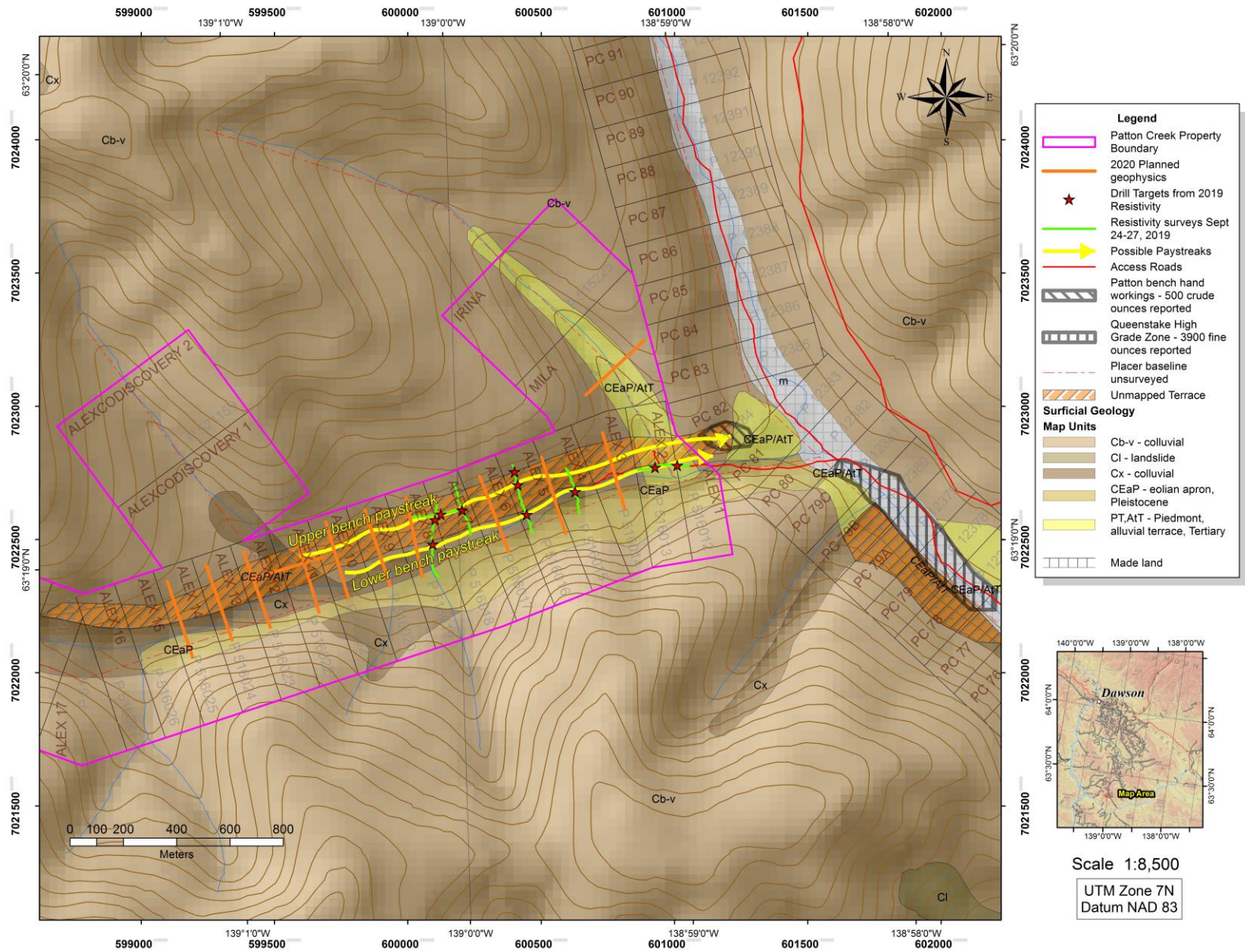


Figure 18 – 2019 Compilation map showing surficial geology (after Jackson, 2005a, 2005b), unmapped terraces, drill targets and potential paystreaks, Patton Creek.

2020 Exploration Program

Overview

The 2020 exploration program included access construction and upgrading, aerial drone imagery, auger drilling, excavator test-pitting and electrical resistivity geophysical surveys.

Access Construction

There was access constructed to the lower claims on Patton Creek, existing access was upgraded, and new access was built higher up on the bench.

Drone Imagery Surveys

High-resolution satellite imagery and recent airphoto coverage are not available for many parts of the Yukon. Much of the imagery available online is unusable due to its low resolution, the presence of cloud cover, or it is simply outdated and no longer representative of the current infrastructure or geomorphology. Therefore, to aid in exploration and mine planning, a program of aerial imaging surveys was conducted.

Personnel and Methodology

The aerial imaging surveys were conducted and processed by William LeBarge and Selena Magel of Geoplacer Exploration Ltd.

The type of drone used is a DJI Mavic 2 Pro, which has a high-resolution Hasselblad camera with a 1-inch photo sensor. Flight planning was done with the Pix4D capture program, and at least 80% overlap of photos was planned between photos within a flight line and between flight lines. Initial processing of the aerial survey is done in the field to check for integrity and data quality.

Final processing of air photos began with image editing software to normalize any extreme contrasts or unusual color balancing needed within the photo sets. A georeferenced orthophoto mosaic was then generated using proprietary software.

Results

The high-resolution imagery obtained by the drone allows for identification of landforms, old roads and trails and previous workings which are not visible with existing available public online satellite imagery.

The drone survey in 2020 captured most of the new workings and new access which was not yet constructed or not visible in the earlier 2019 imagery. Up to date imagery is essential for mine planning and later phases of exploration of the property. The drone survey images are included in Appendix 2.

Auger Drilling

There were 22 auger drill holes completed on the Patton Creek property totalling 403 ft of sampled holes. The drill holes are plotted on Figure 22. Full drill logs are found in Appendix 1. Table 5 outlines the depths, and gold values in the drill holes, as well as their coordinates. The best drill hole was 20-7 with 158 mg of gold recovered in 18 ft of gravel and bedrock. 20-12 had 5 ft of gravel with 45 mg of placer gold recovered. 20-13 had 26 mg of gold recovered in 6 ft of gravel.

Table 5 - Auger drill hole names, coordinates, depth to bedrock, and the amount of placer gold found in each hole for the 2020 exploration program.

Drill Hole Name	Depth to Bedrock (ft)	Gold Weight (mg)	Latitude	Longitude
20-1	25	0	63.31948	-138.99951
20-2	15	0	63.31952	-138.99956
20-3	5	0	63.31968	-138.99941
20-4	22	12	63.31996	-138.99628
20-5	24	trace	63.32008	-138.99616
20-6	19	0	63.32013	-138.99634
20-7	18	158	63.32029	-138.99437
20-8	17	0	63.32049	-138.99288
20-9	cancel		63.32061	-138.99294
20-10	19	0	63.32094	-138.99148
20-11	19	0	63.32100	-138.98994
20-12	19	45	63.31874	-139.00330
20-13	23	26	63.31878	-139.00206
20-14	19	18	63.31922	-139.00115
20-15	18	0	63.31966	-138.99726
20-16	25	20	63.31936	-138.99856
20-17	19	0	63.32045	-138.99376
20-18	22	2	63.32010	-138.99499
20-19	20	2	63.31899	-139.00146
20-20	23	trace	63.31877	-139.00272
20-21	9	0	63.32166	-138.98404
20-22	9	0	63.32162	-138.98551
20-23	14	0	63.32131	-138.98778
Total	403			

Excavator Test Pits

Two test pits were dug on Patton Creek in 2020. Table 6 shows the coordinates and details of the test pits. Samples were taken from the trenches at or as near as possible to the bedrock contact, the gravel was hand fed through a test trommel and then a long tom, and the concentrate from the long tom was panned to recover the placer gold.

Table 6 - Test Pit Results on Patton Creek, 2020.

Test Pit	Claim	Description of Material	Volume Sampled (yd ³)	Gold and Concentrate Description	Latitude	Longitude
2020-1	ALEX 3	Sandy, cobble-pebble gravel	3.0	0.472g coarse gold abundant magnetite	63.319069	-138.988939
2020-2	ALEX 5	Wet, muddy gravel with limestone clasts	0.06	Pyrite, magnetite, no gold	63.318057	-138.994031



Figure 19 - Test pit 2020-01 was excavated on June 11, 2020 to bedrock a depth of approximately 4 metres from surface, just upstream of an earlier test pit (2019-10) which was dug in 2019. Angular bedrock can be seen in the photo below a sandy cobble gravel. Bedrock was dipping towards the left side of the photo implying that the deepest part of the channel was not sampled.



Figure 20 - Gold results from Test Pit 2020-1 were quite promising with several coarse gold pieces weighing 0.472 g recovered along with substantial coarse grained heavy minerals.



Figure 21 - Test pit 2020-2 was excavated on October 1, 2020 to a depth of approximately 4 metres near auger drill hole 20-7, which had returned 158 mg of gold. This pit was thawed, sloughing prevented a clean sample and bedrock was not clearly reached. Heavy minerals were recovered but no gold.

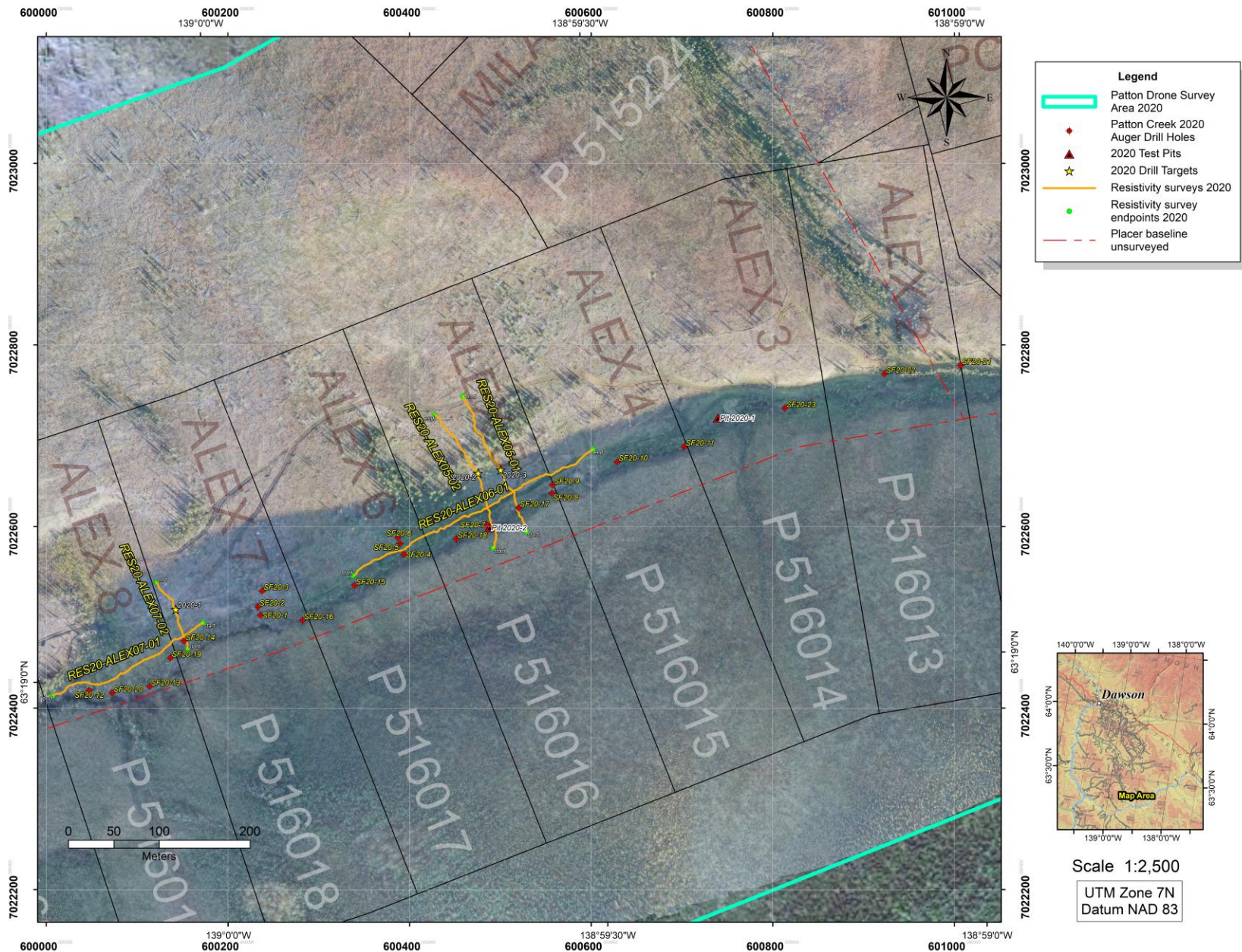


Figure 22 - Compilation Map showing 2020 auger drill holes, test pits, resistivity geophysical surveys, drill targets and drone imagery survey area.

Resistivity Geophysics

Overview

In 2020, a total of 925 m of geophysical resistivity surveys were conducted in five lines which were coincident with several of the auger drill holes.

Methodology

The resistivity technique injects an electrical current into the subsurface through stainless steel spikes and then measures the remaining voltage at various distances away from the injection point. Ground materials have different resistances to the current and give data points in a cross section of the subsurface. With the data points, a tomogram or pseudo section can be created representing changes of resistivity in the ground. Data was collected using Geotest software, while the inversion and data filtering was completed with RES2DINV software. Data points with poor data quality were exterminated and noisy data was filtered statistically with root mean squared data trimming. Two-dimensional tomograms were produced using least squares damped inversion parameters to display the resistivity properties and to display potential contacts.

The two-dimensional images are used for preliminary interpretations of bedrock structure. The images were interpreted by Selena Magel and William LeBarge.

General principles and assumptions of electrical resistivity:

1. Low resistivity can indicate thawed and water saturated areas, as well as fine grained material.
2. Very high resistivity values can be due to ice rich material and frozen or highly disturbed ground.
3. Dry gravels, cobbles and boulders generally have high resistivity values.
4. The contrasts between values is more important in determining contacts than the absolute values found with resistivity data.

Limitations and Disclaimer

The interpreted sections provide an estimate of the conditions beneath the surface to the depths conducted and are within the accuracy of the system and methods. The data becomes more uncertain with depth and are more accurate toward the surface and is further complicated with permafrost present in the region. The materials are interpreted based upon local geology observed, as well as geologic knowledge of the area. Certain materials may be similar in composition and result in uncertain results. The accuracy of the information presented is not guaranteed and all mine development is the client's responsibility. William LeBarge and Selena Magel accept no liability for any use or application by any and all authorized or unauthorized parties.

2020 Resistivity Profiles

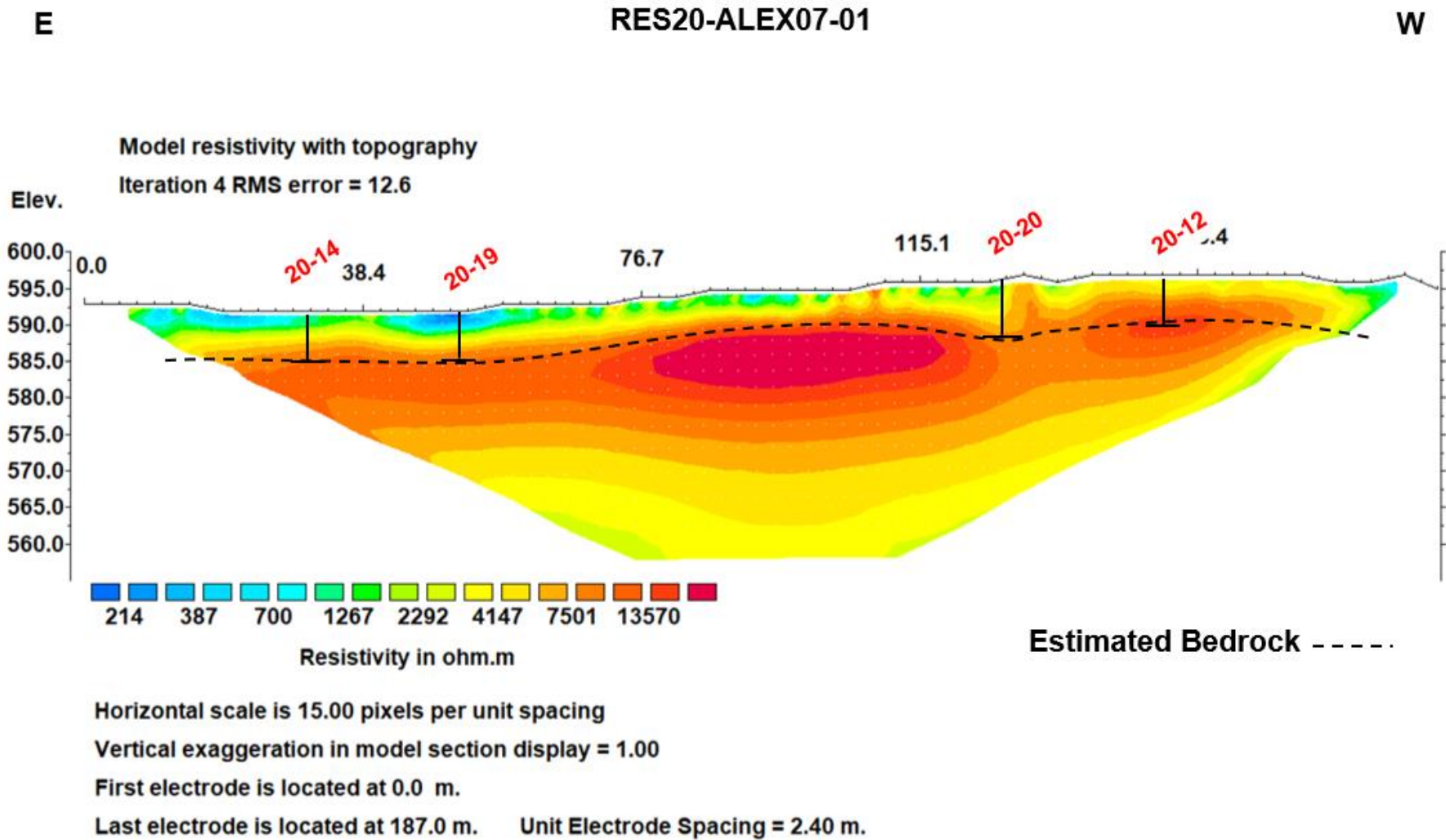
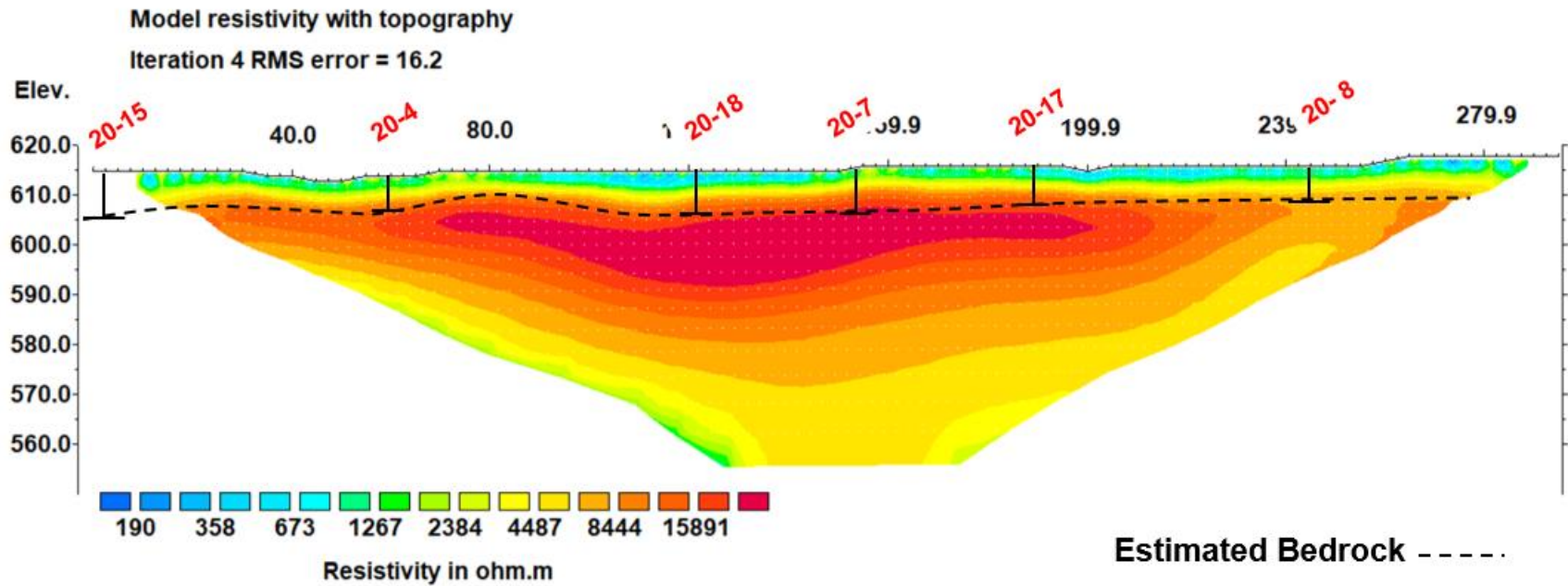


Figure 23 - RES20-ALEX07-01 was surveyed E-W, parallel to Patton Creek. Auger drill hole 20-14 had 18 mg of placer gold recovered in 4 ft of gravel, drill hole 20-19 had 2 mg of gold in 5 ft of gravel, drill hole 20-20 had a trace amount of gold found in 8 ft of gravel, and drill hole 20-12 had 45 mg of placer gold in 5 ft of gravel.

W

RES20-ALEX06-01

E



Horizontal scale is 10.00 pixels per unit spacing

Vertical exaggration in model section display = 1.00

First electrode is located at 0.0 m.

Last electrode is located at 294.8 m. Unit Electrode Spacing = 2.50 m.

Figure 25 - RES20-ALEX06-01 was surveyed W to E, parallel to the creek. Auger drill hole 20-15 had 0 mg of gold with a thin layer of gravel, 20-4 had 12 mg of gold in 8 ft of gravel, 20-18 had 2 mg in 2 ft of gravel, and 20-7 was the best drill hole in the drill program with 158 mg of gold with bedrock at 18 ft. Drill hole 20-17 had no gold in 3 ft of gravel, and 20-8 had no gold in 3 ft of gravel.

Resistivity Results

Table 7 shows the coordinates and lengths of the 5 resistivity surveys. Figure 22 shows the locations of the surveys, and Figures 23-27 show the resistivity profiles and their interpreted bedrock depths and targets identified. A total of 3 new drill targets were identified on the resistivity profiles, and these are plotted on Figure 22 and shown in Table 8. These targets are generally picked in low areas of the interpreted bedrock profiles that could be interpreted as paleochannels.

Table 7 - Geophysics start and end point coordinates as well as lengths of lines for the 2020 exploration program.

Resistivity Line Name	Length (m)	Start Point		End Point	
RES20-ALEX05-01	170	63.318	-138.993	63.319	-138.995
RES20-ALEX05-02	170	63.318	-138.994	63.319	-138.995
RES20-ALEX06-01	310	63.318	-138.997	63.319	-138.992
RES20-ALEX07-01	190	63.317	-139.000	63.317	-139.004
RES20-ALEX07-02	85	63.317	-139.001	63.318	-139.001
Total	925				

Table 8 -2020 Drill target coordinates, Patton Creek.

Target Name	Claim Location	Resistivity Line	Target Depth (m)	Latitude	Longitude
2020-1	ALEX 7	RES20-ALEX07-02	6	63.317344	-139.000982
2020-2	ALEX 5	RES20-ALEX05-02	7	63.318597	-138.994247
2020-3	ALEX 5	RES20-ALEX05-01	7	63.318622	-138.993748

Conclusions and Recommendations

The 2020 geophysical surveys returned good quality data although discontinuous permafrost and variable groundwater saturation complicated interpretation of the geophysical results. Nonetheless, a number of new targets were identified, and these are on trend with targets on the low-level bench that were identified in the 2019 exploration program.

The auger drill holes completed in 2020 correlate well with the interpretations of the bedrock contacts on both the 2019 and 2020 geophysical surveys. The bedrock in the main valley is shallow and within easily mineable depths between 5 ft and 25 ft from surface. The gold sampling results from the auger drill program were promising, including drill hole 20-12 with 45 mg of gold recovered and drill hole 20-7, with 158 mg of placer gold recovered. Drill hole 20-12 is the farthest upstream hole and the gold results here show that there is significant placer gold potential on the untested portions of Patton Creek up-valley.

Gold results from a 3 yd³ sample from Test Pit 2020-1 were quite promising, with several coarse gold pieces weighing 0.472g recovered along with substantial amounts of coarse-grained heavy minerals.

The overall coarseness of the gold as demonstrated in previous sampling and in particular from Test Pit 2020-1 demonstrates that larger bulk samples are necessary to recover a representative amount of gold from Patton Creek. This may also be a factor in some of the drill samples recovering no gold at all, as it is well-known that the coarser the placer gold is within a drainage, the more difficult it is to sample accurately with a drill program.

There are also significant amounts of gravel on the low- and high-level terraces on Patton Creek that have not been sampled, but which may be host to economic placer gold. These should be bulk sampled in a series of pits along the left limit, with samples not less than 20 cubic yards each. Resistivity geophysics should be used as a guide to target potential bedrock depressions and areas where gravel is the thickest.

Initial results in the main valley are promising enough to justify stripping a larger area and processing a large bulk sample of at least 500 cubic yards. The most logical place for this is centred on Test Pit 2020-1 on the ALEX 3 claim. If results continue to be promising, then a full-scale mining operation should be initiated. Resistivity geophysics along with auger drilling may be used to guide the operation as it progresses upstream.

2020 Statement of Expenses, Patton Creek

Table 9 - 2020 Placer Exploration Program Expenses, Patton Creek.

Patton Creek			
Item	Unit	Rate	Total
Daily field expenses	28 days	\$100/day	\$2,800.00
Personnel - William LeBarge	10 days	\$550/day	\$5,500.00
Personnel - Selena Magel	10 days	\$400/day	\$4,000.00
Truck 4x4 Travel to Patton Creek	2968km	\$0.61/km	\$1,810.48
ATV quads (2)	8 days	\$40/day (ea)	\$640.00
ATV side by side	6 days	\$40/day	\$240.00
ATV transport trailer	14 days	\$16/day	\$224.00
2 inch pump	10 days	\$10/day	\$100.00
Test trommel, ATV towable and sluice	10 days	\$50/day	\$500.00
Sylvain Fleurant drilling invoice #6			\$12,173.49
Geoplacer Exploration Ltd. Invoice #TT2020-004			\$12,600.00
Bedrock Mining Company Invoice #105			\$22,680.00
		Total	\$63,267.97

Statements of Qualifications

William LeBarge

I, William LeBarge, of 13 Tigereye Crescent, Whitehorse, Yukon, Canada, DO HEREBY CERTIFY THAT:

1. I am a Consulting Geologist with current address at 13 Tigereye Crescent, Whitehorse, Yukon, Canada, Y1A 6G6.
2. I am a graduate of the University of Alberta (B.Sc., 1985, Geology) and the University of Calgary (M.Sc., 1993, Geology – Sedimentology)
3. I am a Practicing Member in Good Standing (#37932) of the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC).
4. I have practiced my Profession as a Geologist continuously since 1985.
5. I am President and sole shareholder of Geoplacer Exploration Ltd., a Yukon Registered Company.

Dated this 27th day of January, 2021

William LeBarge, P. Geo.



Selena Magel

I, Selena Magel of 80B-18 Azure Road, Whitehorse, Yukon, Canada, DO HEREBY CERTIFY THAT:

1. I am a Geologist in Training, registered with APEGA with current address at 80B-18 Azure Road, Whitehorse, Yukon, Y1A0L2.
2. I am a graduate of the University of Calgary (B.Sc., 2017, Geology).
3. I have practiced Geology since May 2017.
4. I have conducted and interpreted over 70 km of resistivity surveys since the summer of 2017.

Dated this 27th day of January, 2021

Selena Magel, G. I. T.



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Appendix 1 – Auger Drill Logs, Patton Creek

PLACER DRILL LOG		
Date: 13/06/2020 to 17/06/2020		Driller: Sylvain Fleurant
Type of Drill: auger		Inside Diameter of Drill: 6 inch
Location: Patton Creek		
Map : 115-O-07p		
Drill Hole Number	Total Footage	Remarks: samples/results
20-1	34ft	20ft frozen muck 3ft soft gravel 2ft hard crunchy gravel (bedrock at 25ft) 3ft soft no crunch bedrock 1ft crunchy medium hard bedrock (pull out at 29ft back in) 1ft hard bedrock 4ft soft no crunch bedrock black green (no gold)
20-2	24ft	12ft frozen muck 3ft soft bedrock slide green (bedrock maybe at 15ft) 4ft soft crunchy broken bedrock red 5ft soft no crunch bedrock green (no gold)
20-3	14ft	3ft frozen muck 2ft soft bedrock slide (bedrock at 5ft) 7ft soft no crunch green 2ft crunchy medium hard bedrock green (no gold)
20-4	28ft	14ft frozen muck 3ft crunchy medium hard bedrock slide gravel 3ft muck 2ft hard gravel (bedrock at 22ft) 2ft soft no crunch bedrock 1ft soft crunchy bedrock 2ft soft no crunch bedrock 1ft hard bedrock blue green (gold 12mg)
20-5	28ft	20ft frozen muck 4ft medium hard crunchy gravel (bedrock at 24ft) 4ft hard bedrock (gold trace)
20-6	24ft	4ft frozen muck 8ft slide bedrock 1ft ice 1ft soft gravel 3ft soft muck decompose bedrock mix 2ft crunchy medium hard slide or bedrock (bedrock at 19ft) 5ft hard bedrock green black (no gold)
20-7	28ft	10ft frozen muck 3ft soft muck gravel mix 5ft hard gravel (bedrock at 18ft) 2ft soft no crunch bedrock 2ft hard crunchy bedrock 2ft soft no crunch bedrock (pull out at 24ft) 1ft hard bedrock 3ft very hard bedrock (10ft to 24ft = gold 143mg 24ft to 28ft = 15mg total = 158mg) black grey
20-8	23ft	11ft frozen muck 3ft soft muck gravel mix 3ft hard gravel (bedrock at 17ft) 3ft soft no crunch bedrock 3ft hard bedrock grey black (no gold)
20-9	18ft	14ft frozen muck 3ft thawed muck water (cancel) bedrock grey black (no gold)
20-10	21ft	10ft frozen muck 2ft ice 1ft muck (13ft) 1ft soft gravel 5ft hard gravel (bedrock at 19ft) 1ft soft bedrock 1ft very hard
20-11	22ft	15ft frozen muck 4ft very hard gravel (bedrock at 19ft) 1ft soft bedrock 2ft very hard bedrock grey black (no gold)
20-12	27ft	13ft frozen muck 1ft soft gravel 5ft hard gravel (bedrock at 19ft) 2ft very hard bedrock 3ft soft no crunch bedrock (pull out at 24ft) 1ft soft no crunch bedrock 2ft hard bedrock black green 13ft to 24ft = gold 45mg 24ft to 27ft = gold 0mg)

PLACER DRILL LOG

Date: 13/06/2020 to
17/06/2020

Driller: Sylvain Fleurant

Type of Drill: auger

Inside Diameter of Drill: 6 inch

Location: Patton Creek

Map : 115-O-07p

Drill Hole
Number Total
 Footage

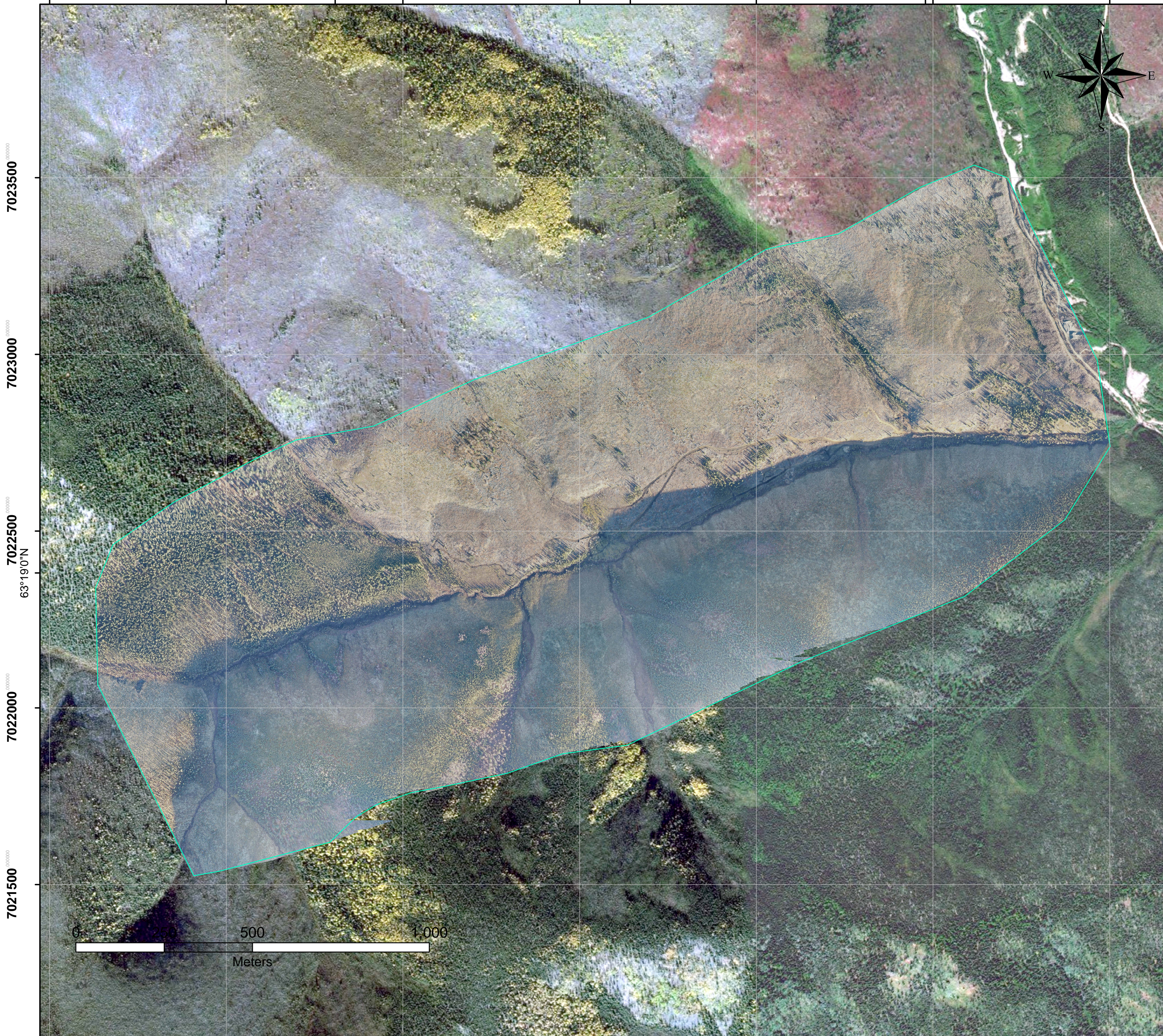
Remarks: samples/results

20-13	28ft	10ft frozen muck 2ft soft gravel 2ft hard gravel 1ft muck 1ft medium hard gravel 1ft muck 6ft hard gravel (bedrock at 23ft) 4ft soft no crunch bedrock 1ft medium hard bedrock green (gold 26mg)
20-14	24ft	12ft frozen muck 3ft soft muck gravel mix 4ft hard gravel (bedrock at 19ft) 4ft soft no crunch bedrock 1ft medium hard bedrock green (gold 18mg)
20-15	23ft	13ft frozen muck 1ft very hard gravel 3ft muck 1ft hard gravel (bedrock at 18ft) 4ft soft no crunch bedrock 1ft very hard bedrock green (gold 0mg)
20-16	27ft	10ft frozen muck 1ft soft gravel 2ft hard gravel 7ft very black greasy muck 4ft hard gravel (pull out at 24ft) 1ft hard gravel (bedrock at 25ft) 2ft very hard bedrock green black (20 to 24ft = gold 7mg, 24 to 27ft = gold 13mg total= gold 20mg)
20-17	23ft	16ft frozen muck 3ft hard gravel (bedrock at 19ft) 4ft hard bedrock grey (no gold)
20-18	24ft	14ft frozen muck 1ft soft crunchy gravel 4ft soft muck 2ft hard gravel (bedrock at 22ft) 2ft soft no crunch bedrock green (gold 2mg)
20-19	24ft	13ft frozen muck 2ft soft gravel 5ft hard gravel (bedrock at 20ft) 3ft hard broken bedrock 1ft soft bedrock green (gold 2mg)
20-20	28ft	13ft frozen muck 2ft sand muck 8ft hard gravel (bedrock at 23ft) 1ft soft no crunch bedrock (pull out at 24ft) 3ft hard bedrock 1ft medium hard bedrock green (gold trace)
20-21	14ft	4ft thawed soil muck 2ft soft bedrock slide 2ft thawed muck 1ft bedrock slide (bedrock at 9ft) 5ft soft no crunch bedrock green (no gold)
20-22	15ft	4ft thawed muck 5ft bedrock slide (bedrock at 9ft) 3ft soft bedrock no crunch 1ft hard bedrock 2ft soft no crunch bedrock green (no gold)
20-23	19ft	4ft thawed muck 10ft thawed gravel water (bedrock at 14ft or 16ft) 2ft thawed soft no crunch 2ft frozen soft no crunch bedrock yellow 1ft soft no crunch bedrock grey green (water bad recovery 10%) (no gold)

Appendix 2 – Drone Imagery

598500 599000 599500 600000 600500 601000 601500

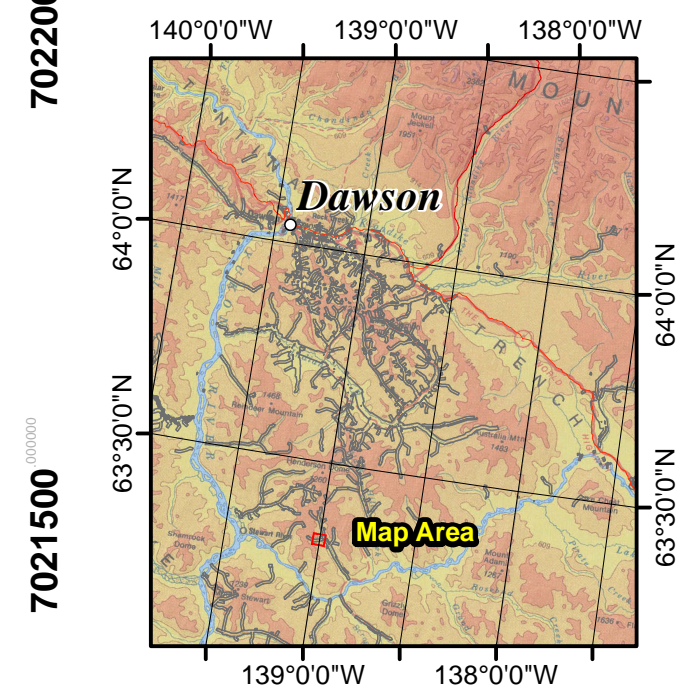
139°1'0"W 139°0'0"W 138°59'0"W



Legend

- Patton Drone Survey Area 2020

7023500
7023000
7022500
7022000
7021500



Scale 1:7,500

UTM Zone 7N
Datum NAD 83

139°2'0"W 139°1'0"W 139°0'0"W 138°59'0"W 138°59'0"W 138°59'0"W

598500 599000 599500 600000 600500 601000 601500