

Report on 2022 Geophysical Surveys

Otto Creek, YMEP2022

Whitehorse Mining District, Yukon Territory

for

Star Mountain Resources Ltd.

By

William LeBarge, P. Geo.

Geoplacer Exploration Ltd.

Location of centre of property: 61°19'55"N, 134°18'52"W

NTS map sheet: 105E/08

Mining District: Whitehorse

Date of work: July 10, 2022

Date: December 23, 2022

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Executive Summary

The following is a report on geophysics conducted under the 2022 YMEP-funded placer exploration program on Otto Creek, by Geoplacer Exploration Ltd., for Star Mountain Resources Ltd.

Otto Creek is a right limit tributary to Livingstone Creek. The Livingstone project area is in the south-central part of the Yukon and lies approximately 90 km by air northeast of Whitehorse and 50 km east of Lake Laberge.

Two resistivity surveys totalling 430 line-m were completed on placer claim Otto 17.

On resistivity survey line RES22-OTTO17-01, the main surface material consists of a highly resistive unit from 7 to 12 metres thick, which is interpreted to be a dry glaciofluvial cobble gravel. This overlies a lower resistivity unit that is up to 20 metres thick, which is interpreted to consist of sandy silt and silty clay, possibly glacial till. Interpreted bedrock depths vary from near surface to depths of up to 35 metres.

Resistivity survey line RES22-OTTO17-02 included a surface layer of boulder-rich gravel overlying a less resistive layer which may be a glacial till – these units correspond well with those encountered on nearby line RES22-OTTO17-01. Bedrock lies near the surface on the eastern extent of the line but drops steeply towards the west.

Eight drill targets were chosen along the surveys, varying from 7 m to 35 m in depth.

Additional resistivity surveys are recommended, in order to delineate the orientation, depth and extent of any potential buried gravel channels.

Shallower targets may be evaluated by excavator testing, however a drill should be brought in to confirm interpreted depths and sample the gold content of the deeper targets. Given the boulder-rich nature of the ground, the drill should either be a cased reverse circulation (R/C) drill (which has an inside diameter of 6 inches or greater) or a similarly-sized sonic drill.

The project area would also benefit from updated aerial imagery from a UAV drone survey.

Introduction

The following is a report on geophysics conducted under the 2022 YMEP-funded placer exploration program on Otto Creek, by Geoplacer Exploration Ltd., for Star Mountain Resources Ltd.

Location and Access

Livingstone Creek lies in the south-central part of the Yukon approximately 90 km by air northeast of Whitehorse and 50 km east of Lake Laberge (Figure 1, Figure 2).

The centre of the area worked on the Otto Creek property in the Livingstone area is located at 61°19'55"N, 134°18'52"W, on NTS map sheet 105E/08, in the Whitehorse Mining District (Figure 3).

Access to the property from Whitehorse can be gained by fixed-wing, helicopter or winter road. The winter road crosses the Teslin River and is available usually only at the height of the winter season.

There are several intermittently maintained bush airstrips, and several all-terrain vehicle suitable trails traverse the field area. A 1700 metre airstrip is situated in the South Big Salmon river valley near Lake Creek. The geographic coordinates of that airstrip are 61°21'58"N and 134°22'19"W. Another, unknown quality airstrip approximately 1 km in length is located at the mouth of Martin Creek at geographic coordinates 61°18'14"N and 134°19'42"W. Finally, a 700-metre-long airstrip of unknown condition is located at the mouth of May Creek, at geographic coordinates 61°16'19"N and 134°10'16"W.

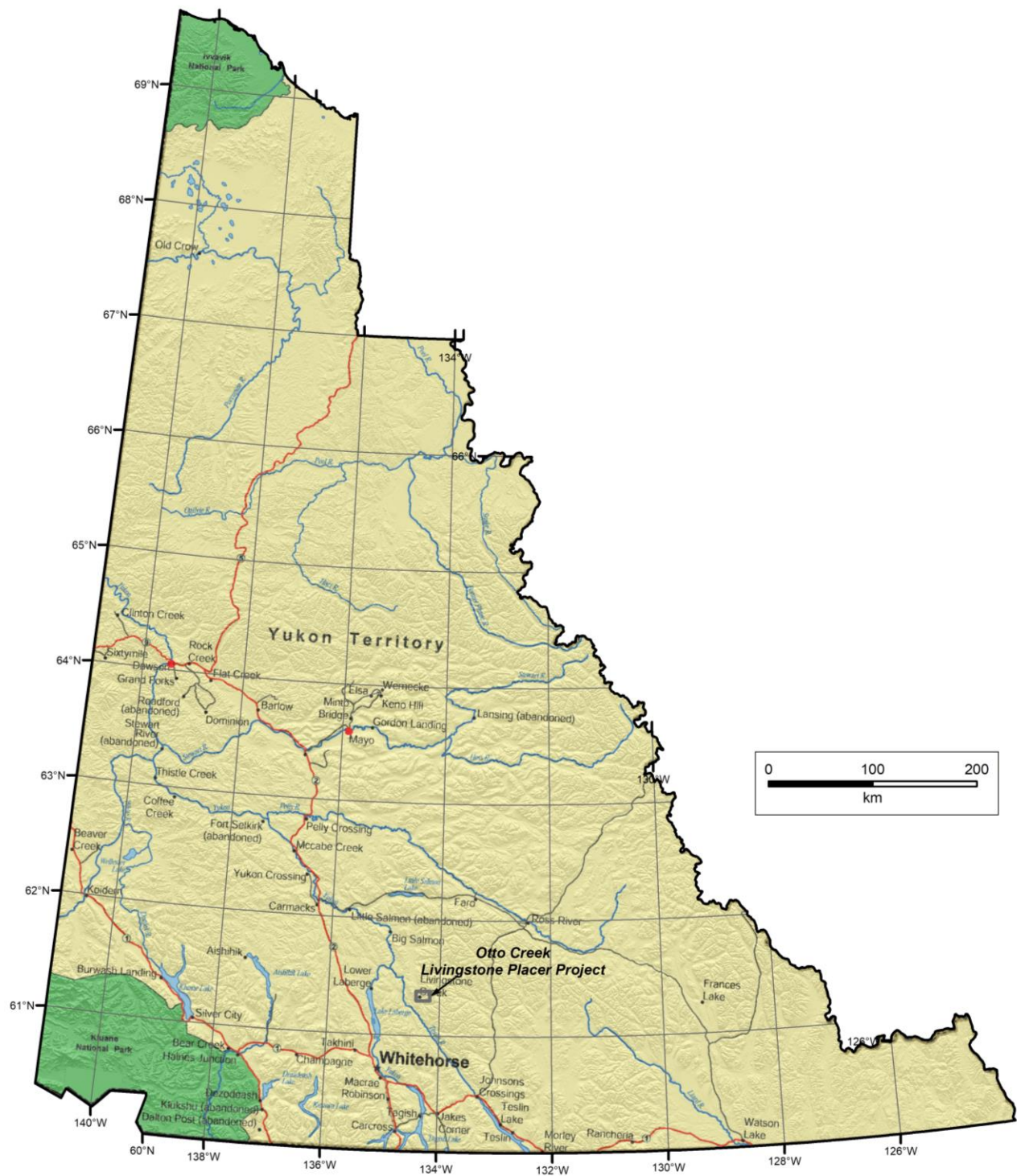


Figure 1 - Location of Otto Creek, Livingstone Placer Project, Yukon.

Placer Tenure

Table 1 details the status of the Otto Creek placer claims.

Table 1 - Claim Status, Otto Creek claims, as of December 18, 2022.

Grant Number	Status	Claim Name	Claim owner	Staking Date	Recording Date	Expiry Date
P 527209	Active	OTTO 1	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527210	Active	OTTO 2	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527211	Active	OTTO 3	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527212	Active	OTTO 4	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527213	Active	OTTO 5	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527214	Active	OTTO 6	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527215	Active	OTTO 7	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527216	Active	OTTO 8	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527217	Active	OTTO 9	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527218	Active	OTTO 10	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527219	Active	OTTO 11	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527220	Active	OTTO 12	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527221	Active	OTTO 13	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527222	Active	OTTO 14	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527223	Active	OTTO 15	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527224	Active	OTTO 16	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22
P 527225	Active	OTTO 17	Adam Sternbergh - 50%, Benjamin Sternbergh - 50%	2021-03-16	2021-03-22	2023-03-22



Plate 1 – North facing view of the mouth of informally named Otto Creek, an unnamed right limit tributary to Livingstone Creek. Photo taken October 8, 2015.

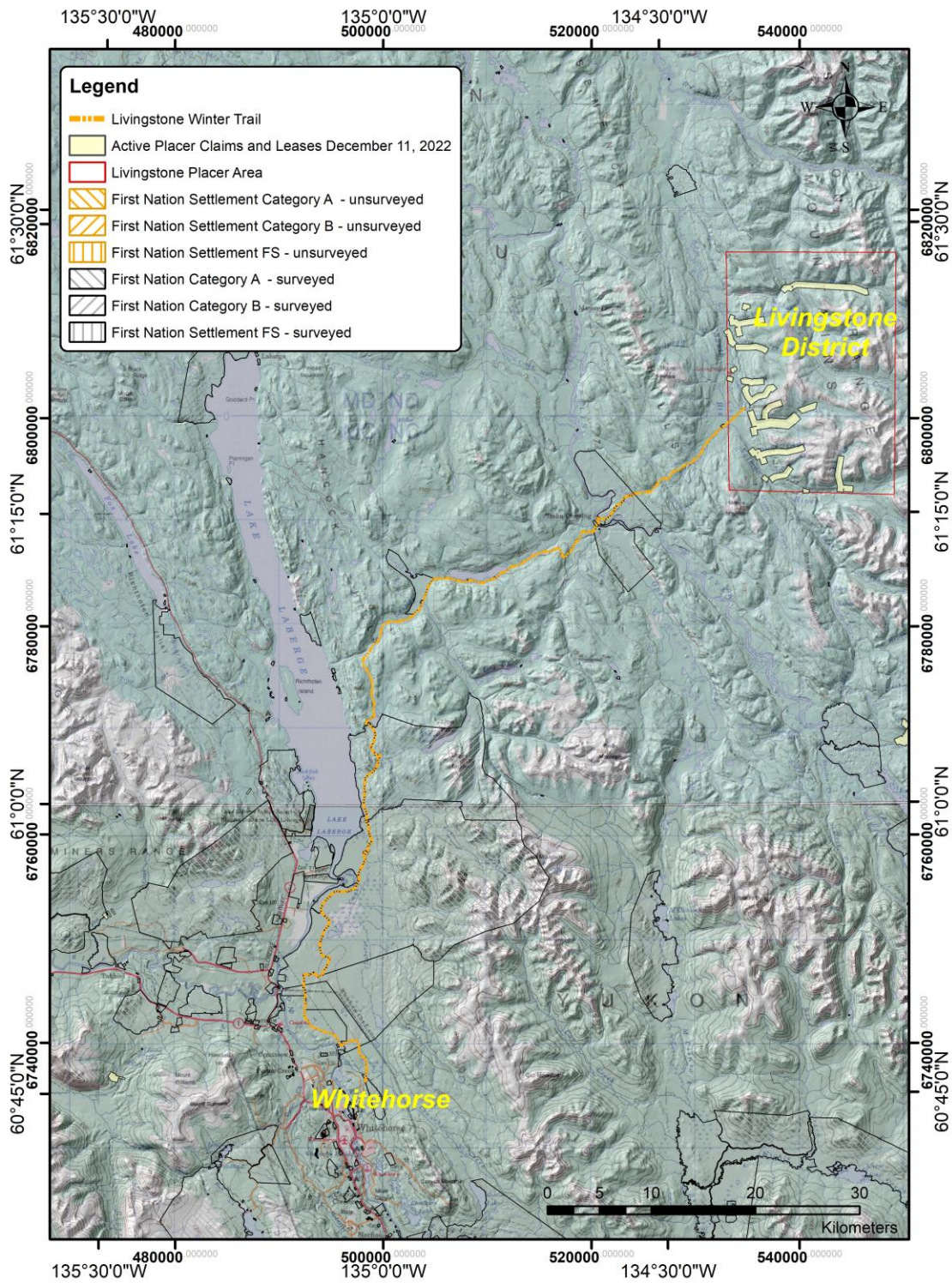


Figure 2 - Location of Livingstone Creek Placer District, 90 km northwest of Whitehorse.

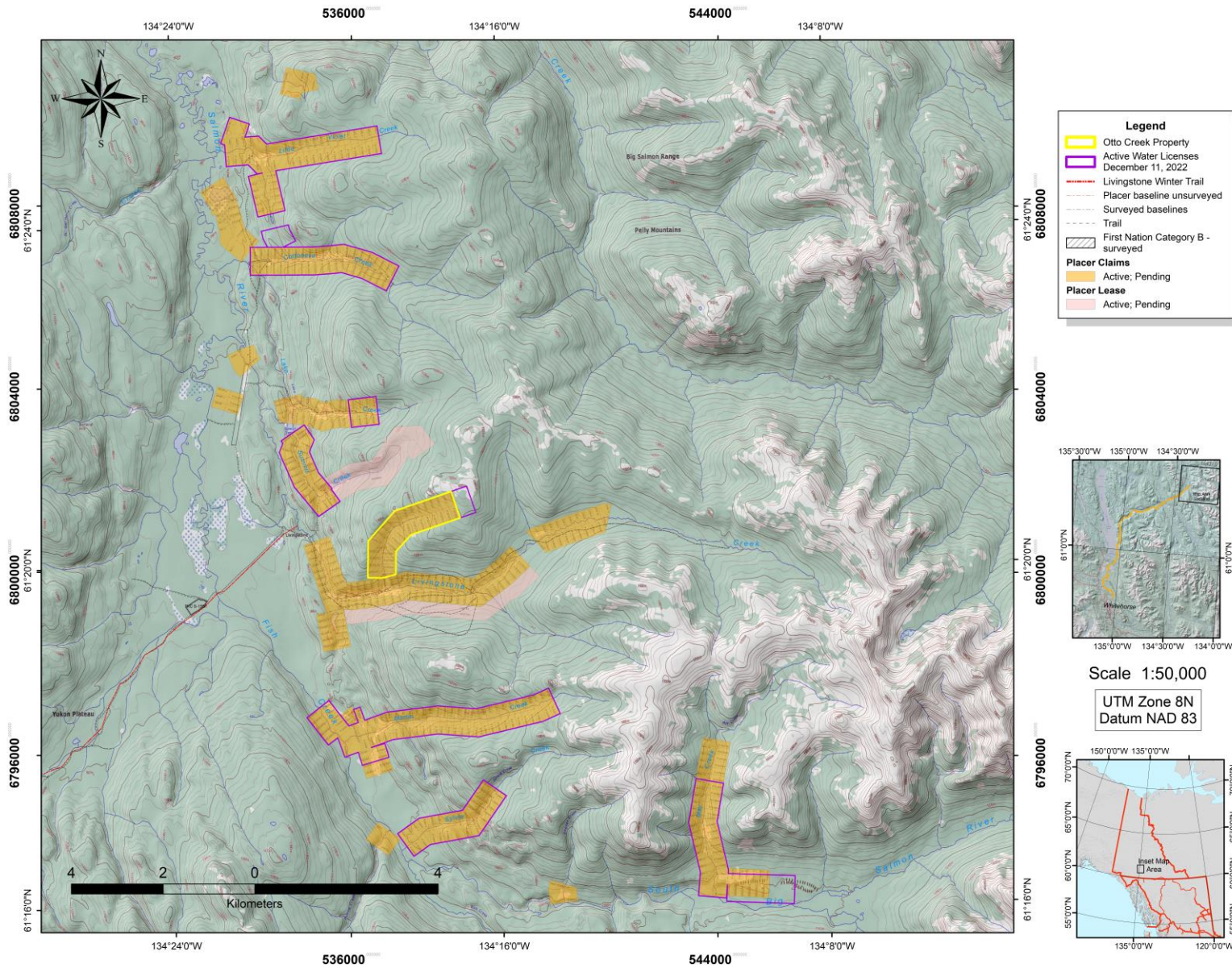


Figure 3 – Livingstone Creek area placer prospecting leases, placer claims and active water licenses, December 11, 2022.

History of Exploration and Mining

Although Yukon Government royalty records show only about 18,000 ounces credited from Livingstone area creeks to 2019 (Yukon Mining Recorder, 2019), the actual production is known to be several times higher. One of the reasons is that since most of the gold from Livingstone creeks is coarse, the modern market is mainly local jewelers and collectors, who would not be intending to export the raw gold out of the Yukon. Since placer gold which is sold for use within the Yukon is not required to have royalties paid, it is often not recorded in any government ledgers.

The Livingstone Creek area was first prospected in 1894 by Joseph E. Peters (LeBarge, 2007). In 1898, Mr. Peters returned to the area with Mr. George Black and together they discovered gold on the Livingstone Creek itself, naming it after Black's friend M. Livingstone. That year, in the four weeks before freeze-up, they mined about 200 ounces. Bostock (1957) mentions that that production between 1898 and 1920 produced over \$1,000,000 in placer gold, which roughly calculates to 46,000 troy crude ounces using a gold price of \$19/ounce and a fineness of 880. Cairnes (1910) stated that the claims on the "old channel" on Livingstone Creek had produced, on the average, about \$25,000 (1157 troy crude ounces) each. The total production in 1906 was about \$90,000 (4168 troy crude ounces). Discovery Claim is stated to have yielded \$11,000 (509 troy crude ounces) in 1900.

Interest in the Livingstone area was revived by T. Kerruish's new discovery on Lake Creek in 1930; and during the 1930's there were 10 to 15 men on Livingstone Creek each year involved in mining a buried left limit channel and "sniping" on the worked over ground in the canyon (Bostock and Lees, 1938).

During the 1940's, J. Stenbraten held much ground on Livingstone Creek, but most of his work was preparatory in nature and little gold was produced (LeBarge, 2007).

During the late 1950s and early 1960s L. Engle and C. Emminger prospected on the Livingstone Creek Discovery Claim. In 1961 G. Murdock and J. Ballentine prospected on the creek. In 1967 M. Fuerstner and E. Kreft staked a one mile lease. Max Fuerstner Jr. took over the mining from Max Sr. in the 1980's.

Seismic refraction was attempted on some placer leases upstream of the canyon on Livingstone Creek in 1981, but this was reportedly unsuccessful due to attenuation by permafrost (LeBarge, 2007). Mining has been intermittent since then, with the most recent mining activity on Livingstone Creek taking place in the early 2000's.

On Otto Creek, there are old hand workings and remnants of wooden sluice boxes, but little is known about mining activity on the creek. No evidence of mechanized mining is present except at the confluence with Livingstone Creek.

Bedrock Geology

The bedrock geology of the Livingstone Creek area is shown in Figure 4. East and north of the South Big Salmon River lie five successions of metasedimentary and metavolcanic rocks: the Snowcap complex, and the Livingstone Creek, Mendocina, Last Peak and Dycer Creek successions (Colpron, 2006, 2017). These occur in two structural domains separated by d'Abbadie fault. The Dycer Creek succession occurs east of the fault while all other successions occur west of the fault (Colpron, 2017).

Figure 4 shows that the mid to lower reaches of Livingstone Creek are dominated by metasedimentary rocks of the Snowcap complex; which are in turn intruded by strongly foliated and locally gneissic Early Mississippian tonalite to granodiorite. Along a north-south trend between the upper-most reaches of Livingstone Creek and the South Big Salmon River, lie metavolcanics, metasediments and marble of the Livingstone Creek succession; and serpentinized peridotite and greenstone of the Mendocina succession (Colpron, 2006; 2017).

Several bedrock mineral occurrences are noted in the area. These are given in Table 2, below.

Mineral Occurrences

Several bedrock mineral occurrences are noted in the area. These are given in Table 2, below.

Table 2 - Mineral Occurrences (MINFILE) of the Livingstone Creek area, YGS 2022.

MINFILE NUMBER	NAME	DEPOSIT TYPE	STATUS	PRODUCER	COMMODITY
105E 001	LIVINGSTON	Vein Polymetallic Ag-Pb-Zn+/-Au	Showing	N	Copper, Silver, Lead, Gold
105E 020	SYLVIA	Vein Polymetallic Ag-Pb-Zn+/-Au	Showing	N	Copper, Gold, Zinc, Silver, Lead
105E 042	LAKE	Vein Au-Quartz	Showing	N	Gold
105E 043	GERM	Unknown	Anomaly	N	Gold
105E 047	MAYBE	Unknown	Anomaly	N	Gold, Lead
105E 053	DEET	Vein Polymetallic Ag-Pb-Zn+/-Au	Showing	N	Antimony, Gold, Arsenic, Lead, Silver, Zinc
105E 049	LITTLE VIOLET	Unknown	Unknown	N	
105E 063	NICKELINE	Ultramafic - Nickel	Showing	N	Antimony, Cobalt, Nickel, Arsenic
105E 054	TRERICE	Unknown	Unknown	N	
105E 056	BRENDA	Unknown	Unknown	N	

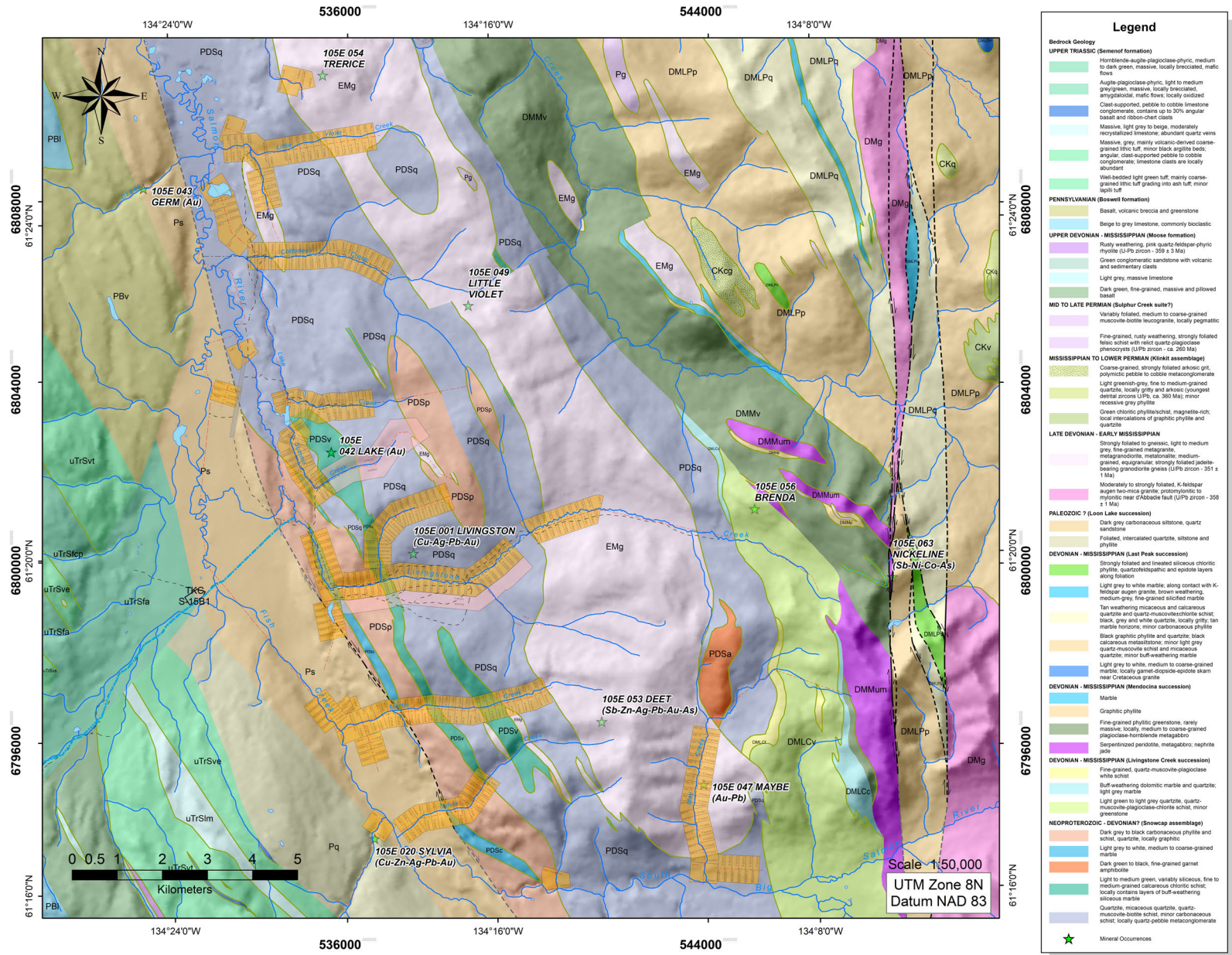


Figure 4 - Bedrock Geology of Livingstone District, modified after Colpron, (2017) and Yukon Geological Survey, (2022).

Regional Surficial Geology and Glacial History

The Livingstone District lies within the late Wisconsinan McConnell glaciation (Duk-Rodkin, 1999) and the most obvious glacial features are of that age. Older glaciations certainly would have blanketed the area, however all features of those earlier episodes have been overprinted by the most recent glacial advance.

Figure 5 shows the glacial features and surficial deposits in the Livingstone District, which were mapped by Hughes et al (1969) and Klassen and Morison (1987); and later updated by Bond and Church (2006).

Surficial deposits in the area are mainly till and colluvium, while an irregular glaciofluvial complex occurs in the South Big Salmon Valley near the mouth of Martin Creek (Klassen and Morison, 1987). The prominent valley that diverts the westerly flow of Livingstone and Summit Creeks is an ice-marginal channel (Hughes et al, 1969).

Indicators of former ice flow direction, mapped by Hughes et al (1969) and Klassen and Morison (1987) suggest that glaciers flowed north along the low valleys that cross the Semenof Hills into the South Big Salmon River Valley in the Livingstone Creek area.

Bond and Church (2006) proposed a four-phase ice-flow history for the Big Salmon Range. This is briefly summarized as following:

Phase 1, a locally derived ice advance, marks the initial accumulation of ice at the onset of glaciation. Geological evidence of this phase is either eroded or buried by later glacial phases. General zones of ice accumulation are inferred from well-developed cirques.

Phase 2 occurred when Cordilleran ice advanced northwest and overtopped the Big Salmon Range at its glacial maximum. High-elevation ice-flow indicators suggest the Cassiar lobe of the Cordilleran ice sheet moved across the range virtually unobstructed by the underlying topography.

Phase 3 occurred when the Cassiar lobe retreated from the Big Salmon Range. With reduced ice thickness during glacial recession the Cassiar lobe became increasingly directed by underlying topography. East-flowing drainages in the Big Salmon Range experienced up-valley ice-flow as the Cassiar lobe maintained a regional northwest flow, while westward-oriented drainages would have been glaciated by down-valley flowing ice. Retreat of the Cassiar lobe to the east of the north-south trending drainage divide resulted in ponding of meltwater in the eastern drainages. This meltwater drained westward across mountain passes and flowed down the western drainages shortly after these were deglaciated. Meltwater erosion was significant enough in some valleys to erode through the surficial deposits and into bedrock, which would have completely reworked pre-existing placer deposits.

A late glacial re-advance of local alpine glaciers (Phase 4) was mapped in the Pelly Mountains further east, however in the Big Salmon Range; the glaciers are less abundant and generally restricted to less than 1 km in extent.

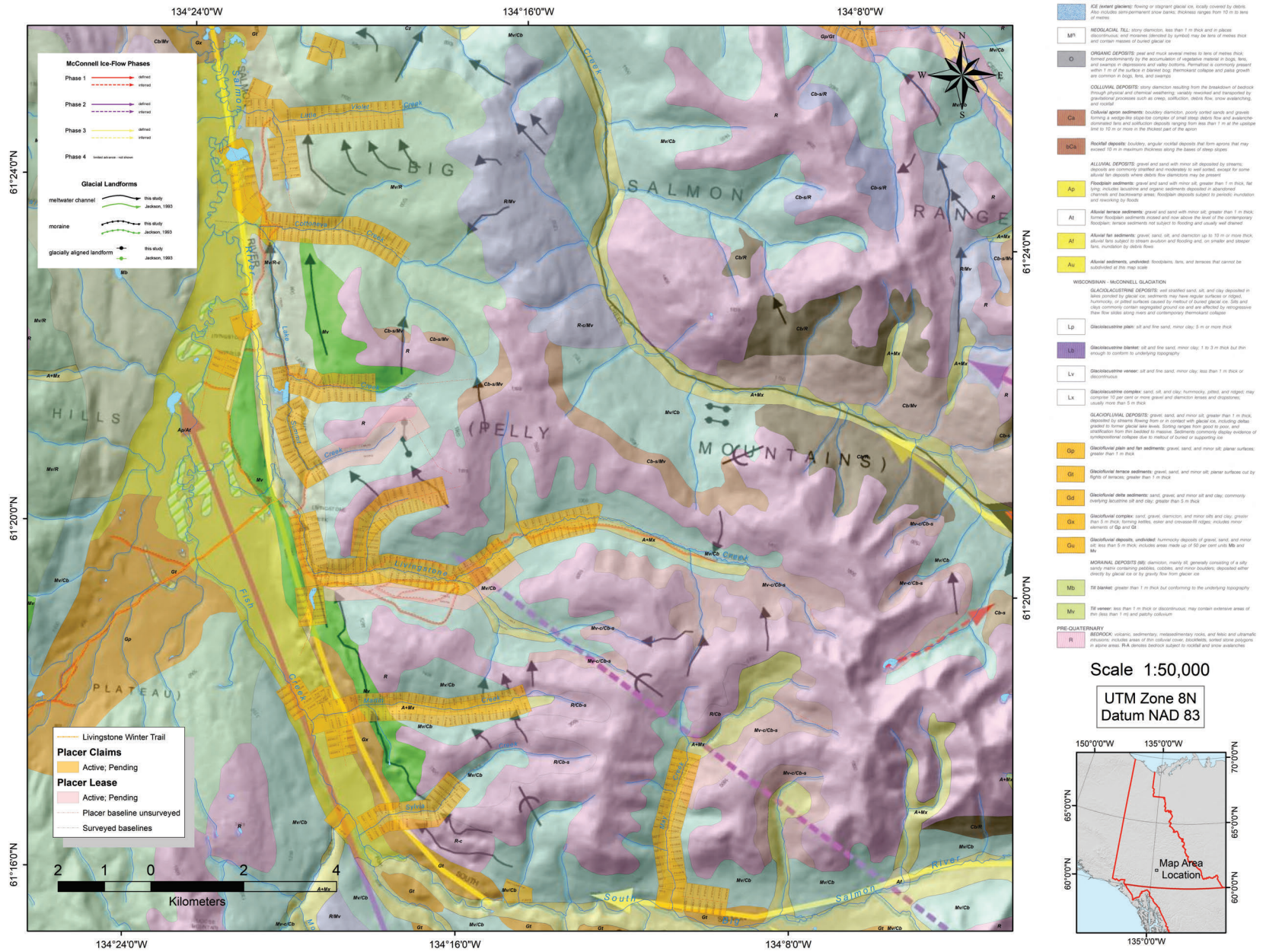


Figure 5 - Surficial geology and glacial features, Livingstone Creek area; after Klassen and Morison, (1987); and Bond and Church, (2006).

Placer Geology and Stratigraphy

Overall, the placer gold-bearing creeks in the Livingstone area are characterized by a sequence of interglacial stream gravels which are overlain by McConnell-age glaciolacustrine silts, glaciofluvial deltaic sandy gravel and boulder-rich glacial till (Levson, 1992). Within the interglacial gravels, concentrated fluvial and debris flow sedimentation likely occurred in response to unusually high storm or spring runoff events. The advance of a glacier down the South Big Salmon River valley resulted in damming of the channelized flows that deposited the underlying gravels. Ice-marginal lakes formed in each of the tributary valleys, and parallel-laminated clays, silts and sands were deposited in the ice-dammed lakes along with debris flow deposits derived mainly from the ice margin. At Summit Creek, a thick glaciofluvial delta complex developed in the lake ponded in that valley. As the glacier in the South Big Salmon River valley expanded, the lakes diminished in size and debris flow sedimentation increased until the area was overridden by ice. Subsequently, a thick till was deposited at the base of the glacier. During deglaciation, a glaciofluvial complex developed along the ice margin. The series of meltwater channels that extend from south of Martin Creek to well north of Summit Creek, formed along the side of the South Big Salmon Valley in association with the ice-marginal deposits. Post-glacial river erosion incised through all of the overlying glacial deposits and re-exposed the placer gold bearing interglacial gravels.

The stratigraphy of Livingstone Creek in the lower reaches as described by Levson (1992) consists of approximately 5 metres (15 feet) locally-derived, coarse-grained, crudely-stratified, poorly-sorted and clast-supported gravels immediately overlying the bedrock. This is the main pay unit, and is interpreted as an interglacial (pre-McConnell) high energy stream channel and gulch sediments deposited by channelized fluvial flows and gravelly debris flows. This unit is overlain by up to 5 metres (15 feet) of parallel-laminated silts and clays with numerous erratic dropstones and pebble intrabeds. This unit is interpreted as proximal glaciolacustrine sediment, which would have formed when a glacier, flowing down the South Big Salmon River valley, blocked Livingstone Creek and other tributaries, causing small ice-marginal lakes to form. A thick, 15 metre (50 feet) matrix-supported diamicton with numerous striated clasts caps the sequence. This is interpreted as a glacial till, deposited directly by ice during the glacial maximum.

Early workers (Cairnes, 1910; Bostock and Lees, 1938) describe an “old boulder channel” on the south side of Livingstone creek, which was quite rich in placer gold. The “old channel” is described as being lower in gradient than the present channel, and within “half a mile” upstream of the canyon (800 m) is about 40 feet (12 metres) lower than the present channel and 1000 feet (300 metres) to the south. The present channel and the paleochannel are separated by a reef of bedrock which was tunneled through by the old timers. The placer gold was reported to lie on bedrock and in the crevices in it.

Cairnes (1910) reported that at some distance up the present creek channel, at a point across from the higher workings in the old, buried channel, a second buried channel is reported to have been discovered on the north side of the creek. An adit was run along it, but the results of that work were not known.

Subsequent placer miners are believed to have worked various parts of the south paleochannel, and gravels adjacent and north of the present creek by sniping under the overburden on the north bank.

2022 Placer Exploration Program

Resistivity Surveys

Overview

A program of resistivity geophysical surveys was conducted on July 10, 2022. Two lines totalling 430 metres were conducted on a right limit tributary of Livingstone Creek, locally known as Otto Creek. Figure 6 shows the location of the resistivity surveys and Table 3 shows the coordinates of the survey lines.

Table 3 - Geographic coordinates and lengths of resistivity lines, Otto Creek, Livingstone Creek area, July 2022.

Otto Creek Resistivity Surveys, July 2022						
			Start Point		End Point	
Name	Claim	Length (m)	Latitude	Longitude	Latitude	Longitude
RES22-OTTO17-01	OTTO 17	330	61.33195	-134.31230	61.33138	-134.31721
RES22-OTTO17-02	OTTO 17	100	61.33126	-134.31202	61.33097	-134.31362

Personnel and Methodology

The geophysical surveys were conducted, processed and interpreted by William LeBarge of Geoplacer Exploration Ltd., with field assistance from Peter Staley and Adam Sternbergh. The Lippmann 4-Point Light Resistivity System was used, and this 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 contact resistance 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.

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 if there is 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 of Geoplacer Exploration Ltd. accepts no liability for any use or application of these data by any and all authorized or unauthorized parties.

Results

Figures 7 and 8 show the interpreted resistivity profiles from the two surveys. Overall, contact resistance was low and resulting data quality was good.

Resistivity survey line RES22-OTTO17-01 was conducted across the upstream portion of claim OTTO17 on Otto Creek. Shallow contacts at 7 to 12 metres are interpreted as dry glaciofluvial cobble gravel, which overlies a sandy silt and silty clay unit (possibly glacial till) up to 20 metres thick. Interpreted bedrock depths vary from near surface on each end of the line, to a depth of 10 metres in the centre of the line, to depths of up to 35 metres at two points along the line. Seven drill targets have been chosen along the line.

Resistivity survey line RES22-OTTO17-02 was surveyed approximately 100 m downstream of RES22-OTTO17-01. Interpreted units in the profile include a surface layer of boulder-rich gravel overlying a less resistive layer which may be a glacial till. One potential drill target was interpreted 7 m from surface. Interpreted bedrock lies near the surface on the eastern extent of the line but drops steeply towards the west.

The coordinates and depths of the targets of the resistivity surveys are shown in Table 4.

Table 4 - Coordinates and depths of targets from 2022 Resistivity surveys, Otto Creek, Livingstone project.

Resistivity Line	Claim	Target name	Depth(s) m	Latitude	Longitude
RES22-OTTO17-01	OTTO 17	T-1	10	61.33196	-134.31339
RES22-OTTO17-01	OTTO 17	T-2	8,25,35	61.33197	-134.31369
RES22-OTTO17-01	OTTO 17	T-3	8	61.33195	-134.3144
RES22-OTTO17-01	OTTO 17	T-4	10	61.3318	-134.31529
RES22-OTTO17-01	OTTO 17	T-5	30,35	61.33167	-134.3156
RES22-OTTO17-01	OTTO 17	T-6	12	61.3316	-134.31607
RES22-OTTO17-01	OTTO 17	T-7	12	61.33158	-134.3165
RES22-OTTO17-02	OTTO 17	T-8	7	61.33114	-134.3126

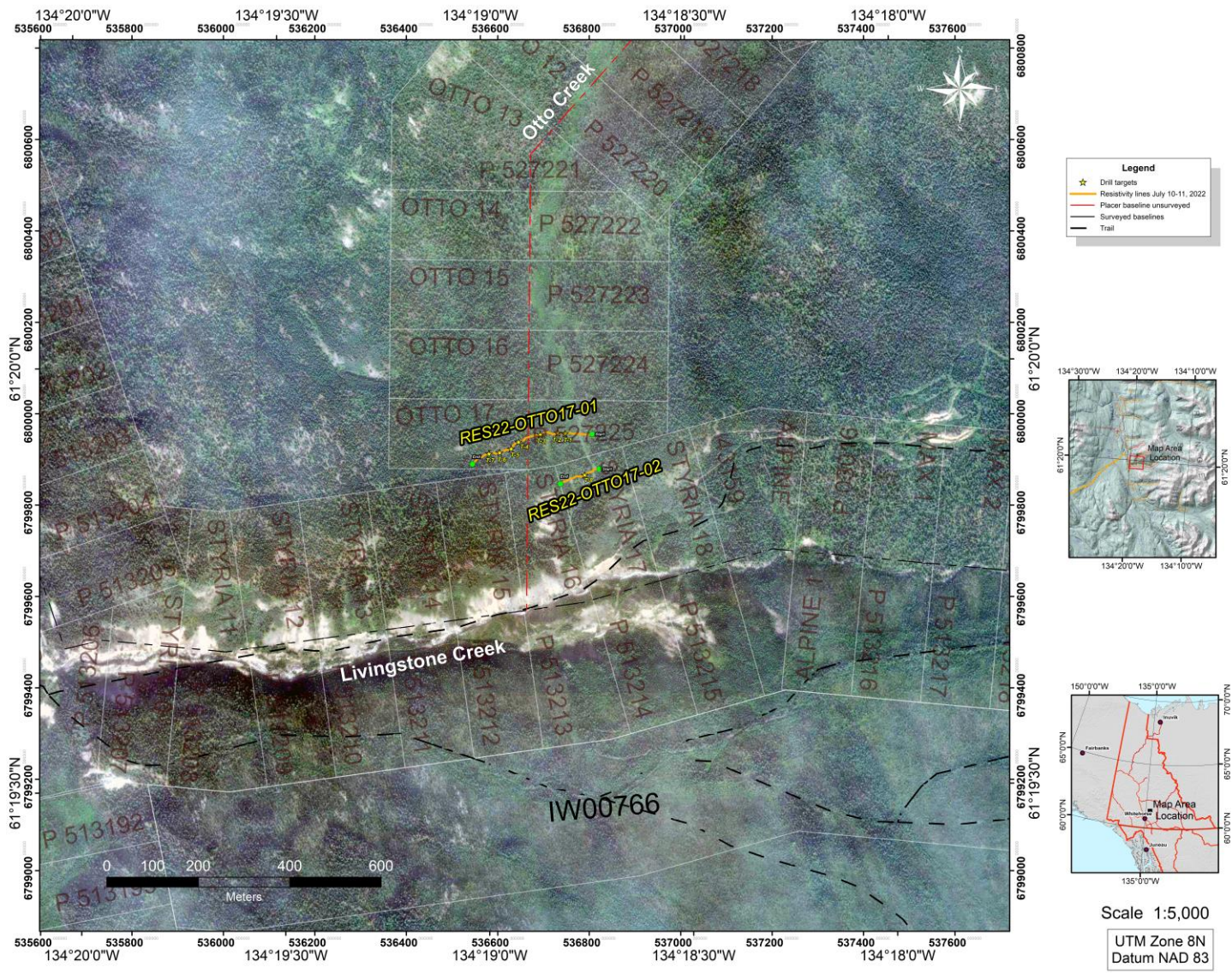


Figure 6 – Location of resistivity surveys and drill targets on Otto Creek, a right-limit tributary to Livingstone Creek.

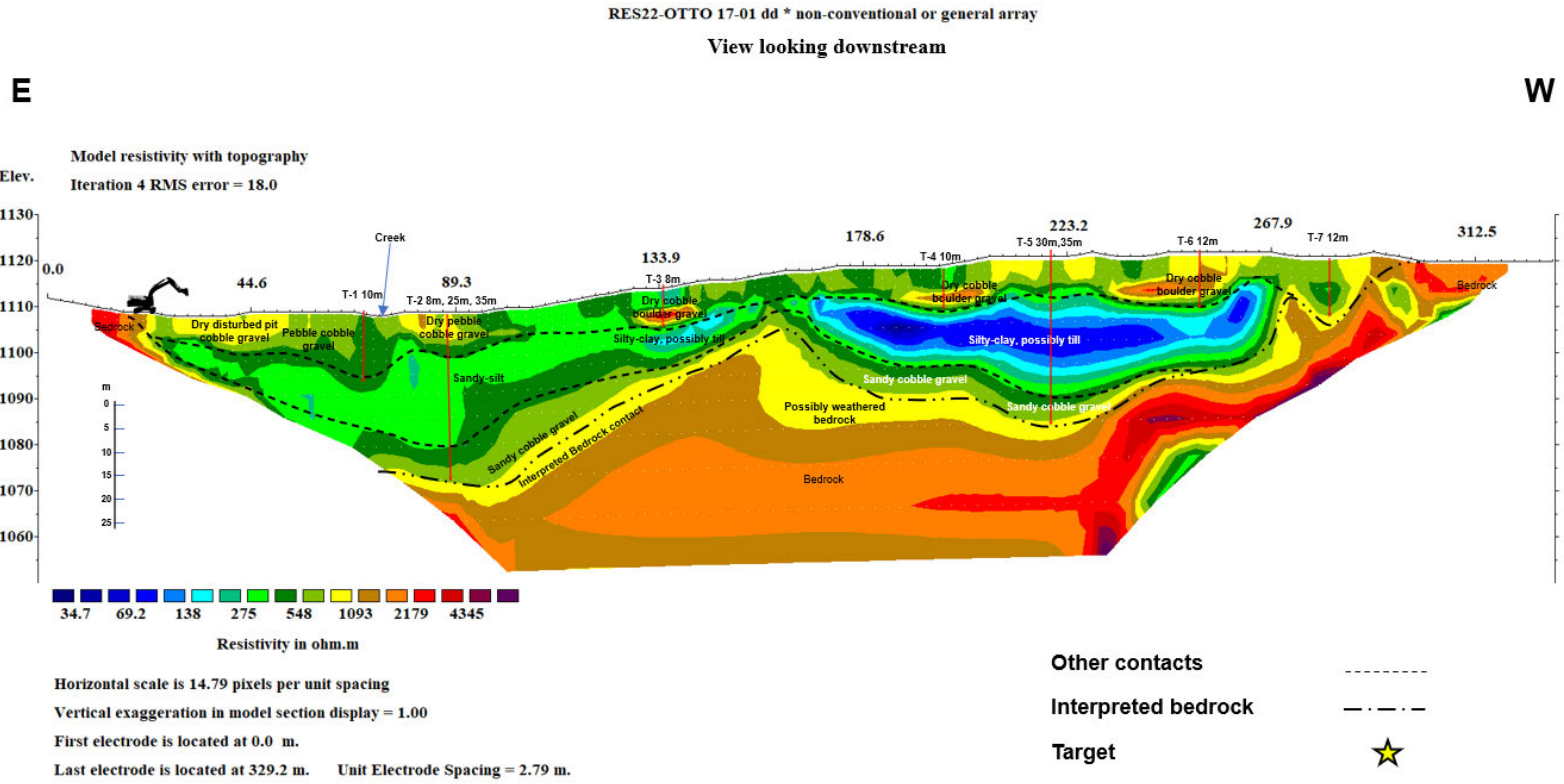


Figure 7 – Resistivity survey line RES22-OTTO17-01 was conducted across the upstream portion of claim OTTO 17 on Otto Creek. Shallow contacts at 7 to 12 metres are interpreted as dry glaciofluvial cobble gravel, which overlies a sandy silt and silty clay unit (possibly glacial till) up to 20 metres thick. Interpreted bedrock depths vary from near surface on each end of the line, to a depth of 10 metres in the centre of the line, to depths of up to 35 metres at two points along the line. Seven drill targets have been chosen along the line.

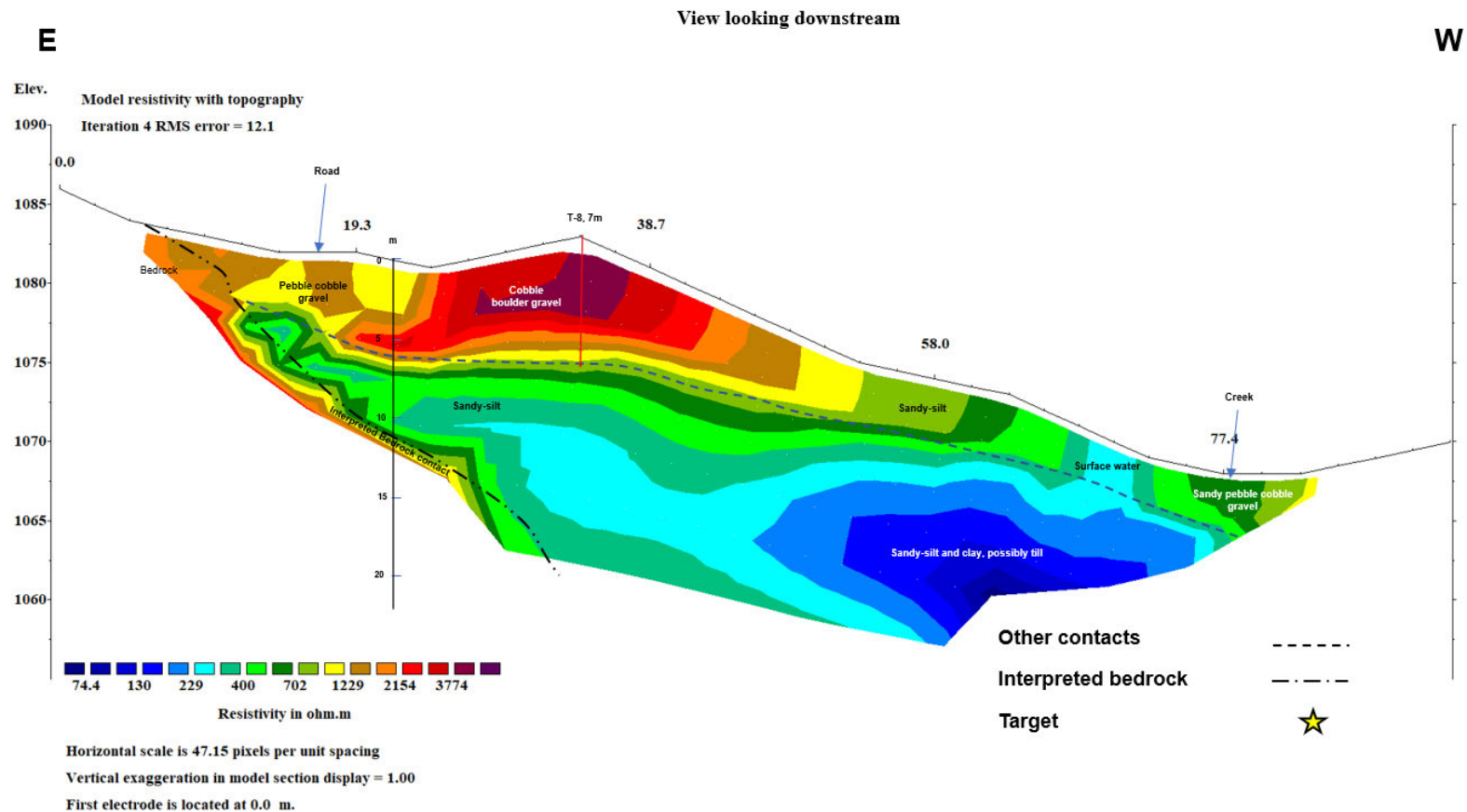


Figure 8 – Resistivity survey line RES22-OTTO17-02 was surveyed approximately 100 m downstream of RES22-OTTO17-01. Interpreted units in the profile include a surface layer of boulder-rich gravel overlying a less resistive layer which may be a glacial till. One potential drill target was interpreted 7 m from surface. Bedrock lies near the surface on the eastern extent of the line but drops steeply towards the west.

Conclusions and Recommendations

Overall, contact resistance was low in the resistivity surveys and resulting data quality was quite good. On resistivity survey line RES22-OTTO17-01, the main surface material consists of a highly resistive unit from 7 to 12 metres thick, which is interpreted to be a dry glaciofluvial cobble gravel. This overlies a lower resistivity unit that is up to 20 metres thick, which is interpreted to consist of sandy silt and silty clay, possibly glacial till. Interpreted bedrock depths vary from near surface to depths of up to 35 metres.

Resistivity survey line RES22-OTTO17-02 included a surface layer of boulder-rich gravel overlying a less resistive layer which may be a glacial till – these units correspond well with those encountered on nearby line RES22-OTTO17-01. Bedrock lies near the surface on the eastern extent of the line but drops steeply towards the west.

Eight drill targets were chosen along both surveys, varying from 7 m to 35 m in depth. Additional resistivity surveys are recommended, in order to delineate the orientation, depth and extent of any potential buried gravel channels. Shallower targets may be evaluated by excavator testing, however a drill should be brought in to confirm interpreted depths and sample the gold content of the deeper targets. Given the boulder-rich nature of the ground, the drill should either be a cased reverse circulation (R/C) drill (which has an inside diameter of 6 inches or greater) or a similarly-sized sonic drill. The project area would also benefit from updated aerial imagery from a UAV drone survey.



Plate 2 - Rounded boulders at surface along line RES22-OTTO17-01, near target T-6.

Statement of Costs, 2022 Exploration Program, Otto Creek

Table 5 - Statement of Costs, Otto Creek placer exploration, July 2022.

2022 Placer Exploration Program, Otto Creek	Total amount	Rate	Subtotal	GST	Total
Resistivity survey line data acquisition, compilation and interpretation, Otto Creek, July 2022, two lines	430 m	\$12/m	\$5160.00	\$258.00	\$5418.00
Total					\$5418.00

Statement 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 23rd day of December, 2022

William LeBarge, P. Geo.

A handwritten signature in blue ink that reads "William LeBarge". The signature is written in a cursive, flowing style.

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