## 2021 GEOPHYSICAL ASSESSMENT REPORT

on

**Rodin Creek** 

**Two Mile Placer Prospecting Lease** 

#### IM00419

by

William LeBarge, P. Geo

for

Seamus Dunne

Location of property: 63°53'46"N; 136°18'44"W NTS map sheet: 115P/16 Mining District: Mayo Date: Sept 8, 2021 Date of Work: Sept 6, 2021

# **Table of Contents**

Executive Summary	
Introduction	2
Location and Access	2
Personnel and Dates of Work	2
Placer Tenure	4
Placer Exploration and Mining History	6
Local Bedrock Geology and Mineral Occurrences	
Quaternary and Surficial Geology	
2021 Placer Exploration Program	
Resistivity Survey	12
Introduction	12
Methodology	12
Limitations and Disclaimer	12
Results	13
Conclusions and Recommendations	
Statement of Costs, 2021 Exploration Program, Rodin Creek Property	
Statements of Qualifications	
William LeBarge	
Cassia Johnson	
References	

# List of Figures

Figure 1 - General Location of Rodin Creek Project, Yukon.	. 3
Figure 2 – Location of Rodin Creek placer property and nearby Mayo region placer tenures	. 5
Figure 3 - Bedrock Geology of Rodin Creek, after Yukon Geological Survey (2020)	. 9
Figure 4 - Surficial Geology, Rodin Creek and South McQuesten River area, after Bond (1998)	1
Figure 5 – View looking upstream at resistivity line RES21-Rodin 2M-01 on Rodin Creek. Three drill	
targets were chosen with estimated contacts between 4 m and 10 m below surface1	14
Figure 6 – Satellite image of Rodin Creek showing the location of resistivity survey RES21-Rodin2M-01.	
Drill targets also shown1	15

### List of Tables

Table 1 – Placer Prospecting Lease Status, Rodin Creek, Sept 4, 20214
Table 2 - Placer gold production from reported gold royalties, Mayo Mining District. Figures are in crude
(raw) ounces
Table 3 – 2021 resistivity survey line endpoint coordinates, grant number and length, Rodin Creek
property
Table 4 - Coordinates and interpreted depths of the drill targets from the resistivity geophysical survey
on Rodin Creek16
Table 5 - Statement of Costs, 2021 Placer Exploration, Rodin Creek property.       17

### **Executive Summary**

The following is an assessment report on the 2021 geophysical exploration program on the Rodin Creek Placer Prospecting Lease IM00419, by Geoplacer Exploration Ltd. The prospecting lease is 100% owned by James Dunne.

Rodin Creek is a right limit tributary of the South McQuesten River, located in central Yukon approximately 40 km by air northwest of Mayo, Yukon. Access is gained by the Silver Trail from the village of Mayo to the South McQuesten (Victoria Gold) road turnoff (36 km) and a further 25 km to a turnoff on the west along the South McQuesten road. An ATV trail (15 km) leads from the South McQuesten road to within 1 km of the southern extent of the prospecting lease. Further access is currently by foot. The centre of the property is 63°53'46"N; 136°18'44"W, on NTS map sheet 115P/16, in the Mayo Mining District.

Rodin Creek was glaciated during the pre-Reid and Reid glacial episodes, but evidently escaped ice cover during the McConnell glaciation. Surficial units include a glaciofluvial complex of Reid age (colluvial in places) as well as the fluvial gravels of Rodin Creek itself. Higher parts of the drainage lie adjacent to till complexes of Reid age.

The 2021 exploration program consisted of a 200 m 2D resistivity survey, which was conducted by William LeBarge of Geoplacer Exploration Ltd with assistance from Cassia Johnson, Seamus Dunne and Rowan Dunne. The resistivity survey was conducted on Sept 6, 2021.

The interpreted geophysical profile appears to show thawed gravel, sand and silt overlying an undulating bedrock up to 10 metres below surface. There appears to be a gravel bench (terrace) on the eastern extent of the survey. Sand and silt occur adjacent to the active stream on the western side of the survey, which corresponds to an active alluvial fan sourced from tributary streams to the west. There are three depressions which may be paleochannels, and these were chosen as drill targets.

Auger drill testing (6-inch or larger size) of the drill targets along the resistivity line is recommended. This should be followed up by excavator test-pitting and bulk processing of prospective alluvial gravels. Further geophysical surveys and drilling should be conducted to determine the extent of any gold-bearing paleochannels on the creek.

### Introduction

The following is an assessment report on the 2021 geophysical exploration program on the Rodin Creek Placer property, by Geoplacer Exploration Ltd. The Prospecting lease is 100% owned by James Dunne.

### **Location and Access**

Rodin Creek is a right limit tributary of the South McQuesten River, located in central Yukon approximately 40 km by air northwest of Mayo, Yukon (Figure 1). Access is gained by the Silver Trail from the village of Mayo to the South McQuesten (Victoria Gold) road turnoff (36 km) and a further 25 km to a turnoff on the west along the South McQuesten road. An ATV trail (15 km) leads from the South McQuesten road to within 1 km of the southern extent of the prospecting lease. Further access is currently by foot. The centre of the property is 63°53'46"N; 136°18'44"W, on NTS map sheet 115P/16, in the Mayo Mining District (Figure 2).

### **Personnel and Dates of Work**

The 2021 exploration program was conducted by William LeBarge of Geoplacer Exploration Ltd with assistance from Cassia Johnson, Seamus Dunne and Rowan Dunne. The resistivity survey was conducted on Sept 6, 2021.

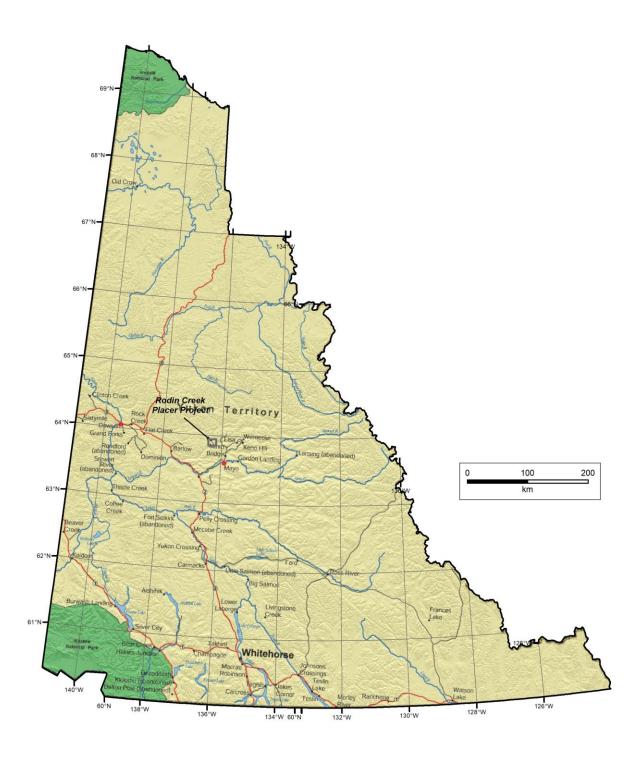


Figure 1 - General Location of Rodin Creek Project, Yukon.

## **Placer Tenure**

Table 1 shows the status for the placer prospecting lease on the Rodin Creek placer property as of Sept 4, 2021.

 Table 1 – Placer Prospecting Lease Status, Rodin Creek, Sept 4, 2021.

STATUS	LENGTH	GRANT NUMBER	OWNER NAME	STAKING DATE	RECORDED DATE	EXPIRY DATE
Active	2 Miles	IM00419	James Dunne - 100%	2019-09-07	2019-09-09	2021-09-09

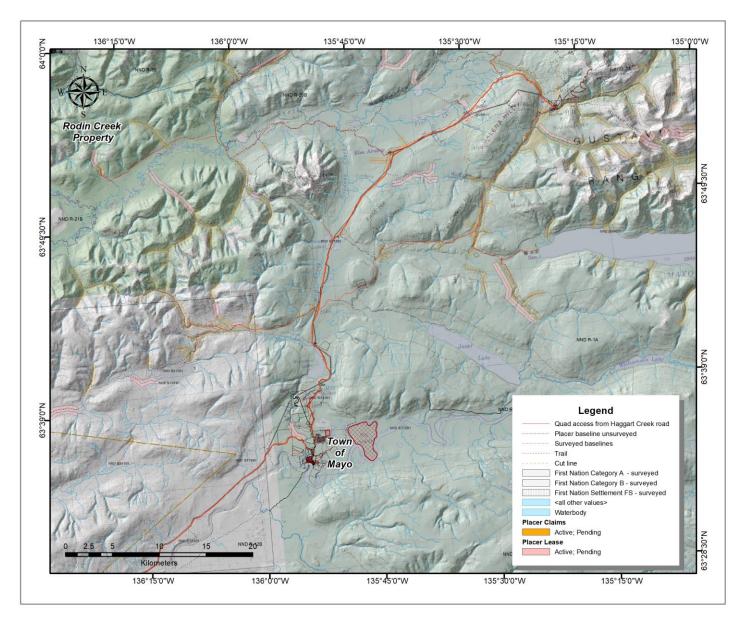


Figure 2 – Location of Rodin Creek placer property and nearby Mayo region placer tenures.

## **Placer Exploration and Mining History**

The discovery of placer gold in the Mayo district began on the Stewart River in 1883, when a party of prospectors worked from the mouth of the Stewart River to the McQuesten River (Mayo Historical Society, 1990). Between 1885 and 1886, it is estimated that up to 14,500 fine ounces (451 000 g) was recovered by hand (Mayo Historical Society, 1990).

In 1892, Ray Stewart discovered gold on the McQuesten River, and in 1895 placer gold was noted on Haggart Creek. Discovery claims were recorded on Johnson and Haggart Creeks in 1898, and around then a Swedish trio named Gustavson were hand mining at the canyon on Duncan Creek, approximately 15 km upstream from its confluence with the Mayo River. However, the Gustavsons who had mined the canyon deposit did not record their claim for fear of initiating another stampede. In 1901, some Dawson stampeders discovered their camp and the Gustavson trio lost their ground (Mayo Historical Society, 1990).

Soon the entire length of Duncan Creek was staked. Exploration in surrounding regions began shortly thereafter, and discoveries were posted on creeks flowing into Mayo Lake and in the Minto Creek region in 1903. Highet Creek was found to contain a significant quantity of gold. Rudolph Rosmusen and partners acquired an area of the bench opposite Rudolph Gulch and found the richest bench ground on the creek, yielding upwards of US\$140 000 or 6773 fine ounces (210 664 g) of gold at US\$20.67 per ounce. The amounts on these claims alone surpassed the total gold taken out of Duncan Creek in its first 14 years.

In 1920 the Highet Creek Dredging Co. attempted to dredge Highet Creek. Dredge operations only lasted a year and a half due to the inability of the dredge to handle large boulders. Intermittent activity continued until an upsurge of mining occurred following the dramatic rise in the price of gold in the late 1970's and early 80's.

Modern methods of mining, utilizing large bulldozers and excavators have become prevalent, especially in areas that were once considered to be too deeply buried by barren glacial overburden. Although most modern mining is still concentrated on the creeks which were initially mined at the turn of the century, some new ground has been explored and mined on a few non-traditional creeks.

Rodin Creek was first prospected in 1908 by a Mr. Rasmussen (LeBarge, 2007). It has been intermittently mined by hand or small-scale equipment over the years, but most of this work was not documented.

The most recent active registered placer claims are held by Mr. Chris Thomas. These claims lie adjacent to the prospecting lease held by James Dunne.

Government placer gold royalty records prior to 1978 are incomplete, however more detail can be found in subsequent years, which are given in Table 2. This table shows that over 180,000 crude ounces have been recorded in the Mayo Mining District between 1978 and 2019. No production has been recorded from Rodin Creek.

Table 2 - Placer gold production from reported gold royalties, Mayo Mining District. Figures are in crude (raw) ounces.

STREAM or RIVER	Tributary to	2015	2016	2017	2018	2019	1978-2019
Anderson	Mayo Lake						938
Bear (Van Bibber)	McQuesten						1448
Bennett	Minto		2.88				3
Carlson	Minto						105
Davidson	Mayo River	912.53	147.63		103.17	60.74	4921
Dawn	Mayo Lake		20.77				36
Dirksen	Mayo Lake						31
Dublin Gulch	Haggart						13099
Duncan	Mayo River	413.44	253.41	400.28	77.85	506.26	36089
Empire	No Gold						1012
Fifteen	Haggart			1.1			1
Gem	Sprague						428
Goodman	South McQuesten						37
Granite Creek	Mayo Lake	1249.16	1902.14	1418.13	1052.51	3277.56	8900
Haggart	McQuesten	3.79			18.88		24528
Highet	Minto	95.86	154.56	61.25	37		40769
Hope Gulch	Lightning						8
Jarvis	Minto						17
Johnson	McQuesten		71.95	350	208.98	289.36	6357
Ledge	Mayo Lake						5815
Lightning	Duncan	0.83					11624
McQuesten	Stewart	9.24					114
Minto	Mayo River	199.42	594.05	406.22	474.65	753.46	3775
Morrison Seattle				3.29	71.65	30.86	122
Murphy's Pup South McQuesten			3.18	13.8	26.72		202
Owl Mayo Lake					12.18		3654
Ross	South McQuesten				3.5	28.88	32
Russell	Macmillan						287
Seattle	McQuesten	83.6	136.11	217.73		22.22	668
Secret	Swede	41.52	4.11		45.79	72.69	836
Steep	Mayo Lake						709
Stewart	Yukon						872
Swede	Haggart		28.53		12.24	1.69	4389
Thunder	Lightning	508.06	547.28	333.58	332.84	333.26	6553
Upper Duncan	Duncan		109.02	105.42		107.88	322
Vancouver	McQuesten		13.95	16.09		124.07	1082
Various Mayo Creeks			7.92	111.93			1709
Total Mayo District		3517.45	3997.49	3438.82	2477.96	5608.93	181492

## Local Bedrock Geology and Mineral Occurrences

Figure 3 shows the bedrock geology of the Rodin Creek drainage, after Yukon Geological Survey (2020). The area of the claims is mapped as PCH1 (Upper Proterozoic to Lower Cambrian Hyland Group), which consists of clastic-dominated metasedimentary rocks.

There are no nearby mineral occurrences in the Rodin Creek area. The closest mineral occurrence is Minfile #115P 002 (Seattle), which is a polymetallic vein hosted in Keno Hill quartzite. This occurrence lies several km to the southeast.

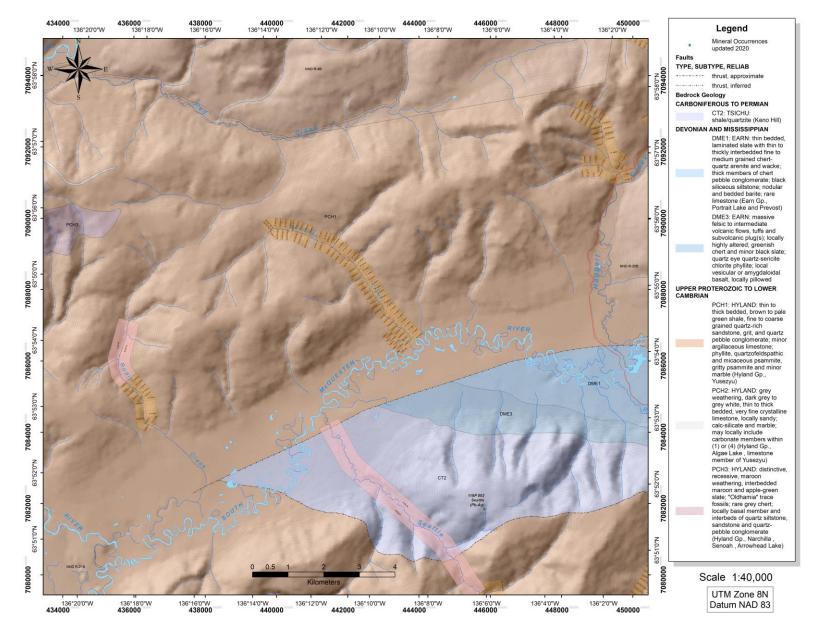


Figure 3 - Bedrock Geology of Rodin Creek, after Yukon Geological Survey (2020).

### **Quaternary and Surficial Geology**

Rodin Creek was glaciated during the pre-Reid and Reid glacial episodes, but evidently escaped ice cover during the McConnell glaciation (Bond, 1998, 1999; LeBarge et al., 2002). The surficial geology of the project area was mapped by Bond (1998). Surficial units include a glaciofluvial complex of Reid age (colluvial in places) as well as the fluvial gravels of Rodin Creek itself. Higher parts of the drainage lie adjacent to till complexes of Reid age.

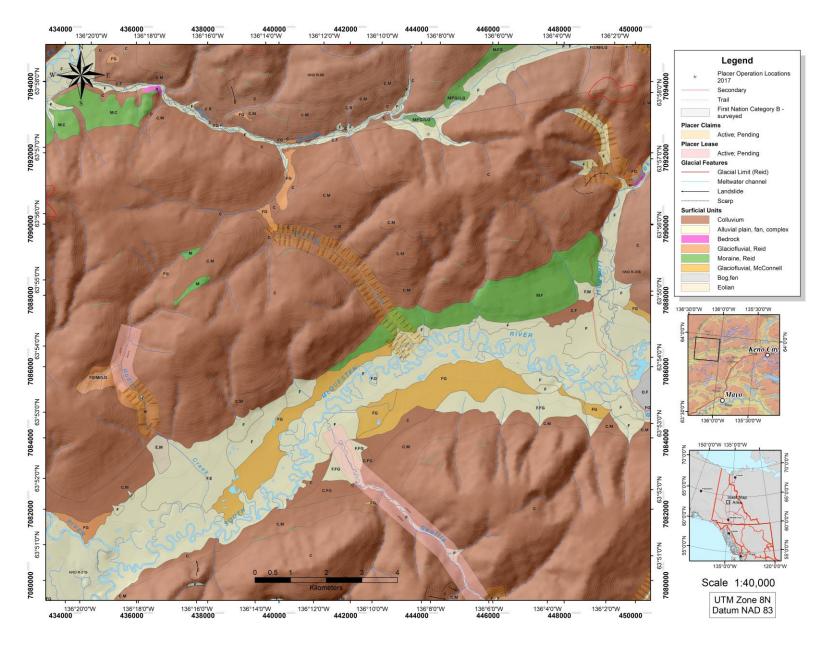


Figure 4 - Surficial Geology, Rodin Creek and South McQuesten River area, after Bond (1998).

## 2021 Placer Exploration Program

#### **Resistivity Survey**

#### Introduction

One resistivity line totalling 200 line-metres was conducted and interpreted by William LeBarge of Geoplacer Exploration Ltd. The survey was conducted on Sept 6, 2021, with field assistance from Cassia Johnson, Seamus Dunne and Rowan Dunne.

#### Methodology

The Lippmann 4-Point Light Resistivity System was used to conduct the survey. 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 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.

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

General principles and assumptions of electrical resistivity are:

- 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 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**

Contact resistivity was generally low in the survey which provided reasonable quality data. In some areas, contrasts between low, moderate and high resistivity values may have been partially or wholly a reflection of varying groundwater conditions, rather than strictly lithological boundaries.

The geographic coordinates of the endpoints of the surveyed line is shown in Table 3. The interpreted profile is shown as Figure 5, and the line is plotted on Figure 6.

Table 3 – 2021 resistivity survey line endpoint coordinates, grant number and length, Rodin Creek property.

Survey Name	Grant Number	Star	t Point	Enc	Length (m)	
		Latitude	Longitude	Latitude	Longitude	
RES21-Rodin2M-01	IM00419	63° 53' 28.1" N	136° 18' 41.17" W	63° 53' 31.5" N	136° 18' 28.7" W	200

#### RES21-RODIN2M-01 dd

#### Looking upstream

Ε

### W

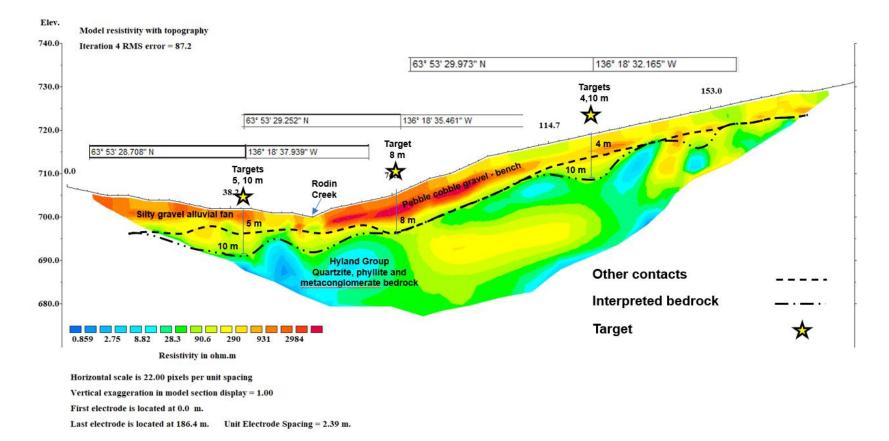


Figure 5 – View looking upstream at resistivity line RES21-Rodin 2M-01 on Rodin Creek. Three drill targets were chosen with estimated contacts between 4 m and 10 m below surface.

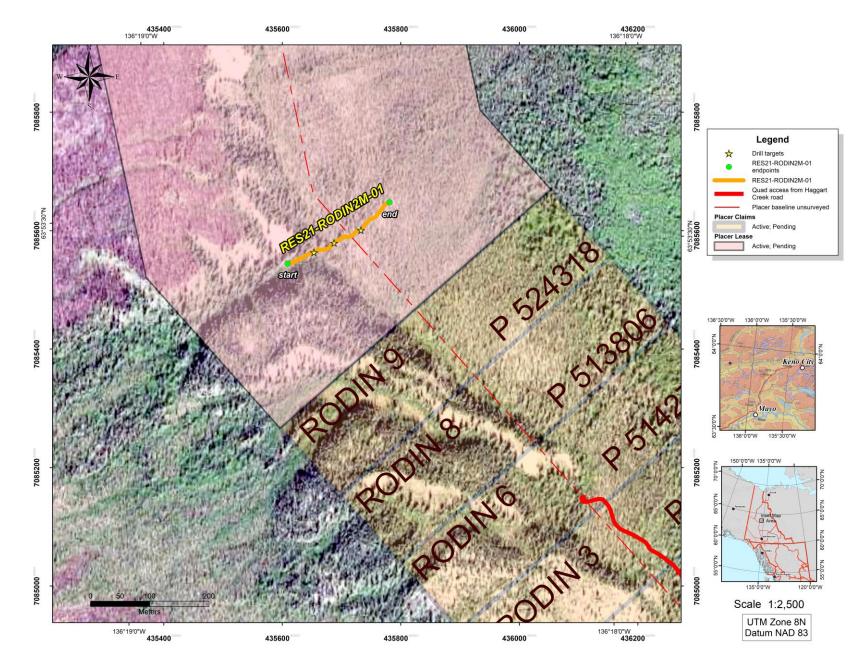


Figure 6 – Satellite image of Rodin Creek showing the location of resistivity survey RES21-Rodin2M-01. Drill targets also shown.

### **Conclusions and Recommendations**

Preliminary interpretations are given in the profile in Figure 5. The exact nature of the materials in the subsurface beneath the survey cannot be determined without drilling.

The interpreted profile appears to show thawed gravel, sand and silt overlying an undulating bedrock up to 10 metres below surface. There appears to be a gravel bench (terrace) on the eastern extent of the survey. Sand and silt occur adjacent to the active stream on the western side of the survey, which corresponds to an active alluvial fan sourced from tributary streams to the west. There are three depressions which may be paleochannels, and these were chosen as drill targets. Coordinates for the drill targets are given in Table 4 below.

Target Name	Survey Line	Grant Latitude Number		Longitude	Approximate Depth to bedrock (m)	
RES21-Rodin 2M-01-1	RES21-Rodin 01-01	IM00419	63° 53' 28.71" N	136° 18' 37.94" W	10	
RES21-Rodin 2M-01-2	RES21-Rodin 01-01	IM00419	63° 53' 29.25" N	136° 18' 35.46" W	8	
RES21-Rodin 2M-01-3	RES21-Rodin 01-01	IM00419	63° 53' 29.97" N	136° 18' 32.175" W	10	

Table 4 - Coordinates and interpreted depths of the drill targets from the resistivity geophysical survey on Rodin Creek.

Auger drill testing (6-inch or larger size) of the drill targets along the resistivity line is recommended. This should be followed up by excavator test-pitting and bulk processing of prospective alluvial gravels. Further geophysical surveys and drilling should be conducted to determine the extent of any gold-bearing paleochannels on the creek.

# Statement of Costs, 2021 Exploration Program, Rodin Creek Property

 Table 5 - Statement of Costs, 2021 Placer Exploration, Rodin Creek property.

2021 Placer Exploration Program, Statement of Costs	Amount	Rate	Subtotal	GST	Total
Resistivity survey line data acquisition, compilation and	200 m	\$12/m	\$2400.00	\$120.00	\$2520.00
interpretation, Rodin Creek property					
Total					\$2520.00

### **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 8<sup>th</sup> day of September, 2021

William LeBarge, P. Geo.

William LeBarge

#### **Cassia Johnson**

I, Cassia Johnson, of 916 Ave L N, Saskatoon, SK, Canada, DO HEREBY CERTIFY THAT:

- 1. I am a Consulting Geologist with current address of 916 Ave L N, Saskatoon, SK.
- I am a graduate of the University of Saskatchewan (B.Sc., 2010, Geology); the University of Waterloo (M.Sc., 2014, Earth and Environmental Sciences – Quaternary Geology) and undergoing studies at the University of Exeter (PhD, Interdisciplinary Mining and Minerals Engineering and Social Sciences)
- 3. I am a Practicing Member in Good Standing (#48392) of the Association of Professional Engineers and Geoscientists of British Columbia (EGBC).
- 4. I have practiced my Profession as a Geologist continuously since 2006.

Dated this 8<sup>th</sup> day of September, 2021

Cassia Johnson, P. Geo.

### References

Bond, J.D., 1998. Surficial Geology of Seattle Creek, Central Yukon, NTS 115P16. Exploration and Geological Services Division, Indian and Northern Affairs, Canada, Geoscience Map 1998-2, 1:50,000 scale map

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