

AD006417

August 5 2014

Geophysical survey

**Tracing the profile of the bedrock with a GPR
(ground penetrating radar)
across the Big Creek Valley**

(Map 115P15p)



By PhD geophysicist Boris Logutov and geologist Sandro Frizzi

Sandro Frizzi

096816

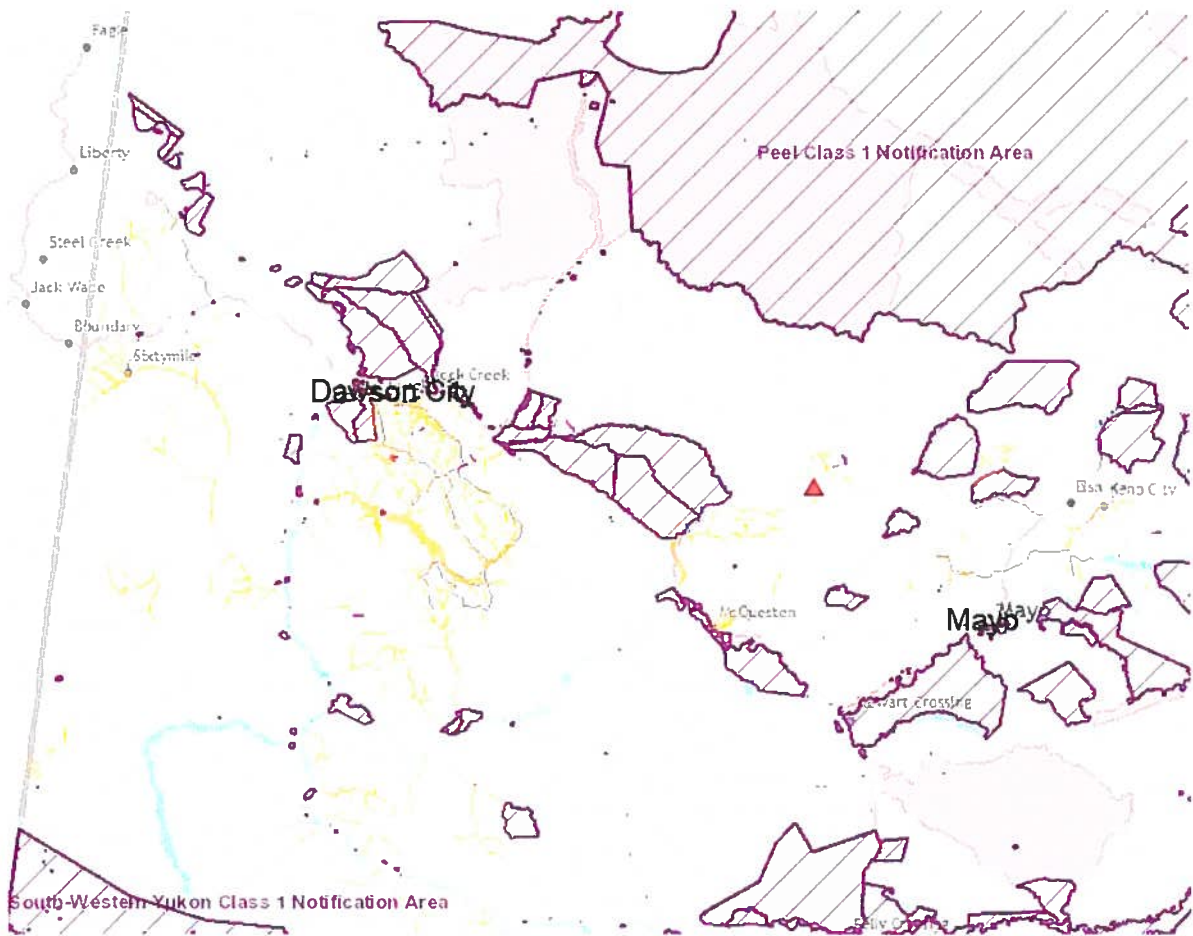


Location of Big Creek on map

(red triangle)

Scale 1:1,500,000

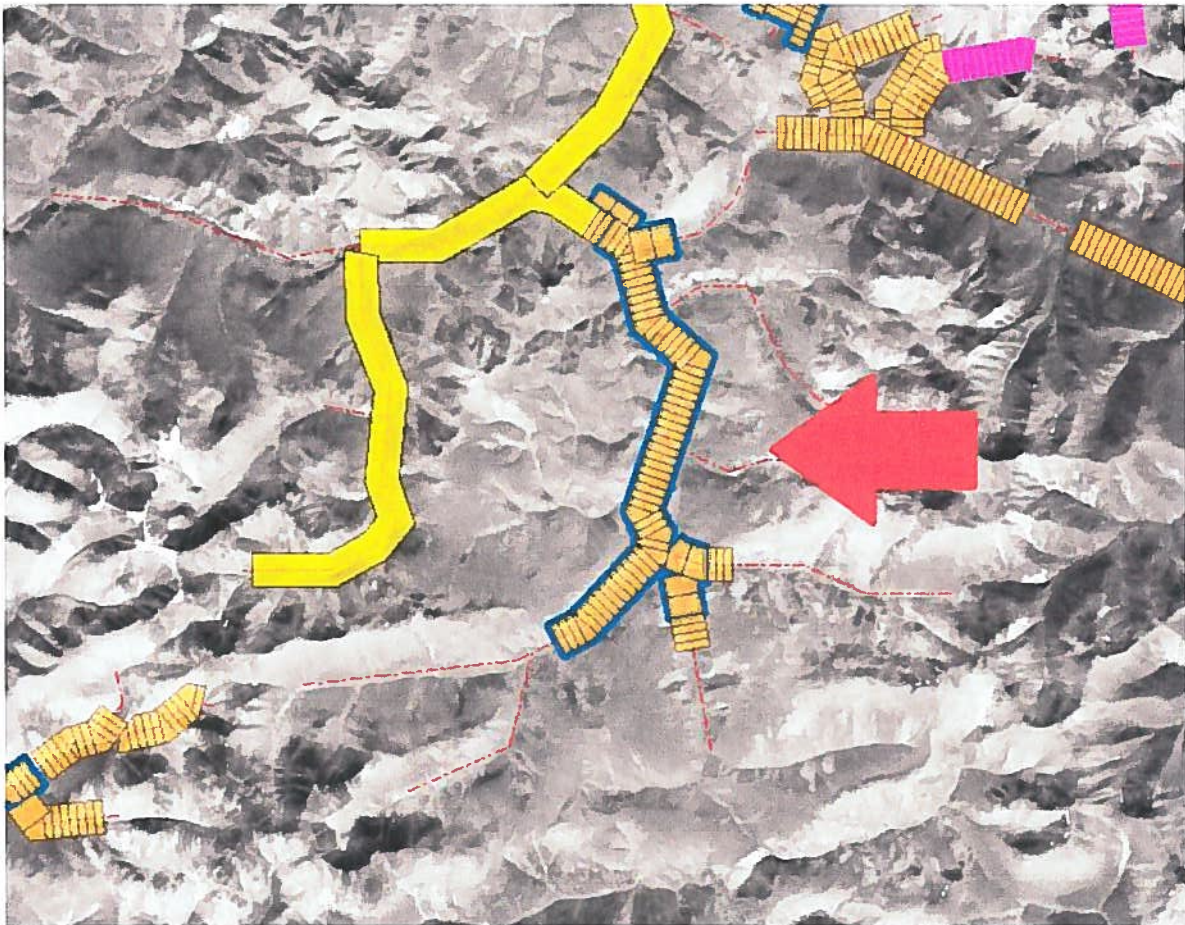
North Δ



The new “Oz” property

Map 115P15p

Scale 1:100,000



Red arrow is indicating the “Oz” property

Location of Big Creek

In the Yukon Territory, there are several creeks named “Big Creek”. The name originates from the aboriginal population or from the first explorers.

Our Big Creek is the one visible on **Map 115P15p** and it flows in the central part of the Yukon, between Mayo (located 60km south-east) and Dawson City (located 125km north-west).

This creek is tributary of the Little South Klondike. Its headwater starts from the mountains of the West Ridge and is separated from the headwater of Clear Creek by the Rhosgobel Stock, a superb, 1,800 meters high granitic dome.

Big Creek is accessible by road. From Dawson City you must drive south on the Klondike highway until Clear Creek road (110 km), then follow Clear Creek road until the Harpers mine (42 km), at the top of the left fork of the creek. From here starts the road to Red Mountain (drivable with 4x4). The camp is at km 14.

The distance between Big Creek and Whitehorse is roughly 500 km.

In case of necessity, there is an airstrip at Arizona Creek, a few kilometers from Big Creek, toward Red Mountain.

For any emergency there is a maintained landing area for helicopters in the upper part of Big Creek, at UTM 406428-7085801.



Big Creek

List of the claims that are part of the “Oz” property

Map 115P15p

The “Oz” property is visible on map 115P15p and includes 68 claims, mostly located along Big Creek. Six claims have also been staked along three different right tributaries.

The name “Oz” property refers only to those claims included in the water license and already grouped together.

Here is the list:

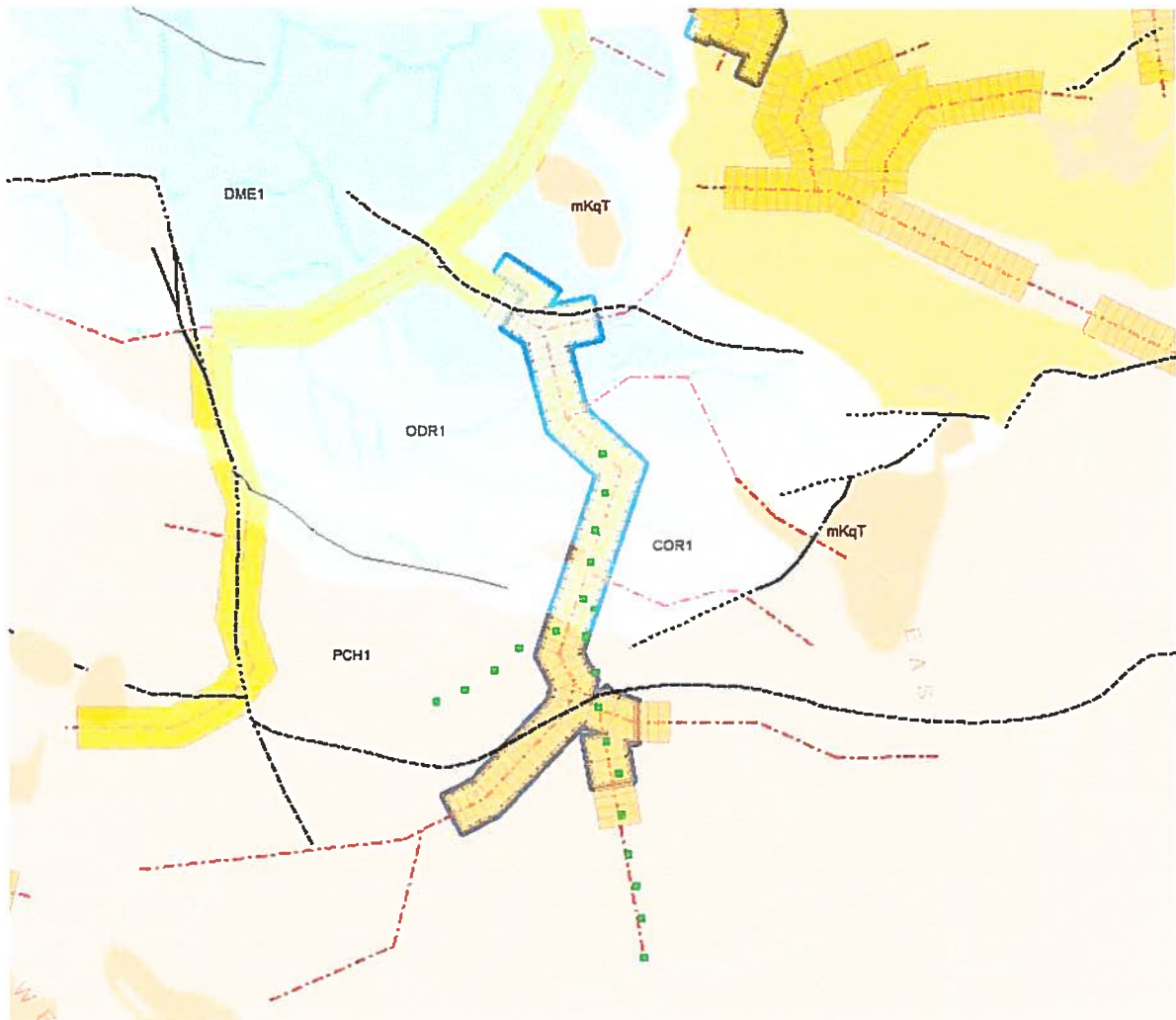
Oz1 to Oz59	P515751 to P515809
Black Jack	P515705
Garda Lake	P515704
Cimadoro	P515703
Ota	P515702
Italian	P515701
Ginevra	P515084
Ceylon	P515085
Bostock	P515087
Arianna	P515086

The owners of the claims listed above are:

D. Bruce McArthur (25%), Hans Algotsson (25%), David Algotsson (25%) and Sandro Frizzi (25%).

Geological map

scale 1:80,000



Legend:

- PCH1: Hyland group (Proterozoic to Cambrian). Coarse turbiditic clastic units. Pale green shale, quartz rich sandstone, grit, phyllite, limestone, mafic volcanic rocks.
- COR1: Rabbitkettle (upper Proterozoic to lower Cambrian). Basinal limestone. Silty limestone, grey lustrous calcareous phyllite, black slate, quartzose

Siltstone, chert.

- ODR1: Road-River group (Ordovician and lower Devonian). Black shale and chert, resistant grey weathering, thin to medium bedded, light grey to black, greenish-grey chert; minor argillaceous limestone.
- DME1: Earn group (Devonian and Mississippian). Assemblage of submarine fan and channel deposits. Thin bedded, laminate slate with interbedded chert-quartz arenite and wacke; black siliceous siltstone.
- mKqT: Tombstone suite (mid-Cretaceous). Plutonic suit of felsic composition. Coarse grained granite, quartz monzonite and granodiorite.

The green dots are indicating the N-S “No Name fault” and the SW-NE fault (downstream).



Graphitic phyllite at Pit M



Quartzite at UTM 406748-7085408



Grit from Pit R

Geophysical survey

(ground penetrating radar system)

During the exploration campaign of 2013 we dug a number of useless pits, where the bedrock was too deep to be reached by our excavator (at Big Creek the groundwater starts right below the surface and that particular condition prevented us from digging lower steps).

To dig a large pit is a complex operation and it usually takes an entire day of work for an operator and his helper. It's obviously expensive: the wage of the workers is added to the cost of running an excavator (which in remote areas can be double).

Last year we tried to pre-determine the depth of bedrock by using an auger drill, which is the most common way to operate. Unfortunately, the presence of shallow groundwater and the type of deposition with the presence of big rocks prevented us from obtaining good results in a desired short time.

To avoid a waste of time and energy, this year we chose to use geophysical surveying. We decided to experiment the ground penetrating radar for its easy portability, for the quick response and for the extremely low cost of this operation.

The surveying campaign has been performed by Boris Logutov, a brilliant geophysicist from the University of Perm, Russia.

Boris used a Russian made GPR, the Python-3, a piece of equipment tested with many others and declared "the best ground penetrating radar for placer exploration" by the geophysical department of Perm University.

Two different antennas have been used to prospect at Big Creek: a 25 MHz and a 50 MHz. The best results have been achieved with the 25 MHz antenna.

We established a grid of 5 lines distributed along the most interesting areas of the upper part of the property. Each line was measuring between 100 and 150 meters and cutting across the valley.

The results of the GPR have been precisely interpreted by Boris and his previsions lately confirmed by our pits, subsequently dug along the lines.

As you will notice by observing the bedrock profiles traced by the Python-3, this surveying revealed the existence of higher benches on line 2, 3 and 4 (keep in mind that in the graphics the surface appears flat, because the GPR doesn't show the profile of the valley, only the one of bedrock. The terraces are obviously located on the hillside).

These benches probably constitute the most important discovery of the summer, as we didn't expect such great extension under the coverage of rock debris (from the valley those stretches seem to be small remains).

After the geophysical survey we exposed the bench M, on line 3, and we found the best gold deposition of the entire property, in a hidden ancient alluvium.

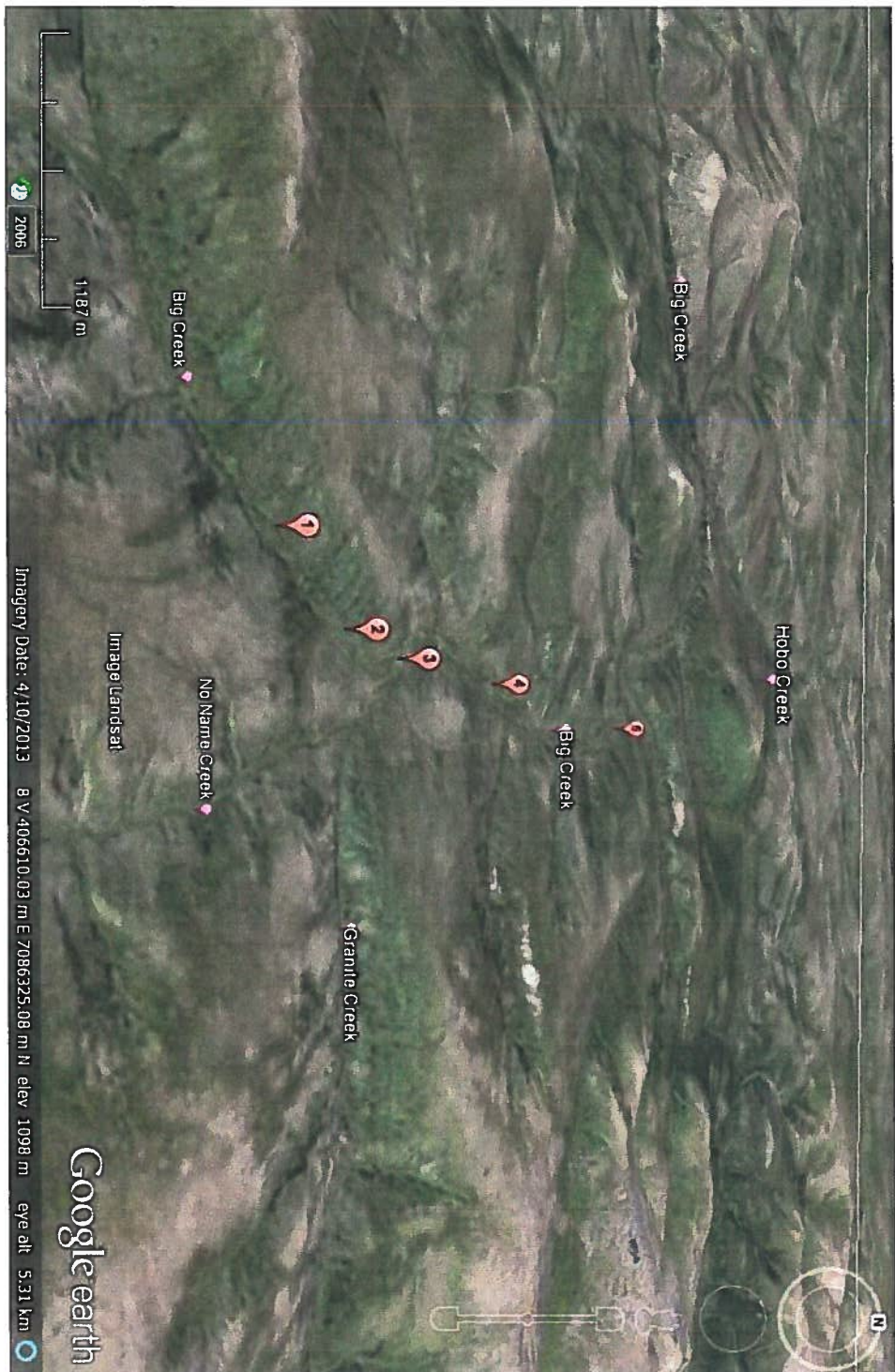
For the future we will strongly recommend (when the depositional conditions are favorable = in absence of clay) the use of a GPR for a preliminary investigation. We have been well impressed by this Python-3, a great little device.

This technology could save to the prospectors a considerable amount of money, time and energy and, more important, it's a non-invasive tool and can preserve the natural environment from unnecessary digging.



Boris Logutov with his GPR Python-3

Location of GPR lines

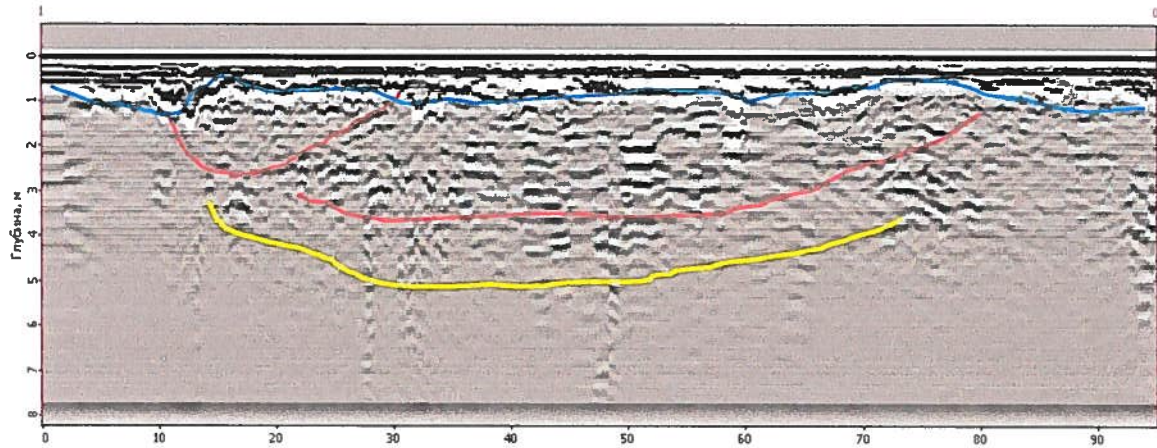


Bedrock profiles

PR 1 (line 1, claim 53)

UTM: 405804-7084457

UTM: 405737-7084510

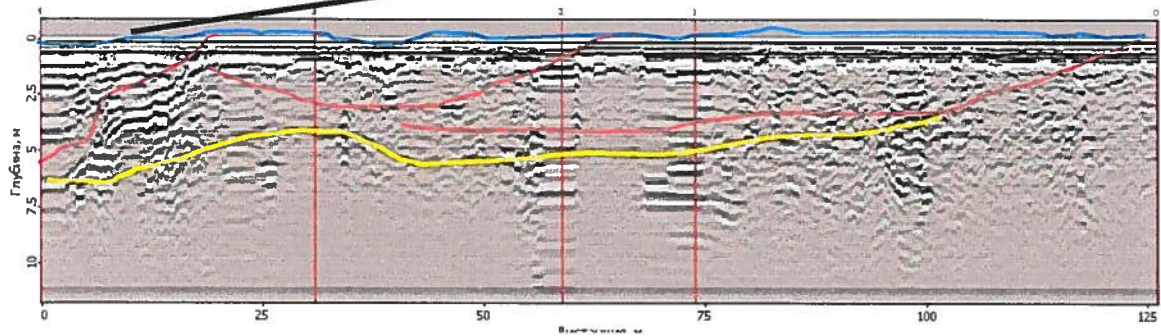


PR 2 (line 2, claim 48)

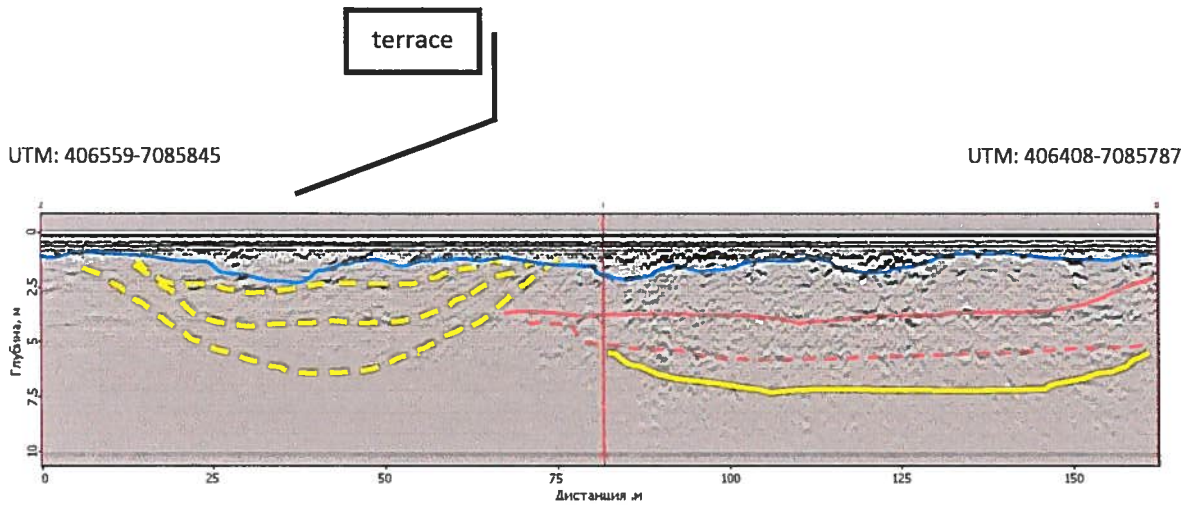
terrace

UTM: 406369-7085112

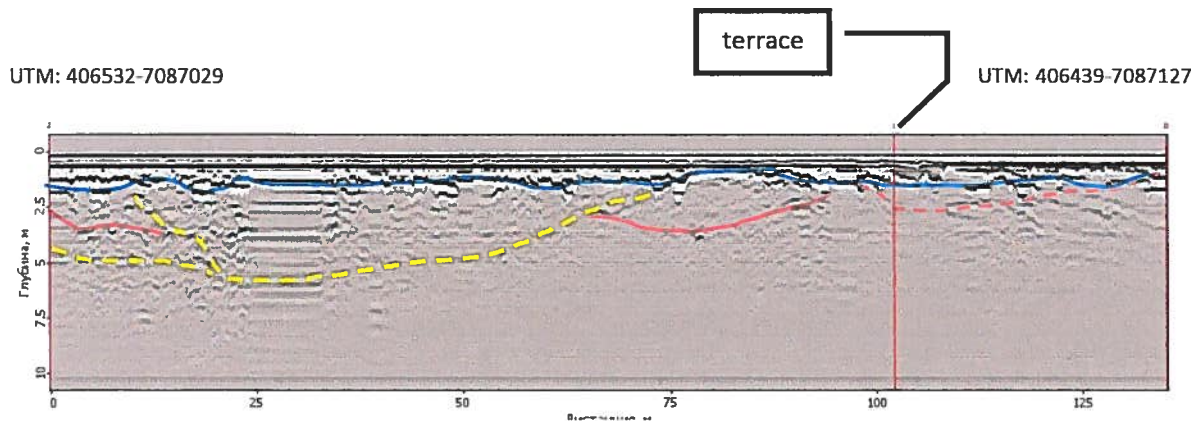
UTM: 406263-7085182



PR 3 (line 3, claim 42)



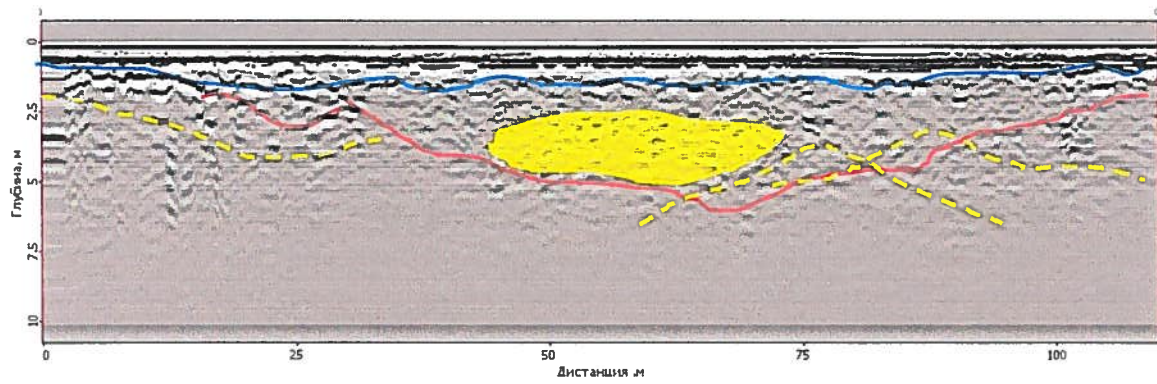
PR 4 (line 4, claim 34)









PR 5 (line 5, claim 17)

UTM: 406859-7089260

UTM: 406752-7089240



-  roof of sands
-  sole of sands
-  prospective sole of sands
-  bedrock
-  prospective bedrock
-  concentration of coarse fraction

(note: depth and distance are in meters)

By Boris Logutov and Sandro Frizzi

Statement of qualification of Boris Logutov and Sandro Frizzi.

Boris Logutov is a PhD geophysicist from Russia (Perm). He worked in the mineral exploration field (hard-rock and placer) in several Countries around the world and he's constantly collaborating as a researcher with the Perm State University. For the last three years Boris is studying the gold placer deposition of the Klondike, where he developed an interesting model of prospecting.

Boris is using a GPR (ground penetrating radar) to determine the depth and to trace the profile of the bedrock under the alluvial coverage.

He's also one of the co-founder of Arctic Fox Inc., a Yukon registered company specialized in placer gold research.

Sandro Frizzi is and Italian geologist (bachelor of science in geology at the University of Bologna), resident of Canada since 2009 and a new resident of Dawson City.

Since 2005 Sandro is working in the Yukon as consultant for several hard-rock exploration companies.

Starting from 2008 he's dedicating more and more attention to the placer mining industry.

Today Sandro owns several placer properties scattered along the Klondike and in the surrounding areas where is trying to develop active mining sites.

**Expenses for the GPR (ground penetrating radar) campaign
at Oz property (Big Creek).**

Map 115P15p

The total cost for three days of geophysical survey at the Oz property (Big Creek) is: **\$ 1,500.**

That's the amount paid to mr. Boris Logutov for the excellent job that he has done.

The expenses of transportation and the camp cost of mr. Logutov have been personally supported by mr. Sandro Frizzi.

The copy of the receipt of the payment to mr. Logutov has been already delivered to the Mining Recorder Office of Dawson City.

Best Regards,

Sandro Frizzi

A handwritten signature in blue ink, appearing to read "Sandro Frizzi". The signature is written in a cursive, flowing style with a large initial 'S' and a long horizontal stroke extending to the left.