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## APPENDIX

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## TARGET EVALUATION PROPOSAL

I, Steve Harasimiuk, am submitting this proposal for YMEP “target evaluation” to assist me in further evaluation of the deep placer gold potential in upper Victoria Creek. When I refer to “we” or “our” in my narrative, it is referring to myself and my hired seasonal mining staff.

The work will be conducted within NTS mining claims map 115I03P. I hold an operating lease agreement for a block of 38 contiguous mining claims along upper Victoria Creek. The bottom claim number is P50199, the top claim is number P26237 (28 claims). There are also 10 claims along an upper right tributary named Eva Creek, claims number P12533 to P12542. I hold a class 4 water licence on this ground to expire on April 20, 2017.

*Reference: Appendix # 1.0 – claims map*

We have conducted geophysical profiling of the bedrock and want to confirm the depth of these deep placer gravel layers. At this point in my exploration efforts, I need financial support to explore the deep placer potential. This will be my first request for funding help at Victoria Creek.

# HISTORICAL INFORMATION

## WORK LOCATION ACCESS ROUTE

Victoria Creek is situated approximately 60 km west of the village of Carmacks along a government maintained secondary road. Carmacks is located north of Whitehorse via the paved Klondike Highway. The entire trip from Whitehorse to Victoria Creek takes approximately 4 hours by road. The Victoria Creek access is an additional 20 minutes by mining roads at the base of Mt. Victoria.

*Reference: Appendix 2.0 – Mt. Nansen Access Road*

The first placer gold discovery in the Mount Nansen area was reportedly in 1899. Since that time, placer mining operations have been conducted on streams in the area, including Victoria Creek and some of its tributaries (Back and Eva creeks). The rich placer discoveries can be attributed to the hard rock potential of the area.

The abundance of hard rock mineralization both underlying and near Victoria Creek make it an excellent candidate for placer discovery.

## REGIONAL TECTONICS, REGIONAL and PROPERTY GEOLOGY

The Victoria Creek property is located between the Tintina Fault, 120 km to the northeast, and the Denali-Shakwak Fault, 120 km to the southwest. Both faults are steeply dipping transcurrent structures that have seen hundreds of kilometres of dextral strike-slip offset. The property is located within the Yukon-Tanana Terrane (YTT) (Nelson and Colpron, 2007). The YTT is a metamorphosed continental arc that developed along the ancient Pacific margin of North America from Late Devonian to Permian.

In 1984, the Geological Survey of Canada published a geological map of the Carmacks area (NTS map sheet 115I) at 1:250,000 scale (Templeman-Kluit, 1984). Gordey and Makepeace (2003) later completed a Yukon-wide geological compilation, which updated the lithological unit names in the Victoria Creek area. Figure 2 illustrates geology as mapped by Templeman-Kluit and compiled by Gordey and Makepeace. The main lithological units are described in Table II.

**Table II– Lithological units (after Gordey and Makepeace, 2003)**

| Map Suite                 | Age                               | Map Unit | Description   |
|---------------------------|-----------------------------------|----------|---|
| Prospector Mountain Suite | Late Cretaceous to Tertiary       | LKdP     | Coarsely crystalline gabbro and diorite.  |
| Mount Nansen Formation    | Middle Cretaceous                 | mKN      | Massive aphyric or feldspar-phyric andesite to dacite flows, breccia and tuff; massive, heterolithic, quartz and feldspar-phyric, felsic lapilli tuff; flow-banded quartz-phyric rhyolite and quartz-feldspar porphyry plugs, dykes, sills and breccia. |
| Whitehorse Suite          | Middle Cretaceous                 | mKyW     | Hornblende syenite grading to granite or granodiorite.  |
| Pelly Gneiss Suite        | Devonian, Mississippian and older | DMgPW    | Foliated medium grained, homogeneous biotite granite gneiss to biotite or hornblende granodiorite gneiss; massive to strongly foliated diorite to granodioritic gneiss; includes interfoliated amphibolite, quartz-mica schist and phyllite.            |

The northwest-trending Big Creek Fault lies approximately 10 km northeast of the property. This steeply dipping feature is poorly understood, but appears to have played an important role in localizing mineralization in the Mount Nansen Gold Camp and elsewhere in the district.

The Mount Nansen Mining Camp contains approximately 30 mineral occurrences of epithermal and porphyry origin and over 12 placer deposits. Vein hosted mineralization occurs throughout the camp and is generally found within northwest-trending structural zones. The Brown-McDade, Heustis and Webber veins are all examples of this type of mineralization. The Brown-McDade is a complex vein system that forms the contact between granodiorite to the north and schists and gneiss to the south. It contained pre-mining reserves and resources totally 600,000 tonnes at 6.1 g/t gold and 55 g/t silver, and between 1996 and 1997, it produced 16,000 oz gold, 83,000 oz silver from 124,000 tonnes of ore. Both the Webber and Heustis veins are hosted in schists and gneiss. The Webber vein has an underground reserve of 85,000 tonnes at

9.4 g/t gold and 560 g/t silver, while the Heustis vein has an underground reserve of 123,800 tonnes at 14.1 g/t gold and 291 g/t silver (Hart and Langdon, 1997). Placer deposits are genetically related to these and other veins in the Mt. Nansen Gold Belt.

There are a number of other mineral deposits in the Dawson Range that are associated with intrusive activity, particularly late stage quartz-feldspar porphyry dykes. One example of this style of mineralization occurs at the Klaza property, which is located about five kilometres north of the Victoria Creek property.

At the Klaza property, soil geochemistry and excavator trenching lead to the discovery of a series of northwest (300°) trending gold-silver veins and breccia zones (Turner, 2011). Exploration programs in 2010 and 2011 comprised extensive excavator trenching, diamond drilling and helicopter-borne magnetic and radiometric surveys. Historical and recent work at the Klaza property has identified four mineralized zones (Klaza, BYG, BRX and HERC).

The Klaza Zone is the best explored of the zones. It has been cut in a number of excavator trenches and drill holes. Highlights from trenching include: 2.33 g/t gold and 34.9 g/t silver across 16.35 m (TR-10-09); 2.87 g/t gold and 42 g/t silver across 20.10 m (TR-10-10); and, 7.17 g/t gold and 16 g/t silver across 7.11 m (TR-11-26). Diamond drilling also intersected significant mineralization including: 2.29 g/t gold and 36 g/t silver over 19.75 m (DDH-10-03); 7.20 g/t gold and 260 g/t silver over 15.30 m (DDH-10-07); 1.04 g/t gold and 15 g/t silver over 33.30 m (DDH-10-10); 1.76 g/t gold and 26 g/t silver over 26.21 m (DDH-11-27); and 5.03 g/t gold and 14 g/t silver over 12.51 m (DDH-11-56).

Historical work on the Victoria Creek property suggests that gold occurs in three zones that range from four to thirty metres wide. These zones reportedly strike about 300° and dip between 60 and 65° to the west. This orientation is consistent with mineralization on the Klaza property and elsewhere in the Mount Nansen Mining Camp.

According to old reports, the core from these holes was logged by a number of different geologists, which may explain some inconsistencies where closely spaced holes are shown with different lithologies. Historical drill programs reported poor core recovery and assaying was only done for gold and silver. Based on the historical drill data it appears that mineralization is associated with both quartz-feldspar porphyry dykes and clay-rich alteration zones.

## REFERENCES

Nelson, J.L. and Colpron, M.

- 2007 Tectonics and metallogeny of the Canadian and Alaskan Cordillera, 1.8 Ga to present; *in* Mineral Deposits of Canada: A Synthesis of Major Deposit Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods; W.D. Goodfellow (ed.), Mineral Deposit Division, Geological Association of Canada, Special Publication 5, p. 755-791. Available at: [http://gsc.nrcan.gc.ca/mindep/synth\\_prov/cord/pdf/nelson\\_colpron\\_cordilleran\\_metallogeny.pdf](http://gsc.nrcan.gc.ca/mindep/synth_prov/cord/pdf/nelson_colpron_cordilleran_metallogeny.pdf)

## **GEOGRAPHY OF THE MT. NANSEN/VICTORIA AREA**

Mount Nansen and Victoria were formed when the ancient Kula Plate was subducting under North America during the Late Cretaceous period. This occurred approximately 80 Ma (1 Ma = 1 million years).

This upheaval brought heavy minerals to the earth's surface through fissures and veins. There have been many surface lode deposits discovered at Mt. Nansen including; Brown- McDade, Huestis, Webber and Flex some of which have been commercially mined.

Glacial events have been described in central Yukon including the Nansen, Klaza, Reid, and McConnell advances. Reid and McConnell glaciations subjected Mt. Nansen area to deposits and climatic influences of the ice sheets.

Prior to the onset of periodic Pleistocene glaciations, a long period of humid tropical weathering occurred in the Tertiary period. This left a thick mantle of highly weathered and eroded bedrock. The first and minimum of two pre-Reid ice advances had occurred at least 1 MA. This ice advance left ice scours on Mount Nansen and Victoria at an elevation of about 1372m (4500 ft) ASL. Mt Nansen elevation is 1827 m (5994 ft) ASL.

After de-glaciation and a lengthy ice free period, there was extensive weathering and a second pre-Reid glaciation occurred. As the Cordilleran ice sheet advanced from the south and merged with the pre-Reid glacier it deposited more glacial and glaciofluvial deposits.

Nansen and Victoria Creek lay outside the limits of the late Wisconsin MacConnell and early Wisconsin region glaciations. They were however subjected to the deposits and water flow changes by these glacial episodes.

*Reference: Appendix 3.0 – 1995 Yukon Placer Geology Report pg 6-7, 72-76, 96-99  
Appendix 4.0 – Sedimentology of Placer Gravels Near Mt Nansen, LeBarge 1995*

## **MT. NANSEN MINING HISTORY**

Gold was first discovered in placer deposits in the Mt. Nansen area in 1899. Mr. Henry S. Back with Mr. H. Klein had found "good panning" on Nansen Creek. The first claim that was staked in the area was Discovery claim on Nansen Creek, which was staked on June 13, 1910. Mining began to take place in the area shortly thereafter and nearly all creeks in the area were at one time staked from end to end, although many were allowed to lapse.



During 1913 to 1914 two miners Mr. Miller and Mr. Shaw worked the South Fork of Nansen Creek near its mouth during the winter recovering 80 ounces of gold. They reportedly hoisted gravel through a vertical shaft a distance of 20 feet to bedrock and recovered approximately 4500 buckets of gravel (8pan/bucket), which would grade out at 0.29 oz/yd.

Nansen, Discovery, East Fork, South Fork, Weber, and Back Creek all recorded similar occurrences. In 1910 -14 the estimated total gold recovered was estimated at 310 to 440 raw ounces. The largest nugget recovered on Discovery Creek was reported to be one ounce. Additional government mining records noted that mining continued in the Nansen Creek district from 1934 to 1937 with some exceptionally good gold recoveries reported on Nansen and Victoria creeks in 1936. From 1914 to 1978 individual creek production records were not documented at the mine recorder's office.

*Reference: Appendix 5.0 – Mount Nansen Property Report, pg 63-65*

## **MINING EVIDENCE AT VICTORIA CREEK**

There were no government documented mining shafts in the claims at Victoria Creek. We did find evidence of early hand mining by locating a decayed wooden rocker box and a tin lined wooden sluice run. We did discover, through our own excavation efforts, that groundwater occurred within a permeable layer above the glacial till, approximately 10 - 30 feet below surface. This water table may have discouraged shaft mining Victoria Creek.

From document we were able to find in the government library, the miner that operated at Victoria Creek the longest was John Trout. John mined the claims until 2005. Then, Lloyd Wade took over the claims in 2006 and worked them intermittently until 2010. Upon reviewing the areas that all of the previous miners had worked (approximately 18 upper claims) they worked the shallow areas directly beneath the location of the present day creek. Our geophysical testing did show that Lloyd Wade may have discovered that the historical channel was 40m to the left of the present day channel. Lloyd did not reach bedrock but did leave a large unfinished excavation “cut,” along the left valley slope.

*Reference: Appendix 6.0, Yukon Government Placer Mining Reports 1993-1994; pg 124-125, 2007-2009, pg 127, 131 & 2010-2014, pg 175, 185-186*

## PREVIOUS TESTING CAPABILITIES

### CAPABILITY/EXPERIENCE

I have prospected in the Mount Nansen area for 6 years (2010 - 2015) and mined/tested Victoria Creek for 4 years (2012 – 2015). The water licence # PM06-524-1 for the 38 claims and mine land use operating plan approval # AP060524, referred to within this proposal, is registered in my name.

*Reference: Appendix 7.0, Water Use Permit # PM06-524, Land Use # AP06524, 29 pages*

I have maintained a good working relationship with all government offices especially with the mining inspectors. All my inspection reports have been positive and I am in full compliance with my responsibilities regarding legislation, regulations, codes and practices. There were some minor observations that were identified and corrected immediately. I have included copies of my past mining inspection reports with this proposal.

*Reference: Appendix 8.0, Yukon Placer Mining Inspection Reports, 2012-2014, 4 pages*

Personally, I have 38 years experience in oilfield, pipeline, power generation & distribution, mining, pulp & paper, and environmental restoration projects. I am a Registered Engineering Technologist with the Alberta Society of Engineering Technologists. As such, I follow the societies' strict code of conduct behavior policies. They include legal and ethical rules to follow. I have been a member in good standing for 35 years. I have successfully managed projects in NWT, BC, AB, and SK up to the \$2B range.

I have been a self-employed contractor for 30 years and presently operate a gravel exploration company in Alberta. As such, the work is in full compliance with all aspects of government. I also provide consulting and project management services to several multi-national companies.

### TECHNICAL SUPPORT

I intend to hire the appropriate geologist support, during this summer to properly document, evaluate, and report all the work in a professional manner. This person will be our hands-on support in the field to oversee all execution of the planned exploration work. I have selected either of these two candidates, to perform this work at site. They are Michelle Cronk and/or Levi Kalinsky of Saskatoon Saskatchewan. Both are Professional Geologists with mineral exploration experience in Yukon, NWT, Labrador and Saskatchewan. Final reports will be

written by Michelle or Levi. Both individuals are equally capable of recording and summarizing our work. They will also be supporting their other client needs, so either one or both may be at our site.

We have also been communicating with Richard Daigle, who has offered to assist our program. Richard works for A1 Cats and had overseen the Back Creek deep placer drilling/evaluation project.

We intend on using the core library XRF Analytical tools for more difficult identification of ore material at bedrock.

## **EQUIPMENT RESOURCES**

Since 2011, I have mobilized a sufficient quantity of equipment into Victoria Creek and will be able to self-perform most of the testing activities.

The following equipment is available at Victoria Creek camp.

Camp - c/w trailers, bunkhouses, generators, power distribution, buried sewage facilities capable of housing 12 workers

6 sea-cans – c/w tools, spare parts, consumable items, electrical, dry storage, tarps, tents, etc

2 - storage trailers – c/w environmental spill and clean-up material, emergency response items

1 -“clean-up” shack – c/w sampling pails & bags, screening, classifying, crushing, gold clean-up, concentrating, melting, and weighing equipment

4 – ATVs c/w Argo, side-by-side, quads, tub trailers

1 – tracked drilling rig: Bombardier Muskeg auger rig (4” to 8” flights)

2 – excavators: Hitachi 400, Komatsu 400

1 – dozer: Cat D8G

2 – portable testing washplant c/w pump: 1 - reverse helix trommel, 1 - highbanker

3 – generators: 10 kw/hr, 7.5 kw/hr, 3.0kw

Misc support equipment: 4x4 truck, water pumps, hoses, fuel storage, spill clean-up kits

## **PREVIOUS TESTING at VICTORIA CREEK**

The shallow placer gravels on the upper claims (conflux of Eva and Victoria) had appeared to have been mined by previous operators. We had no information available from the past operators on recovery rates/volumes, so we searched some of the un-mined claims instead.

Our drill testing in 2012 focussed on expanding a cut initiated by the present claims owner, Michal Bidrman at claim P26085. We sampled and bulk tested the cut until encountering our first significant layer of glacial till. We test drilled this layer and determined it to be ~17m (55ft) deep and consistent across the cut. It becomes mixed, up the left valley slope but became deeper to the right side of the valley, where the bedrock outcrop strikes nearly vertical in places.

Some samples of forms on a previous test program are included.

*Reference: Appendix 9.0, Sample Testing Method and Forms, 6 pages*

## 2016 VICTORIA CREEK TESTING PLAN

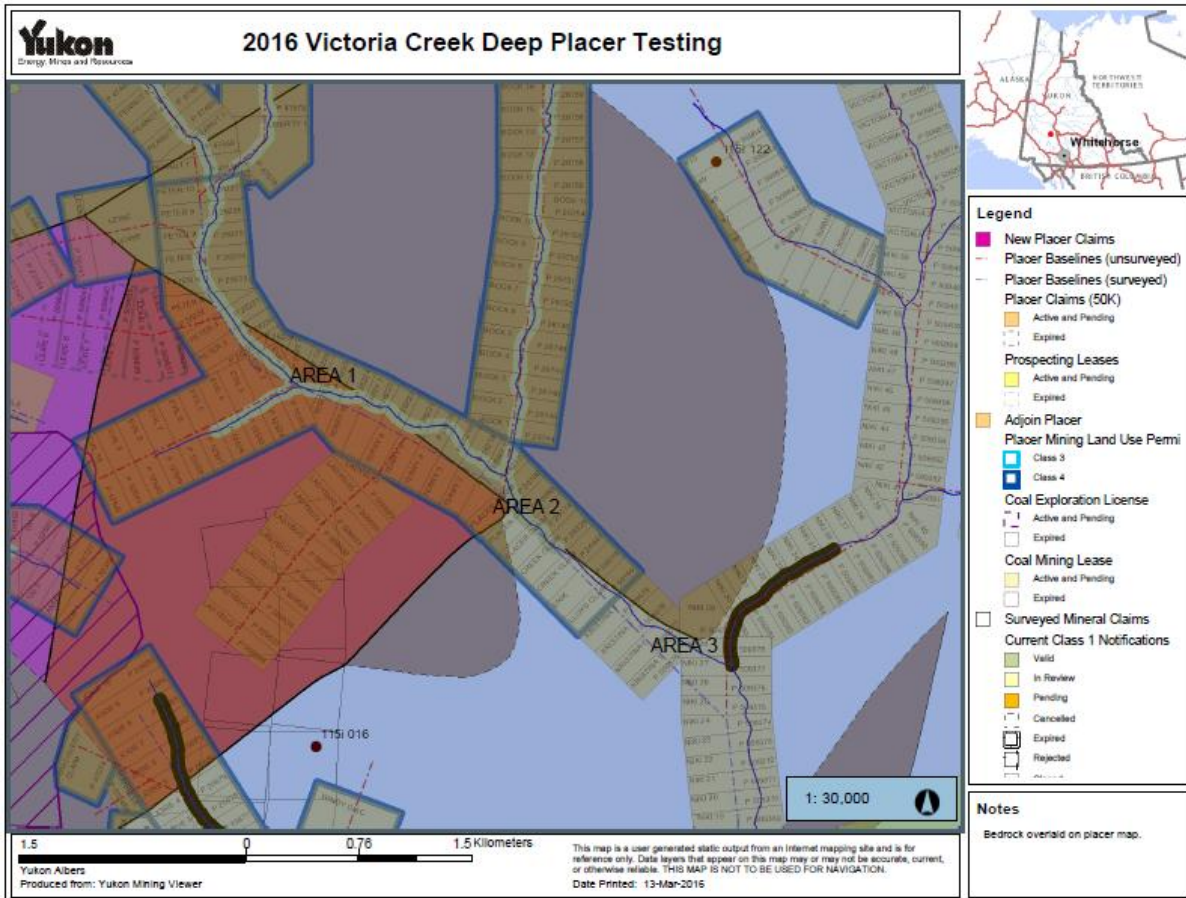
### 2016 TESTING TARGET AREAS

We identified three primary focus areas for our 2016 target exploration. All three have been correlated to geological plates that intersect each other and/or are undefined. Our primary purpose for our target evaluation is to confirm any economic quantities of placer gold and to confirm the lithography data.

*Reference: Appendix 10.0, Area # 1-3 Deep Placer Area Testing Maps, 7 pages*

The three areas are ideal locations to explore for deep placer gravels, we have already performed work stripping and exposing the late Pleistocene and Pleistocene layers. Victoria Creek has been identified as a deep placer potential creek by Jeff Bond at the 2014 Placer Forum.

*Reference: Appendix 11.0, The Deep Placers of Mount Nansen, Jeff Bond 2014, 33 pages*



Area # 1 – Above and below the conflux of Eva Creek and upper right tributary of Victoria Creek at claim #s P26224 to P26231.

Area # 2 - Below the conflux of three channels; left & right channel of an upper Victoria Creek tributary and Ladybug Creek. Located where there is a narrowing of the valley, and the bedrock profile changes. This location is where we have done most of our exploration/test mining.

Area # 3 – Located at the lowest claim # P509576, up to P509579. This is where the upper right Victoria Creek tributary enters the main Victoria Creek channel.

# AREA # 1 TARGET EVALUATION

## PREVIOUS TESTING IN AREA # 1

Test area # 1 is an area that had been mined for the past 50 plus years. We initially believe that the previous miners had mining this area down to the bedrock. We considered to have been “mined out” until we began re-testing the area. We wanted to confirm the depth of the bedrock and map its’ elevation profile. We encountered boulders during our 2014 drilling in this area. The boulder depth in the area appeared to follow closely with the surface profile. We couldn’t penetrate the rock with our drill rig and felt, at the time, that we encountered bedrock. There are fractured bedrock boulders on the right bank and it appeared that they extended from the right bank under our work area. In 2015 we continued testing and discovered material bellow the false bedrock.

In 2014, a report published by R. Chapman and M. Grimshaw, titled: “Placer-Lode Gold Relationships in the Nansen Placer District Yukon.” This report was supported by a hard rock mining company that has a significant gold discovery in the area. This report is significantly important to our placer exploration since it contains placer gold samples from our Area # 1. The report concluded that the “background” gold sample used for their report had a different chemical composition “marker” when they were analyzed. The report concluded that the gold they found in Area # 1 did not originate from the nearby Klaza discovery, but came from an altogether local source. Their report concluded that the gold from Area # 1 is from a very close, undiscovered hard rock source. This was good news as the quartz claims, beneath the Victoria Creek placer claims were subsequently purchased by a prominent hard rock exploration company. This information compelled us in 2015 to excavate sample pits to see if the previous miners may have already discovered and recovered any placer gold from the lode source.

Reference: Appendix 12.0, Yukon Exploration and Geology 2015, pg 63-78

Appendix 13.0, Placer-Lode Gold Relationships in the Nansen District, pg 1-24

Our previous sampling, in 2012 to 2015, of the upper claims at Eva Creek and the conflux with Victoria Creek tributary yielded poor sample results. With the exciting possibility of a local source of gold in this area we wanted to confirm the bedrock depth at Area # 1. In 2015 we dug a test pit at claim # P26234 at a known upstream bedrock outcrop. We dug a series of test pits downstream, following this decomposed bedrock.

The bedrock in each test pit was tested and was void of any gold. There were traces of gold in the samples above the bedrock. As we followed the bedrock downstream, the depth of the

bedrock was getting deeper than the ground surface, with each test pit we dug. At claim # P26226 we began digging a trench. This is where the bedrock took an aggressive elevation “dip” and we couldn’t reach the bedrock layer with our 40t excavator.



We dug more test pits further downstream to try and find the bedrock layer, hoping that it may come closer to surface further downstream. At ~ 6m (20') below the depth (in the area that was



previously mined) we had found some easy digging, below the mixed gravel layer, and managed to open up at trench approximately 60m (200 ft) long. The earlier miners that mined this area did not dig this deep, as evidenced by the ad-hock mixture of gravel and overburden mixed together.



We encountered a uniform and undisturbed silty glacial till layer.

We did not reach the bedrock again but did find an unexpected surprise. When we excavated through the ~600-1000 mm thick layer of glacial till, it was not frozen. It was consistently smooth reddish colored clay and peeled apart in distinct layers. This clay layer extended through the length and width of the excavation and was inclining deeper as we trenched further downstream. When we scraped through this clay layer we encountered an undisturbed layer of unfrozen gravel. As soon as we dug into this gravel a heavy flow of water began to flood our trench. We attempted to pump the water out of our excavation to empty the trench, and continue digging.





Daniel Harasimiuk taking a look at the underground water flow below the clay layer, within the sample trench in Area # 1.

We took advantage of the water reservoir (in our trench) to wash some of the excavated material through our wash plant as a “bulk sample” test. We ran the wash plant with a 6” submersible pump (1250 GPM rated flow rate) for 2 continuous hours and we were not be able to pump the water below the clay layer. The underground water flow would refill the trench and we were not able to continue digging for the bedrock layer.



Area # 1 trench. Marker line identifies the bottom of the clay layer and the start of the fragmented gravel layer. Daniel Harasimiuk taking a pan sample from the gravel zone.



Area # 1 trench, pan sample directly below the clay layer. Notice the angular shape of rock fragments in the sample.



Area # 1 pan sample beneath the clay layer. Notice the fractured quartz ore rock fragment.

**Area # 1 2015 gold nugget from bulk sample testing.**



We discovered the clay layer at the last few days of our 2015 testing/sampling program. We ran out of personal funding and couldn't continue with the investigation any further.

## **2016 TESTING PLAN IN AREA # 1**

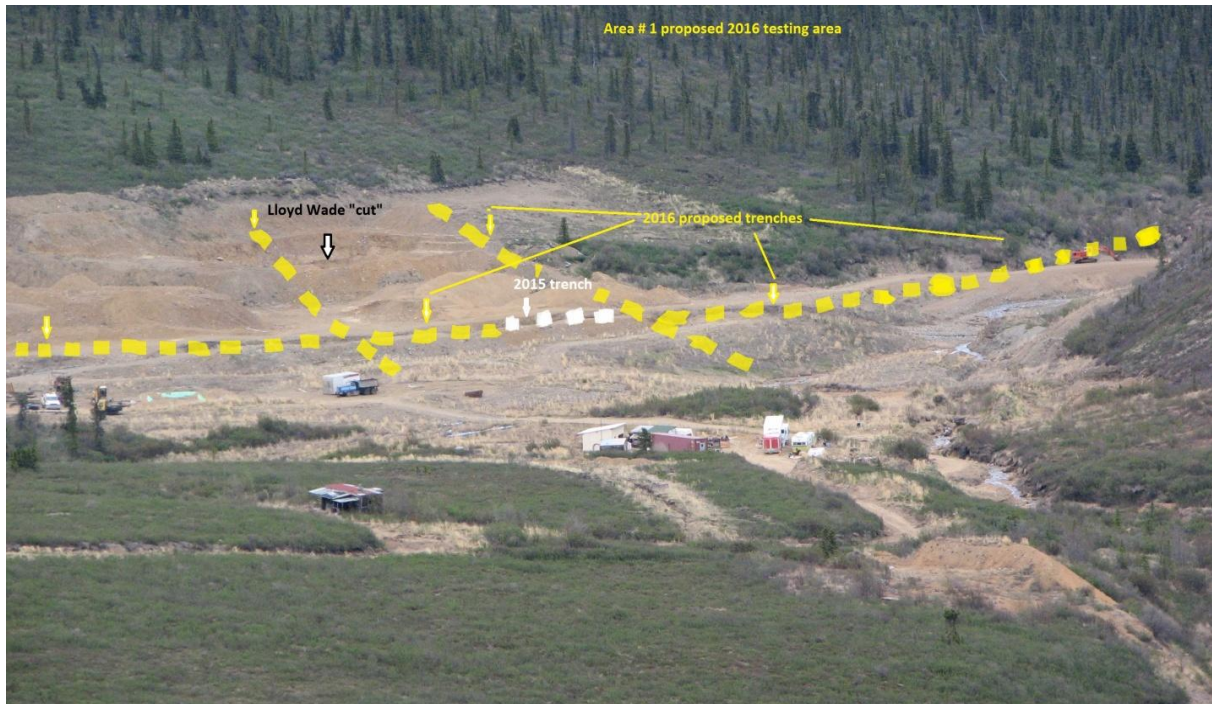
We believe that the Mount Nansen and Whitehorse suite bedrock fault line is in area # 1 very near to our trench.

Our 2016 goal for Area # 1 is to excavate the layer of large rocks & boulders and drill/dig into the gravel below the clay and find the bedrock layer. We want to map the bedrock profile of this area and sample for gold in each drill hole or test pit. To properly evaluate Area # 1, I anticipate needing to dig 100m of sample trench, 20+ deep test pits, and 30+ drill holes. There are two other areas of equally important interest, within the claim block. So, I propose we profile drill across the valley with an initial 6 holes and follow up with several test pits. We can continue with this staged approach until funding/financing is exhausted for the season.

We have a good personal relationship with the quartz claim holders below Victoria Creek. We have contacted them regarding our testing program and they have given us approval to drill into bedrock for reference samples.

A geophysical profile of the valley cross-section, downstream of area # 1, will be used as a drilling guide for locating Tertiary drainage channels.

Reference: Appendix 14.0, Arctic Geophysical 2012 Victoria Creek report # 1, pg 7-16  
Appendix 15.0, Area # 1 Proposed Exploration Maps, 2 pages



## AREA # 2 TARGET EVALUATION

### PREVIOUS TESTING IN AREA # 2

A geophysical profile of the target area was conducted in 2011. The upper gravel layers have been stripped off down to the Pleistocene level. The “cut” is directly above the bedrock channel target, identified in the report.

*Reference: Appendix 16.0, Arctic Geophysical 2011 Victoria Creek Report, pg 6-12*

Test area # 2 is downstream of the conflux of a left and right tributary to an upper Victoria Creek channel. It is within claims P50100 and P26108. At claim P26106 the clay layer extends ~10 (33') below surface and is ~16m (52') thick. The clay layer is void of any gold. Below this clay layer we encountered gravel cobbles with gold traces.

The main excavation was dug down to a glacial clay/silt layer ~ 10m (35') below the original top vegetative ground level. There was some flour gold at the top of the clay, but required a slow feed rate through the wash plant to separate it from the clay. This slow feed rate made the entire operation uneconomical to operate based on quantities of gold recovered.

We drilled through the clay layer and determined that it is 16m (53') thick. We drilled a grid pattern of 30 auger drill holes in the bottom of the excavation. The excavation is ~ 40 x 80m (~10m spacing between holes) and determined that the clay layer depth is consistent and at the bottom of the clay layer we encounter gravel with cobbles. No gravel or stones were encountered within this clay layer. The gravel encountered beneath the clay contains traces of flour gold. We hired a third party drill rig to confirm the results from our own drilling rig. Both drill rigs came back with the same results. Ironically, both rigs were only able to penetrate through the clay and didn't have the pull-down weight to penetrate deeper than 0.5m (2') into the gravel below, due to encountering boulders right below the clay.

So, before we can dig deeper in this area we need to confirm the thickness of the gravel layer(s) encountered and to quantify the volume of gold that may be contained within the gravel.

### 2016 TESTING PLAN IN AREA # 2

We have purchased a variety of auger sizes 4"- 10" that will give us more drilling options. Our plan for this location is to re-enter the existing drill holes and ream the clay layer with 8" drill

bit and 6" auger flights. We have purchased new carbide drill bit designed for rock drilling. We will re-enter the reamed holes with a smaller auger to penetrate the gravel.

An alternative option that we have been exploring with a 3<sup>rd</sup> party drilling company is to drill core hole(s). A company has mobilizing to Mt. Nansen for some hard rock mining exploration in 2016 season and will have time to drill some holes for us, if needed.



We are trying to locate “indicator” gravel seams that have economic gold quantities. We were able to locate some “pockets” of these gravels at Victoria Creek. See the photo below.

We will make as many attempts as possible with the available drilling tools to penetrate down to bedrock. We want to confirm the overall depth of bedrock to be ~38 m(125 ft) from surface.



## **AREA # 3 TARGET EVALUATION**

### **PREVIOUS TESTING IN AREA # 3**

Target Area # 3 is located at claim # P509577. A geophysical profile of the claim was conducted in 2014. Auger sample drilling was performed down to 6m (20') in 2014. Some encouraging results were encountered so a third party drill rig was contracted to obtain independent information. The contract drill rig was only able to drill one hole before encountering mechanical problems. His results were good, but one hole is not a representative sample quantity.

*Reference: Appendix 17.0, Excerpts from Arctic Geophysical 2014 Report, 2 pages*

### **2016 TESTING PLAN for AREA # 3**

Ironically, the bedrock layer on this lower claim is closer to the surface than claims that are further upstream. The bedrock maps of this area indicate a corner of the Whitehorse Suite entering this area, dominated by the Mount Nansen bedrock.

We want to drill this area down to bedrock to confirm our geophysical report and confirm any viable quantities of gold. We intend on drill sampling in a three row grid pattern. All sample locations will be GPS surveyed and staked. The initial drill holes will be selectively chosen based on accessibility. Subsequent drill holes will establish any trends from the initial holes that yielded the best results. The overall evaluation of this area should be evaluated with results from up to 30 drill holes and 20 test pits. For 2016 we will perform an initial 6 drill locations and two test pits based on the most probable location of the ancient Tertiary channel theorized from the geophysical report by Arctic Geophysical. We will continue with drilling as many holes as possible until the financing for the testing program is finished.

## PROPOSAL SUMMARY

We are at a “crossroad” decision with any further activity at Victoria Creek. The upper layers of gravel (0-10m) that we bulk tested contained traces of gold, but were not economical to process. Here is the dismal truth. In the past 4 years we bulk tested the best shallow gravel areas with a gold payback of only \$1.43/m<sup>3</sup>!

We hired a professional miner with 25 years successful mining experience from the Dawson District to be onsite for a month to evaluate our bulk sampling work and adjust our wash plant for maximum recovery. We travelled on six different occasions to Dawson and spent a full day at seven separate operating mines observing and discussing how they succeed in maximum recovery. I travelled to Kluane and Atlin BC to observe mining operations there, as well. I’ve had over a dozen successful miners travel to Victoria Creek from Yukon, Alaska, BC (Likely and Prince George) and Alberta, to evaluate our mining operation. They concluded we were doing everything right and our recovery was excellent...just that the ground is not productive in the shallow areas that we tested. We also met with other successful miners in the Mount Nansen area had many discussions, and strategies about Victoria Creeks poor production results.

So...in 2016 we want to test the deep placer layers, right above bedrock. We hope to gain enough data to evaluate if there are any economical quantities of gold at the bedrock level. We anticipate some positive results.

## GLOSSARY

**Alluvial** Transported and deposited by flowing water. Related to sediment deposits that were originally produced by flowing water.

**Assay** A laboratory test for mineral content

**Bank yard** The volume of material, pay dirt, equivalent to one cubic yard in situ (in place) that in its original undisturbed place in the ground. This volume does not include a swell factor or reduction in volume because of screening.

**Bedrock** Solid rock underlying placer gravels. In many cases the bedrock surface is weathered or decomposed and can be ripped or dozed

**Bench** A placer deposit in an ancient stream channel at an elevation above the present stream channel.

**Black sand** A magnetic black iron oxide, an important iron ore, is found with gold

**Breccia** A rock composed of angular fragments cemented together. Regions between the fragments are often hollow and contain tiny crystals.

**Claim** A piece of land in a gold productive area. Legally staked out and recorded the title with the gold commissioner of that area.

**Classification** Basically is screening. In placer mining terminology classification commonly refers to mechanical separation of the coarse material from pay dirt according to size. Classification may be used in the mining operation before pay dirt enters the wash plant or within the wash plant itself.

**Cleanup** Collecting concentrated placer material from the wash plant recovery devices for further concentration of gold particles.

**Coarse Tailings** Pebble and larger material discharged from a wash plant or classification. System.

**Crystal** A mineral's external form determined by its unique orderly arrangement of atoms. Crystals are solids, bounded by planes, which intersect at specific angles.

**Cut/ Mine Pit** The placer mining process in which pay dirt is excavated from the surface of gold bearing gravels to bedrock and beyond. The excavation itself, from which overburden and pay dirt have been removed; is called the cut or open cut.

**Density** The mass per unit volume of a substance in grams per cubic centimetre at 20<sup>o</sup> C. Placer gold density is about 16 to 19 gm/cc compared to water, which has a density of one gm/cc. Related to specific gravity.

**Deposit** Any natural accumulation of a mineral caused by the action of wind or water.

**Development** The working of an ore deposit.

**Discharge** The rate of flow, or volume of water flowing by a point in a given period of time. Often expressed as cubic metres per second in metric, or cubic feet per second in English units. A common unit of discharge in placer mining is the Imperial Gallon per Minute (IGPM). One IGPM = 1.2 U.S. GPM. One Cubic foot per second (CFS) = 374 IGPM. 1 Cubic meter per second = 35.315 cfs = 7,812.14 l gpm 1000 l gpm = 0.128 m<sup>3</sup>/sec = 4.52 cfs.

**Diorite** Coarse-grained igneous rock of intermediate composed of approximately equal amounts of plagioclase feldspar and ferromagnesian minerals.

**Element** A substance that cannot be broken down to other substances by ordinary chemical methods.

**End moraine** A ridge of till piled up along the front edge of a glacier.

**Erosion** A natural wearing away of the earth's substance, e.g.; [rain, wind, water]

**Erratic** An ice-transported boulder that has not been derived from bedrock near its present site.

**Esker** A long, sinuous ridge of sediment deposited by glacial melt water.

**Extrusive rock** Igneous rock that has been exposed to surface.

**Extrusive** Molten rock that flowed onto the earth's surface where it cooled.

**Faceted rock** A rock fragment with one or more flat surfaces caused by erosive action.

**Fault** A fracture in the terrain along which opposing sides have moved.

**Fineness** Word used to describe the purity of gold, e.g.; [960 fine gold contains 960 parts gold and 40 parts other minerals- copper, silver, gold, etc]

**Fissure** A separation along a fracture or break in rock.

**Fluvial deposit** A sedimentary deposit left behind by a river.

**Fracture** A property of minerals used in their identification. Fracture is used to describe the surface appearance of a freshly broken mineral. Some terms used to describe a fracture are conchoidal, hackly, uneven and splintery. [Or the way a substance breaks where not controlled by cleavage]

**Fracture zone** Major line of weakness in the earth's crust that crosses the mid-oceanic ridge at approximately right angles.

**Free gold** Not combined with any other mineral, e.g.; [placer gold]

**Galena** A type of silver ore.

**Glacier** A sheet of ice formed by re-crystallized snow.

**Grizzly** An iron grating or long steel bars used to classify down material while being sluiced.

**Ground moraine** A blanket of till deposited by a glacier or released as glacier ice melted.

**Hydrothermal veins** A preexisting fracture within which minerals have been deposited and/or leached out by hydrothermal action. Minerals commonly associated with hydrothermal veins include gold, pyrite, and galena.

**Igneous rock** Rocks that were formed by solidification from a molten state.

**Lateral moraine** A low ridge-like pile of till along the side of a glacier.

**Lode** A deposit of an economically important mineral contained within solid rock.

**Malleable** Metals that can be pounded and flattened without breaking.

**Metamorphic facies** Pressure and temperature stability fields for metamorphic rocks as determined by mineral assemblages.

**Metamorphic rock** A rock changed by the heat or tremendous pressure changing the rock into a structure, e.g.; [clay to slate].

**Moraine** A body of till either being carried on a glacier or behind after a glacier has receded.

**Muck** In placer mining means the frozen overburden on top of pay gravels made of fine silt, organic matter and ice. Black muck is the term reserved for a unique kind of dark coloured muck in the Klondike.

**Ore** A natural mineral that can contain one or more precious metals, e.g.; [silver ore, gold ore, copper ore, etc]

**Ore minerals** Are minerals having commercial value.

**Outcrop** Refers to an exposed part of a mineral-bearing vein or deposit.

**Overburden** Any organic material or mineral soil lying on top of pay gravels that must be removed to create the cut.

**Pay Dirt** The gravels in an alluvial deposit which contain placer gold in economic amounts.

**Placer** A glacial, alluvial or marine deposit containing concentrations of tough and heavy minerals of all kinds.

**Placer mine** Surface mines in which valuable mineral grains are extracted from stream bar or beach deposits

**Quartz** May be the only familiar name among the most common minerals on the earth.

**Quartzite** A rock composed of sand-sized grains of quartz that have been welded together during metamorphism.

**Receding glacier** A glacier with a negative budget, which causes the glacier to grow smaller as its edges melt back.

**Recessional moraine** An end moraine built during the retreat of a glacier.

**Rhyolite** A fine-grained, igneous rock, which is largely made up of feldspar and quartz.

**Sand** Sediment composed of particles with a diameter of .062 to 2 mm.

**Sandstone** A sedimentary rock composed of tightly compacted grains of sand.

**Schist** A metamorphic rock, which can usually be split into thin flakes or slabs.

**Seam** Generally thin layer or vein containing concentrations of minerals.

**Secondary deposit** These are deposits where the minerals are found already removed from their original place of formation. That removal is usually accomplished by forces of nature, generally wind and water, and occasionally by natural chemical means.

**Sediment** Loose, solid particles that can originate by [1]-weathering and erosion of preexisting rocks; [2]-chemical precipitation from solution, usually in water; and [3]-secretion by organisms.

**Sedimentary breccia** A coarse- grained sedimentary rock composed of lithified rubble.

**Sedimentary facies** Significantly different rock types occupying laterally distinct parts of the same-layered rock unit.

**Sedimentary** A rock formed by the compacting and cementing of sediments and debris from other rocks and animals.

**Sedimentary rock** A rock formed by pressure, cementing or other means over time.

**Shaft** Holes sunk in the ground to reach bedrock.

**Shale** A type of fine, layered sedimentary rock formed from the deposition of silt, clay, and mud over time.

**Sterling** A standard alloy of silver, which is composed of 92.5 parts silver to 7.5 parts copper.

**Subduction** The sliding of the sea floor beneath a continent or island arc.

**Tailings** Generally waste rock from a mining operation.

**Talus** Rock and gravel deposited by the forces of nature at the base of a cliff or slope.

**Tarnish** The change in surface color of a mineral, usually due to exposure to air.

**Troy weight** A weighing system used for weighing precious metals.

**Truncated spur** Triangular facet where the lower end of a ridge has been eroded by glacial ice.

**Vein** A solid mass of minerals that can have significant length, width, and depth. A lode vein has length, depth, and thickness; it may also have a series of veins interconnected.

## Specific Gravity

What is specific gravity? Specific gravity is simply the weight in grams of one cubic centimeter of a metal. The Specific Gravity Test is used to determine the amount of gold (in nuggets) that contain a mixture of gold and other materials. In this example of the specific gravity test, we are using a gold nugget mixed with quartz. Simply put, the formula is  $3.1 \times$  the weight in water, minus  $1.9 \times$  the weight in air:

Dry nugget weighs 96 grams  $\times 1.9 = 182.4$  "Wet" nugget weighs 74.5 grams  $\times 3.1 = 230.95$

- "Wet" = weight in water - Put a container with enough water to cover the nugget on a scale. Tare (zero) out the scale and hang the nugget by a string in the water.

Subtract the dry weight from the wet weight

$$230.95 - 182.4 = 48.55$$

Now we divide 48.55 by 31.1 to determine how much gold is in our nugget

$$48.55 / 31.1 = 1.56 \text{ ounces of gold}$$

- $31.1 =$  This is the number of grams per ounce of gold

Original dry weight = 96 grams /  $31.1 = 3.08$  ounces.

Subtract the gold weight from the dry weight.

$$3.08 \text{ ounces} - 1.56 \text{ ounces} = 1.52 \text{ ounces.}$$

Therefore what is left is 1.52 ounces of quartz.

The specific gravity for gold is 19.3.

The specific gravity for quartz is 2.65.

The ratio between gold and quartz is 7.28 X.

Here are specific gravities and other properties of a few more metals:

| Metal     | Specific Gravity | Melting Point (°F) | Melting Point (°C) |
|-----------|------------------|--------------------|--------------------|
| Copper    | 8.96             | 1981               | 1083               |
| Gold      | 19.32            | 1945               | 1063               |
| Iron      | 7.87             | 2802               | 1539               |
| Lead      | 11.34            | 621                | 327                |
| Nickel    | 8.90             | 2651               | 1455               |
| Palladium | 12.00            | 2831               | 1555               |
| Platinum  | 21.45            | 3224               | 1773               |
| Silver    | 10.49            | 1761               | 961                |