# Indian River Gold Prospect

## Report of 2017 Exploration Work
## Conducted at
## Indian River, Guysborough County, Nova Scotia
## by
## Henry Schenkels
## with partial funding from the
## Nova Scotia Mineral Incentive Program

13th day of February 2018

Report by Henry F. Schenkels and Robert D. Stewart

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## SUMMARY

Concerns of till depth and wet areas in the region prompted the licensee (Henry Schenkels) to do some investigative exploration that would legitimize or dismiss these concerns. To accomplish this objective, two areas 500 meters apart became the focus of the 2017 exploration and were ultimately pitted and trenched using an excavator.

The western part of Exploration License 51051 was chosen to determine if soil sampling could be an effective gold searching tool in an area where the till was thought to be relatively deep. The area tested in 2017 was a westerly extension of a soil sampling grid where previous license holders had soil sampling return an elevated gold value of 0.349 g/t gold. Their geophysical Very Low Frequency (VLF) surveys showed positive and negative responses suggestive of a bedrock source.

The main initial exploration effort in 2017 on License 51051 included the collection by Henry Schenkels of 45 soil samples from the B horizon and assayed for gold at Dalhousie University's Mineral Engineering Centre (MEC). Gold values up to 0.127 mg/kg were returned with 5 samples returning gold values greater than 0.020 mg/kg. The soil samples were also tested by Henry Schenkels using the Nova Scotia Prospectors Association X-ray Fluorescence (XRF) unit located at the Nova Scotia Department of Natural Resources core library in Stellarton Nova Scotia.

One hundred meters of continuous trenching on the western-most trench was planned over a possible gold trend but this continuous trenching quickly abandoned in favour of four pits along the planned trench line due to the till being over twelve feet deep and there being severe safety concerns raised by caving trench walls. Bedrock was reached in two of the pits but it was very hard to break out material for examination. In pit #3, bedrock that appeared to be a bit raised was broken out and examined. This bedrock material contained a small quartz vein that was tightly folded. A sample of this bedrock was assayed at MEC but returned a gold value below the lab’s detection limit.

The eastern-most trench was planned in a semi-wet area where the overburden above bedrock was thought to be thin and the VLF geophysical indications by previous owners could be investigated. About one hundred twenty-five meters of trenching was planned to investigate VLF values fluctuation (+/-) and to check the VLF high's (conductor) to the south. Due to limited time/funds only the northern edge of the VLF high's (conductor) was reached. Excavation was slowed down by deeper than expected overburden, large boulders and water entering the trench. Where possible, bedrock was broken out and examined at surface. The bedrock was quartzite (greywacke) for the length of the trench but at the VLF crossover (negative to positive moving north) the rock contains abundant sulphide that is conductive and magnetic. Two bedrock samples containing sulphides were assayed for only gold and returned values below the lab’s detection limit. The trench was not entered to determine the exact dip of the bedding in bedrock but pictures taken of the bedrock exposure have led to an interpretation that a minor “S-shaped” fold is present which would affirm being on the southern limb of the Goldenville anticlinal structure.

## INTRODUCTION

This report is focused on reporting the work done in the first year of tenure which is mainly in western portion of Exploration Licence 51501 where, prior to 2010, very minimal exploration has been reported.

Exploration work included in this report was in part funded by the 2017 Nova Scotia Mineral Incentive Program. The work was primarily intended to increase awareness of the local mineral potential through the use of cost effective means that produced reliable results on which to build future mineral exploration programs that could accelerate the property through advanced exploration and possibly into development.

Exploration Licence 051501 (EL 51501) includes 24 claims (approximately 960 acres) that were all issued to Henry Schenkels on March 07, 2017 (Figure 1).

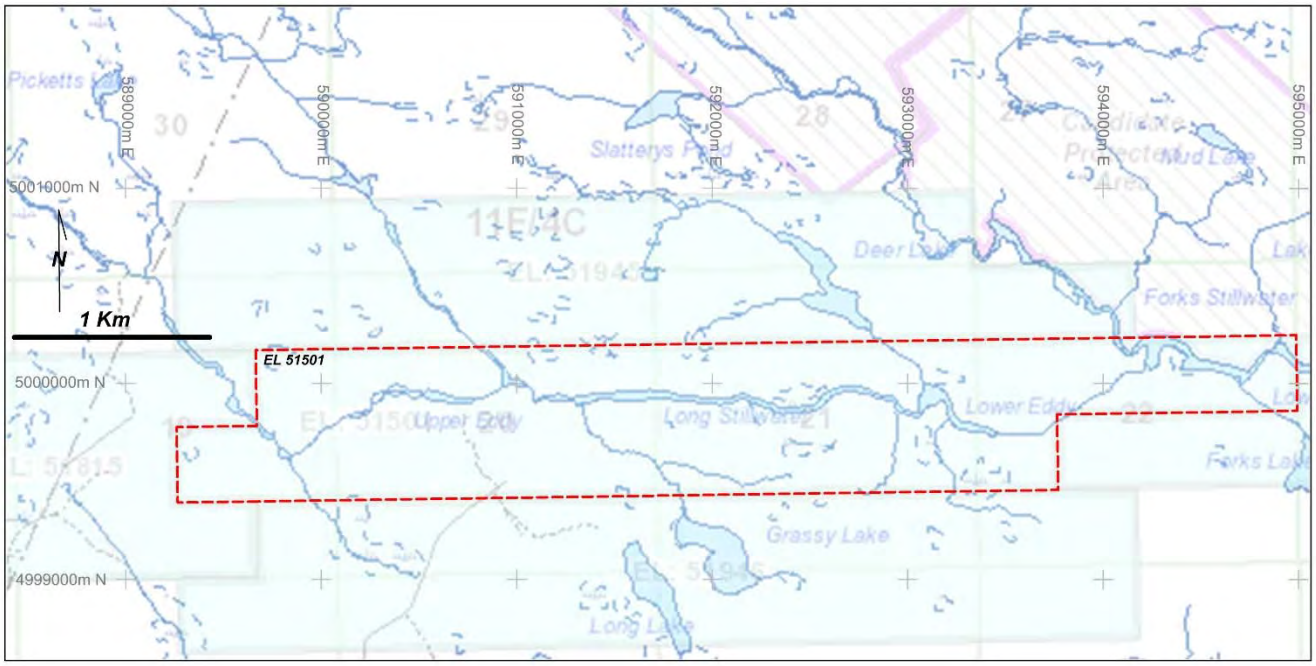


Figure 1: Location Map

The red-dashed outline of EL 51501 is overlain on a NovaROC base map for this portion of National Topographic System (NTS) map sheet 11F/4C. Note the position of the river systems that reflect east-west and northwesterly striking regional bedrock structures.

EL51501 covers a portion of the Goldenville Anticline where previous work by others discovered favourable indications of gold mineralization in a well-recognized geological setting conducive to hosting lode gold deposits (GSC 1883), (Figure 2).

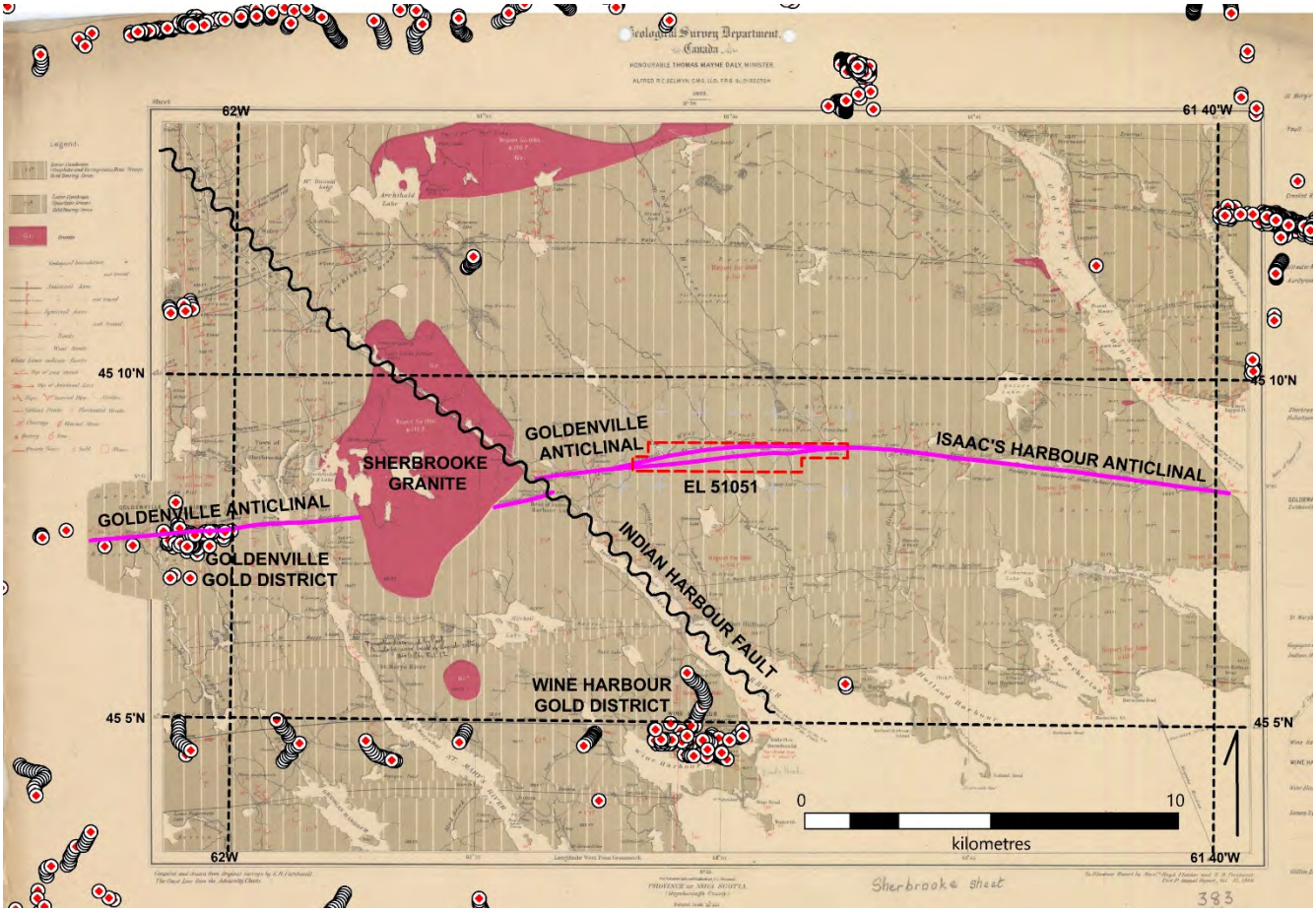


Figure 2: Historical Highlights

The red-dashed outline of Exploration Licence 51501 is positioned on the 1893 GSC geology map (Fletcher and Faribault, 1886) that shows the Goldenville Gold District 13 kilometres to the west and the Wine Harbour Gold District 8 kilometres to the south. All drill hole collar locations (white circles with red centres, O'Neill, 2016) and tracings of the Goldenville-Isaac's Harbour Anticlinal axes (pink lines) are also shown. Note that the provincial drill hole database does not include any historical drill holes for over 27 kilometres along the GSC's trace of the Goldenville-Isaac's Harbour Anticlinal axes from the Goldenville Gold District to Country Harbour. An apparent flexure where the Isaac's Harbour Anticlinal merges with the Goldenville Anticlinal is covered by EL 51501 which is particularly regionally prospective indicator for hosting structurally controlled lode gold mineralization. The Goldenville Gold District is about the same distance from the Sherbrooke Granite as EL51501, another regionally prospective indication.

## LOCATION AND ACCESS

The Indian River prospect is situated along the Goldenville anticlinal axis approximately 13 kilometres east of Nova Scotia's largest historical gold mining district at Goldenville.

Exploration License 51501 consists of twenty-four claims that covers the mapped location of the Goldenville anticline over about 5.8 kilometres (Figure 2).

To access the EL51501 claims from the town of Antigonish, follow Highway # 7 for about 56 kilometres to Stillwater then turn left onto Highway # 211 and proceed about 11.7 kilometres to a woods road on the left called the Ferrona Road. Follow the Ferrona Road for 3.5 km to the claim block.

A reference point on the Western 2017 trench line on the western portion of the claims has Universal Transverse Mercator (UTM) coordinates in the 1983 North American Datum (NAD 83) of 590300 East and 4999600 North.

The Ferrona Road is gated and requires crossing private land. If this road cannot be used to access the claims then several routes using only public roads and crown land may be used to access the claims.

This region has been relatively difficult to access for many years and it is now becoming more accessible than ever before in the current era of advanced exploration technology.

There now is a better understanding of the myriad of indicators that can be used to discover the region’s metallogenic history that formed still-hidden mineral resources. Our reviews of regional airborne radiometric and magnetic surveys (GSC, 2018a and GSC, 2018b) confirm the broad structural and geological observations made by E.R. Faribault over 130 years ago.

Systematic and integrated exploration promises to unravel the clues that will lead to a discovery.

It is extremely unusual in the world for over 23 kilometres of highly favourable geological structures directly along strike of a major gold mining district to have remained virtually untested and undrilled for the past 130 years. Such opportunities are rarely accessible for investment.

## LICENCE TABULATION

| License number | Map Sheet | Tract | Claims |
|---|---|---|---|
| EL 51501 | 11F4C | 19 | G,H,J |
| EL 51501 | 11F4C | 20 | E,F,G,H,J,K,L,M |
| EL 51501 | 11F4C | 21 | E,F,G,H,J,K,L,M |
| EL 51501 | 11F4C | 22 | E,J,K,L,M |

## PREVIOUS WORK

Between 2009 and 2011, the area covered by present day Exploration Licence 51501 was held under Exploration License 8805 by Exploration Orex then from 2012 to 2015 it was held by Bruce Mitchell under Exploration Licence 10194 (Mitchell et al 2011, 2013a, 2013b, 2014, 2017; NovaROC, 2018).

In 2010, Mercator Geological Services (Mercator) of Dartmouth, Nova Scotia and D.R. Duncan and Associates of Windsor, Nova Scotia identified an area, now covered by Exploration Licence 51501, as an exploration target in a regional compilation for Orex. Field exploration work for Orex located a small quartz vein that returned assays of 10.9ppm and 12.7 ppm Au on the north limb of the anticline. An angular quartz vein at least 4 meters thick was found but later recognized as a boulder by trenching in 2013. Soil sampling found elevated gold and arsenic values occurred in an elevated gold-only population to the west and a gold +/- arsenic population in the east. Orex did not renew their exploration licence in late 2011 (Mitchell, 2014).

In 2012 and 2013, Bruce Mitchell did follow up work over the area that included a VLF survey, soil sampling, rock sampling, stream sediment sampling, till sampling, gold grain counts and trenching that confirmed the 4 metre quartz vein was a boulder/displaced bedrock. Recent observations in 2017 suggest its displacement from its bedrock origin may be minimal.

Highlights of these 2009 to 2013 exploration programs are summarized below in Figure 3.

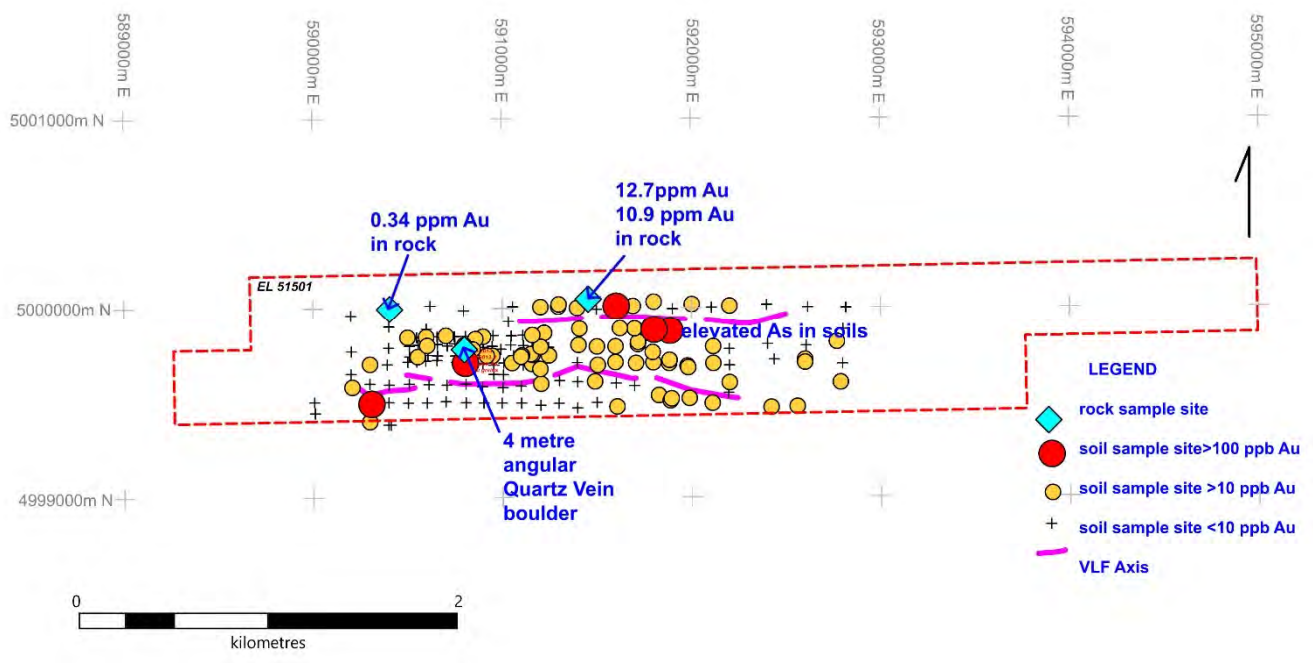


Figure 3: Previous Work Highlights

## GEOLOGICAL SETTING

Lode gold deposits in Nova Scotia are commonly associated with quartz veins in anticlinal fold axes in Meguma Terrane slates, quartzites and greywacke. Spatially associated minerals may include pyrite, galena and arsenopyrite which can provide a possible indication of gold being nearby when observed directly or indirectly using geophysical and geochemical surveys.

License 51501 is 13 kilometres east along the Goldenville Anticlinal axis from the former Goldenville Gold District (Figure 2). Equidistant between the Goldenville Gold District and Licence 51501 is the Sherbrooke Granite intrusion.

The northwesterly striking Indian Harbour Fault first mapped by E.R. Faribault has sinistral horizontal offsets of the stratigraphy and Sherbrooke Granite on the order of 700 to 1200 metres. Linear topographic depressions help trace the Indian Harbour Fault for tens of kilometres. Similar northwesterly-trending linear topographic depressions occur on License 51501.

## 2017 EXPLORATION PROGRAM

In the spring of 2017 a few access routes were evaluated and permission was obtained from Joe Furlong to use the Ferrona Road as an access route to the mineral claims located on Crown Land.

Just after spring thaw, forty-five soil samples were collected at Indian River along three grid lines, each three hundred fifty meters in length. The lines were fifty meters apart and sampling stations were located about twenty-five meters apart (Figure 4). Some sampling locations were moved by several meters from their planned location due to wet/peat ground where the sampling was difficult.

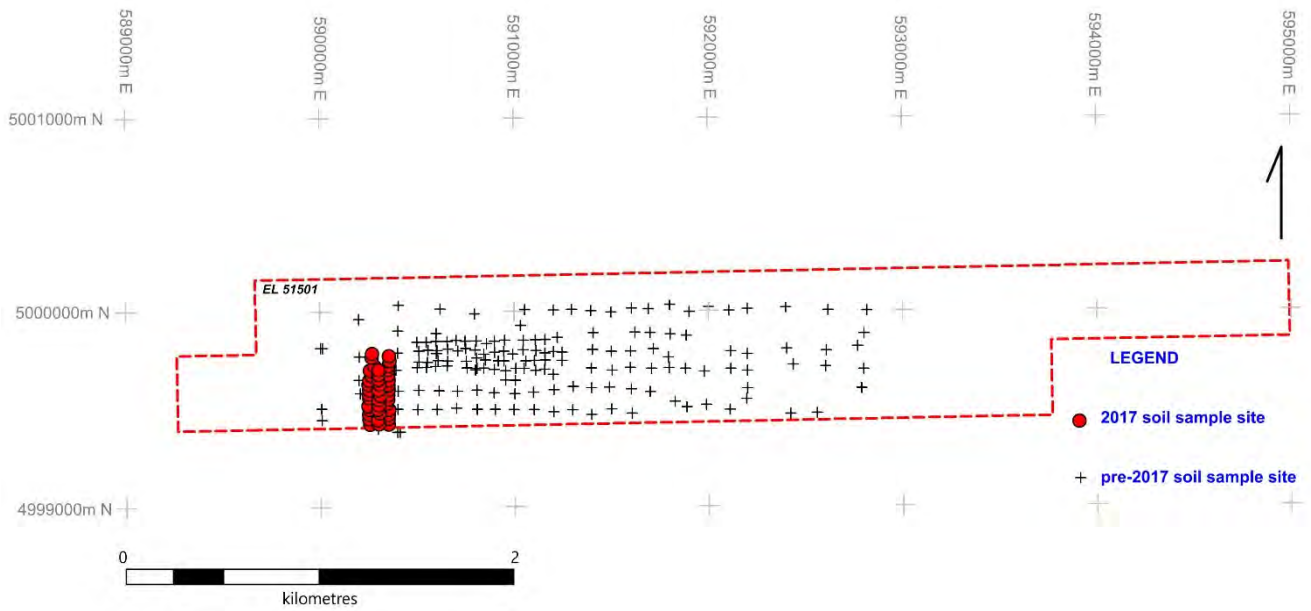

Figure 4: 2017 and Prior Soil Sample Site Locations

Soil sampling locations were controlled using a Garmin GPS 72 and recorded along with sample number, soil texture, soil colour and depth of soil horizons. Soil samples were taken from the B1 zone (top of the B zone) and placed in plastic freezer bags with the sample identification written on the bags and on homemade plastic tags placed in with the sample. Some of the soil samples were very wet so all the samples were partially dried near a wood stove for a few weeks.

A Nova Scotia Mineral Incentive Program (NSMIP) grant was applied for and received to cover the cost associated with assaying the samples. Forty-five samples were delivered to Dalhousie University's Mineral Engineering Centre (MEC) for gold assaying using fire assay. Afterwards the dried pulps (-80 mesh) were picked up from MEC and also tested for multiple elements by Henry Schenkels using an XRF located at the NSDNR core library in Stellarton NS. All geochemical results are provided in Appendix A. All soil sample site descriptions are included in Appendix B.

On receipt of the gold assay results from MEC they were plotted and a possible gold trend was identified (too few samples to confirm) which corresponded with historical VLF responses (Figure 5)

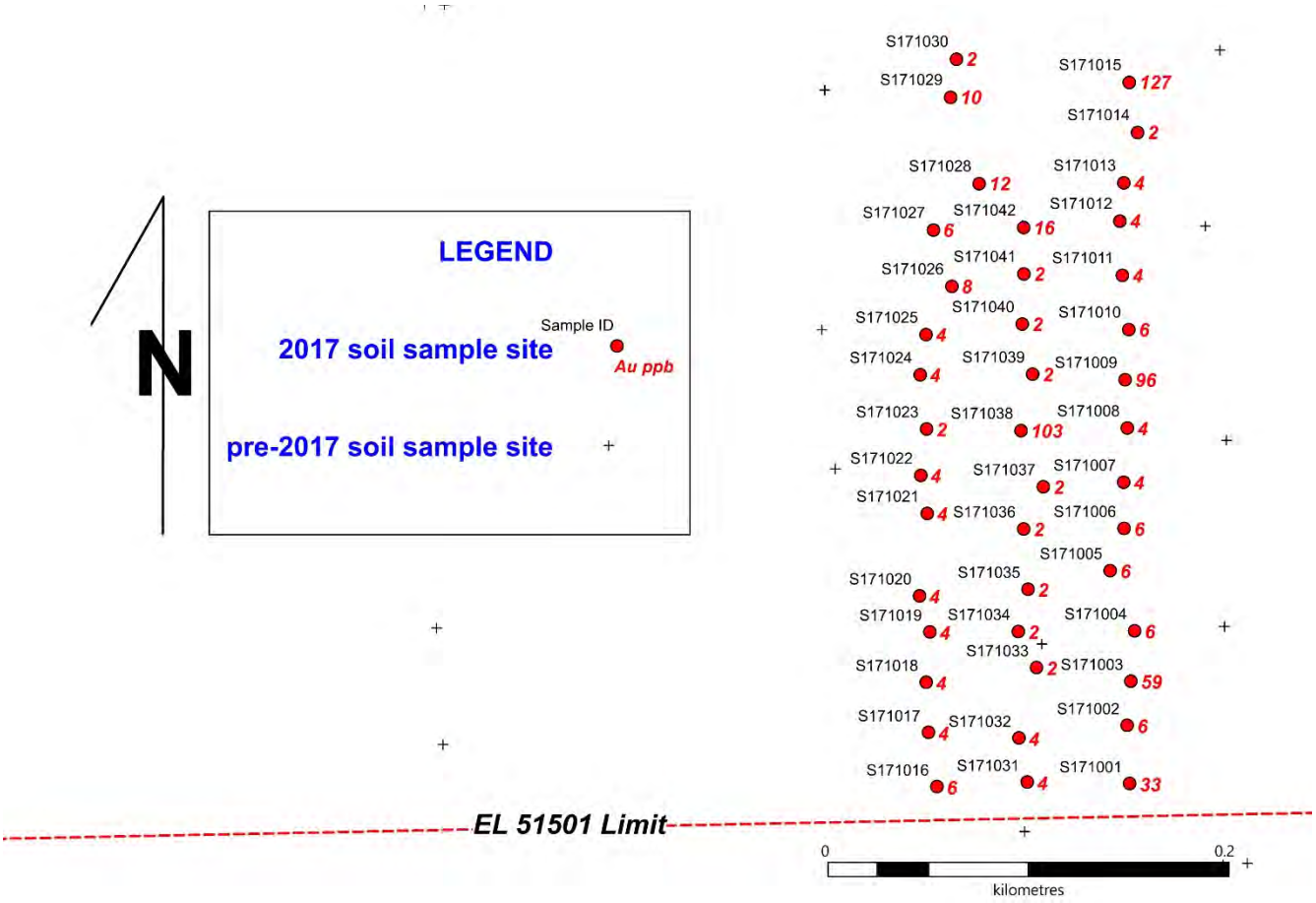


Figure 5: 2017 Posted Soil Sample ID's and Gold Results (Au ppb)

Based on this information a diamond drill hole was planned but then abandoned in favour of trenching due to the lack of funding.

In late summer 2017 two trench lines and access routes were brushed out in preparation for trenching. In the fall of 2017 a large excavator (Hitachi Zaxis 200 LC) owned by George F. MacDonald and Son's and operated by Melvin MacDonald was hired to do the trenching. Excavation locations are shown in Figure 6.

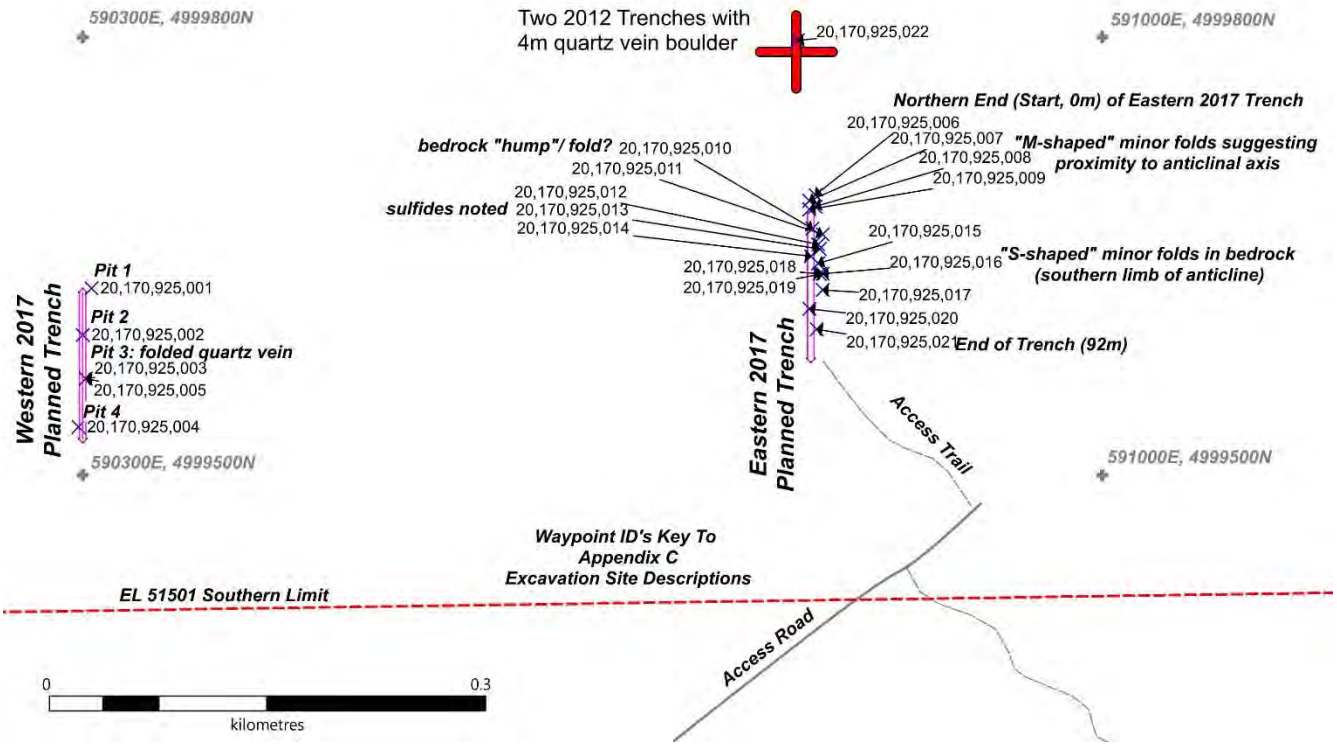


Figure 6: Excavation Locations. Blue x's mark waypoint locations along the edge of the excavations. The 11-digit number shown for each waypoint is keyed to more detailed descriptions about the excavation in Appendix C.

The western 2017-planned trench (planned length 100 metres) was intended to expose bedrock under the "possible gold trend" implied by the soil sampling program but deep till and caving trench walls were encountered as soon as trenching began. The continuous trenching concept along this planned trench line was abandoned in favour of sinking four pits to test the till depth to bedrock.

In two of the pits, bedrock was positively reached. From Pit #3 an excavated bedrock sample containing a small tightly folded quartz vein was taken for assay at MEC in Halifax.

Figure 7: Folded Quartz Vein:
Bedrock sample from western 2017-planned trench Pit #3 with a folded quartz vein. The apparent “S-shape” to the fold shown in this image is not definitive because the sample could not be oriented with certainty to its original position. It is however a good example of the complex quartz vein structures present in the area.

The pits along the 2017-planned western trench line were dug, filled in and reclaimed within the same day.

The eastern 2017-planned trench (planned length 125 metres) was designed to test bedrock in an area where overburden was expected to be shallow and where untested VLF responses had been reported. Due to time constraints, only a 92m portion of the planned 125 metres trench was excavated.

Bedrock was encountered along the length of the trench (92 meters) at various depths which are reported in Appendix C of this report. The excavator operator was asked to break off pieces of bedrock where he could and set the material on the west side of the trench for observation where the material was further broken and examined using a hand lens. In places the bedrock humps at the bottom of the trench looked to be minor folds in the bedrock. Bedrock humps in the northern end of the trench had an equidimensional cross-section that would be consistent to “M-shaped” minor folds near fold axes. Possible asymmetric “S-shaped” folds / bedrock

humps expected to be seen on the southern limb of an anticlinal structure occur further south in the trench from these “M-shaped” humps (see Figure 8).

Figure 8: “Bedrock Humps” in Eastern 2017 Trench

This image (DSCN 0304) was taken from atop the western wall of the Eastern 2017 Trench near waypoint 20170925016 with the fingers pointing east. The “bedrock humps” appear to have an “S-Shaped” asymmetry with the short side of the minor fold dipping north (similar to the plane made by the hand). The shape of the bedrock “humps” could also be an artifact of a straight bucket edge and its scraping action. This highlights the limitations of observations that can only be safely made from the top of a bucket-wide deep trench.

All portions of the eastern 2017-planned trench that were opened were also filled in and reclaimed before sundown of the same day.

Two bedrock samples were collected from sulfidic bedrock exposed in the eastern trench and sent for assay at MEC in Halifax. These bedrock samples did not return any gold values above the lab detection limit of 3 parts per billion (ppb). All 2017 rock sample locations assays are shown on Figure 7.

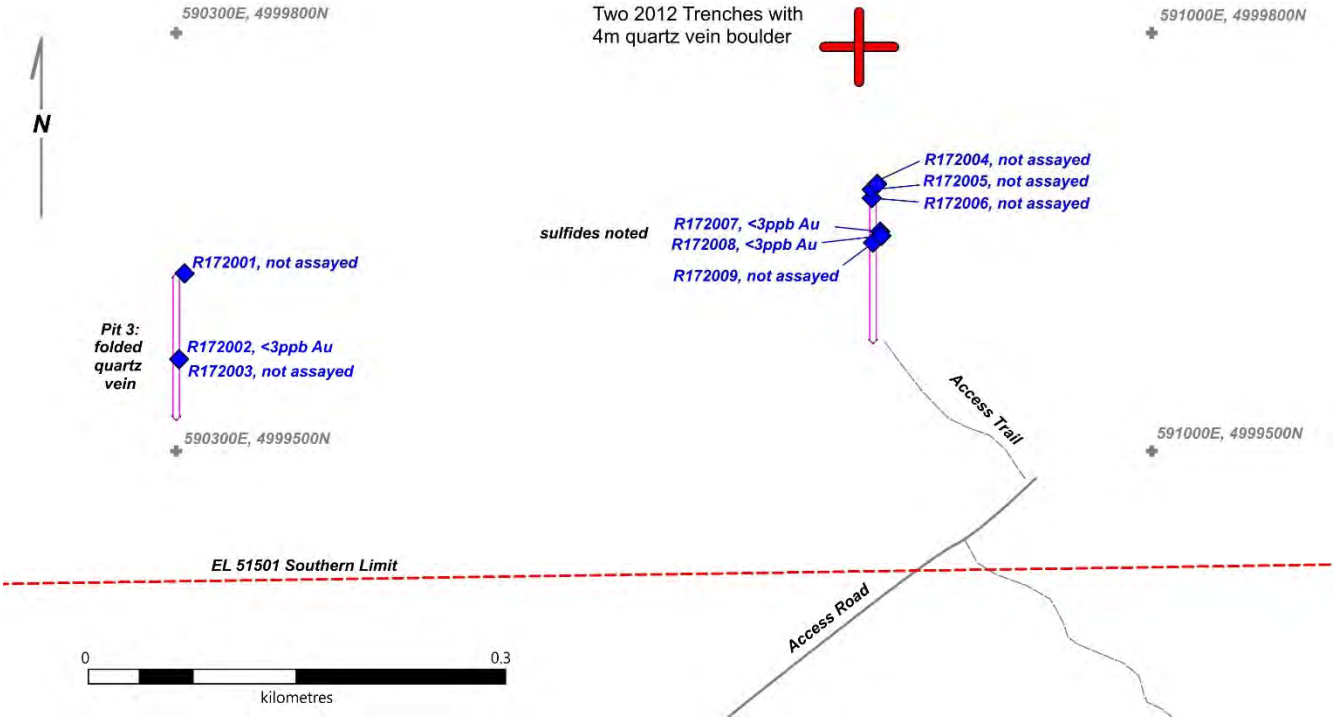


Figure 9: 2017 Rock Sample Locations

Results from historical work and current work were digitally compiled and compared using MapInfo desktop mapping software. A synopsis of these compiled highlights is provided below in Figure 10.

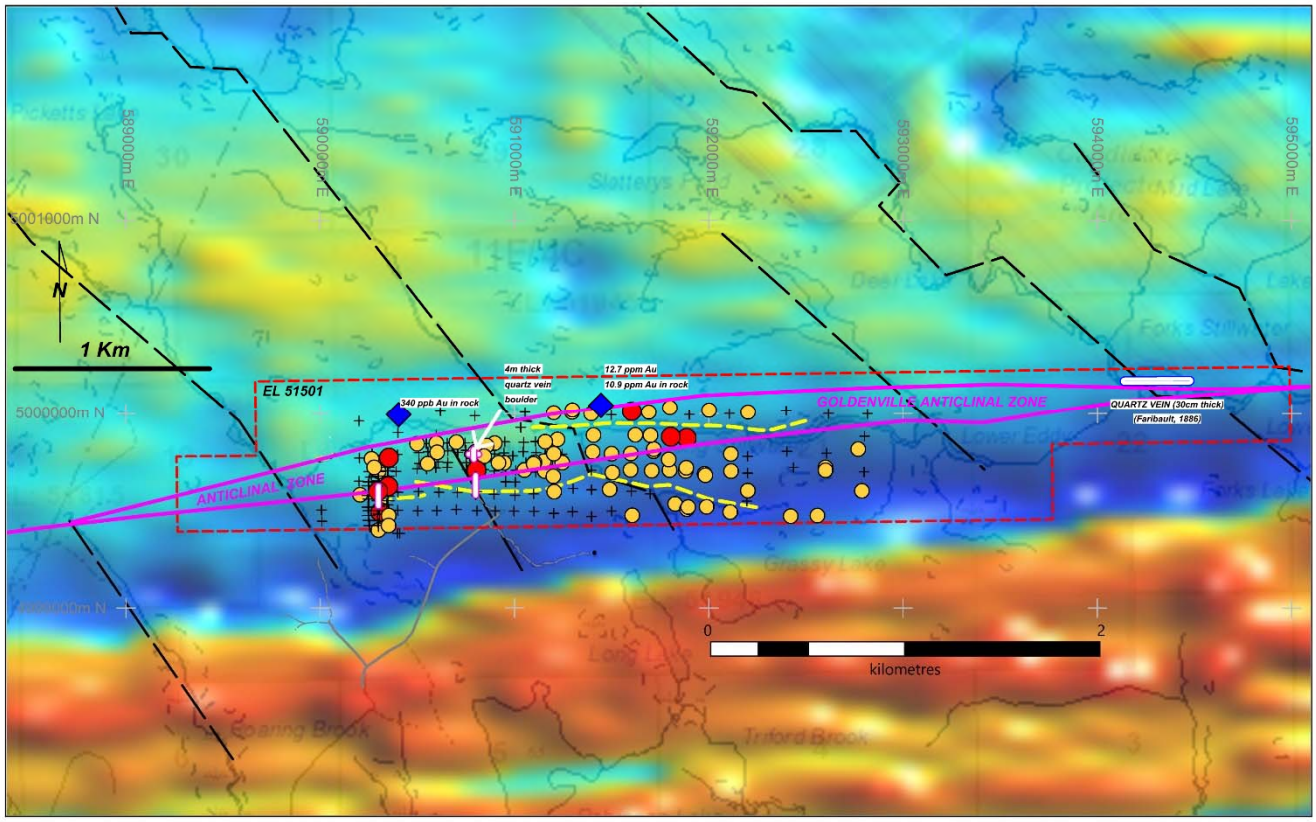


Figure 10: Compiled Highlights

The brightly coloured base layer is the first vertical derivative of the aeromagnetic total field strength (GSC, 2018a) showing magnetic variation within Meguma stratigraphy. A topographic layer is next that shows lakes, roads and drainage patterns (NovaROC, 2018). Northwesterly trending drainage patterns that roughly parallel the sinistral Indian Harbour Fault are highlighted with black dashed lines. The Goldenville Anticlinal Zone is shown arching through EL 51501 between solid pink lines. Historical and recent soil sample sites are shown as small black crosses. Soil sites with gold values from 10 to 99ppb Au are shown as small golden circles and sites with greater than 100ppb gold values are shown as larger red circles. Rock samples are difficult the best gold values in rocks to date are shown as blue diamonds. Dashed yellow lines are Fraser Filtered VLF EM conductor traces. A 30cm thick quartz vein mapped by Fairibault is shown as a white bar on the eastern part of the Licence. Four excavation trench lines are shown as red-rimmed white lines in the western part of the licence.

## CONCLUSIONS

Deep overburden, wet peat bog areas and transported till all contribute to masking the bedrock and anyone's ability to directly determine its prospectivity.

Geochemical results from the soil and till sampling surveys in the area have had some limited effectiveness in identifying mineralized bedrock sources using gold and arsenic values.

Previous worker's VLF geophysical surveys reveal areas of interest that require follow-up exploration work and may be useful for remotely mapping marker horizons within the bedrock.

The Goldenville Anticlinal Zone (Figure 10) is up to 400m wide within EL 51501 and is characterized by quartz veining, elevated gold plus/minus arsenic in soil, till and rocks and VLF responses.

Getting useful continuous bedrock exposures using an excavator for reliable resource estimations is now considered to not be generally feasible in this area due to overburden thickness being deeper than an excavator can expose bedrock for safe and thorough investigations and sampling.

Diamond drill coring would be the best method to provide the first definitive assessment of the bedrock potential for hosting gold mineralization in this regionally prospective setting within the Goldenville Anticlinal Zone.

## RECOMMENDATIONS

Further geochemical and geophysical surveys may further refine the geological model however there are enough indications at present to start the planning and preparation for drilling a 500 metre north-south fence of inclined drill holes that would systematically test across the anticlinal zone starting from the north side of the West Branch of Indian River.

## REFERENCES CITED


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## AUTHORS' QUALIFICATIONS

Henry Schenkels:

I registered as a prospector in Nova Scotia on April 12,1994 and hold Prospector's Identification No. 323.

I participated in a basic prospecting course recognized by Nova Scotia Department of Natural Resources, in the fall of 1997.

My experience is self motivated involvement in the industry as a recreational prospector.

I personally carried out the field work described in this report including permitting and consultation with relevant parties, prospecting, program design and preparation, soil sampling, excavation planning and supervision, rock sampling and report writing.

Robert Stewart:

I registered as a prospector in Nova Scotia on August 13, 1991 and hold Prospector's Identification No.52.

I have worked in the field of geoscience since 1973, graduated from Mount Allison University with a BSc Honours – Geology degree in 1975, graduated from Carleton University with an MSc Geology degree in 1979, worked/consulted on mineral exploration projects over 40 years and currently maintain Professional Geoscientist accreditations in Nova Scotia and Ontario.

I assisted Henry Schenkels in some of the program planning, data analysis, report writing and figure preparation.

# APPENDIX A

# LAB CERTIFICATES AND XRF RESULTS

## APPENDIX A

Geochemical results and descriptions of the methodology used to determine the results are provided here in Appendix A.

Methodology used by the Dalhousie University Minerals Engineering Centre are provided in more detail in the following pages.

An overview of the other processing involved with the samples is included below.

### XRF Methodology

Soil samples were collected by Henry Schenkels on the Indian River Project from 45 sample sites.

Soil samples were air-dryed in their plastic sample bags near a wood stove over several days before shipping to the Dalhousie University Minerals Engineering Centre (DAL-MEC)in Halifax, Nova Scotia.

Soil samples (94 samples) were prepared by the DAL-MEC into a -80 mesh pulp and a +80 mesh reject. The -80 mesh samples were analysed by MEC for gold. Samples up to 2 kg were dried at 105°C for at least 12 hours. After drying, samples were screened at 80 mesh. The fine material is bagged into 4 or 7 oz "Whirlpaks" and labeled. Screens are cleaned with soft nylon brushes and jets of air between samples.

Elevated gold results were obtained from several samples.

The pulp samples were returned to Henry Schenkels and on August 10, 2017, the -80 mesh samples were analysed by Henry Schenkels at the Nova Scotia Department of Natural Resources Stellarton Core Library using a Niton XRF analyzer owned by the Nova Scotia Prospectors Association.

The Niton XL3 XRF Analyzer unit was set up to read the sample pulps in their Dal-MEC packaging in a shielded exclosure using an overall 60 second scan in "SOIL" mode. Only 3 of 4 available beam channels on the Niton are used in "SOIL" mode at 20 seconds per beam. Thirty-three elements are scanned in "SOIL" mode. The fourth beam which is used in "MINING" mode for 5 light elements (Mg, Al, P, Si, Cl), 3 transition elements (Y, Nb, Bi) and four rare earth elements (La, Ce, Pr, Nd) was not used for testing these soil samples.

Sample ID's and metadata for each sample were entered on a keyboard prior to analyzing each sample. Sample metadata and XRF results were stored digitally and downloaded for further processing. These results are provided in spreadsheet format here in Appendix A.

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Tel: 902.494.3955
Fax: 902.494.3506
Email: mec@dal.ca

# Standard Sample Preparation of Soil and Humus

Samples up to 2 kg are dried at 105°C for at least 12 hours. After drying, samples are screened at 80 mesh. Clay samples may need to be broken up before screening in order to liberate <80 mesh material. The fine material is bagged into 4 or 7 oz "Whirlpaks" and labeled. The coarse reject may be saved upon client request.

Screens are cleaned with soft nylon brushes and jets of air between samples.

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# Fire Assay Procedure – Gold

Sample Decomposition: Fire Assay Fusion
Analytical Method: Atomic Absorption Spectroscopy (AAS), Inductively Coupled Plasma Optical Emission Spectroscopy (ICPOES)

A prepared sample is fused with a neutral lead oxide flux inquartered with 4 mg of gold-free silver and then fused at 1950°F for one hour. The fusion is poured into a mold, and allowed to cool to room temperature. The lead button containing gold and the previously added silver is cupelled to yield a precious metal bead. The bead is digested for one hour in 1.0ml of dilute nitric acid. Hydrochloric acid (1.0ml) is added and the solution is digested for an additional hour. The digested solution is cooled, diluted to 4.0 ml with de-ionized water, mixed and analyzed by AAS or ICPOES.

Certified reference samples from CANMET, West Coast Minerals, or Rocklabs are analyzed with each batch. In addition, duplicate check analyses are also run with the samples.

Au detection limit is 0.003 ppm, or 3 ppb, on a 30g sample.

04-Jul-17

Henry Schenkels
RR#2
Goshen, NS
B0H 1M0

Re: Results of analysis on submitted soil samples. Au analysis on <80 mesh fraction using 30g FA-lead collection, AAS or ICP OES finish.

| Sample | mg/kg |
|---|---|
| | Au |
| S171001 | 0.033 |
| S171002 | 0.006 |
| S171003 | 0.059 |
| S171004 | 0.006 |
| S171005 | 0.006 |
| S171006 | 0.006 |
| S171007 | 0.004 |
| S171008 | 0.004 |
| S171009 | 0.096 |
| S171010 | 0.006 |
| S171011 | 0.004 |
| S171012 | 0.004 |
| S171013 | 0.004 |
| S171014 | <0.003 |
| S171015 | 0.127 |
| S171016 | 0.006 |
| S171017 | 0.004 |
| S171018 | 0.004 |
| S171019 | 0.004 |
| S171020 | 0.004 |
| S171021 | 0.004 |
| S171022 | 0.004 |
| S171023 | <0.003 |
| S171024 | 0.004 |
| S171025 | 0.004 |
| S171026 | 0.008 |
| S171026 Dup. | 0.014 |
| S171027 | 0.006 |
| S171028 | 0.012 |
| S171029 | 0.010 |
| S171030 | <0.003 |
| S171031 | 0.004 |

| Sample | mg/kg Au |
|---|---|
| S171032 | 0.004 |
| S171033 | <0.003 |
| S171034 | <0.003 |
| S171035 | <0.003 |
| S171036 | <0.003 |
| S171037 | <0.003 |
| S171038 | 0.103 |
| S171039 | <0.003 |
| S171040 | <0.003 |
| S171041 | <0.003 |
| S171042 | 0.016 |
| S171043 | <0.003 |
| S171044 | <0.003 |
| S171045 | 0.004 |

| Certified Reference Samples: | mg/kg Au Measured |
|---|---|
| OXP116 (14.92±0.11) | 14.82 |
| OxK119 (3.604±0.029 | 3.609 |
| OXP116 (14.92±0.11) | 15.02 |
| Blank-1 | <0.003 |

Daniel Chevalier, MASc
Manager, Minerals Engineering Centre

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**Minerals Engineering Centre**

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25-Oct-17

Henry Schenkels
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Goshen, NS
B0H 1M0

Re: Results of analysis on submitted samples. Au on soil analysis on <80 mesh fraction using 30g FA-lead collection, AAS or ICP OES finish. PGE analysis using 30g fire assay, lead collection, ICP OES finish.

| Sample | mg/kg Au |
|---|---|
| R172002 | <0.003 |
| R172007 | <0.003 |
| R172008 | <0.003 |
| R172008 Dup. | <0.003 |

| Certified Reference Samples: | mg/kg Au |
|---|---|
| OxJ120 (2.365±0.017) | 2.352 |
| OxD107 (0.452±0.004) | 0.455 |
| OxD107 (0.452±0.004) | 0.449 |
| OxJ120 (2.365±0.017) | 2.351 |
| PTM-1 | 1.69 |
| Blank | <0.003 |

Digitally signed by Daniel Chevalier
Date: 2017.10.27 11:16:01 -03'00'

Daniel Chevalier, MASc
Manager, Minerals Engineering Centre

20170810 XRF

| Reading No | Time | Type | Duration | Units | Sequence | Res | EScale | Shape Time | SAMPLE | LOCATION |
|---|---|---|---|---|---|---|---|---|---|---|
| 178 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171001 | EL 51501 |
| 179 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171002 | EL 51501 |
| 180 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171003 | EL 51501 |
| 181 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171004 | EL 51501 |
| 182 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171005 | EL 51501 |
| 183 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171006 | EL 51501 |
| 184 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171007 | EL 51501 |
| 185 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171008 | EL 51501 |
| 186 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171009 | EL 51501 |
| 187 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171010 | EL 51501 |
| 188 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171011 | EL 51501 |
| 189 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171012 | EL 51501 |
| 190 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171013 | EL 51501 |
| 191 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171014 | EL 51501 |
| 192 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171015 | EL 51501 |
| 193 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171016 | EL 51501 |
| 194 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171017 | EL 51501 |
| 195 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171018 | EL 51501 |
| 196 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171019 | EL 51501 |
| 197 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171020 | EL 51501 |
| 198 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171021 | EL 51501 |
| 199 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171022 | EL 51501 |
| 200 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171023 | EL 51501 |
| 201 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171024 | EL 51501 |
| 202 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171025 | EL 51501 |
| 203 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171026 | EL 51501 |
| 204 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171027 | EL 51501 |
| 205 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171028 | EL 51501 |
| 206 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171029 | EL 51501 |
| 207 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171030 | EL 51501 |

20170810 XRF

| Reading No | Time | Type | Duration | Units | Sequence | Res | EScale | Shape Time | SAMPLE | LOCATION |
|---|---|---|---|---|---|---|---|---|---|---|
| 208 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171031 | EL 51501 |
| 209 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171032 | EL 51501 |
| 210 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171033 | EL 51501 |
| 211 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171034 | EL 51501 |
| 212 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171035 | EL 51501 |
| 213 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171036 | EL 51501 |
| 214 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171037 | EL 51501 |
| 215 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171038 | EL 51501 |
| 216 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171039 | EL 51501 |
| 217 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171040 | EL 51501 |
| 218 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171041 | EL 51501 |
| 219 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171042 | EL 51501 |
| 220 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171043 | EL 51501 |
| 221 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171044 | EL 51501 |
| 222 | August 10, 2017 | Soil | 60 | ppm | Final | | | | S171045 | EL 51501 |

| SAMPLE | INSPECTOR | MISC | NOTE | User Login | Flags | COR 1 | COR 2 | Mo | Zr | Sr | U | Rb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S171001 | Henry Schenkels | | | User | | | | <LOD | 313 | 85 | <LOD | 31 |
| S171002 | Henry Schenkels | | | User | | | | <LOD | 319 | 81 | <LOD | 32 |
| S171003 | Henry Schenkels | | | User | | | | <LOD | 383 | 91 | <LOD | 32 |
| S171004 | Henry Schenkels | | | User | | | | <LOD | 378 | 167 | <LOD | 21 |
| S171005 | Henry Schenkels | | | User | | | | <LOD | 327 | 84 | <LOD | 18 |
| S171006 | Henry Schenkels | | | User | | | | <LOD | 300 | 76 | <LOD | 30 |
| S171007 | Henry Schenkels | | | User | | | | <LOD | 231 | 68 | <LOD | 26 |
| S171008 | Henry Schenkels | | | User | | | | <LOD | 235 | 79 | <LOD | 35 |
| S171009 | Henry Schenkels | | | User | | | | <LOD | 197 | 69 | <LOD | 39 |
| S171010 | Henry Schenkels | | | User | | | | <LOD | 189 | 62 | <LOD | 46 |
| S171011 | Henry Schenkels | | | User | | | | <LOD | 278 | 74 | <LOD | 37 |
| S171012 | Henry Schenkels | | | User | | | | <LOD | 309 | 76 | <LOD | 27 |
| S171013 | Henry Schenkels | | | User | | | | <LOD | 267 | 73 | <LOD | 37 |
| S171014 | Henry Schenkels | | | User | | | | <LOD | 274 | 79 | <LOD | 40 |
| S171015 | Henry Schenkels | | | User | | | | <LOD | 302 | 89 | <LOD | 45 |
| S171016 | Henry Schenkels | | | User | | | | <LOD | 369 | 117 | <LOD | 33 |
| S171017 | Henry Schenkels | | | User | | | | <LOD | 378 | 80 | 8 | 30 |
| S171018 | Henry Schenkels | | | User | | | | <LOD | 305 | 125 | <LOD | 19 |
| S171019 | Henry Schenkels | | | User | | | | <LOD | 333 | 82 | <LOD | 29 |
| S171020 | Henry Schenkels | | | User | | | | <LOD | 423 | 111 | 7 | 33 |
| S171021 | Henry Schenkels | | | User | | | | <LOD | 321 | 121 | <LOD | 36 |
| S171022 | Henry Schenkels | | | User | | | | <LOD | 318 | 76 | <LOD | 31 |
| S171023 | Henry Schenkels | | | User | | | | <LOD | 214 | 56 | <LOD | 35 |
| S171024 | Henry Schenkels | | | User | | | | <LOD | 277 | 72 | <LOD | 47 |
| S171025 | Henry Schenkels | | | User | | | | <LOD | 291 | 86 | <LOD | 41 |
| S171026 | Henry Schenkels | | | User | | | | <LOD | 435 | 84 | <LOD | 39 |
| S171027 | Henry Schenkels | | | User | | | | <LOD | 372 | 91 | 7 | 34 |
| S171028 | Henry Schenkels | | | User | | | | <LOD | 325 | 91 | <LOD | 40 |
| S171029 | Henry Schenkels | | | User | | | | <LOD | 280 | 80 | <LOD | 30 |
| S171030 | Henry Schenkels | | | User | | | | <LOD | 269 | 72 | <LOD | 32 |

20170810 XRF

| SAMPLE | INSPECTOR | MISC | NOTE | User Login | Flags | COR 1 | COR 2 | Mo | Zr | Sr | U | Rb |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S171031 | Henry Schenkels | | | User | | | | <LOD | 161 | 39 | <LOD | 45 |
| S171032 | Henry Schenkels | | | User | | | | <LOD | 299 | 81 | <LOD | 36 |
| S171033 | Henry Schenkels | | | User | | | | <LOD | 279 | 82 | <LOD | 31 |
| S171034 | Henry Schenkels | | | User | | | | <LOD | 360 | 118 | <LOD | 32 |
| S171035 | Henry Schenkels | | | User | | | | <LOD | 353 | 111 | 8 | 40 |
| S171036 | Henry Schenkels | | | User | | | | <LOD | 236 | 175 | 7 | 53 |
| S171037 | Henry Schenkels | | | User | | | | <LOD | 305 | 70 | <LOD | 22 |
| S171038 | Henry Schenkels | | | User | | | | <LOD | 203 | 53 | <LOD | 46 |
| S171039 | Henry Schenkels | | | User | | | | <LOD | 164 | 47 | <LOD | 47 |
| S171040 | Henry Schenkels | | | User | | | | <LOD | 270 | 116 | <LOD | 29 |
| S171041 | Henry Schenkels | | | User | | | | <LOD | 198 | 57 | <LOD | 40 |
| S171042 | Henry Schenkels | | | User | | | | <LOD | 272 | 73 | <LOD | 45 |
| S171043 | Henry Schenkels | | | User | | | | <LOD | 208 | 55 | <LOD | 51 |
| S171044 | Henry Schenkels | | | User | | | | <LOD | 261 | 72 | <LOD | 35 |
| S171045 | Henry Schenkels | | | User | | | | <LOD | 321 | 62 | <LOD | 30 |

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| SAMPLE | Th | Pb | Au | Se | As | Hg | Zn | W | Cu | Ni |
|---|---|---|---|---|---|---|---|---|---|---|
| S171001 | <LOD | 8 | <LOD | <LOD | <LOD | <LOD | 24 | <LOD | <LOD | 47 |
| S171002 | 7 | 14 | <LOD | <LOD | 8 | <LOD | 22 | <LOD | 27 | <LOD |
| S171003 | 6 | 22 | <LOD | <LOD | <LOD | <LOD | 28 | <LOD | <LOD | <LOD |
| S171004 | <LOD | 21 | <LOD | <LOD | <LOD | <LOD | 18 | <LOD | <LOD | 36 |
| S171005 | <LOD | 13 | <LOD | <LOD | <LOD | <LOD | 13 | <LOD | 18 | <LOD |
| S171006 | 5 | 26 | <LOD | <LOD | 6.39 | <LOD | 25 | <LOD | <LOD | <LOD |
| S171007 | 5 | 7 | <LOD | <LOD | 5.75 | <LOD | 18 | <LOD | <LOD | 28 |
| S171008 | 10 | 18 | <LOD | <LOD | <LOD | <LOD | 28 | <LOD | <LOD | <LOD |
| S171009 | 12 | 29 | <LOD | <LOD | 8.72 | <LOD | 17 | <LOD | <LOD | <LOD |
| S171010 | 8 | 41 | <LOD | 4 | 12.8 | <LOD | 17 | <LOD | 21 | <LOD |
| S171011 | 7 | 51 | <LOD | <LOD | 20.94 | <LOD | 32 | <LOD | <LOD | <LOD |
| S171012 | 7 | 17 | <LOD | <LOD | <LOD | <LOD | 18 | <LOD | 18 | <LOD |
| S171013 | <LOD | 59 | <LOD | <LOD | 13.59 | <LOD | 20 | <LOD | 21 | <LOD |
| S171014 | <LOD | 51 | <LOD | <LOD | 16.82 | <LOD | 14 | <LOD | <LOD | 39 |
| S171015 | 8 | 27 | <LOD | <LOD | 7.27 | <LOD | 22 | <LOD | <LOD | <LOD |
| S171016 | 5 | 21 | <LOD | <LOD | 7.26 | <LOD | 12 | <LOD | <LOD | 30 |
| S171017 | 7 | 22 | <LOD | <LOD | <LOD | <LOD | 14 | <LOD | <LOD | 43 |
| S171018 | 5 | 23 | <LOD | <LOD | <LOD | <LOD | 12 | <LOD | <LOD | <LOD |
| S171019 | 7 | 19 | <LOD | <LOD | <LOD | <LOD | 15 | <LOD | 19 | <LOD |
| S171020 | 6 | 20 | <LOD | <LOD | 5.73 | <LOD | 16 | <LOD | 20 | <LOD |
| S171021 | 6 | 55 | <LOD | <LOD | 14.02 | <LOD | 20 | <LOD | 23 | 37 |
| S171022 | 7 | 28 | <LOD | <LOD | 9.59 | <LOD | 21 | <LOD | <LOD | <LOD |
| S171023 | 6 | 21 | <LOD | <LOD | 14.72 | <LOD | 13 | <LOD | <LOD | <LOD |
| S171024 | 5 | 29 | <LOD | <LOD | 8.62 | <LOD | 30 | <LOD | <LOD | <LOD |
| S171025 | 7 | 24 | <LOD | <LOD | 8.17 | <LOD | 35 | <LOD | <LOD | 37 |
| S171026 | 5 | 18 | <LOD | <LOD | <LOD | <LOD | 19 | <LOD | <LOD | <LOD |
| S171027 | <LOD | 39 | <LOD | <LOD | 7.73 | <LOD | <LOD | <LOD | 21 | 35 |
| S171028 | <LOD | 35 | <LOD | <LOD | 10.14 | <LOD | 31 | <LOD | <LOD | 67 |
| S171029 | 5 | 20 | <LOD | <LOD | 6.01 | <LOD | 25 | <LOD | <LOD | 38 |
| S171030 | <LOD | 17 | <LOD | <LOD | 10.61 | <LOD | 35 | <LOD | <LOD | 45 |

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| SAMPLE | Th | Pb | Au | Se | As | Hg | Zn | W | Cu | Ni |
|---|---|---|---|---|---|---|---|---|---|---|
| S171031 | 7 | 24 | <LOD | 5 | 15 | <LOD | 22 | <LOD | <LOD | <LOD |
| S171032 | 5 | 16 | <LOD | <LOD | <LOD | <LOD | 19 | <LOD | <LOD | 34 |
| S171033 | 10 | 15 | <LOD | <LOD | 11 | <LOD | 17 | <LOD | <LOD | <LOD |
| S171034 | 7 | 27 | <LOD | <LOD | <LOD | <LOD | 16 | <LOD | 22 | 37 |
| S171035 | 7 | 35 | <LOD | <LOD | <LOD | <LOD | 23 | 43 | <LOD | 30 |
| S171036 | <LOD | 13 | <LOD | <LOD | <LOD | <LOD | 20 | <LOD | 20 | 31 |
| S171037 | 6 | 31 | <LOD | <LOD | 9 | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171038 | 8 | 30 | <LOD | <LOD | 12 | <LOD | 19 | <LOD | <LOD | <LOD |
| S171039 | 9 | 36 | <LOD | 7 | 12 | <LOD | 26 | <LOD | <LOD | <LOD |
| S171040 | 6 | 12 | <LOD | <LOD | <LOD | <LOD | 20 | <LOD | <LOD | <LOD |
| S171041 | <LOD | 34 | <LOD | <LOD | 17 | <LOD | 21 | <LOD | <LOD | <LOD |
| S171042 | 8 | 37 | <LOD | <LOD | 11 | <LOD | 24 | <LOD | <LOD | 32 |
| S171043 | 9 | 19 | <LOD | 4 | 14 | <LOD | 22 | <LOD | <LOD | <LOD |
| S171044 | <LOD | 20 | <LOD | <LOD | 11 | <LOD | 22 | <LOD | <LOD | <LOD |
| S171045 | 7 | 16 | <LOD | <LOD | <LOD | <LOD | 13 | 46 | <LOD | 42 |

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| SAMPLE | Co | Fe | Mn | Cr | V | Ti | Sc | Ca | K | S |
|---|---|---|---|---|---|---|---|---|---|---|
| S171001 | <LOD | 5831 | 314 | 80 | 93 | 2867 | <LOD | 1917 | 6289 | <LOD |
| S171002 | <LOD | 9897 | 350 | 83 | 82 | 2879 | <LOD | 1532 | 6578 | <LOD |
| S171003 | <LOD | 8179 | 292 | 83 | 84 | 2935 | <LOD | 2018 | 6701 | <LOD |
| S171004 | <LOD | 8905 | 269 | 80 | 108 | 4091 | <LOD | 3758 | 6571 | <LOD |
| S171005 | <LOD | 4166 | 175 | 72 | 97 | 3587 | <LOD | 2317 | 6234 | 492 |
| S171006 | <LOD | 9385 | 241 | 91 | 107 | 3115 | 29 | 1697 | 5049 | 473 |
| S171007 | <LOD | 14268 | 174 | 68 | 96 | 2823 | <LOD | 1321 | 5358 | <LOD |
| S171008 | <LOD | 26653 | 294 | 76 | 130 | 3582 | <LOD | 2108 | 5791 | <LOD |
| S171009 | <LOD | 39761 | 631 | 114 | 146 | 4546 | <LOD | 1509 | 6786 | <LOD |
| S171010 | <LOD | 60674 | 361 | 134 | 154 | 5036 | 36 | 1518 | 5942 | <LOD |
| S171011 | <LOD | 29594 | 367 | 90 | 131 | 3985 | <LOD | 1546 | 7142 | 640 |
| S171012 | <LOD | 13737 | 374 | 94 | 92 | 3255 | 26 | 1679 | 5477 | <LOD |
| S171013 | <LOD | 34494 | 232 | 83 | 125 | 4438 | <LOD | 1478 | 7172 | 695 |
| S171014 | <LOD | 29267 | 268 | 89 | 200 | 5418 | <LOD | 2181 | 9594 | 740 |
| S171015 | <LOD | 26229 | 292 | 96 | 138 | 4360 | <LOD | 2046 | 7682 | <LOD |
| S171016 | 74 | 4402 | 224 | 76 | 116 | 4109 | 29 | 3015 | 9133 | 336 |
| S171017 | <LOD | 3556 | 234 | 67 | 74 | 3129 | <LOD | 2200 | 6981 | <LOD |
| S171018 | <LOD | 5942 | 236 | 77 | 128 | 4624 | 47 | 6203 | 4848 | 353 |
| S171019 | <LOD | 3660 | 279 | 65 | 117 | 4070 | <LOD | 1924 | 7064 | <LOD |
| S171020 | <LOD | 3211 | 151 | 77 | 115 | 4690 | <LOD | 2331 | 8419 | 408 |
| S171021 | <LOD | 5961 | 214 | 86 | 111 | 3946 | 24 | 2888 | 8960 | 1017 |
| S171022 | <LOD | 11415 | 570 | 83 | 93 | 3645 | <LOD | 1874 | 5336 | 389 |
| S171023 | <LOD | 26947 | 139 | 93 | 142 | 4074 | <LOD | 1212 | 7119 | 574 |
| S171024 | <LOD | 35084 | 212 | 112 | 124 | 3904 | <LOD | 1278 | 6458 | <LOD |
| S171025 | <LOD | 16549 | 360 | 102 | 100 | 3125 | <LOD | 1679 | 6742 | <LOD |
| S171026 | <LOD | 10542 | 248 | 95 | 110 | 3942 | <LOD | 1726 | 6531 | 364 |
| S171027 | <LOD | 3676 | 217 | 91 | 121 | 4501 | <LOD | 2524 | 8341 | 517 |
| S171028 | <LOD | 29372 | 244 | 223 | 149 | 4827 | <LOD | 2172 | 7835 | 592 |
| S171029 | <LOD | 34753 | 252 | 105 | 188 | 4512 | <LOD | 2082 | 7015 | <LOD |
| S171030 | <LOD | 24744 | 319 | 86 | 92 | 3027 | 30 | 1466 | 6195 | <LOD |

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| SAMPLE | Co | Fe | Mn | Cr | V | Ti | Sc | Ca | K | S |
|---|---|---|---|---|---|---|---|---|---|---|
| S171031 | <LOD | 79868 | 110 | 90 | 234 | 5200 | <LOD | 578 | 4529 | <LOD |
| S171032 | <LOD | 5230 | 212 | 92 | 104 | 3722 | <LOD | 1890 | 8171 | <LOD |
| S171033 | <LOD | 28885 | 281 | 81 | 136 | 4168 | <LOD | 1967 | 6298 | <LOD |
| S171034 | <LOD | 4318 | 248 | 81 | 108 | 4108 | 25 | 2935 | 7989 | 468 |
| S171035 | <LOD | 12773 | 313 | 100 | 119 | 4304 | <LOD | 2515 | 11307 | 529 |
| S171036 | <LOD | 13166 | 232 | 97 | 164 | 3641 | 38 | 4163 | 16980 | <LOD |
| S171037 | <LOD | 7432 | 220 | 58 | 85 | 3733 | 21 | 1918 | 5695 | 461 |
| S171038 | <LOD | 34485 | 175 | 81 | 134 | 3468 | <LOD | 1054 | 5498 | 575 |
| S171039 | <LOD | 36982 | 197 | 124 | 101 | 2780 | 60 | 1082 | 3310 | <LOD |
| S171040 | <LOD | 33063 | 187 | 91 | 95 | 4452 | <LOD | 3919 | 5030 | <LOD |
| S171041 | <LOD | 58124 | 335 | 91 | 164 | 4292 | <LOD | 1212 | 6803 | <LOD |
| S171042 | <LOD | 43331 | 374 | 105 | 149 | 4751 | <LOD | 1520 | 6485 | 828 |
| S171043 | <LOD | 61916 | 237 | 131 | 157 | 5359 | <LOD | 1157 | 7230 | <LOD |
| S171044 | <LOD | 28248 | 315 | 85 | 107 | 4043 | <LOD | 1771 | 6693 | <LOD |
| S171045 | <LOD | 34838 | 308 | 87 | 151 | 4388 | <LOD | 1452 | 6163 | 2074 |

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| SAMPLE | Ba | Cs | Te | Sb | Sn | Cd | Ag | Pd |
|---|---|---|---|---|---|---|---|---|
| S171001 | 188 | 13 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171002 | 158 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171003 | 125 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171004 | 186 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171005 | 88 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171006 | 91 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171007 | 129 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171008 | 65 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171009 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171010 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171011 | 135 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171012 | 69 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171013 | 134 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171014 | 154 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171015 | 136 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171016 | 209 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171017 | 199 | 21 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171018 | 92 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171019 | 140 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171020 | 121 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171021 | 227 | 15 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171022 | 87 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171023 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171024 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171025 | 196 | 11 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171026 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171027 | 206 | 13 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171028 | 191 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171029 | 125 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171030 | 102 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |

20170810 XRF

| SAMPLE | Ba | Cs | Te | Sb | Sn | Cd | Ag | Pd |
|---|---|---|---|---|---|---|---|---|
| S171031 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171032 | 190 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
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| S171034 | 271 | 14 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171035 | 240 | 11 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171036 | 389 | 11 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171037 | 164 | 15 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171038 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171039 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171040 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171041 | 75 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171042 | 50 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171043 | 62 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171044 | 139 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |
| S171045 | 185 | 14 | <LOD | <LOD | <LOD | <LOD | <LOD | <LOD |

# APPENDIX B

# SOIL SAMPLE SITE DESCRIPTIONS

SOIL SITE DESCRIPTIONS

| Sample Number | Sample GPS Location | | Date | Time | Depth A-0 | Depth A-1 | Depth A- 2 | Depth B-1 | B-1 Colour | B -1 Texture | B-1 Comments | Local Area | Notes of Importance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Easting | Northing | | day light hrs | inches | inches | inches | inches | | | | | |
| S171001 | 590351 | 4999424 | 30,04,2017 | 11:08:00 | 4 | 3 | 3 | | brownish grey | sandy loam | | moss,shrubs, black spruce, tree spacing | |
| S171002 | 590350 | 4999453 | 30,04,2017 | 11:41:00 | 3 | 2 | 6 | | reddish brown | course loam | small stones; size > O < | moss;fir average height but stunted growth | one of a few locations noted some clay in A-2 zone |
| S171003 | 590352 | 4999475 | 30,04,2017 | 12:12:00 | 5 | 1 | 6 | | light brown with black spots Mg? | loam | | moss, shrubs,very stunted growth; black spruce | |
| S171004 | 590354 | 4999500 | 30,04,2017 | 12:43:00 | 5 | 3 | 1 | | greyish to light brownish | sandy loam | lots of flattish stone/rock | moss,stunted black spruce | hard to locate A-2 zone |
| S171005 | 590342 | 4999530 | 30,04,2017 | 01:19:00 | 6 | 3 | 2 | | greyish brown | sandy with stones | semi peat bog | moss,stunted black spruce | location moved out of peat bog |
| S171006 | 590349 | 4999551 | 30,04,2017 | 01:48:00 | 8 | 2 | 5 | | brownish | sandy loam | | moss,mixed stunted growth most black spruce, few hardwood | |
| S171007 | 590349 | 4999574 | 30,04,2017 | 02:09:00 | 1 | 3 | 3 | | reddish brown | sandy loam | | moss, fir thicket | |
| S171008 | 590351 | 4999601 | 30,04,2017 | 02:48:00 | 1.5 | 1.5 | 5 | | reddish(rich colour) | loam/sandy loam | dry ground | moss,mature fir dying,regrowth fir | |
| S171009 | 590350 | 4999625 | 30,04,2017 | 03:14:00 | 0.5 | 1.5 | 1.5 | | reddish(rich colour) | loam/sandy loam | good digging,dry ground | moss, dead fir and small regrowth fir | |
| S171010 | 590352 | 4999650 | 30,04,2017 | 03:44:00 | 0.5 | 2 | 5 | | reddish | loam | dry ground | moss,leaves,mixed wood of mid to old growth | |
| S171011 | 590349 | 4999677 | 30,04,2017 | 04:10:00 | 1 | 2 | 4 | 5 | reddish brown | loam | | moss,mixed wood dying,regrowth fir | |
| S171012 | 590348 | 4999704 | 30,04,2017 | 04:29:00 | 1 | 1 | 2 | | reddish brown | loam | rocky | moss,mixed wood dying,regrowth fir | |
| S171013 | 590350 | 4999723 | 30,04,2017 | 04:53:00 | 2 | 2 | 2 | | reddish brown | loam/sandy loam | | moss,mixed wood dying,regrowth fir | GPS readings jumping around |
| S171014 | 590357 | 4999748 | 30,04,2017 | 05:14:00 | 2 | 3 | 5 | | brownish | loam | | moss,mixed wood dying,regrowth fir | GPS readings jumping around |
| S171015 | 590353 | 4999773 | 30,04,2017 | 05:37:00 | 2 | 2 | 2 | | reddish/brownish | loam | large rocks, hard digging, near wet area | mixed wood at various stages | |
| S171016 | 590255 | 4999423 | 04,05,2017 | 10:55:00 | 8 | 3 | 5 | | brownish black | sandy loam | | moss,shrubs, sparse black spruce,near peat bog | location moved few meters out of wet hole to dry hole |
| S171017 | 590251 | 4999450 | 04,05,2017 | 11:25:00 | 3 | 2 | 2 | 4 | greyish brown | fine sandy texture | rocky;hard digging | moss,shrubs, sparse black spruce,near peat bog | B-2 zone light to medium greyish clay |
| S171018 | 590250 | 4999475 | 04,05,2017 | 11:50:00 | 3 | 2 | 2 | | brownish | loam | rocky | moss,shrubs, sparse black spruce (dead),regrowth spruce | |

SOIL SITE DESCRIPTIONS

| Sample Number | Sample GPS Location | | Date | Time | Depth A-0 | Depth A-1 | Depth A- 2 | Depth B-1 | B-1 Colour | B -1 Texture | B-1 Comments | Local Area | Notes of Importance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Easting | Northing | | day light hrs | inches | inches | inches | inches | | | | | |
| S171019 | 590252 | 4999500 | 04,05,2017 | 12:13:00 | 3 | 2 | 3 | | brownish; black mixed in Mg? | sandy loam | rocky | moss,shrubs, sparse black spruce (dead),regrowth spruce | |
| S171020 | 590247 | 4999518 | 04,05,2017 | 12:39:00 | 4 | 2 | 2 | | brownish | sandy loam | rocky, wet | moss,sparse black spruce of various sizes | location moved wet area with rock bottom |
| S171021 | 590251 | 4999559 | 04,05,2017 | 01:24:00 | 5 | 4 | 3 | | greyish brown | sandy loam | stones | moss,sparse black spruce with regrowth black spruce | location moved wet area with rock bottom |
| S171022 | 590248 | 4999578 | 04,05,2017 | 01:44:00 | 2 | 3 | 4 | | brownish | sandy loam | dry ground | moss,shrubs, sparse black spruce, regrowth spruce | |
| S171023 | 590251 | 4999601 | 04,05,2017 | 02:01:00 | 1 | 2 | 4 | | reddish | sandy loam | dry ground | moss,mature black spruce (dying),regrowth fir | |
| S171024 | 590248 | 4999628 | 04,05,2017 | 02:18:00 | 2.5 | 2.5 | 4 | | reddish brown | loam | | moss, various stage black spruce, sparse stunned hardwood | |
| S171025 | 590251 | 4999648 | 04,05,2017 | 02:40:00 | 4 | 3 | 5 | | reddish brown | loam | near wet area | moss, various stage black spruce, sparse stunned hardwood | |
| S171026 | 590264 | 4999672 | 04,05,2017 | 03:23:00 | 6 | 2 | 4 | | brownish | loam | edge of peat bog | moss, stunted black spruce | location moved out of peat bog |
| S171027 | 590255 | 4999700 | 04,05,2017 | 03:05:00 | 5 | 3 | 2 | | dark brown (blackish) | sandy (fine) | edge of peat bog | moss, stunted black spruce | |
| S171028 | 590278 | 4999723 | 04,05,2017 | 03:58:00 | 3 | 2 | 3 | | light reddish brown | loam | edge of peat bog | moss,various conditions 1)peat bog 2)dead wood 3)good wood | location moved out of peat bog |
| S171029 | 590264 | 4999766 | 04,05,2017 | 04:33:00 | 1.5 | 1.5 | 2 | | brownish | loam | | moss, shrubs,few stunted black spruce,open | location moved out of peat bog;with rocky bottom |
| S171030 | 590267 | 4999785 | 04,05,2017 | 05:00:00 | 2 | 2 | 2 | | brownish | course loam | Slight gravel texture | moss, shrubs,few stunted black spruce | location moved out of peat bog;with rocky bottom |
| | | | | | | | | | | | | | |
| S171031 | 590300 | 4999425 | 05,05,2017 | 10:30:00 | 3 | 3 | 6 | | brownish/ brownish orange | loam | some brownish orange colour in soil | moss,mid age black spruce | |
| S171032 | 590296 | 4999447 | 05,05,2017 | 11:00:00 | 5 | 3 | 7 | | medium grey (brownish) | sandy | zone darker than A-2 zone | moss, shrubs,small young black spruce, open | tried several holes to get through rocky condition to B-1 |

SOIL SITE DESCRIPTIONS

| Sample Number | Sample GPS Location | | Date | Time | Depth A-0 | Depth A-1 | Depth A- 2 | Depth B-1 | B-1 Colour | B -1 Texture | B-1 Comments | Local Area | Notes of Importance |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Easting | Northing | | day light hrs | inches | inches | inches | inches | | | | | |
| S171033 | 590305 | 4999482 | 05,05,2017 | 11:38:00 | 3 | 3 | 3 | 2 | dark brownish with black Mg? + rust | loam | after 2" soil is lighter B-1 or B-2 zone | moss,shrubs,young black spruce (edge of peat bog) | tried several holes to get through rocky condition to B-1 |
| S171034 | 590296 | 4999500 | 05,05,2017 | 12:06:00 | 4 | 3 | not sure of zones | | medium grey | sandy (some clay) | no light grey A-2 zone | moss,stunted black spruce,open | not sure if sample was taken in the A-2 or B-1 zone |
| S171035 | 590301 | 4999521 | 05,05,2017 | 12:37:00 | 6 | 3 | 1 | | medium grey with rust stringers in it | loam | not well defined B-1 zone; 1" A-2 zone | moss,shrubs,mid size black spruce,few stunted hardwood | thin 1 inch A-2 zone |
| S171036 | 590299 | 4999551 | 05,05,2017 | 12:59:00 | 3 | 3 | 3 | | greyish brown | course sandy loam | | moss,shrubs,mid size black spruce, (out of peat bog) | B-1 zone not well developed |
| S171037 | 590309 | 4999572 | 05,05,2017 | 01:20:00 | 3 | 3 | 6 | | reddish brown | loam | some stone | moss,mid age black spruce,sparse hardwood | |
| S171038 | 590298 | 4999600 | 05,05,2017 | 01:51:00 | 2 | 2 | 3 | | reddish brown | sandy loam | | moss, mature spruce + fir,regrowth fir, edge of small clearing | |
| S171039 | 590304 | 4999628 | 05,05,2017 | 02:12:00 | 1 | 1 | 2.5 | | reddish (rich colour) | sandy loam | dry ground | moss,mature fir,sparse hardwood, small regrowth fir | |
| S171040 | 590299 | 4999653 | 05,05,2017 | 02:28:00 | 2 | 2 | 5 | | reddish (rich colour) | loam | | moss, mid age/mature fir, sparse hardwood | |
| S171041 | 590300 | 4999678 | 05,05,2017 | 02:45:00 | 2 | 2 | 2 | 5 | dark brown (rich colour) | loam | edge of peat bog | moss,mid age spruce and fir, sparse hardwood | B-1 zone 5" then lighter B-2 zone?? |
| S171042 | 590300 | 4999701 | 05,05,2017 | 03:03:00 | 2 | 2 | 5 | | reddish brown | loam | | moss, fir thicket | |
| S171043 | 590302 | 4999722 | 05,05,2017 | 03:19:00 | 3 | 3 | 6 | | reddish | loam | | moss, mixed dead wood, regrowth fir | |
| S171044 | 590302 | 4999755 | 05,05,2017 | 03:35:00 | 2 | 2 | 5 | 4 | reddish brown | loam | edge of peat bog | moss,mixed age spruce and fir | B-1 zone 4" then less rich B-2 zone?? |
| S171045 | 590313 | 4999771 | 05,05,2017 | 03:56:00 | 1.5 | 1.5 | 3 | | reddish brown | loam | edge of peat bog | moss, fir + spruce various ages | location moved out of peat bog |

# APPENDIX C

# EXCAVATION SITE DESCRIPTIONS

| STATION ID | ROCK SAMPLE ID # | FEATURE | UTM E (NAD83, Z20N) | UTM N (NAD83, Z20N) | DATE | HOLE DEPTH | ESTIMATED A & B ZONES COVER | BEDROCK TYPE | C ZONE (glacial till) | C ZONE COMMENTS | EXCAVATION COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20170925001 | R172001 | Pit #1 on Western Trench Line | 590306 | 4999628 | September 25, 2017 | 12 feet | reddish, 18 to 24 inches | greywacke - dark | fine sandy, light grey | with rounded rock (granite included) | hard digging |
| 20170925002 | no sample | Pit #2 on Western Trench Line | 590300 | 4999596 | September 25, 2017 | 12 feet plus | reddish, 18 to 24 inches | bed rock not reached | fine sandy, light grey | with rounded and angular rock | walls of pit quickly undercut cave in, making for danger above |
| 20170925003 | R172002 | Pit #3 on Western Trench Line | 590302 | 4999566 | September 25, 2017 | 12 feet | reddish, 18 to 24 inches of B Zone then 6 inches rusty sand in C Zone | greywacke | fine sandy, light grey | with rounded and angular boulders and rock | walls of pit quickly undercut and caved in, making for danger above. A small tightly folded quartz vein was obtained from a hump in the bed rock that was to hard to break more out |
| 20170925004 | no sample | Pit #4 on Western Trench Line | 590297 | 4999533 | September 25, 2017 | 12 feet | reddish, 18 to 24 inches | bed rock not reached | fine sandy, light grey | with rounded and angular boulders and rock | |
| 20170925005 | R172003 | float | 590302 | 4999566 | September 25, 2017 | | | | | | piece of greywacke picked up near Pit # 3 on western trench line. A few specks but not gold |
| 20170925006 | R172004 | trench | 590803 | 4999692 | September 25, 2017 | 5.5 feet | 18 to 24 inches | greywacke | fine sandy, light grey | | sample from 1 of 2 hard humps in bed rock, hard to break out more |
| 20170925007 | R172005 | trench | 590799 | 4999688 | September 25, 2017 | 6.5 feet | 18 to 24 inches | greywacke | fine sandy, light grey | | |
| 20170925008 | no sample | trench | 590803 | 4999684 | September 25, 2017 | 3.5 feet | 18 to 24 inches | greywacke | fine sandy , light grey | | 2 humps in bedrock, possible M-shaped minor folds |
| 20170925009 | R172006 | trench | 590799 | 4999682 | September 25, 2017 | 6.5 feet | 18 to 24 inches | greywacke | course sand /gravel | band of black (Mn,MG,??),and rusty material | water coming into hole. Trench gets deeper to south, work to next bedrock rise then stop for day, infill trench for safety reasons. |
| 20170925010 | no sample | trench | 590801 | 4999669 | September 26, 2017 | 12 feet | 12 to 18 inches | greywacke | | | photo of bedrock hump = DSCN0260 |
| 20170925011 | no sample | trench | 590808 | 4999665 | September 26, 2017 | 6.5 feet | 18 to 24 inches | greywacke | | | |
| 20170925012 | R172007 | trench | 590805 | 4999658 | September 26, 2017 | not recorded | not recorded | greywacke, first good sight of sulphides | | | |
| 20170925013 | R172008 | trench | 590806 | 4999655 | September 26, 2017 | 10 feet | 30 to 36 inches | greywacke,with lots of sulphides (pyrite?) | wet (clay sand ??) | angular material in till | |
| 20170925014 | R172009 | trench | 590800 | 4999650 | September 26, 2017 | 8.5 feet | 28 to 34 inches, boulders | greywacke with small amount of quartz | | large boulders in till | small amount of sulphides (specks) in quartz and host rock. Trench is getting very wet (groundwater) |
| 20170925015 | no sample | trench | 590805 | 4999645 | September 26, 2017 | 7 feet | 20 to 26 inches, rocky,boulders | greywacke | | angular material in till | |
| 20170925016 | no sample | trench | 590808 | 4999638 | September 26, 2017 | 4 feet | not recorded | greywacke | | | rise in bedrock, location of possible minor S folds in bedrock humps (DSCN0304) |
| 20170925017 | no sample | trench | 590808 | 4999627 | September 26, 2017 | 8 feet | 3.5 feet, lots large boulders + rocks | greywacke | | | wet, messy to work in |
| 20170925018 | no sample | trench | 590806 | 4999638 | September 26, 2017 | 7 feet | 3 feet | greywacke | wet (clay sand ??) | lots of water coming into trench | |
| 20170925019 | no sample | trench | 590808 | 4999638 | September 26, 2017 | not recorded | | greywacke | water flow west to east | 15 to 20 gallons per minute | |
| 20170925020 | no sample | trench | 590799 | 4999614 | September 26, 2017 | 4 feet | 20 to 26 inches, rocky,boulders | greywacke | | | bed rock rise then back down (south) to 10 feet |
| 20170925021 | no sample | trench | 590804 | 4999600 | September 26, 2017 | 7 feet | 5 feet, very rocky | greywacke | | | wet, messy to work in. End of Trench |
| 20170925022 | no sample | Mitchell | 590791 | 4999798 | old workings | surface | | 4 meter quartz vein material; vein or float | | | area trenched by Bruce Mitchell and 4m quartz vein material reported as float based on the trenching. HS considers it to have minimal displacement. |