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2017-2019 Exploration Report for the Wawa Property

Red Pine Exploration Inc.

Report on the 2017-2019 Diamond Drilling Program, 2018-2019 Overburden Stripping/Trenching Program, 2018 Historic Core Sampling Program, 2019 Prospecting and Grab Sampling Program, 2017 Inversion of 2011 VTEM Data and 2019 Geophysical Gravity Survey at the Wawa Gold Project

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Date: April 7, 2022

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1 Summary

The Wawa Gold Project is a gold exploration project located near Wawa, Ontario, Canada. Red Pine Exploration Inc. ("The Company") owns 64.5 percent ("%") of the Project while Citabar Limited Partnership (Citabar) owns the remaining 35.5%.

This report describes the 2017-2019 diamond drilling exploration program. Drilling was completed by Forage Rouillier. As a result of drilling implementation, Red Pine has demonstrated that:

1) The Jubilee Shear Zone, which hosts all of the inferred resource as identified in The Company's technical report issued in June, 2019 ("National Instrument 43-101 Technical Report for the Wawa Gold Project" prepared by Brian Thomas, P.Geo, (Golder Associates Ltd.) ("Golder")) is open along strike and at depth. The report indicates Surluga Deposit is a high-grade underground resource with 205,000 ounces at 5.31 g/t in the indicated category and 396,000 ounces at 5.22 g/t in the inferred category at a 2.7 g/t cut-off grade (May 31st, 2019).

2) The Minto Mine South Deposit contains 25,000 ounces of gold at 7.5 g/t in the indicated category and 75,000 ounces at 6.6 g/t in the inferred category at a 3.5 g/t cut-off grade (Nov. 7, 2018). The mineralization occurs within shallow, narrow, high-grade veins and shears outside of the current Surluga Deposit envelope, its mineralization remains open in all directions. An updated Mineral Resource estimate for the Project consisting of the Surluga and Minto Mine South deposits was prepared by Golder. The Mineral Resources are disclosed in accordance with the Canadian Securities Administrators' National Instrument (NI) 43-101 and this Technical Report follows the requirements of Form 43-101F1.

Golder's estimates were determined following the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines (November 2003) and were classified following the CIM Definition Standards for Mineral Resources & Mineral Reserves (May 2014).

The report describes 2018 historic core sampling program which showed some significant gold grades in historically unsampled core and was useful for calculating the Surluga Deposit resource model in 2019. The program provided better knowledge of the area around the Jubilee Mine workings and validated some of the lithological and assay modelling.

The report includes information on the 2019 prospecting and grab sampling exploration program which resulted in the extension of the Cooper-Ganley zone to the West, confirmed auriferous potential of the Jubilee Shear Zone Footwall area, and discovered a new Marie Shear Zone (MSZ) in Grace-Darwin area.

This report contains the results on an inversion completed on a previously flown 2011 Airborne VTEM (Versatile Time Domain Electromagnetic) survey. The inversion determined the area surrounding the Surluga Deposit and surrounding area is non-magnetically susceptible. Aarhus Geophysics completed the inversion in 2017.

A 2019 ground gravity survey completed by Abitibi Geophysics is included in this report. The survey successfully detected both the Jubilee and Hornblende Shear Zones, and also detected other possible shear zones that are favorable host rocks for gold mineralization on the Wawa Gold Project. The gravity survey also confirmed the extension of the Jubilee Stock to the south-west of where historic mapping defined its boundary.

The 2018-2019 overburden stripping and channel sampling program is also described in this report. The results of this program confirmed that the Jubilee Shear Zone extends south of the Parkhill Fault, following the structure over a strike length of approximately 1.5 kilometres, and identified the area where the Grace Shear Zone intersect the Jubilee Shear Zone. The intersection of the Grace and Jubilee Shear Zones defines a significant exploration target. The Grace Shear Zone is interpreted to predate the formation of the Jubilee Shear Zone and Red Pine’s 2017 drilling in the Grace Shear Zone proved the structure hosts very high-grade gold mineralization (up to 57.31 g/t gold over 3.14 metres). Red Pine’s updated geological model for the Wawa Gold Property hypothesized that the zones of intersection between structures in the Grace and Jubilee orientations are an important control on the location of higher-grade mineralization in the Jubilee Shear Zone. This makes the intersection between the Grace Shear Zone and the southern extension of the Jubilee Shear Zone a promising exploration target to test if the under-explored segment of the Jubilee Shear Zone south of the Parkhill Fault hosts significant mineralization.

The exploration programs were overseen onsite by Red Pine Senior Project Geologist, Conrad Dix, P.Geo, and Geologist, Olga Prikhodko, P.Geo. Data compilation and

QAQC review was completed by Red Pine Geomatics Manager Eric Steffler and Chief Geologist Jean-Francois Montreuil, Ph.D.

1.1 PROPERTY DESCRIPTION AND OWNERSHIP

1.1.1 Project Description and Location

The Project is located 2 kilometres (km) east of the Town of Wawa, Ontario and approximately 650 km northwest of Toronto (Figure 4-1). The Project is within the McMurray township (NTS 41/n14) and centered on Universal Transverse Mercator (UTM) North American 1983 Datum (NAD83) (Zone 16N) 669,800 m east (E) and 5,315,000 m north (N). Legal access is available via Highway 101 from Wawa and the Surluga Mine Road, a private road owned and maintained by Red Pine and Citabar.

Red Pine holds a 64.5% interest in the Project and the other 35.5% is held by Citabar, which is also a significant shareholder of Red Pine.

The Project consists of 285 unpatented and 132 patented or leased mining claims totaling 6,528 hectares (ha).

1.1.2 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

The Wawa Gold property can be accessed by driving 2 km on Highway 101 from the Town of Wawa, ON, and then turning south onto a gravel road using a 2-wheel drive vehicle. During the winter months, the main access road to the property from Highway 101 is plowed. Areas off the main road can be accessed by snowmobiles or ATVs.

Wawa is located at 289 metres above mean sea level (m asl) and the property is hilly with a range of elevations from 300 m to 400 m asl. Steep ridges exist locally. The property is forested with spruce, pine, poplar and birch being the dominant species.

The vicinity to Lake Superior has a significant impact on the climate of the property. Environment Canada has recorded weather details in Wawa since 1981 (http://climate.weather.gc.ca) and showed that the warmest temperatures are recorded in July and August (daily mean 15°C; daily maximum 20.8°C). The coldest temperatures are typically recorded in January (daily mean −14°C; daily minimum −20.2°C). September and October are the months with the most rainfall (~122 millimetres [mm] and ~107 mm, respectively) and the highest snowfall occurs in December (~80 centimetres [cm]). The Project site can be operated year-round.

Wawa has a population of 2,905 people (2016) (https://www12.statcan.gc.ca/census-recensement/index- eng.cfm). A 230-kV power line crosses the southern part of the property and a second power line crosses the western part of the property. Wawa Municipal Airport is located 3.1 km south southwest of Wawa along highway 17 N, although no commercial airlines operate from the airport. Canadian National Railway acquired Algoma Central Railway in October of 2001 and ceased operation of the Sault Ste Marie to Hearst line in July of 2015. The government subsidy still stands, and the regional stakeholders are seeking a new rail operator. There is enough water available from lakes and streams on the property to support exploration and mining.

1.1.3 History

The Wawa area has been explored for gold since the 1860s (Rupert, 1997) and gold was first discovered by William Teddy in 1897 (Frey, 1987). A staking rush followed the change in claim staking adopted by the Ontario Government to encourage staking in 1895 (MacMillan and Rupert, 1990). The staking rush resulted in several discoveries and the first mine to start production was the Grace Mine (1901). In the 1930s, several mines commenced production, including the Parkhill, Minto and Jubilee Mines (MacMillan and Rupert, 1990). By the early 1940s, 15 mines produced gold in the Wawa area (Frey, 1987).

The Surluga Mine was discovered in the early 1960s (Sage, 1991) and commenced production shortly after (Kuryliw, 1970 & 1972). The Surluga Mine continued production until the mid-1970s. The early 1980s saw the consolidation of various properties from previous owners into one land package. In the mid-1980s the Surluga Mine was dewatered and the mine shaft was refurbished as part of restarting the mining operations, and mining operations continued until the Surluga mine ceased operations in 1990 (Rupert, 1997). The 1990s was a period when the Project was optioned multiple times by different groups to evaluate the various mines and a period of limited exploration; with the acquisition of the Sunrise-Mickelson vein systems and the Van Sickle mine to the land package (Bradshaw, 1991; Bowdidge, 1996; Rupert, 1997). The late 2000s saw the rejuvenation of exploration on the Project with extensive drilling starting near the end of the decade and extensive exploration taking place at the Surluga mine and surrounding areas (Gow, 2011). Yearly exploration has continued at the Project since the late 2000s and is ongoing. Eight past-producing mines exist on the Project: Cooper, Minto, Jubilee, Surluga, Parkhill, Grace- Darwin, Mariposa and Van Sickle.

1.2 GEOLOGY AND MINERALIZATION

The property is in the Michipicoten greenstone belt of the Wawa Subprovince (Superior Province). The Michipicoten greenstone belt consists of three cycles of mafic and felsic metavolcanic rocks with associated subvolcanic intrusions and metasedimentary rocks (Sage, 1994). The Jubilee Stock, which hosts the mineralization on the property, is described as a high-level intrusion of dioritic to dominantly granodioritic composition with many intrusive facies (Frey, 1987; Sage, 1993). The core of the Jubilee Stock is curved-shaped into a sigmoid form. Its long axis is oriented at 20° and it has a 6 km x 1.3 km surface expression. The grain size of the intrusion composing the Jubilee Stock is fine to medium grained and locally porphyritic. It intruded its host volcanic sequence around 2,745 ± 3 million years before present (Ma) (Sullivan et al. 1985).

Gold mineralization is conspicuous throughout the Project and mineralization is closely related to the structural setting of the property characterized by numerous shear zones, fractures and faults of variable orientations.

In zones of gold mineralization formed after felsic to mafic hosts, old concentration typically relates to finely disseminated sulfides (pyrite or arsenopyrite) in quartz veins, and in silicified and sericitized lenses and pods within shear and breccia zones.

In zones of gold mineralization formed after mafic rocks, gold concentration is typically related to quartz veins associated with chlorite and iron carbonate alteration with disseminated pyrite and/or pyrrhotite with weak to moderate sericitization.

1.3 EXPLORATION STATUS

Extensive historical exploration has been completed on the property. A total of 863 historical and recent surface diamond drill holes totaling 148,047 m and 1,444 historic underground drill holes totaling 46,975 m have been drilled on the Project since the first borehole was drilled in the 1930s. Eight past-producing mines exist on the property.

In 2017 Aarhus Geophysics was contracted to model and create an inversion of the previously flown (Augustine Venture) 2011 Airborne VTEM data. An SCI inversion algorithm with Cole-Cole modeling parameters was completed using the data. (Viezzoli et al., 2008; Fiandaca et al., 2012). A final report and database of the inversion was delivered to The Company.

Through February-October of 2018 a historic core sampling program was completed to gather further, more detailed information about the Jubilee Shear Zone where most of these holes had been drilled. 30, 174 m of core were processed from 388 drill holes, resulting in 7,805 samples being sent for analysis. Sampling resulted in gold being added to many of the unsampled historic boreholes in the Jubilee Shear Zone, as well as in the footwall and hanging wall of the Surluga Deposit. These results were included in mineral resource calculation 2019.

Red Pine Exploration contracted Abitibi Geophysics to conduct a high-resolution ground gravity survey, which was completed between March 19th and March 29th, 2019. The aim of ground gravity survey carried out around the Jubilee Lake, was to detect abandoned underground mine workings of the Jubilee Mine, as well as to delineate prospective targets for gold mineralization.

In the summer-fall of 2018 and 2019 The Company conducted an overburden stripping/trenching and channel sampling program focusing on following zones: Minto Lower/Minto Mine South, Parkhill, Mickelson, Cooper-Ganley, Jubilee, Jubilee South, and Grace-Darwin. During the program a total 35 trenches were excavated, 30 of them mapped, and 390 samples were collected from 155 channels. Significant results were obtained in Cooper-Ganley (up to 42.8 g/t gold), Grace-Darwin (up to 16.49 g/t gold), Jubilee South (up to 2.56 g/t gold) which confirmed continuity of these structures.

Red Pine commenced drilling on the Project in 2017-2019. A total of 130 diamond drill holes were drilled through the reported period totaling 34,506.45 m. A total of 18,632 core samples were analyzed at Activation Laboratories (Actlabs) in their facilities in Ancaster. Two routine gold analytical packages were selected by Red Pine for the analysis completed by Actlabs.

For the quality assurance and quality control (QA/QC) monitoring, Red Pine relied partly on the internal analytical QC measures implemented by Actlabs and implemented its own external analytical control measures consisting of the use of control samples (blanks, certified reference materials [CRMs]) inserted in all sample batches submitted for assaying. Umpire check assaying was not performed. The routine insertion rate for CRMs and blanks was 1 standard per 20 samples and 1 blank per 25 samples sent. Additional blanks were also inserted after vein samples when many specks of visible gold were observed in the sampled vein. Red Pine also implemented a systematic check of the higher-grade samples analyzed by routine fire assay. Every sample containing gold equal or greater than 2 g/t gold on the fire assay was systematically re-analyzed by metallic screen fire assay. A total of 1,914 CRMs and blanks were analyzed by Actlabs.

In 2018 SRK estimated a Mineral Resource based on information from 2,007 historical boreholes (126,067 m) drilled between 1960 and 1990, core drilled respectively by Wawa GP Inc. and Augustine Ventures in 2007 and 2011, and additional 26 boreholes (5,594 m) drilled by Red Pine in 2014 and 2015. SRK reported the tonnage and grade estimates at two cut-off grades: 0.4 and 2.5 g/t gold for open pit and underground Mineral Resources, respectively. This estimation was completed in conformity with CIM Mineral Resource and Mineral Reserves Estimation Best Practices Guidelines (November 2003). The blocks were classified according to CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) guidelines. This estimation does not represent Mineral Reserves and has not demonstrated economic viability. The effective date of the Mineral Resource estimate was May 26, 2015 (Ronacher et al. 2015). This Mineral Resource estimate is no longer current and has been superseded by this Technical Report. Refer to Item 6.7.3 for more details.

Golder was retained to perform an estimation of the mineral resources for the Minto Mine South Project for The Company, in accordance with National Instrument 43-101 (NI 43-101). Golder's mineral resource estimates were completed in a CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. The resource estimate was completed by Brian Thomas, P.Geo., an independent Qualified Person (QP), as defined in NI 43-101. The resource estimate incorporated 26,275 m of diamond drilling, completed on the Minto Project between April 2017 and July 2018. The resource estimate concluded the Minto Mine South Deposit contains 25,000 ounces gold at 7.5 g/t in the indicated category and 75,000 ounces at 6.6 g/t in the Inferred category at a 3.5 g/t cut-off grade.

In summer of 2019 a prospecting and grab sampling program was completed. The goal was to traverse the target areas on foot in a grid-like pattern periodically taking structural measurements, lithological descriptions, observations, and grab samples from exposed outcrop. The targets were: The Cooper Vein system, the Stanley Mine System, the Darwin-Grace Shear Zone, the southern extension of the Jubilee Shear Zone, and the mineralized shear zones within the Jubilee Shear Zone footwall. A new shear zone, the Marie Shear Zone (MSZ), in Grace-Darwin area was discovered during this program. A total of 151 grab samples were taken during the program.

In 2019 Golder prepared a Mineral Resource estimate of the Surluga deposit, part of the Project for Red Pine in accordance with National Instrument (NI) 43-101 and following the requirements of Form 43-101F1. Golder's estimates follow the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines (November 2003). The resource estimate was completed by Brian Thomas, P.Geo., an independent Qualified Person (QP), as defined in NI 43-101. The new Mineral Resource estimate stated the Surluga Deposit is a high-grade underground resource with 205,000 ounces at 5.31 g/t in the Indicated category and 396,000 ounces at 5.22 g/t in the Inferred category at a 2.7 g/t cut-off grade (May 31st, 2019).

1.4 Development and Operations Status

The Project is in the exploration stage and is not currently being developed for commercial production.

1.5 Mineral Resource Estimates

The Mineral Resource estimates and other information in this section were prepared by Golder, Brian Thomas, P.Geo.

"The Mineral Resource estimates outlined in the following section were derived from geological models and drill hole data provided by Red Pine, using a 3D block modelling approach in Datamine Studio RM (Datamine) software. The Mineral Resource estimate is based upon data provided from recent surface diamond drilling, completed by Red Pine, along with historical drill hole data from previous owner/operators. The drill hole database cut-off date was March 20, 2019.

In the Surluga deposit, three shear zone solids, consisting of Upper, Main, and Lower Jubilee shears were modelled by Red Pine and used to constrain mineralization in the model. For the purpose of grade estimation, all three shear zones were treated as a single mineral domain. The Minto Mine South mineralization was modelled in two zones, consisting of a broad Shear Zone (Zone 1) and a narrow Vein Zone (Zone 2).

Three-dimensional (3D) block models were constructed for estimating gold (Au) grades based on Inverse Distance Cubed (ID^3) interpolation. High-grade, outlier samples were controlled by top-cutting assay values.

A mean bulk density value of 2.75 tonnes per metre cubed (t/m^3) was assigned to the Surluga deposit and 2.77 (t/m^3) applied to the Minto Mine South deposit. Areas of historical mining from both deposits were deleted from the block model.

Cut-off grades of 2.7 g/t (Surluga) and 3.5 g/t (Minto) were selected for Mineral Resource reporting and represent approximate break-even mining costs for underground long-hole and cut and fill mining respectively.

Mineral Resources are not Mineral Reserves, and do not demonstrate economic viability. There is no certainty that all, or any part, of this Mineral Resource will be converted into a Mineral Reserve. Inferred Resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves.

Table 1-1 reports the Indicated and Inferred Mineral Resources for the Surluga Project. Mineral Resources were evaluated for mining continuity by reporting within a 2 g/t reporting envelope.

Table 1-1: Surluga Mineral Resource Estimate (Effective Date May 31, 2019)

Resource Category	Tonnes (000)	Au Grade (g/t)	Contained Gold (000 Ozs)
Indicated	1,202	5.31	205
Total Indicated	1,202	5.31	205
Inferred	2,362	5.22	396
Total Inferred	**2,362**	**5.22**	**396**

Notes:

1) All Mineral Resources reported at a 2.7 g/t Au cut-off from within a 2-g/t envelope.
2) A 2.7 g/t cut-off is supported for potential underground longhole mining by the following economic

assumptions: Gold Price: $1,200
$USD, Gold Recovery: 90%, Operating Expense (OPEX): $CAD $125/tonne ($85 mining, $25 milling, $15 G&A).

3) Tonnage estimates are rounded to the nearest 1,000 tonnes.
4) g/t – grams per tonne.
5) Ozs – troy ounces.

The Mineral Resource estimate for the Minto South Project is reported at a cut-off of 3.5 g/t Au (Table 1-2).

Table 1-2: Minto Mine South Mineral Resource Estimate (Effective Date November 7, 2018)

Resource Category	*Tonnes (000s)*	*Au Grade (g/t)*	*Contained Gold (000 Ozs)*
Indicated	105,000	7.5	25
Total Indicated	**105,000**	**7.5**	**25**
Inferred	354,000	6.6	75
Total Inferred	**354,000**	**6.6**	**75**

Notes:

1) All Mineral Resources reported at a 3.5 g/t Au cut-off.
2) A 3.5 g/t cut-off is supported by the following economic assumptions for potential underground cut and fill mining: Gold Price: $1,200
$USD, Gold Recovery: 90%, Operating Expense (OPEX): $CAD $160 / tonne ($120 mining, $25 milling, $15 G&A).

3) Tonnage estimates are rounded to the nearest 1,000 tonnes.
4) g/t – grams per tonne.
5) Ozs – troy ounces.

The combined Mineral Resource estimate for the Project, comprising the Surluga and Minto Mine South deposits, is summarized in Table 1-3."

Table 1-3: Wawa Gold Project Combined Mineral Resource Estimate

Deposit	**Resource Category**	**Tonnes (000s)**	**Au Grade (g/t)**	**Contained Gold (000 Ozs)**
Surluga	Indicated	1,202	5.31	205
Minto Mine South	Indicated	105	7.5	25
Total	**Indicated**	**1,307**	**5.47**	**230**
Surluga	Inferred	2,362	5.22	396
Minto Mine South	Inferred	354	6.6	75
Total	**Inferred**	**2,716**	**5.39**	**471**

2 Introduction

This report has been prepared by Red Pine Exploration for their 285 unpatented and 132 patented mining claims totaling 6,528 hectares within the McMurray township, 2 km southeast of the Town of Wawa, Ontario. The authors of the report have spent significant time working on the property.

The Project is located two km east of the Town of Wawa, Ontario and ~650 km northwest of Toronto, dominantly in McMurray township but straddles Naveau and Rabazo townships in the Sault Ste. Marie Mining Division (NTS 41/n14 and 42/C3). The property is centred on UTM NAD83 (Zone 16N) 669,800 m E and 5,315,000 m N. Legal access is available via Highway 101 from Wawa and the Surluga Mine Road, a private road owned and maintained by Citabar.

Red Pine recently issued a 43-101 technical report for the Project that includes over 700,000 ounces gold for the Surluga Deposit and the Minto Mine South Deposit combined, at an average grade of > 5 g/t (both Indicated and Inferred) (*May 31, 2019*). Both resources are accessible using existing historical underground infrastructure and both appear to be open along strike and at depth. 95% of the current resource is contained between surface and 350 metres depth.

Surluga Deposit

- 205,000 ounces at 5.31 g/t in the Indicated category and 396,000 ounces at 5.22 g/t in the Inferred category at a 2.7 g/t cut-off within a 2 g/t envelope *(May 31, 2019*)
- Open along strike and depth
- Potential for bulk underground mining – vein thickness range between 3-30 metres

Minto Mine South Deposit

- 25,000 ounces at 7.5 g/t in the Indicated category and 75,000 ounces at 6.6 g/t in the Inferred category (*Nov. 7, 2018*)
- Occurs in shallow, narrow, high-grade veins and shears outside of the current Surluga Deposit envelope
- Mineralization remains open in all directions

In addition to the two (2) deposits currently identified on the property (the Surluga Deposit and the Minto Mine South Deposit), Red Pine has identified six additional exploration targets, along a gold-mineralization corridor that extends for more than 6 km (the Wawa Gold Corridor).

Based on the results of the 2014-2018 Drilling, historic core sampling, channel sampling and trenching, it was recommended further exploration drilling be completed to potentially expand the Mineral Resource for the Project by drilling along strike and down-dip of the Jubilee Shear Zone to test the current extent of the deposit, as well as surface exploration of other high priority exploration targets, consisting of mapping, trenching and sampling.

While focused on delineating shallow, high-grade deposits amenable to bulk underground mining along the Wawa Gold Corridor, the Company's 2020 exploration program will target the continuity of the mineralization of the Surluga Deposit at depth.

2.1 Source of Information

This Report are based on information provided by Red Pine including:

- Drill hole database consisting of:
  - Gold (Au) assays
  - Lithology, mineralogy, alteration, and structural descriptions
  - Collar coordinates and down-hole survey data
  - Magnetic Susceptibility data
  - Specific Gravity data
  - Short Wave Infrared Reflectance ("SWIR") data
- Gold (Au) assays for channel and grab samples
- Assay certificates
- Red Pine's reports, presentations, and press releases
- External geophysical reports
- Red Pine standard operating procedures (SOP's)

2.2 UNITS OF MEASURE AND ABBREVIATIONS

The metric system of measurement is used in most of this report. Historic data reported in imperial units were converted using the following conversion factors:

- 1 ounce per (short) ton = 34.2857 grams/tonne
- 1 foot = 0.3048 metres
- 1 mile = 1.609344 kilometres

The following abbreviations are used in this report:

- m = metres,
- km = kilometres,
- km^2 = squared kilometres,
- ft = foot,
- ha = hectare,
- nT = nanoTesla,
- g/t = grams/tonne,
- oz/t = ounce/short ton,
- Asl = above sea level,
- Ga = billion years,
- Lidar = Light Detection and Ranging,
- RTK GPS = Real Time Kinematic Global Positioning System,
- SEDAR = System for Electronic Document Analysis and Retrieval
- Certified reference material = CRM or OREAS.

For the entire report, Universal Transverse Mercator (UTM) coordinates are provided in the datum of NAD83, Zone 16N.

List of geological abbreviation can be found in Appendix I.

3 Reliance on Other Experts

In the preparation of this report, the authors relied on historic data and interpretation from the National Instrument 43-101 Technical Report for the Wawa Gold Project (2019), Red Pine's Assessment Report 2017. The authors have direct ground experience with many of the property's features and have not found reasons to doubt the accuracy of the consulted historic data. The authors have also not come across compelling reasons to single out any particular exploration campaign as having unusual results outside the range of previous or subsequent surveys.

4 Property Description and Location

The Wawa Gold Project is located 2 km southeast of the town of Wawa, Ontario and ~650 km northwest of Toronto, dominantly in McMurray township but also straddles the townships of Naveau and Rabazo in the Sault Ste. Marie Mining Division (

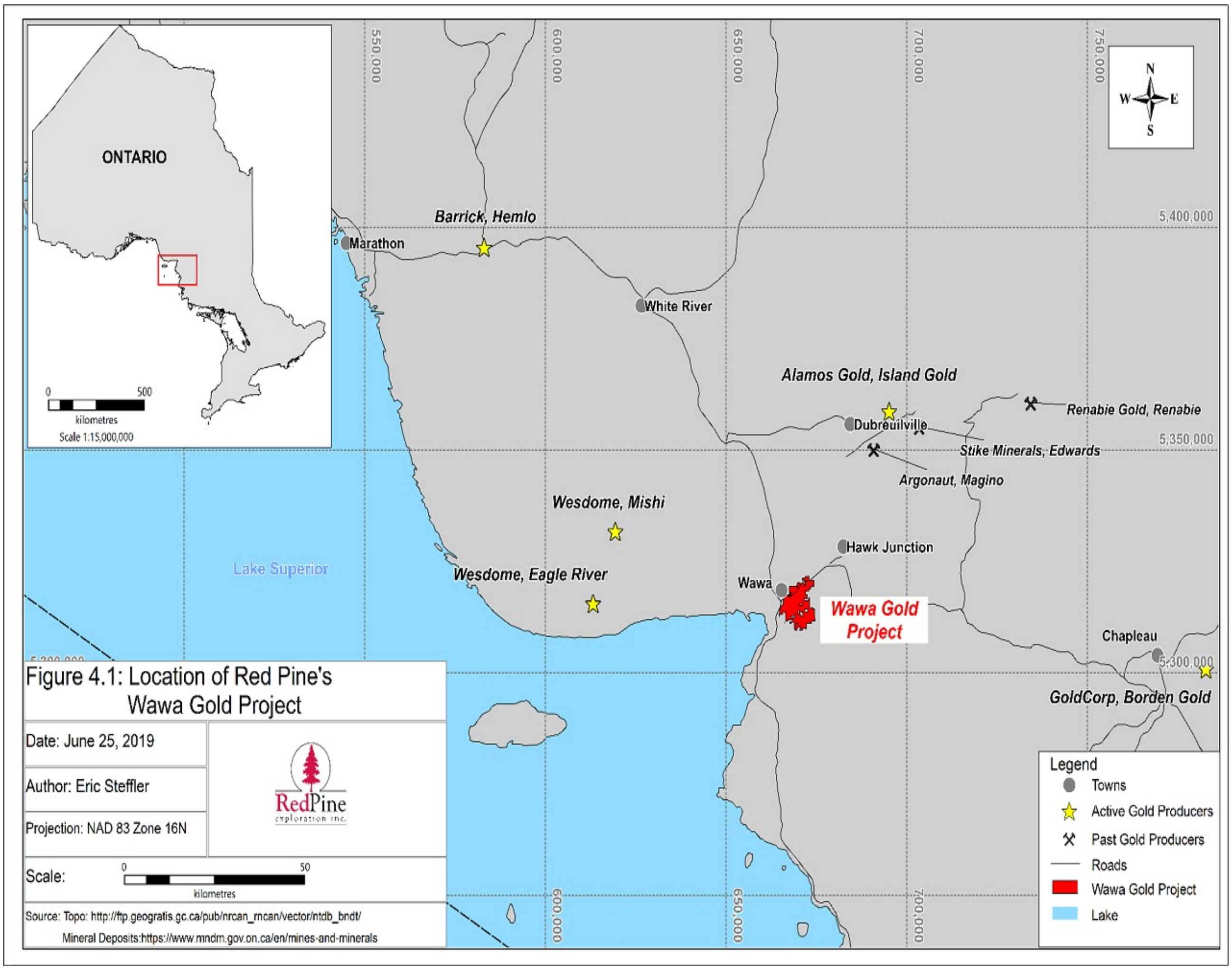


Figure 4.1: Location of Red Pine's Wawa Gold Project

). The property is centered on UTM NAD83 (Zone 16N) 669,800 m E and 5,315,000 m N. Legal access is available via Highway 101 from Wawa and the Surluga Mine Road, a private road owned and maintained by Red Pine and Citabar.

4.1 OWNERSHIP

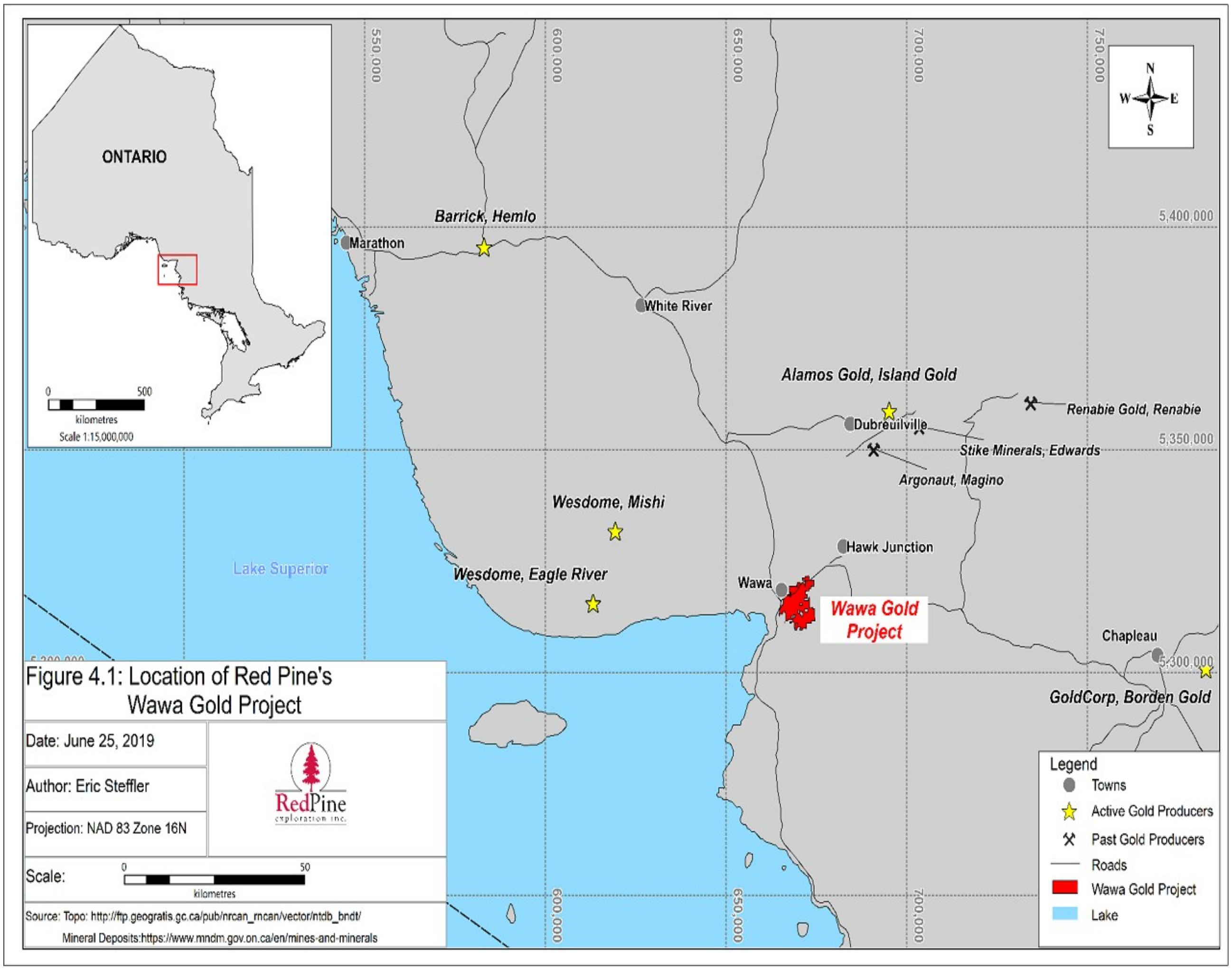
On November 14, 2016, Red Pine announced in a press release available on the company's website and under its profile on www.SEDAR.com that it had entered into a definitive agreement (the "Arrangement Agreement") whereby Red Pine would acquire all of the outstanding securities of Augustine Ventures Inc. (Augustine) (the "Transaction") pursuant to the plan of arrangement provisions of the Business Corporations Act (Ontario) (the "Plan of Arrangement"). Red Pine exploration and Augustine each held 30% interest in the Project.

Upon completion of the Transaction, Augustine became a wholly owned subsidiary of Red Pine and Red Pine carried on the business of the combined companies after reorganizing its board of directors ("Resulting Issuer"). Initially the Resulting Issuer (Red Pine) held a 60% interest in the Project and the other 40% is held by Citabar, who is a significant shareholder of Red Pine. Red Pine and Citabar are now parties to an amended joint venture agreement in respect of a joint venture on the Project, the full text of which can be found under Red Pine's profile on www.sedar.com and the summary of these agreements herein is qualified in its entirety by the full text of these agreements. The reader is encouraged to refer to the agreements for further information.

On December 11th, 2019 Red Pine announced that its ownership interest in its gold mineral property near Wawa, Ontario (the "**Wawa Gold Project**") has increased from 60% to 64.5% as a result of Red Pine's joint venture partner, Citabar Limited Partnership's ("**Citabar**") election under the joint venture agreement effective August 15, 2015, a copy of which is filed under the Company's profile on www.SEDAR.com (the "**JV Agreement**"), not to fund the balance of the 2019 exploration program. Correspondingly, Citabar's interest has been reduced to 35.5%.

4.2 PROPERTY LAND TENURE

The property consists of 132 patented mining claims, as well as 285 unpatented mining claims covering 6,528 hectares (**Error! Reference source not found.**, Table 4.2,



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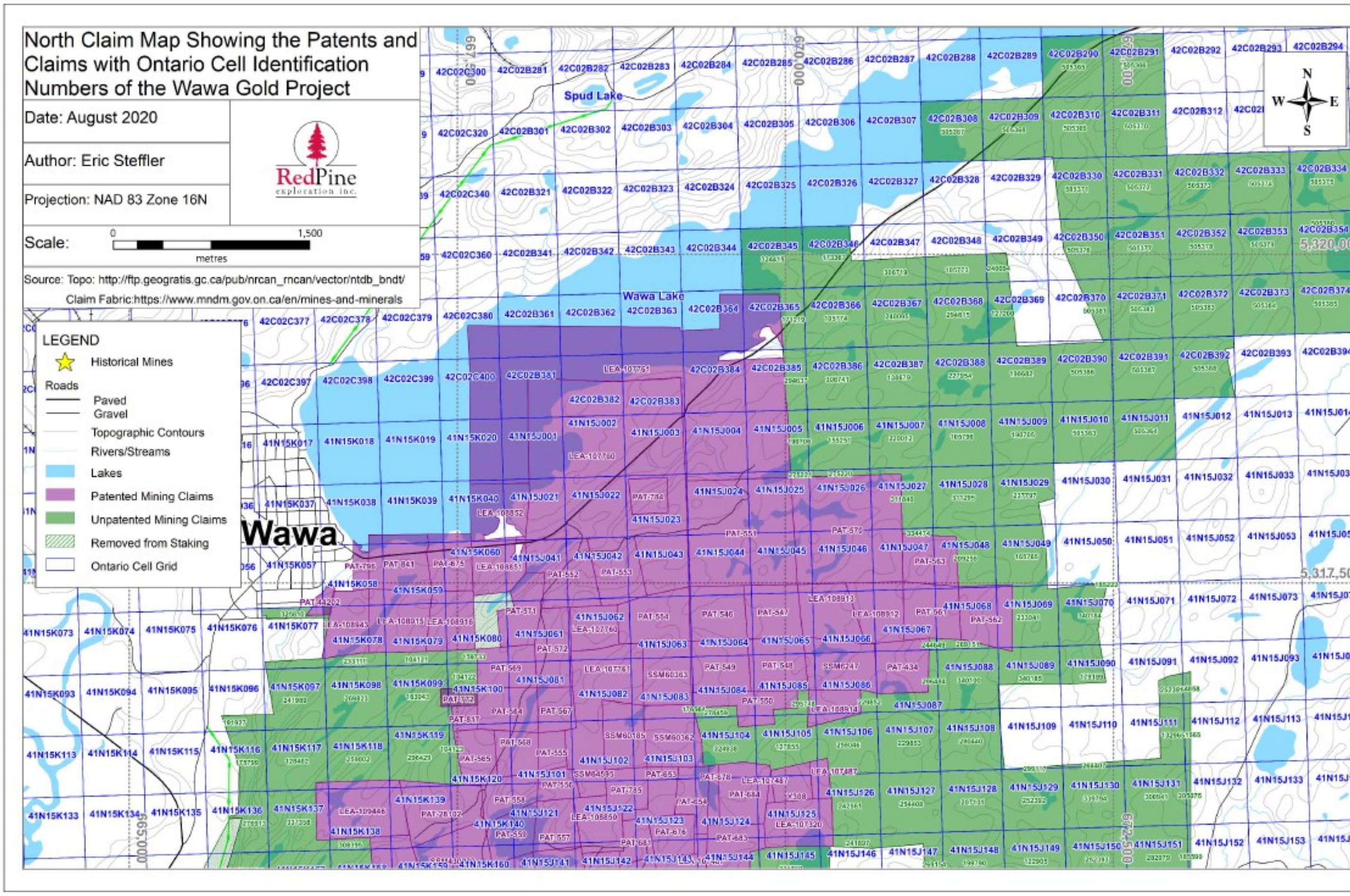

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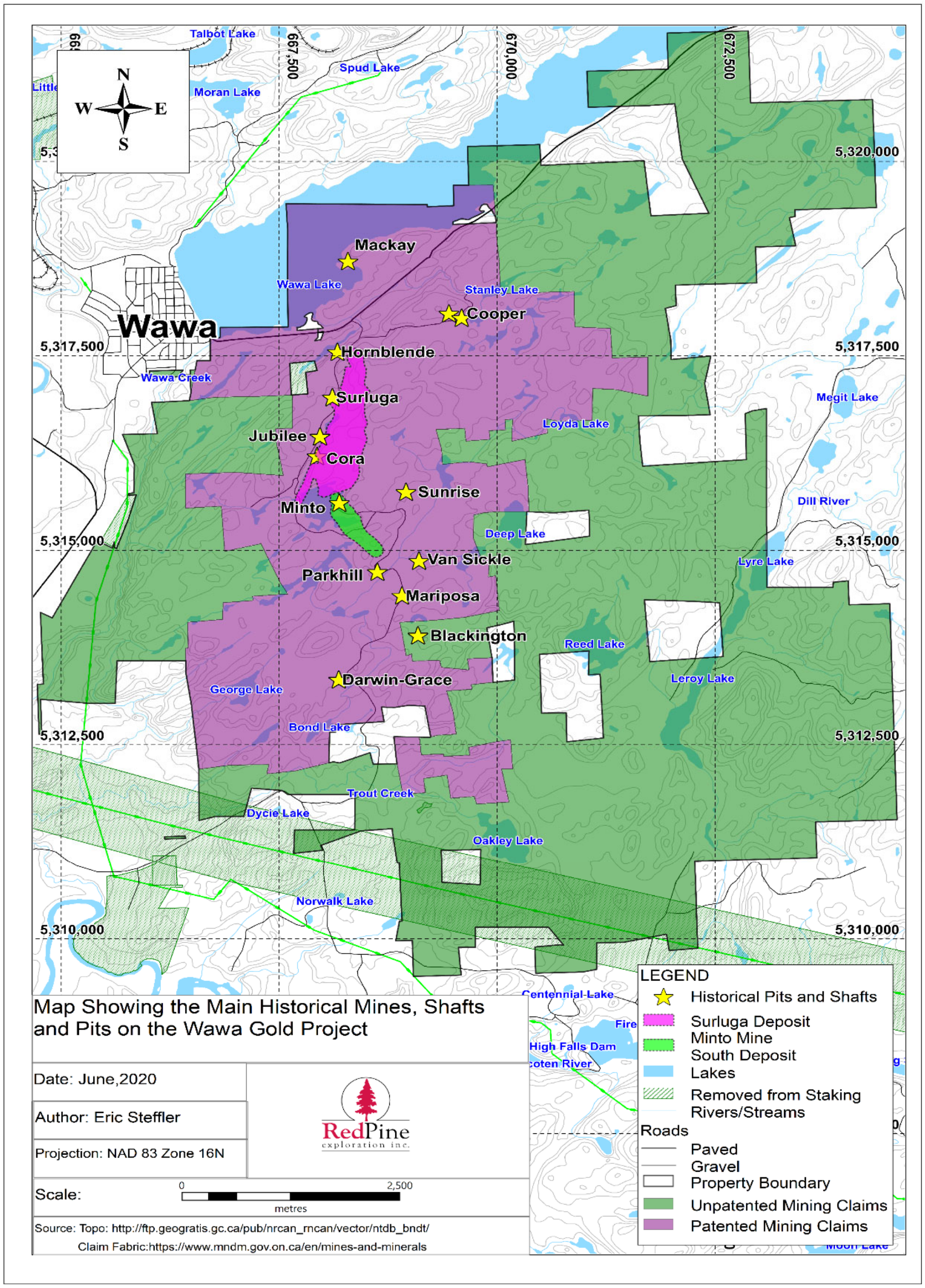


). These make up a contiguous land package which hosts eight past producing mines with historic production of over 120,000 ounces of gold. Most of the area covered by patents includes surface rights, particularly over old mine areas, as well as shafts and tailings impoundments. Timber rights are also included for a small number of the patented claims. Red Pine does not own surface rights over the unpatented mining claims.

Table 4-1: List of patented claims that are part of the Wawa Gold Project property

Property	Tenure Number	Holder	Type	Area, he	Township
Wawa Gold JV	PAT-841	Red Pine Exploration	Patent	16.131	McMurray
Wawa Gold JV	PAT-527	Red Pine Exploration	Patent	14.164	McMurray
Wawa Gold JV	PAT-497	Red Pine Exploration	Patent	19.425	McMurray
Wawa Gold JV	PAT-561	Red Pine Exploration	Patent	17.685	McMurray
Wawa Gold JV	PAT-498	Red Pine Exploration	Patent	12.545	McMurray
Wawa Gold JV	PAT-558	Red Pine Exploration	Patent	11.817	McMurray
Wawa Gold JV	PAT-551	Red Pine Exploration	Patent	64.75	McMurray
Wawa Gold JV	PAT-547	Red Pine Exploration	Patent	16.309	McMurray
Wawa Gold JV	PAT-572	Red Pine Exploration	Patent	16.467	McMurray
Wawa Gold JV	PAT-28102	Red Pine Exploration	Patent	21.853	McMurray
Wawa Gold JV	PAT-519	Red Pine Exploration	Patent	16.592	McMurray
Wawa Gold JV	PAT-524	Red Pine Exploration	Patent	21.448	McMurray
Wawa Gold JV	PAT-553	Red Pine Exploration	Patent	17.806	McMurray
Wawa Gold JV	PAT-550	Red Pine Exploration	Patent	13.638	McMurray
Wawa Gold JV	PAT-557	Red Pine Exploration	Patent	11.493	McMurray
Wawa Gold JV	PAT-555	Red Pine Exploration	Patent	5.666	McMurray
Wawa Gold JV	PAT-677	Red Pine Exploration	Patent	8.903	McMurray
Wawa Gold JV	LEA-108915	Red Pine Exploration	Lease	20.372	McMurray
Wawa Gold JV	PAT-490	Red Pine Exploration	Patent	8.094	McMurray
Wawa Gold JV	PAT-44202	Red Pine Exploration	Patent	3.136	McMurray
Wawa Gold JV	LEA-108914	Red Pine Exploration	Lease	7.758	McMurray
Wawa Gold JV	LEA-108852	Red Pine Exploration	Lease	15.338	McMurray
Wawa Gold JV	PAT-505	Red Pine Exploration	Patent	4.856	McMurray
Wawa Gold JV	PAT-546	Red Pine Exploration	Patent	16.673	McMurray
Wawa Gold JV	PAT-28077	Red Pine Exploration	Patent	11.21	McMurray
Wawa Gold JV	PAT-560	Red Pine Exploration	Patent	16.997	McMurray
Wawa Gold JV	PAT-28076	Red Pine Exploration	Patent	9.308	McMurray
Wawa Gold JV	PAT-512	Red Pine Exploration	Patent	13.355	McMurray
Wawa Gold JV	PAT-491	Red Pine Exploration	Patent	7.284	McMurray
Wawa Gold JV	LEA-107320	Red Pine Exploration	Lease	17.369	McMurray
Wawa Gold JV	PAT-495	Red Pine Exploration	Patent	10.927	McMurray
Wawa Gold JV	PAT-492	Red Pine Exploration	Patent	15.783	McMurray
Wawa Gold JV	PAT-654	Red Pine Exploration	Patent	8.498	McMurray
Wawa Gold JV	PAT-514	Red Pine Exploration	Patent	16.592	McMurray

Property	Tenure Number	Holder	Type	Area, he	Township
Wawa Gold JV	PAT-523	Red Pine Exploration	Patent	12.545	McMurray
Wawa Gold JV	PAT-562	Red Pine Exploration	Patent	18.737	McMurray
Wawa Gold JV	PAT-571	Red Pine Exploration	Patent	15.265	McMurray
Wawa Gold JV	PAT-506	Red Pine Exploration	Patent	12.545	McMurray
Wawa Gold JV	PAT-684	Red Pine Exploration	Patent	16.997	McMurray
Wawa Gold JV	PAT-676	Red Pine Exploration	Patent	9.441	McMurray
Wawa Gold JV	PAT-28079	Red Pine Exploration	Patent	8.863	McMurray
Wawa Gold JV	PAT-513	Red Pine Exploration	Patent	14.569	McMurray
Wawa Gold JV	PAT-549	Red Pine Exploration	Patent	18.009	McMurray
Wawa Gold JV	LEA-108943	Red Pine Exploration	Lease	16.058	McMurray
Wawa Gold JV	PAT-570	Red Pine Exploration	Patent	64.75	McMurray
Wawa Gold JV	PAT-529	Red Pine Exploration	Patent	6.07	McMurray
Wawa Gold JV	LEA-108913	Red Pine Exploration	Lease	19.696	McMurray
Wawa Gold JV	LEA-107760	Red Pine Exploration	Lease	162.202	McMurray
Wawa Gold JV	PAT-520	Red Pine Exploration	Patent	15.783	McMurray
Wawa Gold JV	PAT-681	Red Pine Exploration	Patent	6.475	McMurray
Wawa Gold JV	PAT-28075	Red Pine Exploration	Patent	9.672	McMurray
Wawa Gold JV	PAT-508	Red Pine Exploration	Patent	18.211	McMurray
Wawa Gold JV	PAT-559	Red Pine Exploration	Patent	13.193	McMurray
Wawa Gold JV	PAT-568	Red Pine Exploration	Patent	9.996	McMurray
Wawa Gold JV	PAT-28074	Red Pine Exploration	Patent	18.494	McMurray
Wawa Gold JV	PAT-548	Red Pine Exploration	Patent	18.737	McMurray
Wawa Gold JV	PAT-435	Red Pine Exploration	Patent	8.498	McMurray
Wawa Gold JV	PAT-525	Red Pine Exploration	Patent	7.689	McMurray
Wawa Gold JV	PAT-510	Red Pine Exploration	Patent	12.95	McMurray
Wawa Gold JV	PAT-503	Red Pine Exploration	Patent	14.973	McMurray
Wawa Gold JV	PAT-556	Red Pine Exploration	Patent	6.556	McMurray
Wawa Gold JV	PAT-653	Red Pine Exploration	Patent	8.782	McMurray
Wawa Gold JV	PAT-678	Red Pine Exploration	Patent	3.735	McMurray
Wawa Gold JV	PAT-28099	Red Pine Exploration	Patent	16.187	McMurray
Wawa Gold JV	PAT-496	Red Pine Exploration	Patent	5.666	McMurray
Wawa Gold JV	LEA-108502	Red Pine Exploration	Lease	1.206	McMurray
Wawa Gold JV	PAT-433	Red Pine Exploration	Patent	8.498	McMurray
Wawa Gold JV	PAT-500	Red Pine Exploration	Patent	8.498	McMurray
Wawa Gold JV	PAT-521	Red Pine Exploration	Patent	4.452	McMurray
Wawa Gold JV	PAT-675	Red Pine Exploration	Patent	12.424	McMurray
Wawa Gold JV	PAT-28080	Red Pine Exploration	Patent	3.865	McMurray
Wawa Gold JV	PAT-518	Red Pine Exploration	Patent	18.616	McMurray
Wawa Gold JV	LEA-108851	Red Pine Exploration	Lease	14.609	McMurray

Property	Tenure Number	Holder	Type	Area, he	Township
Wawa Gold JV	PAT-565	Red Pine Exploration	Patent	12.464	McMurray
Wawa Gold JV	PAT-680	Red Pine Exploration	Patent	10.117	McMurray
Wawa Gold JV	PAT-517	Red Pine Exploration	Patent	13.759	McMurray
Wawa Gold JV	PAT-432	Red Pine Exploration	Patent	9.308	McMurray
Wawa Gold JV	PAT-522	Red Pine Exploration	Patent	16.187	McMurray
Wawa Gold JV	PAT-28097	Red Pine Exploration	Patent	7.689	McMurray
Wawa Gold JV	PAT-516	Red Pine Exploration	Patent	4.856	McMurray
Wawa Gold JV	PAT-28072	Red Pine Exploration	Patent	11.857	McMurray
Wawa Gold JV	LEA-109446	Red Pine Exploration	Lease	21.413	McMurray
Wawa Gold JV	LEA-109445	Red Pine Exploration	Lease	37.231	McMurray
Wawa Gold JV	PAT-528	Red Pine Exploration	Patent	13.759	McMurray
Wawa Gold JV	PAT-28095	Red Pine Exploration	Patent	7.284	McMurray
Wawa Gold JV	PAT-28096	Red Pine Exploration	Patent	10.297	McMurray
Wawa Gold JV	PAT-567	Red Pine Exploration	Patent	9.955	McMurray
Wawa Gold JV	PAT-502	Red Pine Exploration	Patent	7.284	McMurray
Wawa Gold JV	PAT-679	Red Pine Exploration	Patent	20.76	McMurray
Wawa Gold JV	PAT-434	Red Pine Exploration	Patent	15.135	McMurray
Wawa Gold JV	PAT-554	Red Pine Exploration	Patent	18.777	McMurray
Wawa Gold JV	PAT-564	Red Pine Exploration	Patent	15.054	McMurray
Wawa Gold JV	PAT-683	Red Pine Exploration	Patent	18.616	McMurray
Wawa Gold JV	PAT-499	Red Pine Exploration	Patent	9.712	McMurray
Wawa Gold JV	PAT-526	Red Pine Exploration	Patent	14.569	McMurray
Wawa Gold JV	LEA-108916	Red Pine Exploration	Lease	17.062	McMurray
Wawa Gold JV	PAT-507	Red Pine Exploration	Patent	16.592	McMurray
Wawa Gold JV	PAT-515	Red Pine Exploration	Patent	14.569	McMurray
Wawa Gold JV	PAT-28073	Red Pine Exploration	Patent	13.395	McMurray
Wawa Gold JV	PAT-494	Red Pine Exploration	Patent	16.592	McMurray
Wawa Gold JV	LEA-107487	Red Pine Exploration	Lease	15.103	McMurray
Wawa Gold JV	PAT-796	Red Pine Exploration	Patent	3.237	McMurray
Wawa Gold JV	PAT-501	Red Pine Exploration	Patent	6.475	McMurray
Wawa Gold JV	PAT-566	Red Pine Exploration	Patent	11.817	McMurray
Wawa Gold JV	PAT-817	Red Pine Exploration	Patent	3.237	McMurray
Wawa Gold JV	PAT-552	Red Pine Exploration	Patent	21.853	McMurray
Wawa Gold JV	PAT-785	Red Pine Exploration	Patent	9.834	McMurray
Wawa Gold JV	LEA-108912	Red Pine Exploration	Lease	16.058	McMurray
Wawa Gold JV	PAT-511	Red Pine Exploration	Patent	13.759	McMurray
Wawa Gold JV	PAT-682	Red Pine Exploration	Patent	6.475	McMurray
Wawa Gold JV	PAT-28094	Red Pine Exploration	Patent	7.689	McMurray
Wawa Gold JV	PAT-563	Red Pine Exploration	Patent	14.973	McMurray

Property	Tenure Number	Holder	Type	Area, he	Township
Wawa Gold JV	PAT-431	Red Pine Exploration	Patent	9.712	McMurray
Wawa Gold JV	PAT-509	Red Pine Exploration	Patent	14.973	McMurray
Wawa Gold JV	PAT-784	Red Pine Exploration	Patent	8.778	McMurray
Wawa Gold JV	PAT-28098	Red Pine Exploration	Patent	7.932	McMurray
Wawa Gold JV	PAT-569	Red Pine Exploration	Patent	12.95	McMurray
Wawa Gold JV	LEA-107417	Red Pine Exploration	Lease	9.324	McMurray
Wawa Gold JV	PAT-28078	Red Pine Exploration	Patent	17.321	McMurray
Wawa Gold JV	PAT-493	Red Pine Exploration	Patent	14.569	McMurray
Wawa Gold JV	LEA-107761	Red Pine Exploration	Lease	319.176	McMurray
Wawa Gold JV	LEA-108850	Red Pine Exploration	Lease	79.776	McMurray
Wawa Gold JV	PAT-504	Red Pine Exploration	Patent	10.522	McMurray
Wawa Gold JV	SSM6247 (LEA-107761)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM60363 (LEA-107761)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM430235 (LEA-108850)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM64595 (LEA-107761)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM60185 (LEA-107761)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM430233 (LEA-108850)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	Y308 (LEA-107487)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM430234 (LEA-108850)	Red Pine Exploration	Patent	n/a	McMurray
Wawa Gold JV	SSM60362 (LEA-107761)	Red Pine Exploration	Patent	n/a	McMurray

Table 4-2: List of patented claims with Ontario Cell Identification Numbers

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
LEA-107320	Lease	Mining and Surface Rights	750618	41N15J145, 41N15J125, 41N15J126, 41N15J146
LEA-107417	Lease	Mining Rights	753481	41N15J222, 41N15J203, 41N15J223, 41N15J202
LEA-107487	Lease	Mining and Surface Rights	752095	41N15J143, 41N15J126, 41N15J105, 41N15J125, 41N15J124, 41N15J144,

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
				41N15J123, 41N15J106
LEA-107760	Lease	Mining and Surface Rights	497878	41N15J001, 41N15J041, 42C02B383, 41N15J003, 41N15J023, 41N15J043, 41N15J062, 42C02B382, 41N15J002, 41N15J022, 41N15J042, 42C02B381, 41N15J021
LEA-107761	Lease	Mining Rights	788894	41N15K040, 42C02B365, 42C02B385, 41N15J005, 41N15J025, 42C02B364, 42C02B384, 41N15J004, 41N15J024, 41N15J023, 41N15J003, 42C02B363, 42C02B383, 41N15J063, 41N15J083, 41N15J082, 41N15J062, 42C02B362, 42C02B382, 41N15J102, 41N15J101, 42C02B361, 41N15K020, 42C02C400, 42C02C380, 41N15J021, 41N15J001, 42C02B381
LEA-108502	Lease	Mining Rights	500534	41N15J162, 41N15J121
LEA-108850	Lease	Mining Rights	759322	41N15J142, 41N15J122, 41N15J161
LEA-108851	Lease	Mining and Surface Rights	500978	41N15K060, 41N15K040, 41N15J021, 41N15J041
LEA-108852	Lease	Mining Rights	751262	41N15J021, 41N15K040
LEA-108912	Lease	Mining Rights	752172	41N15J066, 41N15J046, 41N15J047, 41N15J067
LEA-108913	Lease	Mining Rights	498443	41N15J065, 41N15J045, 41N15J046, 41N15J066
LEA-108914	Lease	Mining Rights	751284	41N15J106, 41N15J086, 41N15J085, 41N15J105
LEA-108915	Lease	Mining Rights	750823	41N15K058, 41N15K078, 41N15K059, 41N15K079
LEA-108916	Lease	Mining Rights	746249	41N15K059, 41N15K079, 41N15K060, 41N15K080
LEA-108943	Lease	Mining Rights	498823	41N15K078, 41N15K077, 41N15K058
LEA-109445	Lease	Mining and Surface Rights	748815	41N15K138, 41N15J161, 41N15J181, 41N15K180, 41N15K200, 41N15K139, 41N15K159, 41N15K159, 41N15K178, 41N15K158
LEA-109446	Lease	Mining Rights	748794	41N15K119, 41N15K137, 41N15K118, 41N15K139, 41N15K117, 41N15K138
PAT-28072	Patent	Mining and Surface Rights	748389	41N15J243, 41N15J223, 41N15J224, 41N15J244

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
PAT-28073	Patent	Mining and Surface Rights	745979	41N15J182, 41N15J162, 41N15J163, 41N15J183
PAT-28074	Patent	Mining and Surface Rights	500321	41N15J142, 41N15J162
PAT-28075	Patent	Mining and Surface Rights	499396	41N15J162, 41N15J142
PAT-28076	Patent	Mining and Surface Rights	750131	41N15J182, 41N15J181, 41N15J201, 41N15J202
PAT-28077	Patent	Mining Rights	749697	41N15J183, 41N15J182, 41N15J202, 41N15J203
PAT-28078	Patent	Mining and Surface Rights	753352	41N15J202, 41N15J182, 41N15J203
PAT-28079	Patent	Mining and Surface Rights	498309	41N15J182, 41N15J181, 41N15J162
PAT-28080	Patent	Mining Rights	500903	41N15J183, 41N15J184
PAT-28094	Patent	Mining Rights	752741	41N15J164, 41N15J165, 41N15J184
PAT-28095	Patent	Mining Rights	748868	41N15J184, 41N15J183 ,41N15J164, 41N15J163
PAT-28096	Patent	Mining Rights	749286	41N15J163, 41N15J183
PAT-28097	Patent	Mining and Surface Rights	748765	41N15J242, 41N15J241, 41N15J221, 41N15J222
PAT-28098	Patent	Mining and Surface Rights	752935	41N15J242, 41N15J222
PAT-28099	Patent	Mining and Surface Rights	500000	41N15J223, 41N15J222, 41N15J242, 41N15J243
PAT-28102	Patent	Mining and Surface Rights	747868	41N15K139, 41N15K119, 41N15K120, 41N15K140
PAT-431	Patent	Mining and Surface Rights	752646	41N15J243, 41N15J244
PAT-432	Patent	Mining and Surface Rights	748254	41N15J264, 41N15J244, 41N15J263, 41N15J243
PAT-433	Patent	Mining and Surface Rights	500556	41N15J224, 41N15J225
PAT-434	Patent	Mining and Surface Rights	748068	41N15J067, 41N15J087, 41N15J086, 41N15J066
PAT-435	Patent	Mining and Surface Rights	499932	41N15J224, 41N15J223, 41N15J244
PAT-44202	Patent	Mining and Surface Rights	749980	41N15K058, 41N15K077, 41N15K057, 41N15K078
PAT-490	Patent	Mining Rights	749976	41N15J201, 41N15J181
PAT-491	Patent	Mining Rights	750595	41N15K260, 41N15K240

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
PAT-492	Patent	Mining Rights	751059	41N15J282, 41N15J262, 41N15J263, 41N15J283
PAT-493	Patent	Mining Rights	754067	41N15K240, 41N15K220, 41N15J201
PAT-494	Patent	Mining Rights	746204	41N15J202, 41N15J222, 41N15J221, 41N15J201
PAT-495	Patent	Mining Rights	750631	41N15J241, 41N15K260
PAT-496	Patent	Mining Rights	500039	41N15J181, 41N15J201
PAT-497	Patent	Mining Rights	751471	41N15K199, 41N15J181, 41N15J201, 41N15K220, 41N15K200
PAT-498	Patent	Mining Rights	747563	41N15J241,41N15J242
PAT-499	Patent	Mining Rights	748971	41N15J203, 41N15J184, 41N15J183, 41N15J204
PAT-500	Patent	Mining Rights	501440	41N15J263, 41N15J262
PAT-501	Patent	Mining Rights	752038	41N15J283, 41N15J284, 41N15J263, 41N15J264
PAT-502	Patent	Mining Rights	749312	41N15J263, 41N15J283
PAT-503	Patent	Mining Rights	499580	41N15J284, 41N15J264, 41N15J265, 41N15J285, 41N15J305, 41N15J304
PAT-504	Patent	Mining Rights	759597	41N15J262, 41N15J265, 41N15J285, 41N15J305, 41N15J304, 41N15J264, 41N15J284, 41N15J263, 41N15J283, 41N15J282
PAT-505	Patent	Mining Rights	750481	41N15J265, 41N15J285
PAT-506	Patent	Mining Rights	497556	41N15K279, 41N15K259, 41N15K260, 41N15K280
PAT-507	Patent	Mining Rights	746254	41N15K300, 41N15K280, 41N15K279, 41N15K299
PAT-508	Patent	Mining Rights	499813	41N15K278, 41N15K258, 41N15K259, 41N15K279
PAT-509	Patent	Mining Rights	753175	41N15K298, 41N15K279, 41N15K299, 41N15K278
PAT-510	Patent	Mining Rights	499566	41N15K297, 41N15K277, 41N15K278, 41N15K298
PAT-511	Patent	Mining Rights	752236	41N15K278, 41N15K258, 41N15K257, 41N15K277
PAT-512	Patent	Mining Rights	750177	41N15K257, 41N15K237, 41N15K238, 41N15K258
PAT-513	Patent	Mining Rights	499058	41N15K198, 41N15K218, 41N15K199, 41N15K219

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
PAT-514	Patent	Mining Rights	750215	41N15K218, 41N15K238, 41N15K219, 41N15K239
PAT-515	Patent	Mining Rights	747010	41N15K239, 41N15K219, 41N15K220, 41N15K240
PAT-516	Patent	Mining Rights	748373	41N15K240, 41N15K239
PAT-517	Patent	Mining Rights	748240	41N15K218, 41N15K198, 41N15K197, 41N15K217
PAT-518	Patent	Mining and Surface Rights	500944	41N15J221, 41N15J241, 41N15J222, 41N15J242
PAT-519	Patent	Mining and Surface Rights	747894	41N15K260, 41N15K240, 41N15J221, 41N15J241
PAT-520	Patent	Mining Rights	498253	41N15K220, 41N15K240, 41N15J201, 41N15J221
PAT-521	Patent	Mining Rights	501468	41N15K280, 41N15K260, 41N15J241, 41N15J261
PAT-522	Patent	Mining Rights	748753	41N15K280, 41N15K300, 41N15J261, 41N15J281
PAT-523	Patent	Mining Rights	497640	41N15K259, 41N15K239, 41N15K240, 41N15K260
PAT-524	Patent	Mining Rights	747901	41N15K238, 41N15K258, 41N15K239, 41N15K259
PAT-525	Patent	Mining Rights	500772	41N15J284, 41N15J304, 41N15J283
PAT-526	Patent	Mining Rights	746231	41N15K200, 41N15K199, 41N15K220, 41N15K219
PAT-527	Patent	Mining Rights	751469	41N15K218, 41N15K237, 41N15K217, 41N15K238
PAT-528	Patent	Mining Rights	749254	41N15J165, 41N15J184, 41N15J164, 41N15J185
PAT-529	Patent	Mining Rights	498105	41N15J204, 41N15J184, 41N15J185
PAT-546	Patent	Mining and Surface Rights	749665	41N15J043, 41N15J063, 41N15J044, 41N15J064
PAT-547	Patent	Mining and Surface Rights	747822	41N15J064, 41N15J044, 41N15J045, 41N15J065
PAT-548	Patent	Mining and Surface Rights	500827	41N15J084, 41N15J064, 41N15J065, 41N15J085
PAT-549	Patent	Mining and Surface Rights	499123	41N15J063, 41N15J083, 41N15J064, 41N15J084
PAT-550	Patent	Mining and Surface Rights	751114	41N15J083, 41N15J085, 41N15J105, 41N15J104, 41N15J084

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
PAT-551	Patent	Mining and Surface Rights	747974	41N15J043, 41N15J025, 41N15J023, 41N15J044, 41N15J024, 41N15J045
PAT-552	Patent	Mining and Surface Rights	752434	41N15J042, 41N15J041, 41N15J061, 41N15J062
PAT-553	Patent	Mining and Surface Rights	750256	41N15J062, 41N15J042, 41N15J043, 41N15J063
PAT-554	Patent	Mining and Surface Rights	748076	41N15J043, 41N15J062, 41N15J063
PAT-555	Patent	Mining and Surface Rights	750770	41N15J101
PAT-556	Patent	Mining and Surface Rights	500372	41N15J101, 41N15J121, 41N15J102, 41N15J122
PAT-557	Patent	Mining and Surface Rights	750755	41N15J121, 41N15J141, 41N15J122, 41N15J142
PAT-558	Patent	Mining and Surface Rights	747956	41N15J101, 41N15J121, 41N15K140, 41N15K120
PAT-559	Patent	Mining and Surface Rights	499439	41N15K160, 41N15K140, 41N15J121, 41N15J141
PAT-560	Patent	Mining and Surface Rights	749702	41N15J161, 41N15J141, 41N15J162, 41N15J142
PAT-561	Patent	Mining and Surface Rights	747550	41N15J047, 41N15J067, 41N15J048, 41N15J068
PAT-562	Patent	Mining and Surface Rights	497410	41N15J068, 41N15J048, 41N15J049, 41N15J069, 41N15J089, 41N15J088
PAT-563	Patent	Mining and Surface Rights	752528	41N15J047, 41N15J048
PAT-564	Patent	Mining and Surface Rights	748954	41N15K100, 41N15K120, 41N15J081, 41N15J101
PAT-565	Patent	Mining and Surface Rights	748580	41N15K140, 41N15K120
PAT-566	Patent	Mining and Surface Rights	751758	41N15J181, 41N15J161, 41N15J162, 41N15J182
PAT-567	Patent	Mining and Surface Rights	748879	41N15J101, 41N15J081, 41N15J082, 41N15J102
PAT-568	Patent	Mining and Surface Rights	499876	41N15J101, 41N15K120
PAT-569	Patent	Mining and Surface Rights	753465	41N15K080, 41N15K100, 41N15J081, 41N15J061
PAT-570	Patent	Mining and Surface Rights	498101	41N15J045, 41N15J025, 41N15J027, 41N15J047, 41N15J026, 41N15J046
PAT-571	Patent	Mining and Surface	497432	41N15J061, 41N15K080, 41N15J041

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
		Rights		
PAT-572	Patent	Mining and Surface Rights	747839	41N15J082, 41N15J062, 41N15J061, 41N15J081
PAT-653	Patent	Mining and Surface Rights	499604	41N15J123, 41N15J122, 41N15J103
PAT-654	Patent	Mining and Surface Rights	749811	41N15J103, 41N15J104, 41N15J124, 41N15J123
PAT-675	Patent	Mining and Surface Rights	501219	41N15K039, 41N15K059, 41N15K040, 41N15K060
PAT-676	Patent	Mining and Surface Rights	496963	41N15J143, 41N15J123
PAT-677	Patent	Mining and Surface Rights	749946	41N15J143, 41N15J144
PAT-678	Patent	Mining and Surface Rights	499634	41N15J104, 41N15J124
PAT-679	Patent	Mining and Surface Rights	748904	41N15J162, 41N15J142, 41N15J143, 41N15J163
PAT-680	Patent	Mining and Surface Rights	748194	41N15J143, 41N15J144, 41N15J163, 41N15J164
PAT-681	Patent	Mining and Surface Rights	498969	41N15J122, 41N15J142, 41N15J123, 41N15J143
PAT-682	Patent	Mining and Surface Rights	752720	41N15J162, 41N15J142, 41N15J143
PAT-683	Patent	Mining and Surface Rights	748960	41N15J124, 41N15J144, 41N15J125, 41N15J145
PAT-684	Patent	Mining and Surface Rights	496962	41N15J104, 41N15J124, 41N15J105, 41N15J125
PAT-784	Patent	Mining and Surface Rights	752923	41N15J023
PAT-785	Patent	Mining and Surface Rights	752127	41N15J102, 41N15J122, 41N15J103, 41N15J123
PAT-796	Patent	Mining and Surface Rights	751873	41N15K058, 41N15K038
PAT-817	Patent	Mining and Surface Rights	752401	41N15K100, 41N15K120
PAT-841	Patent	Mining and Surface Rights	751717	41N15K059, 41N15K038, 41N15K058, 41N15K039
SSM430233 (LEA-108850)	Lease	Mining Rights	31169	41N15K159, 41N15K139, 41N15K140, 41N15K160
SSM430234 (LEA-108850)	Lease	Mining Rights	31169	41N15K179, 41N15K159, 41N15K200, 41N15K160, 41N15K180

Tenure ID	Tenure Type	Tenure Rights	Object ID	Ontario Cell ID
SSM430235 (LEA-108850)	Lease	Mining Rights	31169	41N15K180, 41N15K160, 41N15J141, 41N15J161
SSM60185 (LEA-107761)	Lease	Mining Rights	31169	41N15J103, 41N15J083, 41N15J102, 41N15J082
SSM60362 (LEA-107761)	Lease	Mining Rights	31169	41N15J104, 41N15J084, 41N15J103, 41N15J083
SSM60363 (LEA-107761)	Patent	Mining Rights	31169	41N15J063, 41N15J083
SSM6247 (LEA-107761)	Lease	Mining Rights	31169	41N15J066, 41N15J065, 41N15J085, 41N15J086, 41N15J087
SSM64595 (LEA-107761)	Lease	Mining Rights	31169	41N15J122, 41N15J102
Y308 (LEA-107487)	Lease	Mining Rights	31169	41N15J105, 41N15J125

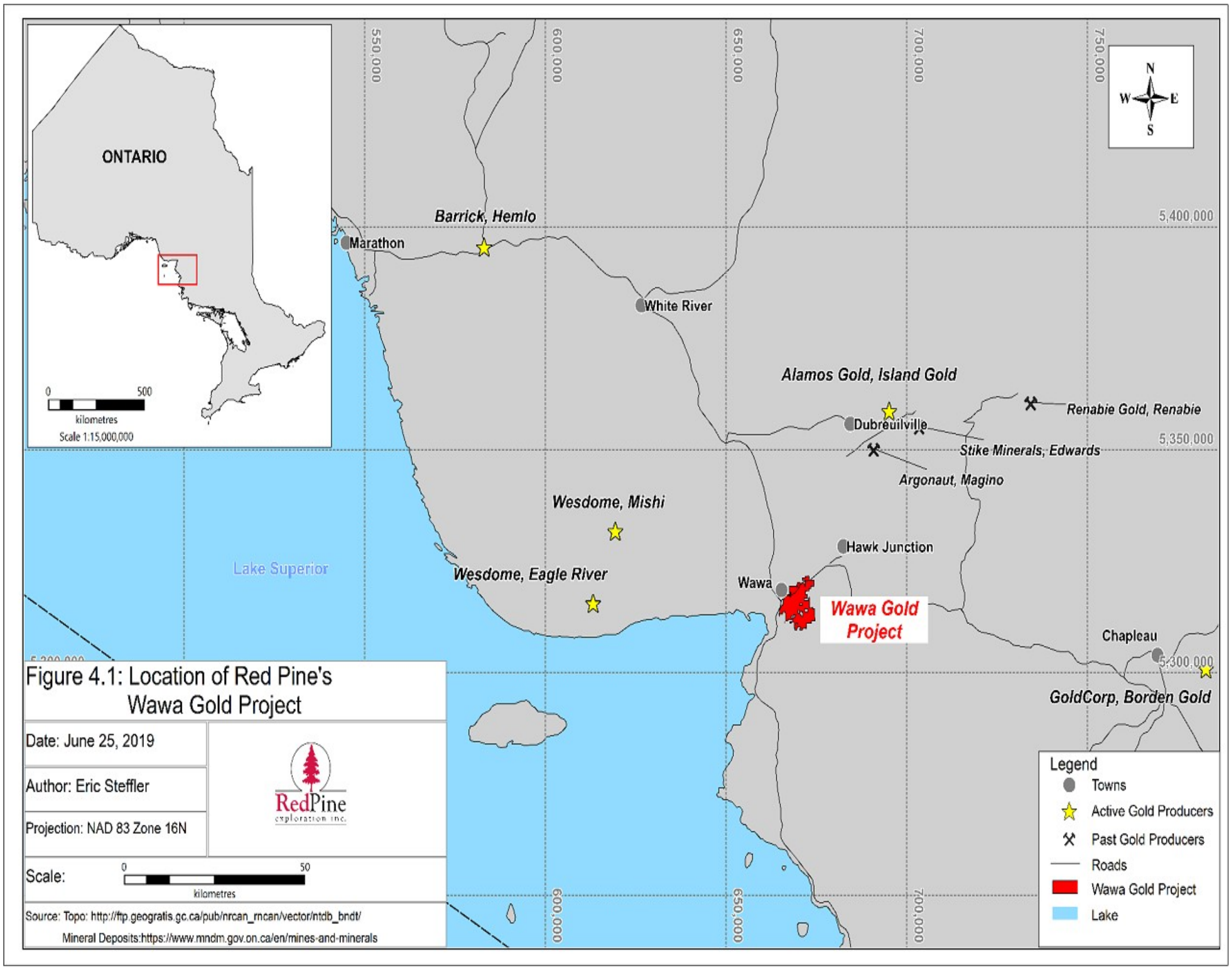


Figure 4-1: Location of the Wawa Gold Project in Northern Ontario

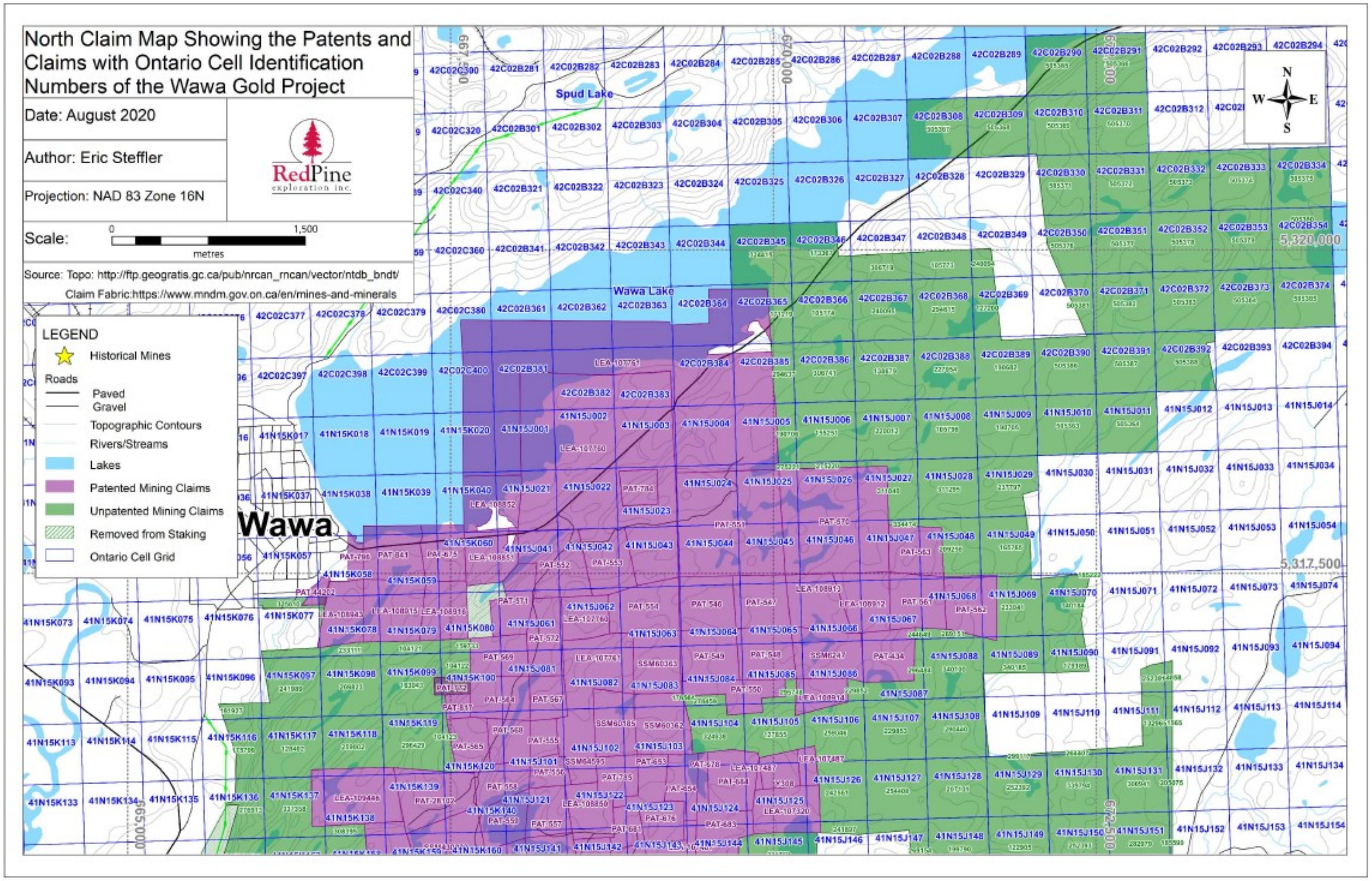


Figure 4-2: Claim map showing the Patents and Claims with Ontario Cell Identification Numbers of the Northern Wawa Gold Project

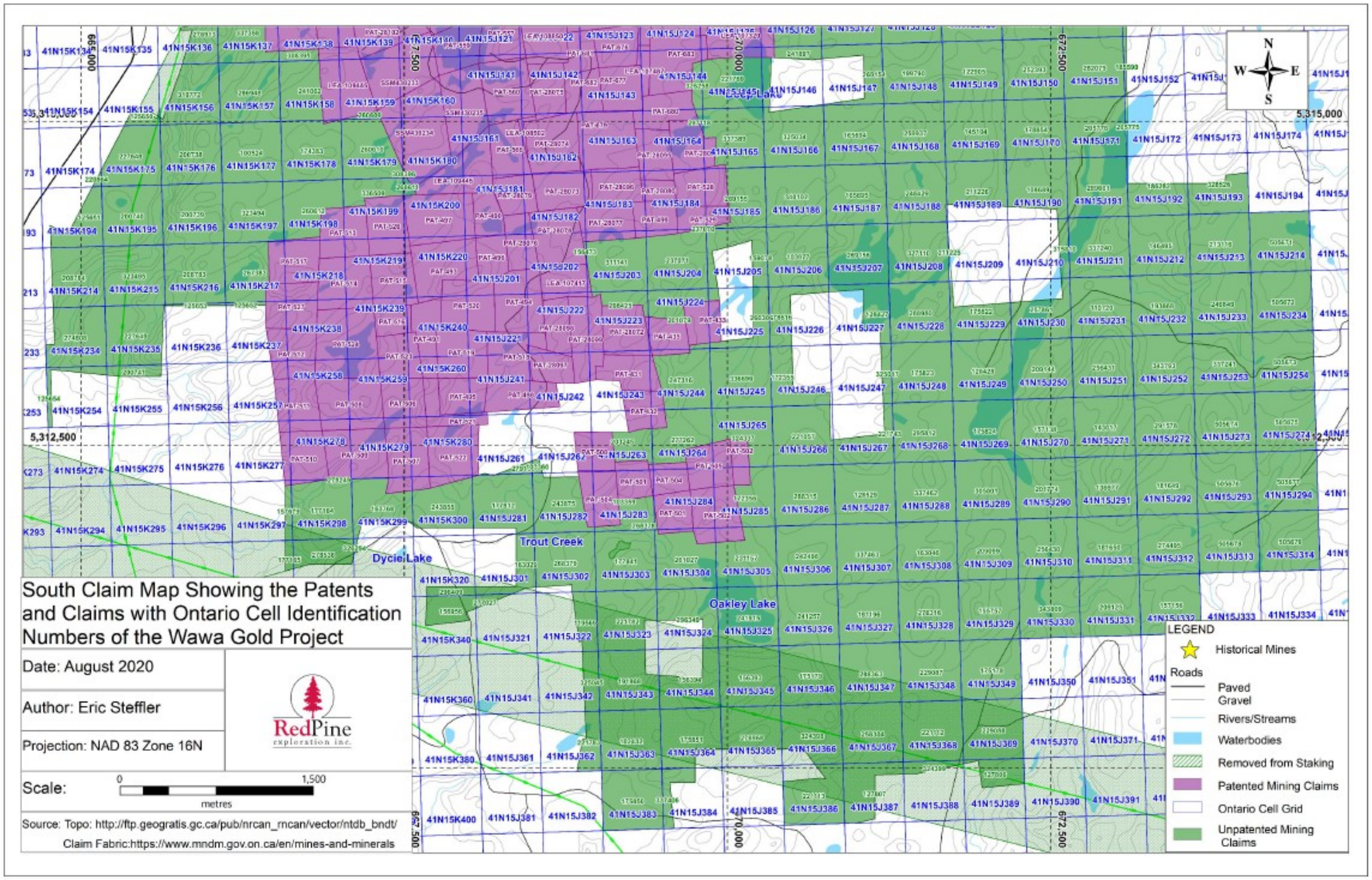


Figure 4-3: Claim map showing the Patents and Claims with Ontario Cell Identification of the southern Wawa Gold Project

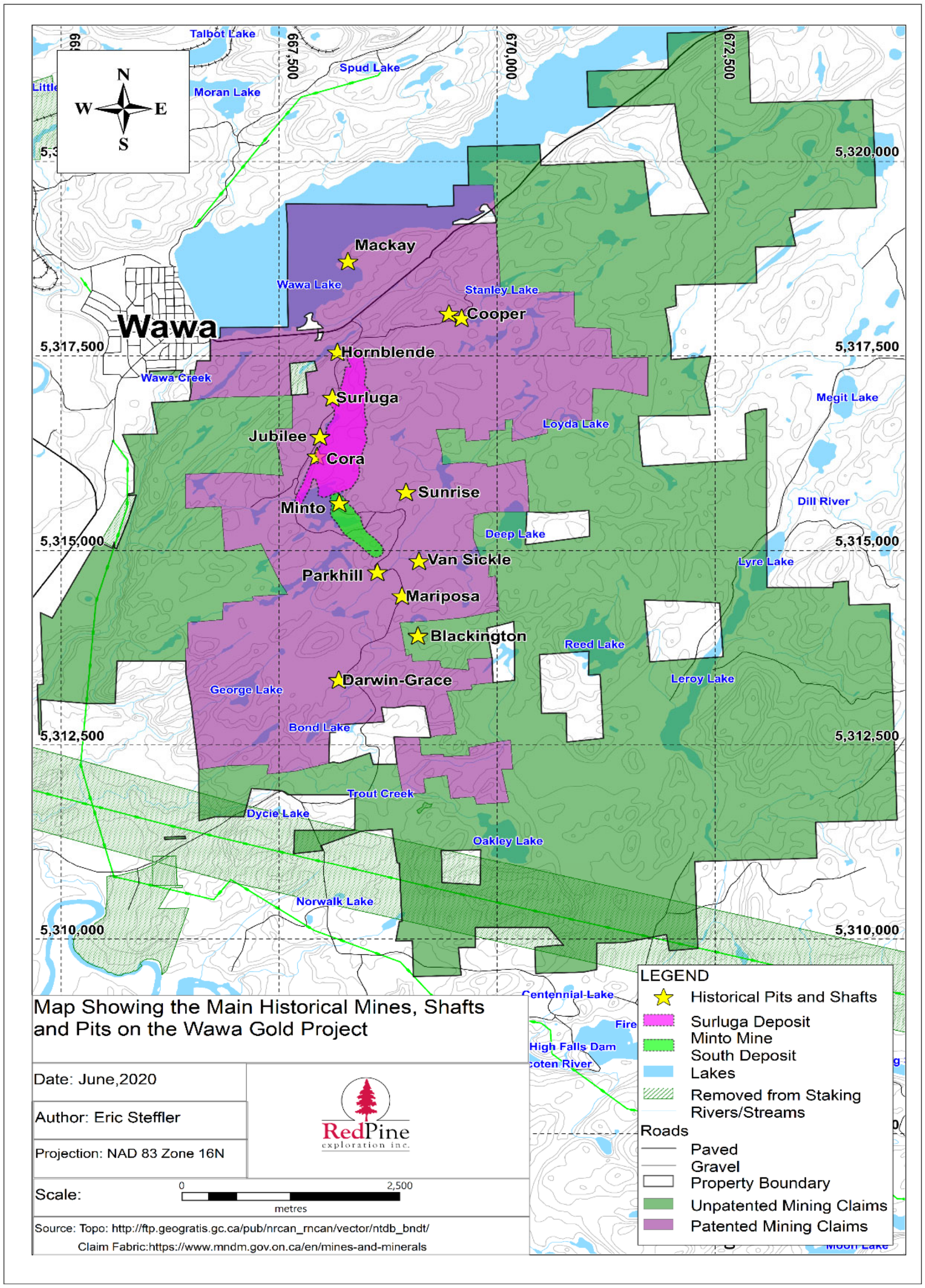


Figure 4-4: Total Land Package to 6,528 Hectares

4.3 EARLY EXPLORATION PLANS AND PERMITS

In Ontario, permits are required for exploration on unpatented mineral claims or leases. Exploration activities by Red Pine on the Project became active in 2014 and included geophysical activities requiring a power generator, line cutting where the line width is less than 1.5 m, mechanized drilling where the total weight of the rig is less than 150 kilogram (kg), mechanized surface stripping where the total stripped area is less than 100 m^2, or pitting and trenching of a volume of 1 to 3 m^3. Exploration on unpatented mineral claims or leases requires an exploration plan. Plan and permit applications are submitted to the Ministry of Northern Development and Mines for review, posting on the Environmental Registry (30 days) and circulation to First Nations communities who have areas of cultural significance. Plans are typically approved within 30 days and permits within 50 days. Plans are valid for two years and permits are valid for three years.

No exploration plans or permits are required for fee simple absolute patents and for areas that are part of a closure plan. All surface rights holders must be notified of the application in advance of the submission. Thus, for the 2017-2019 drilling and exploration seasons, no permit was required. Exploration permit PR-16-10809 expired on April 7, 2019 and a new one was obtained PR-19-000238 for the period of October 24th, 2019 to October 23rd, 2022.

4.3.1 Summary of the Agreement between Red Pine and First Nation Communities

Red Pine has entered into agreements with certain First Nations which articulate a mutually agreed upon process for consultation for exploration phase activities conducted within the exploration area. Red Pine has entered into separate agreements with the Michipicoten First Nation, Batchewana First Nation and Garden River First Nations. The stated purpose of these agreements is to articulate a clear and mutually agreed upon consultation process to identify adverse impacts to Aboriginal and treaty rights and engage with respect to accommodation, and to establish a mutually beneficial, positive and productive relationship. In addition to supporting consultation, Red Pine has agreed to support the promotion of employment opportunities for First Nation members.

While these agreements apply to exploration phase activities, the agreements contemplate the negotiation of future agreements pertaining to advanced exploration and, potentially, development.

During development of the Project, the Company agreed to the following general guidelines:

- Ensuring that Batchewana, Michipicoten, and Garden River First Nation customs are always respected
- Understand Treaty Rights and Inherent Rights
- Safety is priority for worker, general public and wildlife
- Sustainable practice intergraded into all projects dealing with environmental activities
- Protect wildlife and wildlife habitat
- Environmental impact protection
- Promoting First Nation employment opportunities

4.4 ENVIRONMENTAL CONSIDERATIONS

Red Pine and Citabar are in the process of completing a mine closure plan. All patented mining claims for which mining rights are held are part of the closure plan.

Since 2015, Red Pine has capped mine shafts that were exposed to the environment to bring all open shafts up to environmental standards.

4.4.1 Summary of the Environmental Studies Completed as part of the Mine Closure Plan

On March 1, 2017, exp Global brought to Red Pines' attention that the following, as discussed in the coming sub- items, environmental concerns would need to be addressed.

4.4.1.1 Item 1: Capping of Exposed Mine Shafts

The main shaft at the Minto Mine site was capped in 2009 and the concrete pad that was located next to the shaft opening has been broken, graded and covered. The vent raise concrete cap was reinstalled to Code requirements in the spring of 2009 and is considered complete. The waste rock dump was re-contoured to a flatter profile in October 2009.

The main shaft at the Van Sickle Mine site was capped in 2009.

4.4.1.2 Item 2: Acid Drainage Potential

In 2009 representative waste rock samples from the Parkhill site were sent to ALS Chemex in Vancouver for analysis of acid generating potential. The results from these samples confirmed the earlier CANMET findings i.e. that buffering capacity is moderate to high in all rock samples found at the sites.

The main shaft at the Park Hill Mine site was backfilled with cemented mine waste in 1995. The Parkhill Mine zone of thin crown pillars was closed by blasting prior to 1996 and the open stope was filled prior to 1997.

4.4.1.3 Item 3: Revegetation

Due to the ongoing exploration by Red Pine Exploration, Item 2 – Revegetation has been delayed.

4.4.1.4 Item 4: Surface and Ground Water

Run-off is directed from the Parkhill and Grace to Darwin sites in a southerly direction toward Trout Creek. Trout Creek eventually enters the Michipicoten River south of the property. The Ontario Ministry of the Environment (MOE) has issued an Ontario Water Resources Act, Section 53 Certificate of Approval (COA) No. 4-0101-88-896 in 1989 with respect to the Minto Lake Tailings Dam and Pond. As per the conditions of the COA, which includes a comprehensive surface water monitoring program, the result of surface water sampling and analysis are that effluent quality continues to remain within COA limits.

No ground water issues are expected to require management at the time of final closure.

4.4.1.5 ITEM 5: AQUATIC PLANT AND ANIMAL LIFE

Minto Lake has been supporting a fish community of brook trout, white suckers and cyprinids and is managed by the Ministry of Natural Resources. Post closure, it is not anticipated that this arrangement will change.

4.4.1.6 ITEM 6: ROAD SPILLWAY CONSTRUCTION

The reconstruction of the spillway out of Minto Lake, as per the Closure Plan. The initial design and survey work were completed in 2009 with construction completed in summer 2010.

5 Accessibility, climate, local resources, infrastructure, and physiography

5.1 ACCESS

The town of Wawa is located on Highway 17 (Trans-Canada Highway), ~480 km east of Thunder Bay, Ontario, ~225 km north of Sault St. Marie, Ontario, and ~650 km northwest of Toronto, Ontario. The property can be accessed by driving 2 km on Highway 101 from Wawa and then turning south onto a gravel road (the ‘Surluga Road’) using a 2-wheel drive vehicle (**Error! Reference source not found.**). During the winter months, the main access road to the property from Highway 101 is ploughed. Areas off the main road can be accessed by snowmobiles.

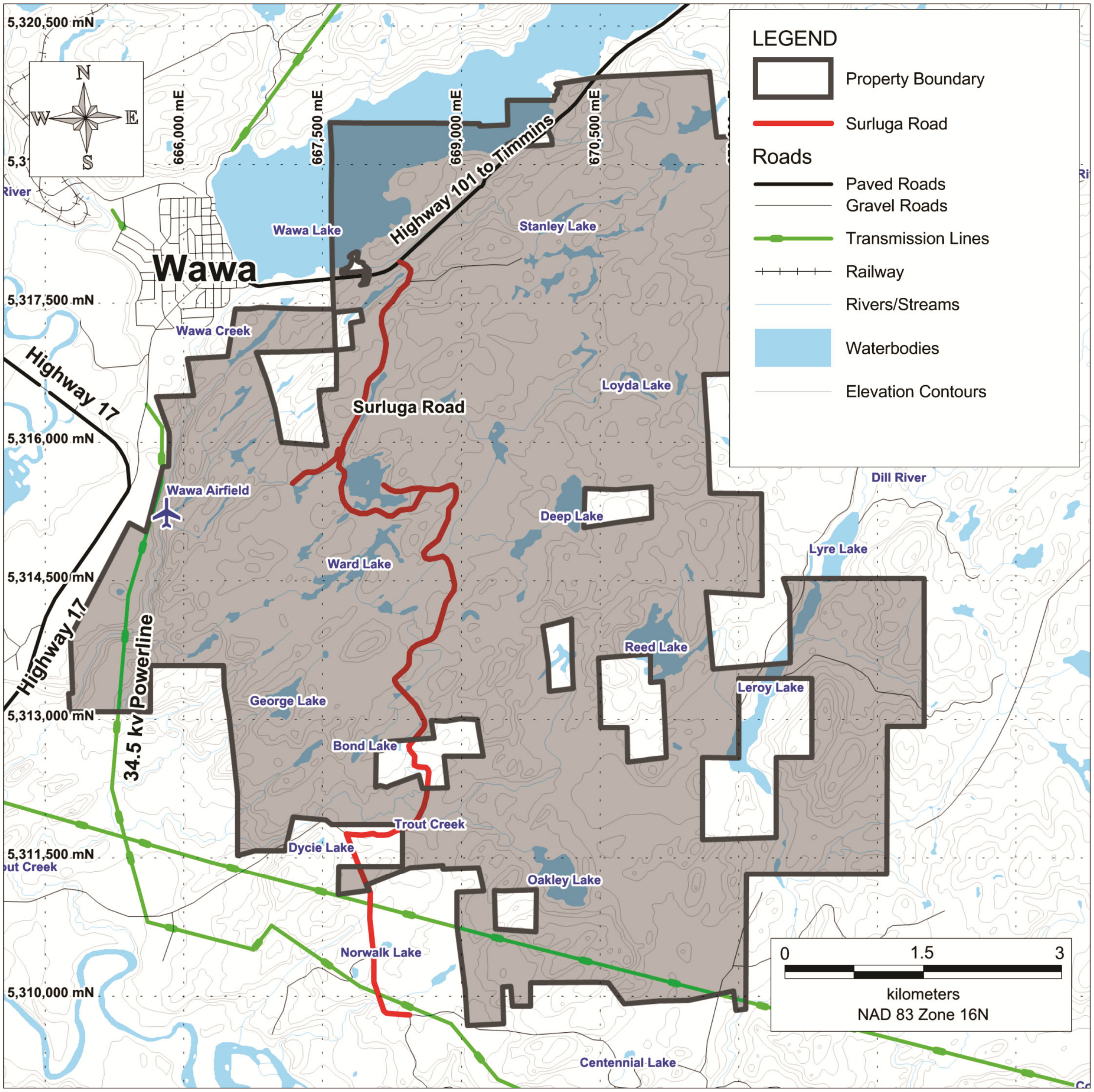


Figure 5-1: Wawa Gold Project with surrounding infrastructures

5.2 CLIMATE

The vicinity to Lake Superior has a significant impact on the climate on the property. Environment Canada has recorded weather details in Wawa since 1981 (http://climate.weather.gc.ca) and shown that the warmest temperatures are recorded in July and August (daily average 15° C; daily maximum 20.8° C). The coldest temperatures are typically recorded in January (daily average −14° C; daily minimum −20.2° C). September and October are the months with the most rainfall (~122 and ~107 mm, respectively) and the highest snowfall occurs in December (80 cm). Exploration can be completed on the property year-round.

5.3 PHYSIOGRAPHY AND VEGETATION

The town of Wawa is located at an elevation of 289 m asl. The area of the property is hilly with a range of elevations from 300 m to 400 m asl. Steep ridges exist locally. The property is forested with spruce, pine, poplar and birch being the dominant species.

5.4 LOCAL RESOURCES AND INFRASTRUCTURES

Skilled and unskilled labor is available in Wawa because of the long mining history in the area. Wawa has a population of 2,975 persons (http://www12.statcan.gc.ca/census-recensement/2011).

A 230-kV power line crosses the southern part of the property and a second power line crosses the western part of the property. An airport exists in Wawa, but no commercial airlines operate out of the airport. Canadian National Railways acquired Algoma Central Railway and no longer operates freight service between Sault Ste. Marie and Hearst. Passenger service existed to Hawk Junction, 23 km northeast of Wawa until the end of 2015.

Enough water is available from lakes and streams on the property. Surface rights for a large part of the property are held by Red Pine's joint venture partner Citabar Limited Partnership (acting by and through its sole general partner Wawa GP Inc.) and are adequate for any potential mining operation

6 History

The Project has a long exploration history that began in the late 1800s and has been discontinuously explored and worked since discovery. This long period of activity resulted in the exploitation of 8 gold mines. Preserved records of production have been summarized by Sage (1993) and Rupert (1997) who also provide a detailed overview of historic exploration which was extensive in some parts of the property (Table 6-1; Figure 6-1).

A total of 127,489 metres of historic drilling from 580 surface diamond drill holes and 1,444 underground diamond drill holes have been recorded and compiled in Red Pine's drilling database (Figure 6-2). Widespread stripping and sampling of trenches, the sinking of shafts and the collection of numerous samples has also been completed on the property. This item presents the history of exploration and mining activity that occurred on the Project and stages of the amalgamation of the different land packages that now form the current Project.

Table 6-1: Historic gold mine and gold production that were active on the Wawa Gold Project

Mine	Tonnes Milled	Gold Grade (g/t)	Gold Recovered (Ounces)
Mariposa	8	**72.99**	**19**
Grace+Darwin	41,302	**13.27**	**17634**
Parkhill	114,096	**14.81**	**54298**
Van Sickle	8,372	**6.34**	**1710**
Cooper	4,435	**11.42**	**1627**
Jubilee	107,930	**4.29**	**36178**
Minto	**57,335**	**12.56**	
Surluga	86,082	**3.12**	**8626**
Total	**419,560**	**9.04**	**120,093**

6.1 DISCOVERY PERIOD - 1897 TO 1910

The Wawa area has been explored for gold since the 1860s (Rupert, 1997, **Error! Reference source not found.**). Gold was first discovered by William Teddy in 1897 at Mackay Point and panned along the south shore of Wawa Lake at Mackay Point(Frey, 1987; **Error! Reference source not found.**2, **Error! Reference source not found.**3).

A staking rush followed the discovery and benefited from the change in claim staking adopted by the Ontario Government to encourage staking in 1895 (MacMillan and Rupert, 1990). This early rush period resulted in multiple discoveries.

Attempts to produce gold from bedrock started in 1897 with the sinking of many shafts and the digging of many test pits throughout the property. In 1897 and 1898 on the Jubilee Shear Zone west of Jubilee Lake, a 103 ft shaft was sunk by the Great Northern Mining Company Ltd. in sericite schists (Sage, 1993). Gold values encountered in that shaft were described as negligible. In 1897, S. Berailldt discovered the Minto Mine and sold it to D. Tisdale who sank a 130 ft inclined shaft on the vein. Work on the Minto Mine was suspended in 1900. In 1898, Mr. A. B. Blackington and Mr. W.H. Lewis discovered the Blackington vein (now known as the Mariposa Vein). In 1900, the Edey Gold Mining Company sunk a 33 ft shaft and dug many 25 ft deep pits (Sage 1993).

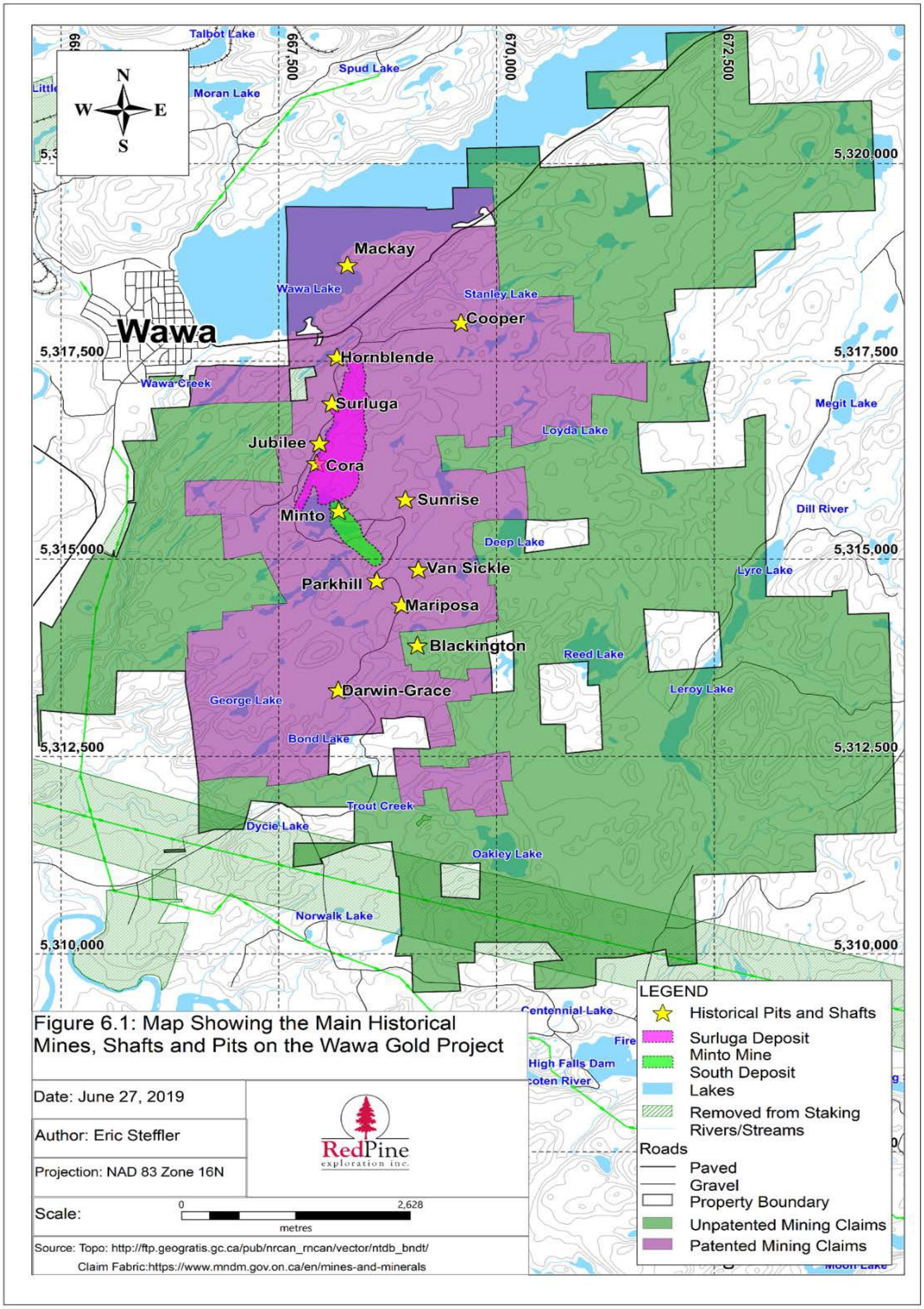


Figure 6-1: Map showing the main historic mines, shafts and pits of the Wawa Gold Project

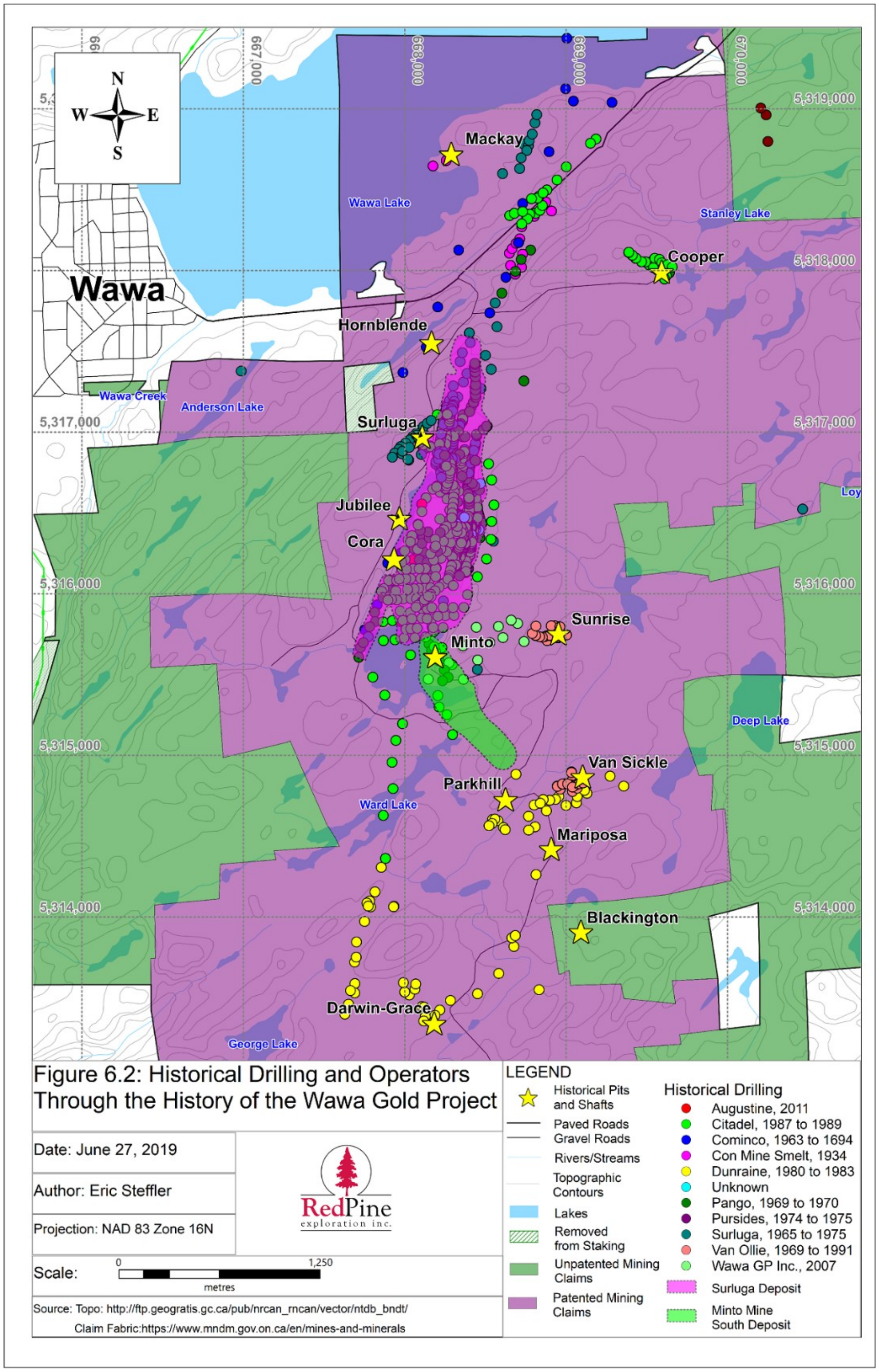


Figure 6-2: Historic drilling and operators through the history of the Wawa Gold Project

Table 6-2: Historic exploration and mining activity during the Discovery period of the Wawa Gold Project

Company	Years	Exploration	Results	Reference
William Teddy, and J.J. Mackay and J.L. Caverhill	1897-1900	Discovery of gold on the shore of Wawa Lake at Mackay point Pitting and trenching of auriferous quartz veins	Staking rush in the Wawa area and discovery of Wawa Gold Camp Sinking of a 8 by 10 by 40 foot shaft	Sage, 1993
Great Northern Mining Company Ltd.	1897-1898	Discovery of auriferous sericitic schists west of Jubilee Lake related to Jubilee Shear Zone Sinking of a 103-foot shaft	Gold grade in shear zone were described as negligible; Operation abandoned	Sage, 1993
S. Beraildt and D. Tisdale	1897-1900	Discovery of the Minto Mine; Stripping and pitting; Sinking of a 133-foot inclined shaft	Records lost	Sage, 1993
Mr. A. B. Blackinton and Mr. W.H. Lewis, and Edey Gold Mining Company	1898-1900	Discovery of the Mariposa Vein; Sinking of the 33-foot Blackington shaft on the vein; Digging of several 25-foot-deep pits	Records lost	Sage, 1993
Peter Nissen and Hornblende Mining Company	1899-1900	Discovery of the Hornblende Shear Zone; Sinking of two shafts and construction of a test mill near Hornblende Lake	Results lost	Sage, 1993
J. George and Algoma Commercial Company	1900-1903	Discovery of the Grace vein; Sinking of the 304-foot shaft on the Grace Mine	Gold production from 6,097 tons of ore through a 10 ton per day stamp mill ending in 1902; Company went into receivership in 1903	Sage, 1993
Sunrise Mining Company	1902-1903	Sinking of a 100-foot inclined shaft and a 20-foot vertical shaft on the Sunrise vein	Records lost	Sage, 1993
Mariposa Gold Company	1902-1904	Discovery of the northern extension of the Mariposa vein; Sinking of the 208-foot Mariposa shaft	Limited gold production of 18 ounces of gold from two levels at 100 and 200 feet	Sage, 1993
Stanley Newton Syndicate	1903	Sampling, geological assessment	Several Au-bearing veins located; conclusions "Michipicoten gold district will become one of the important gold camps of America"	Boss, 1903 (41N15NE0039)
Lepage Gold Mining Company	1907-1910	Rehabilitation and operation of the Grace Mine	Production of 4,260 tons of ore from the Grace vein	Sage, 1993

In 1899, Mr. Peter Nissen discovered gold in the Hornblende shear Zone. Two inclined shafts of 22ft and 32ft were sunk and a test mill was constructed in 1900 near Hornblende Lake by the Hornblende Mining Company. In 1902 and 1903, the Mariposa Gold Company sunk the 208ft Mariposa shaft, inclined at 80°NE in the footwall of the Mariposa Vein with two drifted levels at 100ft and 200ft (Sage, 1993).

Gold production on a larger scale started in 1900, following the discovery of the Grace vein. The Algoma Commercial Company started the Grace Mine by sinking a 304ft shaft on the Grace vein and produced 6,097 tons of ore (Sage, 1993). Commercial gold production at the Grace mine ceased in 1903 and resumed between 1907 and 1910 when the mine was operated by the Lepage Gold Mining Company who produced 4,260 tons of ore.

6.2 PEAK OF MINING ACTIVITY - 1925 – 1938

During the period between 1910 and 1925, the Wawa Gold Project saw an exploration and production hiatus characterized by brief periods of activity and many land transactions between different parties (Sage, 1993). The following period, extending from the mid-late 1920s to the late 1930s, saw the peak of mining activity on the property with several mines in operation. Production records exist for eight of the mines during this period (Cooper, Minto, Jubilee, Parkhill, Grace-Darwin, Mariposa and Van Sickle; Figure 6-1, **Error! Reference source not found.**; **Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.**; MacMillan and Rupert, 1990; Sage, 1993). The Cora vein, located in the Jubilee Shear Zone, was also briefly mined in the Cora shaft in 1927 and constitutes the first area mined of the Jubilee Shear Zone. The other larger mine from that period, extracting gold from the Jubilee Shear Zone, was the Jubilee Mine that produced 107,930 tonnes at 4.29 g/t gold. The largest producer of that period was the Parkhill Mine, active between 1929 and 1938 and produced 54,298 ounces of gold from 114,096 tonnes at 14.81 g/t gold (**Error! Reference source not found.**). By the late 1930s, 15 mines produced gold in the Wawa area (Frey, 1987).

6.3 SURLUGA MINE DISCOVERY AND FIRST MINING OPERATION - 1960 TO 1976

The 1940s and 1950s was characterized by little exploration and salvaging operations at the Grace-Darwin and Deep Lake Mines. In the 1950s, Tom Surluga became quite active in the region and initiated many land transactions to consolidate separate land packages covering what is now the Surluga Deposit (Sage, 1993).

Exploration and development activity resumed in 1960 when Tom Surluga interested W.D. Sutherland in the region (**Error! Reference source not found.** and **Error! Reference source not found.**). Sutherland and company continued the consolidation of the property and in 1960-1961, drilled 25 holes in what is now the northern extension of the Surluga Deposit (**Error! Reference source not found.**). In 1962, following the successes of the 1960-1961 drill programs, Sutherland and company formed Surluga Gold Mines Limited, which continued land consolidation and surface drilling over the Surluga Deposit (Table 6-8). The property was optioned to Consolidated Mining and Smelting Limited in 1964 and drilled 20 surface diamond drill holes and dropped the option in June 1964. Between 1964 and 1968, Surluga Gold Mines Limited sank a 950ft shaft with 7 levels, forming what is now known as the Surluga mine. The shaft included 7 levels spaced by 150ft. In 1967, Surluga Gold Mines Limited constructed a 750 ton per day mill on the property and started an extensive underground drilling program. The mill was in operation in 1968 and 1969, although underground development continued past 1969 (**Error! Reference source not found.** and **Error! Reference source not found.**). Development of the Surluga Mine and exploration between 1969 and 1971, was in partnership with Pango Gold Mines Limited, which became part owner of the Surluga Mine, and was a subsidiary of Prado Exploration Limited, and Surluga Gold Mines Limited (Sage, 1993). Extensive surface drilling, drifting and underground drilling in the Surluga Deposit occurred during that period resulting in the discovery of the 6-5 high-grade zone.

Table 6-3: Historic exploration and mining activity during the peak of mining activity on the Wawa Gold Project

Company	Year(s)	Exploration	Results	Reference
Anglo Huronian Ltd. And Cooper Gold Mines	1926–1929	26 surface diamond drill holes and underground development at Jubilee Mine	No results reported	Rupert, 1997
Cooper Gold Mine Limited	1926-1930	Diamond drilling and exploration of Minto, Jubilee, Cooper and Trout Creek (Parkhill) mines Gold production from the Minto Mine	Exploration results lost; Sinking of a 3-compartment vertical shaft in the Minto Mine with levels at 125, 225 and 325 feet; 5,818 of lateral drifting	Sage, 1993
Power and Mines syndicate	1926-1930	Resumption of mining in the Grace Mine; Discovery of Nyman vein	Sinking of the shaft to 440 feet; Production of 750 tons of ore	Sage, 1993
Cora Gold Mines Limited	1927	Sinking of Cora shaft, 3 diamond drill holes	Records lost	Sage, 1993
Parkhill Gold Mines	1929–1938	Shaft started in 1930; Operated Parkhill mine	Production of 54,298 ounces of gold; Bankruptcy in 1938; Ore grade material reported left at the 14th level	41N15NE0087 (Amalgamation of several reports)
Minto Gold Mines	1930–1939	Purchase and operation of the Cooper, Minto and Jubilee Mines; Operation of a 75 ton per day cyanide mill	Gold production from the Cooper (1,627 ounces of gold), Jubilee and Minto Mines (combined production of 36,178 ounces of gold)	Sage, 1993 Rupert, 1997
L.A. Van Sickle and S.B. Smith	1933-1936	Discovery and operation of the Van Sickle mine	Sinking of a 289-foot shaft with levels at 119 and 261 feet; 50 ton per day mill erected; Production of 1,710 ounces of gold	Sage, 1993 Rupert, 1997
Mackay Point Syndicate	1933/34	Metallurgical testing, 15 ddh	Up to 17 g/t Au over 0.3 m in core	Mackey Point Syndicate, 1933 (42C02SE0021)
Darwin Gold Mines Limited	1934-1937	Gold production from the Darwin Mine	Deepening of inclined shaft to 500 feet; Sinking of a vertical shaft to 800 feet; 10,400 feet of drifting, 2,900 feet of crosscutting and 4,000 feet of raising; Total gold production from Darwin-Grace mine of 17,634 ounces of gold	Sage, 1993 Rupert, 1997

Company	Year(s)	Exploration	Results	Reference
W.J. Hocking and J.C. Canfield	1934-1939	Discovery and operation of Deep Lake Mine	Construction of 20 ton per day mill; Sinking of a 200 foot two compartment shaft with two levels;	
Mackay Point Gold Mines Limited	1936-?	Trenching, pitting and 4,285 feet of diamond drilling at Mackay Point and on Root vein	Records lost	Sage, 1993
Wawa Gold Fields Limited	Pre-1934	Trenching and stripping of Figgus vein	Assays between $0.70 across 24 inches to $262.85 across 18 inches reported (gold between $20.5 and $35/oz in 1934)	Rupert (1979)

Table 6-4: Historic exploration and mining activity during the first development of the Surluga Mine

Company	Year	Exploration	Results	Reference
Tom Surluga and W.D. Sutherland	1960-1962	Consolidation of land package over Surluga Deposit and 25 surface ddh	Discovery of Surluga Mine S022 drilled in 1961contained 10.27 g/t gold over 15.12 metres	Sage, 1993
Surluga Gold Mines	1962-1964	Surluga Gold Mines Incorporated; 64 surface ddh	Extension of Surluga high-grade zone; Mine construction started; Intersection of broad zones of mineralization in the footwall of Jubilee Shear Zone in S087 and S088	Kuryliw, 1970 & 1972 (41N15NE0036)
Cominco	1964	Optioned property; mapping; geophysics (no specific method mentioned); 20 ddh	Geophysics inconclusive; VG in one drill hole	Morris, 1964 (42C02SE9043)
Surluga Gold Mines	1964–1969	3 shafts sunk, levels 1, 2, 3 and 5 developed; Surluga mine brought into production, Surface and underground diamond drilling from 1964 to 1969	Mine operated from 1968 to 1969; drilling intersected numerous gold- rich zones leading to the discovery of the 6-5 ramp zone; One of discovery hole (U0769L6) contained 6.15 g/t gold over 66.29 metres	Surluga Gold Mines Annual Report (41N15NE0063) Kuryliw, 1972 (41N15NE0036) Kuryliw, 1969 (41N15NW0037)

Company	Year	Exploration	Results	Reference
Pango Gold Mines Ltd.	1969-1971	JV with Surluga Gold Mines: expansion of underground workings, underground drilling; detailed surface mapping. Ground mag survey 1 Ground mag survey 2	New drifts and adits; "good" grades returned from ddh (no assay data available) Ground mag survey 1: Oct-Nov 1969. Line spacing 400 ft (=121.92 m), Tie spacing 2000 ft (=609.60 m). An inclined gabbro plug East of Jubilee Lake containing disseminated pentlandite-chalcopyrite-pyrrhotite mineralization was found to have highly magnetic pyrrhotite- pentlandite but the gabbroic rock itself was found to have low magnetics, notable lower than the biotitic syenite intruded by the gabbro. A 1000 gamma (=1000 nT) anomaly was identified and noted to be associated with disseminated pentlandite-pyrrhotite mineralization in the gabbro, east of Jubilee Lake. The un-mineralized gabbro was noted to have a flat magnetic response. Additional magnetic anomalies are noted to be associated with peridotite plugs, and are considered to be part of the Pango intrusive complex. Ground mag survey 2: April-July 1970. 74.82 line-miles (=120.41 line-km) at 400 ft (=121.92 m) line spacing, 3000 ft (=914.40 m) tie lines, and 100 ft (=30.48 m) station spacing. July 1970, 6.3 line-miles (=10.14 line-km) of ground mag completed at 100 ft (=30.48 m) stations. Magnetic flat response, indicating a uniform suite of rocks. One 2000 gamma (=2000 nT) anomaly was noted, adjacent to a carbonatite plug	Kuryliw, 1972 (41N15NE0036) Kuryliw, 1969 (41N15NW0037) Tindale, 1970a (42C02SE0208) Tindale, 1970b (41N15NE0008)
JDS Bohme Property	1970	Ground mag survey	Survey completed at 400 ft (=121.92 m) line spacing. Only magnetic linear anomalies noted, interpreted to be gabbroic intrusive dykes	Kuryliw, 1970 (41N15NE0516)

Company	Year	Exploration	Results	Reference
Pango Gold Mines Ltd.	1971	Ground mag survey; 1 ddh on north shore of Reed Lake into mag anomaly	Ground mag survey: 100 ft (=30.48 m) intervals. Anomaly found - recommended for follow up drilling: ultramafic rock with magnetite, minor sulfides, no gold	Kuryliw, 1971a (41N15NE9035) Kuryliw, 1971b (41N15NE0088)
Surluga Gold Mines (under the name of Pursides Gold Mines Ltd.)	1973-1975	Mine reopened; new drifting on the 6th level, decline between 6th and 7th level; underground diamond drilling	Resources delineated based on drilling	41N15NE0036 (Amalgamation of reports. p. 79)
Consolidated Morrison Explorations Ltd	1974	Airborne magnetic and radiometric survey (Aerodat)	Mag and radiometric anomaly related to carbonatite	Boyko, 1974 (42C02SE1210)
Pursides Gold Mines	1974-1975	VLF-EM survey	VLF-EM: Summer 1974, winter 1975. 8 anomalies detected, 1 recommended for follow-up	Crone, 1975 (41N15NE0082)

Pango Gold Mines completed limited drilling on other prospects on the property (Cooper Mine, Reed Lake mafic-ultramafic complex) as well as surface exploration, geological mapping, and geophysical surveys. Limited exploration conducted by other parties also took place on the property in that period. In 1973, Surluga Gold Mines changed its name to Pursides Gold Mines Limited and conducted an underground exploration program in the Surluga Deposit and the development of levels 6 and 7. All exploration and development activities on the Surluga Deposit stopped in 1975 and Pursides Gold Mines Limited was forced in receivership in 1976.

Table 6-5: Historic surface diamond drill holes completed on the Wawa Gold Project in the 1960-1975 period

Company	Year Drilled	No of DDH	Meterage (m)
Sutherland	1960	8	744.2
Sutherland	1961	17	2,135.93
Surluga	1962	51	5,975.98
Surluga	1963	13	2,092.62
Cominco	1964	20	2,633.03
Surluga	1968	16	1,673.31
Surluga	1969	13	2,874.61
Pango	1969	43	6,811.11

Table 6-6: Historic underground diamond drill holes completed in the Surluga Deposit in the 1960-1975 period

Company	Year drilled	No of DDH	Meterage (m)
Surluga	1967	9	243.63
Surluga	1968	261	8,276.04
Surluga	1969	57	1,183.72
Pango	1969	309	10,654.07
Pango	1970	100	3,596.02
Pursides	1974	31	787.21
Pursides	1975	170	4,216.69
Surluga	1975	1	6.10
Log Missing	?	47	1,748.61

Table 6-7: Highlight from surface holes drilled in the Surluga Deposit between 1960 and 1969

Hole No	Year Drilled	From (m)	To (m)	Interval (m)*	Au (g/t)
S012	1961	35.81	87.94	52.13	1.31
S022	1961	71.35	133.84	62.49	2.91
S023	1961	76.35	126.49	50.14	1.96
S028	1962	57.61	121.31	63.70	2.78
S030	1962	78.03	132.92	54.89	1.01
S048	1962	80.16	132.89	52.73	1.16
S056	1962	73.61	109.88	36.27	1.50
S062	1962	56.39	91.29	34.90	2.39
S063	1962	16.28	44.01	27.73	2.46
S141	1969	118.57	184.71	66.14	0.77

**Intervals listed here do not represent true thickness.*

6.4 EXPLORATION CONCENTRATED THE SOUTHERN PART OF THE WAWA GOLD PROJECT - 1980 TO 1986

The bankruptcy of Pursides Gold Mines, and its reorganization as Citadel Gold Mines Inc. ("Citadel") in 1980, corresponds to a hiatus in development and exploration activities on the Surluga Deposit. Between 1982 and 1986, Citadel consolidated various properties from previous owners into one land package. Limited surface exploration, till sampling and geophysics (ground magnetic and VLF-EM surveys) were done by Pango Gold Mines on Citadel-Pango land package (**Error! Reference source not found.**8).

Most of the exploration activities between 1980 and 1986 were conducted by or on behalf of Dunraine Mines Ltd. ("Dunraine") and were centered on the historic Parkhill, Van Sickle and Grace-Darwin gold mines (Table 6-8). In 1980, Dunraine focused its efforts on drilling around the Parkhill and Van Sickle Mines. In 1981, Dunraine drilled the Darwin Shear Zone, recognized as the possible extension of the Jubilee Shear Zone south of the Parkhill Fault (**Error! Reference source not found.**9; Harper 1981a, b). Between 1982 and 1984, Dunraine continued drilling as well as trenching and surface mapping, with most of the efforts focused on the Darwin Shear Zone and the Grace-Darwin mine with limited testing of other known gold showings south of the Parkhill fault.

Dunraine also dewatered, sampled and mapped the upper 6 levels of the Parkhill Mine and tested the grade of the Parkhill Mine tailings (Gignac, 1983; Studemeister, 1983, 1984). Dunraine also proposed a syn-genetic gold model to explore the property. In 1986, Goldun Age Resources Inc. entered an option agreement with Dunraine in 1986 and continued the dewatering of the underground workings on the Parkhill property. The underground workings were mapped, sampled and evaluated. Tilsley (1986) concluded that gold remained in pillars, floors and backs of stopes, particularly above the 1st level, but that little minable material was left below the 3rd level. He reports that, broken material and material washed from the stopes had grades comparable to the ones reported from the stopes except for material from the Mill Vein on 3rd level, which had grades up to 3 ounces per ton (102.86 g/t Au; average grade 24 g/t Au; Tilsley, 1986). Tilsley (1986) also concluded, that the mined lenses would not extend up dip to the property boundary and that there are no undiscovered lenses.

Table 6-8: Historic exploration during the 1980-1986 period

Company	Years	Exploration	Results	Reference
Golden Goose Gold Mines Ltd.	1978	Acquires Deep Lake Mine		Rupert, 1990 (41N15NE9036)
Dunraine Mines Ltd.	1980	38 surface drill holes (3385.1 m); sampling of Parkhill tailings (235 samples)	Best intersection in D80-18: 46.22g/t Au over 0.88 m; average grade of Parkhill tailings 0.86 g/t	Harper, 1981a (41N15NE0054)
Golden Goose Gold Mines Ltd.	1980	35 channel samples of Surface expression of Deep Lake Mine Ground mag survey VLF-EM survey	Below detection limit to 0.91 g/t (average: 0.31 g/t Au); Rupert (1980a) concluded that no economic potential exists at the mine.	Rupert, 1980a (41N15NE9036) Rupert, 1980b (41N15NE007 8)
Pango Gold Mines Ltd.	1980	Ground mag survey	Ground mag and VLF-EM: no significant anomalies noted; Two structural/lithological features identified: 1. east-west trend related to metavolcanic rocks, 2. northwest- southeast trend related to diabase dyke. Two oval shaped anomalies identified, mapped as gabbroic-diorite intrusions	Kuryliw, 1980 (41N15NE0077) Piaza, 1984 (41N15NW002 6)

Company	Years	Exploration	Results	Reference
Dunraine Mines Ltd.	1981	20 surface drill holes on Darwin Shear Zone (4919.7 m); dewatering of Parkhill mine	Best intersection in D81-2: 34.97 g/t Au over 0.15 m	Harper, 1981b (41N15NE0061)
Dunraine Mines Ltd.	1982	8 surface drill holes (410.6 m); continued dewatering of Parkhill	Best intersection in D82-4: 7.61 g/t Au over 1.5 m	Harper, 1982 (41N15NE0061) Gignac, 1983 (41N15NE0055)
Pango Gold Mines Ltd.	1982	VLF-EM survey 1 (April 19-21, 1982) VLF-EM survey 2 (April-May 1982)	VLF-EM survey 1: 3 conductors identified, two recommended for drilling VLF-EM survey 2: 10 conductive anomalies identified, thought to be caused by bedrock sources; IP recommended as follow-up tool for prioritization	Kuryliw, 1982 (41N15NE0057) Piaza, 1984 (41N15NW002 6)
Northern Horizon Resources Ltd.	1981	Ground mag survey	300 ft (=91.44 m) line spacing. One horseshoe-shaped magnetic anomaly identified, interpreted as possible folded structure	Kuryliw, 1981 (41N15NE0524)
Canbec Explorations Ltd.	1983	Ground mag survey (May 1983) VLF-EM survey (May- June 1983)	Ground mag survey: 5.9-line miles (=9.50 line-km) were run at 200 ft (=60.96 m) and 400 ft (=121.92 m) line spacing, with station spacing of 50 ft (=15.24 m) over 3 claims. Results showed weak overall magnetic signature, with anomalies identified as diabase dykes and felsic volcanic flow unit. VLF-EM survey: 5.9-line miles (=9.50 line-km) at 200 ft (=60.96 m) and 400 ft (=121.92 m) line spacing and 100 ft (=30.48 m) station spacing. One anomaly noted, trending north-south and in strike with the Darwin Shear. Noise related to the power line was noted.	Archibald, 1983a (41N15NW0029) Archibald, 1983b (41N15NW0029)

Company	Years	Exploration	Results	Reference
Dunraine Mines Ltd.	1983	Mapping, drilling (6 ddh; 738.2 m): 83-1 to -6; rock samplingVLF- EM Survey	Outlined shear-zone hosting Au; proposed syngenetic genesis; 0.9–1.8 m of 3.4 g/t in 3 ddh; geochem survey indicated Au only near Darwin shear VLF-EM survey: Phase 1 covered the Darwin EW grid extending from Moody Pit to the Darwin Shear. Phase 2 covered southern half of Darwin Shear. The northern half of the Darwin Shear was not able to be surveyed due to remanence of the power and telephone lines; 5 conductors were found in the vicinity of the Darwin Mine; The Darwin Shear was noted to be a conductive structure, and areas where east-west striking conductors intersect the structure were considered prospective. Geochemical surveys were recommended for follow-up	Studemeister, 1983 (41N15NE0041)
Northern Horizon Resources Ltd.	1983	Dighem III FDEM	April 1-4, 1983, 298 line-km and 300 m line spacing, 30 m EM sensor height, 45 m mag sensor height. 20 anomalies identified as moderate-high priority	Smith and Dvorak,1983 (42C02SE050 5)
Pango Gold Mines Ltd.	1984	Till sampling: 47 overburden holes	Anomalous zones near faults and shears identified but no economic significance attributed to anomalies	Gillis, 1984 (41N15NW002 7)

Company	Years	Exploration	Results	Reference
Monte Christo Resources	1984	Ground mag survey VLF-EM Survey Geologic mapping EM-17 HLEM 3 ddh targeting conductors (W-1, -2, - 2A, -3	Ground mag and VLF-EM survey: Completed on 11 claims in Feb 1984 and April 1984. A total of 18.7 line-miles (=30.06 line-km) of mag data and 16 line-miles (=25.75 line- km) of VLF-EM data were collected. One large conductive anomaly was found to be high priority and recommended for drill testing with three drill holes Geologic mapping: shear zones identified during mapping EM-17 HLEM: July 1984. 6 line-miles (=9.66 line-km) collected at 300 ft (=91.44 m) coil separation, as a follow-up survey on the conductors identified by the VLF survey. Weak HLEM conductors were noted in the same trend, interpreted as a possible shear zone, and were recommended for drilling Drilling: one ddh intersected shear zone with "consistent anomalous gold values", two were abandoned	Kuryliw, 1984a (41N15NE0048) Kuryliw, 1984b (41N15NE0064)
Dunraine Mines Ltd.	1984	5 surface drill holes (887.9 m)	10.29 g/t Au over 0.3 m	Studemeister, 1984 (41N15NE0046)
Goldun Age Resources Inc	1986	Ground mag and gradiometer survey Dewatering and review of underground workings	Ground mag and gradiometer: May 30-June 12, 1986. 0.94 line-km on one claim of ground magnetic data and gradiometer (vertical total field magnetic gradient). Gradiometer sensor spacing is 1 m. 84 stations surveyed. No significant results interpreted due to small size of survey, recommendation to increase survey area Dewatering and review: investigation concluded that Au is left in pillars, floors and backs of stopes (in particular above first level, little minable material left below third level	Gignac, 1986 (41N15NE0034) Tilsley, 1986 (41N15NE9041)

Company	Years	Exploration	Results	Reference
Caviar Resources	1986	Ground mag survey VLF-EM survey Mapping, prospecting, sampling between Reed Lake and Leroy Lake	Ground mag and VLF-EM: Jan-Feb, 1986. 24.12 line-miles (=38.82 line- km) of ground mag and VLF at 300 ft (=91.44 m) line spacing and 100 ft (=30.48 m) station spacing. Infill lines were at 100 ft (=30.48 m) line spacing. Magnetic data was collected at 50 ft (=15.24 m) station spacing. 8 conductive anomalies were identified as high-priority targets Mapping, prospecting, sampling: NW trending, Au-bearing vein delineated (up to 16.80 g/t Au)	Sears, 1986a (41N15NE0035) Sears, 1986b (41N15NE0505)

Table 6-9: Historic drilling by Dunraine Mines on the Wawa Gold Project during the 1980-1986 period

Year	No of Holes	Total metres	Best Intersection*	Main Target of program
1980	38	3,385.1	46.22 g/t Au over 0.88m	Parkhill and Van Sickle mines
1981	20	4,919.70	34.97 g/t Au over 0.15 m	Darwin Shear Zone
1982	8	410.6	7.61 g/t Au over 1. 5 m	Darwin Shear Zone
1983	6	738.2	5.96 g/t Au over 1.5 m	Grace-Darwin Mine
1984	5	887.9	10.29 g/t Au over 0.3 m	Grace-Darwin Mine

**Intervals listed here do not represent true thickness.*

6.5 SECOND MINING OF THE SURLUGA MINE BY CITADEL GOLD MINES - 1986 TO 1991

6.5.1 Citadel Gold Mines

In 1986, the Surluga mine was dewatered, the Surluga mine shaft was refurbished, and the mill was reconstructed. A 3 year program of surface and underground drilling was started, including a mapping program throughout the Surluga Deposit as part of restarting the mining operation (**Error! Reference source not found.**0 to **Error! Reference source not found.**3; Rupert, 1997). In 1988, to optimize its exploration and development model of the Surluga Mine, Citadel commissioned a study of the structural setting of the Surluga deposit. Helmstaedt (1988) concluded that the quartz-gold veins predate some of the ductile shear movement along the Jubilee Shear Zone and that the geometry of the high-grade zone of the deposit is controlled by a strong stretching lineation in the shear zone. Helmstaedt (1988) described the stretching lineation as shallowly plunging to the south southeast. Citadel also commissioned an ore recovery study, including gravity concentration by various means, floatation and cyanidation (Lakefield Research, 1988). Cyanidation recovered ~90% of the gold, sulfide flotation ~86%. Gravity concentration using the Knelson Concentrator was unsuccessful but upgrading gravity with a Mozley Mineral Separator recovered +20% of contained gold. Mining in the Surluga Deposit stopped again, in 1989 because of the mill inefficiency, the un-optimized design of the mine, including the difficulties of mechanizing production and problems with dilution control because of the cryptic boundaries of the high-grade zone (E. Hoffman, pers. comm.). One exploration success following the end of the mining operations in 1989 was the discovery of the Old Tom zone, in the southernmost part of the Surluga Deposit.

During the Surluga Mine operation and development, between 1986 and 1990, Citadel also undertook an extensive exploration program of its property to find additional gold to feed the newly constructed mill. This included diamond drilling of Root and Cooper-Ganley vein systems, stripping, trenching, channel sampling and geological mapping, as well as many airborne and ground geophysical surveys. Citadel also continued the consolidation of the Wawa Gold Property by optioning the Henderson property east of Leroy Lake in the southeast corner of McMurray township in 1987. Osmani (1987) mapped the property and concluded that the mineralization was independent of rock-type and structurally controlled. He recommended further exploration including geophysical surveys, mapping and prospecting on the property. In 1987, Citadel purchased from Dunraine the Parkhill and Grace-Darwin Mine properties (Rupert, 1997)

Table 6-10: Historic exploration and mining activity during the second development of the Surluga Mine

Company	Year	Exploration	Results	Reference
Citadel Gold Mines	1986-1987	Surluga mine dewatered; underground development; surface and underground drilling Mill refurbished; mapping/sampling on Henderson property (SE McMurray Twp.)	Drilling: Intersected 20.42 m at 3.74 g/t Au Dighem III: 454 line-km flown with Dighem III FDEM in October 1986. Several discrete bedrock conductors identified and recommended for follow-up work. Mineralization independent of host rock but structurally controlled (140°–160°, 010°–060°)	Rupert, 1997 Kilty, 1986 (42C02SE0504) Osmani, 1987 (41N15NW0028)
Robert Henderson	1986	Dighem III Survey Terraquest airborne mag VLF-EM survey	Terraquest fixed-wing airborne magnetic and VLF-EM survey flown July 22, 1986. 100 line-km at 200 m line spacing and 100 m terrain clearance. Several structural and conductive anomalies were located and recommended for follow-up surveying	Barrie, 1986 (41N15NE0033)
Allied Northern Resources Ltd.	1988	Mapping, rock sampling Ground mag VLF-EM survey 1 Ground mag VLF-EM survey 2 Ground mag VLF-EM survey 3	Mapping, rock sampling: six rock types observed and described; various quartz veins observed (no assay results available) Ground mag, VLF-EM survey 1: Aug 12-Sept 17, 1988. 19.25 line-km of ground mag and VLF-EM collected. Ground mag station spacing = 25 m. Magnetic results highlight diabase dykes and geologic contacts. VLF-EM results identified 2 high-priority conductors Ground mag, VLF-EM survey 2: Aug 12-Dec 10, 1988. A total of 50.85 line-km of ground mag and VLF-EM were conducted on 31 claims at 120 m line spacing. No significant anomalies were identified. Ground mag, VLF-EM survey 3: Aug 15-Nov 10, 1988. 11.75 line-km collected at 120 m line spacing. One conductor was recommended for follow-up	Sears and Gasparetto, 1988 (41N15NE0027) Sears, 1989 (41N15NW0021) Sears and Gasparetto, 1989 (41N15NW0022)

Company	Year	Exploration	Results	Reference
Citadel Gold Mines	1988	Ore recovery studies Structural studies	Cyanidation recovered 90% of the gold, floatation 86% Gold-bearing quartz veins predate shearing along Jubilee Zone High-grade zone geometry and distribution in Jubilee Shear Zone controlled by stretching lineation	Lakefield Research,1988 Helmstaedt, 1988
Citadel Gold Mines	1988-1990	Exploratory underground development; Underground and Surface drilling; Panel sampling in Surluga mine; Ground mag survey IP survey 1 Ground mag survey 2 Ground mag survey 3 Surluga mine closed in 1989 Extensive surface exploration program throughout the property; Acquisition of Parkhill and Grace-Darwin from Dunraine Reinterpretation of geophysical surveys, Trenching; mapping in Deep Lake area	Discovery of Old Tom and Peter Zones in the southern extremity of Surluga Deposit; Ground mag survey 1: Summer 1988 on Block B to establish base data for future mapping. IP survey 1: Pole-dipole and gradient array methods in time-domain IP mode. Results found the shear zone was not distinguishable from background Ground mag survey 2: June-July 1988. Targeted follow-up of anomalies on Block C. Line spacing 400 ft (=121.92 m). Several magnetic anomalies were identified. Ground mag survey 3: Dec 1988 - Mar 1989. Ground magnetic survey conducted at 400 ft (=121.92 m) line spacing to improve resolution of airborne magnetic anomaly. The anomaly was interpreted as iron formation. Geophysics deemed of "marginal utility" but soil sampling effective. Stripping and/or sampling, and geological mapping of Minto, Mariposa, Parkhill, Grace-Darwin, Darwin Shear Zone Drilling and stripping of Root and Cooper Ganley Regional exploration throughout the property anomalous Au grades in Deep Lake area but economic questionable (best results 0.41 g/t Au	Rupert and Leroy, 1989 (42C02SE0220) Rupert, 1989a (41N15NE0023) Rupert, 1989b (41N15NE0021) Rupert, 1990 (42C02SE0500) Reed, 1990 (42C02SE0500, p. 27) Rupert, 1997
Allied Northern Resources Ltd.	1989	Mapping	Mapping: four target areas delineated	Sears, 1989 (41N15NW0021)

Company	Year	Exploration	Results	Reference
Allied Northern Resources Ltd.	1990	Mapping, soil and rock sampling, 6 drill holes (AN-90-1 to 6)	3 vein systems located, several weak soil anomalies; drilling intersected the Villeneuve vein	Sears, 1990b (41N15NE0014) Sears, 1990c (41N15NE0013) Sears, 1990e (41N15NE0025)
Van Ollie Exploration Ltd.	1990	Mapping, soil geochemistry, drilling Ground mag and VLF-EM survey	Mapping, soil geochemistry, drilling: more Au anomalies in soil over intrusive rocks than volcanic rocks; down dip of Mickelson vein system confirmed Mag, VLF-EM: Jan 11-Feb 4, 1990. 41.1 line-km of magnetic data and 38.1 line-km of VLF-EM data collected. Several magnetic and conductive anomalies were identified from the respected surveys and recommended for follow-up work.	Sears, 1990a (41N15NE0011) Sears, 1990d (41N15NE0016) Reid, 1990 (41N15NE0011)
Van Ollie Exploration Ltd.	1991	6 ddh (195.76 m) on Sunrise #1 vein (S-91-0 to -6)	Best assays between 1.23 and 4.87 g/t Au but no intervals reported	Delisle, 1991 (41N15NE0069)

Table 6-11: Historic surface diamond drill holes from the second development stage of the Surluga Mine

Company	Year drilled	No of DDH	Meterage (m)
Citadel	1987	100	18,089.94
Citadel	1988	30	4,879.91
Citadel	1989	51	6,812.36

Table 6-12: Historic underground diamond drill holes from the second development stage of the Surluga Mine

Company	Year drilled	No of DDH	Meterage (m)
Citadel	1987	396	12,430.43
Citadel	1988	9	669.95
Citadel	1989	55	3,205.27

Table 6-13: Highlights from Citadel surface drilling on the Surluga Deposit between 1987 and 1989

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)
S204	147.22	202.24	55.02	1.55
S232	177.09	221.29	44.20	3.88
S240	46.63	74.22	27.59	4.29
S273	187.76	230.74	42.98	2.82
S274	194.98	247.20	52.22	1.56
S279	146.55	168.55	22.00	2.74
S280	199.65	244.30	44.65	1.73
S285	112.47	167.03	54.56	1.42
S290	213.66	255.73	42.07	1.77
S307	290.93	347.48	56.55	1.57
S327	43.89	66.14	22.25	2.56

6.5.2 Van Ollie Exploration

Between 1989 and 1991, Van Ollie Exploration Ltd. ("Van Ollie") conducted an extensive exploration program around the Sunrise-Mickelson vein system and the Van Sickle mine; that included diamond drilling, stripping, channel sampling and surface mapping. Several veins, including the Van Sickle Vein, Captain Vein and Road Vein, were stripped. Mapping, prospecting and rock sampling delineated several targets that correspond with zones of soil and geophysical anomalies. The Van Sickle vein system was traced for 200 m and Sears (1990a) concluded it was the extension of the Park Hill vein system.

Van Ollie drilled thirty-one diamond drill holes totaling 1,445.88 m in 1989, thirty-four diamond drill holes totaling 1,447.22 m in 1990 and six diamond drill holes totaling 195.76 m in 1991 (**Error! Reference source not found.**4, **Error! Reference source not found.**5). The drilling targeted the Van Sickle, Mickelson and Captain Veins. In 1991, Van Ollie drilled six diamond drill holes totaling 195.76 m at the Sunrise No. 1 Vein (Delisle, 1991). The best assay results ranged from 1.23 g/t Au to 4.87 g/t Au, however, the intervals for these grades were not reported in Delisle (1991).

Table 6-14: Historic surface diamond drill holes drilled by Van Ollie

Company	Year drilled	No of DDH	Meterage (m)
Van Ollie	1989	31	1,445.88
Van Ollie	1990	34	1,445.22
Van Ollie	1991	6	196.76

Table 6-15: Intersection highlights from historic holes of Van Ollie

Hole #	From (m)	To (m)	Interval (m)*	Au (g/t)	Target
VO-89-01	1.83	2.19	0.36	142.42	Van Sickle Mine
VO-89-01	1.22	1.52	0.3	44.91	Van Sickle Mine
VO-89-01	2.49	2.8	0.31	17.55	Van Sickle Mine
VO-89-02	6.76	6.91	0.15	38.19	Van Sickle Mine
VO-89-04	27.74	27.91	0.17	34.9	Van Sickle Mine
VO-89-10	45.54	45.62	0.08	11.86	Mickelson
VO-89-12	28.65	28.93	0.28	10.08	Mickelson
VO-89-14	2.97	3.15	0.18	57.12	Van Sickle Mine
VO-89-14	5.31	5.54	0.23	32.57	Van Sickle Mine
VO-89-14	5.87	6.1	0.23	14.67	Van Sickle Mine
VO-89-23	31.55	31.85	0.3	75.43	Mickelson
VO-89-23	30.23	30.3	0.07	41.73	Mickelson
VO-89-24	16.74	17.22	0.48	81.63	Mickelson
VO-90-39	10.62	10.72	0.1	109.89	Van Sickle Mine
VO-90-43	34.31	34.44	0.13	28.77	Mickelson
VO-90-45	12.32	12.75	0.43	14.64	Van Sickle Mine
VO-90-50	32.74	32.92	0.18	20.95	Van Sickle Mine
VO-90-51	29.41	30.48	1.07	46.87	Mickelson
VO-90-51	28.19	29.41	1.22	29.01	Mickelson
VO-90-53	37.85	38	0.15	53.55	Mickelson
VO-90-63	13.01	13.14	0.13	23.55	Mickelson
VO-S-91-6	8.73	8.93	0.2	14.71	Sunrise

**Intervals listed here do not represent true thickness.*

6.5.3 Allied Northern Resources

In 1988, Allied Northern Resources completed a geological (mapping and sampling) and geophysical (magnetics and VLF-EM) survey (Sears and Gasparetto, 1988). Several quartz veins were found, but assay data is not available. In 1990, Allied Northern Resources completed small exploration programs on their claims in the southern part of McMurray township at the boundary of McMurray township with Rabazo and Naveau townships. The program consisted of prospecting, stripping, rock and soil sampling and mapping (Sears, 1990b). Three quartz-carbonate veins and several weak soil anomalies in the eastern part of the property were delineated. One of the veins had low gold values. In addition, six diamond drill holes totaling 320.95 m were drilled (Sears, 1990c). All six drill holes intersected the Villeneuve vein system (Sears, 1990e).

6.6 OPTIONING OF THE SURLUGA DEPOSIT - 1990 TO 1996

The optioning period marks a contrasted transition in the evaluation and exploration model of the Wawa Gold Project (**Error! Reference source not found.**6). Following the difficulties of selective underground mining, this period represents the first attempts to quantify if a large tonnage and lower grade resource amenable to open pit mining exists on the Wawa Gold Project.

6.6.1 Pan Orvana Resources Inc. - 1990 to 1992

Pan Orvana Resource Inc. (“Pan Orvana”) entered into an option agreement with Citadel to evaluate the Surluga Deposit. Between 1990 and 1992, Pan Orvana reviewed historic information including drilling. Pan Orvana also completed a soil sampling survey that delineated a Au anomaly over the main shear zone, sampled the underground workings of the Jubilee Mine after dewatering the mine and sampled un-sampled sections of a selection of historic holes (Bradshaw, 1991). The best intersection in un-sampled material in the Jubilee Shear Zone was in hole S240 in which un-sampled core contained 5.04 g/t gold over 5.18 meters. From the limited sampling they have done, Bradshaw (1991) also observed that 10% of the un-sampled core in the Jubilee Shear Zone contains over 0.684 g/t gold. Bradshaw (1991) concluded based on the underground sampling that “significant gold grades” were left in the margins of the Jubilee Mine workings, and that the grade, thicknesses and sub-cropping nature of the Surluga Deposit are favorable for open pit mining, but that additional work remains to define a viable resource. Orvana dropped the option in 1992.

6.6.2 Goldbrook Exploration Limited - 1996 to 1997

In 1996, Goldbrook Exploration Limited ("Goldbrook") entered into an option agreement with Citadel to evaluate the Surluga Deposit. Bowdidge (1996) reviewed all the available data for the Surluga Deposit and postulated that the Jubilee Shear Zone is a large-scale structure up to 150 feet thick and contains widespread low-grade mineralization. Using only the surface hole results, Bowdidge evaluated that a substantial resource of low-grade mineralization exists in the Jubilee Shear Zone (**Error! Reference source not found.**17). However, following section 2.4 of the NI 43-101 Standards of Disclosure for Mineral Projects (Form 43-101F1), no qualified person has done enough work to classify this historical estimate as current mineral resources or mineral reserves and as such, the issuer is not treating this historical estimate as current mineral resources or mineral reserves. Because Goldbrook was unable to raise funds under market conditions to meet their financial commitments, Citadel dropped the option with Goldbrook in 1997 (Rupert, 1997).

Table 6-16: Historic work done during the optioning period of the Surluga Deposit

Company	Year	Exploration	Results	Reference
Pan-Orvana (option agreement with Citadel)	1990-1992	Soil sampling, review of historical data; sampling of underground workings	Au anomaly over the shear zone; sampling revealed "considerable variability" in gold content of the shear zone; Sampling of un-sampled historic holes uncovered 5.04 g/t gold over 5.18m in S240 Possibility that sufficient low-grade resources available; Additional work necessary to define a viable open pit resource	Bradshaw, 1991 (42C02SE0518)
Goldbrook Exploration Limited	1996-1997	Review of historic data; Resource evaluation in the Surluga Deposit	A substantial resource of low-grade mineralization exists in the Jubilee Shear Zone; Citadel revoked the option in 1997 as Goldbrook did not meet the financial commitments	Bowdidge, 1996 Rupert, 1997

Table 6-17: Historic resource estimate for the Surluga Deposit by Bowdidge (1996)

Cut-off grade (g/t Au)	Tonnes	Grade (g/t Au)
1.03	9,319,000	1.75
1.54	6,594,000	2.02

6.7 RECENT PERIOD - REDEVELOPMENT OF THE SURLUGA DEPOSIT 2007-2017

The period between the end of extensive exploration activity in 1991 and the resumption of the large drill programs in 2007 only saw sporadic and smaller-scale exploration programs completed (**Error! Reference source not found.**18). In 1997, Citadel acquired the properties of Van Ollie exploration, including the Sunrise-Mickelson vein systems and the Van Sickle mine (Rupert, 1997). Following 2007, the Surluga Deposit and its surroundings have seen extensive exploration.

Table 6-18: Exploration programs of the 1991 to 2007 period

Company	Year	Exploration	Results	Reference
Transgold Exploration and Investment Inc.	1994/1995	Mapping, sampling (1994); VLF-EM survey HLEM survey Ground mag survey Prospecting, rock/soil sampling (1995) in Leroy Lake area	No significant Au results in 1994; weak B-horizon soil anomaly (57 ppb) All ground geophysics conducted between July - September, 1995, on a 100 m line-spaced grid. VLF-EM: 25 m station spacing, HLEM: 25 m station spacing, Ground mag: 12.5 m station spacing. Several anomalies were identified from these surveys and displayed on related maps.	Drost, 1994 (41N15NE0004) Drost, 1995 (41N15NE0029)
Lawrence Melnick	1995-1996	VLF-EM survey Ground mag survey	VLF-EM: Oct 1995. Line spacing 100 m, station spacing 25 m. One conductive anomaly was identified. Ground mag survey: Oct 1996. Line spacing 60 m, station spacing 30 m. 2 anomalies identified as high-priority for follow-up	Archibald, 1996b (42C02SE0026)

Company	Year	Exploration	Results	Reference
Elliot Feder	1996-1998	VLF-EM survey Ground mag survey Till sampling	VLF-EM: Oct 1996. 12.2 line-km collected, 100 m line spacing, 25 m station spacing. 3 anomalies identified as possible shear zones, recommended for follow-up Ground mag survey: Oct 1996. 12.2 line-km. Anomalies identified related to Firesand Carbonatite Complex Till sampling: 1997-1998. gold-bearing vein averaging 8.7 g/t Au located in southern and northern parts of McMurray Twp.	Archibald, 1996a (42C02SE0022) Thomas, 1997a (42C02SE2001) Thomas, 1997b (42C02SE2002) Archibald, 1998 (42C02SE2003)
Transgold Exploration and Investment Inc.	1998	IP survey	IP test survey on weak VLF-EM anomalies. Time domain IP survey. Dipole-dipole array, a spacing = 25m, N = 1-3. Three chargeable features were identified and recommended for follow-up	Anderson, 1998 (41N15NE2002)
John Leadbetter	1998–2000	Beepmat survey Prospecting and sampling near Deep Lake	No conductors; best Au assay: 442 ppb	Leadbetter, 1998 (41N15NE2003) Leadbetter, 2000 (41N15NE1005)
Tri Origin (option Agreement with Citadel)	2000	6 ddh (789 m), ground geophysics	Best Au assay: 609 ppb over 1.3 m	Gow, 2004
3814793 Canada Inc. P.L. Mousseau	2004	Ground mag survey VLF-EM survey	Between Oct 15, 2003 and July 18, 2004: Ground mag survey: 62.2 line-km. 25 m and 50 m line spacing, 15 m station spacing. Ground magnetic results have been used to further delineate airborne anomalies and outcrops. VLF-EM survey: 24.5 line-km, 50 m line spacing, 15 m station spacing. Anomalies identified were interpreted to be associated with fault and shear systems)	Archibald, 2004 (42C02SE2014)

6.7.1 Wawa General Partnership – 2007

In 2007, the Wawa General Partnership ("Wawa GP Inc.") on behalf of Citabar, completed a 8,401m NQ-size diamond drill program at their Jubilee–Surluga property; targeting the down dip extension of the Jubilee shear zone and following the geological modeling of the interpreted deeper extension of the structure (**Error! Reference source not found.**19 and **Error! Reference source not found.**0; Gow, 2011). This drilling program proved successful and the best results achieved were of potential economic interest, especially the 3.40 m intersection at 11.40 g/t Au in DDH 07-391 (Gow, 2011). However, during the drill program, Citabar determined it had insufficient storage space for all the drill core generated and a decision was taken to dispose of most of the core that was considered un-mineralized based on the logging. Scott Wilson from RPA in 2011 indicates that this disposal of the core was regrettable, considering the many problems identified with the logging and sampling procedures applied during the 2007 drilling program (Gow, 2011). Gow (2011) also concluded that a twinning program of historic holes was necessary to confirm the results from the historic holes before a resource evaluation was undertaken.

Table 6-19: Surface diamond drill holes from the 2007 drilling program

Company	Year drilled	No of DDH	Meterage (m)
Wawa GP Inc.	2007	14	8,410.2

Table 6-20: Selected assay highlights for Wawa GP's 2007 drilling program

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)
07-383	452.00	453.90	1.90	6.00
incl.	452.60	453.40	0.80	11.21
07-384	555.06	562.20	7.14	1.18
incl.	555.60	555.80	0.20	13.39
	564.40	576.40	12.00	1.15

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)
incl.	569.70	570.15	0.45	5.49
07-385	61.10	62.40	1.30	10.38
07-386B	586.00	590.00	4.00	2.06
incl.	586.00	587.20	1.20	6.22
07-387	476.10	485.50	9.40	1.78
incl.	480.70	481.70	1.00	3.37
incl.	483.50	484.50	1.00	4.61
07-388	48.25	49.18	0.93	4.28
	507.35	508.20	0.85	1.35
7-389	559.60	562.60	3.00	7.24
7-391	600.90	604.30	3.40	11.44
7-392	844.10	844.60	0.50	5.12
7-393	680.50	680.90	0.40	4.50
	691.10	692.80	1.70	10.67
	734.20	735.70	1.50	5.73
07-393B	686.25	688.80	2.55	6.21
incl.	686.25	686.40	0.15	93.70
	716.80	717.60	0.80	10.95

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)
07-394	558.10	559.20	1.10	7.92
	51.10	52.10	1.00	8.68

Intervals listed here do not represent true thickness.

6.7.2 Augustine Ventures Inc. - 2009 to 2014

Augustine acquired a stake in the Surluga Project pursuant to the terms of an option agreement (the "Option Agreement") dated April 16, 2009 entered into between Citabar Limited Partnership ("Citabar"), Citadel Gold Mines Inc. (Citadel"), Delta Uranium Inc. ("Delta") and Delta Precious Metals (Ontario) Inc. ("DPMI"), and also pursuant to the terms of an assignment agreement (the "Assignment Agreement") dated September 15, 2010 entered into between Delta, DPMI, Citadel, Citabar and the Company. Pursuant to the terms of the Assignment Agreement, Citabar and Citadel consented to Delta and DPMI assigning their rights under the Option Agreement to the Company, whereby Delta and DPMI grant the Corporation the exclusive right to earn an undivided 60% interest in the Surluga Project (Augustine Ventures MDA, July 24, 2015).

In September 2010, Augustine Ventures Inc. (Augustine) satisfied the conditions and assumed the obligations of Delta PM and Delta Uranium Inc.

In January 2011, Augustine contracted Geotech Ltd. to collect 412 line-km of helicopter-borne Versatile Time Domain Electromagnetic data ("VTEM") at 100 m line spacing (Duke, 2012). Several magnetic-conductive features were noted within the survey to coincide with the Parkhill fault. Six conductive anomalies were identified as potential follow-up targets (Duke, 2012).

In 2011, Augustine drilled 2,944 m in 18 diamond drill holes (core diameter: NQ; **Error! Reference source not found.**1 and **Error! Reference source not found.**2). The purpose of the drilling was to confirm historic drilling results (13 drill holes) and define the mineralization around the Jubilee mine (5 drill holes; Duke, 2012). The holes were surveyed every 10 m using a Flex-IT down hole survey tool. Twelve of the holes twinned historic holes. The twin holes did not reproduce the results of the historic database. Duke (2012) concluded that the nugget effect cannot be used to explain the discrepancy between the two data sets which remained unexplained.

Table 6-21: Augustine's 2011 drilling program

Company	Year drilled	No of DDH	Meterage (m)
Augustine Ventures	2011	18	2,944

Table 6-22: Assay highlights for Augustine's 2011 drilling program

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)
AV-11-002	91.81	93.38	1.57	5.67
	97.09	103.58	6.49	1.94
incl.	98.58	99.17	0.59	7.24
AV-11-05	171.17	173.66	2.49	2.87
incl.	171.56	172.05	0.49	5.85
AV-11-006	133.00	136.59	3.59	7.03
incl.	133.56	134.12	0.56	21.87
AV-11-007	35.19	37.70	2.51	2.83
incl.	35.92	36.17	0.25	17.32
AV-11-008	30.56	36.60	6.04	3.23
incl.	31.28	31.80	0.52	10.69
and	32.50	32.93	0.43	8.83
AV-11-009	45.23	53.17	7.94	5.33
incl.	46.15	46.46	0.31	43.77
and	51.30	51.74	0.44	8.82
AV-11-010	162.92	164.60	1.68	20.18
AV-11-011	48.17	51.77	3.60	3.76

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)
AV-11-012	161.54	171.44	9.90	1.93
incl.	161.54	161.98	0.44	14.36
and	170.15	170.55	0.40	10.47
AV-11-14	126.85	135.75	8.90	3.09
incl.	133.30	133.70	0.40	23.14
and	134.16	134.62	0.46	11.19
	144.68	145.42	0.74	22.77
AV-11-15	190.74	219.65	28.91	2.57
AV-11-16	155.92	161.39	5.47	3.06
AV-11-18	147.55	156.84	9.29	2.60

**Intervals listed here do not represent true thickness.*

Subsequently, Augustine commissioned Watts, Griffis and McOuat consulting geologists and engineers (“WGM”) to complete a resource estimate that included Augustine’s current and previous drill holes (Duke, 2012). WGM estimated the Surluga deposit contained 32.2 Mt grading 1.14 g/t Au (cutoff: 0.2 g/t Au). The historic estimate is reliable but no longer relevant as it was superseded by the current estimate (Section 14: Mineral Resource Estimates), which upgraded the historic estimate. The historic estimate used the categories set out in the “Definition Standards on Mineral Resources and Mineral Reserves” by the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”; CIM, 2014). The estimate was completed using ordinary kriging and validated using the inverse distance method. Red Pine is not treating the historic estimate as current because the qualified person has not done enough work to classify the historic estimate as current.

Augustine also collected 200 grab samples on the property in 2011. **Error! Reference source not found.**3 lists samples with >1 g/t Au. Although Augustine completed a Lidar survey, no details of the survey (year, contractor, survey parameters, etc.) are known to the company.

Table 6-23: Assay highlights of the grab samples collected by Augustine in 2011

Sample #	Easting	Northing	Au (g/t)	Location
1003978	668180	5315784	14.03	Minto
1003953	668166	5315867	8.3	Minto
1003903	668382	5315387	5.64	Minto
1003920	668242	5315144	3.95	Minto
1003894	668397	5315385	2.96	Minto
1003963	668242	5315971	2.06	Minto
1003976	668170	5315779	1.88	Minto
1003873	668447	5315431	1.49	Minto
1003921	668243	5315145	1.27	Minto

6.7.3 Red Pine Exploration Inc. (2014-2015)

In September 2014, Red Pine Exploration examined the Project and made a review and evaluation of the main showings of the property. Fifty-nine rock samples were collected on the property's main gold showings as part of this review. Samples with >1 g/t Au are listed in **Error! Reference source not found.**4.

Table 6-24: Assay highlights of the grab samples collected by Red Pine in 2014

Sample	Easting	Northing	Au (g/t)	Location
22313	668762	5318441	5.63	Root Vein
22314	668791	5318470	14.7	Root Vein
22316	667930	5316220	2.3	Cora Shaft
22327	668190	5315789	17	Minto C
22328	668190	5315789	5.51	Minto C
22334	668942	5315761	9.25	Sunrise
22336	668942	5315754	31.9	Sunrise
22338	668932	5315689	27	Sunrise
22340	668724	5315745	15	Sunrise
22201	668794	5314282	11	Mariposa Shaft
22205	668029	5313446	13.5	Grace-Darwin Mine
22208	668991	5314866	3.48	Van Sickle Shaft

In December 2014, Red Pine entered into an Assignment and Assumption Agreement with Augustine and Citabar Limited Partnership ("Citabar") effective December 11, 2014 (the "Assumption Agreement") pursuant to which the parties have agreed to amend the Surluga Property Option Agreement ("Option Agreement") dated April 16, 2009, as amended, between Augustine and Citabar to permit Red Pine to earn up to a 45% interest in the Wawa Gold Project property (the "Wawa Gold Project").

Under the terms of the Assumption Agreement, Red Pine had to incur $2.1 million in eligible exploration expenditures to earn a 30% interest in the Wawa Gold Project. To satisfy these obligations, Red Pine initiated a 2-phase exploration program in December 2014 that extended to April 2015. The program included 5,594 meters of NQ-size diamond drilling (**Error! Reference source not found.**5), helicopter-borne gradient magnetic survey, ground magnetic survey, line-cutting, an induced polarization survey as well as prospecting, mapping and channel sampling of the property's main showings.

Table 6-25: Red Pine 2014-2015 drilling program

Company	**Year drilled**	**Phase**	**No of DDH**	**Meterage (m)**
Red Pine	2014	1	6	1,573
Red Pine	2015	2	20	4,021
				5,594

The focus of the first phase of the drill program, which started and ended in December 2014, was to intersect the main zones of high-grade gold mineralization in the Surluga Deposit (Old Surluga Mine, Pango, 6-5, Old Tom). This was done to validate the grade and width of these zones and better define their geological attributes. As a secondary goal, this drilling also helped to confirm the location of underground workings which were near the planned program of 6 drill holes. It also helped to determine any un-reported material removal near the workings.

The drilling was successful at confirming the location of underground workings and at intersecting the historically defined higher grade zones of mineralization within the Surluga Deposit (**Error! Reference source not found.**6). It was concluded that no un-reported material was removed close to the mine workings. Hole SD-14-01, the only one that hit a working, was collared 11 degrees off the planned azimuth and after the initial down-hole survey it was believed a drift would be intersected. The hole was completed to confirm the drift location as well as to test for gold mineralization proximal to such historic workings.

Table 6-26: Highlights from Red Pine 2014 drilling program on the Surluga Deposit

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)	Target Zone
SD-14-01	75.5	78.1	2.6	2.61	Surluga Mine
incl.	77	78.1	1.1	4.72	
SD-14-01	107.07	109.6	2.53	3.15	
SD-14-02	80.5	82.5	2	3.85	Surluga Mine
SD-14-02	119.5	128.38	**8.88**	**3.58**	
incl.	119.5	120.5	1	8.28	
and	121.5	122.42	0.92	6.06	
and	125.5	126.5	1	11.3	
SD-14-03	255	260	5	3.22	Pango
incl.	257	258	1	8.17	
SD-14-03	264.1	271.8	**7.7**	**8.89**	
incl.	265.1	266.2	1.1	20.5	
and	266.53	267.3	0.77	15	
and	268.5	270.7	2.2	14.23	
SD-14-04	253.18	288.5	**35.32**	**5.72**	6-5 Ramp
incl.	263	264	1	11.6	
and	267	267.77	0.77	11.6	
and	275.6	276.6	1	11.8	
and	281.5	282.5	1	11.4	
SD-14-05	148.25	162.25	**14**	**7.25**	Surluga Mine
incl.	155	161	6	15.33	
SD-14-06	10.61	18	7.39	1.71	Old Tom
incl.	10.61	12.45	1.84	6.05	
SD-14-06	292.33	322.5	**30.17**	**2.64**	
incl.	302.2	303.3	1.1	11.9	
and	320.46	321.5	1.04	42.3	

**Intervals listed here do not represent true thickness.*

Following the initial results of the resource modeling received in early February 2015, phase 2 of the drilling program ran from February 2015 through April 2015 and was designed as an in-fill program in the central zone of the Surluga Deposit. A secondary objective was to test some of the known gold structures of the hanging wall. Twenty oriented NQ-size diamond drill holes were completed for a total of 4,021m. These twenty holes indicated that significant mineralization exists in the Jubilee Shear Zone, as well as above and below the shear zone in some of the hanging wall and footwall structures, particularly in Minto B (**Error! Reference source not found.**7). This drilling program confirmed the existence of the stretching lineation controlling the geometry of the high-grade zones of the deposit and that the intersection of gabbro dykes with gold-bearing structures could also concentrate gold. This structural and lithological control was tested in SD-15-26 as it successfully intersected the down-plunge continuity of the 6-5 Ramp along the measured trend and plunge of the stretching lineation (**Error! Reference source not found.**6, Table 6-27). This program also demonstrated the existence of a network of steeply dipping high-grade tension veins intersected in the footwall of the Surluga Deposit in SD-15-11 (Table 6-27). The steep dip of these tension veins made any intersection with the vertical surface holes unlikely. As a result, it was recommended that drilling inclined holes should be a standard method applied in this area. This improved the probabilities of intersecting sub-vertical gold-bearing structures while still efficiently targeting the main zones of mineralization.

Table 6-27: Highlights from Red Pine Winter-Spring 2015 drilling program on the Surluga Deposit

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)	Target Zone
SD-15-07	66	68	**2**	**13.65**	Minto B
SD-15-07	237	252	**15**	**2.19**	Old Tom
incl.	247	248	1	9.25	
SD-15-08	328.35	329.35	1	11.5	6-5 Ramp
SD-15-10	228.39	229.4	1.01	16.2	Upper 6-5 ramp
SD-15-11	195.5	196.5	**1**	**53.2**	Tension vein footwall
SD-15-11	216	217	**1**	**51.7**	
SD-15-12	151.1	152.1	1	5	Jubilee Mine
SD-15-14	253	257	4	2.17	Upper 6-5 ramp
incl.	254.11	255	0.89	8.49	
SD-15-14	266	273.18	**7.18**	**2.57**	
incl.	268.8	269.8	1	9.99	

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)	Target Zone
and	273	273.18	0.18	5	
SD-15-14	281	285.48	4.48	3.16	
incl.	282	283	1	11.2	
SD-15-15	166	174	8	1.04	Lower Jubilee Mine
SD-15-19	72	79.6	**7.6**	**1.67**	Shallow Surluga Deposit
incl.	74.48	76.5	2.02	4.88	
SD-15-19	84.6	85.6	1	5.11	
SD-15-22	54.7	57	2.3	2.48	Shallow Surluga Deposit
incl.	56.04	57	0.96	5.67	
SD-15-22	72	75	3	1.88	
SD-15-23	30.6	31.6	1	3.86	Shallow Surluga Deposit
SD-15-24	161	162	1	2.88	William Gold Zone
SD-15-25	196.70	206.75	**10.05**	**2.38**	Lower Surluga Mine
SD-15-25	231.7	232.7	1	2.35	
SD-15-26	275	300.20	**25.20**	**3.53**	6-5 Ramp lower extension
incl.	287.1	288.1	1	17.89	
SD-15-26	298.13	299.13	1	11.2	

**Intervals listed here do not represent true thickness.*

The helicopter-borne gradient magnetic survey covering the extents of the Wawa Gold Project and, to a lesser extent, the ground magnetic survey covering the Surluga Deposit, contributed to the mapping and interpretation of the major structural trends present on the Property. On the helicopter-borne gradient magnetic survey, the major structures such as the Hornblende Shear, the Jubilee Shear, the Parkhill Fault and the Darwin Shear could be traced at the scale of the property and could guide gold exploration in untested sections of those structures, particularly for the Hornblende Shear Zone.

Red Pine collected 277 rock grab samples on the property from July 3 to 31, 2015. The purpose of the sampling was to characterize historic gold showings in the hanging wall and footwall of the Surluga deposit and elsewhere on the property. Another purpose was to test structures interpreted from the helicopter-borne magnetic data.

Samples were collected from outcrops and placed in a plastic sample bags together with a pre-labeled sample tag. Individual samples were placed in rice bags and delivered to the laboratory by Red Pine personnel. The samples are representative of the outcrops from which they were collected. Assay highlights are listed in **Error! Reference source not found.**28. Samples from the Mickelson, Sunrise, Parkhill and Jubilee (near the Cora shaft) areas returned gold values between 24 and 50 g/t. Samples from the Cooper area and the Hornblende Shear area north of Surluga returned samples with gold values between 20 and 50 g/t Au. The sample results confirmed that significant gold grades exist in the historic showings.

Table 6-28: Assay highlights of the grab samples collected by Red Pine in 2014

Sample	Easting	Northing	Au (g/t)	Location
1473051	669518.1	5317996	34.1	Cooper Vein
1473059	669653.19	5317918	**25.4**	
1473023	667930	5316243	**50.8**	Cora Shaft
11663	668077	5317498	**24.4**	Hornblende Shear
11465	668966	5315680	**24.9**	Mickelson
11701	668944	5315749	**36.3**	
11728	668884	5315692	**93**	
11619	668764	5314700	**54.1**	Trout Creek Vein

Channel sampling was laid out and completed on areas where rock samples from the 2014 and 2015 mapping and prospecting program returned high gold grades. Red Pine collected 144 channel samples from forty-one locations during July 3 to 31, 2015.

The purpose of the channel sampling was to verify historic showings. Channel samples were cut using a channel saw with a diamond blade. The starting point of the channel was recorded using a handheld GPS and after completion a high precision RTK GPS was used to locate the start and end of each individual sample. Samples were collected in approximately one-meter intervals (intervals range from 0.1 to 1.5 m); assay highlights of the channel samples are listed in **Error! Reference source not found.**29. The channel samples were representative of the outcrops from which they were collected.

Table 6-29: Assay highlights of the 2015 channel samples

Channel	**From (m)**	**To (m)**	**Interval (m)***	**Au (g/t)**	**Location**
15WG-AC-001	0	2	2	4.16	Root vein
15WG-AC-001A	0	3.5	3.5	8.03	
incl.	2.5	2.88	0.38	**53.7**	
15WG-JFM-017	0	0.95	0.95	8.55	
15WG-AC-008	2	6	4	2.64	Minto C
incl.	5	6	1	5.16	
15WG-AC-025	2	3	1	9.21	Trout Creek Vein
15WG-AC-026	0	1.5	1.5	8.22	Mickelson
incl.	1	1.1	0.1	**88.1**	
15WG-AC-035	0	2.75	2.75	**28.04**	
incl.	0	0.7	0.7	**69.5**	
Mickelson1	2.1	3.45	1.35	8.85	
Mickelson5	0	1.6	1.6	**18.76**	
Mickelson7	0	1.2	1.2	**24.23**	
15WG-AC-125A	0.5	3.15	2.65	17.2	Sunrise 4
incl.	1.5	2.25	0.75	**54.2**	

**Intervals listed here do not represent true thickness.*

The areas investigated through channel sampling were located around the historic Sunrise shaft, the area between the historic Van Sickle and Parkhill mines, the area north of the historic Minto Mine and an area north of Highway 101 on lease LEA-107760. The best results were obtained from the Sunrise area with several samples returning gold grades >50 g/t.

Following the summer 2015 exploration program, Red Pine met the capital spending requirements and earned a 30% interest in the Wawa Gold Project. Red Pine also became the operator of the project. A joint venture between Red Pine, Augustine and Citabar was formed to continue the exploration of the property.

6.7.4 2015 Mineral Resource Estimate

Following the exploration program of December 2014 and winter/spring 2015, Red Pine commissioned Ronacher-Mackenzie Geoscience, who worked in collaboration with SRK Consulting, to update the NI 43-101 compliant resource for the Surluga Deposit (Ronacher et al., 2015). The updated mineral resource was estimated based on information from 2,007 historic boreholes (126,067 meters) drilled between the early 1960s and the 1990s, boreholes drilled by Augustine in 2007 and 2011, and twenty-six boreholes (5,594 meters) drilled by Red Pine in 2014 and 2015 (Phases 1 and 2). For the resource estimation, three domains were modelled within the Jubilee Shear Zone and considered as domains to constrain gold estimation. Any zones outside the Jubilee Shear Zone were not included in the inferred resource. Grade estimation considered ordinary kriging and five passes informed by 2-metre-long capped composites at 75 g/t gold. From Ronacher et al. (2015):

"*The first pass was the most restrictive in terms of search radii and number of boreholes required to code a block. Successive passes usually populated areas with less dense drilling, using relaxed parameters with generally larger search radii and less data requirements. SRK assessed the sensitivity of the gold block estimates to changes in minimum and maximum number of data, use of octant search and the number of informing boreholes. Results from these studies show that the model is relatively insensitive to the selection of the estimation parameters and data restrictions. A hard boundary was used between the resource domains.*"

Effective May 26th, 2015, using an overall 0.5 g/t cut-off, SRK consulting estimated a NI 43-101 compliant inferred resource of 1,088,000 ounces contained in 19,824,000 tonnes @ 1.71 g/t gold (**Error! Reference source not found.**30). This estimation was completed in conformity with CIM Mineral Resource and Mineral Reserves Estimation Best Practices Guidelines (November 2003). The blocks were classified according to CIM Standard Definition for Mineral Resources and Mineral Reserves (May 2014) guidelines. This estimation does not represent mineral reserves and has not demonstrated economic viability. There is no certainty that all, or any part of the mineral resources will be converted into mineral reserves. **Error! Reference source not found.**30 lists the details of the resource estimate.

Table 6-30: Mineral resource statement for the Surluga Deposit of the Wawa Gold Project

Resource Category*	Cut-off	Quantity	Grade	Contained Metal
	Gold (g/t)	('000 t)	Gold (g/t)	Gold ('000 oz)

Resource Category*	Cut-off	Quantity	Grade	Contained Metal
	Gold (g/t)	('000 t)	Gold (g/t)	Gold ('000 oz)
Inferred**				
Inside Pit	0.4	10,239	2.05	676
Outside Pit	0.4	8,630	1.07	298
Underground	2.5	955	3.73	114
Total	**0.5**	**19,824**	**1.71**	**1,088**

**Mineral resources are not mineral reserves and have not demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. Composites have been capped where appropriate.*

***Pit mineral resources are reported at a cut-off grade of 0.40 g/t gold in relation with a conceptual pit shell constructed by SRK. Underground mineral resources include classified modelled blocks below the conceptual pit shell and above a cut-off grade of 2.50 g/t gold. Cut-off grades are based on a gold price of US$1,250 per ounce and a gold recovery of 95 percent.*

6.7.5 Red Pine-Augustine-Citabar JV (2015)

The first exploration program under the joint venture consisted of ground geophysical surveys in the Mickelson-Sunrise area and a drill program consisting of thirteen HQ-size diamond drill holes, totaling 1571.6 meters; completed in October and November of 2015.

The purpose of the drilling program was to test the structure of the Hornblende Shear Zone and the Mickelson-Sunrise vein system. These showings are adjacent to the Surluga Deposit where gold mineralization was found in surface samples and where prospecting and channel samples contained high gold grades of >20 g/t.

Prior to drilling in the Mickelson-Sunrise area, Red Pine cut a grid and contracted ClearView Geophysics to conduct a ground horizontal loop electromagnetic (Max-Min) survey and ground magnetic survey over the area (**Error! Reference source not found.**1). The surveys were designed to define the main structural trends and highlight locations that could be related to know gold mineralization.

Table 6-31: Parameters of the ground magnetic survey

Survey Parameter	Value
Survey dates	October 18-19, 2015
Line-km	12.3 km
Line direction	170°
Line spacing	20 m
Terrain clearance	2 m

Survey Parameter	Value
Magnetic sensor	Scintrex ENVI Cesium magnetometer
Magnetic sensor resolution	0.01 nT
Magnetic sensor sampling rate	10 Hz
Magnetic base station sensor	GSM-19 v7.0 Overhauser magnetometer
Magnetic base station sensor resolution	0.01 nT
Magnetic base station	1 Hz
Magnetic base station location (Long, Lat)	84.7378W, 47.9714N

The Fall 2015 drilling program confirmed the Hornblende Shear Zone is mineralized from surface to 300 meters below surface with 700 meters strike length. The four holes targeting the shallower extension of the Hornblende Shear Zone all successfully intersected gold mineralization, whereas the deeper holes intersected a high-grade zone within the Hornblende Shear Zone (**Error! Reference source not found.**2). This drilling program also discovered a new gold zone between the Jubilee Shear Zone and the Hornblende Shear Zone named the William Gold Zone (**Error! Reference source not found.**2).

In the Sunrise-Mickelson area, the drilling program did not reproduce the grade*length obtained from the channel samples. However, combined with the Max-Min area, the drilling program may have identified a previously un-recognized major contact in the area. The best intersection from the 2015 drill program (SM-15-35, 28.06 g/t gold over 0.75 m) in the Mickelson area was obtained above this break in the Max-Min domains.

Table 6-32: Highlights from Red Pine-Augustine-Citabar JV Fall 2015 drilling program

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)	Gold Zone
HS-15-27	25	36.00	**11**	**2.22**	Hornblende Shear Zone
incl.	26	27.4	1.4	**9.7**	
and	28.4	29.73	1.33	3.28	
HS-15-28	25.95	41.3	**15.35**	**1.25**	Hornblende Shear Zone
incl.	25.95	31.50	5.55	2.55	
HS-15-29	147.00	174.00	27	0.53	Hornblende Shear Zone
incl.	148	149	1	3.05	
incl.	159	171	**12**	**0.74**	
HS-15-30	1.5	14	**12.5**	**1.78**	William Gold Zone
incl.	10	11.4	1.4	3.82	
and	12.84	14	1.16	**5.22**	
HS-15-30	152.5	164.83	**12.33**	**1.26**	Hornblende Shear Zone
incl.	155.97	160.4	4.43	2.28	
HS-15-31	57.5	85.5	28	2.77	Jubilee Shear

Hole No	From (m)	To (m)	Interval (m)*	Au (g/t)	Gold Zone
incl.	62	81	**19**	**3.91**	Zone
HS-15-31	178.5	200.5	22	1.01	William Gold Zone
incl.	187.5	200.5	**14.5**	**1.35**	
HS-15-31	347.5	356	**8.5**	**5.37**	Hornblende Shear Zone
incl.	350.5	353.4	2.9	**14.28**	
SM-15-32	21.4	22	0.6	6.65	Mickelson Vein
SM-15-35	41	41.75	0.75	**28.06**	
SM-15-37	6.1	7	0.9	1.04	

**Intervals listed here do not represent true thickness*

6.7.6 Red Pine's 2016 Historic Hole Sampling

Of the 42,000 meters of historic core available at the beginning of the sampling program, Red Pine took 3,497 drill core samples, covering 6,227.38 meters of core by processing 16,364 meters of drill core distributed in 139 drill holes during the summer 2016 sampling program (**Error! Reference source not found.**3). In total, 19 surface (holes starting with "*S*" and 96-2) and 139 underground drill holes (holes starting with "*U*") were processed.

Table 6-33: Attributes of the historic core sampling program

Parameters	Value
Number of holes sampled	158
Number of surface holes sampled	19
Number of underground holes sampled	139
Total meterage covered (m)	16,364
Total meterage sampled (m)	6,227.38
Total number of core samples taken	3497
Total number of CRM samples	358

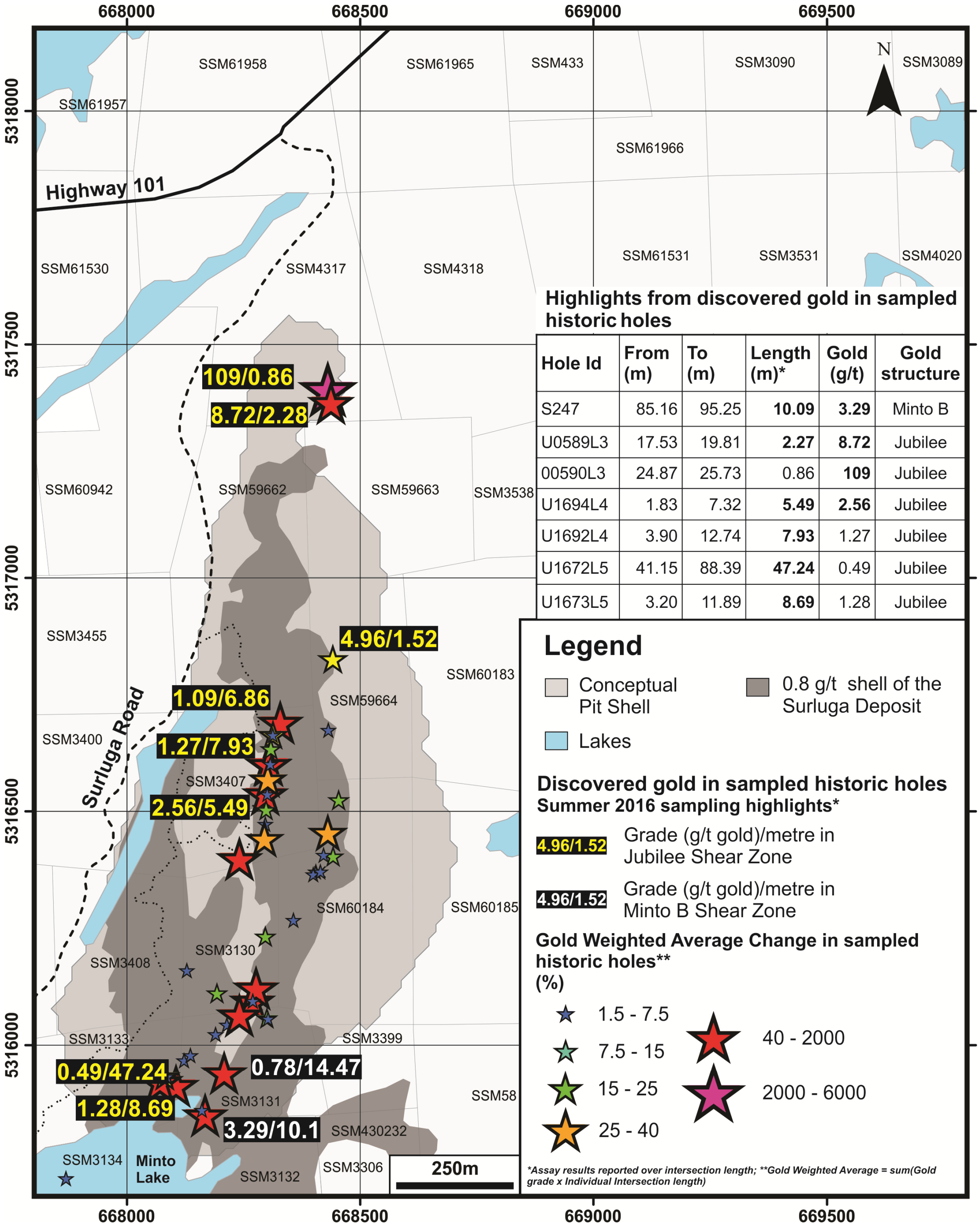
6.7.7 Impacts of the historic core sampling program on the total gold content of the historic holes

From the 3,497 core samples taken, 360 samples (10.3 %) contained over 0.1 g/t gold (**Error! Reference source not found.**4). The highest-grade interval discovered contained 109 g/t gold over 0.86 metres. This sample came from hole U0590L3 drilled in the Jubilee Shear Zone at the northern end of the Surluga Deposit's inferred resource.

Table 6-34: Grade (g/t Au) distribution in the historic core samples

Grade range (g/t Au)	**# of samples**	**Percentage**	**Cumulative Percentage**
0 - 0.01	2121	60.65	60.65
0.01 - 0.05	835	23.88	84.53
0.05 - 0.1	181	5.18	89.71
0.1 - 0.3	**191**	**5.46**	**95.17**
0.3 - 0.8	**110**	**3.15**	**98.31**
0.8 - 1.5	**26**	**0.74**	**99.06**
1.5 - 2.5	**17**	**0.49**	**99.54**
2.5 - 5	**12**	**0.34**	**99.89**
5 - 14	**3**	**0.09**	**99.97**
>100	**1**	**0.03**	**100**

To measure the impacts of the sampling program on the gold content of known gold-bearing structures intersected by the sampled holes, the weighted gold average of the gold zones before sampling was compared to the weighted gold average of the same zone after the sampling. From the 158 historic holes sampled, 72 (46%) holes distributed throughout the Surluga Deposit showed either significant changes to the overall gold content of the known gold structures they intersected or contained gold zones discovered during that program (Figure 6-3).



Hole Id	From (m)	To (m)	Length (m)*	Gold (g/t)	Gold structure
S247	85.16	95.25	**10.09**	**3.29**	Minto B
U0589L3	17.53	19.81	**2.27**	**8.72**	Jubilee
00590L3	24.87	25.73	0.86	**109**	Jubilee
U1694L4	1.83	7.32	**5.49**	**2.56**	Jubilee
U1692L4	3.90	12.74	**7.93**	1.27	Jubilee
U1672L5	41.15	88.39	**47.24**	0.49	Jubilee
U1673L5	3.20	11.89	**8.69**	1.28	Jubilee

Figure 6-3: Highlights of the summer 2016 historic core sampling program showings the location of the intersections with the highest gold content discovered in un-sampled core un-corrected for calculated true thickness

In the Jubilee Shear Zone that hosts the inferred resource of the Surluga Deposit, the overall gold metal factor increased for 64 holes and the overall width of the mineralized intersection in the Jubilee Shear Zone increased for 42 holes (**Error! Reference source not found.**35). Corrected for true thickness, the average length addition of gold-mineralized rocks in the 143 holes intersecting the Jubilee Shear Zone that were sampled was 1.13 meters.

Capping the assays results from the sampling program at 75 g/t gold based on Ronacher et al. (2015), an average metal factor, corrected for calculated true width, of 1.08 g/t Au*m was added in the 143 historic holes that intersected the Jubilee Shear Zone sampled during this program. Compared to the average metal factor of 20.83 g/t Au*m for all the historic holes in the Jubilee Shear Zone corrected for true thickness, the average addition of 1.08 g/t Au*m per sampled historic holes corresponded to a 5.2% increase of the average metal factor of the historic holes intersecting the Jubilee Shear Zone.

Significant gold in previously un-sampled core was also found in the Minto B Shear Zone in three sampled historic holes (**Error! Reference source not found.**35). Corrected for calculated true thickness, un-sampled core in the Minto B Shear Zone in hole S247 contained 3.29 g/t gold over 3.45 meters and 0.78 g/t gold over 11.08 meters in S309. The average gold metal factor addition corrected for calculated true thickness in the Minto B Shear Zone is 8.69 g/t Au*m and the average gold mineralized length added was 5.43 meters (corrected for calculated true width). The Minto B Shear Zone is in the hanging wall of the Surluga Deposit inferred resource.

Ten sampled historic holes also discovered gold zones in the hanging wall and footwall of the Jubilee Shear Zone (**Error! Reference source not found.**35). The average length and metal factor, not corrected for true thickness, of the discovered zones were respectively 4.37 meters and 1.82 g/t Au*m.

Table 6-35: Summary of the historic core sampling additions to known and discovered gold zones

Gold zones with known true thickness	**Jubilee Shear Zone**	**Minto B**	**Discovered Gold Zones with unknown true thickness**	
Added mineralized length corrected for calculated true thickness (m)	Number of holes	Number of holes	Added mineralized length	Number of holes
0 m	99	0	**0 m**	0

Gold zones with known true thickness	Jubilee Shear Zone	Minto B	Discovered Gold Zones with unknown true thickness	
0 - 0.5 m	0	0	**0 - 0.5 m**	0
0.5 - 1.5 m	7	1	**0.5 - 1.5 m**	2
1.5 - 3 m	15	0	**1.5 - 3 m**	3
3 - 5 m	12	1	**3 - 5 m**	2
5 - 7 m	5	0	**5 - 7 m**	1
7 - 9 m	4	0	**7 - 9 m**	1
>9 m	1	1	**>9 m**	1
Added metal factor corrected for calculated true thickness (g/t Au*m)	Number of holes	Number of holes	Added metal factor not corrected for calculated true thickness (g/t Au*m	Number of holes
0 g/t Au*m	79	0	**0 g/t Au*m**	0
0 - 0.2 g/t Au*m	7	0	**0 - 0.2 g/t Au*m**	0
0.2 - 0.5 g/t Au*m	8	0	**0.2 - 0.5 g/t Au*m**	0
0.5 - 1 g/t Au*m	15	0	**0.5 - 1 g/t Au*m**	2
1 - 2 g/t Au*m	17	1	**1 - 2 g/t Au*m**	5
2 - 5 g/t Au*m	11	0	**2 - 5 g/t Au*m**	3
5 - 10 g/t Au*m	3	1	**5 - 10 g/t Au*m**	0
10 - 25 g/t Au*m	2	1	**10 - 25 g/t Au*m**	0
>25 g/t Au*m	1	0	**>25 g/t Au*m**	0

6.7.8 Red Pine 2016 Trenching and Channel Sampling

In summer 2016, Red Pine personnel were on site at the Wawa Gold project to carry out mechanized stripping and channel sampling of the exposed outcrops. A total of 760 channel samples were collected over 18 trenches. The main objective of the trenching program was to characterize the surface geology and mineralization of historic showings within or proximal to the Surluga Deposit. These showings include: The Jubilee Shear Zone (JSZ), Hornblende Shear zone (HBSZ), Algoma, Minto A, Minto B, and prospective structures identified from the geophysical surveys. Modelling of historic data provided targets for drill testing, but confirmation of historic results was also required. Trenching and channel sampling was also completed in areas where limited to no surface work had been done to date but that exhibited similar geophysical signatures as known mineralization.

A total of 760 channel samples were collected and analyzed for gold as well as an assortment of other elements. Highlights of the analysis results are outlined in Table 6-36.

Table 6-36: Channel samples with gold equal or above 0.5 g/t

Trench	**From (m)**	**To (m)**	**Length (m)***	**Sample ID**	**Au (g/t)**
TR-16-1K	1	2	1	1473502	0.76
TR-16-1K	3	4	1	1473504	0.512
TR-16-1M	0	1	1	1473506	2.77
TR-16-1N	0	1	1	1473508	6.92
TR-16-2A	4	5	1	1473634	1.76
TR-16-2A	5	6	1	1473635	2.83
TR-16-2N	4	5	1	1473616	0.872
TR-16-3B	0	1	1	1473731	6.74
TR-16-3B	1	2	1	1473732	0.713
TR-16-4A	0	1	1	1473637	1.08
TR-16-4A	2	3	1	1473639	0.715
TR-16-4A	4	5	1	1473642	1.508
TR-16-4A	5	6	1	1473643	0.912
TR-16-4A	6	7	1	1473644	0.651
TR-16-4A	7	8	1	1473645	1.289
TR-16-4A	8	9	1	1473646	0.657
TR-16-4B	1	2	1	1473658	0.642
TR-16-4B	2	3	1	1473659	1.082
TR-16-6K	1	2	1	1473864	0.6
TR-16-7S	0	0.5	0.5	1473782	0.712
TR-16-7S	0.5	1	0.5	1473783	0.73
TR16-8F	1	2	1	1473910	0.573
TR16-8F	3.2	4	0.8	1473913	1.78
TR16-11K	3	4	1	1473466	1.13
TR16-13C	6	7	1	17433	0.857
TR16-17G	0	1	1	17013	0.561
TR16-17H	0	0.8	0.8	17023	1.22
TR16-17I	0	0.6	0.6	17035	0.854

***Length represent sample length

The work proved successful as several promising results were generated. Gold mineralization extensions were confirmed at surface for the William Gold Zone and north and south of the Jubilee Shear Zone. The results also provided important geological constraints for many of the other gold-bearing structures located near the Surluga Deposit. The results from this trenching program also confirmed that lithological contacts are an important factor to gold mineralization as this is where the best results were found at surface in many of the trenches. Beside the main mine site road, a significant shear zone, aptly named the Surluga Road Shear Zone, was also discovered during this trenching program

6.7.9 Red Pine Drilling Program (2016-2017)

The 2016-2017 drilling program was initiated to further develop the gold inventory on the Wawa Gold Project. This objective was approached in several different ways which included drilling along strike and down dip of the current resource. Drilling was also completed on hanging wall and footwall targets to better understand the geometry of these mineralized zones. Along with these targets, several other historic mine sites of the property were tested to confirm historic results, to develop a structural model of the property and to determine if mineralized material remains outside of the stopped areas reported. These areas include the Parkhill, Van Sickle, Darwin-Grace and Minto Mine sites.

During this program it was has demonstrated that the Jubilee Shear Zone, which hosts all of the inferred resource as identified in the Company's technical report ("Independent Technical Report, Wawa Gold Project, Ontario" prepared by Ronacher McKenzie GeoScience and SRK consulting) which is available under the Company's profile on www.SEDAR.com (the "Technical Report"), is part of a larger deformation and gold mineralization corridor named the Wawa Gold Corridor.

The Wawa Gold Corridor consists of a network of interconnected gold-bearing shear and replacement zones extending for at least 8 km North-South by 0.5 km East-West. Individual shear zones range from 0.5 m to 100 m thick. Gold mineralization is also hosted in large replacement zones measuring up to 20 m thick. The southern, western and eastern boundaries of the Wawa Gold Corridor remain unknown. Five Key areas were drilled along the extension of the Surluga Deposit: the Surluga North Zone; the Minto Mine South Zone; The Sunrise-Mickleson Zone; The Parkhill Mine Zone; and the Grace-Darwin Zone. These areas all contribute to a gold-mineralization zone that extends for more than 5 km.

The Jubilee Shear Zone (JSZ) was drilled along strike to the north of the current resource with holes. The main purpose for these holes was to expand the gold inventory in the JSZ to the North and expand the footprint and volume of the Surluga Deposit. The program was successful at intersecting mineralized zones where gaps existed in historic drilling. Along with filling many gaps in drill spacing several new discoveries were made.

Mineralization in the JSZ is strongly controlled by a south-south-east trending stretching lineation and as such, holes were designed and drilled to optimize this. While drilling to the north, a high-grade intersection was encountered outside of the main ore shoots. Hole SD-16-45 intersected 15.23m of 14.66g/t which is believed to be the upper extents of a new ore shoot in the JSZ. A summary of highlights from the northern Surluga drilling in the JSZ can be found in **Error! Reference source not found.**37.

Along with drilling to the north of the existing resource, holes were drilled through the resource in several areas. Based on the geometry of historic workings and drilling, it was believed that the true thickness of the JSZ was not optimized in several areas. Multiple holes returned intersections greater than 10m with composites >0.5g/t (**Error! Reference source not found.**37). These are typical of the JSZ when outside of the main ore shoots and many represent increased thickness compared to historical modelling. Along with optimization of the JSZ, multiple holes encountered mineralized zones in the hanging-wall and foot-wall. Some of these zones were the Algoma Zone, the Surluga Road Shear Zone (SRSZ), the William Zone, and The Hornblende Shear Zone (HBSZ). Gold values were also obtained outside of these zones but have due to limited data and few intersections, modelling has not been completed. Highlights from these proximal gold zones can be found in **Error! Reference source not found.**37.

The Minto Mine South Zone is comprised of several gold bearing structures south of the historic Minto mine. These zones include the Minto A vein, the Minto E vein, the Minto Stockwork Zone and the #4 Vein (Minto A lower). Because of its potential, 58 holes were completed to test these zones.

The Minto A Vein has shown significant potential with relatively consistent grades and widths intersected in multiple holes. This vein shows good continuity both laterally and to depth and gold content appears to be related to an increase in sulphides, which aids as a visual indicator when logging. Visible gold is relatively common in this structure, being observed in more than 68 of 117 holes (58%) drilled. The Minto Stockwork zone has shown less continuity than that of the Minto A vein but provides important width where encountered. The zone remains open to depth and along strike. Highlights from the Minto A and Minto Stockwork are showing in **Error! Reference source not found.**37.

The Minto E zone is a semi continuous quartz shear vein which has shown a high degree of variability and discontinuity. Positive results have been achieved with intersections including 3.62m of 9.58g/t and 1m of 6.58g/t (**Error! Reference source not found.**37). Several dry holes were drilled into this zone and as such further modelling and analysis is required to develop this gold zone.

Recent modelling has indicated that the #4 vein is a sub parallel structure which exhibits similar characteristics and warrants further follow up. This vein was targeted and drilled near the Parkhill Mine.

Drilling at the Sunrise-Mickleson was completed to follow up on the recent program which included drilling in this area. The Max-Min survey completed over this area showed an anomalous target which was coincident with the best results from the last round of drilling in the area (SM-15-35, 0.78m @ 28.6g/t). SM-17-68 was designed to further test this interpreted contact. The hole returned only background values and further interpretation is required to determine why the hole was dry.

The high-grade gold in the Darwin-Grace Mine area (57.31 g/t gold over 3.14m) was typical of past production from this mine historically. Table 6-37 is outlining the best gold results.

Using historic mine workings, drilling and surface work from recent programs, several holes were drilled to test the Parkhill mine area, and some of them intersected intervals with high gold value (Table 6-37)

Table 6-37: 2016-2017 Drilling highlights

Hole	**From (m)**	**To (m)**	**Length (m)**	**Gold (g/t)**	**Gold Zone**
SD-16-43	43.94	69.7	25.76	0.79	Jubilee Shear Zone
	including				
	43.94	52.9	8.96	2	
	65.7	69.7	4	0.59	
SD-16-45	147.27	162.25	15.23	14.66	Jubilee Shear Zone
	including				
	147.27	148.27	1	44.41	
	155.36	156.14	0.78	176	
	159.74	160.43	0.69	36.8	
SD-17-104	172.5	189.9	17.4	1.2	Jubilee Shear Zone

Hole	From (m)	To (m)	Length (m)	Gold (g/t)	Gold Zone
	Including				
	172.5	173.5	1	3.1	
	180.5	185.9	5.4	2.9	
SD-17-107	160.8	171	10.2	0.7	Jubilee Shear Zone
	Including				
	168.6	171	2.4	2.5	
	197	198	1	56.8	
SD-17-124	207.5	222	14.5	0.64	Jubilee Shear Zone
	Including				
	216.3	221	4.7	1.09	
SD-16-40	140.18	142.1	1.92	16.82	Surluga Road Shear Zone
	170	175	5	1.27	William Gold Zone
	394	416	22	0.94	Hornblende Shear Zone
	Including				
	394	408	14	1.17	
SD-16-42	95.93	99.13	3.2	0.5	Surluga Road Shear Zone
SD-16-43	104.8	122	17.2	0.57	Hornblende Shear Zone/Surluga Road Shear Zone
	including				
	114.46	122	7.54	0.76	
SD-17-50	94.87	104.57	9.7	2.02	Surluga Road Shear Zone
	113.4	128.28	14.88	0.63	William Gold Zone
	213.38	222.24	8.86	1.28	Lower William Gold Zone
	242.53	247.45	4.92	0.86	Hornblende Shear Zone - Upper
SD-17-52	85.15	86.22	1.07	1.84	Surluga Road Shear Zone
	210.24	223	10.89	1.09	Hornblende Shear Zone - Lower
SD-17-102	124	126	2.1	3.2	Algoma North
	240	242.7	2.7	4.7	Surluga Road Shear Zone

Hole	From (m)	To (m)	Length (m)	Gold (g/t)	Gold Zone
	Including				
	240.8	241.8	1	10.7	
SD-17-73	18.16	19.16	1	1.38	Minto Stockwork Zone
	43.28	44.28	1	3.35	
	89.87	92.87	3	19.92	MMSZ
SD-17-78	48.88	49.79	0.91	1.39	Minto Stockwork Zone
	53.7	57.19	3.49	11.82	MMSZ
	including				
	55.3	56.1	0.8	51	
SD-17-86	152.31	154.31	2	24.9	MMSZ
SD-17-101	206.4	207.4	1	34.6	MMSZ
SD-17-117	126	130	4	13.72	MMSZ
	Including				
	127	128	1	40.15	
SD-17-126	186.6	188.6	2	11.47	MMSZ
	Including				
	186.6	187.4	0.8	28.2	
SD-17-96	4.6	5.6	1	6.58	Minto E Gold Zone
SD-17-99	17.35	20.97	3.62	9.58	Minto E Gold Zone
PH-17-70	38.49	40	1.51	6.23	Parkhill Mine Structure
PH-17-71	52.68	55	2.32	1.77	Parkhill Mine Structure
	63.32	64.32	1	2.87	
	155.07	158.07	3	2.6	No.4 Vein (MMSZ)
DG-17-57	No significant results - hole hit workings of Darwin-Grace mine and stopped				
DG-17-58	No significant results - hole hit workings of Darwin-Grace mine and stopped				
DG-17-53	51	53	2	1.1	Darwin-Grace Deformation Zone
DG-17-54	46.88	54.5	7.62	13.07	
DG-17-55	51.75	56.2	4.45	23.17	
DG-17-56	62.86	71	8.14	23.1	
DG-17-60	66.66	70.7	4.04	1.09	
DG-17-63	73.74	77.77	4.03	3.1	
DG-17-66	12.18	16	3.82	2.37	Nyman Vein

6.7.10 Red Pine Exploration Program 2017 - Summer Surface Sampling Program

A multitude of historic showings exist on the Wawa Gold Project. These showings have been visited periodically throughout the history of exploration on the project and many have been shown to be gold bearing. During the 2017 summer field season, the Root Vein was selected as a priority target by the company, as historic results have shown significant mineralization and visible gold (‘VG’) is often found at surface. Some drilling was completed historically with varied results, but the geometry was poorly understood.

The Root Vein showing is on the north side of Hwy 101, accessed by foot on a historic drill trail. Stripping was completed historically and due to limited remediation, the outcrop remains clean and well exposed. No overburden stripping was required because of this.

A total of 49 channel samples were collected over 9 trenches covering 49.6m. The samples were analyzed for gold as well as a multi element suite.

The main objective of the trenching program was to characterize the surface geology and mineralization of the Root Vein system. Channel samples were taken in well exposed parts of the trench and orientated perpendicular to strike.

Samples were selected to test prospective portions of the vein with visible sulfides and/or Gold at surface. Where available, samples were also designed to follow up on positive historic results.

Significant gold mineralization was intersected in the main vein on the showing which was anticipated as previous sampling focused mainly on this trend and it has been shown to be mineralized. The aspect of the root trench that had not been extensively tested in the past was the stockwork of in the wall rocks adjacent to the main vein. Positive results were achieved from the stockwork in most channels which provides the potential for a more significant mineralized volume. **Error! Reference source not found.**38 summarizes the results obtained.

Table 6-38: Highlights from Root Vein channel samples

Trench	**Length (m)**	**Au (g/t)**
Trench RV-2	4	4.87
Trench RV-3	4	4.40

Trench	Length (m)	Au (g/t)
Trench RV-5	3	8.10
Trench RV-6	2	10.78
Trench RV-7	4	25.73
Trench RV-8	1	79.7

6.7.11 Red Pine Magnetotelluric (MT) Survey 2017

Members of the Red Pine team acquired EMpulse Geophysics Ltd. to conduct a transient magnetotelluric (MT) survey of the Surluga Mine and surrounding area between May 2nd, /2017 and June 3rd, 2017. The MT survey is used to infer the earth's subsurface electrical conductivity from measurements of earth's natural geomagnetic and geoelectric field variations. The earth's electrical structure at depth may be estimated from surface measurements of naturally occurring fluctuations in the earth's geomagnetic field along with electric field fluctuations induced within the earth by the former.

Data quality is fair to good for this data-set with dead-band effects generally smaller than expected. Due to thick bush and a dense root network on the forest floor, induction coil installations were generally difficult and remained quite susceptible to motion noise, especially the vertical coil. As a result, the impedance tensor and tipper are typically wind noise dominated below approximately 20 Hz.

They survey was collected using a SFERIC Transient AMT system in which 137 stations at approximately 300 m spacing was collected on 19 parallel lines enclosing an area of approximately 2.5 km E-W by 5.5 km N-S. The MT results show that the Surluga property lies East of a deep (1.5 km or greater), major regional structure which could possibly be hydraulically connected to the Jubilee Lake area. Further, between 1500 and 2000 m, there is evidence of several deep “roots” or resistivity lows that exist below shallower anomalies in the upper several hundred meters. The location of these resistivity low anomalies exists North of Minto Lake, near the old Mariposa mine (Figure 6-1). In addition, there are strong resistivity lows in the upper several hundred meters at the West end of the northern-most lines, under Lake Wawa and at the end of L3 at shallow depths (<200m) where a conducted airborne EM survey has been completed in the past and has responded strongly to the feature.

6.7.12 Red Pine Rock Sampling 2016-2018

Red Pine completed a short field program from 2016 to 2018. The field work was executed by Red Pine geologists. The purpose of the program was to collect structural data and samples from the property. 176 rock samples were collected. The samples are representative of the outcrop from which they were collected. **Error! Reference source not found.**39 highlights assay results above 1 g/t gold.

Table 6-39: List of samples collected by Red Pine during the 2016-2018 field program

Sample ID	Easting	Northing	Au (g/t)	Au (ppb)
18482	668469	5313564	143.1	0
18492	668292	5313478	1.65	1650
18493	668292	5313478	3.42	2180
1473351	668044	5316687	20.9	7490
1473370	667830	5315051	3.16	2710
1473376	668606	5315512	2.48	2480
1473380	667738	5315240	1.32	1320
1473953	668050	5316691	12.4	0
1473954	668040	5316695	1.54	1540
1473955	668016	5316711	5.33	0
1473963	668289	5316731	43.1	43.1
1473964	668113	5316586	3.15	3.15
1473973	668193	5316994	3.51	2300
1473977	668235	5316818	64.9	0
1473981	668517	5317985	1.53	1530
18434	668412	5314937	4.43	0

7 Geological setting and mineralization

7.1 REGIONAL GEOLOGY

The Wawa Gold Project is in the southern part of the Michipicoten greenstone belt, one of two greenstone belts that form the Wawa Sub-province (

Figure **7-1**) of the Superior Province, the world's largest Archean craton (Ronacher et al., 2015). The Wawa Sub-province extends from Minnesota in the west to the Kapuskasing structural zone in the east. The Superior Province was formed by the amalgamation of numerous sub-provinces of various origins and compositions (plutonic, volcanic-plutonic, gneissic, sedimentary) that range in age from 3.0 to 2.65 Ga (Polat and Kerrich, 2000).

7.2 LOCAL GEOLOGY

The Michipicoten greenstone belt is an amalgamation of three cycles of mafic to felsic volcanism associated with concomitant subvolcanic intrusions (Sage, 1994). Zircon U-Pb ages date volcanic Cycle 1 to 2.9 Ga, volcanic Cycle 2 to 2.75 Ga and volcanic Cycle 3 to 2.7 Ga. Like other greenstone belts within the Superior Province, the mafic portion of the Michipicoten greenstone belt ranges in composition from basaltic to komatiitic. In the southern part of the Michipicoten greenstone belt, the main subvolcanic intrusions, emplaced during cycles 1 and 2 are the Hawk Lake Granitic Complex and the Jubilee Lake Stock. These intrusions have been interpreted to delineate the centers of calderas and to be the intrusive equivalent of the felsic to intermediate volcanic rocks within the main greenstones (Sage, 1984). The hiatus between volcanic Cycles 2 and 3 was marked by extensive banded iron formations. Post-Archean magmatism includes diabase dikes and the emplacement of the Firesand River Carbonatite intruded along the Wawa-Hawk Lake-Manitowik Lake Fault System. The Wawa Gold Project is located within the southern part of the Michipicoten greenstone belt (Sherman, 2005).

A prominent structure in the southern Michipicoten greenstone belt is the Wawa-Hawk Lake-Manitowik Lake Fault System, which defines the boundary between a lamprophyre-rich domain to the south and lamprophyre-free domain to the north (

Figure **7-1**). The emplacement of the Firesand River Carbonatite along the Wawa-Hawk Lake-Manitowik Lake Fault System suggests that the fault is deep-seated, whereas the location of the Jubilee Stock and Hawk Granite Complex along the fault indicate that it may follow an older structure active during the formation of the older greenstone belt. All the rocks of the Michipicoten greenstone belt are metamorphosed at greenschist facies and its volcano-plutonic sequences have been repeatedly deformed and folded (Sage, 1994).

7.3 PROPERTY GEOLOGY

The core of the known gold corridor of the Wawa Gold Project is centered on the Jubilee Stock, a composite intrusion formed of many individual intrusions of variable composition. Almost every historic mine of the property is located within or at the margins of the Jubilee Stock (Figure 7-22).

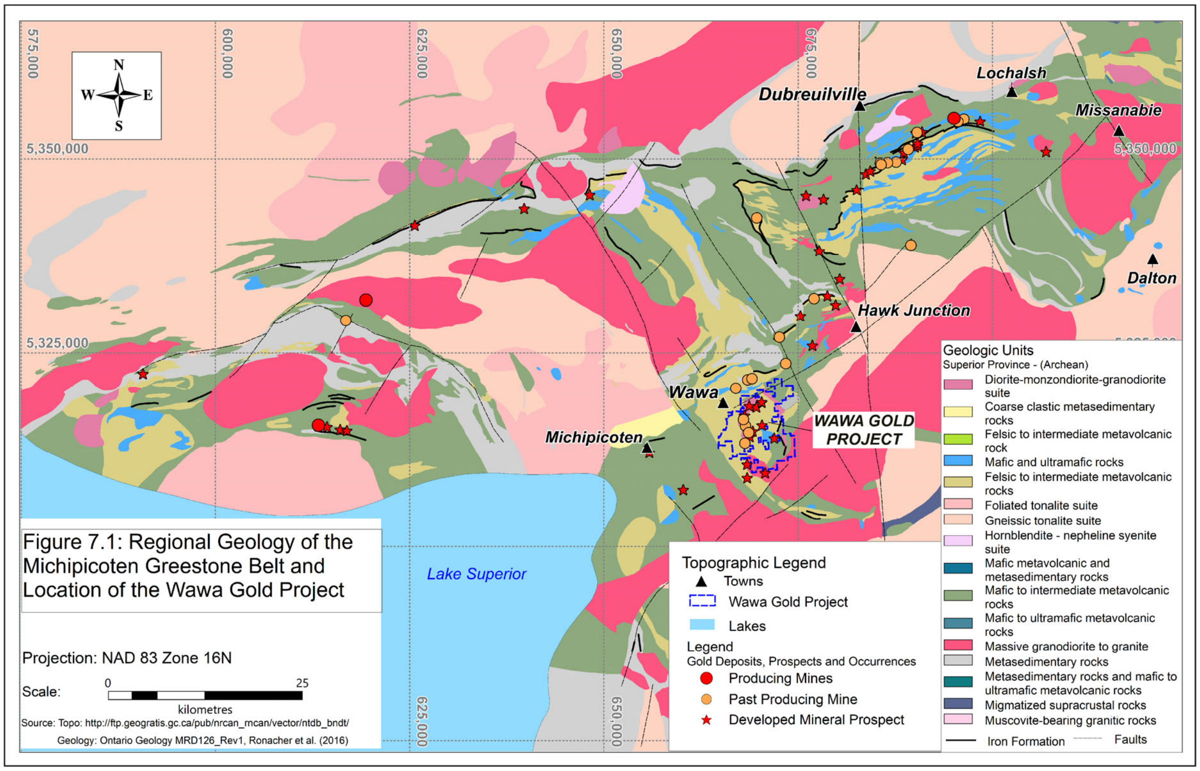


Figure 7-1: Regional Geology of the Michipicoten Greenstone Belt and location of the Wawa Gold Project within the belt

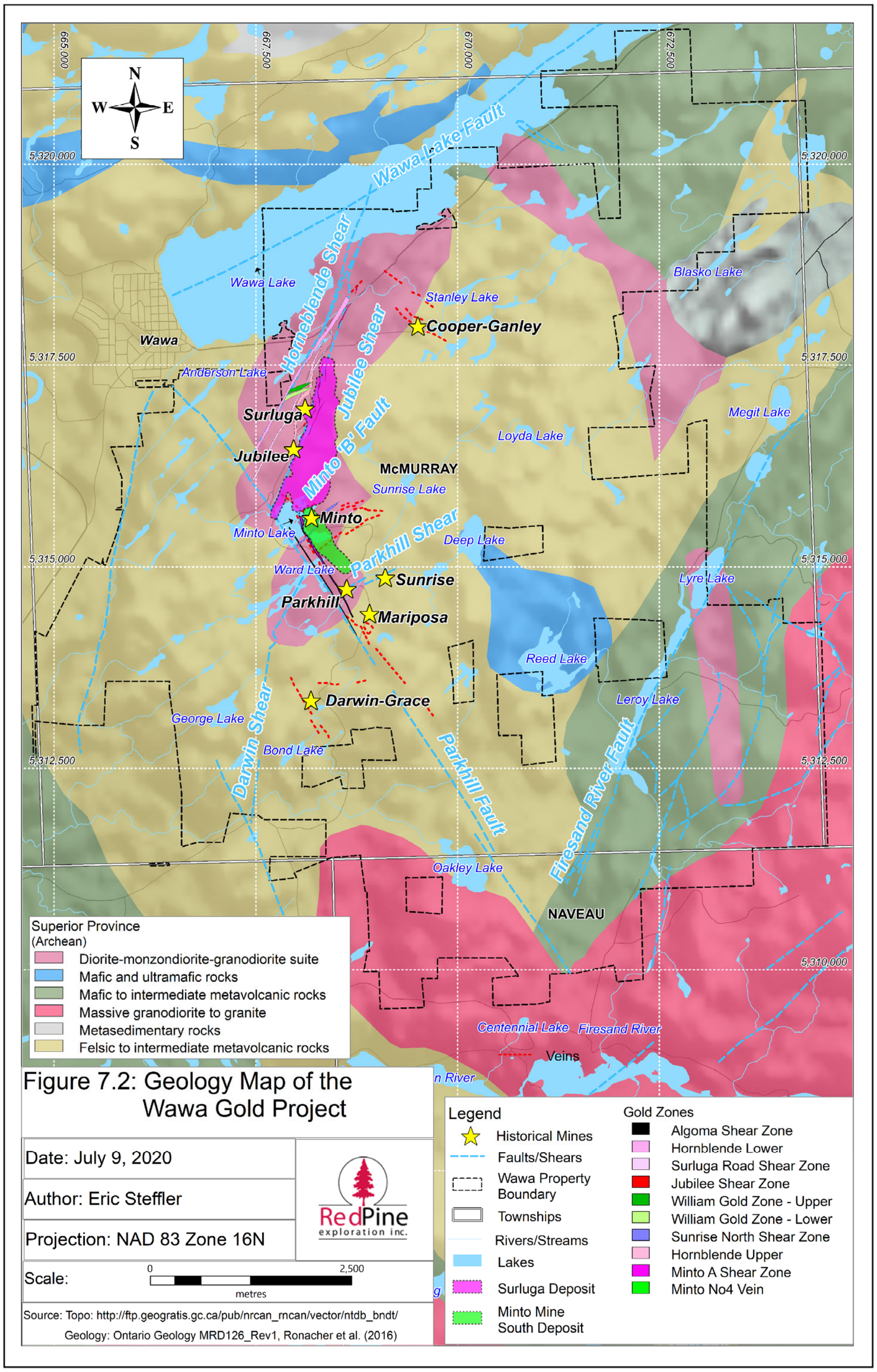


Figure 7-2: Geology map of the Wawa Gold Property from Ronacher et al. (2016)

7.3.1 Jubilee Stock

The Jubilee Stock is described as a high-level intrusion of dioritic to a dominantly granodioritic composition with many intrusive facies (Frey, 1987; Sage, 1993; Figure 7-23). The core of the Jubilee Stock is curved-shaped into a sigmoid form. Its long axis is oriented at 20° and it has a 6 x 1.3 kilometers surface expression. The grains of the intrusion composing the Jubilee Stock are fine- to medium and locally porphyritic; it intruded the host volcanic sequence around 2,745 ± 3 Ma (Sullivan et al. 1985). MacMillan and Rupert (1990) observed that the more massive and competent central parts of the Jubilee Stock are associated with better gold grades which they attributed to a locally favorable stress field spatially associated with the competent blocks. The compositional and geometrical complexity of the Jubilee Stock comprising many contact zones between rocks of different rheology are interpreted to be critical controls on the geometry and distribution of the gold zones. The main intrusive facies of the Jubilee Stock encountered by Red Pine are described below.

Medium-grained diorite *(*Figure 7-3 *and* Figure 7-4*)*

Medium-grained to coarse-grained diorite form the diagnostic unit of the core zones in Jubilee Stock and varies from a mesocratic to a melanocratic composition. Red Pine and almost every other operator of the property described the medium- to coarse-grained rocks of the Jubilee Stock as diorite. However, the name diorite is more a generic term to simplify the nomenclature of the medium-grained to coarse-grained granitic units of the Jubilee Stock. Reported petrographic work from Sage (1993) indicate a mode of 10-30% quartz, 40-55% plagioclase and 10-20% biotite without clear mention of alkali feldspar, which underlies a tonalitic composition. However, no systematic detailed petrographic and microprobe work as well as chemical discrimination work that considered the high mobility of Ca, Fe, K, Na, Rb and Sr in the hydrothermal system was done to support this classification of the medium-grained to coarse-grained granitic intrusions that could also have a tonalitic to per se granitic composition.

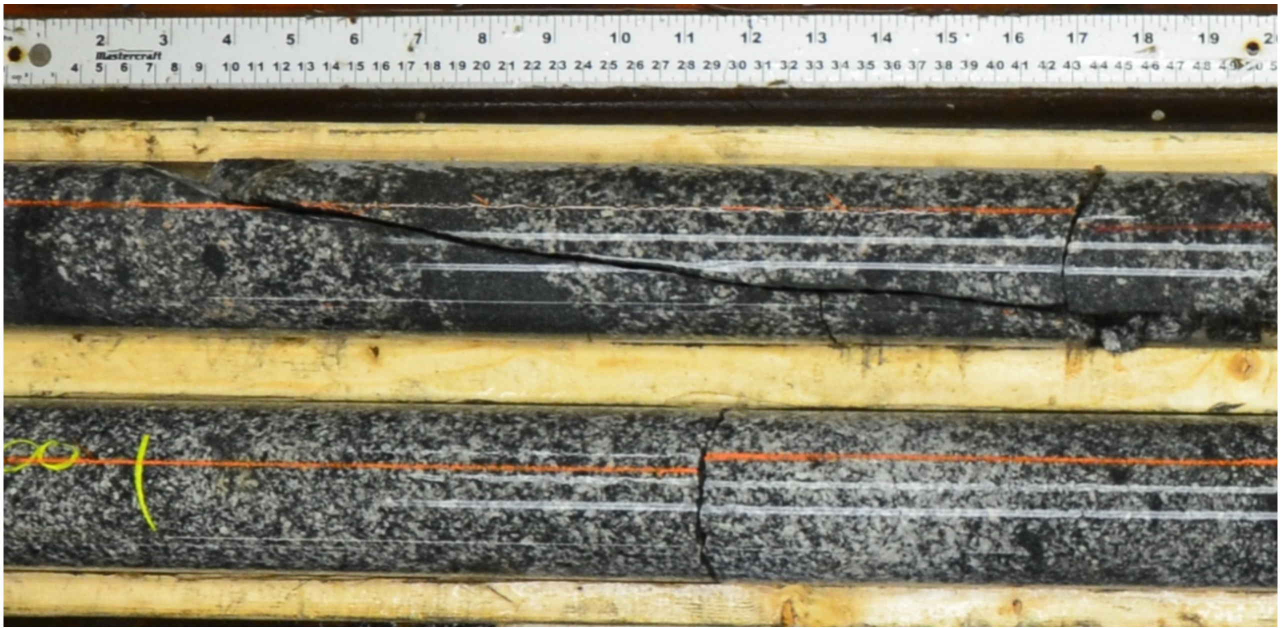


Figure 7-3: Medium- to coarse-grained facies of the Jubilee Stock diorite near the contact with the volcanic units containing enclaves of volcanic rocks

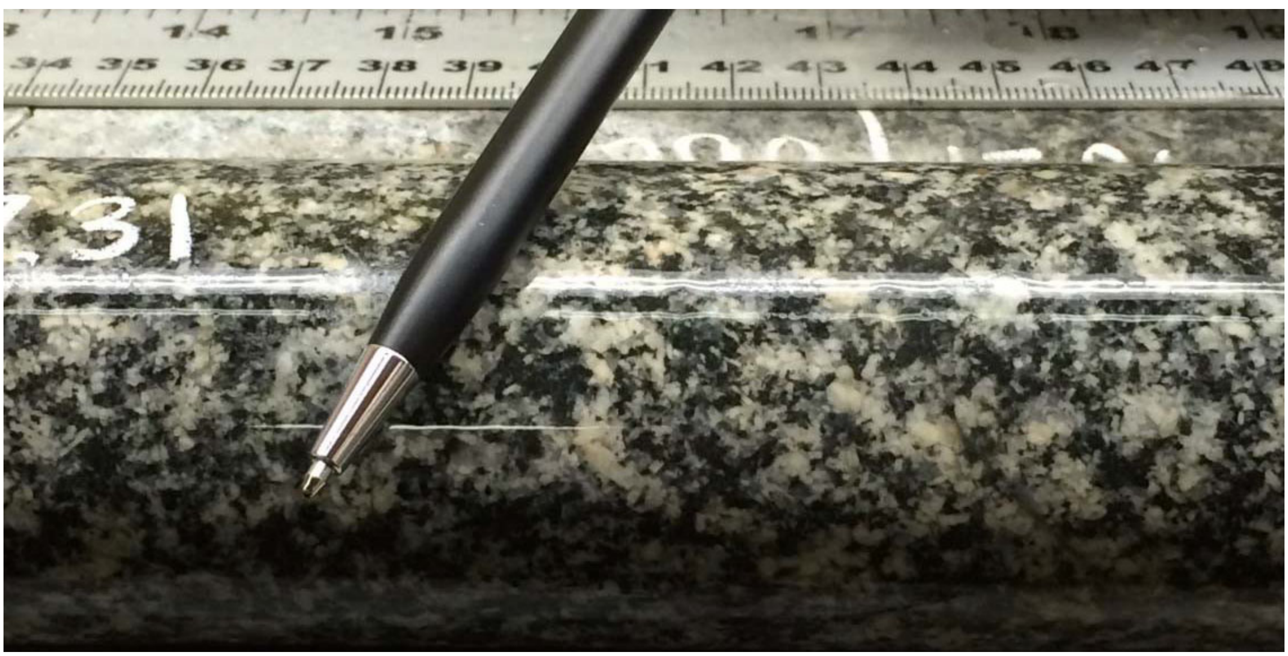


Figure 7-4: Typical Jubilee Stock diorite in the core of the Jubilee Stock

Porphyritic intrusions *(*Figure 7-5*)*

Many porphyritic intrusions surrounding the core of Jubilee Stock consist of medium- to coarse-grained granitic intrusions. The porphyritic intrusions were hypothesized by Sage (1993) to occupy the ring fracture of a large caldera centered on the Jubilee Stock. In the contact zones between different intrusions, the porphyritic intrusions are often intermixed together and with intrusions of the medium- to coarse-grained diorite. The main primary phenocryst assemblages observed in the porphyritic units are: feldspar, biotite-feldspar, quartz-feldspar and quartz. A compositional continuum and visual gradation between the medium- to coarse-grained diorite and intrusions of the feldspar-phyric, biotite-feldspar-phyric and biotite-phyric units were commonly observed, indicating the likely coeval emplacement of those units. Because of the variability in the mapping and logging of the porphyritic units, the porphyritic units of the Jubilee Stock remain undivided and not broken down in single intrusions at the time of this report.

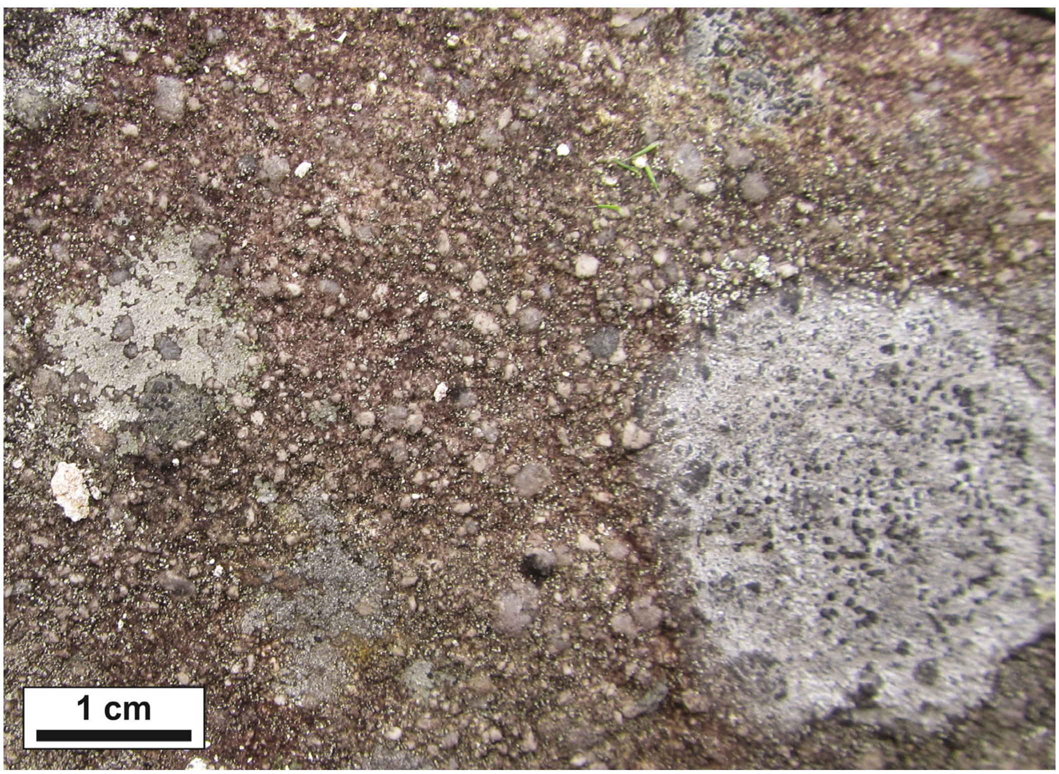


Figure 7-5: Feldspar-quartz porphyritic intrusion exposed near the Surluga Deposit

Silicified/Albitized unit *(*Figure 7-6*)*

This unit corresponds to albitized/strongly albitized and silicified diorite, volcanic units and porphyritic intrusions and prevails in certain zones of the Wawa Gold Corridor. The unit may relate to the hornfelsed units described by Sage (1993) as occurring along some of the contacts between the Jubilee Stock and the volcanic rocks. In zones of intense alteration, the primary textures of the host rocks are generally destroyed, and the unit becomes quite homogeneous making protolith identification difficult. In the transitional zones, strong alteration fronts are seen to replace the host units. The predominant precursor unit is most likely fine-grained volcanic units intruded by the Jubilee stock in which albitization was preferentially partitioned.

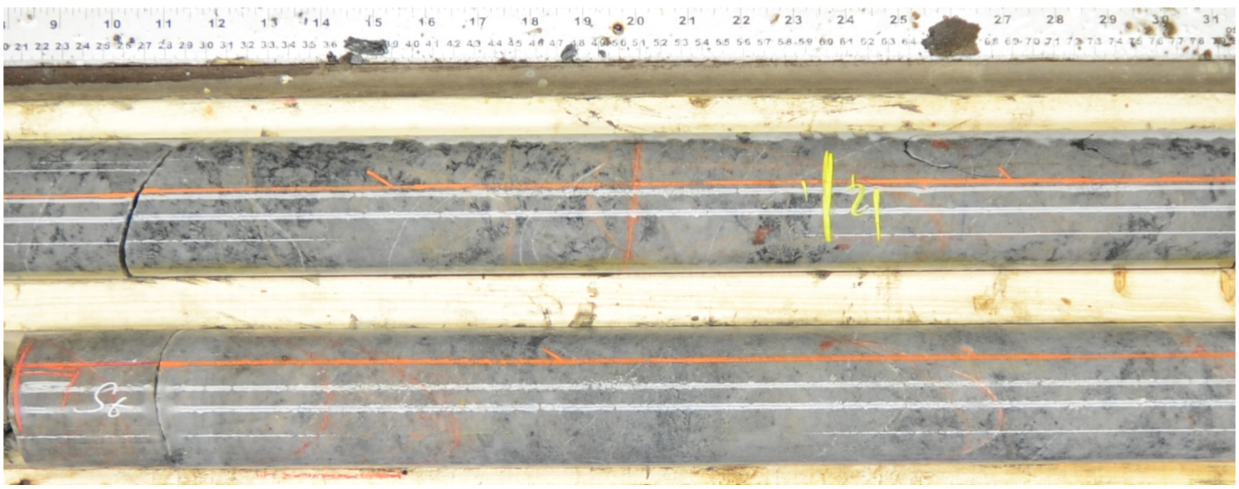


Figure 7-6: Albitized unit formed near the contacts between the Jubilee Stock and the volcanic units

Intrusive breccias *(*Figure 7-7*,* Figure 7-8*)*

Many contact zones between the intrusions of the Jubilee Stock and between different intrusive facies of the stock are characterized by the formation of intrusive breccia zones. The breccia cement is typically composed of the coarser-grained facies' granitic intrusions, whereas the fragments, predominantly of volcanic origin, are fine- to very fine-grained and vary considerably in size, ranging from a few millimeters to tens of meters and some are partially assimilated by the dioritic magma. As reported by Sage (1993) and noted by Red Pine geologists, this is making the mapping of this unit, especially in drill cores, particularly challenging.

Figure 7-7: Intrusive breccia formed at the contact between the Jubilee Stock medium- to coarse-grained diorite and the volcanic units at the Sunrise #4 gold showing

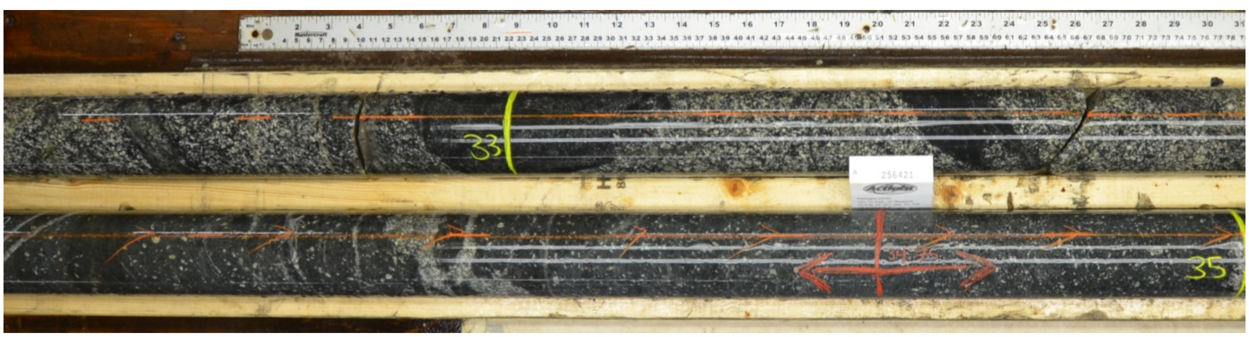


Figure 7-8: Intrusive breccia texture in drill hole and melanocratic feldspar-phyric unit in the contact zone between the Jubilee Stock coarse-grained diorite and the volcanic units

7.3.2 Gabbroic rocks

Many mafic intrusions are documented on the Wawa Gold Project. Three main types of mafic intrusions were documented by Red Pine in the Surluga Deposit and were mainly discriminated based on the grain size of the core of the intrusion and the absence or presence of a porphyritic texture with feldspar phenocrysts. The three types of mafic intrusions include: coarse-grained gabbro (Figure 7-9), fine-grained gabbro (Figure 7-10) and feldspar-phyric very fine-grained gabbro, all deformed in the Jubilee Shear Zone. Based on the observation of magma mixing textures between felsic and a mafic magma in the Jubilee Stock, Walker (2011) also recognized that some of the mafic intrusions are comagmatic with the stock. The intersections of the mafic rocks and the gold-bearing structures of the property were observed to form zones of preferential gold enrichments. Some of the drill holes intersecting the porphyritic mafic intrusions in the Surluga Deposit discovered Ni-Cu mineralization that occur as disseminated clusters of pyrrhotite-chalcopyrite with the pyrrhotite likely intermingled with pentlandite.

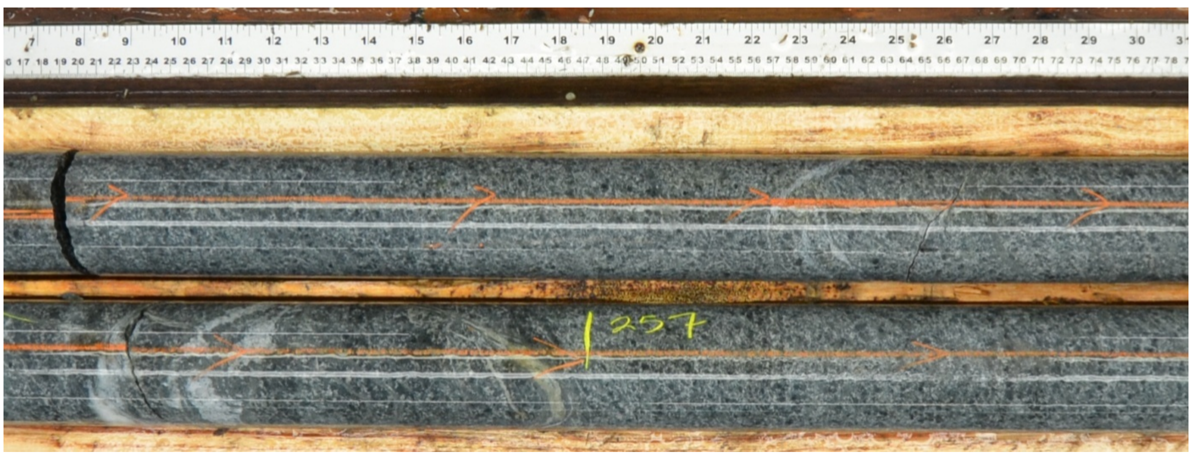


Figure 7-9: Coarse-grained gabbroic intrusion in the Jubilee Stock

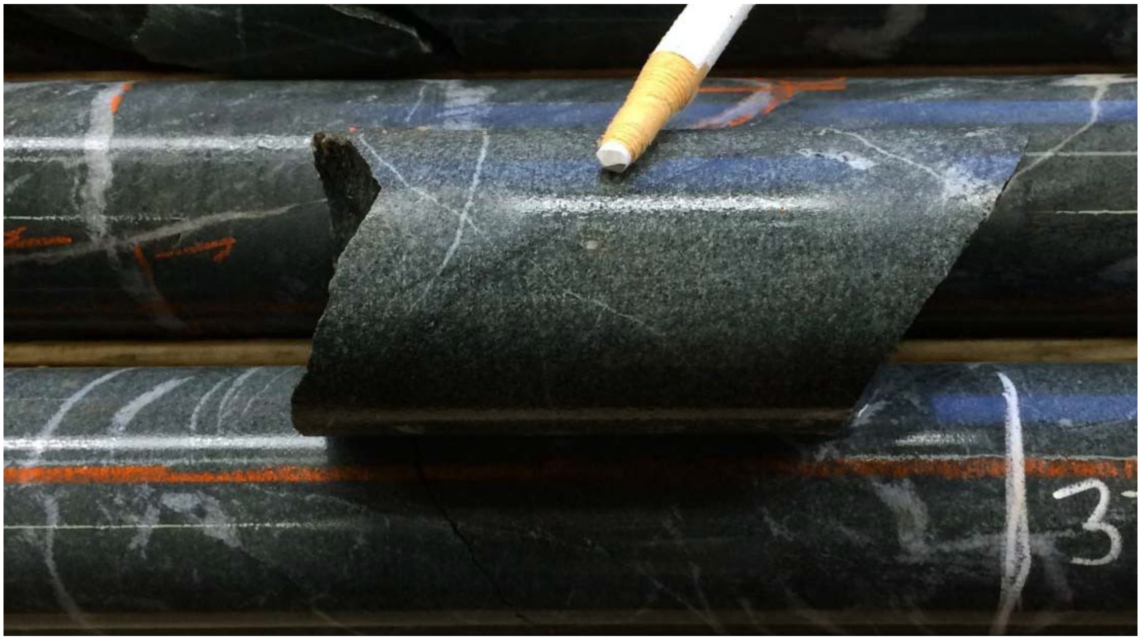


Figure 7-10: Fine-grained gabbro in the Jubilee Stock

The largest mafic intrusion on the property is centered on Reed Lake and forms the Reed Lake mafic-ultramafic complex which is composed of diorite, quartz-gabbro, leuco- to meta-gabbro and pyroxenite. Sage (1993) inferred that the combined trends of the long axis of 315° for the Reed Lake and 20° for the Jubilee Stock may suggest there were emplaced in a conjugate fracture system and are possibly petrogenetically related.

7.3.3 Volcanic units

For most the Wawa Gold Project, the descriptions of the volcanic units are constantly evolving depending on the opinion of the geologist, exploration model and time period. In many cases, the sub-volcanic porphyritic intrusions, part of the Jubilee Stock, and the volcanic units, are confused and their classification inter-changed. No systematic framework to classify and map the volcanic units of the property has so far been developed. In historic logs, many volcanic units are described as fragmental volcaniclastic units, but re-examination for some of them indicate sheared porphyritic intrusions or zones of intrusive breccias. Some of the described fragmental volcanic units are also zones of fluid-assisted brecciation during brittle-ductile deformation in the shear zones of the property and are Au mineralized.

7.3.4 Lamprophyre dikes

Lamprophyre dikes are pervasive throughout the Wawa Gold Project and at least two generations of lamprophyre exist. One generation is late-stage and cut all the gold mineralized zones of the property. Dikes of that generation are black, porphyritic, medium-grained and strongly magnetic with a blue amphibole alteration halo. A possible set of lamprophyres is likely older. Dikes of that set are generally smaller. Their primary mineralogy is partially to completely replaced which gives them a dark- to pale-greenish color. One dike of this set is also possibly gold mineralized, indicating that some of the lamprophyre dykes could have been emplaced prior to the formation of the gold system. A few carbonatite dikes are likely related to the Firesand Carbonatite. They are located a few hundred meters east of the northeastern corner of the property and were also observed in drill holes in the Surluga Deposit.

7.4 STRUCTURE AND GOLD MINERALIZATION

Gold mineralization is conspicuous throughout the Wawa Gold Project and mineralization is closely related to the structural setting of the property characterized by numerous shear zones, fractures and faults of variable strikes and dips. This is evidenced by the nine past producing mines as well as the numerous other shafts and pits dug on the property (see Section 6).

7.4.1 Wawa Gold Corridor

In the Surluga Deposit and the other gold structures nearby that include the Minto B, Surluga Road Shear Zone and Hornblende Shear Zone, the prevalent orientation of the brittle-ductile to brittle deformation fabrics is NNE to NE (20°–45°) and dip varies between 30° and 80° (

Figure **7-1**,

Figure **7-11**, Figure 7-12, Figure 7-13). The area between the Hornblende Shear Zone and the Minto B Shear Zone north of the Parkhill Fault, where the brittle-ductile fabric is similar, is now named the Wawa Gold Corridor and is interpreted to relate to the same deformation regime (

Figure **7-1**). A penetrative stretching lineation, trending 160°-190° and plunging 20°-35° is a characteristic feature of the Wawa Gold Corridor. This stretching lineation parallels the oblique thrusting movement along the Jubilee Shear Zone moving up and north (Helmstaedt, 1988). Domains of L-tectonite associated with that lineation are relatively common in the Wawa Gold Corridor (Figure 7-14).

The Jubilee shear zone, which hosts most of the mineralization defined so far in the Wawa Gold Corridor in the Surluga Deposit, consists of several parallel, ~300–900 m long en-echelon segments (Rupert, 1997). It strikes northeast (018–034°) and dips (25–55°) to the southeast. Its width ranges from 9 m to 75 m. It extends from Wawa Lake to the northwest-trending Parkhill Fault (3.2 km) (Rupert, 1997; MacMillan and Rupert, 1990).

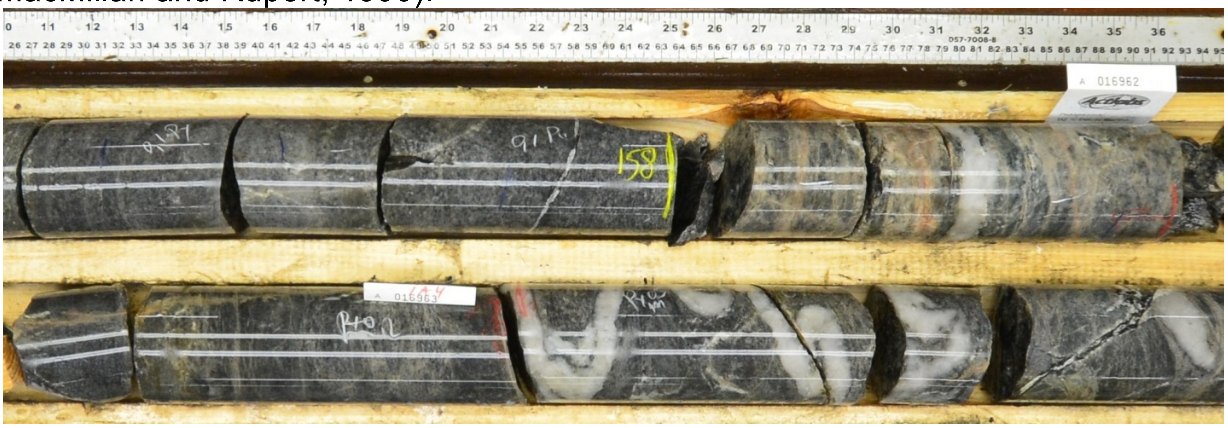


Figure 7-11: Brittle-ductile shearing and tight folding of auriferous quartz veins in the Jubilee Shear Zone

Figure 7-12: Brittle-ductile deformation in the Minto B Shear Zone

Figure 7-13: Zone of brittle deformation associated with brecciation in the Jubilee Shear Zone

Figure 7-14: Characteristic stretching lineation of the Wawa Gold Corridor preferentially partitioned in a mafic dike (William Gold Zone)

In the zones of gold mineralization of the Wawa Gold Corridor formed after felsic to intermediate hosts, gold concentration typically relates to finely disseminated sulfides (pyrite or arsenopyrite) in quartz veins, and in silicified and sericitized lenses and pods within shear and breccia zones (

Figure **7-11** and Figure 7-15). In the zones of gold mineralization formed after mafic rocks, quartz veins associated with chlorite and iron carbonate alteration with disseminated pyrite and/or pyrrhotite with weak to moderate sericitization prevail. In the Surluga Deposit, a zonation of the sulfide species was hypothesized by Kuryliw (1970). He described the upper part of a high-grade zone being composed of white quartz-tourmaline-gold grading to grey quartz-pyrite-gold and then to blue-grey quartz-arsenopyrite-gold. Although Red Pine has observed these different facies of gold mineralization, the zonation described by Kuryliw (1970) has not been confirmed.

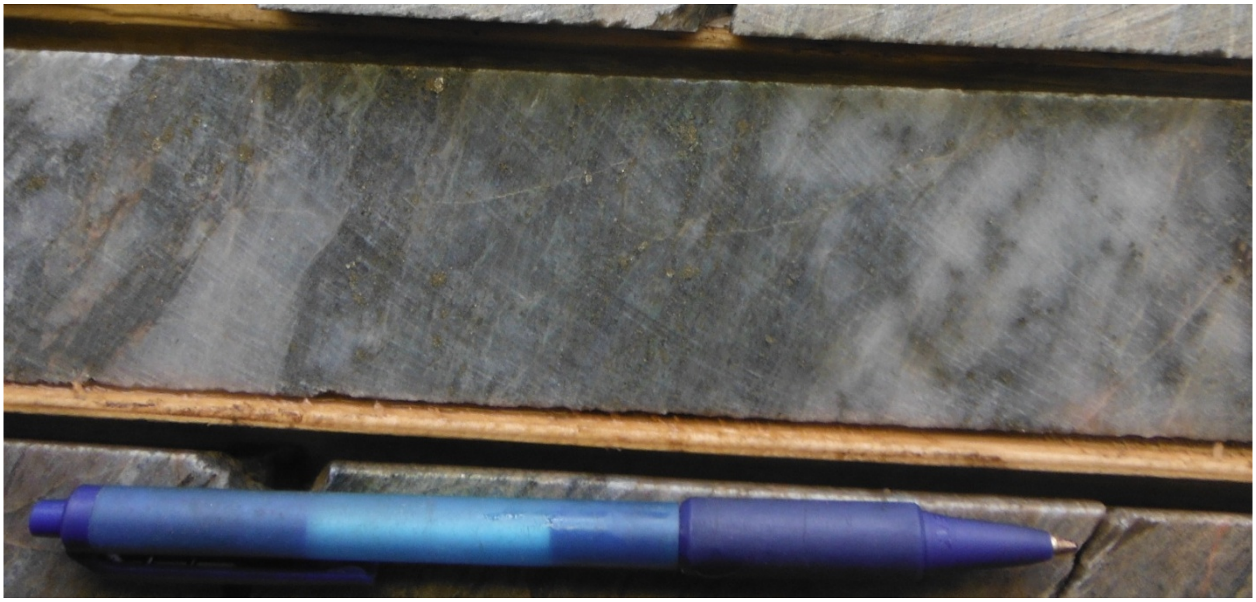


Figure 7-15: Grey quartz vein with pyrite typical of the higher-grade zones of the Surluga Deposit

Three main controls exist on the distribution and geometry of the gold zones within the major shear zones of the Wawa Gold Corridor, but on the spatial distribution and geometry, the mineralized splays in the hanging wall of the larger structures:

- rheological contrasts between various intrusive phases of the Jubilee Stock to partition and focus deformation, fluid circulation and brittle fracturing;
- chemical contrast between units of the Jubilee Stock especially contact zones between gabbro and other units to partition and focus deformation and fluid circulation, and also trap gold transported as sulfide-bearing complexes in the fluids;
- the stretching lineation and overall deformation regime of the Wawa Gold Corridor.

The William Gold Zone represents a different style of gold mineralization of the Wawa Gold Corridor, hypothesized but unconfirmed by Walker (2011), and first identified during the Fall 2015 drill program. In the William Gold Zone and the other zones of similar mineralization now being identified within the Wawa Gold Corridor, tectonic fabrics are absent to locally strong, alteration is weak to strong and gold is interpreted to relate to pervasively disseminated sulfides in the host rocks (Figure 7-16). The cryptic style of this mineralization resulted in it being missed by all previous operators of the property and remains quite eluding. The main geometrical controls hypothesized for the William Gold Zone mineralized zones are shearing shallowly dipping (20°-35°) to the ESE and the stretching lineation of the Wawa Gold Corridor, also shallowly plunging to the ESE. The importance and exact role of these two components remain to be defined, but the 3D modeling of the William Gold Zone using these structural constraints resulted in its intersection along drill holes where the zone was predicted.

Figure 7-16: William-like mineralization in the Jubilee Shear Zone hanging wall - core contains 1.86 g/t gold over 1.15 metre

Two main sets of gold-bearing tension veins are recognized in the Wawa Gold Corridor. The first set is preferentially formed in the medium- to coarse-grained diorite, is steeply dipping to the W to WNW (dip >65°) and is not associated with conspicuous shearing. The other set of tension veins is moderately dipping to the NE (40°–55°) It forms the ore zones of the Minto Mine and is associated with weak to locally strong shearing that variably shears the tension veins (Figure 7-17). In the Surluga Deposit area, the main zones of weakness intruded by mafic dikes are typically shallowly dipping (20°–45°) S to SW, striking relatively parallel to the long axis of the Reed Lake Complex. The contacts between the mafic dike and the intermediate to felsic rocks of the Jubilee Stock are generally sheared

Figure 7-17: Shear zone hosting the Cooper Vein characterized by brittle-ductile shearing preferentially partitioned at the contact between the medium- to coarse-grained diorite and porphyritic units

Other subsidiary mineralized structures of the Wawa Gold Corridor include shear zones that are steeply dipping SSE to S (>70°). The main example is the Minto C shear zone in which gold mineralization relates to sericitic alteration associated with substantial arsenopyrite concentration. Quartz veining is relatively minor to absent in the Minto C shear Zone and does not seem to control gold concentration. The timing relation between the Minto C Shear Zone and the Jubilee Shear Zone is unknown, but the intersection of similar structures with the Jubilee Shear and Hornblende Shear may partially control the distribution of arsenopyrite in those structures.

7.4.2 Minto Mine South Zone (MMSZ)

The Minto A vein is hosted in the Minto Mine South shear zone, which was the focus of mining in the Minto Mine historically (36,178 oz @ 12.56g/t). The Minto Mine South shear zone is a 3 to 20 metre wide shear zone hosting a domain of higher grade mineralization. Outside of the zone of mineralization and strong veining, the tectonic foliation and lineation’s of the Minto Mine South shear zone are poorly developed and not penetrative, making the structure sometimes hard to identify. Inside the zones of strong veining and mineralization, the structure has well-developed and penetrative tectonic foliation and lineation's. Overall the structural shear envelope of Minto Mine South Zone is dipping approximately 48 degrees to the NE and the zones of higher grade mineralization are raking approximately 60 degrees to the right of an observer looking down of the structure parallel to the dip direction. The domains of higher grade mineralization in the Minto Mine South shear zone are characterized by the presence of a domain, between 0.3-5m wide, where a single shear-hosted quartz vein or stacks of closely spaced shear hosted quartz veins are formed. The main domain of shear hosted veining initially exploited in the Minto Mine is quite continuous in the Minto Mine South shear zone and was followed down-plunge over 600 metres. In the zones of the structures where a mature quartz domain is developed, a strongly sheared mafic unit is present either in the hanging wall or the footwall of the high-grade vein.

The gangue minerals of the mineralized quartz shear veins in the Minto Mine South shear zone comprise light to dark grey quartz, tourmaline and iron carbonate. Gold mineralization in the Minto Mine South shear zone postdates the initial quartz stage and occurs in brittle fractures crosscutting the early quartz. The earliest sulfides formed in the veins predates the main gold introduction event and includes subhedral to euhedral pyrite and pyrrhotite. During the main gold mineralization event, the early pyrite and pyrrhotite are overprinted by a new generation of anhedral pyrite and pyrrhotite associated with variable chalcopyrite, common visible gold in the best zones of the structure and locally bismuthinite. A late mineralization white quartz veining, crosscutting the sulfides and the early grey quartz, occurred in many of the mineralization. The observation of visible gold in some zones of white quartz indicate either remobilization of gold from the main stage of mineralization or a later introduction of gold in the veins. The strongly sheared mafic rocks around the domains of veining are overprinted by strong chlorite and carbonate replacement, whereas the surrounding intermediate to felsic rocks are overprinted by moderate to strong sericitic and iron carbonate replacement. Around the mature zones of the Minto Mine South shear zones a well-define alteration halo extend approximately 10 to 20 metres away from the vein. In the immature and poorly developed zones of the structures, alteration is confined to the weakly to moderately developed higher strain domains marking the presence of the structure.

The Minto Mine South shear zone is not unique and is part of a network of shear-hosted veins dipping to the NE that present throughout the property. In addition to the Minto Mine South Zone, gold-bearing shear hosted veins dipping to the NE includes the Grace Mine, the Cooper Mine, and the #4 vein of the Parkhill Mine (Figure 7-18).

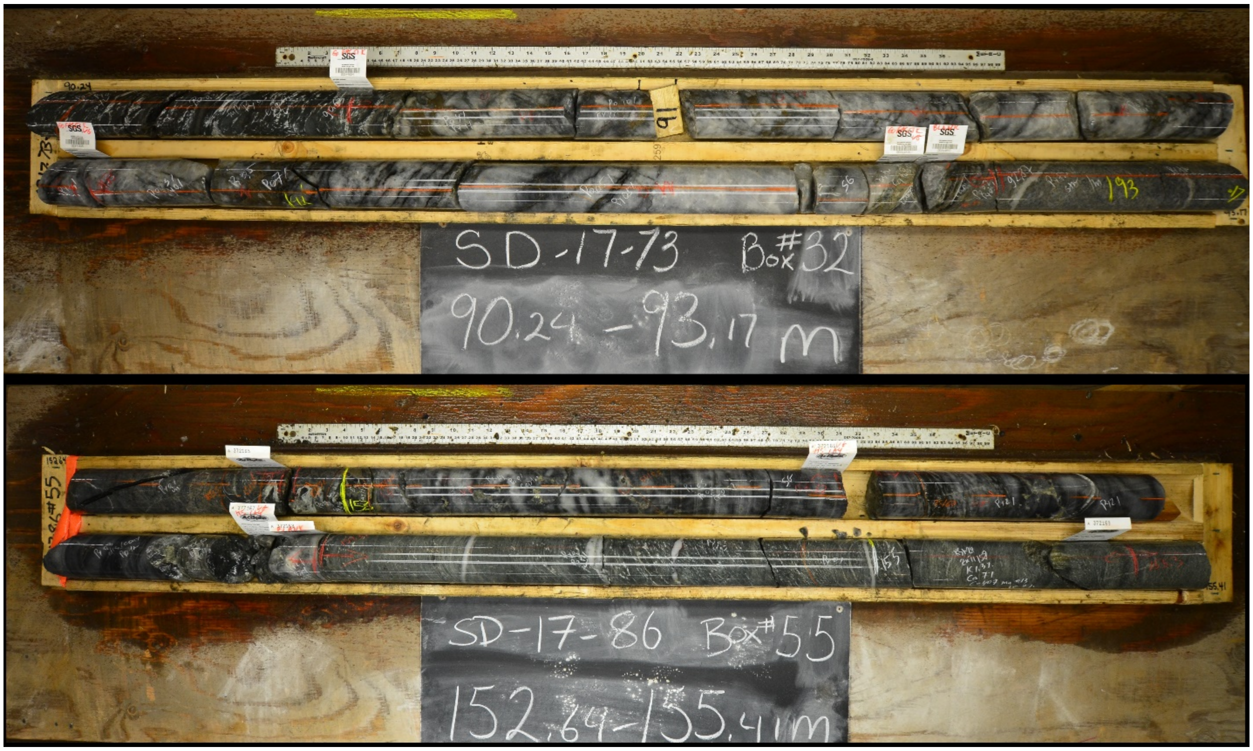


Figure 7-18: Intersection of the Minto A Shear Zone, related to the Minto Mine.

7.4.3 Late brittle faulting

The main brittle fault of the Wawa Gold Project is the NW-oriented and sub-vertical Parkhill Fault. Following Sage (1993), the Parkhill Fault is the southeastern extension of the northwest-striking Black Trout Lake Fault and is seen to truncate the Wawa Gold Corridor, which likely resurfaces to the south in the Darwin Shear Zone. The age of the Parkhill Fault remains uncertain and its intrusions by gabbroic rocks, interpreted to be Archean, indicate that it is possibly a long-lived structure in the area, even possibly formed during the evolution of the gold system. The late movement along the Parkhill Fault, considering the interpreted offset of the Jubilee Shear Zone, is left-lateral.

7.5 ALTERATION

Carbonatization, sericitization, chloritization and local silicification of the Jubilee Stock are characteristic of the zones adjacent to mineralization. Locally, the Jubilee diorite is pervasively biotitized. Epidote, tourmaline and K-feldspar were also observed. In the gold structures of the Wawa Gold Corridor, current drill core and surface mapping reveals that quartz-sericite alteration of strongly sheared diorite is intimately associated with gold mineralization (Figure 7-19). Pink K-feldspar alteration overprints the sericite alteration. Outward from the mineralization, pre-mineralization sodic alteration is prevalent. Biotite veins outside of the immediate mineralized zone and a broad halo of chlorite-carbonate alteration also predate mineralization. A schematic alteration zonation of Surluga Deposit is presented by Figure 7-20.

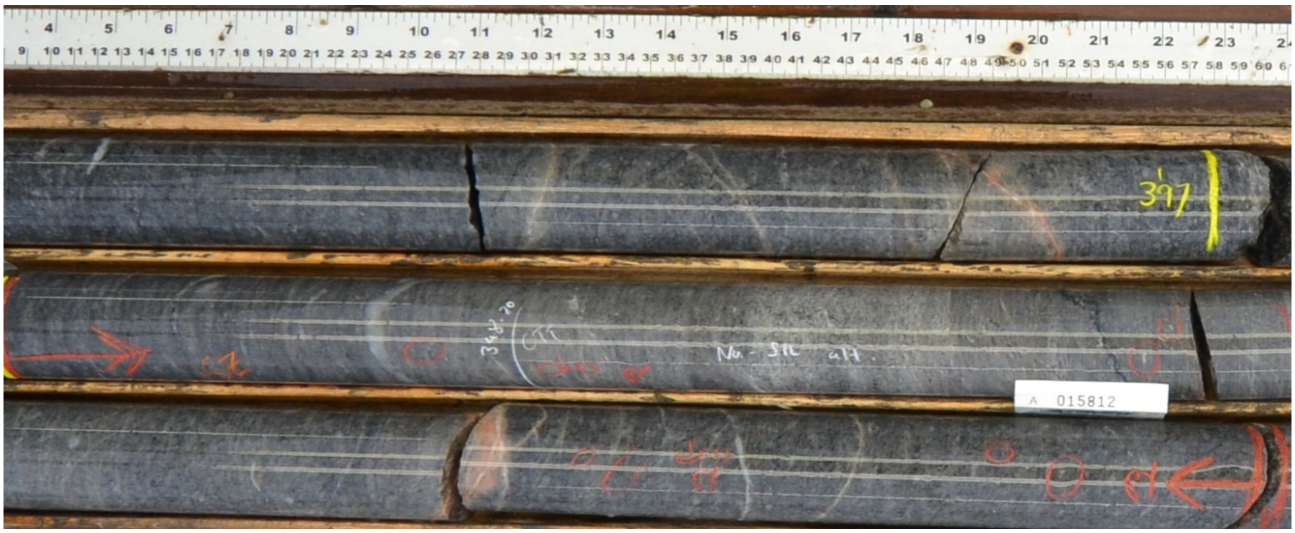


Figure 7-19: Sericitic alteration fronts in the Hornblende Shear Zone associated with pervasive dissemination of pyrite and gold mineralization

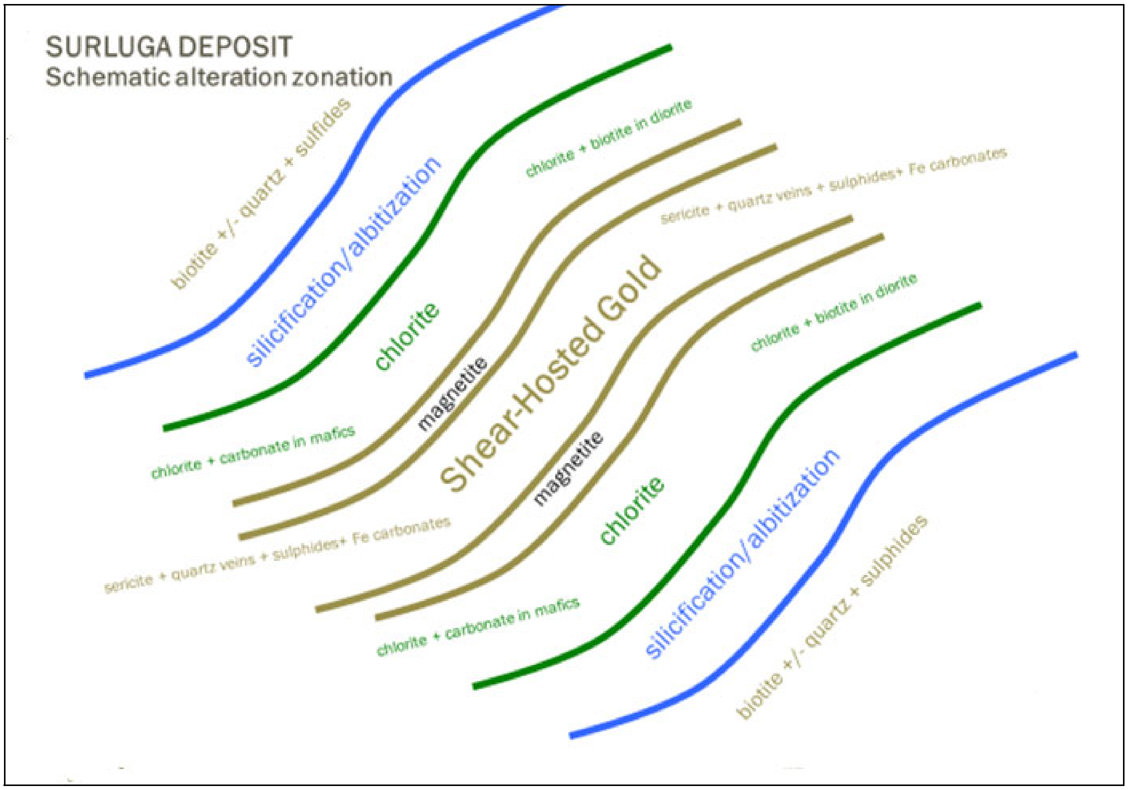


Figure 7-20: Schematic alteration zonation of Surluga Deposit

8 Deposit types

Following Dube et al. (2015), gold mineralization at the Wawa Gold Project is best classified as greenstone-hosted quartz-carbonate veins that are part of Precambrian Lode Gold deposits. Precambrian Lode Gold Deposit are typically related to mesothermal mineralizing systems formed around the brittle-ductile transition in continental crust close to deep- crustal, compressional and trans-tensional fault zones with complex structural histories (Dubé and Gosselin, 2007). The deposits are typically located in secondary and tertiary structures adjacent to the boundaries between geological domains of a geological province and are typically formed during the late stages of orogeny (Goldfarb et al., 2005). The host greenstone belts are characterized by tholeiitic basalts and ultramafic komatiitic flows later intruded by intermediate to felsic porphyritic intrusions, and less often by swarms of albitites and lamprophyre dykes. Metamorphic fluids are interpreted to be responsible for gold transport as bi-sulphide complexes. However, gold may have been sequestered from rocks predating the metamorphic event and remobilized during a later event (Goldfarb et al., 2005) These epigenetic gold deposits in Precambrian shields have yielded 23,000–25,000 t gold. (Goldfarb et al., 2005).

Mineralization is hosted by veins filling shears and faults. Mineralization is concentrated at jogs or changes in strike along the larger-scale fault zones. The timing of the mineralization is typically syn- to late- deformation. Stockworks, breccias, crack-seal veins, sigmoidal veins, and disseminations in deeper parts are all common.

Typical hydrothermal alteration facies are associated with this family of deposits, of which the mineralogy is strongly influenced by the composition of the host rock, including:

- potassic alteration forming muscovite/sericite and fuchsite, or biotite and K-feldspar;
- sodic alteration characterized by the formation of albite as early alteration and dikes;
- carbonatization characterized by the zoned formation of carbonate and iron carbonate;
- sulphidization characterized by the formation of pyrite, arsenopyrite and pyrrhotite;
- tourmalinization; and

- chloritization.

The typical sulfide content of these deposits is 2–5% with arsenopyrite and pyrite being the dominant sulfides. Pyrrhotite occurs in higher-temperature systems. Base-metals are rare but W-, B- and Te-bearing phases can occur (Goldfarb et al., 2005). Visible gold and electrum are common in some deposits but absent in others. Typical gangue minerals are quartz and carbonate. Carbonates, sericite/muscovite, chlorite, K-feldspar, biotite, tourmaline and albite are typical alteration minerals. Intermittent pressure changes in the shear zones and the resulting fluid un-mixing and water–rock interaction and associated de-sulfidation are considered the dominant precipitation mechanisms. Metamorphic fluids are interpreted to be responsible for gold transport. However, gold may have been sequestered from rocks predating the metamorphic event (Goldfarb et al., 2005).

Economically significant orogenic deposits tend to be between 2 and 10 km long, ~1 km wide and can be mined to depths of 2–3 km. Examples of orogenic deposits/districts are Muruntau (Uzbekistan), Ashanti (West Africa) and Golden Mile (West Australia). Canadian examples include McIntyre–Hollinger (Ontario), Red Lake (Ontario) and Kirkland Lake (Ontario).

9 Exploration

9.1 EXPLORATION PROGRAM 2019 – SUMMER PROSPECTING PROGRAM

9.1.1 Program Overview and Objectives

A multitude of historic showings exist on the Wawa Gold Project. These showings have been visited periodically throughout the history of exploration on the project and many have been shown to be gold bearing. During the 2019 summer field season, between May 24th and July 25th, multiple targets were selected by the company based on historic records of gold bearing vein systems and successful mining projects conducted in the area. This was carried out by two summer students and one geologist on staff. The goal was to traverse the target areas on foot in a grid-like pattern periodically taking structural measurements, lithological descriptions, observations, and grab samples from exposed outcrop. The targets were: The Cooper Vein system, the Stanley Mine System, the Darwin-Grace Shear Zone, the southern extension of the Jubilee Shear Zone, and the mineralized shear zones within the Jubilee Shear Zone footwall.

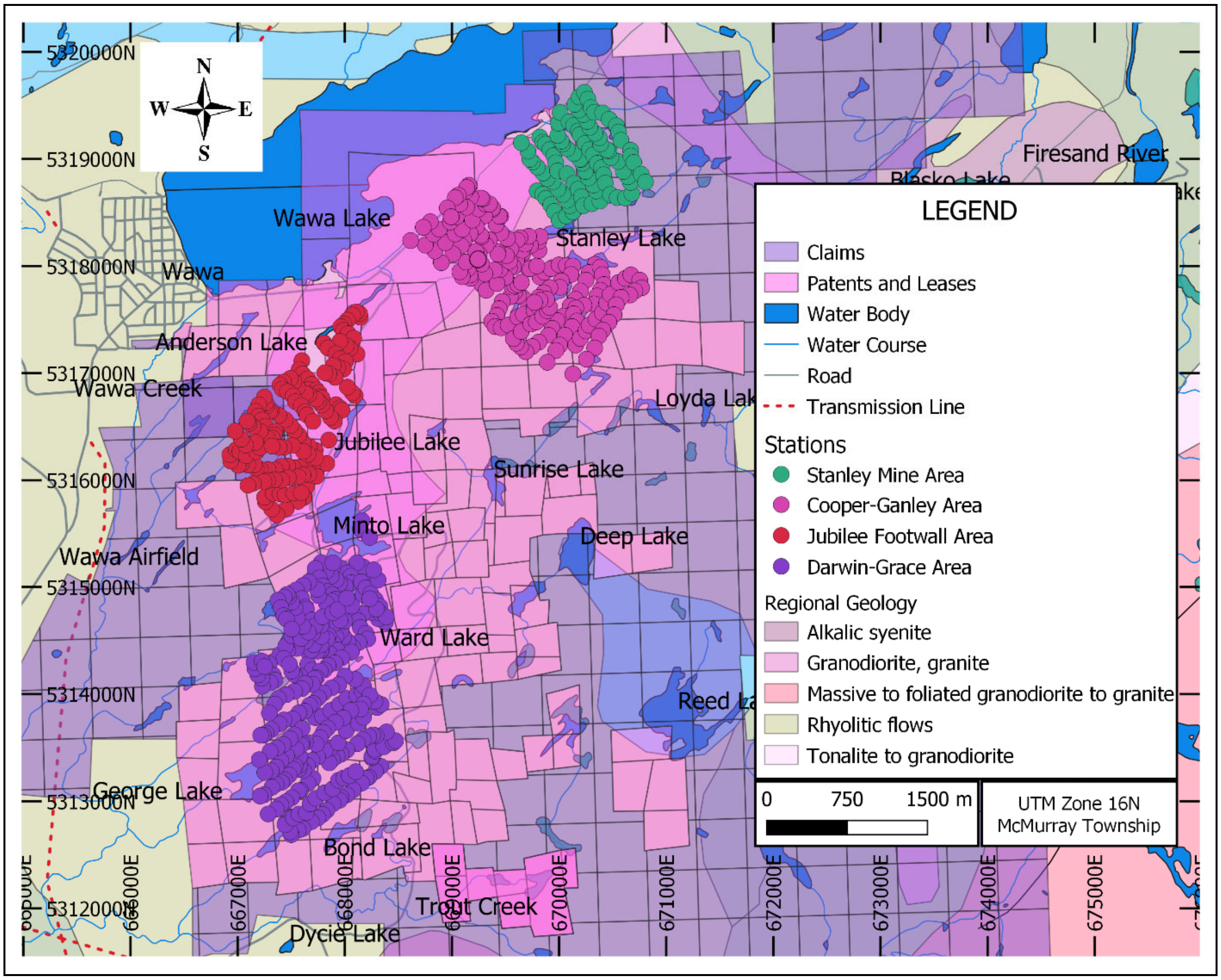


Figure 9-1: Overview of the areas visited in the 2019 Prospecting Program

The Cooper Vein showing is on the south side of Hwy 101, accessed by all-terrain vehicle or on foot via the historic Cooper Mine road or south from the highway (Figure 9-1). The traverse area covered a NW-SE trending zone chosen based on the known relative strike of the cooper shear.

The Stanley Mine showing is also on the south side of Hwy 101, east of the cooper vein showing, accessed by foot from the highway. The area expanded upon the Stanley Mine site looking for an extension of the mined vein and possibly new targets.

The Jubilee Shear Zone and footwall are located on the western side of the property, south of Highway 101 and slightly south-east of Wawa proper. The purpose of visiting this area was to expand the structural model from surface and expand the footprint of mineralization into the footwall.

The Darwin-Grace showing is the south-western most extent visited in the 2019 field program, directly south of the Jubilee Shear Zone and footwall traverse. Structural measurements were important in this area to identify and confirm early deformation packages and their impact on the Jubilee Shear Zone to the north.

A total of 151 grab samples were collected and analyzed over the duration of the program. The location and a grade scale of each sample can be seen in Figures 9-2 to 9-4.

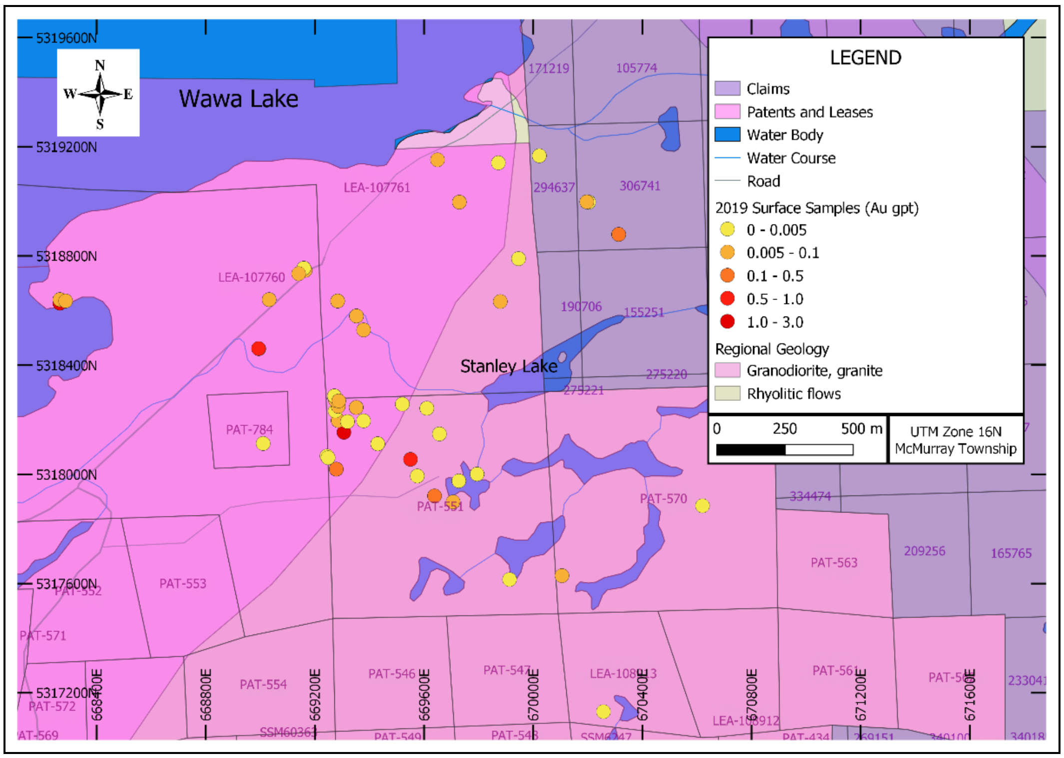


Figure 9-2: Grab samples in the Cooper-Ganley and Stanley Mine areas

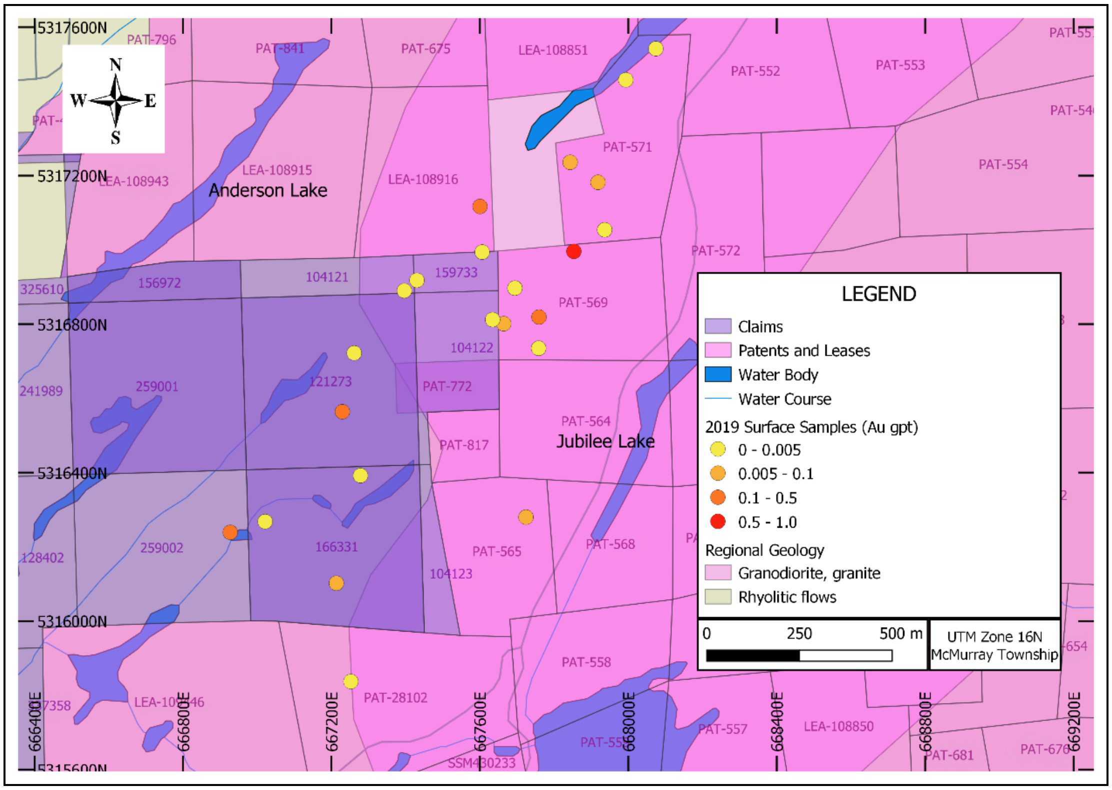


Figure 9-3: Grab samples in the Jubilee Shear Zone Footwall area

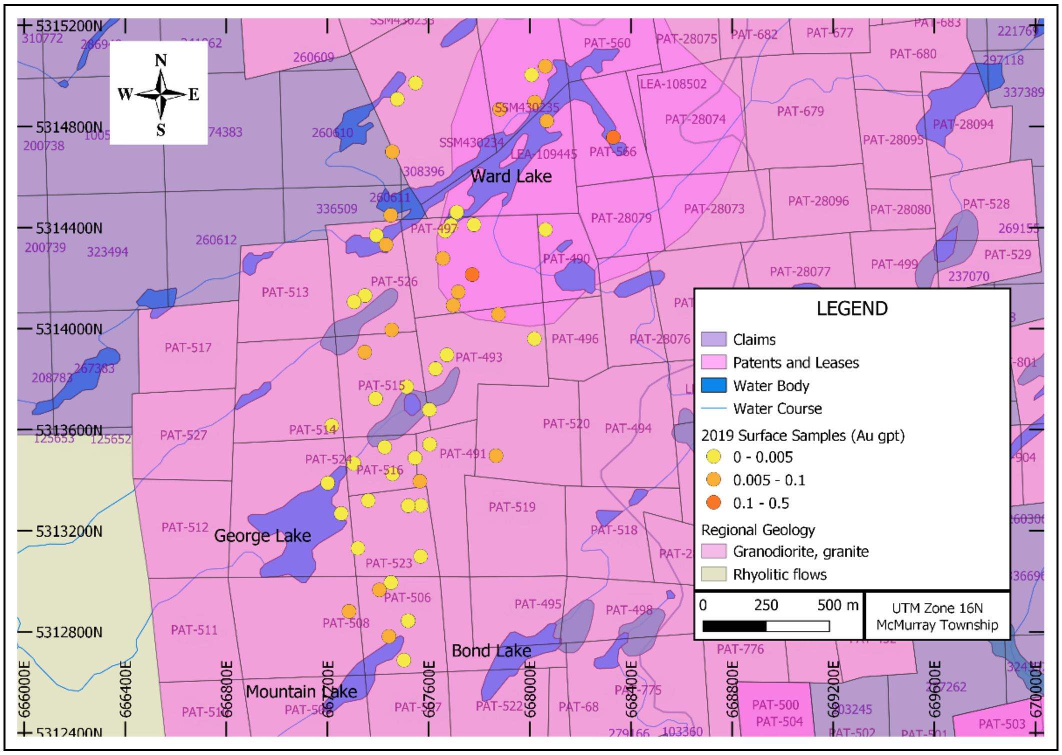


Figure 9-4: Grab samples in the Darwin-Grace area

Table 9-1 highlights the assays from the grab samples which returned over Au 0.5 gpt. A table with all assay data can be found in Appendix II. The most significant grab sample came from the Cooper-Ganley vein system and proves significant gold grades exist at surface.

Table 9-1: Highlights of the grab sampling program

Area	Sample #	Sample Type	Certificate	Au (gpt)
Cooper-Ganley	500411	Grab	A19-08138	2.62
Cooper-Ganley	500415	Grab	A19-08138	0.516
Cooper-Ganley	500425	Grab	A19-08138	0.508
Cooper-Ganley	769154	Grab	A19-08138	0.843
JSZ Footwall	769165	Grab	A19-08138	0.518

Detailed maps of each traverse and all stations taken can be found in Appendix III, and the field descriptions at each station is in Appendix IV. Structural measurement descriptions from this program can also be found in Appendix V.

9.1.2 Results

A major structure (presumably Hornblende Shear Zone) was observed along the north-west boundary of the area of interest. This area shows potential for a low-grade extension of the Surluga deposit based on grab samples mainly returning Au 0.1 to 0.5 gpt. The structural measurements may provide guidance on future drilling programs in that area.

The Stanley Mine area has localized prospective features including a 2-metre quartz vein and associated local intense deformation. Future work in the area should be focused on these features.

Prospecting in the Cooper-Ganley area successfully located Cooper-style deformation and veining extending to the west. The eastern part may not be exposed well at surface. The Cooper-Ganley Shear Zones were found to share structural and mineralogical features with Minto Mine South. This prevalent north-west striking system extends to the south-east, where future prospecting programs may focus to try to continue tracing the system at surface.

In the far south-western extent of the prospecting program, an unconstrained shear zone was mapped over 1,000m along strike. Referred to as the Marie Shear Zone (MSZ), it steeply dips to the north-west with SSE-plunging L-tectonites. Weak domains of JSZ fabric were observed in this area, increasing in intensity to the north, overprinting the MSZ fabric. Some pyrite and possibly arsenopyrite mineralization was observed in the area which provides an interesting package to explore in future. Future drilling programs in the area could be planned around structural measurements taken in this program and future prospecting could focus on mapping the extent of the MSZ.

9.2 Geophysics

9.2.1 Inversion of Versatile Time Domain Electromagnetic Data (VTEM)

9.2.1.1 Introduction

Aarhus Geophysics was contracted to write a report and model the previously flown Augustine ventures block, located in Wawa area (ON, Canada), covered by versatile time domain electromagnetic (VTEM) data in 2011. The inversion was completed from June 14th to 20th 2017, with the report completed thereafter.. A total of 362-line km were used for the SCI inversion algorithm with Cole-Cole modelling (Viezzoli et al., 2008; Fiandaca et al., 2012).

The purpose of the project was to recover improved electrical resistivities by means of Cole-Cole modeling to maximize possible anomaly depths for the VTEM system in current geologic setting. The previous attempt to recover the electrical properties was carried out by the data provider and resulted in Resistivity Depth Imaging (RDI) sections over selected flight lines. Some advanced modeling (Maxwell and Mag3d) was carried out for the area surrounding the Surluga deposit and covered in the full report.

The data (approximately 360 line kms) was acquired with VTEM system and delivered in Oasis Montaj database format, with associated waveforms. A Total of 13943 inversion stations were created during the data processing. The data was first inspected in Oasis Montaj, then exported as XYZ, imported and inspected in Aarhus Workbench (Auken et al., 2009). The AEM data were assessed for noise and IP effects.

They data appeared to be quite noisy, as well as subject to moderate/strong IP effects. Furthermore, some VTEM anomalies appear only on a single flight line, which imposes certain limitations on the 1D forward modeling approach used in the SCI inversion algorithm and may require some additional attention using plate modeling for selected targets. A vast amount of the VTEM data were contaminated with AIP effects, which made conventional inversion methods difficult.

The inversion of VTEM data was carried out using “AarhusInv”, modified as per Fiandaca et al, (2012). This code has been successfully implemented in cases with strong IP effect presence (Kaminski and Viezzoli, 2017; Viezzoli et al, 2017). It needs to be stressed that inversion of IP parameters is, in general, a very ill-posed problem, which should make use of all ancillary information available to reduce the ambiguities.

9.2.1.2 RESULTS

There are several gold deposits in the area. At least three of them (Parkhill, Minto, and Surluga) were subject to extensive drilling in 2017. The near-surface Cole-Cole parameters are gridded and imaged over the map of gold deposits in order to study any potential correlation. SCI inversion misfit normalized by the standard deviation is shown in Figures 9-5 and 9-6.

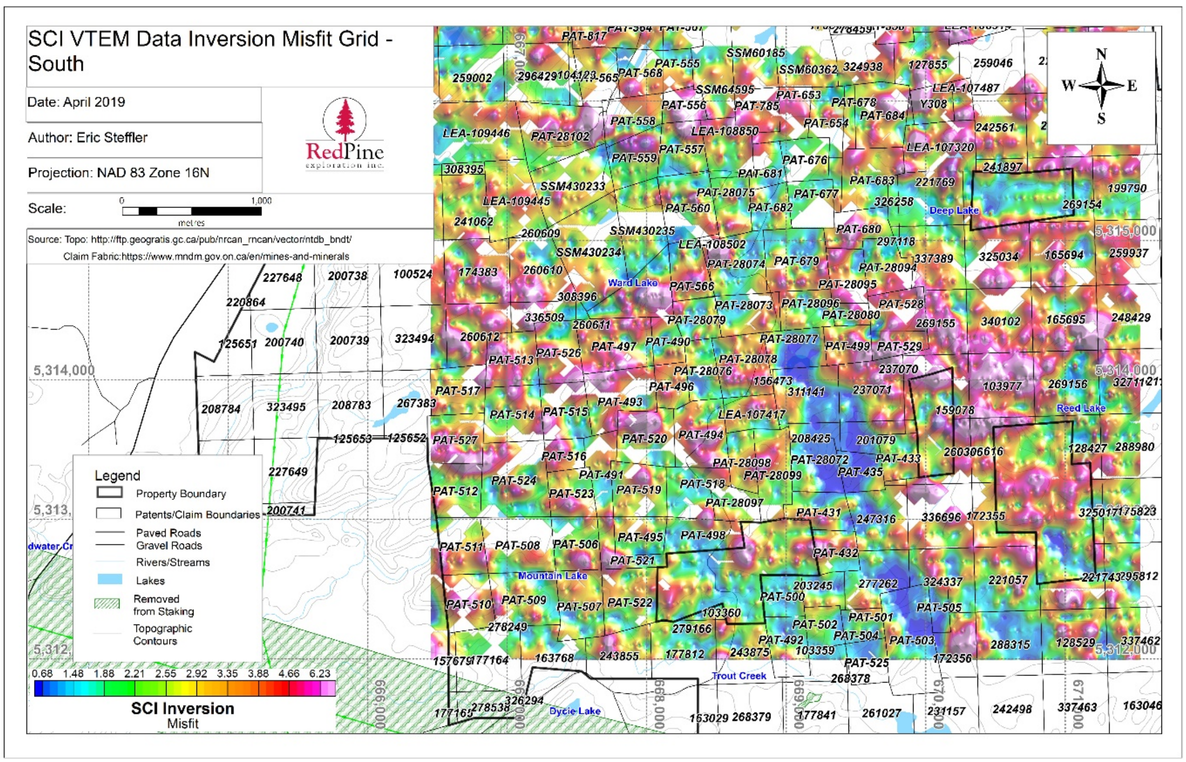


Figure 9-5:SCI Data Inversion Misfit, North

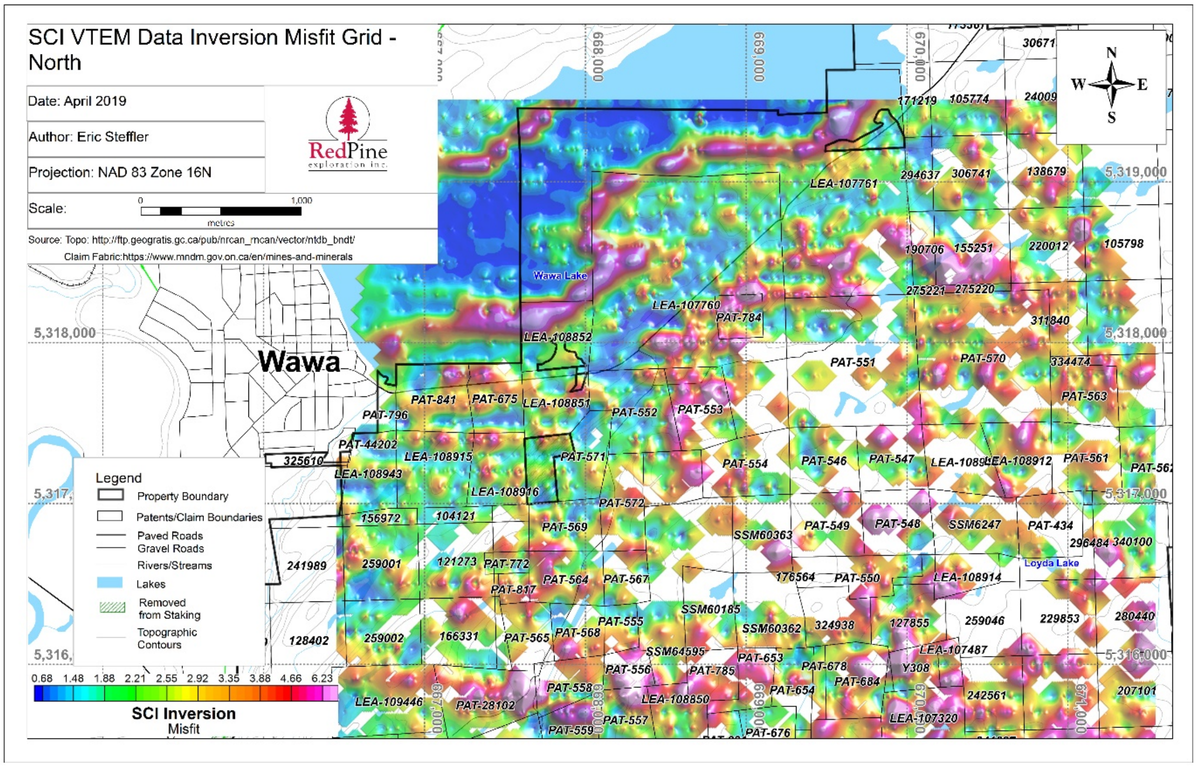


Figure 9-6: SCI Data Inversion Misfit, South.

The inversion suggests that conductive targets may in fact be associated with magnetic lows. The latter is consistent by our understanding of the Jubilee Shear Zone signature (Ronacher and McKenzie, 2015). Although the anomaly does not visually fall within the known extent of the shear zone, its geophysical signature may be still controlled by the same processes, which led to the destruction of magnetic minerals, as those responsible for ore deposition. The area surrounding the Surluga deposit was subject to 3D magnetic inversion using mag3d (Li and Oldenburg, 1996).

The study of electrical signatures of different deposits in the area leads to the conclusions that there is no particular correlation between electrical conductivity and gold content. In Surluga deposit there is a strong conductive signature, with the Jubilee, Minto, Deep Lake mine and Van Sickle, there is some conductive response, but to a small degree, in other cases (e.g. Hornblende pit, Mariposa and Cooper), there is no conductive response.

From the magnetic 3d modeling carried out for the area surrounding the Surluga deposit it can be seen that the deposit itself is marked as non-magnetically susceptible. The conductive target to the west of Surluga deposit shares a similar magnetic signature. The latter could be attributed to the presence of the non-magnetic Jubilee Shear Zone similar to the Surluga deposit, which led to destruction of magnetic minerals in the the adjacent anomaly, subject to advanced modeling.

It was recommended to carry out complete 3D inversion of airborne magnetic data over the entire area covered by VTEM survey. For a follow-up drilling program, it is recommended to carry out additional Maxwell plate modeling for any related targets, knowing the limitations of the SCI inversion algorithm. The full report can be found in Appendix VI.

9.2.2 Gravity Survey

9.2.2.1 Introduction

Red Pine Exploration contracted Abitibi Geophysics to conduct a high-resolution ground gravity survey, which was completed between March 19th and March 29th, 2019. The ground gravity survey (L 1+00E, L 2+00E and L 3+00E) carried out around the Jubilee Lake, was to detect abandoned underground workings of the Jubilee Mine, while the purpose of the two NW-SE long traverses (L 4+00N and L 5+00N), was to delineate prospective targets for gold mineralization.

A Scintrex CG-6 and a CG-5u AutoGrav gravity meter were used. These gravity meters use quartz sensor technology and offer fast, reliable, and precise gravity measurements which includes an array of mapping and post processing functionality. They can detect volcanic massive sulphides associated with nickel deposits, diamond bearing kimberlites, banded iron formations, and impact basins. Gravity data can detect voids or cavities whether they are old workings, washouts or sink holes.

The software used was SCTutil and USB Stick Interface for data transfer to a PC, and Gravity and Terrain Correction (Oasis Montaj ver 9.5.2 module from Geosoft) for all remaining gravity processing.

Real Time Kinematic (RTK) GPS surveying was done, with an expected accuracy better than 5 cm in elevation and horizontal positioning. A Leica 1200 base station and Leica Viva GS15 rover were used in tandem with LEICA Geo-Office 8.2.

A total of 402 gravity readings divided into two NW-SE profiles and spaced every 50 metres were measured. The gravity data was corrected to sea-level by standard reductions (Tide, drift, height, temperature, pressure, tilt, free air, bouguer and terrain corrections) using a bouguer density of 2.75 g/cm^3 to reflect the diorite to granodiorite rocks that constitute the Jubilee Stock. To avoid misinterpretation in the location of underground tunnels of the Jubilee Mine, all the raw measurements with a standard deviation greater than 0.15, were discarded. The program was conducted on snow-covered overburden. There are no powerlines or rail tracks on the property to interfere with the measurements.

The ground gravity survey was conducted along two traverses (L 4+00N and L 5+00N) oriented NW-SE and 2.7 kilometres apart. Line 4+00N crossed perpendicular to the Jubilee Stock at the Jubilee Gold Mine, while line 5+00N passed south of the historical workings (Figure 9-7 and Figure 9-8).

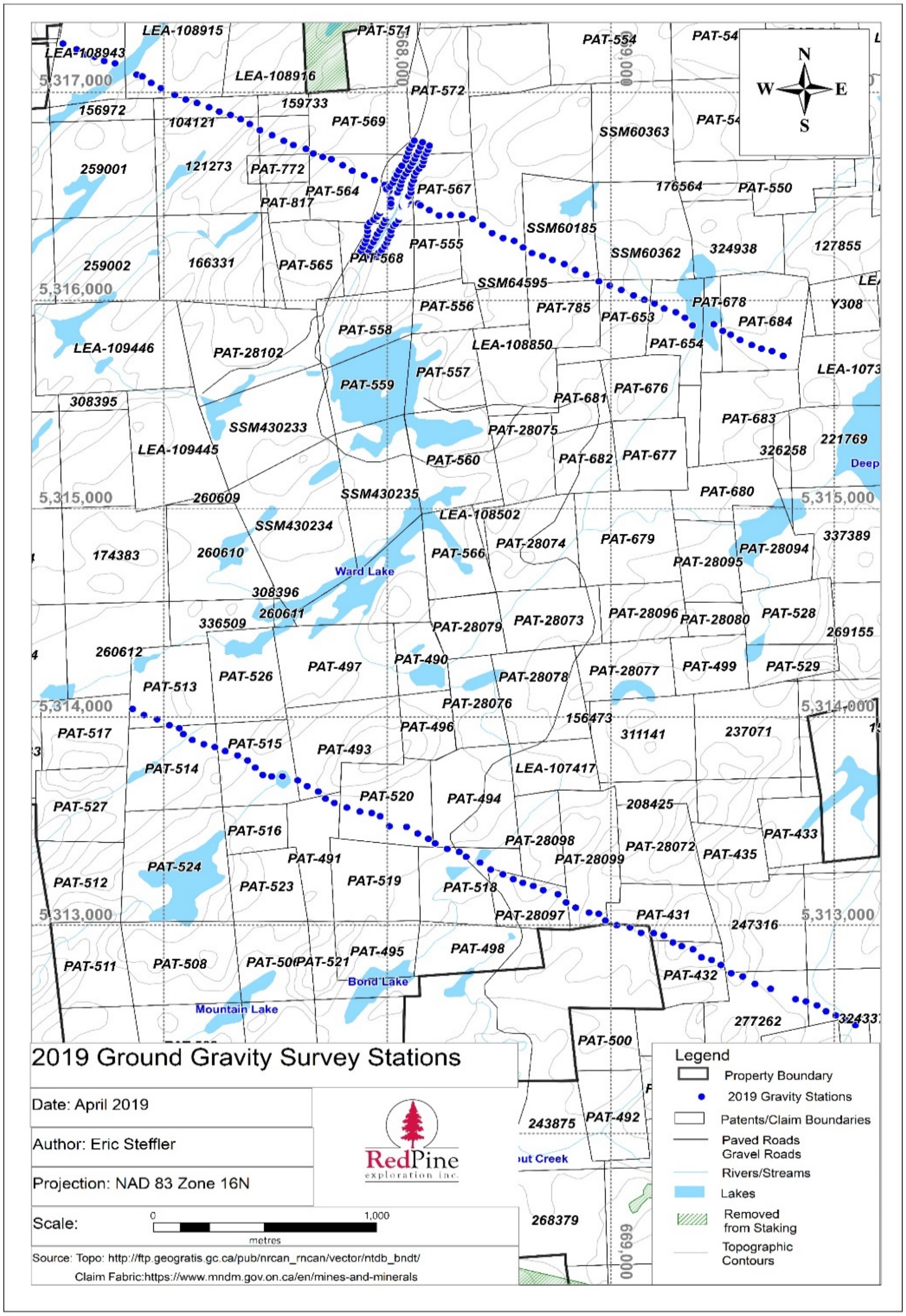


Figure 9-7: Location of survey gravity stations

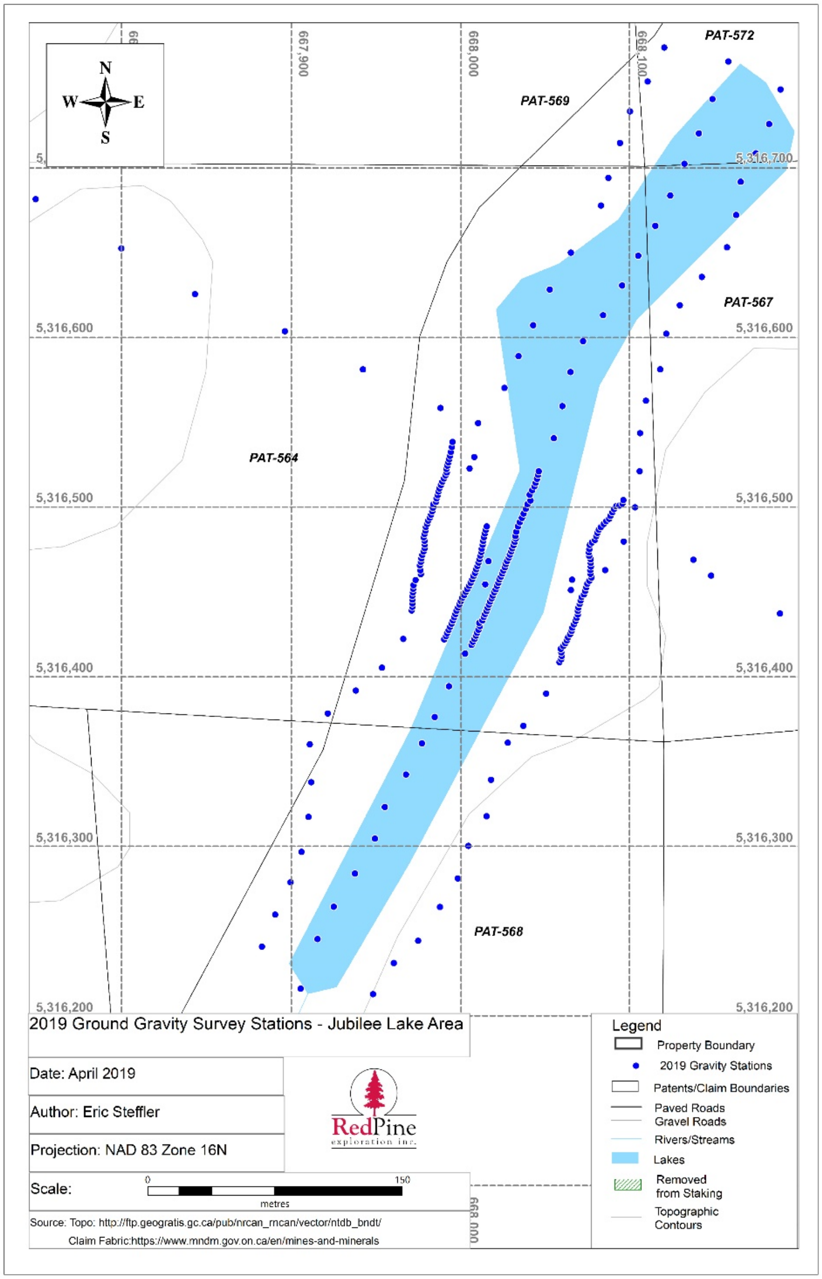


Figure 9-8: Location of survey gravity stations around Jubilee Lake.

As some geological features are hardly recognizable due to the complexity of the Bouguer anomaly which displays the regional background other than local features, a separation of regional and residual gravity anomalies from the Bouguer field was performed.

9.2.2.2 Results of Gravity Survey

The gravity survey successfully detected both the Jubilee and Hornblende Shear Zones. Based on this association, it also detected other possible shear zones that are favorable host rocks for gold mineralization on the Wawa Gold Project.

The gravity method mapped the Jubilee Stock by negative residual responses and confirmed the extension of the Jubilee Stock to the SW of where historic mapping defined its boundary. The direct association between the zone(s) of gold mineralization identified on the Wawa Gold Project and the Jubilee Stock indicate its importance in controlling the deposition of gold. This southerly extension of the Jubilee Stock identifies new areas for gold exploration on the property. The gravity data supports the companys interpretation of the extension of the Wawa Gold Corridor much farther to the south and extending the potential mineralization strike length to over 6 kilometres.

Before any follow up drilling program, it was suggested to conduct a deep penetrating resistivity/IP survey (OreVision®) with the following configuration: a = 25 m, n = 1 to 30 along the NW-SE traverses, in order to discriminate the nature of the outlined targets and to follow them more deeply up to 300 m, since the diamond drill program conducted in 2018 at the Jubilee Shear Zone revealed high-grade gold mineralization down to a depth of 315 m associated with sulphides (2-5% arsenopyrite and pyrite). The full report can be found in Appendix VII.

9.3 Overburden Stripping and Channel Sampling

9.3.1 Program Overview and Objectives

In 2018 from August 7th to August 17th and October 9th to November 2nd, and in 2019 from May 28th to November 5th Red Pine personnel were on site at the Project to carry out mechanized stripping, mapping, and channel sampling of the exposed outcrops. In total excavating took 24 days in 2018 and 54 days in 2019, when washing, mapping, channel cutting, sample descriptions/logging was completed in 24 days in 2018 and 129 days in 2019. The summary of completed work is outlined in **Error! Reference source not found.**-2.

The main objective of the trenching programs was to test the deformation zones and quartz veins, to characterize the surface geology, and mineralization of historic showings within or proximal to the Surluga Deposit. These showings include Minto Mine

South Zone (Minto A and Minto Lower), Parkhill Zone, Sunrise Zone, Central Jubilee Shear Zone, Cooper-Ganley Zone, Gulch Zone, Grace-Darwin Zone, Jubilee South Shear Zone. Modeling of historic data provided targets for drill testing, but confirmation of historic results was also required. Trenching and channel sampling were also completed in areas where limited to no surface work had been done. Channel samples are representative of the outcrop from which they were collected. Channel samples were taken in well exposed parts of the trench and orientated perpendicular to strike. The samples were analyzed for gold as well as a multi element suite.

During the 2018 field season several areas for overburden stripping were selected, such as Grace-Darwin (~260 m x ~105 m), Minto (~1485 m x ~500 m), Parkhill (~200 m x ~10 m), Jubilee (~8 m x ~10 m), Sunrise (~40 x ~5 m), to complete 14 trenches mainly located in Minto area (Table 9-5). As a result, all trenches were mechanically stripped, and 10 of them washed, 5 of them mapped, and only 1 channel sampled. The 2018 stripping, mapping, and channel sampling program was not completed due to an explained drilling program through 2017 and the beginning of 2018 which created a significant logging backlog, and geologists were mainly focusing on the drill core logging and the on-going drill program.

The 2019 trenching/pitting program was desgined to target Cooper-Ganley (840 m x 300 m) and Gulch (20 m x 3 m), Grace-Darwin (760 m x 300 m) and Jubilee South (850 m x 450 m) areas. This program planned to complete 3 trenches excavated in 2018 (1 from Cooper-Ganley, 1 from Grace-Darwin, 1 from Sunrise areas), and 19 new ones (Table 9-5). 95% of the 2019 trenching/pitting program was completed.

Red Pine Exploration is planning to complete washing, mapping, channel cutting already excavated trenches in 2020 summer.

As a result of the 2018-2019 stripping programs, a total of 391 channel samples were collected over 155 channels covering 402.3 m from 22 trenches located in 3 different areas. Summary of 2018-2019 overburden stripping programs presented in Table 9-2. Figure 9-9 illustrates the location of the trenches relative to the Clams ID.

Both trenching programs included the use of a variety of the geologists - Blake McLaughlan (P. Geo), Adam Clough, Dominique van der Byl (G.I.T), Jolee Stewart (G.I.T), Ruth Orlóci-Goodison (G.I.T.), Tim Porter (G.I.T), and Olga Prikhodko (P.Geo), a variety of the technicians Rob Dyer, Peter Olafson, Patrick Lambert, Wilkie Langille, Jonathan Savard, Darrel Beardy, and one excavator operator - Keith Desauliner. Throughout the 2018-2019 trenching programs a Terex 225 excavator was used to clear trees and remove overburden to expose bedrock. A total of 452.1 work hours were put on the excavator and 628 on the excavator operator (Table 9-2) during the exploration programs. In 2019 a roughly 1.7 km long access trail was built to access Trench 6 and the Jubilee South trenches, which will also be used for the 2020 drilling program. Building the trail took an additional 71.2 excavator hours, and 93 operator hours (Table 9-3). The excavator was rented at $6,400 per month and the operator cost $30 an hour. The excavator was kept on the property for the trenching programs 2.9 months (from August 7th to November 2nd) in 2018 and 5.2 months (May 28th to November 5th) in 2019. The work was completed under permits: PR-16-10809 (for the period 04/07/2016 to 04/07/2019) and PR-19-000238 (for the period of October 24th, 2019 to October 23rd, 2022).

Access to the site via highway 101 from the nearest town of Wawa and within the property is readily available and easily facilitated as the extensive historic work on the property has left a substantial network of roads and trails throughout the property which are accessible via trucks and ATVs. After trenching with the excavator, a high-pressure pump was used to remove the remaining dirt on the bedrock. Channel samples were cut and chipped out on the trenches in areas that were considered prospective for mineralization by the geologist. The geologist also took structural measurements, and mapped the trenches (sometimes not mapped, only the structures measured), and logged every sample. Trench washing and channel cutting were completed by a crew of two technicians. Trench mapping, selection of channel samples, and structural measurements were completed by a geologist or more often a team of two geologists mainly for a safety reason.

Table 9-2: Summary of the work completed via 2018-2019 overburden stripping programs

Area	Trenches Number	Area, m2	Volume, m3	Excavated, %	Washed, %	Mapped, %	Channels Cut and Logged, %	Channels Total	Channels Length, m	Channel Samples	Certified Reference Material (CRM)	Blanks	Samples Analyzed	Excavator, hr	Excavator Operator, hr	Technicians, hr	Geologist, hr
2018 Minto	8	2538.5	2276.95	100	75	50	0	0	0	0	0	0	0	97.9	129	192	64
2018 Parkhill	1	600	600	100	0	0	0	0	0	0	0	0	0			0	0
2018 Jubilee	1	42	4.2	0	100	100	0	0	0	0	0	0	0	0	0	16	16
2018-2019 Sunrise	1	128	76.8	100	0	0	0	0	0	0	0	0	0	32.9	46.5	0	0
2018 Cooper Ganley	1	120	48	100	100	100	100	6	10.43	18	1	1	20	9	11	64	16
2018-2019 Cooper-Ganley	1	134	80.4	100	100	100	100	4	18.3	10	0	2	12	19	22	84	24
2019 Cooper-Ganley and Gulch	12	1064.3	394.74	100	100	100	100	49	140.43	128	7	8	143	98.1	124	529	286
2018-2019 Grace-Darwin	1	200	180	100	100	100	100	4	8.55	7	1	0	8	13	16	50	28
2019 Grace-Darwin	6	1078.7	409.32	100	100	100	67	31	61.51	51	2	2	55	104.2	140	396	188
2019 Jubilee South	3	474.2	239.72	100	100	100	100	61	162.48	171	11	8	190	78	139.5	220	176
Total	**35**	**6379.7**	**4310.13**	**100**	**82**	**79**	**93**	**155**	**401.7**	**385**	**22**	**21**	**428**	**452.1**	**628**	**1551**	**798**

Table 9-3: Access trail – claims ID, the dates, and hours of use of the excavator, the dates and hours worked by the equipment operator

Access Trail	Patent	Length, km	Dates built	Excavator, hr (rental cost $6 400 per month)	Excavator Operator, hr (operator cost $30 per hour)	Comments
Access trail to the Trench 6 and Jubilee South trenches	PAT-520	390.7	2019-06-28 to 2019-07-01; 2019-07-15 to 2019-07-17; 2019-07-19 to 2019-07-20	71.2	93	~1.9 km length and ~3.5 m wide; the trail is planning to use for 2020 drilling program
	PAT-496	456.6925786				
	PAT-493	851.0288576				
	PAT-494	211.6821736				
Total length, km		1910.10361				

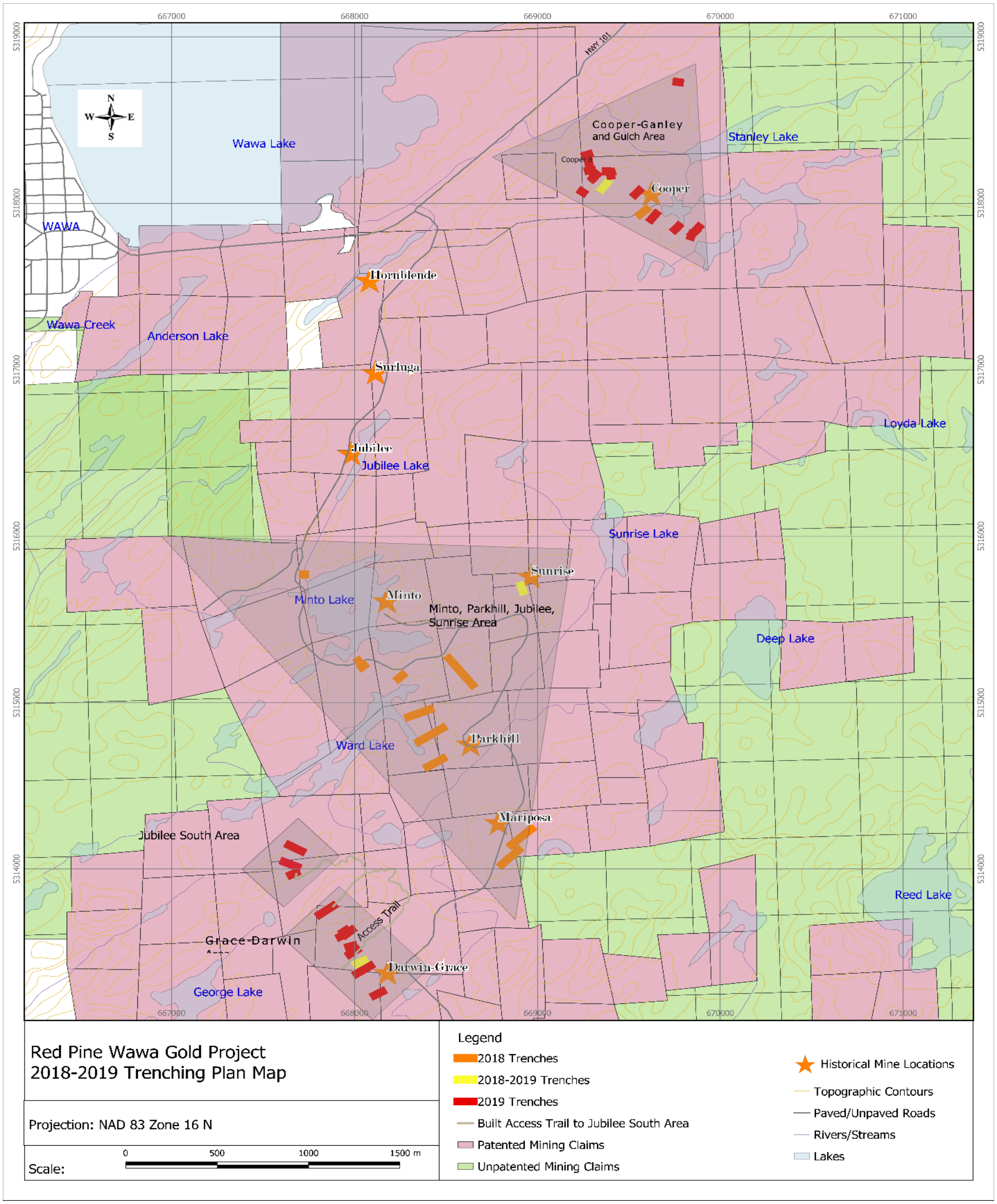


Figure 9-9: Summary of trenching plan map outlining planned trench locations for the 2018-2019 trenching programs

9.3.2 Trench Location, Trench Mapping, and Work Completed

9.3.2.1 Trench Location

Once a trenching plan was designed, a geologist or/with an experienced technician/prospector explored the proposed start and end trench points to confirm a trench was suitable for excavation. Wet or marsh areas, steep hills or cliffs were subjects to consider changing of the trench coordinates. Any changes were done only after a discussion with the chief geologist.

A Garmin Oregon handheld GPS (Figure 9-10) was used to take trench start/end point locations. This GPS has an accuracy +- 5m in good conditions. Both ends of the trenches were marked by flagging tape, as well as trench direction. When each trench was mapped georeferenced points were located using a TopCon RTK GPS (Figure 9-11) with an accuracy of <5cm.

The property contains a wide network of trails that allowed easy access for an excavator. Distance from a trail to a trench was flagged to make it visible for an excavator operator. To figure out the shortest and safe way up to a trench it took from several hours to several days.

The Table 9-4 illustrates all trenches (excavated and non excavated open space, mapped and not mapped) with associated patent/lease IDs. Trench locations and their size outlined in the Table 9-5, where the trench coordinates are planned for the 2018 trenches, and georeferenced points located by TopCon RTK GPS for 2019 trenches.

Table 9-4: Summary of 2018-2019 trenches and associated Claims ID

Trench Name	Target Structure	Patent/Lease	%
MintoA-01	MintoA, MintoA-Lower	PAT-566	80.4
MintoA-01	MintoA, MintoA-Lower	LEA-108502	19.6
MintoA-02	MintoA, MintoA-Lower	PAT-28074	17.6
MintoA-02	MintoA, MintoA-Lower	LEA-108502	11.2
MintoA-02	MintoA, MintoA-Lower	PAT-566	71.2
MintoA-03	MintoA-Lower	PAT-28074	18.3
MintoA-03	MintoA-Lower	PAT-566	81.7
MintoA-04	MintoA	PAT-28078	10.2

Trench Name	Target Structure	Patent/Lease	%
MintoA-04	MintoA	PAT-28077	89.8
MintoA-05	MintoA-Lower	PAT-28078	78.9
MintoA-05	MintoA-Lower	PAT-28077	21.1
MintoA-06	MintoA-Lower	SSM430235 (LEA-108850)	100
MintoA-07	MintoA-Lower	SSM430235 (LEA-108850)	100
MintoA-08	MintoA	PAT-560	100
Parkhill-01	Parkhill-North	PAT-28075	100
Jubilee	Jubilee	PAT-558	100
CG	Cooper-Ganley	PAT-551	100
CG-1	Cooper-Ganley	PAT-551	100
Cooper1	Cooper Vein	PAT-551	100
Cooper2	Cooper Vein	PAT-551	100
Cooper3	Cooper Vein	PAT-551	100
Cooper4	Cooper Vein	PAT-551	100
Cooper5a	Cooper Vein	PAT-551	100
Cooper 5b	Cooper Vein	PAT-551	100
Cooper6, 6a	Cooper Vein	PAT-551	100
Cooper8	Cooper Vein	PAT-551	100
Cooper10	Cooper Vein	LEA-107761	100
Cooper11	Cooper Vein	LEA-107761	40
Cooper11	Cooper Vein	LEA-107760	60
Gulch a-b	Gulch SZ	LEA-107761	100
Ganley1	Ganley Vein	PAT-551	100
Ganley3	Ganley Vein	PAT-551	100
Ganley3a	Ganley Vein	PAT-551	100
Ganley3b	Ganley Vein	PAT-551	100
Trench 2	Grace	PAT-520	100
Trench 1	Grace	PAT-520	100
Trench 3 a	Grace	PAT-520	100
Trench 3 b	Grace	PAT-520	47
Trench 3 b	Grace	PAT-519	63
Trench 4	Grace	PAT-518	13
Trench 4	Grace	PAT-519	87
Trench 5a	Grace	PAT-520	100
Trench 5b	Grace	PAT-520	100
Trench 5c	Grace	PAT-520	100
Trench 6	Grace	PAT-520	100

Trench Name	Target Structure	Patent/Lease	%
Trench 7a- b	Grace	PAT-520	100
JSZ_South a-b-c	Jubilee SZ South	PAT-493	100
JSZ_South2	Jubilee SZ South	PAT-493	100
JSZ_South3a-b	Jubilee SZ South	PAT-497	100
Mickelson-1	Sunrise	PAT-681	100

Table 9-5: Trench locations and trench size

Trench Name	Target Structure	Year	From		To		Average Length, m	Area, m2	Volume, m3
			West	East	West	East			
MintoA-01	MintoA, MintoA-Lower	2018	668296	5314914	668412	5314958	125	375	375
MintoA-02	MintoA, MintoA-Lower	2018	668353	5314766	668482	5314846	161	483	483
MintoA-03	MintoA-Lower	2018	668401	5314615	668482	5314663	100	300	300
MintoA-04	MintoA	2018	668858	5314144	668966	5314237	140	420	420
MintoA-05	MintoA-Lower	2018	668805	5314026	668896	5314111	125	375	375
MintoA-06	MintoA-Lower	2018	668020	5315250	668036	5315230	24	312	187.2
MintoA-07	MintoA-Lower	2018	668040	5315213	668052	5315223	19	116	58
MintoA-08	MintoA	2018	668240	5315145	668262	5315165	45	157.5	78.75
Parkhill-01	Parkhill-North	2018	668516	5315262	668644	5315105	200	600	600
Jubilee	Jubilee SZ	2018	667727.226	5315770.243	667720.787	5315769.524	7.2	42	4.2
CG	Cooper-Ganley	2018	669560	5317930	669594	5317960	50	120	48
CG-1	Cooper-Ganley	2018-2019	669353.714	5318085.259	669382.449	5318122.523	57	134	80.4
Cooper1	Cooper Vein	2019	669302.871	5318147.251	669324.718	5318171.49	34	136	54.4
Cooper2	Cooper Vein	2019	669622.127	5317903.756	669648.855	5317935.256	60	90	36
Cooper3	Cooper Vein	2019	669752.739	5317842.225	669771.563	5317862.485	33	68	20.4
Cooper4	Cooper Vein	2019	669312.138	5318165.034	669308.417	5318167.459	6	24	4.8
Cooper5a	Cooper Vein	2019	669850.106	5317820.291	669882.847	5317857.478	60	132	39.6
Cooper 5b	Cooper Vein	2019	669840.586	5317800.114	669867.655	5317834.343	26	64	32
Cooper 6, 6a	Cooper Vein	2019	669278.539	5318195.913	669296.283	5318199.894	21	99	0
Cooper8	Cooper Vein	2019	669278.508	5318255.688	669281.247	5318243.183	15	30	0
Cooper10	Cooper Vein	2019	669263.033	5318288.223	669280.954	5318294.378	18	180	90
Cooper11	Cooper Vein	2019	669240.556	5318071.179	669250.848	5318063.633	18	54	21.6
Gulch a-b	Gulch SZ	2019	669761.815	5318728.306	669777.427	5318725.511	19	36.3	25.84
Ganley1	Ganley Vein	2019	669534.48	5318053.102	669556.432	5318075.7	46	69	55.2
Ganley3	Ganley Vein	2019	669399.653	5318157.541	669401.297	5318166.318	9	45	9

Trench Name	Target Structure	Year	From		To		Average Length, m	Area, m2	Volume, m3
			West	East	West	East			
Ganley3a	Ganley Vein	2019	669395.767	5318182.507	669405.613	5318186.172	11	22	4.4
Ganley3b	Ganley Vein	2019	669377.467	5318192.433	669382.135	5318189.59	5	15	1.5
Trench 2	Grace	2018-2019	668010.925	5313431.647	668052.083	5313451.699	50	200	180
Trench 1	Grace	2019	667972.983	5313490.351	668011.714	5313516.638	60	150	75
Trench 3 a, b	Grace	2019	668012.096	5313374.698	668086.216	5313418.981	76	121.6	24.32
Trench 4	Grace	2019	668109.755	5313244.635	668151.157	5313266.252	60	180	72
Trench 5a	Grace	2019	667937.44	5313622.426	667953.356	5313633.074	25	125	6.25
Trench 5b	Grace	2019	667951.861	5313608.116	667985.352	5313635.254	44	88	61.6
Trench 5c	Grace	2019	667921.227	5313594.647	667940.938	5313605.449	23	62.1	31.05
Trench 6	Grace	2019	667813.208	5313731.336	667880.977	5313773.122	81	162	129.6
Trench 7a-b	Grace	2019	667969	5313535	667993	5313542	38	190	9.5
Jubilee South a-b-c	Jubilee SZ South	2019	667615.233	5314041.807	667685.727	5314013.538	76	167.2	100.32
Jubilee South 2	Jubilee SZ South	2019	667655.853	5313964.865	667679.966	5313978.453	28	112	22.4
Jubilee South 3a-b	Jubilee SZ South	2019	667641.814	5314143.369	667711.19	5314106.742	78	195	117
Mickelson-1	Sunrise	2018-2019	668910	5315700	668920	5315667	40	128	76.8
Total 35 trenches							**2113.2**	**6379.7**	**4310.13**

*Refer to Table 9-4 for a summary of Red Pine's 2017-2019 claim ID's and associated trenches.

9.3.2.2 Trench Mapping and Map Digitizing

Trench Mapping

Once a trench was washed, trench mapping was started by a geologist or a team of two geologists including, draw a baseline and tie lines crossing the baseline at 90 degree, determine the lithological domains, main features to be plotted on the map, taking structural measurements, pictures of a trench and channel samples. Then all channel samples and structural measurements were recorded in a spread sheet, completed logging used MX Deposit software, all mapping observations summarized in a word file. Last thing it was to complete map digitizing.

Mapping of some 2018 trenches (Minto-02, Minto-06, Minto-08) was done with limited interpretation, another (Jubilee) was completely mapped and processed but without photos or digitizing. 2018 trench Cooper-Ganley (CG) structural measurements, sampling and lithological unit description were done in the spread sheet format, with photos taken and no completed mapping.

Trench Map Digitization Process

The hand drawn maps created in the field were transformed into georeferenced TIF images using the measured coordinates of the RTK points marked on the trench. By importing these TIF images to ArcMap 10.5.1 or QGIS, the geological units were drawn as polygons with the corresponding symbology applied to highlight the rock type(s), quartz veining percentage, and strain intensity. The overburden was digitized as a polygon around the trench. Structural measurements and RTK points were digitized as points with appropriate symbology. Linear features such as veins and faults were digitized along with channel samples labeled with the sample number. The patent number that the trench is located within is included on the map with a legend, scale bar, and UTM grid border.

All the trench maps can be found in the Appendix VIII.

9.3.2.3 Work Completed During 2018-2019 Overburden Stripping Programs

Summary of the work completed and sample submission during 2018-2019 overburden stripping programs is outlined in the Table 9-6. Three trenches Jubilee (2018), Cooper 6 and Cooper 8 (2019) are naturally exposed outcrops with no overburden stripping needed, only high-pressure washing. Table 9-6 highlights the year or years when trench excavation, washing, mapping, and sample analyzing was completed. Some trenches excavated in 2018 have not been mapped or georeferenced. These trenches are planned to be finished in the spring-summer of 2020. In 2018 the excavator and an excavator operator dates and hours were logged without referencing trenches. For that reason, these hours are given as combined number for the 2018 trenches with extracted rough estimated numbers for the trenches that were fully finished in 2019.

Hours worked by the technicians include trench washing, channel cutting, sample labelling, and RTK sample location based on a team of two persons.

Hours worked by the geologists include trench and access trail flagging, mapping structure measurements, sample photographing, logging, and map digitizing. For safety reason, most of the trenches were mapped by two geologists. Hours do not include overseeing the trenching program or completion of the assessment report.

Table 9-6: Summary of the work completed and sample submission during 2018-2019 overburden stripping programs

Trench Name	Excavated		Washed		Mapped		Channels Number	Channel Length, m	Channel Samples	Certified Reference Materials (CRM) and Blanks Samples	Analyzed		Excavator, hr	Excavator Operator, hr	Technicians, hr	Geologist, hr
	Yes/No	Year	Yes/No	Year	Yes/No	Year					Samples	Year				
MintoA-01	Yes	2018	Yes	2018	No		0		0				97.9	129	0	0
MintoA-02	Yes	2018	Yes	2018	Yes	2018	0		0						48	16
MintoA-03	Yes	2018	Yes	2018	No		0		0						0	0
MintoA-04	Yes	2018	No		No		0		0						0	0
MintoA-05	Yes	2018	No		No		0		0						0	0
MintoA-06	Yes	2018	Yes	2018	Yes	2018	0		0						48	16
MintoA-07	Yes	2018	Yes	2018	Yes	2018	0		0						48	16
MintoA-08	Yes	2018	Yes	2018	Yes	2018	0		0						48	16
Parkhill-01	Yes	2018	Yes	2018	No		0		0						0	0
Jubilee	No	2018	Yes	2018	Yes	2018	0		0				0	0	16	16
CG	Yes	2018	Yes	2018	Yes	2018	6	10.43	18	2	20	2018	9	11	64	16
CG-1	Yes	2018	Yes	2019	Yes	2019	4	18.3	10	2	12	2019	19	22	84	24
Cooper1	Yes	2019	Yes	2019	Yes	2019	3	6.35	5	1	6	2019	6.4	8.5	34	19
Cooper2	Yes	2019	Yes	2019	Yes	2019	7	21.4	22	2	24	2019	9.1	10.5	66	20
Cooper3	Yes	2019	Yes	2019	Yes	2019	3	10.9	10	2	12	2019	4.7	9	22	20
Cooper4	Yes	2019	Yes	2019	Yes	2019	2	3.4	3	1	4	2019	1.5	2	14	13
Cooper5a	Yes	2019	Yes	2019	Yes	2019	4	12.4	10	1	11	2019	5.4	5.5	50	16
Cooper 5b	Yes	2019	Yes	2019	Yes	2019	3	11.7	11	1	12	2019	6.8	9.5	82	24
Cooper 6, 6a	No		Yes	2019	Yes	2019	4	7.13	7	1	8	2019	0	0	38	18
Cooper8	No		Yes	2019	Yes	2019	2	3.85	3	1	4	2019	0	0	12	16

Trench Name	Excavated		Washed		Mapped		Channels Number	Channel Length, m	Channel Samples	Certified Reference Materials (CRM) and Blanks Samples	Analyzed		Excavator, hr	Excavator Operator, hr	Technicians, hr	Geologist, hr
	Yes/No	Year	Yes/No	Year	Yes/No	Year					Samples	Year				
Cooper10	Yes	2019	Yes	2019	Yes	2019	4	15.09	13	1	14	2019	8.9	10.5	50	24
Cooper11	Yes	2019	Yes	2019	Yes	2019	6	18.12	17	2	19	2019	15.1	18	66	32
Gulch a-b	Yes	2019	Yes	2019	Yes	2019	5	6.32	6	1	7	2019	8.5	11	34	16
Ganley1	Yes	2019	Yes	2019	Yes	2019	2	11.7	11	1	12	2019	16.2	21	34	20
Ganley3	Yes	2019	Yes	2019	Yes	2019	1	5.75	5	0	5	2019	7.5	8	9	16
Ganley3a	Yes	2019	Yes	2019	Yes	2019	1	1.5	1	0	1	2019	5	6	9	16
Ganley3b	Yes	2019	Yes	2019	Yes	2019	2	4.82	5	0	5	2019	3	4.5	9	16
Trench 2	Yes	2018	Yes	2018	Yes	2019	4	8.55	7	1	8	2019	13	16	50	28
Trench 1	Yes	2019	Yes	2019	Yes	2019	7	13.72	11	2	13	2019	15.9	20	50	20
Trench 3 a, b	Yes	2019	Yes	2019	Yes	2019	7	13.3	11	2	13	2019	18.5	21.5	58	32
Trench 4	Yes	2019	Yes	2019	Yes	2019	3	5.99	4	0	4	2019	14.7	21	58	16
Trench 5a	Yes	2019	Yes	2019	Yes	2019	6	13.5	10	0	10	2019	16.8	21.5	50	28
Trench 5b	Yes	2019	Yes	2019	Yes	2019	5	6.5	7	0	7	2019	8.8	10.5	50	24
Trench 5c	Yes	2019	Yes	2019	Yes	2019	3	8.5	7	0	7	2019	6.5	10	50	24
Trench 6	Yes	2019	Yes	2019	Yes	2019							23	35.5	56	20
Trench 7a-b	No		Yes	2019	Yes	2019							0	0	24	24
Jubilee South a-b-c	Yes	2019	Yes	2019	Yes	2019	29	62.19	60	7	67	2019	31.6	59.5	116	72
Jubilee South 2	Yes	2019	Yes	2019	Yes	2019	8	35.04	41	5	46	2019	17.8	28.5	34	32
Jubilee South 3a-b	Yes	2019	Yes	2019	Yes	2019	24	65.25	70	7	77	2019	28.6	51.5	70	72
Mickelson-1	Yes	2018-2019	No		No		0						32.9	46.5	0	0
Total 35 trenches							**155**	**401.7**	**385**	**43**	**428**		**452.1**	**628**	**1551**	**798**

*Refer to Table 9-4 for a summary of Red Pine's 2017-2019 claim ID's and associated trenches and Table 9-5 for the trench locations and their size

9.3.3 Channel Sample Selection/Location

Samples were selected:

- to test a major structure or vein with visible sulfides and/or visible gold at surface, commonly with associated shoulder samples;
- to test replacement zone;
- to test lithological contacts.

Red/orange spray paint was used to mark selected channel samples, then photographed by a geologist. In 2018 photos were done as an entire channel or a portion of it using a photo camera. In 2019 every single channel sample was photographed using a Garmin Oregon handheld GPS. Later, all sample pictures were renamed in accordance with sample ID number. All trench and channel photos can be found in Appendix X.

Once each channel was cut, a TopCon RTK GPS (Figure 9-11) was used to precisely locate the channel samples. Using a corrected base station and rover receiver, an accuracy of <5cm was achieved. The starting and end points of each channel was recorded. A summary of channel locations with Claims ID can be found below in Table 9-7 and the full list of coordinates can be found in Appendix XI. Full information on the used GPS can be found on Appendices XII-XIII.

Table 9-7: Channel sample locations and lengths

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year
CG-1	PAT-551	669582.591	5317951.157	363.21	0.65	-35	170	2018
CG-2	PAT-551	669579.885	5317949.662	362.148	2.02	-10	234	2018
CG-3	PAT-551	669578.083	5317949.531	361.988	0.6	0	220	2018
CG-4	PAT-551	669577.704	5317949.282	361.957	1.53	0	220	2018
CG-5	PAT-551	669576.13	5317949.317	361.957	3.4	15	230	2018
CG-6	PAT-551	669571.781	5317944.152	364.12	2.23	0	336	2018
Cooper-10-1	LEA-107761	669271.6	5318295.5	363.3	5.8	0	227	2019
Cooper-10-2	LEA-107761	669267.1	5318295.8	362.4	3	0	208	2019
Cooper-10-3	LEA-107761	669274.6	5318294.5	364	5.4	0	125	2019
Cooper-10-4	LEA-107761	669272.6	5318290	364.5	1	0	180	2019
Cooper-1-1	PAT-551	669317.4	5318159.9	375.1	1.5	-90	0	2019
Cooper-11-1	LEA-107760	669243.6	5318067.2	364.9	4	0	55	2019
Cooper-11-2	PAT-551	669252.2	5318068.2	365.5	6.8	0	237	2019
Cooper-11-3	LEA-107760	669240.3	5318071.6	366.2	3	0	139	2019

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year
Cooper-11-4	LEA-107760	669243.9	5318063.1	364.5	1.5	0	128	2019
Cooper-11-5	LEA-107760	669243.6	5318069.3	365.4	1.5	0	72	2019
Cooper-11-6	LEA-107760	669244.7	5318070.5	365.5	1.3	0	67	2019
Cooper-1-2	PAT-551	669315.7	5318159.3	374.9	3.4	0	248	2019
Cooper-1-3	PAT-551	669303.4	5318148.1	374.6	1.5	0	308	2019
Cooper-2-1	PAT-551	669637.3	5317918.2	361.7	3	0	42	2019
Cooper-2-1a	PAT-551	669639.5	5317922	361.7	3.7	0	27	2019
Cooper-2-2	PAT-551	669653	5317935.1	361.2	2.6	0	195	2019
Cooper-2-3	PAT-551	669626.5	5317911.4	362.5	4.5	0	345	2019
Cooper-2-4	PAT-551	669632.9	5317917.7	362.2	5.9	0	19	2019
Cooper-2-5	PAT-551	669637.9	5317920.6	361.1	1.1	0	8	2019
Cooper-2-6	PAT-551	669639	5317921.5	361.5	1	0	0	2019
Cooper-3-1	PAT-551	669769.8	5317855.6	358.9	7.2	0	42	2019
Cooper-3-2	PAT-551	669767.6	5317860.2	356.5	1.5	0	0	2019
Cooper-3-3	PAT-551	669753	5317843.5	360.7	2.2	0	296	2019
Cooper-4-1	PAT-551	669311.2	5318165.8	371.9	1.9	0	58	2019
Cooper-4-2	PAT-551	669307.5	5318165	371.1	1.5	0	14	2019
Cooper-5a-1	PAT-551	669851	5317822.4	358.4	4.1	0	70	2019
Cooper-5a-2	PAT-551	669857.3	5317830.2	359.4	5.4	0	100	2019
Cooper-5a-3	PAT-551	669863.4	5317832.2	358.5	1.4	0	105	2019
Cooper-5a-4	PAT-551	669881.6	5317855.2	358.3	1.5	0	186	2019
Cooper-5b-1	PAT-551	669831.8	5317816.7	357.9	8.9	0	58	2019
Cooper-5b-2	PAT-551	669838	5317816.7	357.4	1.4	0	349	2019
Cooper-5b-3	PAT-551	669841.1	5317813.4	357.8	1.4	0	13	2019
Cooper-6-1	PAT-551	669291.6	5318196.8	375.2	2.4	0	248	2019
Cooper-6-2	PAT-551	669285.7	5318197.4	375.6	2.7	0	20	2019
Cooper-6a-1	PAT-551	669295.4	5318177.5	371.9	1.1	0	307	2019
Cooper-6a-2	PAT-551	669294	5318179.7	371.9	1	0	307	2019
Cooper-8-1	PAT-551	669278.1	5318246.9	368	2.8	0	51	2019
Cooper-8-2	PAT-551	669278.3	5318250.6	367	1.1	0	83	2019
Ganley-1-1	PAT-551	669538.6	5318057.5	370.9	8.8	0	65	2019
Ganley-1-2	PAT-551	669547.6	5318052.5	370.2	2.9	0	38	2019
Ganley-3-1	PAT-551	669401.5	5318159.8	373.3	5.8	0	338	2019
Ganley-3a-1	PAT-551	669396.5	5318182.7	371.4	1.5	0	208	2019
Ganley-3b-1	PAT-551	669380.2	5318188.3	370.3	3.6	0	350	2019
Ganley-3b-2	PAT-551	669380.5	5318191	370.1	1.2	0	27	2019
Gulch-A-1	LEA-107761	669765.6	5318728	353.4	1.4	0	100	2019

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year
Gulch-A-2	LEA-107761	669772.7	5318727.5	352.2	2.5	0	270	2019
Gulch-B-1	LEA-107761	669782.6	5318725.5	359.6	1	90	352.3	2019
Gulch-B-2	LEA-107761	669780.6	5318724.3	355.9	1.1	90	352.3	2019
Gulch-B-3	LEA-107761	669781.3	5318725.6	357.1	1	90	352.3	2019
JSZ_South2-1	PAT-493	667655.8	5313965	360.8	3.3	0	75	2019
JSZ_South2-2	PAT-493	667656.7	5313968.3	360.5	2.5	0	103	2019
JSZ_South2-3	PAT-493	667659.1	5313968.8	360.9	1.4	0	90	2019
JSZ_South2-4	PAT-493	667659.4	5313971.8	360.3	5	0	116	2019
JSZ_South2-5	PAT-493	667663.1	5313972.3	359.9	3.5	0	13	2019
JSZ_South2-6	PAT-493	667665.6	5313977	358.3	5	0	130	2019
JSZ_South2-7	PAT-493	667668.7	5313978.5	357.3	7.5	0	116	2019
JSZ_South2-8	PAT-493	667676	5313978.5	354.5	7.5	0	116	2019
JSZ_South3A-1	PAT-497	667684	5314121.1	343.7	1.9	0	127	2019
JSZ_South3A-10	PAT-497	667708.1	5314108.7	344.3	4.3	0	124	2019
JSZ_South3A-2	PAT-497	667685	5314118.3	346.9	1	0	146	2019
JSZ_South3A-3	PAT-497	667685.5	5314117.5	346.9	3.6	0	150	2019
JSZ_South3A-4	PAT-497	667692	5314116	348.3	2	0	130	2019
JSZ_South3A-5	PAT-497	667694.9	5314116.7	348.2	2	0	122	2019
JSZ_South3A-6	PAT-497	667695.5	5314114.5	349.2	3	0	123	2019
JSZ_South3A-7	PAT-497	667698.2	5314114.2	347.9	2.9	0	123	2019
JSZ_South3A-8	PAT-497	667700.6	5314113.2	346.6	6.8	0	124	2019
JSZ_South3A-9	PAT-497	667706.4	5314109.2	344.5	2	0	138	2019
JSZ_South3B-1	PAT-497	667641.3	5314145.2	343	1.1	0	78	2019
JSZ_South3B-10	PAT-497	667667.7	5314130.5	344.5	1.1	0	76	2019
JSZ_South3B-11	PAT-497	667669.3	5314131.2	345.1	1	0	150	2019
JSZ_South3B-12	PAT-497	667669.9	5314130	345.5	5.8	0	127	2019
JSZ_South3B-13	PAT-497	667674.3	5314126.6	344.8	3.5	0	123	2019
JSZ_South3B-14	PAT-497	667677.9	5314125.5	344.1	2.7	0	119	2019
JSZ_South3B-2	PAT-497	667642.3	5314144.8	343	1	0	139	2019
JSZ_South3B-3	PAT-497	667643.7	5314144.2	343.1	3.2	0	135	2019
JSZ_South3B-4	PAT-497	667647.9	5314142.7	344	1	0	133	2019
JSZ_South3B-5	PAT-497	667648.8	5314142.1	344.1	5.3	0	123	2019
JSZ_South3B-6	PAT-497	667656.9	5314136.9	343.1	3	0	138	2019
JSZ_South3B-7	PAT-497	667659.8	5314135.9	344.6	2.9	0	130	2019
JSZ_South3B-8	PAT-497	667663.1	5314133.8	344.4	3.6	0	133	2019

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year
JSZ_South3B-9	PAT-497	667666.6	5314130.8	344	1	0	103	2019
JSZ_SouthB-1	PAT-493	667638.2	5314038.2	358	1.2	0	96	2019
JSZ_SouthB-2	PAT-493	667638.4	5314037.2	358.5	4	0	97	2019
JSZ_SouthB-3	PAT-493	667641.3	5314035.1	359.1	1	0	72	2019
JSZ_SouthB-4	PAT-493	667642.6	5314035.2	359.1	9.8	0	124	2019
JSZ_SouthC-1	PAT-493	667658.5	5314025.6	357.4	1	0	175	2019
JSZ_SouthC-10	PAT-493	667676.1	5314018.3	357.2	1.8	0	127	2019
JSZ_SouthC-11	PAT-493	667677.6	5314017.7	356.3	2.4	0	124	2019
JSZ_SouthC-12	PAT-493	667679.3	5314016.1	355.8	1	0	132	2019
JSZ_SouthC-13	PAT-493	667680.9	5314016.8	355.2	1.1	0	146	2019
JSZ_SouthC-14	PAT-493	667681.1	5314015.7	354.8	1	0	141	2019
JSZ_SouthC-15	PAT-493	667682.3	5314016.3	354.6	1.5	0	130	2019
JSZ_SouthC-16	PAT-493	667682.8	5314017.1	354.8	2.2	0	135	2019
JSZ_SouthC-2	PAT-493	667659.5	5314026.7	357.8	1	0	135	2019
JSZ_SouthC-3	PAT-493	667666	5314023	357.5	1.8	0	121	2019
JSZ_SouthC-4	PAT-493	667668.4	5314022.1	358.2	2.8	0	170	2019
JSZ_SouthC-5	PAT-493	667670.2	5314019.6	358.8	1.2	0	140	2019
JSZ_SouthC-6	PAT-493	667670.8	5314020.1	359	2.1	0	137	2019
JSZ_SouthC-7	PAT-493	667671.9	5314018.2	358.6	1.2	0	139	2019
JSZ_SouthC-8	PAT-493	667673.5	5314019.6	358.4	1.3	0	120	2019
JSZ_SouthC-9	PAT-493	667674.6	5314019	357.8	1.6	0	107	2019
Jubilee-SouthA-1	PAT-493	667621.4	5314040.3	360.4	5.4	0	103	2019
Jubilee-SouthA-2	PAT-493	667620.8	5314039.2	360.4	1.1	0	10	2019
Jubilee-SouthA-3	PAT-493	667626.4	5314038.9	359.3	3	0	97	2019
Jubilee-SouthA-4	PAT-493	667628.8	5314039.1	358.7	3.6	0	108	2019
Jubilee-SouthA-5	PAT-493	667615	5314041	359.7	1.8	0	133	2019
Jubilee-SouthA-6	PAT-493	667616.8	5314040.5	359.7	1	0	135	2019
Jubilee-SouthA-7	PAT-493	667617.7	5314040.6	360.1	3	0	118	2019
Jubilee-SouthA-8	PAT-493	667633.2	5314038.6	357.5	1.5	0	144	2019
Jubilee-SouthA-9	PAT-493	667635.3	5314038.9	357.5	1.6	0	142	2019
Trench-1-1	PAT-520	667980.8	5313494.8	343.5	1	0	316	2019
Trench-1-2	PAT-520	667993.3	5313502.9	345.6	1.5	0	48	2019
Trench-1-3	PAT-520	667999.8	5313508.6	344.7	3	0	53	2019
Trench-1-4	PAT-520	668002.8	5313508.6	344.4	4.2	0	39	2019
Trench-1-5	PAT-520	668018	5313519.1	343.3	1.5	0	143	2019

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year
Trench-1-6	PAT-520	668018.8	5313518.1	342.6	1	0	143	2019
Trench-1-7	PAT-520	667975.9	5313492.1	344.3	1.6	0	45.7	2019
Trench-2-1	PAT-520	668036.4	5313442.1	344.7	2.5	0	237	2019
Trench-2-2	PAT-520	668034.5	5313440.2	344.8	1.3	0	245	2019
Trench-2-3	PAT-520	668023.6	5313438.4	345.7	3.2	0	58	2019
Trench-2-4	PAT-520	668033.6	5313438.8	344.9	1.5	0	244	2019
Trench-3A-1	PAT-520	668055.5	5313405.9	345.3	2.8	0	26	2019
Trench-3A-2	PAT-520	668059.5	5313409.2	346.5	1.5	0	82	2019
Trench-3A-3	PAT-520	668062.2	5313407.6	346.1	2	0	312	2019
Trench-3B-1	PAT-520	668040.4	5313400.2	344.9	1.5	0	6	2019
Trench-3B-2	PAT-519	668026.1	5313379.3	344.6	1.5	0	9	2019
Trench-3B-3	PAT-519	668016.7	5313376.8	345.8	2.5	0	122	2019
Trench-3B-4	PAT-519	668013.3	5313376	345.8	1.5	0	53	2019
Trench-4-1	PAT-519	668121.3	5313257.9	340.7	3	0	318	2019
Trench-4-2	PAT-519	668132	5313261.9	337.5	1.5	0	180	2019
Trench-4-3	PAT-519	668133.9	5313262.2	336.8	1.5	0	239	2019
Trench-5A-1	PAT-520	667939.4	5313623.3	353.6	1.5	0	94	2019
Trench-5A-2	PAT-520	667941	5313623.2	353.3	3.6	0	64	2019
Trench-5A-3	PAT-520	667944.2	5313624.4	350.8	1.5	0	57	2019
Trench-5A-4	PAT-520	667946.2	5313627	352.7	3.1	0	48	2019
Trench-5A-5	PAT-520	667949	5313628.5	352	2.3	0	50	2019
Trench-5A-6	PAT-520	667944.5	5313626.1	353.1	1.5	0	52	2019
Trench-5B-1	PAT-520	667958.6	5313613.7	346.6	1.6	0	70	2019
Trench-5B-2	PAT-520	667969.8	5313621	349	1	0	303	2019
Trench-5B-3	PAT-520	667955.9	5313610.8	346.9	1.8	0	53	2019
Trench-5B-4	PAT-520	667963.9	5313617	348.5	1.5	0	19	2019
Trench-5B-5	PAT-520	667957.2	5313612	347.2	1	0	45	2019
Trench-5C-1	PAT-520	667934.1	5313600.7	342.6	3	0	40	2019
Trench-5C-2	PAT-520	667928.3	5313598.5	342.5	4.5	0	53	2019
Trench-5C-3	PAT-520	667939.8	5313605.3	343.3	1	0	53	2019
CG-1-1	PAT-551	669360.33	5318111.935	379.225	4.4	0	225	2019
CG-1-2	PAT-551	669365.312	5318105.934	379.401	4.3	0	229	2019
CG-1-3	PAT-551	669354.373	5318091.949	380.362	7	0	177	2019
CG-1-4	PAT-551	669372.736	5318115.243	381.031	2.6	0	186	2019

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year

Channel ID	Claim ID	X	Y	Z	Length	Dip	Azimuth	Year

Figure 9-10: Garmin Oregon handheld GPS used for general location purpose

Figure 9-11: TopCon RTK GPS used to get precise location of the channel samples

9.3.4 Sampling and Logging

9.3.4.1 Channel layout

Channels were visually laid out close to perpendicular to the main vein or structure orientation and at variable angles to the minor visual indicators of gold mineralization. Based on Red Pine's experience on the project, the visual indicators are shearing, pervasively disseminated sulfides (mostly pyrite or arsenopyrite), quartz veining, pervasive white mica alteration, contact zones between two units with indications of shearing and fluid circulation, and pervasive chloritization with iron carbonate alteration in mafic units. Sample lengths are between 0.5-1.5 m. Spray paint was used by the geologist to note where cutting was to take place.

9.3.4.2 Cutting, chipping, and marking samples

A Husqvarna chop saw with a 14inch diamond blade was used to cut all channel samples. A small portable 'trash pump' was used to supply water to the saw. Water is required to keep the blade cool as well as for dust reduction. A crew of two was mobilized to the trench daily until all cutting was completed. Two cuts, separated by 2-3inches, were completed along the length of each channel. Cross cuts were completed to separate each individual sample. A hammer and chisel were used to break and remove all cut material along the length of each sample while attempting to maintain a uniform depth for the length of each sample. Once completed a metal tag with the sample ID was glued to the outcrop at the end of each sample.

9.3.4.3 Sample Logging

In 2018 the structural measurements and geological logging of the samples was completed in a microsoft excel spreadsheet. This included: assigning a lithology, a brief description, and noting the intensity of various alteration and mineralization minerals based on a scale of 1-7 (1=trace, 2=weak, 3=weak to moderate, 4=moderate, 5=moderate to strong, 6=strong, 7=intense). In 2019 for the channel sample logging was completed in MX Deposit (Seequent), when still an excel spreadsheet was utilized for the structural measurements. Logging in MX Deposit was followed the same way as per the drill core logging including major and minor lithology, mineralization, alteration, veining system, and recognized gold zones. In total, 391 channel samples were logged. All channel descriptions can be found in the Appendices XIV-XVII.

9.3.4.4 Bagging, Tagging and Certified Reference Materials (CRM)

As samples were cut, chipped, and logged they were subsequently bagged in durable plastic bags, a sample tag was inserted, and the bags were zip tied shut. As a standardized procedure with any sampling, standards (certified reference materials) and blanks were regularly inserted for QA/QC purposes. The standards used were Ore Research & Exploration Pty Ltd (OREAS) 209, 218, 226, and minor 229 (Table 9-8). Standards were inserted every 20 samples while Blanks composed of White Lightening #2020 silica sand were inserted every 25 samples. Groups of 3-4 samples were then placed in heavy rice bags and marked with sample IDs. Once all sampling was completed and CRMs were inserted, rice bags were closed and sealed with numbered security tags for shipment to the lab.

9.3.4.5 Transportation and Shipping

After bagging samples and adding security tags, samples were placed in a plastic shipping tote and delivered to Manitoulin Transport in Wawa where they were subsequently shipped to ActLabs main facility in Ancaster, ON.

9.3.5 Assay Analyses and On-site Quality Assurance/Quality Control (“QA/QC”) Measure

All samples were taken directly from the bedrock. A channel saw was used to cut samples from the mapped trenches of 2018-2019 overburden stripping programs. Then samples were chipped using a hammer and chisel. Samples were bagged, given a sample tag, and locked closed with a zip tie. Standards and blanks were inserted every 20 and 25 samples for channel samples. Once the samples were logged, they were placed in rice bags (2-5 to a bag) and closed with heavy-duty security zip ties. The security ties are assigned a unique number that allows for tracking the chain of custody. Then the samples were taken directly to Manitoulin Transport's shipping facility in Wawa and shipped to Activation Labs (Actlabs) in Anacaster, Ontario.

Red Pine has implemented a quality-control program to comply with best practices in the sampling and analysis of drill core. As part of its QA/QC program, Standards 209, 218, 226, and 229 (Table 11-5) were alternated and inserted every 20 samples while Blanks composed of White Lightening #2020 silica sand were inserted every 25 samples. All assay results and certificates can be found in Appendix XVIII.

A total of 390 channel samples and 43 certified reference materials and blanks (Table 9-6) were analyzed by Activation Laboratories Ltd. (ActLabs) out of its Ancaster facilities, using the fire-assay with an AAS finish (ActLabs code 1A2-50). Samples with significant veining and sulfides along with any sample which returned a preliminary gold values >2g/t were analyzed using a metallic screen (ActLabs code 1A4-1000) to help minimize nugget effect and better capture a coarse fraction of gold if it exists. Some samples were flagged as high sulfide because the laboratory must adjust flux formula and the flux/rock ratio to ensure accurate results for precious metal analyses. For more detailed information on the analytical and assay procedures, go to the Actlabs website at http://www.actlabs.com.

Along with the gold assay, a multi element analysis was completed using ICP-MS. The multi element suite is utilized in house for trace element signatures related to mineralized features as well as an aid for alteration mapping where possible.

For the fire-assay analysis, the entire sample was crushed to −10 mesh (1.7 mm), mechanically split and an aliquot of 500 g was pulverized to at least 95% −150 mesh (105 µm). Fifty grams of the pulverized sample was used for the fire assay procedure. Gold analysis was completed by AAS. For the metallic screen analysis, a 1000 g split was sieved at 100 mesh (149 µm). Assays were performed on the entire +100 mesh and on two splits of the −100 mesh fraction. The final assay was calculated using the weight and gold analysis of each fraction. Samples are also analyzed using ICP-MS for a multi element suite which includes elements such as As, Cu, Ni, Bi, Mo, Pb, Zn. Summary of assay results with Au>5.0 g/t is provided in Table 9-8. The full suite of elements can be seen in the complete assay results (Appendix XVIII).

For more detailed information on the analytical and assay procedures can be found on the Actlabs website at http://www.actlabs.com. The Activation Laboratories Ltd. Website states that, “the laboratory has achieved the ultimate accreditation to international standards, the ISO 17025 standard for specific registered tests. ISO 17025 evaluates the quality system and specific analytical methodologies through proficiency testing and routine audits of the laboratory. In addition, we have achieved accreditation to CAN-P-1579, specific to mineral analysis laboratories. We are one of the few commercial laboratories which have achieved this distinction. Activation Laboratories Ltd. can also advise on methods you can use to ensure security of samples during transport to the laboratory. We have a rigorous chain of custody protocol in place to ensuresecurity of your samples once we receive them. Analytical uncertainty is available on request. In 2007, Activation Laboratories Ltd. became accredited to NELAP in the USA.”

9.3.6 Results

Overburden stripping was completed in four different areas: 1) Minto Mine South (Minto A and Minto Lower), Parkhill, Sunrise, and Central Jubilee Shear Zones; 2) Cooper-Ganley and Gulch Zones; 3)Grace-Darwin Zone; and 4)Jubilee South Shear Zone with main objective to test the deformation zones and quartz veins, to characterize the surface geology, and mineralization of historic showings within or proximal to the Surluga Deposit. Highlights of channel samples assay results from all sampled trenches within the different areas is in Table 9-8 below, where channel ID indicates the name of the trench and number of the channel. All assay results and certificates can be found in Appendix XVIII, as well as in Appendixes VIII-XI and XIV-XVII for structural measurements, maps, channel logs, and photos. Trench location, size, work completed, and sample submissions is outlined in Table 9-5 and Table 9-6 of this section.

Table 9-8: Highlights of channel sampling assay results

Channel ID	From	To	Length, m	Sample ID	Au >0.5 g/t	Structure
CG-2	1.6	2.02	0.42	920428	9.58	Cooper
CG-3	0	0.31	0.31	920429	27	Cooper
CG-5	0.78	1.23	0.45	920435	3.19	Cooper
CG-5	1.23	2.23	1	920436	3.67	Cooper
CG-1-1	1.5	2	0.5	918304	26.9	Cooper
CG-1-2	1.4	1.9	0.5	918308	42.8	Cooper
CG-1-2	1.9	2.8	0.9	918309	28.5	Cooper
Cooper-2-4	3.93	4.54	0.61	918368	2.51	Cooper
Cooper-3-1	1.8	2.85	1.05	918224	2.58	Cooper
Cooper-3-1	2.85	3.9	1.05	918226	34.1	Cooper
Cooper-3-1	4.8	5.7	0.9	918228	1.13	Cooper
Cooper-3-1	5.7	7.2	1.5	918229	8.01	Cooper
Cooper-5b-2	0	1.4	1.4	918210	14.1	Cooper
Cooper-5b-3	0	1.4	1.4	918211	3.23	Cooper
Cooper-5a-1	3	4.1	1.1	918215	0.662	Cooper
Cooper-6-1	0	0.92	0.92	918338	1.04	Cooper
Cooper-6-1	0.92	1.58	0.66	918339	0.538	Cooper
Cooper-10-2	0	0.67	0.67	918328	0.636	Cooper
Cooper-10-2	1.49	2.99	1.5	918330	3.57	Cooper
Cooper-11-2	1.5	1.9	0.4	918288	12.8	New Discovery Cooper 11
Ganley-1-2	1.8	2.9	1.1	918257	6.29	Ganley
Trench-2-1	1.5	2.55	1.05	918378	7.56	Grace
Trench-5A-4	2.1	3.1	1	918393	3.75	Grace
Trench-5A-5	0	0.9	0.9	918394	2.01	Grace
Trench-5B-1	0	0.6	0.6	918402	16.49	Grace
Trench-5B-1	0.6	1.65	1.05	918403	0.857	Grace
JSZ_South3B-5	1	1.85	0.85	500369	2.56	Jubilee Shear Zone
JSZ_South3B-6	0	1	1	500374	0.594	Jubilee Shear Zone
JSZ_South3B-6	2	3	1	500376	1.48	Jubilee Shear Zone

*Refer to Table 9-5 for a summary of Red Pine's 2017-2019 claim ID's and associated trench channels.

Minto Mine South (Minto A and Minto Lower), Parkhill, Sunrise, and Central Jubilee Shear Zones

The Minto Mine South Zone is comprised of several gold bearing structures south of the historic Minto mine including Minto A and Minto Lower Zones.

In 2018 in the Minto A and Minto Lower area 8 trenches were excavated, 6 of them washed, 4 of them mapped with no channel samples selected. No trench photos or georeferenced points were taken. However, photos and georeferenced points location will be completed in May-June of 2020.

In the Parkhill area one trench was excavated and washed in 2018 but not mapped.

In the Sunrise area one trench was excavated in 2018-2019, but not washed or mapped.

In the Central Jubilee Shear area one trench was washed with no need for excavation, then mapped, but no channel sampling was completed. Georeferenced points were located by a TopCon RTK GPS. Again, no trench photos were taken. The trench photos can be completed in May-June of 2020.

The 2018 stripping, mapping, and channel sampling program was not completed due to an expanded drilling program through 2017 and beginning 2018 which created a significant logging backlog, and geologists were mainly focusing on the drill core logging and the on-going drill program.

Red Pine is planning to map all previously excavated trenches in 2020 summer.

Figure 9-12 illustrates all 11 trenches of this area.

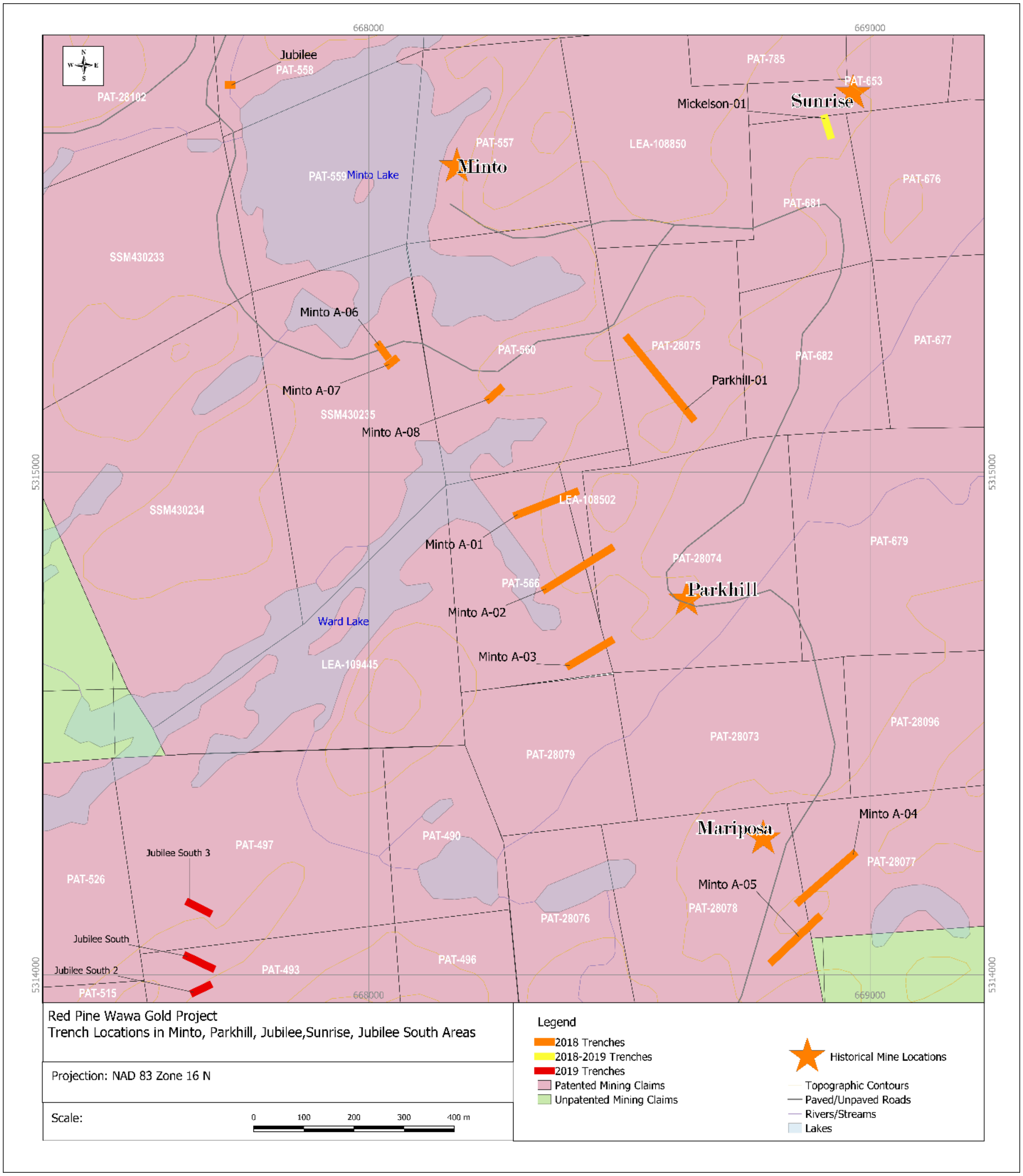


Figure 9-12: Trench Locations in Minto, Parkhill, Jubilee, Sunrise, and Jubilee South Areas

Cooper-Ganley and Gulch Zones

The Cooper Shear Zone is part of the Cooper Deformation Corridor, located 1 kilometer east of the Surluga Deposit and 2.8 kilometers northeast of the Minto Mine South Deposit. The Cooper Shear System comprises two known gold-bearing structures, the Cooper Shear Zone and the Ganley Shear Zone. The gold-bearing structures of the Cooper Shear Zone system are structurally and mineralogically similar to the structures of the Minto Shear System.

In 2018 two trenches were excavated in the Cooper-Ganley area, one of them was washed, mapped, had 20 channels samples cut, and analyzed (refer to the Table 9-6). By the assay results 4 channel samples contained gold ranging from 3.19 to 27 g/t (refer to the Table 9-8 with Au>5.0g/t).

Highlights of channel sampling assay results of the 2018 Cooper-Ganley (CG) (Table 9-8 with Au>5.0 g/t):

- Channel sample CG-3 contains 27.0 g/t gold over 0.31 metres;
- Channel sample CG-2 contains 9.6 g/t gold over 0.42 metres, and
- Channel sample CG-5 contains 3.5 g/t gold over 1.45 metres.

Another Cooper-Ganley trench was only excavated in 2018. In 2019 this trench and 12 other new excavated trenches were fully completed with washing, mapping, sampling, logging, photographing, and georeferenced coordinates. In total 141 channel samples were analyzed for gold content and multiple chemical elements. For QA//QC purpose 17 standards and blanks were inserted.

Channel sampling highlights of the 2019 Cooper-Ganley trenches (Tables 9-8):

- The mineralized strike length of the Cooper Shear Zone extends for at least 700 metres;
- High-grade gold occurs within the Cooper Shear Zone over a strike length of 560 metres:
  - Channel sample CG-1-2 contains 33.6 g/t gold over 1.4 metres;
  - Channel sample CG-1-1 contains 26.9 g/t gold over 0.5 metres, and
  - Channel sample Cooper 3-1 contains 9.6 g/t gold over 5.4 metres including 34.1 g/t gold over 1.05 metres;
  - Channel sample Cooper-5b-2 contains 14.1 g/t gold over 1.4 metres.

- Red Pine discovered an additional two (2) shear zones parallel to the Cooper Shear Zone that contain high-grade gold mineralization
    - Channel sample Cooper-11-2 in Cooper 11 Shear Zone contains 12.8 g/t gold over 0.4 metres; and
    - Channel sample Ganley-1-2 in Ganley Shear Zone contains 6.3 g/t gold over 1.1 metres.

Figure 9-13 illustrates trench locations in Cooper-Ganley and Gulch area, when Figure 9-14 demonstrates channel sample location with scaled gold value.

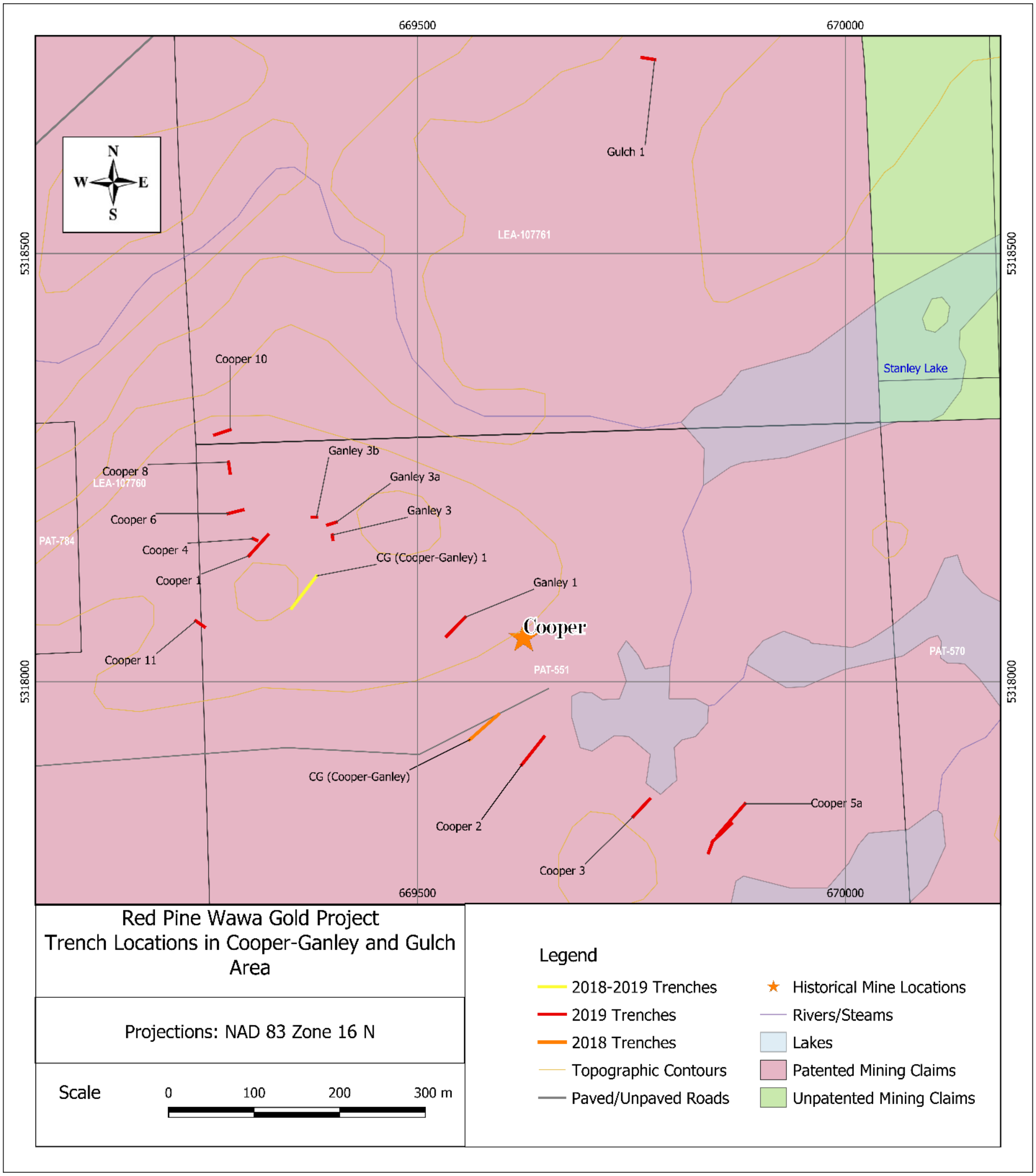


Figure 9-13: Trench locations in Cooper-Ganley and Gulch Area

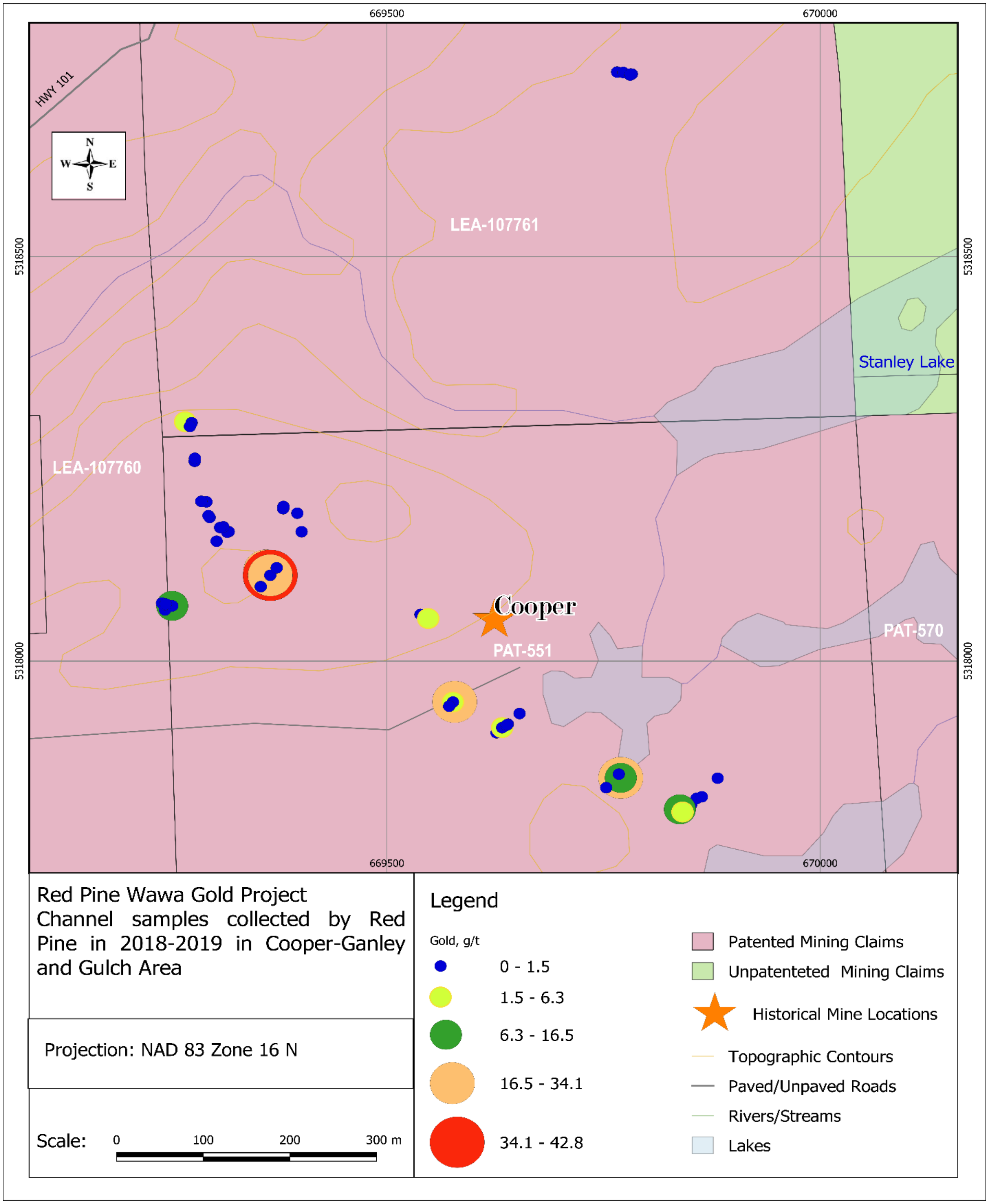


Figure 9-14: Channel samples collected by Red Pine in 2018-2019 in Cooper-Ganley and Gulch area

Red Pine's 2018-2019 trenching programs on the Cooper Structure was undertaken to compare both the structural and chemical attributes of the Cooper Structure to those of the Minto Mine South Structure. Results confirm the similarities between the structures:

- Mapping showed that the strike/dip direction of the foliations and the stretching lineations observed in the Cooper Structure are similar to those measured in the Minto Mine South Structure;
- Short-wave infrared data from the tourmalines in the quartz veins of the Cooper Structure are compositionally similar to the tourmalines in the Minto Mine South Structure;
- Elevated bismuth in the high-grade samples of the Cooper Structure correspond to the elevated bismuth in the higher-grade zones of the Minto Mine South Structure.

Red Pine discovered two additional structures that are similar to the Cooper Shear Zone, the Cooper 11 and the Ganley Shear zones. Both structures are mineralized and could possibly contain zones of high-grade mineralization similar to the ones discovered in the Cooper Shear Zone.

The similarities between the Cooper and the Minto Mine South Structures support Red Pine's hypothesis that more than one Minto-like structure exists on the Wawa Gold Property. This also suggests that the Cooper Structure has the potential to host a deposit similar to the Minto Mine South Deposit.

Grace-Darwin Zone

The Grace Shear Zone, located 3 kilometres south of the southernmost extension of the Surluga resource, is host to the historical Darwin-Grace Mine. The mine was last in production in 1938 and milled just over 41,302 tonnes gold at an average grade of 17.63 g/t.

In 2018 one trench was excavated and washed. In 2019 this trench and 4 other new excavated trenches were completed with washing, mapping, sampling, logging, photographing, and georeferenced coordinates. Two more 2019 trenches were completed to 75% - had been excavated, washed, mapped, but marked channel samples were not cut. These two trenches were postponed to be finished in May-June of 2020. In total 58 channel samples were analyzed for gold content and multiple chemical elements. For QA//QC purpose 3 standards and blanks were inserted.

Channel sampling highlights (refer to the Table 9-8 with Au>5.0 g/t):

- The Grace Shear Zone known strike length has been extended by more than 100 metres to the northwest. The known strike length of the structure is now at least 500 metres
- High-grade gold persists in the northern extension of the Grace Shear Zone at surface:
  - Trench 5A-4/5 contains 2.88 g/t gold over 1.9 metres;
  - Trench 5B-1 contains 16.49 g/t gold over 0.6 metres;
  - Trench 2-1 contains 7.56 g/t gold over 1.05 metres.

Red Pine's 2019 trenching in the Grace Shear Zone confirms that the structure extends to the north and suggests that the structure remains open both to the south and to the north of its currently known footprint. The geological data collected during the trenching program also improved our geological understanding of the structure and will contribute to the optimization of the drill targeting in the Grace Shear Zone. Figure 9-15 illustrates the trench locations in Grace-Darwin and Jubilee South areas, while Figure 9-16 demonstrates channel sample location with scaled gold value.

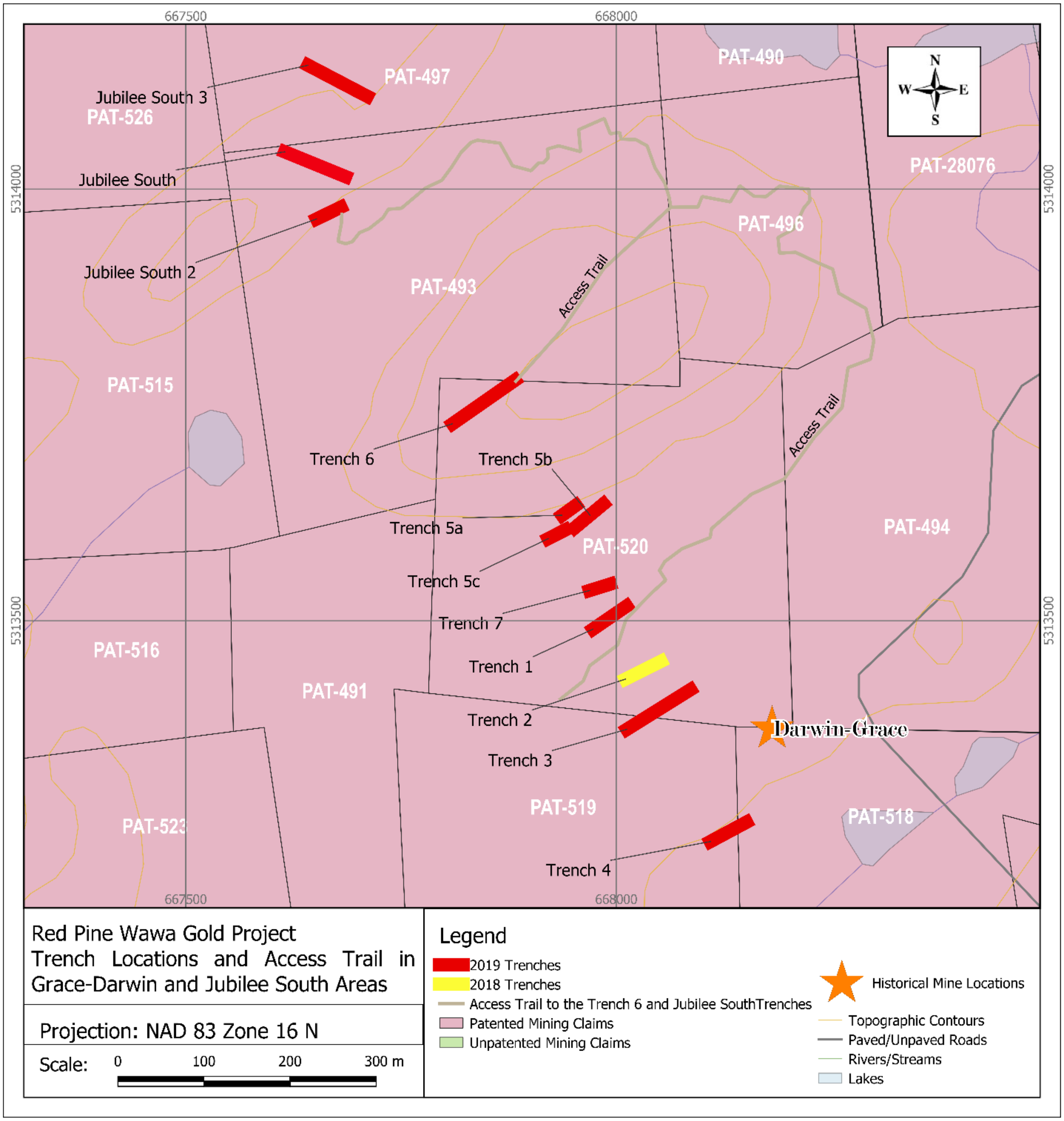


Figure 9-15: Trench location in Jubilee South and Grace-Darwin areas

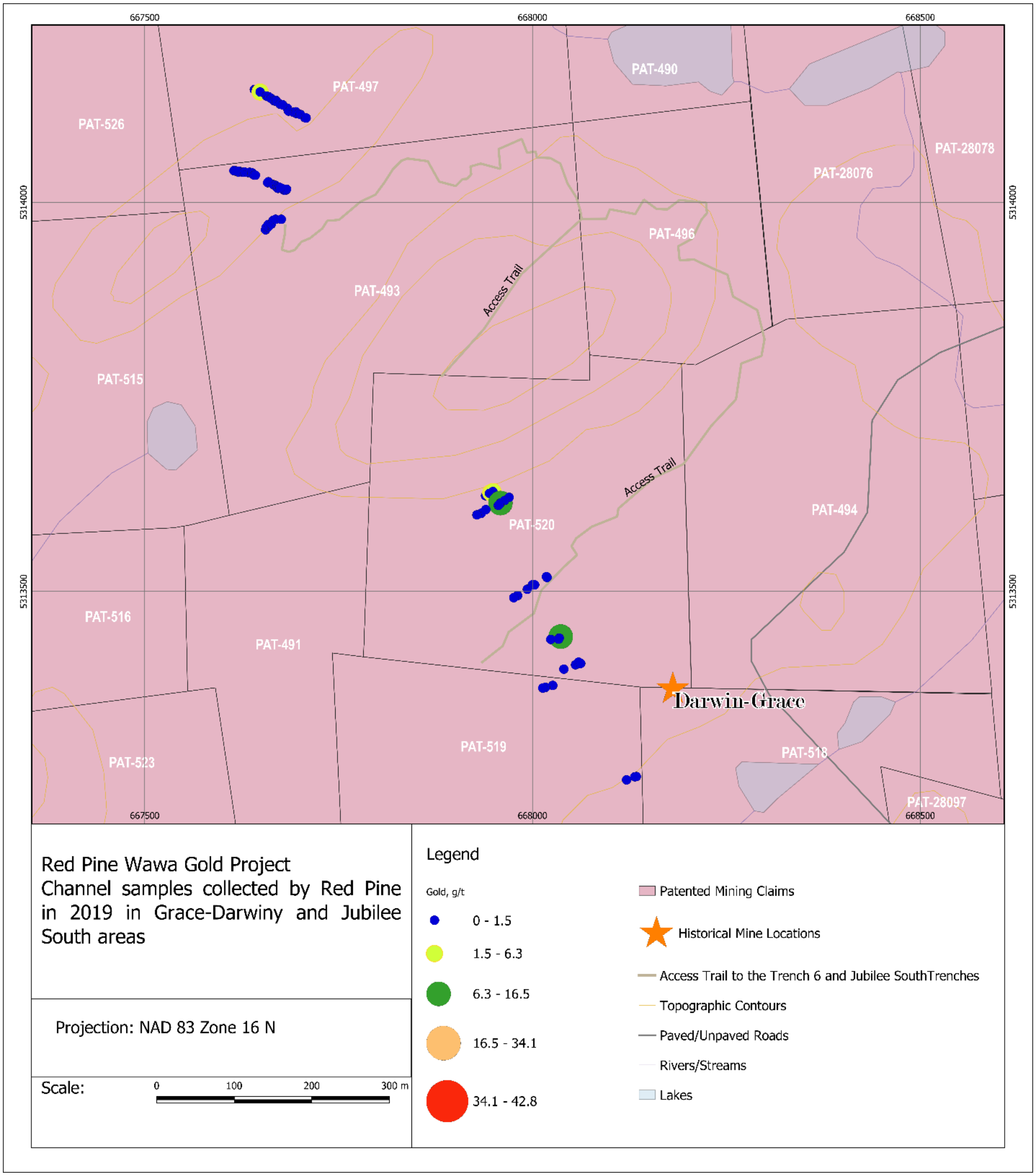


Figure 9-16: Channel samples collected by Red Pine in 2019 in Grace-Darwin and Jubilee South areas

Jubilee South Area

In 2019 3 trenches were fully completed in Jubilee South area with the purpose to test the Jubilee Shear Zone extension south of the Parkhill Fault and identify the intersection of the Jubilee Shear Zone and Grace Shear Zone. In total 172 channel samples were analyzed for gold content and multiple chemical elements. For QA//QC purposes 19 standards and blanks were inserted.

Channel sampling highlights of the 2019 Jubilee South trenches (Tables 9-8 with Au>5.0 g/t):

- Jubilee South 3B-5 contains 2.56 g/t gold over 0.85 metres;
- Jubilee South 3B-6 contains 1.48 g/t gold over 1 m.

Figure 9-15 above depicts the trench locations in Jubilee South and Grace-Darwin areas and Figure 9-16 illustrates the channel sample locations with scaled gold values.

Red Pine's overburden stripping and channel sampling in 2019 confirmed that the Jubilee Shear Zone extends south of the Parkhill Fault, traced the structure over a strike length of approximately 1.5 kilometres and identified the area where the Grace Shear Zone intersects the Jubilee Shear Zone. The intersection of the Grace and Jubilee shear zones defines a significant exploration target. The Grace Shear Zone is interpreted to predate the formation of the Jubilee Shear Zone and Red Pine's 2017 drilling in the Grace Shear Zone proved that the structure hosts very high-grade gold mineralization (up to 57.31 g/t gold over 3.14 metres). Red Pine's updated geological model for the Wawa Gold Property hypothesized that the zones of intersection between structures in the Grace and Jubilee orientations are an important control on the location of zones of higher-grade mineralization in the Jubilee Shear Zone. This makes the intersection between the Grace Shear Zone and the southern extension of the Jubilee Shear Zone a promising exploration target to test if the under-explored segment of the Jubilee Shear Zone south of the Parkhill Fault hosts significant mineralization.

9.4 2018 HISTORIC CORE SAMPLING PROGRAM

Previously drilled core that had been stored on site was visually inspected and logged based on the field geologist's descriptions between February 25th to October 25th 2018. The main employees who carried out the program were two summer students and one full-time field geologist. The information was input into a Microsoft Excel™ spreadsheet for our records. The incorporation of a variety of analytical methods was utilized to best describe the lithological units. These included testing for magnetism with a magnet, reactivity with 10% hydrochloric acid (HCL), scratch testing with a tungsten carbide scribe to estimate hardness, portable X-ray fluorescence (XRF) readings, colour, texture, structure, grain size, pervasive alteration and contact definitions. These components were then used to create a lithological description of the core from intervals of the drill hole that could be recovered. This log was further subdivided by lithologies with description of alteration and mineralization.

Alteration and rock type identification were supported by spot measurements using a portable XRF if uncertainty existed. The portable XRF units used by the company are programmed with predefined element ratios that characterize favorability for gold (white mica intensity ratio derived from internal work) and the nature of the host rocks (Zr/TiO2).

The purpose of this program was to gather further, more detailed information, primarily within the Jubilee Shear Zone where the majority of these holes had been drilled. Data for these historic holes was frequently missing therefore re-logging and sampling was necessary. It was also useful to confirm the validity of historic assay data.

Red Pine took 9,228 assays from 17,784 metres of core by processing approximately 30,174 metres of drill core distributed in 388 drill holes during the 2018 sampling program (Table 9-9). Program details are listed in Table 9.10. Historical hole details are located in Appendix XX and locations are in Figure 9.17. Table 9.11 highlights assay results of historic drill hole sampling with intersections greater than 5.0 g/t Au, true width has not been calculated and intercept is reported as drilled length. In total, 117 surface (holes starting with "S") and 271 underground drill holes (holes starting with "U") were processed. Included with the assaying, 698 certified reference material ("CRM") were processed to ensure quality control.

Table 9-9: Attributes of the 2018 Historical Core Sampling Program

Program Details	**Value**
Number of holes sampled 2018	388
Number of surface holes sampled	117
Number of underground holes sampled	271
Total meterage covered (m)	30,174
Total meterage sampled (m)	17,784
Total number of assays taken	9,228
Total number of CRM samples	698

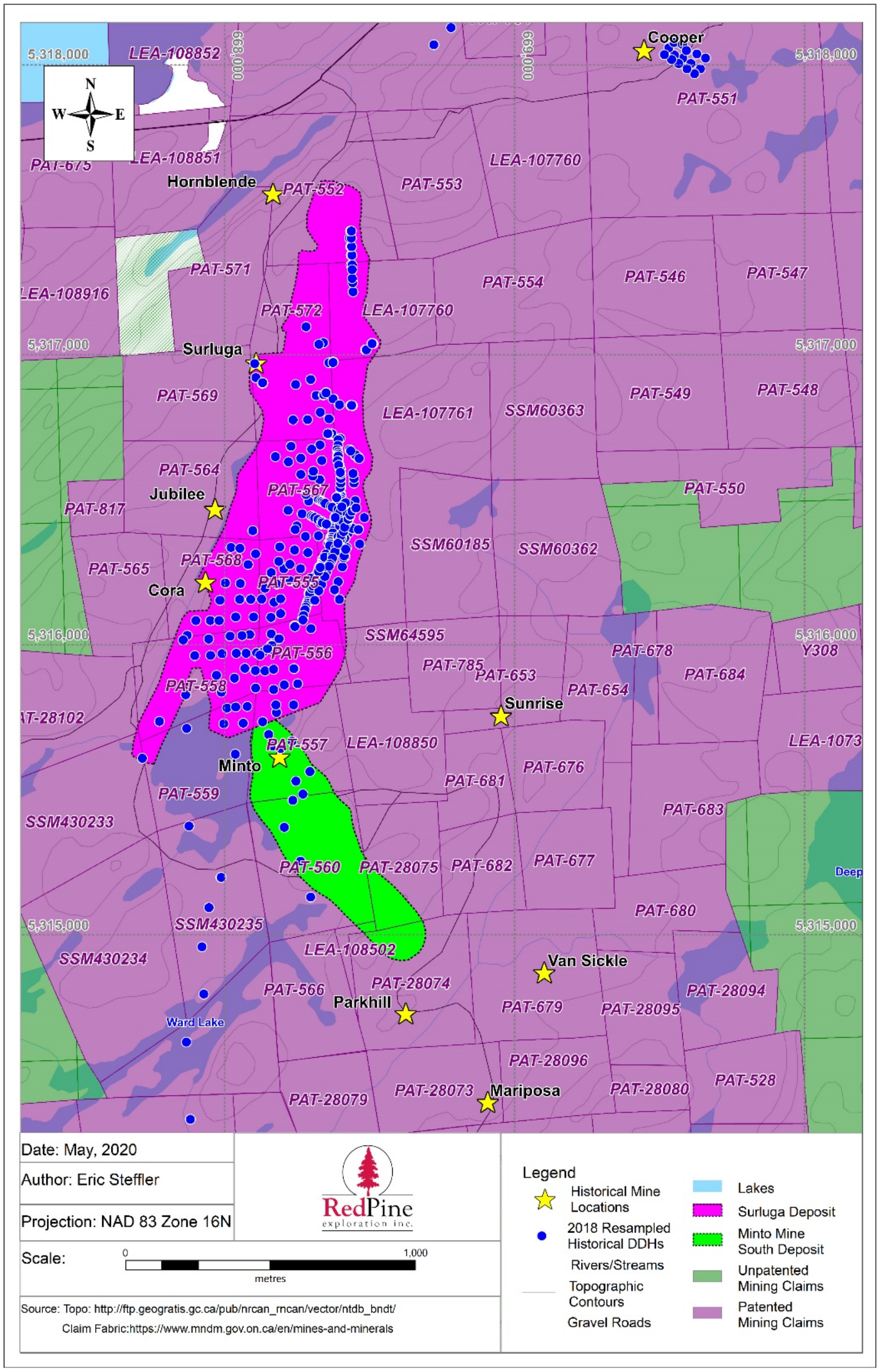


Figure 9-17: Red Pine Wawa Gold Project 2018 Historical Diamond Drill Core Re-Sampling Program collar locations

Table 9-10 provides highlights in the sampling program with the highest grade occurring in hole U1027L2 with 91.89 gpt Au over 0.61m. Most of the highest-grade samples were in underground holes from the historic Jubilee Mine in the Jubilee Shear Zone. Historical drill hole collar and core logging information is in the Appendices XIX-XX. Core photos are located in Appendix XXI. All assay results for historical core sampling program and certificates can be found in Appendix XXII.

Table 9-10: Highlights of assays results of historical holes sampled by Red Pine during the 2018 Sampling Program (> 5.0 g/t Au) (true width not calculated and intercept is reported as drilled length)

Hole ID	From (m)	To (m)	Length (m)	Sample	Au (gpt)
S174W2	174.65	175.56	0.91	705211	9.36
S176	294.13	295.66	1.53	919797	5.19
S212	67.67	69.86	2.19	712451	7.95
S280	182.58	183.18	0.6	706388	14.5
S287	132.59	134.84	2.25	712713	22.8
S311	267.31	270.36	3.05	708204	5.52
U0011AL6	22.56	23.17	0.61	705861	6.47
U0454L5	11.58	12.19	0.61	705799	5.24
U0552L3	30.78	31.85	1.07	706547	5.09
U0728L5	23.77	26.52	2.75	706871	8.78
S309	74.07	74.86	0.79	14972	6.19
U0589L3	17.53	19.81	2.28	14526	8.72
U0182L3	6.46	7.8	1.34	18134	8.57
U0784L6	7.32	7.77	0.45	30678	7.89
U0784L6	8.23	8.84	0.61	30679	31.54
U0784L6	8.84	9.54	0.7	30680	11.31
U0784L6	9.54	10.06	0.52	30681	25.71
U0784L6	10.06	10.67	0.61	30682	7.2
U0784L6	10.67	11.28	0.61	30683	9.94
U0784L6	11.28	11.89	0.61	30684	10.63
U0784L6	11.89	12.5	0.61	30685	11.66
U0784L6	12.5	12.95	0.45	30686	10.63
U0784L6	16.46	17.37	0.91	30691	6.17
U0784L6	19.51	20.27	0.76	30695	7.54
U0784L6	23.38	24.08	0.7	30697	5.49

Hole ID	From (m)	To (m)	Length (m)	Sample	Au (gpt)
U0793L6	0	0.61	0.61	30486	5.83
U0793L6	0.61	1.22	0.61	30487	33.6
U0793L6	1.22	1.83	0.61	30488	8.57
U0793L6	4.11	4.72	0.61	30491	5.83
U0798L6	6.71	7.62	0.91	31123	6.51
U0798L6	11.28	11.89	0.61	31257	9.26
U0798L6	13.11	14.02	0.91	31259	5.14
U0812L6	2.74	3.66	0.92	31032	5.14
U0812L6	4.88	5.79	0.91	31035	6.86
U0812L6	5.79	6.4	0.61	31036	22.63
U0812L6	6.4	7.01	0.61	31037	12.34
U0812L6	10.97	11.58	0.61	31105	5.83
U0812L6	16.15	16.76	0.61	31111	8.91
U0846L6	6.86	7.62	0.76	31369	13.71
U0846L6	11.73	12.19	0.46	31376	30.17
U0846L6	12.95	13.72	0.77	31378	11.31
U0847L6	7.62	8.2	0.58	31408	5.14
U0847L6	12.44	13.23	0.79	31414	6.17
U0847L6	13.23	14.14	0.91	31415	6.17
U0847L6	21.34	22.1	0.76	31424	37.03
U0847L6	22.1	22.86	0.76	31425	13.71
U0848L6	0	0.76	0.76	31426	7.89
U0851L6	1.52	2.13	0.61	31489	12.69
U0852L6	0	0.76	0.76	31493	10.63
U0852L6	6.1	6.86	0.76	31501	9.26
U0852L6	6.86	7.62	0.76	31502	5.83
U0852L6	12.8	13.41	0.61	31510	12.34
U0852L6	13.41	14.02	0.61	31511	20.91
U0852L6	21.34	22.1	0.76	31522	7.71
U0870L6	4.57	5.49	0.92	32376	6
U0871L6	26.97	27.65	0.68	32457	12.34
U0883L6	0.34	1.22	0.88	33563	31.2
U0883L6	1.22	2.16	0.94	33564	5.49

Hole ID	From (m)	To (m)	Length (m)	Sample	Au (gpt)
U0883L6	2.93	3.57	0.64	33566	8.91
U0883L6	4.88	5.82	0.94	33569	7.54
U0883L6	7.25	7.62	0.37	33572	9.6
U0893L6	11.77	12.56	0.79	36709	19.2
U0893L6	12.56	13.41	0.85	36710	28.46
U0893L6	13.41	14.23	0.82	36711	10.11
U0898L6	3.72	4.63	0.91	35081	6
U0898L6	6.1	6.86	0.76	35084	5.49
U0898L6	6.86	7.71	0.85	35085	6.69
U0898L6	7.71	8.47	0.76	35086	14.06
U0907L6	27.89	28.35	0.46	35967	6
U0916L6	0.67	1.31	0.64	33615	11.66
U0916L6	5.03	5.79	0.76	33621	5.49
U0979L6	8.02	8.84	0.82	35572	8.91
U0979L6	9.45	10.06	0.61	35574	9.26
U0984L6	9.75	10.67	0.92	36333	15.09
U0984L6	10.67	11.34	0.67	36334	7.89
U0984L6	11.34	12.19	0.85	36335	6.34
U0984L6	12.19	13.11	0.92	36336	15.09
U0986L6	7.32	8.23	0.91	36465	5.49
U0986L6	9.45	10.52	1.07	36468	7.54
U0986L6	10.52	11.58	1.06	36469	5.66
U0986L6	11.58	12.19	0.61	36470	21.94
U0986L6	14.33	15.24	0.91	36473	12.69
U0986L6	18.44	19.2	0.76	36477	10.29
U0986L6	19.2	19.81	0.61	36478	11.66
U0986L6	19.81	20.42	0.61	36479	8.57
U0991L6	0.34	1.01	0.67	36542	24.51
U0992L6	2.13	3.05	0.92	36342	12
U0992L6	7.62	8.14	0.52	36349	28.11
U0992L6	19.2	19.81	0.61	36396	7.2
U0995L6	5.91	6.71	0.8	36503	5.66
U0995L6	6.71	7.16	0.45	36504	24

Hole ID	From (m)	To (m)	Length (m)	Sample	Au (gpt)
U0995L6	7.16	7.92	0.76	36505	33.26
U0995L6	7.92	8.47	0.55	36506	26.06
U0995L6	8.47	9.51	1.04	36507	19.54
U0995L6	16.76	17.56	0.8	36522	8.57
U0995L6	17.56	18.29	0.73	36523	21.94
U0995L6	18.29	18.9	0.61	36524	17.49
U0995L6	18.9	19.6	0.7	36525	13.54
U0996L6	13.26	13.69	0.43	36599	8.91
U0997L6	5.43	6.4	0.97	36620	5.66
U1027L2	25.3	25.91	0.61	5229	7.54
U1027L2	25.91	26.52	0.61	5230	91.89
U1113L3	32	32.92	0.92	6674	13.17
U1117L3	22.46	23.99	1.53	6214	10.63
U1117L3	23.99	25.54	1.55	6215	10.97
U1258L5	0	1.52	1.52	8129	13.23
U1404L7	16.76	18.29	1.53	7454	39.22
U1443L7	7.01	7.92	0.91	6331	6.24
U1651L5	33.83	34.75	0.92	4045	20.5
U1651L5	49.38	50.6	1.22	4050	8.23
U1654L5	57	58.52	1.52	4151	6.72
U1654L5	65.07	66.6	1.53	4157	9.53
U1654L5	66.6	68.12	1.52	4158	8.71
U1654L5	69.65	70.87	1.22	4160	6.1
U1654L5	70.87	72.09	1.22	4161	15.77
U1654L5	72.85	73.76	0.91	4163	15.5
U1657L5	28.65	29.57	0.92	4063	8.3
U1657L5	33.53	34.44	0.91	4067	5.28
U1657L5	46.63	47.55	0.92	4077	8.02
U1657L5	47.55	48.77	1.22	4078	75.09
U1657L5	50.9	51.82	0.92	4081	6.65
U1657L5	56.69	58.22	1.53	4085	7.27
U1658L5	19.35	20.88	1.53	4102	7.2
U1658L5	23.47	24.38	0.91	4105	6.93

Hole ID	From (m)	To (m)	Length (m)	Sample	Au (gpt)
U1659L5	7.62	8.69	1.07	4385	7.95
U1659L5	45.72	47.24	1.52	4402	7.13
U1660L5	12.04	12.95	0.91	4408	5.76
U1660L5	20.88	22.25	1.37	4561	5.01
U1671L5	0	1.98	1.98	4181	5.21
U1676L5	3.66	4.57	0.91	4538	14.67
U1676L5	16.46	17.98	1.52	4545	7.89
U1677L5	10.36	11.28	0.92	4510	5.62
U1677L5	16.76	17.98	1.22	4515	9.53
U1677L5	19.05	19.96	0.91	4517	7.27
U1677L5	19.96	20.88	0.92	4518	5.28
U1677L5	22.71	23.62	0.91	4520	12.41
U1677L5	27.43	28.96	1.53	4524	11.25
U1677L5	28.96	30.48	1.52	4525	9.94
U1677L5	30.48	32	1.52	4526	15.84
U1677L5	32	33.53	1.53	4527	6.58

This program was successful in that it showed some significant gold grades in historically un-sampled core and was useful for calculating the Surluga Deposit resource model in 2019. The program provided better knowledge of the area around the Jubilee Mine workings and validated some of the lithological and assay modeling.

10 Drilling

The 2017-2019 diamond drilling programs were initiated to further develop the gold inventory on the Wawa Gold Project. Each program was approached strategically based on the newest information available. These strategic approaches included: drilling along strike and down dip of the high-grade ore shoots and testing for parallel high-grade ore shoots as well as targeting areas of high probability based on the results of the previous exploration, drilling, historic drilling sampling programs. Along with drilling near the current resources, drill programs were designed to test hanging wall, foot wall, and high-grade discovery targets to better understand the geometry of these mineralized zones.

Forage Rouillier of Amos, Quebec was contracted to complete each drill program, drilling a total of 34,496.48 m of 130 HQ (63.5 mm core diameter) diamond drill holes. Table 10-1 summaries details of the drill programs per year and table 10-2 illustrates in detail the drill holes with associated Red Pine's claims.

Table 10-1: Summary of the 2017-2019 Wawa Gold Project Diamond Drill Holes

Year	Number of Holes	Metres Drilled	Company	Drilling Company
2017	20	5, 334.3	Red Pine Exploration	Forage Rouillier
2018	90	24, 813.18	Red Pine Exploration	Forage Rouillier
2019	20	4,349	Red Pine Exploration	Forage Rouillier
Total	**130**	**34, 496.48**		

Access to the site and within the property is readily available and easily facilitated as the extensive historic work on the property has left a substantial network of roads and trails throughout the property which are accessible via trucks and ATVs. The drills were moved around site on skids behind a bulldozer.

Table 10-2: Summary of Red Pine's 2017-2019 Claims and Associated Drill Holes

DH Hole	Year Drill	Tenure ID	Percent Per Claim	Metres Per Claim
SD-17-157	2017	PAT-572	29.74	110.04
SD-17-157	2017	LEA-107761	25.39	93.94

DH Hole	Year Drill	Tenure ID	Percent Per Claim	Metres Per Claim
SD-17-157	2017	PAT-567	44.87	166.02
SD-17-158	2017	PAT-560	100.00	190.00
SD-17-159	2017	PAT-560	100.00	223.00
SD-17-160	2017	LEA-107761	25.28	97.84
SD-17-160	2017	PAT-572	74.72	289.16
SD-17-161	2017	PAT-560	100.00	256.00
SD-17-162	2017	PAT-560	100.00	225.30
SD-17-163	2017	PAT-567	69.88	172.60
SD-17-163	2017	PAT-572	30.12	74.40
SD-17-164	2017	PAT-560	100.00	241.00
SD-17-165	2017	PAT-572	100.00	199.00
SD-17-166	2017	PAT-560	100.00	229.00
SD-17-167	2017	PAT-572	70.49	355.95
SD-17-167	2017	PAT-569	29.51	149.05
SD-17-168	2017	PAT-560	100.00	130.00
SD-17-169	2017	PAT-560	100.00	205.00
SD-17-170	2017	PAT-567	77.38	209.71
SD-17-170	2017	PAT-564	22.62	61.29
SD-17-171	2017	PAT-560	100.00	229
SD-17-172	2017	PAT-567	47.84	102.37
SD-17-172	2017	PAT-564	52.16	111.63
SD-17-173	2017	PAT-564	100.00	472
SD-17-174	2017	PAT-560	100.00	250
SD-17-175	2017	PAT-560	100.00	268
SD-17-176	2017	PAT-564	43.60	97.22
SD-17-176	2017	PAT-568	56.40	125.78
SD-18-177	2018	PAT-560	100.00	220
SD-18-178	2018	PAT-564	100.00	478
SD-18-179	2018	PAT-560	100.00	235
SD-18-181	2018	PAT-560	100.00	31
SD-18-181A	2018	PAT-560	100.00	220
SD-18-183	2018	PAT-560	100.00	271
SD-18-184	2018	PAT-560	100.00	313
SD-18-186	2018	PAT-569	100.00	114
SD-18-187	2018	PAT-560	100.00	246
SD-18-188	2018	PAT-560	100.00	250
SD-18-189	2018	PAT-560	83.93	214.85
SD-18-189	2018	PAT-557	16.07	41.15

DH Hole	Year Drill	Tenure ID	Percent Per Claim	Metres Per Claim
SD-18-191	2018	PAT-560	100.00	250
SD-18-192	2018	PAT-560	59.56	175.70
SD-18-192	2018	PAT-557	40.44	119.30
SD-18-193	2018	PAT-560	13.16	36.45
SD-18-193	2018	PAT-28075	86.84	240.55
SD-18-194	2018	PAT-28075	100.00	289
SD-18-195	2018	PAT-560	100.00	157
SD-18-196	2018	PAT-560	100.00	115
SD-18-197	2018	PAT-28075	100.00	355
SD-18-198	2018	PAT-560	23.70	37.21
SD-18-198	2018	PAT-557	76.30	119.79
SD-18-199	2018	PAT-560	38.13	58.72
SD-18-199	2018	PAT-557	61.87	95.28
SD-18-200	2018	PAT-557	85.26	192.69
SD-18-200	2018	PAT-560	14.74	33.31
SD-18-201	2018	PAT-560	100.00	140
SD-18-202	2018	PAT-28075	80.96	216.97
SD-18-202	2018	PAT-560	19.04	51.03
SD-18-203	2018	PAT-28075	43.90	129.49
SD-18-203	2018	PAT-560	56.10	165.51
SD-18-204	2018	PAT-28075	63.84	163.43
SD-18-204	2018	PAT-560	36.16	92.57
SD-18-205	2018	PAT-28075	100.00	328
SD-18-206	2018	PAT-28075	100.00	340
SD-18-207	2018	PAT-28075	93.87	285.36
SD-18-207	2018	PAT-560	6.13	18.64
SD-18-208	2018	LEA-108502	67.00	149.41
SD-18-208	2018	PAT-566	33.00	73.59
SD-18-209	2018	LEA-108502	24.95	51.14
SD-18-209	2018	PAT-566	75.05	153.86
SD-18-210	2018	LEA-108502	64.00	125.44
SD-18-210	2018	PAT-566	36.00	70.56
SD-18-211	2018	PAT-28074	100.00	223
SD-18-212	2018	PAT-28074	100.00	313
SD-18-213	2018	PAT-28074	100.00	289
SD-18-214	2018	PAT-28074	100.00	289
SD-18-215	2018	PAT-28074	100.00	286
SD-18-216	2018	PAT-28075	100.00	331

DH Hole	Year Drill	Tenure ID	Percent Per Claim	Metres Per Claim
SD-18-217	2018	PAT-28075	100.00	331
SD-18-218	2018	PAT-28075	86.91	305.93
SD-18-218	2018	PAT-560	13.09	46.07
SD-18-219	2018	PAT-28075	100.00	277
SD-18-220	2018	PAT-28075	100.00	274
SD-18-221	2018	PAT-28075	73.11	191.55
SD-18-221	2018	PAT-560	26.89	70.45
SD-18-222	2018	PAT-28074	12.26	39.83
SD-18-222	2018	PAT-28075	87.74	285.17
SD-18-223	2018	PAT-28075	36.35	126.86
SD-18-223	2018	LEA-108502	63.65	222.14
SD-18-224	2018	PAT-28075	59.40	153.86
SD-18-224	2018	PAT-28074	40.60	105.14
SD-18-225	2018	PAT-28075	42.14	142.02
SD-18-225	2018	PAT-28074	57.86	194.98
SD-18-226	2018	PAT-28074	100.00	319
SD-18-227	2018	PAT-28074	100.00	277
SD-18-228	2018	LEA-107761	53.70	176.13
SD-18-228	2018	PAT-567	46.30	151.87
SD-18-229	2018	LEA-107761	90.90	284.52
SD-18-229	2018	PAT-567	9.10	28.48
SD-18-230	2018	LEA-107761	100.00	316
SD-18-231	2018	LEA-107761	72.36	254.70
SD-18-231	2018	PAT-567	27.64	97.30
SD-18-232	2018	LEA-107761	100.00	364
SD-18-233	2018	LEA-107761	100.00	343
SD-18-234	2018	LEA-107761	100.00	319
SD-18-235	2018	LEA-107761	100.00	346
SD-18-236	2018	LEA-107761	86.62	325.70
SD-18-236	2018	PAT-555	13.38	50.30
SD-18-237	2018	LEA-107761	100.00	343
SD-18-238	2018	LEA-107761	12.61	39.45
SD-18-238	2018	PAT-572	87.39	273.55
SD-18-239	2018	PAT-572	49.09	141.87
SD-18-239	2018	LEA-107760	50.91	147.13
SD-18-240	2018	PAT-555	86.52	200.74
SD-18-240	2018	PAT-568	13.48	31.26
SD-18-241	2018	PAT-555	100.00	214

DH Hole	Year Drill	Tenure ID	Percent Per Claim	Metres Per Claim
SD-18-242	2018	PAT-555	93.20	210.62
SD-18-242	2018	PAT-567	6.80	15.38
SD-18-243A	2018	PAT-555	100.00	265
SD-18-244	2018	PAT-555	68.56	150.83
SD-18-244	2018	PAT-568	31.44	69.17
SD-18-245	2018	PAT-568	100.00	136
SD-18-246	2018	PAT-568	100.00	154
SD-18-247	2018	PAT-557	91.03	295.83
SD-18-247	2018	PAT-556	8.97	29.17
SD-18-248	2018	PAT-568	100.00	160
SD-18-249	2018	PAT-568	88.50	221.26
SD-18-249	2018	PAT-558	11.50	28.74
SD-18-250	2018	PAT-557	100.00	409
SD-18-251	2018	PAT-558	11.97	27.78
SD-18-251	2018	PAT-568	88.03	204.22
SD-18-252	2018	PAT-558	31.00	73.77
SD-18-252	2018	PAT-568	69.00	164.23
SD-18-253	2018	PAT-557	16.30	73.18
SD-18-253	2018	PAT-556	83.70	375.82
SD-18-254	2018	PAT-558	31.03	65.48
SD-18-254	2018	PAT-568	68.97	145.52
SD-18-255	2018	PAT-558	100.00	214
SD-18-256	2018	PAT-555	14.83	54.43
SD-18-256	2018	PAT-556	85.17	312.57
SD-18-257	2018	PAT-558	100.00	181
SD-18-258	2018	PAT-556	100.00	307
SD-18-259	2018	PAT-556	100.00	364
SD-18-260	2018	PAT-557	100.00	460
SD-18-261	2018	PAT-556	92.36	366.68
SD-18-261	2018	PAT-555	7.64	30.32
SD-18-262	2018	PAT-556	82.17	331.14
SD-18-262	2018	LEA-107761	17.83	71.86
SD-18-263	2018	PAT-556	0.00	397
SD-18-264	2018	PAT-569	41.33	195.10
SD-18-264	2018	PAT-572	58.67	276.90
SD-19-276	2019	PAT-564	100.00	376
SD-19-277	2019	PAT-564	60.33	243.11
SD-19-277	2019	PAT-569	39.67	159.89

DH Hole	Year Drill	Tenure ID	Percent Per Claim	Metres Per Claim
SD-19-278	2019	PAT-568	100.00	199
SD-19-279	2019	PAT-568	100.00	172
SD-19-280	2019	PAT-568	100.00	190
SD-19-281	2019	LEA-107761	100.00	415
SD-19-282	2019	LEA-107761	100.00	454
SD-19-283	2019	SSM60185 (LEA-107761)	13.57	68.15
SD-19-283	2019	LEA-107761	86.43	433.85
SD-19-284	2019	SSM60185 (LEA-107761)	44.78	257.05
SD-19-284	2019	PAT-785	31.35	179.95
SD-19-284	2019	LEA-107761	23.87	137.00
CG-19-265	2019	PAT-551	100.00	79
CG-19-266	2019	PAT-551	100.00	79
CG-19-267	2019	PAT-551	100.00	88
CG-19-268	2019	PAT-551	100.00	121
CG-19-269	2019	PAT-551	100.00	82
CG-19-270	2019	PAT-551	100.00	76
CG-19-271	2019	PAT-551	100.00	166
CG-19-272	2019	PAT-551	100.00	76
CG-19-273	2019	PAT-551	100.00	82
CG-19-274	2019	PAT-551	100.00	136
CG-19-275	2019	PAT-551	100.00	79
PH-18-190	2018	PAT-28073	39.00	196.95
PH-18-190	2018	PAT-28078	61.00	308.05
RV-18-180	2018	LEA-10776	100.00	138
RV-18-182	2018	LEA-10776	100.00	259.18
RV-18-185	2018	LEA-10776	100.00	69

10.1 2017-2019 DIAMOND DRILL PROGRAMS DESIGN AND IMPLEMENTATION

To better evaluate the potential of the Wawa Gold Corridor and to optimize its on-going 2017 drill program, Red Pine tasked Golder Associates Ltd to provide guidance to identify the Exploration Targets. Three exploration targets were identified: hanging wall (Jubilee Shear Zone), footwall (Surluga Road, Hornblende, William), and high-grade discovery (Minto Mine South Zone). At the end of 2017, the company shifted its drilling focused to the above listed zones using two drill rigs. Drilling was implemented from October 29th, 2017 to December 15th, 2017 (76 days).

In 2018 Red Pine started a strategic optimization of the gold assets of the Wawa Gold Project. The discovery of the Minto Mine South Zone and the re-evaluation of the high-grade zones of the Surluga Deposit suggested that multiple high-grade gold deposits could be delineated on the property. To further quantify this potential, Red Pine defined three exploration targets for the 2018 drill program focused on the higher-grade assets of the property – hanging and foot walls of the Surluga Deposit, and the Minto Mine South Deposit with main objective to convert the exploration targets into mineral resources and expand the exploration program into the un-explored areas of the both deposits. The program began with two drill rigs; one to test the continuity of Surluga Deposit in the north of the property, the other to test the high grade Minto zones. After January 27, 2018, a single drill rig was utilized to complete the program. The 2018 drill program was carried out between January 7th, 2018 and January 15th, 2019 (with a break December 18th, 2018 - January 6th, 2019) totaling 355 days; however, core processing, logging, sampling was continued until May 13th, 2019 (118 days).

The 2019 drill program was designed based on the successful results of 2017-2018 exploration programs in addition to the; 2019 mechanized stripping program, and renewed 2019 Ni 43-101 with outlined indicated resources for Surluga and Minto Mine South deposits. The main objectives of the 2019 drill program included:

1) Testing the continuity of mineralization in the Hornblende Shear Zone located west of the Surluga Deposit, 2) testing the continuity of the Surluga Deposit, at depth, beyond the current footprint and, 3) testing the continuity of high-grade mineralization discovered at surface in the Cooper Shear Zone.

The 2019 drill program was completed from July 26th, 2019 to September 30th, 2019 (91 days) with an additional 14 days spent to finish core logging, processing, sampling.

Highlights of the drill programs are listed in Table 10-3.

Table 10-3: Drill Hole Highlights by Red Pine on the Wawa Gold Project During 2017 – 2019

Hole	From, m	To, m	Length, m	Au > 10.0 g/t
SD-17-163	56.8	57.8	1	12.8
SD-17-163	119.3	120.15	0.85	10.3
SD-17-170	96	97	1	11.4
SD-17-170	111.9	112.73	0.83	14.8

Hole	From, m	To, m	Length, m	Au > 10.0 g/t
SD-17-170	112.73	113.56	0.83	10.9
SD-17-171	200.38	201.39	1.01	15.48
SD-17-171	201.39	202.3	0.91	14.26
SD-17-172	72.6	73.6	1	10.7
SD-17-172	77.6	78.65	1.05	10.2
SD-17-172	90.57	91.59	1.02	40.2
SD-17-172	118.83	119.91	1.08	13.6
SD-17-172	148.53	149.5	0.97	21.1
SD-17-173	44.5	45.53	1.03	28.63
SD-17-173	48.36	49.25	0.89	12.94
SD-17-173	50.75	51.4	0.65	12.58
SD-17-173	55.4	56.4	1	12.01
SD-17-174	193.6	194.36	0.76	17.48
SD-17-174	194.36	195.27	0.91	21.34
SD-17-176	78.8	79.6	0.8	13.4
SD-18-178	224.92	226	1.08	13
SD-18-189	107	107.98	0.98	16.81
SD-18-189	125.58	126.58	1	15.52
SD-18-192	248.65	249.44	0.79	19.41
SD-18-195	134.14	134.98	0.84	16.51
SD-18-195	134.98	135.83	0.85	12.29
SD-18-196	102.15	103.25	1.1	10.3
SD-18-212	276.2	276.75	0.55	13.6
SD-18-213	258.3	258.88	0.58	16.3
SD-18-219	91.45	92.52	1.07	19.8
SD-18-222	257.88	258.6	0.72	46.5
SD-18-223	156.9	158.02	1.12	13.4
SD-18-223	169	169.98	0.98	16
SD-18-225	232.41	233.4	0.99	19.6
SD-18-228	262	263	1	19.7
SD-18-228	268.5	269	0.5	33.7
SD-18-228	279	280	1	24.2
SD-18-229	270.63	271.63	1	16.3
SD-18-233	311.5	312.35	0.85	16.03
SD-18-233	312.35	313.2	0.85	12.9
SD-18-233	313.2	314	0.8	14.21
SD-18-234	272.77	273.7	0.93	23.6
SD-18-234	273.7	274.7	1	60.22
SD-18-234	274.7	275.68	0.98	14.58

Hole	From, m	To, m	Length, m	Au > 10.0 g/t
SD-18-235	290.57	291.43	0.86	14.7
SD-18-235	291.43	292.38	0.95	12.2
SD-18-235	298.79	299.4	0.61	12.1
SD-18-236	318.68	319.54	0.86	12.08
SD-18-237	278.8	279.8	1	15.4
SD-18-238	178.3	179.3	1	11.9
SD-18-238	179.3	180.33	1.03	16.13
SD-18-238	180.33	181.34	1.01	15.62
SD-18-238	207.75	208.7	0.95	10.8
SD-18-241	149.47	150.5	1.03	12.37
SD-18-241	151.3	151.85	0.55	17.39
SD-18-241	151.85	152.5	0.65	32.91
SD-18-243A	205.96	207.01	1.05	72.1
SD-18-243A	207.01	208	0.99	34.1
SD-18-243A	208	208.77	0.77	16.5
SD-18-243A	230.71	231.67	0.96	11.2
SD-18-244	175.16	176	0.84	10.7
SD-18-247	127.5	128.5	1	10.1
SD-18-248	103.83	104.66	0.83	15.7
SD-18-253	302.18	303.07	0.89	12.8
SD-18-255	189.79	190.41	0.62	11.3
SD-18-255	190.41	191.2	0.79	98.6
SD-18-255	191.2	191.94	0.74	68.1
SD-18-256	106	107.16	1.16	10.3
SD-18-258	247.53	248.21	0.68	10.03
SD-18-259	75.13	76.05	0.92	14.7
SD-18-260	274.78	275.89	1.11	12.9
SD-19-283	154.96	155.61	0.65	12.38
RV-18-182	232.96	233.75	0.79	25.6

*Refer to Table 10-2 for a summary of Red Pine's 2017-2019 claim ID's and associated drill holes.

**Intervals listed here do not represent true thickness.*

10.1.1 Construction of the solids used to provide guidance on continued drilling campaign

The geological solids used for the individual gold zones were constructed in Leapfrog Geo from drill hole and assay data compiled by Red Pine as well as historic drill holes from the previous operators of the property. For instances where historic holes were unsampled, the boundaries of the structures were defined using the descriptions available in the drill logs. The geometry of the solids was further constrained using structural measurements obtained by Red Pine's 2016-2018 oriented drilling, surface structural measurements collected during the 2017-2018 prospecting program and grade distributions within recent (2016-2018) and historic drill holes.

10.1.2 Gold Zone Determination

The gold bearing zones are based on de-clustered sample data and conceptual mineral envelopes provided by Red Pine as determined from ongoing exploration.

In the spring of 2017 Golder Associates Ltd. completed a site visit to the Surluga property and determined that all procedures used by Red Pine were found to be consistent with industry standard practices. As result, Golder Associates Ltd. recommended to continue the exploration effort to improve the geological understanding and increase the level of confidence in the geometry and distribution of gold in the conceptual Exploration Targets.

10.1.3 Collar Survey

A Reflex TN-14 gyrocompass was utilized by a Red Pine geologist to align the drill head prior to casing installation. This device uses a north seeking gyro to provide high precision drill orientation. With several holes coming near historic underground workings, this tool was instrumental in obtaining precise azimuth and dip measurements from surface.

All drill collars during the 2017-2019 drill programs were spotted prior to drilling using a handheld Garmin Oregon GPS (Appendix XII). This unit is limited to an accuracy of ~5m with minimal tree cover and moderately clear skies. Upon completion of the drill program, a TopCon RTK GPS (Appendix XIII) was utilized to provide high precision collar locations and elevations. The casing for all drill holes was left in place and capped with a red bolt-on metal cap and attached 3ft flag (Figure 10-2). A full list of collar locations from the 2017-2019 drilling programs can be found in Appendix XXIV, Table 10-4, and Figure 10-1. Both the initial collar location and precise follow up positioning were completed by Red Pine personnel (Table 10-4).

Table 10-4: Details of 2017 to 2019 Drill Programs, UTM coordinates, NAD 83, Zone 16

Hole ID	X	Y	Z	Depth (m)	Dip	AZ	Year Drilled	Claim ID	Area
SD-17-157	668390.7	5316834.7	373.8	370	-50	193.9	2017	LEA-107761	Surluga Deposit
SD-17-158	668408.3	5315211.8	362.4	190	-78.3	199.9	2017	PAT-560	Minto Mine South Zone
SD-17-159	668408.3	5315211.8	362.4	223	-56	205	2017	PAT-560	Minto Mine South Zone
SD-17-160	668390.7	5316834.7	373.8	387	-74.1	311.1	2017	LEA-107761	Surluga Deposit
SD-17-161	668409.9	5315212.0	363.8	256	-47	187	2017	PAT-560	Minto Mine South Zone
SD-17-162	668408.9	5315197.6	360.2	225.27	-49.1	158.8	2017	PAT-560	Minto Mine South Zone
SD-17-163	668268.8	5316742.2	364.2	247	-61.7	173.1	2017	PAT-572	Surluga Deposit
SD-17-164	668411.1	5315212.9	364.2	241	-70	131.8	2017	PAT-560	Minto Mine South Zone
SD-17-165	668269.8	5316766.5	354.6	199	-62	122.2	2017	PAT-572	Surluga Deposit
SD-17-166	668408.9	5315196.6	360.2	229	-63.2	179	2017	PAT-560	Minto Mine South Zone
SD-17-167	668269.6	5316767.9	353.5	505	-54	305	2017	PAT-572	Surluga Deposit
SD-17-168	668411.0	5315213.0	362.6	130	-56.3	166.1	2017	PAT-560	Minto Mine South Zone
SD-17-169	668409.0	5315197.0	360.2	205	-76.1	324.8	2017	PAT-560	Minto Mine South Zone
SD-17-170	668084.2	5316426.3	353.1	271	-50.9	60	2017	PAT-564	Surluga Deposit
SD-17-171	668413.0	5315218.2	363.3	229	-63	325	2017	PAT-560	Minto Mine South Zone
SD-17-172	668084.2	5316426.3	353.5	214	-66.1	130.1	2017	PAT-564	Surluga Deposit
SD-17-173	668084.2	5316426.3	353.5	472	-53.8	305	2017	PAT-564	Surluga Deposit
SD-17-174	668412.2	5315217.1	363.1	250	-79	142	2017	PAT-560	Minto Mine South Zone
SD-17-175	668413.1	5315218.2	362.6	268	-58.8	150	2017	PAT-560	Minto Mine South Zone
SD-17-176	668084.2	5316426.3	353.5	223	-45.1	205	2017	PAT-564	Surluga Deposit
2017 - 20 holes				**5334.27**					
SD-18-177	668412.6	5315216.8	364.4	220	-55	168	2018	PAT-560	Minto Mine South Zone
SD-18-178	667965.6	5316498.4	354.0	478	-59	305	2018	PAT-564	Surluga Deposit

Hole ID	X	Y	Z	Depth (m)	Dip	AZ	Year Drilled	Claim ID	Area
SD-18-179	668413.0	5315218.0	363.3	235	-69	164	2018	PAT-560	Minto Mine South Zone
RV-18-180	668754.1	5318517.6	319.5	138	-45.1	160.2	2018	LEA-10776	Surluga Deposit North
SD-18-181	668409.9	5315212.0	363.8	31	-84	50	2018	PAT-560	Minto Mine South Zone
SD-18-181A	668409.9	5315212.0	363.8	220	-84	50	2018	PAT-560	Minto Mine South Zone
RV-18-182	668721.0	5318476.9	314.2	259.18	-50.1	304.7	2018	LEA-10776	Surluga Deposit North
SD-18-183	668410.3	5315210.4	363.9	271	-78	41	2018	PAT-560	Minto Mine South Zone
SD-18-184	668410.3	5315210.4	363.9	313	-77	95	2018	PAT-560	Minto Mine South Zone
RV-18-185	668717.0	5318478.0	314.3	69	-44.9	159.6	2018	LEA-10776	Surluga Deposit North
SD-18-186	668007.8	5316884.8	351.0	114	-69.8	179.9	2018	PAT-569	Surluga Deposit
SD-18-187	668424.4	5315399.5	349.1	246	-45.1	284.9	2018	PAT-560	Minto Mine South Zone
SD-18-188	668424.7	5315399.5	349.0	250	-55	292	2018	PAT-560	Minto Mine South Zone
SD-18-189	668424.6	5315400.1	349.1	256	-45	300.1	2018	PAT-560	Minto Mine South Zone
PH-18-190	668799.2	5314220.6	359.8	505	-69	6.1	2018	PAT-28078	Parkhill
SD-18-191	668425.5	5315399.8	349.2	250	-65	299.6	2018	PAT-560	Minto Mine South Zone
SD-18-192	668425.0	5315400.4	349.1	295	-51	323	2018	PAT-560	Minto Mine South Zone
SD-18-193	668605.1	5315078.0	368.5	277	-61	298	2018	PAT-28075	Minto Mine South Zone
SD-18-194	668605.1	5315078.0	368.5	289	-70	300.4	2018	PAT-28075	Minto Mine South Zone
SD-18-195	668231.4	5315461.4	351.2	157	-53	172	2018	PAT-560	Minto Mine South Zone
SD-18-196	668230.8	5315461.6	351.3	115	-45	222	2018	PAT-560	Minto Mine South Zone
SD-18-197	668608.6	5315078.7	367.7	355	-84.9	282.1	2018	PAT-28075	Minto Mine South Zone
SD-18-198	668231.2	5315463.8	351.4	157	-58	293	2018	PAT-560	Minto Mine South Zone
SD-18-199	668232.0	5315463.4	351.4	154	-80.2	353.7	2018	PAT-560	Minto Mine South Zone
SD-18-200	668234.1	5315463.5	351.5	226	-65	35	2018	PAT-560	Minto Mine South Zone
SD-18-201	668225.4	5315451.5	352.3	140	-45.8	180	2018	PAT-560	Minto Mine South Zone
SD-18-202	668608.0	5315079.0	368.4	268	-64.6	250.8	2018	PAT-28075	Minto Mine South Zone
SD-18-203	668606.4	5315079.9	367.9	295	-45	257	2018	PAT-28075	Minto Mine South Zone

Hole ID	X	Y	Z	Depth (m)	Dip	AZ	Year Drilled	Claim ID	Area
SD-18-204	668606.9	5315078.2	367.9	256	-56	264	2018	PAT-28075	Minto Mine South Zone
SD-18-205	668609.1	5315079.0	367.6	328	-62	324	2018	PAT-28075	Minto Mine South Zone
SD-18-206	668607.8	5315077.9	368.4	340	-76	316	2018	PAT-28075	Minto Mine South Zone
SD-18-207	668609.0	5315078.6	368.4	304	-59	312	2018	PAT-28075	Minto Mine South Zone
SD-18-208	668430.4	5314966.1	365.6	223	-75	247	2018	PAT-28074	Minto Mine South Zone
SD-18-209	668429.2	5314965.5	364.6	205	-45	247	2018	LEA-108502	Minto Mine South Zone
SD-18-210	668485.3	5314893.5	369.9	196	-54	244	2018	PAT-28074	Minto Mine South Zone
SD-18-211	668485.0	5314892.8	369.8	223	-54.1	191.2	2018	PAT-28074	Minto Mine South Zone
SD-18-212	668487.8	5314892.1	369.6	313	-45.3	165	2018	PAT-28074	Minto Mine South Zone
SD-18-213	668712.6	5314805.8	345.9	289	-45.3	219.9	2018	PAT-28074	Minto Mine South Zone
SD-18-214	668713.2	5314806.5	346.0	289	-55.8	231.2	2018	PAT-28074	Minto Mine South Zone
SD-18-215	668712.8	5314806.7	345.9	286	-50.9	249.9	2018	PAT-28074	Minto Mine South Zone
SD-18-216	668601.8	5315073.0	368.2	331	-72.2	331.7	2018	PAT-28075	Minto Mine South Zone
SD-18-217	668601.3	5315073.0	368.2	331	-66.1	322.3	2018	PAT-28075	Minto Mine South Zone
SD-18-218	668601.1	5315073.2	368.3	352	-53.1	322.2	2018	PAT-28075	Minto Mine South Zone
SD-18-219	668602.6	5315072.9	368.2	277	-76.7	285.8	2018	PAT-28075	Minto Mine South Zone
SD-18-220	668602.7	5315073.1	368.2	274	-68.4	290.5	2018	PAT-28075	Minto Mine South Zone
SD-18-221	668602.6	5315073.3	368.2	262	-61.3	279.3	2018	PAT-28075	Minto Mine South Zone
SD-18-222	668602.7	5315074.9	368.2	325	-81.1	179.4	2018	PAT-28075	Minto Mine South Zone
SD-18-223	668602.2	5315075.2	368.2	349	-46.3	226.1	2018	PAT-28075	Minto Mine South Zone
SD-18-224	668602.9	5315075.4	368.2	259	-65.8	210	2018	PAT-28075	Minto Mine South Zone
SD-18-225	668698.4	5315042.5	344.0	337	-81.9	276.2	2018	PAT-28074	Minto Mine South Zone
SD-18-226	668698.2	5315043.4	344.0	319	-72	206	2018	PAT-28074	Minto Mine South Zone
SD-18-227	668697.9	5315043.2	343.9	277	-54.2	219	2018	PAT-28074	Minto Mine South Zone
SD-18-228	668491.8	5316349.2	379.5	328	-50	308	2018	LEA-107761	Surluga Deposit
SD-18-229	668492.4	5316348.8	379.5	313	-63.1	313.9	2018	LEA-107761	Surluga Deposit

Hole ID	X	Y	Z	Depth (m)	Dip	AZ	Year Drilled	Claim ID	Area
SD-18-230	668492.6	5316348.5	379.6	316	-74.3	314.1	2018	LEA-107761	Surluga Deposit
SD-18-231	668492.0	5316349.2	379.4	352	-46.1	327	2018	LEA-107761	Surluga Deposit
SD-18-232	668493.0	5316349.1	379.6	364	-50	339	2018	LEA-107761	Surluga Deposit
SD-18-233	668493.2	5316348.9	379.5	343	-58	341	2018	LEA-107761	Surluga Deposit
SD-18-234	668494.2	5316351.5	379.8	319	-63.6	272.1	2018	LEA-107761	Surluga Deposit
SD-18-235	668494.0	5316351.3	379.9	346	-60	248.1	2018	LEA-107761	Surluga Deposit
SD-18-236	668493.7	5316350.6	379.6	376	-51.8	233.9	2018	LEA-107761	Surluga Deposit
SD-18-237	668523.5	5316747.2	393.5	343	-64.7	249	2018	LEA-107761	Surluga Deposit
SD-18-238	668386.9	5316834.9	373.8	313	-63.2	232.8	2018	LEA-107761	Surluga Deposit
SD-18-239	668453.3	5317011.2	369.2	289	-51.2	256.7	2018	LEA-107760	Surluga Deposit
SD-18-240	668154.4	5316251.7	381.4	232	-62.9	339.7	2018	PAT-555	Surluga Deposit
SD-18-241	668154.2	5316250.9	381.6	214	-78.1	343.9	2018	PAT-555	Surluga Deposit
SD-18-242	668154.1	5316250.8	381.6	226	-56.1	353	2018	PAT-555	Surluga Deposit
SD-18-243	668153.0	5316251.0	381.7	10	-72	170.4	2018	PAT-555	Surluga Deposit
SD-18-243A	668153.4	5316249.2	381.7	265	-72	175.1	2018	PAT-555	Surluga Deposit
SD-18-244	668154.0	5316250.0	381.7	220	-65.9	214.3	2018	PAT-555	Surluga Deposit
SD-18-245	668078.0	5316293.2	380.6	136	-56.5	260.2	2018	PAT-568	Surluga Deposit
SD-18-246	668077.4	5316292.8	380.9	154	-49.1	218.3	2018	PAT-568	Surluga Deposit
SD-18-247	668169.3	5315847.9	351.2	325	-78.2	226.8	2018	PAT-556	Surluga Deposit
SD-18-248	668077.6	5316294.8	380.8	160	-73.8	19.9	2018	PAT-568	Surluga Deposit
SD-18-249	668111.7	5316044.5	376.3	250	-64	358.7	2018	PAT-558	Surluga Deposit
SD-18-250	668326.8	5315818.8	361.4	409	-78	289	2018	PAT-557	Surluga Deposit
SD-18-251	668110.5	5316045.0	376.8	232	-61	323.2	2018	PAT-558	Surluga Deposit
SD-18-252	668110.2	5316044.4	376.6	238	-75.9	306	2018	PAT-558	Surluga Deposit
SD-18-253	668326.5	5315819.5	361.6	449	-59.1	357.9	2018	PAT-557	Surluga Deposit
SD-18-254	668109.9	5316045.1	376.7	211	-52.8	279.3	2018	PAT-558	Surluga Deposit

Hole ID	X	Y	Z	Depth (m)	Dip	AZ	Year Drilled	Claim ID	Area
SD-18-255	668112.1	5316046.3	376.6	214	-49.1	248.8	2018	PAT-558	Surluga Deposit
SD-18-256	668371.0	5315924.0	358.4	367	-52.8	334.9	2018	PAT-556	Surluga Deposit
SD-18-257	667984.9	5315988.0	376.2	181	-66.2	202.9	2018	PAT-558	Surluga Deposit
SD-18-258	668170.3	5315846.2	351.4	307	-77.1	313.2	2018	PAT-556	Surluga Deposit
SD-18-259	668371.7	5315923.3	358.3	364	-67.2	357	2018	PAT-556	Surluga Deposit
SD-18-260	668389.8	5315728.9	375.5	460	-72.1	315	2018	PAT-557	Surluga Deposit
SD-18-261	668371.7	5315924.0	358.4	397	-59.9	344	2018	PAT-556	Surluga Deposit
SD-18-262	668371.5	5315922.9	358.5	403	-62.2	5	2018	PAT-556	Surluga Deposit
SD-18-263	668359.6	5316062.0	364.9	397	-51	239.9	2018	PAT-556	Surluga Deposit
SD-18-264	668245.9	5316786.5	354.4	472	-55.2	291.9	2018	PAT-572	Surluga Deposit
2018 - 90 holes				**24823.18**					
CG-19-265	669612.2	5317944.0	361.9	79	-45	279.8	2019	PAT-551	Cooper-Ganley Zone
CG-19-266	669665.2	5317938.0	360.5	79	-44.9	270	2019	PAT-551	Cooper-Ganley Zone
CG-19-267	669665.7	5317937.7	360.5	88	-65	100	2019	PAT-551	Cooper-Ganley Zone
CG-19-268	669665.5	5317938.0	360.4	121	-54.2	4.9	2019	PAT-551	Cooper-Ganley Zone
CG-19-269	669731.4	5317912.9	357.8	82	-56	326.2	2019	PAT-551	Cooper-Ganley Zone
CG-19-270	669731.4	5317912.6	357.8	76	-55.1	200.3	2019	PAT-551	Cooper-Ganley Zone
CG-19-271	669731.8	5317913.9	357.5	166	-52.7	15.2	2019	PAT-551	Cooper-Ganley Zone
CG-19-272	669885.8	5317815.5	358.3	76	-45	199.8	2019	PAT-551	Cooper-Ganley Zone
CG-19-273	669885.8	5317815.9	358.2	82	-44.8	306	2019	PAT-551	Cooper-Ganley Zone
CG-19-274	669584.9	5318081.6	376.2	136	-45.2	165	2019	PAT-551	Cooper-Ganley Zone
CG-19-275	669310.1	5318068.5	376.9	79	-45.1	272.1	2019	PAT-551	Cooper-Ganley Zone
SD-19-276	667933.7	5316528.8	354.7	376	-58.2	303.9	2019	PAT-564	Surluga Deposit
SD-19-277	667907.2	5316632.3	357.7	403	-57	305	2019	PAT-564	Surluga Deposit
SD-19-278	667971.7	5316140.9	370.3	199	-45.1	345	2019	PAT-568	Surluga Deposit

Hole ID	X	Y	Z	Depth (m)	Dip	AZ	Year Drilled	Claim ID	Area
SD-19-279	667971.7	5316141.3	370.4	172	-80.3	169.8	2019	PAT-568	Surluga Deposit
SD-19-280	667970.5	5316142.2	370.1	190	-45.3	280	2019	PAT-568	Surluga Deposit
SD-19-281	668506.1	5316208.3	376.6	415	-69.1	346	2019	LEA-107761	Surluga Deposit
SD-19-282	668505.2	5316208.2	376.5	454	-80.9	239.8	2019	LEA-107761	Surluga Deposit
SD-19-283	668637.7	5316117.8	377.0	502	-76.1	305	2019	SSM60185 (LEA-107761)	Surluga Deposit
SD-19-284	668751.6	5316047.9	369.9	574	-70.2	301	2019	PAT-785	Surluga Deposit
2019 - 20 holes				**4349**					
Total - 130 holes				**34506.45**					

*Refer to Table 10-2 for a summary of Red Pine's 2017-2019 claim ID's and associated drill holes.

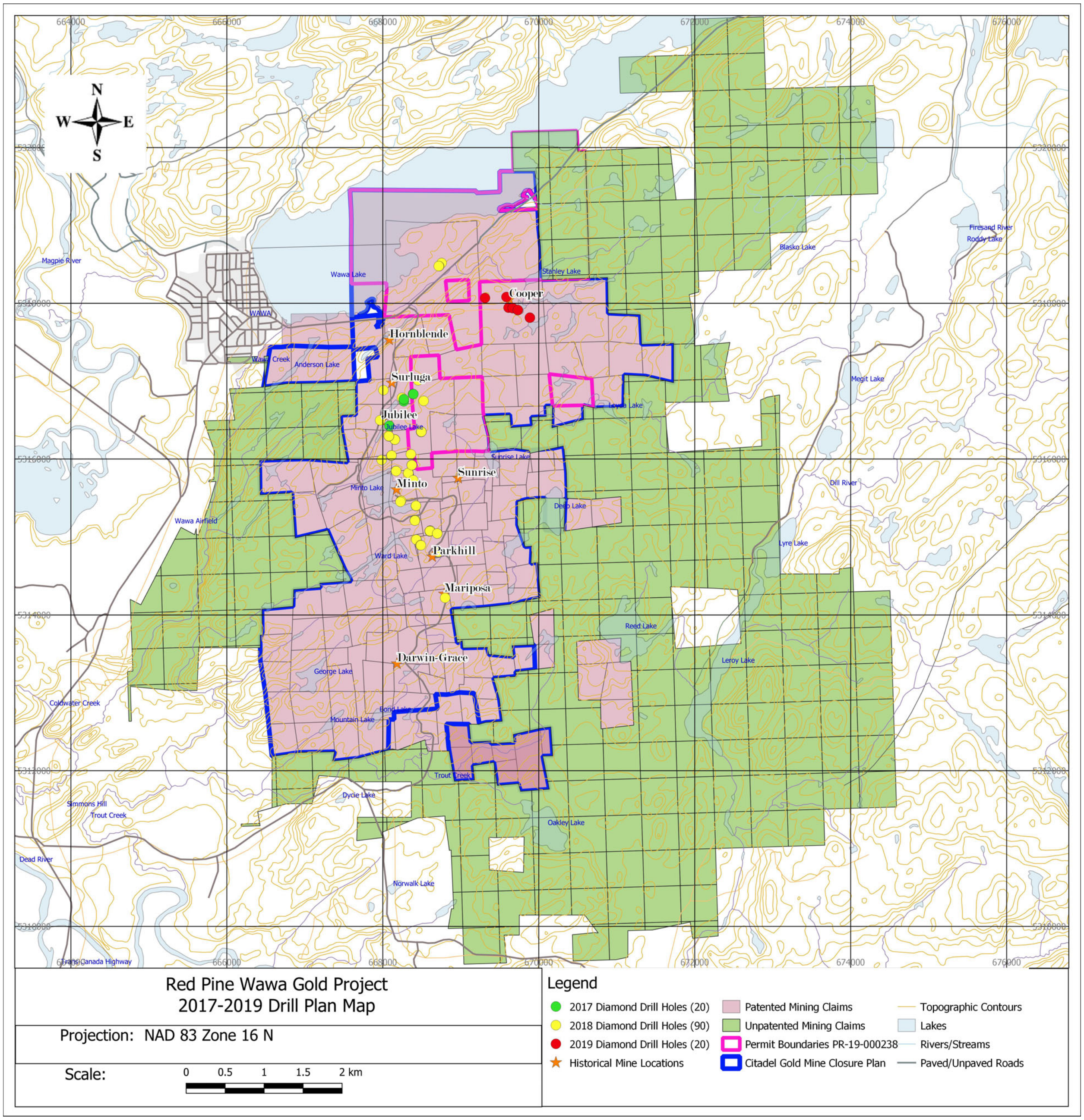


Figure 10-1: Summary of drill plan map outlining planned collar locations for the 2017-2019 drilling program. Please see Figure 10-5 for the zoom in of drill collars and (Refer to Table 10-2 for a summary of Red Pine's 2019 claim ID's and associated drill holes)

Figure 10-2: Drill Collar Location for SD-18-216 through SD-18-221

10.1.4 Down-Hole Survey

A down-hole survey was completed on all holes during the 2017 to 2019 drill programs to gain as much information as possible from each drill hole. While drilling was undertaken, a Reflex easy shot was used to provide in-hole azimuth and dip measurements. This survey was completed ~10m below the bottom of the drill casing as well as every 30m below that. This device uses magnetism for its measurements so in areas where ferromagnetism is prevalent in the rocks, measurement can be unreliable. All down hole surveys were completed by Forage Rouillier at the drill.

The down-hole survey was an important aspect to drilling as holes typically flatten and bend to the right. This effectively decreases the dip and increases the azimuth. With underground workings in the area it was integral to ensure that not only the location of the collar was correct but also to effectively track the path of the drill hole as it progressed to target depth. The full results of the down-hole survey can be found in Appendix XXV.

10.1.5 Core Recovery

Core recovery was especially important to this program because of the orientation process. The core was pieced together by a Red Pine geologist or core tech to obtain one continuous run. Therefore, any missing core is very problematic. Extensive discussion with the drilling team verified that all efforts were made to see the highest possible core recovery rates. As such, an extremely high level of core recovery was achieved throughout both drilling programs.

10.1.6 Core Handling Procedure

The core was boxed at the drill and labeled with the hole ID and box number, as well as blocks within the core indicating the end of each drill run every 3 meters. At the end of this 3m interval, a mark indicating the bottom of the core was drawn on the last piece at the drill. A lid was placed on the box, taped shut, and transported by snowmobile and/or ATV from the drill to the core logging facility (the core shack). These steps are all completed at the drill by Forage Rouillier personnel. The core shack is located on the property, near the town of Wawa, no more than 3km from any of the drill hole locations. After arrival at the core shack, the core boxes were opened and moved inside to defrost prior to geotechnical processing and logging. Once a truck load of samples was accumulated in the core shack, they were subsequently shipped to the lab for assay analyses. Sequentially numbered security seals are utilized on each bag of samples to maintain secure shipping and an appropriate chain of custody.

10.2 Geotechnical Core Processing, Core Logging and Analyses

Prior to the beginning of the geological logging, core pieces were properly fitted, an orientation line was drawn, and metre marks were promptly labeled referencing the blocks identified by the drillers every run (3 m); start and end of each core box was marked on the box and recorded in an Excel™ file creating a box info file. From there, the geological logging procedure was carried out by a Red Pine geologist.

10.2.1 Structure

The Reflex ACTIII was used during the 2017-2019 drill program in conjunction with drilling to indicate the bottom of the drill core as it came out of the hole. The entire length of core is pieced together to obtain a continuous, or near continuous run from the top to the bottom of each hole. A solid line was then drawn on the core connecting the marks made at the drill site at the end of each run. This solid line represents the bottom of the core in the hole, providing a reference line to measure all structural data from. Structural aspects of interest were then marked on the core and measured relative to the previously mentioned line noting the bottom of core using the alpha-beta method and level of confidence. This method utilizes a transparent tube (Holcombe Alpha-Beta Protractor) with angles relative to the long axis (alpha) and angles around the circumference of the core (beta). All structural measurements (Appendix XXIII) with exception two holes SD-18-181 and SD-18-243) are validated (QAQC) with the use of 3D software (Leapfrog, Target) and known structural orientation of the intended target. All structure data was processed by Red Pine and used for modeling and targeting.

10.2.2 Short Wave Infrared Reflectance (SWIR)

Short Wave Infrared Reflectance (“SWIR”) data was then systematically acquired on every meter of core. The data was acquired using a TerraSpec 4 Hi-Res Mineral Spectrometer designed by PANalytical (Figure 10-3). At the beginning of every data acquisition period, the spectrometer was allowed a 15-30-minute period of warming up to stabilize the signal. To obtain reflectance values that were comparable between holes, a Spectralon® certified reflectance standard was used during data acquisition. To correct for drifting and changing light conditions, a standard measurement was taken every 10-15 minutes. The spectrometer conditions were also optimized at the beginning of each period of measurement, as well as periodically during data acquisition and whenever there were drastic changes of light conditions.

SWIR data was acquired on a meter by meter basis to simplify the acquisition procedures and provide more flexibility in the order in which the core was measured. For each meter, between 4 and 6 equally spaced individual spot measurements were taken along the core. Signal biasing was addressed by taking measurements in local features (e.g. small veins). The raw spectra which was acquired using the customized software that came with the spectrometer was then processed using The Spectral

Geologist (TSG™) software to get the spectral mineralogy of each spot measurement. Different spectral scalars, specific to white micas, chlorite, carbonate, biotite and tourmaline, which were the minerals found to be directly related to the metasomatic processes related to the gold mineralizing fluids, were then calculated for each hole being measured. All SWIR measurements can be found in Appendix XXVII (with exception two holes SD-18-181 and SD-18-243).

Figure 10-3: TerraSpec 4 Hi-Res Mineral Spectrometer and data acquisition computer on the rolling table used to acquire SWIR data on historic core

Using a proprietary script in R, the data for each meter was then consolidated in one point for each set of minerals. This consolidation was based on the minerals identified by TSG™. For each of the identified minerals in a meter, the specific spectral scalars for each data point were averaged for the entire row. The script then assigned a ‘from – to’ for each point and created graphics to portray the down-hole variations of spectral scalars of interest known to be spatially related to gold zones. These graphs and the detection of certain minerals help to ensure that even zones with cryptic gold indicators were sampled whereas the three-dimensional integration of the data was used to map the maturity of the shear zone at the edges of the inferred resource for future expansion.

10.3 CORE LOGGING AND ANALYSES

10.3.1 Core Logging

During the 2017-2019 drill program the core was visually inspected and logged based on the field geologist's descriptions. The information was then recorded in MXDeposit (Geosoft/Sequeent Software). All lithology tables and created abbreviations are included with the complete logs in Appendix XXVIII (with exception two holes SD-18-181 and SD-18-243).

The incorporation of a variety of analytical methods was utilized to best describe the lithological units. These included testing for magnetism with a magnet, reactivity with 10% HCL, scratch testing with a nail to estimate hardness, portable XRF reading, color, texture, structure, grain size, pervasive alteration, and contact definition. These components were then used to create a lithological description of the core from the top to the bottom of each hole. This log was further subdivided by lithologies with description of veining, alteration, texture, deformation, Red Pine's gold zones, and mineral abundances.

Alteration and rock type identification were systematically supported by the SWIR analyses and by spot measurements using a portable XRF. The portable XRF units used by the company are programmed with predefined element ratios that characterize favorability for gold (white mica intensity ratio derived from internal work) and the nature of the host rocks (Zr/TiO_2).

The complete drill logs can be found in Appendix XXVIII, except two SD-18-181 (31 m length) and SD-18-243 (10 m length) which were not logged, not sampled because both of these holes were re-collared by SD-18-181A and SD-18-243A.

10.3.2 Sampling

The selections of the sampled intervals of core were based on favorable visual indicators known to be associated with gold mineralization and on the presence of favorable alterations detected by the SWIR and portable XRF analyzers. The key visual indicators of gold mineralization, based on Red Pine's experience on the project, are shearing, pervasively disseminated sulfides in the core (mostly pyrite or arsenopyrite), quartz veining, pervasive white mica alteration, contact zones between two units with indications of shearing and fluid circulation, and pervasive chloritization with iron carbonate alteration in mafic units. Each sampled interval 0.5-1.5 m was recorded in an Excel sheet and represented by sample ID in Appendix XXIX with assay results with exception two holes SD-18-181 and SD-18-243 which were not sampled.

Upon completion of logging, samples tags are inserted in 0.5-1.5 m intervals and at lithological contacts within the zone of mineralization. Tags are placed at the end of each sample. Once sample locations were determined, the core was cut in half. One half was placed in a durable plastic sample bag with an ID tag and the other half remained in core storage on site for future reference. Samples were then separated into groups of 5-6 and placed in durable rice bags for transport.

10.3.3 Magnetic Susceptibility

A Terraplus KT-10 magnetic susceptibility meter was used to measure and record the magnetic susceptibility through every meter of each drill hole. This device provides quantitative data regarding magnetism of the rocks down the length of the drill hole. Magnetic susceptibility measurements were considered important as shoulders of the gold zones on the Wawa Gold Property are selectively enriched with magnetite, forming a positive magnetic susceptibility anomaly around the gold zones that are themselves demagnetized. The magnetic susceptibility readings are downloaded and recorded in an Excel™ spreadsheet for each drill hole which can be found in Appendix XXX (with exception two holes SD-18-181 and SD-18-243).

10.3.4 Density Measurements

Specific gravity (SG) measurements were collected on all drill holes based on representative 10 cm intervals selected by a Red Pine geologist. One or two pieces of core were selected per major lithological unit and marked for measurement by the geologist or core technician and recorded in an Excel™ spreadsheet for each drill hole. The SG was determined by weighing a piece of core in air and in water and calculating SG using the following formula:

$$SG = \frac{Sample\ Weight\ in\ Air}{Sample\ Weight\ in\ Air - Sample\ Weight\ in\ Water}$$

The results of the density measurements can be found in Appendix XXXI (with exception two holes SD-18-181 and SD-18-243).

Figure 10-4: SG Measurement at Red Pine's Core Logging Facility

10.3.5 Core Photography

Photos were taken of all core drilled through the programs. Once preparation and logging of the core is completed and sample tags have been added, photos of each box are taken individually. A chalk board with the Hole ID, box number and meterage contained in the box is utilized for labeling purposes. If sample IDs are visible on the camera then photos are deemed to be in focus and complete. All core photos can be found in Appendix XXXII (with exception two holes SD-18-181 and SD-18-243).

10.3.6 Assay Analyses

A total of 20,546 samples including CRM and blanks were submitted for analysis: 2017 – 3245 samples, 2018 – 13980 samples, 2019 – 3321 samples (Table 10-5). All samples were analyzed by Activation Laboratories Ltd. (ActLabs), using the fire-assay with an AAS finish (ActLabs code 1A2-50) with selected samples being analyzed with a metallic screen to capture coarse gold (ActLabs code 1A4-1000). Two triggers were used for metallic screen analyses: (1) the observation of visible gold in the core and (2) gold >= 2g/t following the 1A4-1000 analyses. Some samples were flagged as high sulfide because the lab must adjust flux formula and the flux/rock ratio to ensure accurate results for precious metal analyses. For more detailed information on the analytical and assay procedures, go to the Actlabs website at http://www.actlabs.com.

For the fire-assay analysis, the entire sample was crushed to −10 mesh (1.7 mm), mechanically split and an aliquot of 500 g was pulverized to at least 95% −150 mesh (105 μm). Fifty grams of the pulverized sample was used for the fire assay procedure. Gold analysis was completed by AAS. For the metallic screen analysis, a 1000 g split was sieved at 100 mesh (149 μm). Assays were performed on the entire +100 mesh and on two splits of the −100 mesh fraction. The final assay was calculated using the weight and gold analysis of each fraction. Samples are also analyzed using ICP-MS for a multi element suite which includes elements such as As, Cu, Ni, Bi, Mo, Pb, Zn. Summary of assay results with Au>5.0 g/t is provided in Table10-6. The full suite of elements can be seen in the complete assay results (Appendix XXIX). Two holes SD-18-181 and SD-18-243 were not logged or sampled.

Table 10-5 Summary of analyzed core samples, blanks, certified reference materials (CRM) per year

Year of Drilling	Total Hole Numbers per Year	Total Hole Length per Year, m	Sampled Length, m	% Sampled	#Samples Selected	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	CRM&Blanks Total	#Samples Assayed
2017	20	5334.27	3460.16	64.9	2945	138	48	57	43	0	14	300	3245
2018	90	24823.18	14955.51	60.2	12672	595	219	230	155	1	108	1308	13980
2019	20	4349	3352.6	77.1	3015	140	45	0	47	46	28	306	3321
Total	**130**	**34506.45**	**21768.27**	**63.1**	**18632**	**873**	**312**	**287**	**245**	**47**	**150**	**1914**	**20546**

Table 10-6: Summary of Assay Results (> 5.0 g/t Au) and Gold Zone intersected from 2017 to 2019 Drilling Programs

Hole ID	From (m)	To (m)	Length (m)	Calculated True Width (m)*	Au >5.0 g/t	Gold Zone
SD-17-157	240.7	241.7	1	0.6	5.36	Jubilee Shear Zone
SD-17-158	155.2	155.92	0.72	0.58	7.36	Jubilee Shear Zone
SD-17-163	56.8	57.8	1		12.8	Tension Vein
SD-17-163	117.28	118	0.72	0.44	5.95	Jubilee Shear Zone
SD-17-163	119.3	120.15	0.85	0.51	10.3	Jubilee Shear Zone

Hole ID	From (m)	To (m)	Length (m)	Calculated True Width (m)*	Au >5.0 g/t	Gold Zone
SD-17-164	222.5	223.5	1	0.57	6.12	Minto Mine South
SD-17-167	82	82.84	0.84	0.83	7.64	Jubilee Shear Zone
SD-17-169	187.4	188.4	1	0.66	5.39	Minto Mine South
SD-17-170	96	97	1	0.41	11.4	Jubilee Shear Zone
SD-17-170	111.9	112.73	0.83	0.34	14.8	Jubilee Shear Zone
SD-17-170	112.73	113.56	0.83	0.34	10.9	Jubilee Shear Zone
SD-17-170	244.95	246.25	1.3		7.77	Tension Vein
SD-17-171	200.38	201.39	1.01	0.61	15.48	Minto Mine South
SD-17-171	201.39	202.3	0.91	0.55	14.26	Minto Mine South
SD-17-172	72.6	73.6	1	0.53	10.7	Jubilee Shear Zone
SD-17-172	77.6	78.65	1.05	0.55	10.2	Jubilee Shear Zone
SD-17-172	79.56	80.6	1.04	0.55	7.73	Jubilee Shear Zone
SD-17-172	90.57	91.59	1.02	0.54	40.2	Jubilee Shear Zone
SD-17-172	118.83	119.91	1.08	0.57	13.6	Jubilee Shear Zone
SD-17-172	148.53	149.5	0.97	0.51	21.1	Jubilee Shear Zone
SD-17-173	44.5	45.53	1.03	1.02	28.63	Jubilee Shear Zone
SD-17-173	48.36	49.25	0.89	0.88	12.94	Jubilee Shear Zone
SD-17-173	49.25	50.1	0.85	0.84	8.68	Jubilee Shear Zone
SD-17-173	50.75	51.4	0.65	0.64	12.58	Jubilee Shear Zone
SD-17-173	55.4	56.4	1	0.99	12.01	Jubilee Shear Zone
SD-17-174	193.6	194.36	0.76	0.49	17.48	Minto Mine South
SD-17-174	194.36	195.27	0.91	0.59	21.34	Minto Mine South
SD-17-174	198	198.91	0.91	0.59	8.94	Minto Mine South
SD-17-174	198.91	199.82	0.91	0.59	5.92	Minto Mine South
SD-17-175	218.7	219.7	1	0.6	7.03	Minto Mine South
SD-17-176	78.8	79.6	0.8	0.5	13.4	Jubilee Shear Zone
SD-18-178	131.09	132.1	1.01		7.05	Shear Zone
SD-18-178	224.92	226	1.08		13	Hornblende Shear Zone
SD-18-181A	204.83	205.82	0.99	0.58	5.77	Minto Mine South
RV-18-182	232.96	233.75	0.79	0.78	25.6	Hornblende Shear Zone
SD-18-188	230.25	231	0.75	0.59	5.34	Minto Mine South
SD-18-189	107	107.98	0.98		16.81	Tension Vein
SD-18-189	125.58	126.58	1		15.52	Tension Vein
SD-18-189	149.3	150.05	0.75		8.93	Tension Vein
PH-18-190	204	205	1		6.06	Parkhill #4 Shear Zone/Minto Lower
SD-18-192	248.65	249.44	0.79	0.44	19.41	Minto Mine South

Hole ID	From (m)	To (m)	Length (m)	Calculated True Width (m)*	Au >5.0 g/t	Gold Zone
SD-18-194	272.74	273.53	0.79	0.58	6.7	Minto Mine South
SD-18-195	134.14	134.98	0.84	0.61	16.51	Minto Mine South
SD-18-195	134.98	135.83	0.85	0.62	12.29	Minto Mine South
SD-18-196	100.48	101.38	0.9	0.89	5.85	Minto Mine South
SD-18-196	102.15	103.25	1.1	1.08	10.3	Minto Mine South
SD-18-207	289.71	290.42	0.71	0.48	5.42	Minto Mine South
SD-18-212	262	263	1		5.28	Parkhill #4 Shear Zone/Minto Lower
SD-18-212	276.2	276.75	0.55		13.6	Parkhill #4 Shear Zone/Minto Lower
SD-18-213	184.45	185.5	1.05		6.76	Shear Zone
SD-18-213	258.3	258.88	0.58		16.3	Parkhill #4 Shear Zone/Minto Lower
SD-18-219	91.45	92.52	1.07		19.8	Tension Vein
SD-18-222	246	247	1		7	Tension Vein
SD-18-222	257.88	258.6	0.72	0.52	46.5	Minto Mine South
SD-18-223	156.9	158.02	1.12	1.11	13.4	Minto Mine South
SD-18-223	167.12	168.13	1.01	1	6.14	Minto Mine South
SD-18-223	168.13	169	0.87	0.86	7.94	Minto Mine South
SD-18-223	169	169.98	0.98	0.97	16	Minto Mine South
SD-18-225	232.41	233.4	0.99		19.6	Tension Vein
SD-18-228	262	263	1	0.98	19.7	Jubilee Shear Zone
SD-18-228	268.5	269	0.5	0.49	33.7	Jubilee Shear Zone
SD-18-228	272	273	1	0.98	6.67	Jubilee Shear Zone
SD-18-228	273	274	1	0.98	9.62	Jubilee Shear Zone
SD-18-228	279	280	1	0.98	24.2	Jubilee Shear Zone
SD-18-229	269.6	270.63	1.03	1	7.91	Jubilee Shear Zone
SD-18-229	270.63	271.63	1	0.97	16.3	Jubilee Shear Zone
SD-18-229	272.66	273.62	0.96	0.93	6.81	Jubilee Shear Zone
SD-18-229	274.3	275.4	1.1	1.06	6.77	Jubilee Shear Zone
SD-18-229	281.56	282.75	1.19	1.15	9.52	Jubilee Shear Zone
SD-18-230	272.95	273.9	0.95	0.88	7.6	Jubilee Shear Zone
SD-18-231	289.1	290.1	1	0.91	8.38	Jubilee Shear Zone
SD-18-231	290.1	291.11	1.01	0.92	5.24	Jubilee Shear Zone
SD-18-231	294.26	295.18	0.92	0.84	5.67	Jubilee Shear Zone
SD-18-233	83.3	84.25	0.95		8.01	Shear Zone
SD-18-233	311.5	312.35	0.85		16.03	Jubilee Shear Zone
SD-18-233	312.35	313.2	0.85		12.9	Jubilee Shear Zone

Hole ID	From (m)	To (m)	Length (m)	Calculated True Width (m)*	Au >5.0 g/t	Gold Zone
SD-18-233	313.2	314	0.8		14.21	Jubilee Shear Zone
SD-18-233	314	314.91	0.91		7.94	Jubilee Shear Zone
SD-18-234	272.77	273.7	0.93	0.91	23.6	Jubilee Shear Zone
SD-18-234	273.7	274.7	1	0.98	60.22	Jubilee Shear Zone
SD-18-234	274.7	275.68	0.98	0.96	14.58	Jubilee Shear Zone
SD-18-235	290	290.57	0.57	0.53	9.48	Jubilee Shear Zone
SD-18-235	290.57	291.43	0.86	0.8	14.7	Jubilee Shear Zone
SD-18-235	291.43	292.38	0.95	0.88	12.2	Jubilee Shear Zone
SD-18-235	298.79	299.4	0.61	0.57	12.1	Jubilee Shear Zone
SD-18-235	309.41	310.37	0.96	0.89	8.22	Jubilee Shear Zone
SD-18-236	318.68	319.54	0.86	0.72	12.08	Jubilee Shear Zone
SD-18-236	320.54	321.54	1	0.84	9.1	Jubilee Shear Zone
SD-18-237	278.8	279.8	1	0.93	15.4	Jubilee Shear Zone
SD-18-238	177.3	178.3	1	0.87	7.83	Jubilee Shear Zone
SD-18-238	178.3	179.3	1	0.87	11.9	Jubilee Shear Zone
SD-18-238	179.3	180.33	1.03	0.9	16.13	Jubilee Shear Zone
SD-18-238	180.33	181.34	1.01	0.88	15.62	Jubilee Shear Zone
SD-18-238	181.34	182.35	1.01	0.88	8.74	Jubilee Shear Zone
SD-18-238	207.75	208.7	0.95	0.83	10.8	Jubilee Shear Zone
SD-18-240	149.7	150.7	1	0.9	5.14	Jubilee Shear Zone
SD-18-240	202.37	203.3	0.93	0.84	5.88	Jubilee Shear Zone
SD-18-241	149.47	150.5	1.03	0.9	12.37	Jubilee Shear Zone
SD-18-241	150.5	151.3	0.8	0.7	7.63	Jubilee Shear Zone
SD-18-241	151.3	151.85	0.55	0.48	17.39	Jubilee Shear Zone
SD-18-241	151.85	152.5	0.65	0.57	32.91	Jubilee Shear Zone
SD-18-241	153.11	154	0.89	0.78	6.96	Jubilee Shear Zone
SD-18-241	155	156.05	1.05	0.91	5.24	Jubilee Shear Zone
SD-18-241	157.6	158.38	0.78	0.68	6.35	Jubilee Shear Zone
SD-18-241	162	162.61	0.61	0.53	8.36	Jubilee Shear Zone
SD-18-243A	205.96	207.01	1.05	0.74	72.1	Jubilee Shear Zone
SD-18-243A	207.01	208	0.99	0.7	34.1	Jubilee Shear Zone
SD-18-243A	208	208.77	0.77	0.54	16.5	Jubilee Shear Zone
SD-18-243A	212.17	212.68	0.51	0.36	6.52	Jubilee Shear Zone
SD-18-243A	212.68	213.37	0.69	0.49	9.5	Jubilee Shear Zone
SD-18-243A	213.37	214.25	0.88	0.62	6.04	Jubilee Shear Zone
SD-18-243A	219.38	220.4	1.02	0.72	9.21	Jubilee Shear Zone
SD-18-243A	230.71	231.67	0.96	0.68	11.2	Jubilee Shear Zone
SD-18-244	174.34	175.16	0.82	0.66	6.72	Jubilee Shear Zone

Hole ID	From (m)	To (m)	Length (m)	Calculated True Width (m)*	Au >5.0 g/t	Gold Zone
SD-18-244	175.16	176	0.84	0.68	10.7	Jubilee Shear Zone
SD-18-244	176	177.14	1.14	0.92	7.11	Jubilee Shear Zone
SD-18-244	179.17	180.22	1.05	0.85	5.91	Jubilee Shear Zone
SD-18-247	91.85	92.98	1.13	0.24	8.75	Minto B Shear Zone
SD-18-247	120.5	121.5	1	0.21	5.47	Minto B Shear Zone
SD-18-247	127.5	128.5	1	0.21	10.1	Minto B Shear Zone
SD-18-247	128.5	129.52	1.02	0.22	9.39	Minto B Shear Zone
SD-18-248	103.83	104.66	0.83	0.65	15.7	Jubilee Shear Zone
SD-18-248	104.66	105.45	0.79	0.62	8.64	Jubilee Shear Zone
SD-18-248	115.1	116.14	1.04	0.82	5.48	Jubilee Shear Zone
SD-18-248	121.18	122.17	0.99	0.78	5.39	Jubilee Shear Zone
SD-18-248	123.84	124.83	0.99	0.78	5.57	Jubilee Shear Zone
SD-18-251	173.28	174.16	0.88	0.84	7.99	Jubilee Shear Zone
SD-18-253	302.18	303.07	0.89	0.72	12.8	Jubilee Shear Zone
SD-18-254	168.93	169.97	1.04	1.03	6.02	Jubilee Shear Zone
SD-18-255	*189.79*	*190.41*	*0.62*	*0.56*	*11.3*	Jubilee Shear Zone
SD-18-255	190.41	191.2	0.79	0.71	98.6	Jubilee Shear Zone
SD-18-255	191.2	191.94	0.74	0.67	68.1	Jubilee Shear Zone
SD-18-256	105	106	1		7.91	Shear Zone
SD-18-256	106	107.16	1.16		10.3	Shear Zone
SD-18-256	248.33	249.43	1.1		6.9	Minto B Shear Zone
SD-18-258	240.9	241.96	1.06	0.97	5.93	Jubilee Shear Zone
SD-18-258	247.53	248.21	0.68	0.62	10.03	Jubilee Shear Zone
SD-18-258	249.17	250.18	1.01	0.93	7.75	Jubilee Shear Zone
SD-18-258	263.13	263.82	0.69	0.63	5.03	Jubilee Shear Zone
SD-18-258	264.83	265.88	1.05	0.96	8.49	Jubilee Shear Zone
SD-18-258	265.88	266.91	1.03	0.94	8.25	Jubilee Shear Zone
SD-18-259	75.13	76.05	0.92		14.7	Shear Zone
SD-18-261	307.33	308.3	0.97	0.85	7.38	Jubilee Shear Zone
SD-18-264	179.13	179.67	0.54		7.55	Shear Zone
SD-19-277	87.55	88.55	1		6.74	Shear Zone
SD-19-277	89.39	90.32	0.93		5.75	Shear Zone
SD-19-277	218.2	219.1	0.9		6.09	Hornblende Shear Zone
SD-19-282	257.68	258.4	0.72		6.89	Minto B Shear Zone
SD-19-282	313	314	1		5.21	Minto B Shear Zone
SD-19-283	152.46	152.98	0.52		8.06	Shear Zone
SD-19-283	152.98	153.51	0.53		9.67	Shear Zone

Hole ID	From (m)	To (m)	Length (m)	Calculated True Width (m)*	Au >5.0 g/t	Gold Zone
SD-19-283	154.96	155.61	0.65		12.38	Shear Zone

*Assay results reported over intersection length for gold zones labelled: Tension Vein, Nyman Vein, Shear Zone, Parkhill #4, Mickelson Shear Zone, Minto E, Replacement Zone, Parkhill Shear Zone and William Gold Zone and Grace Shear Zone. Additional holes required to calculated true width

10.3.7 Core Sampling QA/QC Protocol

The samples were placed in rice bags (4-5 to a bag) and closed with heavy-duty security zip ties. The security ties are assigned a unique number that allows for tracking the chain of custody.

The samples were then taken directly to Manitoulin Transport's shipping facility in Wawa and shipped to Activation Labs (Actlabs) in Anacaster, Ontario.

As part of the QA/QC protocols, a certified reference material (CRM, standard) is regularly inserted into the sampling order with a standard every 20 samples and blank every 25 samples. The standards used were Ore Research & Exploration Pty Ltd (OREAS) 209, 210, 218, 226, and 229. These were routinely inserted into sample tag books prior to sampling to ensure appropriate spacing and regular insertion. The blanks were 200 g Bell & Mackenzie White Lightning® 2040 and are also pre-recorded in tag books. Short descriptions of the CRM and blanks are provided in Table 11-5. All assay results and certificates can be found in Appendix XXIX (with exception two holes SD-18-181 and SD-18-243 which were not sampled).

10.4 RESULTS

The Wawa Gold Corridor consists of a network of interconnected gold-bearing shear and replacement zones extending for at least 8 km North-South by 0.5 km East-West. Individual shear zones range from 0.5 m to 100 m thick. Gold mineralization is also hosted in large replacement zones measuring up to 20 m thick. The southern, western and eastern boundaries of the Wawa Gold Corridor remain unknown.

The 2017-2019 drilling programs were focused on three major targets: The hanging wall and footwall of the Jubilee Shear Zone and the Minto Mine South Zone. The purpose of the drill programs is to convert these targets into mineral resources. Four key areas were drilled along the extension of the Surluga Deposit: 1) Surluga North Zone - the Root Vein Zone, 2) Surluga Deposit - the Jubilee Zone, the William Zone, the Hornblende Zone, the Minto B Zone, 3) the Minto Mine South Zone, the Parkhill Mine Zone, and 4) the Cooper-Ganley Zone.

Summary of drilling and sampling compiling per area is highlighted in Table 10-7.

Table 10-7: Summary of drilling and sampling compiling per area

Area	Total Hole Numbers per Area	Hole Length per Area, m	Year of Drilling	Sampled Length, m	% Sampled	#Samples Selected	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	CRM&Blanks Total	#Samples Assayed
Surluga North	3	466.18	2018	407.82	16	363	16	6	7	3	0	3	35	398
Minto Mine South and Parkhill	58	14916.3	2017-2018	6254	41.9	5135	252	83	96	71	0	45	547	5682
Surluga	58	18060	2017-2019	14580	80.7	12686	583	218	184	166	40	95	1286	13972
Cooper	11	1064	2019	526.68	49.5	448	22	5	0	5	7	7	46	494
Total	**130**	**34506.5**		**21768**	**63.1**	**18632**	**873**	**312**	**287**	**245**	**47**	**150**	**1914**	**20546**

Red Pine has demonstrated that:

1) The Jubilee Shear Zone, which hosts all of the inferred resource as identified in the Company's technical report issued in June, 2019 ("National Instrument 43-101 Technical Report for the Wawa Gold Project" prepared by Brian Thomas, P.Geo, Golder Associates Ltd.) is open along strike and at depth. The report indicates Surluga Deposit is a high-grade underground resource with 205,000 ounces at 5.31 g/t in the Indicated category and 396,000 ounces at 5.22 g/t in the Inferred category at a 2.7 g/t cut-off grade (May 31st, 2019).
2) The Minto Mine South Deposit with 25,000 ounces gold at 7.5 g/t in the indicated category and 75,000 ounces at 6.6 g/t in the Inferred category at a 3.5 g/t cut-off

grade (Nov. 7, 2018) is occurred within shallow, narrow, high-grade veins and shears outside of the current Surluga Deposit envelope, and its mineralization remains open in all directions.

The drill hole data for the 130 drill holes of 2017-2019 drilling programs is summarized in Table 10-8 and Figure 10-5.

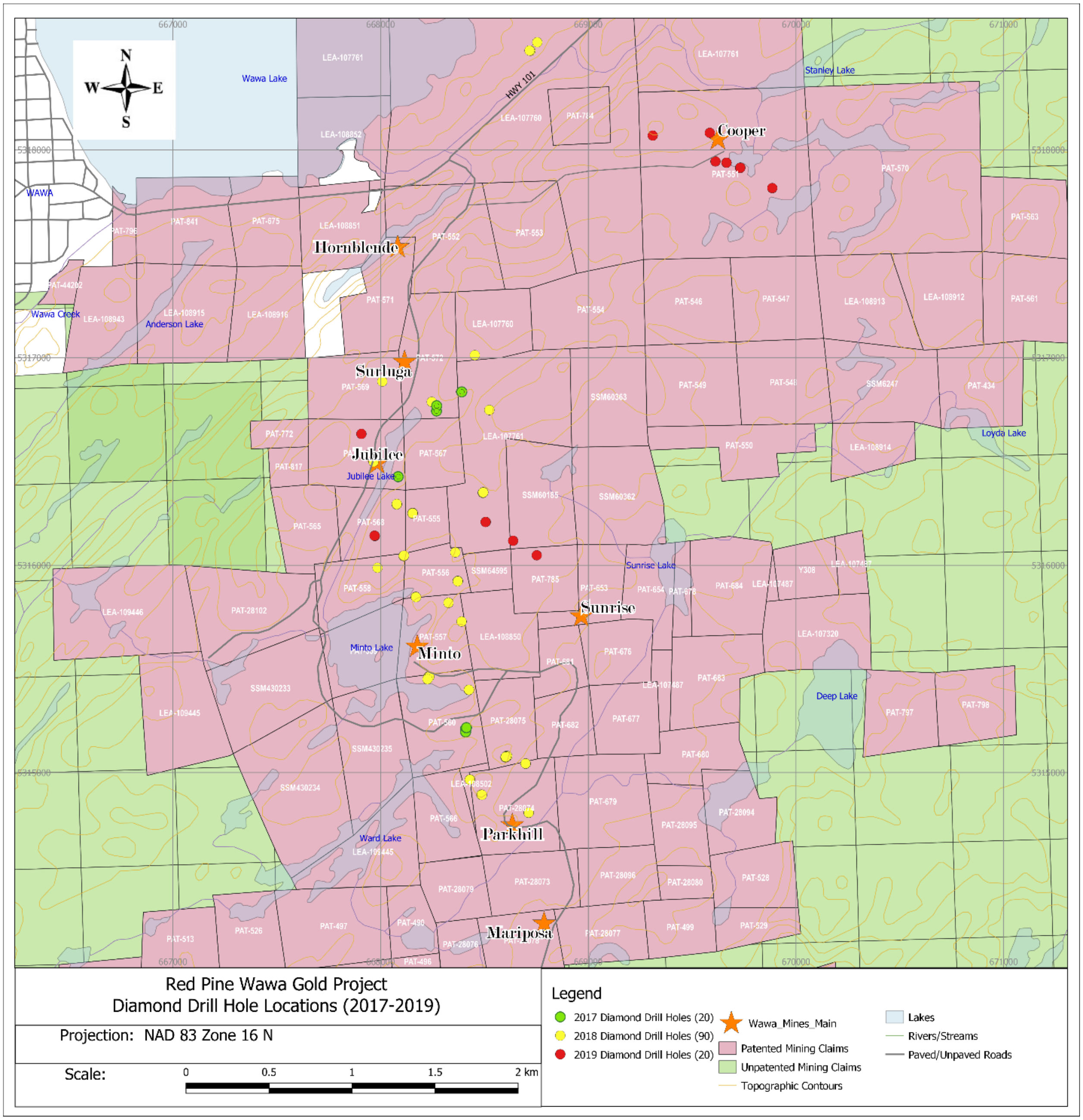


Figure 10-5: Diamond Drill Hole Collar Locations 2017 to 2019

Table 10-8: Summary of the 2017-2019 drilling program and analyzed samples, blanks, and certified reference materials per hole

Hole ID	Depth, m	Dip	AZ	Year Drilled	Sampled Length, m	% Sampled	#Samples Selected	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	CRM&Blanks Total	#Samples Assayed
SD-17-157	370	-50	193.9	2017	240.58	65	191	9	2	5	3	0	1	20	211
SD-17-158	190	-78.3	199.9	2017	50.36	26.5	42	3	0	1	1	0	0	5	47
SD-17-159	223	-56	205	2017	82.44	37	64	2	1	1	2	0	0	6	70
SD-17-160	387	-74.1	311.1	2017	310	80.1	262	12	5	4	3	0	2	26	288
SD-17-161	256	-47	187	2017	122.56	47.9	102	5	1	3	2	0	0	11	113
SD-17-162	225.27	-49.1	158.8	2017	76.29	33.9	58	3	1	2	0	0	0	6	64
SD-17-163	247	-61.7	173.1	2017	217.3	88	192	9	3	3	2	0	2	19	211
SD-17-164	241	-70	131.8	2017	135.76	56.3	117	7	1	3	2	0	1	14	131
SD-17-165	199	-62	122.2	2017	163.56	82.2	137	6	2	3	3	0	0	14	151
SD-17-166	229	-63.2	179	2017	63.46	27.7	54	2	0	2	1	0	0	5	59
SD-17-167	505	-54	305	2017	504.9	100	439	18	7	9	5	0	1	40	479
SD-17-168	130	-56.3	166.1	2017	0	0	0	0	0	0	0	0	0	0	0
SD-17-169	205	-76.1	324.8	2017	123.89	60.4	101	6	3	1	1	0	0	11	112
SD-17-170	271	-50.9	60	2017	255.99	94.5	223	12	4	4	2	0	2	24	247
SD-17-171	229	-63	325	2017	133.98	58.5	104	4	1	2	2	0	1	10	114
SD-17-172	214	-66.1	130.1	2017	144.22	67.4	118	5	2	2	2	0	0	11	129
SD-17-173	472	-53.8	305	2017	468.7	99.3	432	21	8	9	8	0	1	47	479
SD-17-174	250	-79	142	2017	94.39	37.8	76	5	2	1	0	0	1	9	85
SD-17-175	268	-58.8	150	2017	67.05	25	59	1	1	0	1	0	1	4	63
SD-17-176	223	-45.1	205	2017	204.73	91.8	174	8	4	2	3	0	1	18	192
2017 - 20 holes	**5334.27**				**3460.16**	**64.9**	**2945**	**138**	**48**	**57**	**43**	**0**	**14**	**300**	**3245**
SD-18-177	220	-55	168	2018	93.86	42.7	75	5	1	2	1	0	0	9	84
SD-18-178	478	-59	305	2018	474.01	99.2	388	18	7	7	4	0	4	40	428
SD-18-179	235	-69	164	2018	83.07	35.3	73	4	1	1	1	0	0	7	80
RV-18-180	138	-45.1	160.2	2018	135.09	97.9	101	4	1	2	2	0	0	9	110
SD-18-181	31	-84	50	2018	0	0	0	0	0	0	0	0	0	0	0
SD-18-181A	220	-84	50	2018	70.84	32.2	57	3	2	1	1	0	0	7	64
RV-18-182	259.18	-50.1	304.7	2018	256.23	98.9	247	11	5	5	0	0	3	24	271
SD-18-183	271	-78	41	2018	49.05	18.1	39	2	0	1	1	0	0	4	43
SD-18-184	313	-77	95	2018	118.93	38	90	4	1	1	1	0	1	8	98
RV-18-185	69	-44.9	159.6	2018	16.5	23.9	14	1	0	0	1	0	0	2	16
SD-18-186	114	-69.8	179.9	2018	113	99.1	99	5	1	2	1	0	1	10	109
SD-18-187	246	-45.1	284.9	2018	51.18	20.8	45	2	1	1	0	0	1	5	50

Hole ID	Depth, m	Dip	AZ	Year Drilled	Sampled Length, m	% Sampled	#Samples Selected	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	CRM&Blanks Total	#Samples Assayed
SD-18-188	250	-55	292	2018	126.26	50.5	102	6	1	1	2	0	1	11	113
SD-18-189	256	-45	300.1	2018	165.38	64.6	156	8	3	3	1	0	2	17	173
PH-18-190	505	-69	6.1	2018	310.38	61.5	257	12	3	3	3	0	5	26	283
SD-18-191	250	-65	299.6	2018	161.28	64.5	129	6	2	3	2	0	1	14	143
SD-18-192	295	-51	323	2018	118.6	40.2	101	4	1	3	2	0	0	10	111
SD-18-193	277	-61	298	2018	90.98	32.8	72	3	1	1	1	0	1	7	79
SD-18-194	289	-70	300.4	2018	107.45	37.2	84	5	1	2	2	0	0	10	94
SD-18-195	157	-53	172	2018	31.1	19.8	28	3	0	0	0	0	1	4	32
SD-18-196	115	-45	222	2018	29.49	25.6	24	2	0	1	1	0	0	4	28
SD-18-197	355	-84.9	282.1	2018	81.36	22.9	68	3	2	0	1	0	1	7	75
SD-18-198	157	-58	293	2018	61.03	38.9	48	2	1	1	0	0	0	4	52
SD-18-199	154	-80.2	353.7	2018	75.2	48.8	60	3	0	1	0	0	0	4	64
SD-18-200	226	-65	35	2018	65.77	29.1	54	3	1	2	0	0	0	6	60
SD-18-201	140	-45.8	180	2018	54.99	39.3	51	3	0	1	1	0	1	6	57
SD-18-202	268	-64.6	250.8	2018	139.93	52.2	113	5	3	2	1	0	1	12	125
SD-18-203	295	-45	257	2018	93.73	31.8	68	3	1	1	1	0	1	7	75
SD-18-204	256	-56	264	2018	129.44	50.6	104	4	1	2	2	0	0	9	113
SD-18-205	328	-62	324	2018	100.83	30.7	80	4	2	1	1	0	1	9	89
SD-18-206	340	-76	316	2018	121.96	35.9	97	5	2	2	2	0	0	11	108
SD-18-207	304	-59	312	2018	123.76	40.7	102	4	1	2	2	0	1	10	112
SD-18-208	223	-75	247	2018	219.4	98.4	183	8	2	4	2	0	1	17	200
SD-18-209	205	-45	247	2018	81.43	39.7	67	3	1	1	1	0	1	7	74
SD-18-210	196	-54	244	2018	192.66	98.3	153	7	2	3	2	0	1	15	168
SD-18-211	223	-54.1	191.2	2018	62.62	28.1	52	2	0	1	1	0	1	5	57
SD-18-212	313	-45.3	165	2018	146.28	46.7	128	6	2	2	2	0	2	14	142
SD-18-213	289	-45.3	219.9	2018	138.67	48	118	7	3	3	1	0	3	17	135
SD-18-214	289	-55.8	231.2	2018	101.39	35.1	80	3	2	1	1	0	1	8	88
SD-18-215	286	-50.9	249.9	2018	105.22	36.8	87	5	1	2	1	0	2	11	98
SD-18-216	331	-72.2	331.7	2018	166.4	50.3	133	6	3	2	2	0	1	14	147
SD-18-217	331	-66.1	322.3	2018	131.64	39.8	104	4	2	1	2	0	1	10	114
SD-18-218	352	-53.1	322.2	2018	100.03	28.4	83	5	1	3	1	0	1	11	94
SD-18-219	277	-76.7	285.8	2018	130.62	47.2	104	3	2	2	3	0	0	10	114
SD-18-220	274	-68.4	290.5	2018	98.21	35.8	82	5	1	1	1	0	1	9	91
SD-18-221	262	-61.3	279.3	2018	81.59	31.1	69	3	1	2	1	0	0	7	76
SD-18-222	325	-81.1	179.4	2018	222.2	68.4	201	12	6	3	0	0	3	24	225

Hole ID	Depth, m	Dip	AZ	Year Drilled	Sampled Length, m	% Sampled	#Samples Selected	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	CRM&Blanks Total	#Samples Assayed
SD-18-223	349	-46.3	226.1	2018	166.97	47.8	130	6	3	2	2	0	1	14	144
SD-18-224	259	-65.8	210	2018	91.84	35.5	78	4	2	2	1	0	0	9	87
SD-18-225	337	-81.9	276.2	2018	162.41	48.2	124	6	1	3	2	0	1	13	137
SD-18-226	319	-72	206	2018	150.32	47.1	129	7	3	2	2	0	1	15	144
SD-18-227	277	-54.2	219	2018	98.04	35.4	77	4	2	1	1	0	0	8	85
SD-18-228	328	-50	308	2018	267.48	81.5	221	9	3	5	3	0	1	21	242
SD-18-229	313	-63.1	313.9	2018	251.73	80.4	212	9	4	4	3	0	0	20	232
SD-18-230	316	-74.3	314.1	2018	233.15	73.8	197	10	4	4	2	0	1	21	218
SD-18-231	352	-46.1	327	2018	257.78	73.2	213	8	5	2	4	0	1	20	233
SD-18-232	364	-50	339	2018	272.01	74.7	219	11	4	5	2	0	1	23	242
SD-18-233	343	-58	341	2018	292.53	85.3	248	12	5	4	3	0	2	26	274
SD-18-234	319	-63.6	272.1	2018	291.59	91.4	251	11	5	4	4	0	1	25	276
SD-18-235	346	-60	248.1	2018	287.51	83.1	246	11	4	4	3	0	2	24	270
SD-18-236	376	-51.8	233.9	2018	304.45	81	267	12	5	4	1	0	4	26	293
SD-18-237	343	-64.7	249	2018	193.78	56.5	172	9	3	4	2	0	1	19	191
SD-18-238	313	-63.2	232.8	2018	211.45	67.6	183	7	2	4	2	0	1	16	199
SD-18-239	289	-51.2	256.7	2018	230.95	79.9	200	9	4	3	4	0	0	20	220
SD-18-240	232	-62.9	339.7	2018	152.12	65.6	129	5	3	1	1	0	1	11	140
SD-18-241	214	-78.1	343.9	2018	108.71	50.8	99	7	1	3	0	0	2	13	112
SD-18-242	226	-56.1	353	2018	183.24	81.1	159	7	4	2	1	0	1	15	174
SD-18-243	10	-72	170.4	2018	0	0	0	0	0	0	0	0	0	0	0
SD-18-243A	265	-72	175.1	2018	176.76	66.7	161	7	3	3	1	0	2	16	177
SD-18-244	220	-65.9	214.3	2018	167.12	76	145	6	3	3	2	0	0	14	159
SD-18-245	136	-56.5	260.2	2018	89.06	65.5	72	4	2	1	1	0	0	8	80
SD-18-246	154	-49.1	218.3	2018	60.26	39.1	54	1	0	2	1	0	0	4	58
SD-18-247	325	-78.2	226.8	2018	181.95	56	164	7	2	4	1	0	3	17	181
SD-18-248	160	-73.8	19.9	2018	97.26	60.8	80	5	1	1	1	0	1	9	89
SD-18-249	250	-64	358.7	2018	119.48	47.8	98	5	2	1	2	0	1	11	109
SD-18-250	409	-78	289	2018	379.92	92.9	352	16	6	7	0	0	6	35	387
SD-18-251	232	-61	323.2	2018	157.13	67.7	128	5	2	3	1	0	1	12	140
SD-18-252	238	-75.9	306	2018	200.45	84.2	177	8	3	4	2	0	1	18	195
SD-18-253	449	-59.1	357.9	2018	354.28	78.9	315	14	4	7	3	0	3	31	346
SD-18-254	211	-52.8	279.3	2018	196.77	93.3	168	8	4	2	2	0	1	17	185
SD-18-255	214	-49.1	248.8	2018	136.24	63.7	123	7	1	2	2	0	1	13	136
SD-18-256	367	-52.8	334.9	2018	266.55	72.6	225	10	5	4	3	0	1	23	248

Hole ID	Depth, m	Dip	AZ	Year Drilled	Sampled Length, m	% Sampled	#Samples Selected	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	CRM&Blanks Total	#Samples Assayed
SD-18-257	181	-66.2	202.9	2018	114.8	63.4	101	5	3	1	1	0	1	11	112
SD-18-258	307	-77.1	313.2	2018	298.72	97.3	267	12	4	5	3	0	3	27	294
SD-18-259	364	-67.2	357	2018	313.26	86.1	260	12	5	3	4	1	1	26	286
SD-18-260	460	-72.1	315	2018	424.94	92.4	344	15	5	7	6	0	1	34	378
SD-18-261	397	-59.9	344	2018	314.26	79.2	260	12	6	3	5	0	1	27	287
SD-18-262	403	-62.2	5	2018	298.86	74.2	261	13	3	6	4	0	2	28	289
SD-18-263	397	-51	239.9	2018	323.94	81.6	291	13	6	6	4	0	1	30	321
SD-18-264	472	-55.2	291.9	2018	446.4	94.6	402	20	7	6	4	0	9	46	448
2018 - 90 holes	**24823.2**				**14955.51**	**60.2**	**12672**	**595**	**219**	**230**	**155**	**1**	**108**	**1308**	**13980**
CG-19-265	79	-45	279.8	2019	47.02	59.5	42	1	0	0	0	0	1	2	44
CG-19-266	79	-44.9	270	2019	44.33	56.1	38	2	0	0	1	1	1	5	43
CG-19-267	88	-65	100	2019	52.41	59.6	42	2	0	0	0	1	1	4	46
CG-19-268	121	-54.2	4.9	2019	72.4	59.8	69	4	1	0	1	1	1	8	77
CG-19-269	82	-56	326.2	2019	36.82	44.9	33	2	0	0	1	1	1	5	38
CG-19-270	76	-55.1	200.3	2019	23.29	30.6	18	1	0	0	0	0	0	1	19
CG-19-271	166	-52.7	15.2	2019	54.96	33.1	46	1	2	0	0	0	0	3	49
CG-19-272	76	-45	199.8	2019	45.65	60.1	40	2	0	0	1	0	1	4	44
CG-19-273	82	-44.8	306	2019	48.82	59.5	38	3	0	0	0	2	0	5	43
CG-19-274	136	-45.2	165	2019	57.6	42.4	47	3	1	0	0	0	1	5	52
CG-19-275	79	-45.1	272.1	2019	43.38	54.9	35	1	1	0	1	1	0	4	39
SD-19-276	376	-58.2	303.9	2019	338.8	90.1	317	14	5	0	6	4	4	33	350
SD-19-277	403	-57	305	2019	302.84	75.1	293	12	4	0	5	5	1	27	320
SD-19-278	199	-45.1	345	2019	156.28	78.5	138	7	3	0	3	2	0	15	153
SD-19-279	172	-80.3	169.8	2019	136.13	79.1	115	5	2	0	2	1	1	11	126
SD-19-280	190	-45.3	280	2019	135.03	71.1	123	5	1	0	1	2	2	11	134
SD-19-281	415	-69.1	346	2019	366.64	88.3	330	15	5	0	5	5	3	33	363
SD-19-282	454	-80.9	239.8	2019	406.23	89.5	373	19	6	0	5	6	4	40	413
SD-19-283	502	-76.1	305	2019	463.81	92.4	404	19	6	0	7	6	3	41	445
SD-19-284	574	-70.2	301	2019	520.16	90.6	474	22	8	0	8	8	3	49	523
2019 - 20 holes	**4349**				**3352.6**	**77.1**	**3015**	**140**	**45**	**0**	**47**	**46**	**28**	**306**	**3321**
Total - 130 holes	**34506.5**				**21768.27**	**63.1**	**18632**	**873**	**312**	**287**	**245**	**47**	**150**	**1914**	**20546**

*Refer to Table 10-2 for a summary of Red Pine’s 2017-2019 claim ID’s and associated drill holes and Table 10-4 for a summary of hole attributes

10.4.1 Surluga Deposit North Drilling

Three drill holes RV-18-180, RV-18-182, and RV-18-185 were drilled almost 1 kilometer north of the Surluga Deposit to test the Wawa Gold Corridor north of highway 101 in the extension of the intersections in SD-16-43, and also to test the down-dip extension of the network of quartz veins forming the Root Stockwork sampled in 2016. The drill hole data can be found in Table 10-4. The results demonstrated the potential to expand the gold resource at the Wawa Gold Project. These holes confirmed continuity of the Hornblende Shear Zone to the North with a maximum 25.6 g/t gold over 0.79 cm, and extension of the Root Stockwork with the best gold result grading 1.91 g/t. Sample information summarised in Table 10-9. Table 10-10 includes a summary of highlights for the pointed above holes. Figure 10-6 represents drill hole locations. All assay results can be found in Appendix XXV.

Table 10-9: Summary of Sample Information on North Drilling Holes

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
RV-18-180	138	135.09	97.9	101	9	110
RV-18-182	259.18	256.23	98.9	248	24	272
RV-18-185	69	16.5	23.9	14	2	16
Total - 3 holes	**466.18**	**407.82**	**87.5**	**363**	**35**	**398**

*Refer to Table 10-9 for sample details per hole and to Table 10-4 for hole attributes

*Refer to Table 10-2 for a summary of Red Pine's 2019 claim ID's and associated drill holes.

Table 10-10: Surluga Deposit North Drilling Highlights

Hole ID	From (m)	To (m)	Length (m)	Au >0.5 g/t	Gold Zone
RV-18-182	128.97	130	1.03	1.58	Shear Zone
RV-18-182	202.75	203.85	1.1	0.579	Hornblende Shear Zone
RV-18-182	232.96	233.75	0.79	25.6	Hornblende Shear Zone
RV-18-182	252	253	1	0.656	Stringer Zone
RV-18-185	45	46	1	1.91	Root Vein Stockwork

**Intervals listed here do not represent true thickness.*

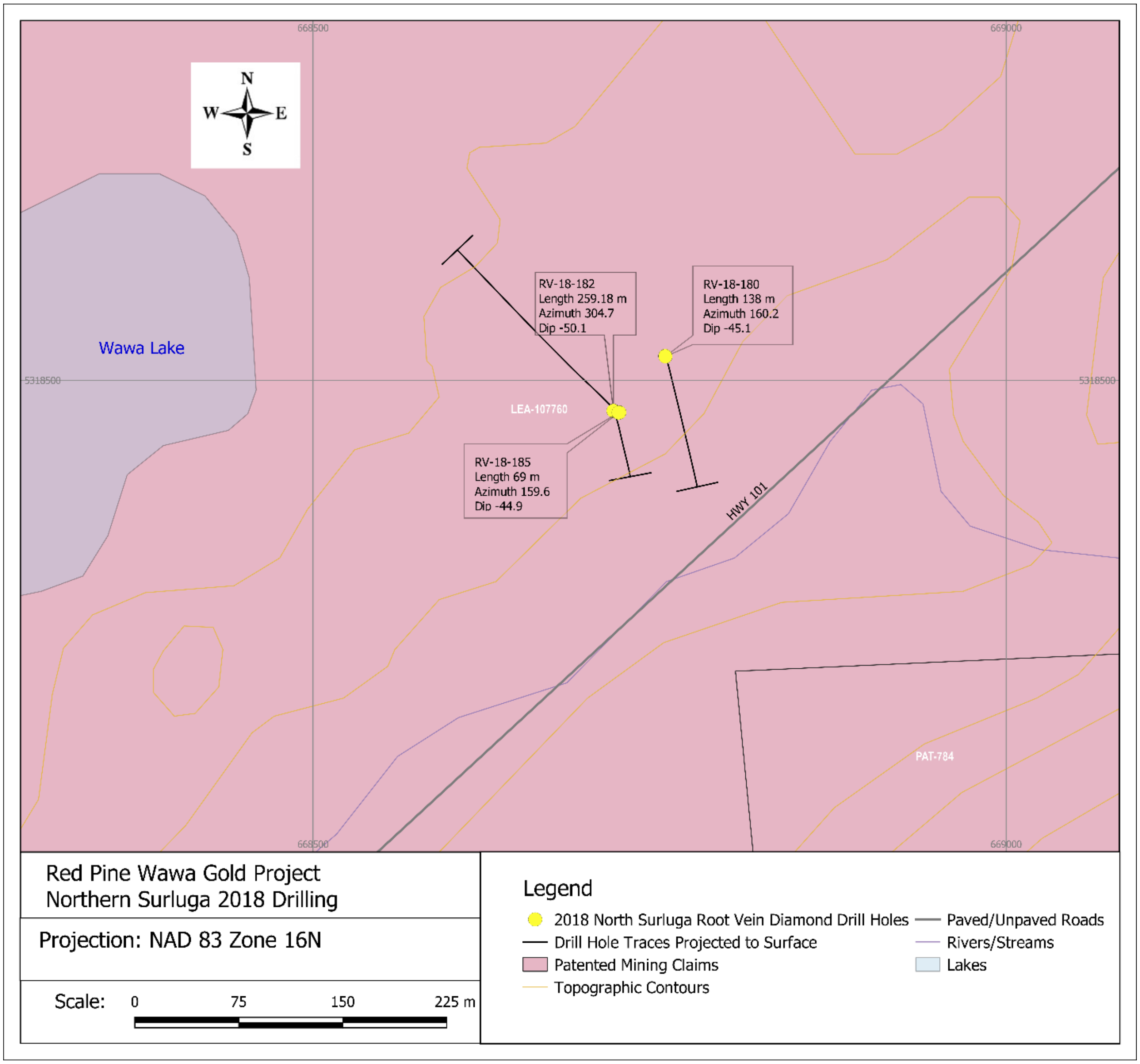


Figure 10-6: Northern Surluga 2018 Drilling

10.4.2 Surluga Deposit Drilling

2017-2019 drilling programs were focused on the hanging and foot walls of the Surluga deposit which include the Jubilee Shear Zone, Minto B Shear Zone, Surluga Road Shear Zone, Hornblende Shear Zone, William Zone with the main purpose to infill gaps among mineral resource blocks, and extend drilling on un-explored areas. A total of 58 holes for 18,060 meters of drilling was completed at the Surluga Deposit with the aim to shift the deposit from a lower -grade open pit to a higher-grade underground resource. The drill hole data can be found in Table 10-4 and Figure 10-8.

The programs were successful at intersecting mineralized zones where gaps existed in historic drilling and in recent mineral resource modeling. Several new discoveries were made along with filling the gaps in drill spacing.

These programs were helpful for better understanding of the geological controls of the high-grade mineralization in the Wawa Gold Corridor. As a result, it was recognized the one possible event of syn-magmatic mineralization pre-dating the orogenic period and three events of orogenic gold mineralization (Figure 10-7) which include:

Syn-magmatic: Porphyry or IRGS-like mineralization;

Syn-Jubilee deformation: 1) Darwin-Grace episode; 2) Peak Jubilee Shear Zone - deformation episode; 3) Minto-like mineralization.

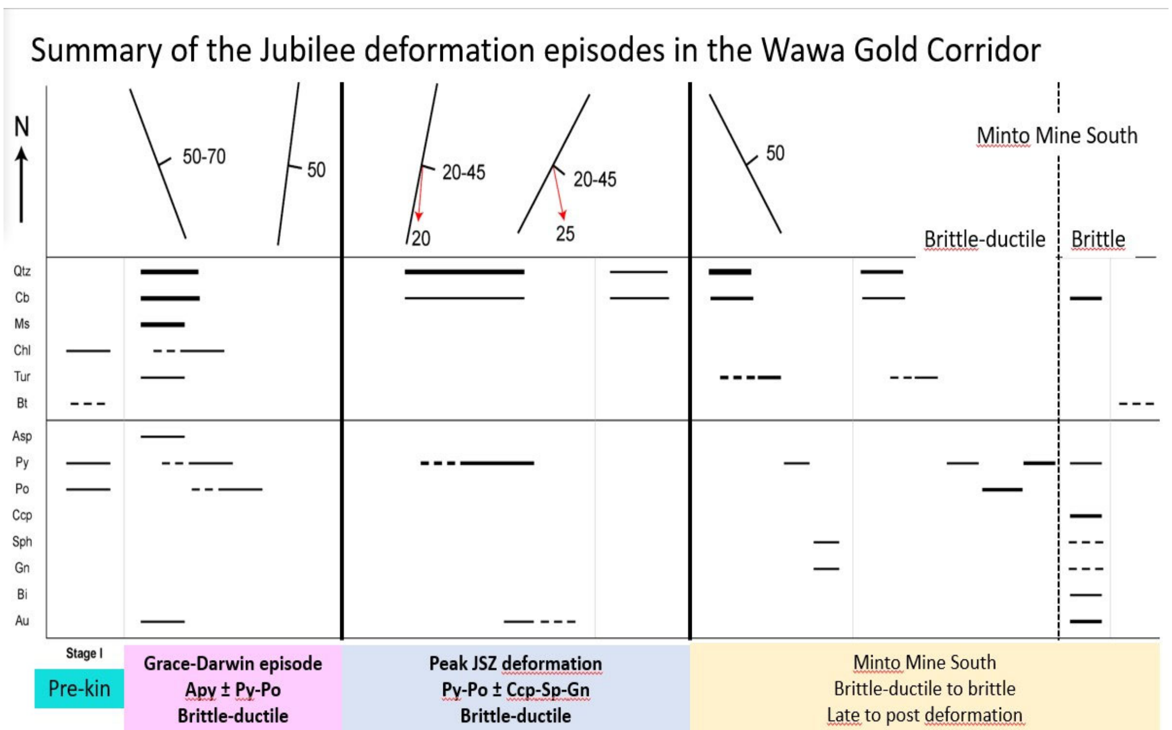


Figure 10-7: Summary of the Jubilee deformation episodes in the Wawa Gold Corridor

Summary of sample information is provided in Table 10-11. A summary of highlights from the northern Surluga drilling in the Jubilee Shear Zone is included in Table 10-6.

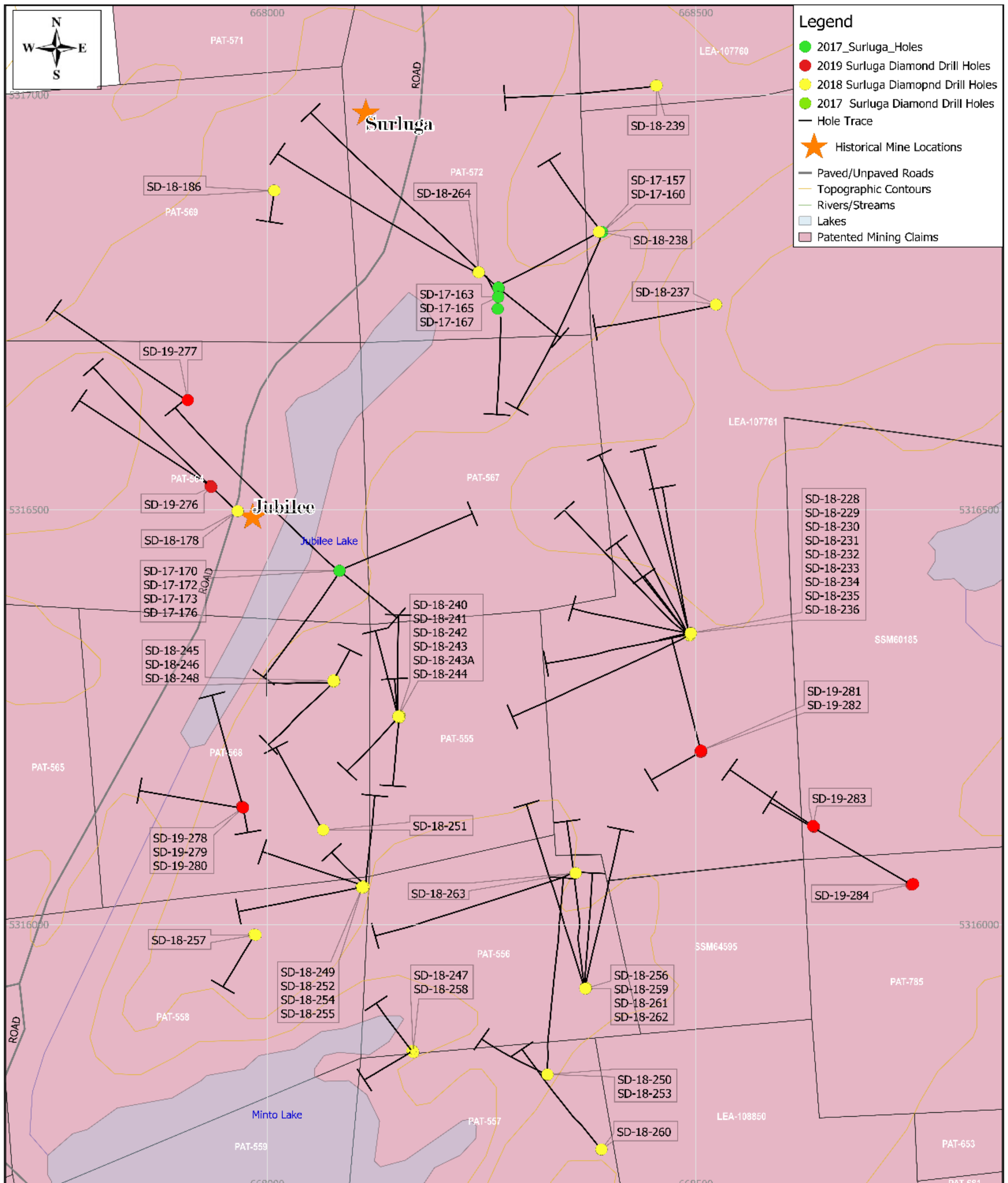
Table 10-11: Summary of Sample Information on Surluga Deposit Drilling Holes

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
SD-17-157	370	240.58	65	192	20	212
SD-17-160	387	310	80.1	262	26	288
SD-17-163	247	217.3	88	192	19	211
SD-17-165	199	163.56	82.2	137	14	151
SD-17-167	505	504.9	100	439	40	479
SD-17-170	271	255.99	94.5	223	24	247
SD-17-172	214	144.22	67.4	118	11	129
SD-17-173	472	468.7	99.3	432	47	479
SD-17-176	223	204.73	91.8	174	18	192
2017 - 9 holes	**2888**	**2509.98**	**86.9**	**2169**	**219**	**2388**
SD-18-178	478	474.01	99.2	388	40	428
SD-18-186	114	113	99.1	99	10	109
SD-18-228	328	267.48	81.5	221	21	242
SD-18-229	313	251.73	80.4	212	20	232
SD-18-230	316	233.15	73.8	197	21	218
SD-18-231	352	257.78	73.2	213	20	233
SD-18-232	364	272.01	74.7	219	23	242
SD-18-233	343	292.53	85.3	248	26	274
SD-18-234	319	291.59	91.4	251	25	276
SD-18-235	346	287.51	83.1	246	24	270
SD-18-236	376	304.45	81	267	26	293
SD-18-237	343	193.78	56.5	172	19	191
SD-18-238	313	211.45	67.6	183	16	199
SD-18-239	289	230.95	79.9	200	20	220
SD-18-240	232	152.12	65.6	129	11	140
SD-18-241	214	108.71	50.8	99	13	112
SD-18-242	226	183.24	81.1	159	15	174
SD-18-243	10	0	0	0	0	0
SD-18-243A	265	176.76	66.7	161	16	177
SD-18-244	220	167.12	76	145	14	159
SD-18-245	136	89.06	65.5	72	8	80
SD-18-246	154	60.26	39.1	54	4	58

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
SD-18-247	325	181.95	56	164	17	181
SD-18-248	160	97.26	60.8	80	9	89
SD-18-249	250	119.48	47.8	98	11	109
SD-18-250	409	379.92	92.9	352	35	387
SD-18-251	232	157.13	67.7	128	12	140
SD-18-252	238	200.45	84.2	177	18	195
SD-18-253	449	354.28	78.9	315	31	346
SD-18-254	211	196.77	93.3	168	17	185
SD-18-255	214	136.24	63.7	123	13	136
SD-18-256	367	266.55	72.6	225	23	248
SD-18-257	181	114.8	63.4	101	11	112
SD-18-258	307	298.72	97.3	267	27	294
SD-18-259	364	313.26	86.1	260	26	286
SD-18-260	460	424.94	92.4	344	34	378
SD-18-261	397	314.26	79.2	260	27	287
SD-18-262	403	298.86	74.2	261	28	289
SD-18-263	397	323.94	81.6	291	30	321
SD-18-264	472	446.4	94.6	402	46	448
2018 - 40 holes	**11887**	**9243.9**	**77.8**	**7951**	**807**	**8758**
SD-19-276	376	338.8	90.1	317	33	350
SD-19-277	403	302.84	75.1	293	27	320
SD-19-278	199	156.28	78.5	138	15	153
SD-19-279	172	136.13	79.1	115	11	126
SD-19-280	190	135.03	71.1	123	11	134
SD-19-281	415	366.64	88.3	330	33	363
SD-19-282	454	406.23	89.5	373	40	413
SD-19-283	502	463.81	92.4	404	41	445
SD-19-284	574	520.16	90.6	474	49	523
2019 - 9 holes	**3285**	**2825.92**	**86**	**2567**	**260**	**2827**
Total - 58 holes	**18060**	**14579.8**	**80.7**	**12687**	**1286**	**13973**

*Refer to Table 10-9 for sample details per hole and to Table 10-4 for hole attributes

*Refer to Table 10-2 for a summary of Red Pine's 2019 claim ID's and associated drill holes.



Red Pine Wawa Gold Project
Surluga Deposit 2017-2019 Drilling

Projections: NAD 83 Zone 16 N

Scale: 0 100 200 m

Hole Attributes

Hole ID	Length (m)	Dip	Azimuth
SD-17-157	370	-50	193.9
SD-17-160	387	-74.1	311.1
SD-17-163	247	-61.7	173.1
SD-17-165	199	-62	122.2
SD-17-167	505	-54	305
SD-17-170	271	-50.9	60
SD-17-172	214	-66.1	130.1
SD-17-173	472	-53.8	305
SD-17-176	223	-45.1	205
SD-18-178	478	-59	305
SD-18-186	114	-69.8	179.9
SD-18-228	328	-50	308
SD-18-229	313	-63.1	313.9
SD-18-230	316	-74.3	314.1
SD-18-231	352	-46.1	327
SD-18-232	364	-50	339
SD-18-233	343	-58	341
SD-18-234	319	-63.6	272.1
SD-18-235	346	-60	248.1
SD-18-236	376	-51.8	233.9
SD-18-237	343	-64.7	249
SD-18-238	313	-63.2	232.8
SD-18-239	289	-51.2	256.7
SD-18-240	232	-62.9	339.7
SD-18-241	214	-78.1	343.9
SD-18-242	226	-56.1	353
SD-18-243	10	-72	170.4
SD-18-243A	265	-72	175.1
SD-18-244	220	-65.9	214.3
SD-18-245	136	-56.5	260.2
SD-18-246	154	-49.1	218.3
SD-18-247	325	-78.2	226.8
SD-18-248	160	-73.8	19.9
SD-18-249	250	-64	358.7
SD-18-250	409	-78	289
SD-18-251	232	-61	323.2
SD-18-252	238	-75.9	306
SD-18-253	449	-59.1	357.9
SD-18-254	211	-52.8	279.3
SD-18-255	214	-49.1	248.8
SD-18-256	367	-52.8	334.9
SD-18-257	181	-66.2	202.9
SD-18-258	307	-77.1	313.2
SD-18-259	364	-67.2	357
SD-18-260	460	-72.1	315
SD-18-261	397	-59.9	344
SD-18-262	403	-62.2	5
SD-18-263	397	-51	239.9
SD-18-264	472	-55.2	291.9
SD-19-276	376	-58.2	303.9
SD-19-277	403	-57	305
SD-19-278	199	-45.1	345
SD-19-279	172	-80.3	169.8
SD-19-280	190	-45.3	280
SD-19-281	415	-69.1	346
SD-19-282	454	-80.9	239.8
SD-19-283	502	-76.1	305
SD-19-284	574	-70.2	301

Figure 10-8: Surluga Deposit 2017-2019 Drilling

Jubilee Shear Zone

The Jubilee Shear Zone is the largest zone of mineralization traced so far on the Wawa Gold Property. The known strike length of the Jubilee Shear Zone extends over at least 5.5 kilometres and the interpretation of Red Pine's 2017 magneto-telluric survey shows that the structure extends beyond 2 kilometres below surface.

The current resource in the Jubilee Shear Zone is entirely from surface and 350 metres below surface over a strike length of approximately 1.7 kilometres. Channel sampling and diamond drilling has shown that the southern extension of the Jubilee Shear Zone is gold-bearing and has good exploration potential.

The geometry of the high-grade zones in the Surluga Deposit are controlled by a south-south-east trending strong linear tectonic fabric that includes generated zones of high-grade gold mineralization. These zones of higher-grade gold can be extended longitudinally over hundreds of meters. The historic drilling pattern of the deposit has left gaps where additional high-grade mineralization may be found and as such, these gaps were designed and drilled to optimize this.

Drilling results support the potential for the Surluga Deposit to host a higher-grade gold resource, accessible using the existing underground developments of the Surluga Mine. Also, these results confirmed that additional gold zones exist below the Jubilee Shear Zone and that higher-grade mineralization has been found in those gold zones.

Significant zones of high-grade gold mineralization intersected in the Jubilee Shear Zone include:

- New high-grade zones discovered in the Surluga Deposit that include 3.7 g/t gold over 34.6 metres (true width) in SD-18-243A and 10.6 g/t gold over 12.7 metres in SD-18-255
- New structure containing 2 g/t gold over 11.28 metres in the hole SD-19-283, including 6.13 g/t gold over 3.15 metres discovered east of the Jubilee Shear Zone
- New structure containing 4.72 g/t gold over 2.77 metres (SD-19-277) discovered between the Jubilee and the Hornblende Shear Zone
- 5.21 g/t gold over 1 meter intersected in the down-dip extension of the Jubilee Shear Zone (SD-19-282)
- 7.74 g/t gold over 2.9 m core length in SD-17-172 the Jubilee Shear Zone

Hornblende Shear Zone

The Hornblende Shear Zone is located below the Jubilee Shear Zone and was accessed in the seventh level of the historic Surluga Mine. The main tectonic foliations and stretching lineations observed in the Hornblende Shear Zone parallel the main tectonic fabric observed in the Jubilee Shear Zone, indicating that the two structures are part of the same deformation system. Red Pine's work and historic mapping indicate that the Hornblende Shear Zone is an important structure on the property and was traced north of the Parkhill fault over at least 2 kilometers. The thickness of the Hornblende Shear Zone varies from 4 to 40 meters. This includes broad high grade mineralization zones, often associated with rich arsenopyrite, and also gold mineralization in many of the satellite shear zones located between the Jubilee and the Hornblende Shear Zones.

Significant zones of gold mineralization were intersected in the following holes:

- New higher-grade zone containing 5.13 g/t gold over 1.8 metres discovered in the Hornblende Shear Zone in the diamond drill hole SD-19-277
- The Hornblende Shear Zone had widely distributed intervals with 1 to 3 g/t gold, such as 0.7 g/t gold over 30 m core length in the hole SD-19-277 with maximum 1.31 g/t gold over 0.87 m; 1.35 g/t gold over 1.93 m core length in the hole SD-19-276; 1.58 g/t gold over 2.49 m in the hole SD-19-264; and also 2.6 g/t gold over 1.93 m in the hole SD-19-178
- RV-18-282 confirmed Hornblende Shear Zone continues 1 kilometer north of the Surluga Deposit with 25.6 g/t gold over 0.79 m core length
- SD-17-167 contains 2.00 g/t gold over 4.6 meters within 1.09 g/t gold over 10.9 meters in the Hornblende Shear Zone

Minto B Shear Zone

The Minto B Shear Zone is located above the Jubilee Shear Zone. This structure is currently traced over a strike length of 1km and exhibits a variable thickness ranging from 4 to 20 m. It is sub-vertical and intersects the Jubilee Shear Zone approximately 225 to 250m below surface. It is locally accessible by the underground development of the historic Surluga Mine.

During 2017-2019 drilling programs, additional zones of mineralization in the Minto B Shear Zone were discovered:

- 1.1 g/t gold over 51.4 m core length in the diamond drill hole SD-18-247, and 2.1 g/t gold over 10.6 m core length in the hole SD-18-256.
- Gold mineralization in the Minto B Shear Zone extended with the intersection of 3.06 g/t gold over 2.02 metres and 1.88 g/t gold over 3.52 metres by the diamond drill hole SD-18-282.

William

Discovered through 2015 drilling program, the William Zone is located bellow the Jubilee Shear Zone. This zone is associated with the combination of weak foliation, and strong hydrothermal replacement in which gold is spatially associated with finely disseminated sulfides forming lenses/envelops, and commonly in variable thickness. Several zones of gold mineralization were intersected in some holes drilled in 2017 and 2018:

- 1.58 g/t gold over 1 m core length in the diamond drill hole SD-17-167;
- 2.07 g/t gold over 0.83 m in the hole SD-17-173;
- In the hole SD-17-178 a wide William zone was intersected such as 0.75 g/t gold over 12.6 m core length including 7.05 g/t over 1.1 m; and 0.58 g/t gold over 39.5 m core length including 12.76 g/t over 1.1m.

Surluga Road Shear Zone

The Surluga Road Shear Zone is located bellow the Jubilee Shear Zoneand characterized by a slightly decreased strain and alteration intensity. Intersections of high-grade gold within the current resource envelope of the Surluga Deposit in Surluga Road Shear Zone are in the list below:

- Hole SD-18-238 contains 5.31 g/t gold over 1.74 meters (true width);
- Hole SD-18-240 contains 5.88 g/t gold over 0.93 meters core length;
- Hole SD-18-242 contains 2.15 g/t gold over 0.97 meters core length;
- Hole SD-17-173 contains 4.88 g/t gold over 1.01 m core length.

All highlights with Au>5.0 g/t from these proximal gold zones can be found in Table 10-6 and full assay results in Appendix XXV.

2017-2019 drilling programs were focusing to convert the exploration targets into mineral resources. As a result of successful implementation of the drilling programs, in June 2019 an updated Mineral Resource estimate was completed by Golder Associates Ltd. Representative Brian Thomas, a Qualified Person, P.Geo. The new Mineral

Resource estimate was evaluated for an underground mining scenario and is reported at a 2.7 g/t cut-off within a 2 g/t envelope, and now stands at 1,202,000 tonnes at 5.31 g/t for 205,000 ounces gold in the Indicated category and 2,362,000 tonnes at 5.22 g/t for 396,000 ounces gold in the Inferred category.

The Mineral Resource estimate of the Surluga deposit was prepared in accordance with National Instrument (NI) 43-101 and following the requirements of Form 43-101F1. All estimates follow the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines (November 2003).

A Qualified Person personal site inspection of the Wawa Gold Project was conducted between March 21, 2019 – March 22, 2019, in order to observe site conditions, review geological data collection and Quality Assurance and Quality/Control (QA/QC) procedures and results, confirm drill collar locations, and complete verification sampling of drill core.

Table 10-12 reports the Indicated and Inferred Mineral Resources for the Surluga Project, and Table 10-13 summarizes the sensitivity relative to other mining cut-offs. Mineral Resources for Surluga were evaluated for mining continuity by reporting within a 2 g/t reporting envelope.

Table 10-12: Surluga Mineral Resource Estimate (Effective Date May 31, 2019)

Resource Category	**Tonnes (000)**	**Gold Grade (g/t)**	**Contained Gold (000 Ounces)**
Indicated	1,202	5.31	205
Total Indicated	**1,202**	**5.31**	**205**
Inferred	2,362	5.22	396
Total Inferred	**2,362**	**5.22**	**396**

Notes:

- All Mineral Resources are reported at a 2.7 g/t gold cut-off from within a 2 g/t envelope.

- A 2.7 g/t cut-off is supported for potential underground long hole mining by the following economic assumptions: Gold Price: $1,200 USD, Foreign exchange rate: $CA/$US75, Gold Recovery: 90%, Operating Expense (OPEX): CAD $125 / tonne ($85 mining, $25 milling, $15 G&A).
- Tonnage estimates are rounded to the nearest 1,000 tonnes.
- g/t – grams per tonne.
-

Table 10-13: Surluga Cut-off Sensitivity Comparison

	Indicated Category			**Inferred Category**		
Gold Cut-off Grade (g/t)	**Tonnes (000)**	**Gold Grade (g/t)**	**Contained Gold (000 Ounces)**	**Tonnes (000)**	**Gold Grade (g/t)**	**Contained Gold (000 Ounces)**
2.0	1,654	4.50	239	3,533	4.26	484
2.5	1,323	5.06	215	2,666	4.92	422
2.7	**1,202**	**5.31**	**205**	**2,362**	**5.22**	**396**
3.0	1,043	5.68	191	1,981	5.67	361
3.5	829	6.31	168	1,507	6.44	312
4.0	669	6.93	149	1,175	7.21	272

Notes:

- Official Mineral Resource estimate highlighted in bold.
- Tonnage estimates are rounded to the nearest 1,000 tonnes.
- g/t – grams per tonne.

10.4.3 Minto Mine South Zone

In total, 14 916.27 m of diamond drilling were completed (58 holes) on the Minto Project between November 2017 and July 2018 with the objective of delineating an underground resource in the Minto Mine South Zone. A plan map (Figure 10-9) of these holes is shown below, hole details can be found in Table 10-4. Based on a completed drilling program Red Pine was able to complete the resource estimation.

In 2018 Golder Associates Ltd. (Golder) was retained to perform an estimation of the mineral resources for the Minto Mine South Project for Red Pine, in accordance with National Instrument 43-101 (NI 43-101). Golder's mineral resource estimates were completed in a CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. The resource estimate was completed by Brian Thomas, P.Geo, an independent Qualified Person (QP), as defined in NI 43-101.

Table 10-14 reports the Indicated and Inferred Mineral Resources for the Minto Mine South Project, and Table 10-15 summarizes the sensitivities relative to other cut-offs. The mineral resources is reported at a 3.5 g/t break-even mining cut-off grade, and classified according to Canadian Institute of Mining, Metallurgy, and Petroleum ("CIM") Definition Standards for Mineral Resources and Mineral Reserves (May 2014). The effective date of this Resource Estimate is November 7, 2018.

Table 10-14: Minto Mine South Resource Estimate (Effective Date November 7, 2018)

Resource Category	Quantity (tonnes)	Grade (g/t Au)	Contained Gold (Troy Ounces)
Indicated	105,000	7.5	25,000
Total Indicated	**105,000**	**7.5**	**25,000**
Inferred	354,000	6.6	75,000
Total Inferred	**354,000**	**6.6**	**75,000**

- There is no certainty that all, or any, part of this Mineral Resource will be converted into Mineral Reserve. Inferred Resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves.
- High-grade assays capped to 35 g/t gold;
- Tonnage estimates are rounded to the nearest 1,000 tonnes;
- A 3.5 g/t cut-off is supported by the following economic assumptions: Gold Price: $1,200 USD, Gold Recovery: 90%, Operating Expense (OPEX): CAD $160 / tonne ($120 mining, $25 milling, $15 G&A)
- Areas of historical mining from the Minto Mine were excluded from the block model.

Table 10-15: Minto Mine South Cut-off Sensitivity Comparison

	Indicated Classification			Inferred Classification		
Cut-off Grade (g/t Au)	**Quantity (tonnes)**	**Grade (g/t Au)**	**Contained Gold (ounces)**	**Quantity (tonnes)**	**Grade (g/t Au)**	**Contained Gold (ounces)**
2.5	142,000	6.3	29,000	496,000	5.6	89,000
3.0	123,000	6.9	27,000	426,000	6.0	83,000
3.5	**105,000**	**7.5**	**25,000**	**354,000**	**6.6**	**75,000**
4.0	92,000	8.0	24,000	303,000	7.1	69,000
4.5	81,000	8.5	22,000	260,000	7.5	63,000
5.0	71,000	9.1	21,000	225,000	8.0	58,000

- Official resource highlighted in bold.
- Tonnage estimates are rounded to the nearest 1,000 tonnes.

The Minto Mine South Zone is comprised of several gold bearing structures south of the historic Minto mine. These zones include the Minto A vein, the Minto E vein, Minto Lower/ Parkhill #4 Shear Zone, Minto Stockwork, and Parkhill Shear Zone. 58 holes were completed to test these zones. A plan map (Figure 10-9) of these holes is shown below, summary of sampling is in Table 10-16, and assay results highlights are in Tables 10-6, while a full list of assays can be found in Appendix XXV.

Table 10-16: Summary of Sample Information on Minto Mine South Drilling Holes

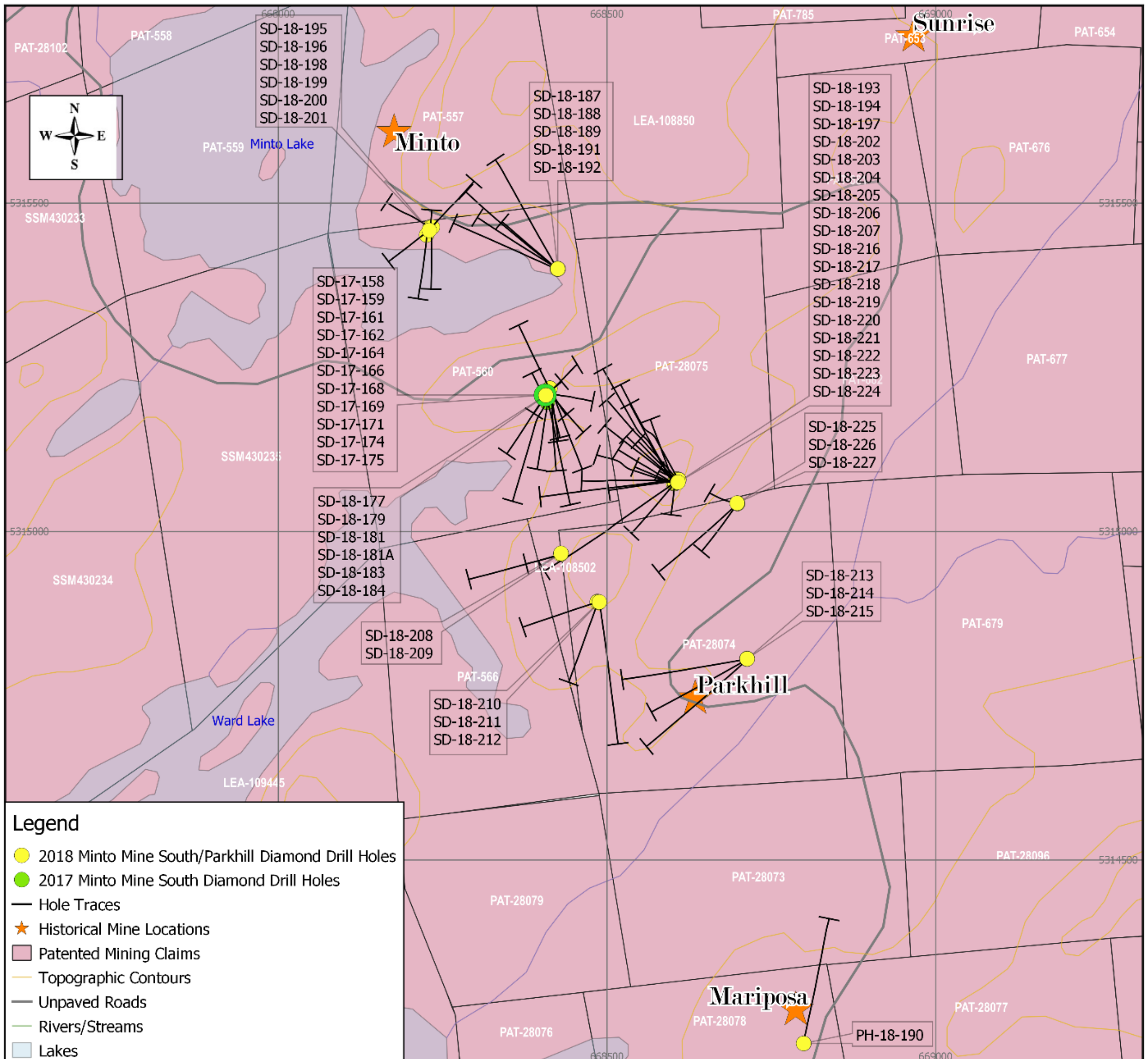
Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
SD-17-158	190	50.36	26.5	42	5	47
SD-17-159	223	82.44	37	64	6	70
SD-17-161	256	122.56	47.9	102	11	113
SD-17-162	225.27	76.29	33.9	58	6	64
SD-17-164	241	135.76	56.3	117	14	131
SD-17-166	229	63.46	27.7	54	5	59
SD-17-168	130	0	0	0	0	0
SD-17-169	205	123.89	60.4	101	11	112

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
SD-17-171	229	133.98	58.5	104	10	114
SD-17-174	250	94.39	37.8	76	9	85
SD-17-175	268	67.05	25	59	4	63
2017 - 11 holes	**2446.27**	**950.18**	**38.8**	**777**	**81**	**858**
SD-18-177	220	93.86	42.7	75	9	84
SD-18-179	235	83.07	35.3	73	7	80
SD-18-181	31	0	0	0	0	0
SD-18-181A	220	70.84	32.2	57	7	64
SD-18-183	271	49.05	18.1	39	4	43
SD-18-184	313	118.93	38	90	8	98
SD-18-187	246	51.18	20.8	45	5	50
SD-18-188	250	126.26	50.5	102	11	113
SD-18-189	256	165.38	64.6	156	17	173
PH-18-190	505	310.38	61.5	257	26	283
SD-18-191	250	161.28	64.5	129	14	143
SD-18-192	295	118.6	40.2	101	10	111
SD-18-193	277	90.98	32.8	72	7	79
SD-18-194	289	107.45	37.2	84	10	94
SD-18-195	157	31.1	19.8	28	4	32
SD-18-196	115	29.49	25.6	24	4	28
SD-18-197	355	81.36	22.9	68	7	75
SD-18-198	157	61.03	38.9	48	4	52
SD-18-199	154	75.2	48.8	60	4	64
SD-18-200	226	65.77	29.1	54	6	60
SD-18-201	140	54.99	39.3	51	6	57
SD-18-202	268	139.93	52.2	113	12	125
SD-18-203	295	93.73	31.8	68	7	75
SD-18-204	256	129.44	50.6	104	9	113
SD-18-205	328	100.83	30.7	80	9	89
SD-18-206	340	121.96	35.9	97	11	108
SD-18-207	304	123.76	40.7	102	10	112
SD-18-208	223	219.4	98.4	184	17	201
SD-18-209	205	81.43	39.7	67	7	74
SD-18-210	196	192.66	98.3	153	15	168
SD-18-211	223	62.62	28.1	52	5	57
SD-18-212	313	146.28	46.7	128	14	142
SD-18-213	289	138.67	48	118	17	135

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
SD-18-214	289	101.39	35.1	80	8	88
SD-18-215	286	105.22	36.8	87	11	98
SD-18-216	331	166.4	50.3	133	14	147
SD-18-217	331	131.64	39.8	104	10	114
SD-18-218	352	100.03	28.4	83	11	94
SD-18-219	277	130.62	47.2	104	10	114
SD-18-220	274	98.21	35.8	82	9	91
SD-18-221	262	81.59	31.1	69	7	76
SD-18-222	325	222.2	68.4	201	24	225
SD-18-223	349	166.97	47.8	130	14	144
SD-18-224	259	91.84	35.5	78	9	87
SD-18-225	337	162.41	48.2	124	13	137
SD-18-226	319	150.32	47.1	129	15	144
SD-18-227	277	98.04	35.4	77	8	85
2018 - 47 holes	**12470**	**5303.79**	**42.5**	**4360**	**466**	**4826**
Total 58 holes	**14916.3**	**6253.97**	**41.9**	**5137**	**547**	**5684**

*Refer to Table 10-9 for sample details per hole and to Table 10-4 for hole attributes

*Refer to Table 10-2 for a summary of Red Pine's 2019 claim ID's and associated drill holes.



Red Pine Wawa Gold Project
Minto Mine South and Parkhill Zones

Projection: NAD 83 Zone 16 N

Scale:

0 100 200 300 m

Hole Attributes

Hole ID	Length (m)	Dip	Azimuth
SD-17-158	190	-78.3	199.9
SD-17-159	223	-56	205
SD-17-161	256	-47	187
SD-17-162	225.27	-49.1	158.8
SD-17-164	241	-70	131.8
SD-17-166	229	-63.2	179
SD-17-168	130	-56.3	166.1
SD-17-169	205	-76.1	324.8
SD-17-171	229	-63	325
SD-17-174	250	-79	142
SD-17-175	268	-58.8	150
SD-18-177	220	-55	168
SD-18-179	235	-69	164
SD-18-181	31	-84	50
SD-18-181A	220	-84	50

Hole ID	Length (m)	Dip	Azimuth
SD-18-183	271	-78	41
SD-18-184	313	-77	95
SD-18-187	246	-45.1	284.9
SD-18-188	250	-55	292
SD-18-189	256	-45	300.1
PH-18-190	505	-69	6.1
SD-18-191	250	-65	299.6
SD-18-192	295	-51	323
SD-18-193	277	-61	298
SD-18-194	289	-70	300.4
SD-18-195	157	-53	172
SD-18-196	115	-45	222
SD-18-197	355	-84.9	282.1
SD-18-198	157	-58	293
SD-18-199	154	-80.2	353.7

Hole ID	Length (m)	Dip	Azimuth
SD-18-200	226	-65	35
SD-18-201	140	-45.8	180
SD-18-202	268	-64.6	250.8
SD-18-203	295	-45	257
SD-18-204	256	-56	264
SD-18-205	328	-62	324
SD-18-206	340	-76	316
SD-18-207	304	-59	312
SD-18-208	223	-75	247
SD-18-209	205	-45	247
SD-18-210	196	-54	244
SD-18-211	223	-54.1	191.2
SD-18-212	313	-45.3	165
SD-18-213	289	-45.3	219.9
SD-18-214	289	-55.8	231.2

Hole ID	Length (m)	Dip	Azimuth
SD-18-215	286	-50.9	249.9
SD-18-216	331	-72.2	331.7
SD-18-217	331	-66.1	322.3
SD-18-218	352	-53.1	322.2
SD-18-219	277	-76.7	285.8
SD-18-220	274	-68.4	290.5
SD-18-221	262	-61.3	279.3
SD-18-222	325	-81.1	179.4
SD-18-223	349	-46.3	226.1
SD-18-224	259	-65.8	210
SD-18-225	337	-81.9	276.2
SD-18-226	319	-72	206
SD-18-227	277	-54.2	219

Figure 10-9: Minto Mine South Zone 2017-2018 Drilling

Red Pine discovered the Minto Mine South Zone (Minto A) in the extension of the historic Minto Mine in April 2017. The Minto A Vein (Minto Mine South) has shown significant potential with relatively consistent grades and widths intersected in multiple holes (Table 10-6 Highlights). This vein shows good continuity both laterally and to depth and gold content appears to be related to an increase in sulphides, which aids as a visual indicator when logging. Visible gold is relatively common in this structure, being observed in more than 34 of 58 holes (58.6%) drilled.

Here are highlighted high-grade gold intersections (Table 10-6) in the extension of the Minto Mine South Zone:

- SD-17-171 contains 6.25 g/t gold over 5 metres;
- SD-17-174 contains 9.2 g/t gold over 6.3 metres, including 16.9 g/t gold over 2 metres, in the down-dip extension of the Minto Mine South Zone;
- SD-18-192 contains 7.7 g/t gold over 2.0 metres in a new high-grade zone located 150 metres down-dip of the historic Minto Mine;
- 7.15 g/t gold over 5.1 metres, including 33.73 g/t gold over 1 metre in hole SD-18-222;
- 3.30 g/t gold over 15 metres including 9.93 g/t gold over 2.9 metres and 12.52 g/t gold over 1.2 metres in SD-18-223.

In-fill drilling intersected additional high-grade gold in the Minto Mine South Zone and supports the continuity of high-grade mineralization in the zone:

- SD-18-195 contains 5.1 g/t gold over 5.3 metres including 12.2 g/t gold over 2.0 metres in the Hornblende Shear Zone.

Minto E Zone

The Minto E zone is a semi continuous quartz shear vein which has shown a high degree of variability and discontinuity. A few holes drilled intersect the Minto E Zone in complexity with intersection of Minto A (Minto Mine South) Zone. Overall, no significant results have been achieved, most of them with gold contents <0.5 g/t, once 0.998 g/t over 93 cm in hole SD-18-181A. Further modeling and analysis are required to develop this gold zone.

Minto Lower/Parkhill #4 Shear Zone

The Minto Lower/Parkhill #4 Shear Zone was mined in the Parkhill Mine in the 1930s and was successfully intersected by Red Pine's exploratory diamond drilling. Red Pine also discovered in the summer of 2018, the surface extension of the Minto

Lower/Parkhill #4 Shear Zone near Minto Lake, 1.1 kilometres north-west of the Parkhill Mine. A new Minto Lower Zone parallel to the Minto Mine South Zone was discovered. The new discovered zone is significant as it extends for over 1.5 km and its high-grade mineralization has the potential to increase the property's gold inventory. 3D modelling suggests that veins of the newly discovered Minto Lower Zone may be associated with the historic Parkhill Mine.
Drilling highlights with Au>5.0 g/t refer to Table 10-6:
Discovery of a new gold zone (Minto Lower) parallel to the Minto Mine South Zone

- New structure has a strike length of a least 1.5 km (as indicated by diamond drilling and surface mapping);
- SD-18-213 contains 4 g/t gold over 2.2 metres, including 15.83 g/t gold over 0.6 metre;
- SD-18-212 contains 76 g/t gold over 1.6 metres including 12.47 g/t gold over 0.6 metre;
- PH-19-190 contains 6.06 g/t gold over 1 meter

To test the extension of the Minto A structure south of the Parkhill Mine and testing the down-plunge extension of the high-grade zones of the Parkhill mine a single hole PH-19-190 was drilled. As said above, the Minto Lower structure was successfully confirmed in this hole. Parkhill Shear Zone was intersected in the interval 420-491 m with the best gold result 0.44 g/t over 1.5 m, the majority of assays results were of lower gold grades. Further drilling is required to test this zone. Assay highlights with Au>5.0 g/t can be found in Table 10-6.

Minto Stockwork
During 2017-2018 drilling programs, numerous/multiple gold veins in the Minto Stockwork around the Minto Mine South Zone were discovered. These include:

- 0.7 g/t gold over 12.5 m including 6.13 g/t over 1.1 m in SD-18-189
- 3.89 g/t gold over 1 m in the same SD-18-189 but much dipper
- 0.78 g/t gold over 1 m and 0.57 g/t over 10.3 m in SD-18-222, last one including 7 g/t over 1 m
- 0.57 g/t gold over 10.3 m including 4.5 g/t over 1 m in the same hole SD-18-222
- 4.19 g/t gold over 5.3 m including 19.4 g/t gold over 1 m in SD-18-225

All drilling highlights with Au>5.0 g/t refer to the Table 10-6 and full assay results in Appendix XXIX.

10.4.4 Cooper-Ganley Zone Drilling

The Cooper Shear Zone is part of the Cooper Deformation Corridor, located 1 kilometer east of the Surluga Deposit and 2.8 kilometers northeast of the Minto Mine South Deposit (Figure 10-1). The Cooper Shear System comprises two known gold-bearing structures, the Cooper Shear Zone and the Ganley Shear Zone. The gold-bearing structures of the Cooper Shear Zone system are structurally and mineralogically similar to the structures of the Minto Shear System. Diamond drilling and channel sampling by previous operators of the property show that the Cooper Shear Zone extends at depth and remains mineralized beyond the footprint of the historic Cooper Mine.

After the 2019 summer channel sampling program in the Cooper Shear Zone, multiple centers of high-grade gold mineralization were found. This resulted in a diamond drill program with the purpose to define the extension, at depth, of the zones of high-grade mineralization that were identified in the Cooper Shear Zone. As a result, 11 exploration diamond drill holes totaling 1064 m (Table 10-4, Figure 10-10), covering a strike length of 325 meters, in the Cooper Shear Zone at its Wawa Gold Project were drilled.

2019 diamond drilling proved that the structure extends at depth. Despite the observation of visible gold in some of the intercepts, drilling results did not replicate the high-grade mineralization encountered at surface with the channel sampling. The Company believes that a very high nugget effect is responsible for the lack of grade continuity observed in the drill results of the Cooper Shear Zone. The high nugget effect would explain why some samples containing visible gold resulted in assay results that were below the gold detection threshold of the analytical method. Summary of sampling and assay results highlights can be found in Tables 10-17 and 10-18, also full assay results can be found in Appendix XXIX.

Table 10-17: Summary of Sample Information on Cooper-Ganley Drilling Holes

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
CG-19-265	79	47.02	59.5	42	2	44
CG-19-266	79	44.33	56.1	38	5	43
CG-19-267	88	52.41	59.6	42	4	46
CG-19-268	121	72.4	59.8	69	8	77
CG-19-269	82	36.82	44.9	33	5	38
CG-19-270	76	23.29	30.6	18	1	19
CG-19-271	166	54.96	33.1	46	3	49
CG-19-272	76	45.65	60.1	40	4	44

Hole ID	Depth (m)	Sampled Length, m	% Sampled	#Samples Selected	CRM&Blanks Total	#Samples Assayed
CG-19-273	82	48.82	59.5	38	5	43
CG-19-274	136	57.6	42.4	47	5	52
CG-19-275	79	43.38	54.9	35	4	39
Total - 11 holes	**1064**	**526.68**	**49.5**	**448**	**46**	**494**

*Refer to Table 10-9 for sample details per hole and to Table 10-4 for hole attributes

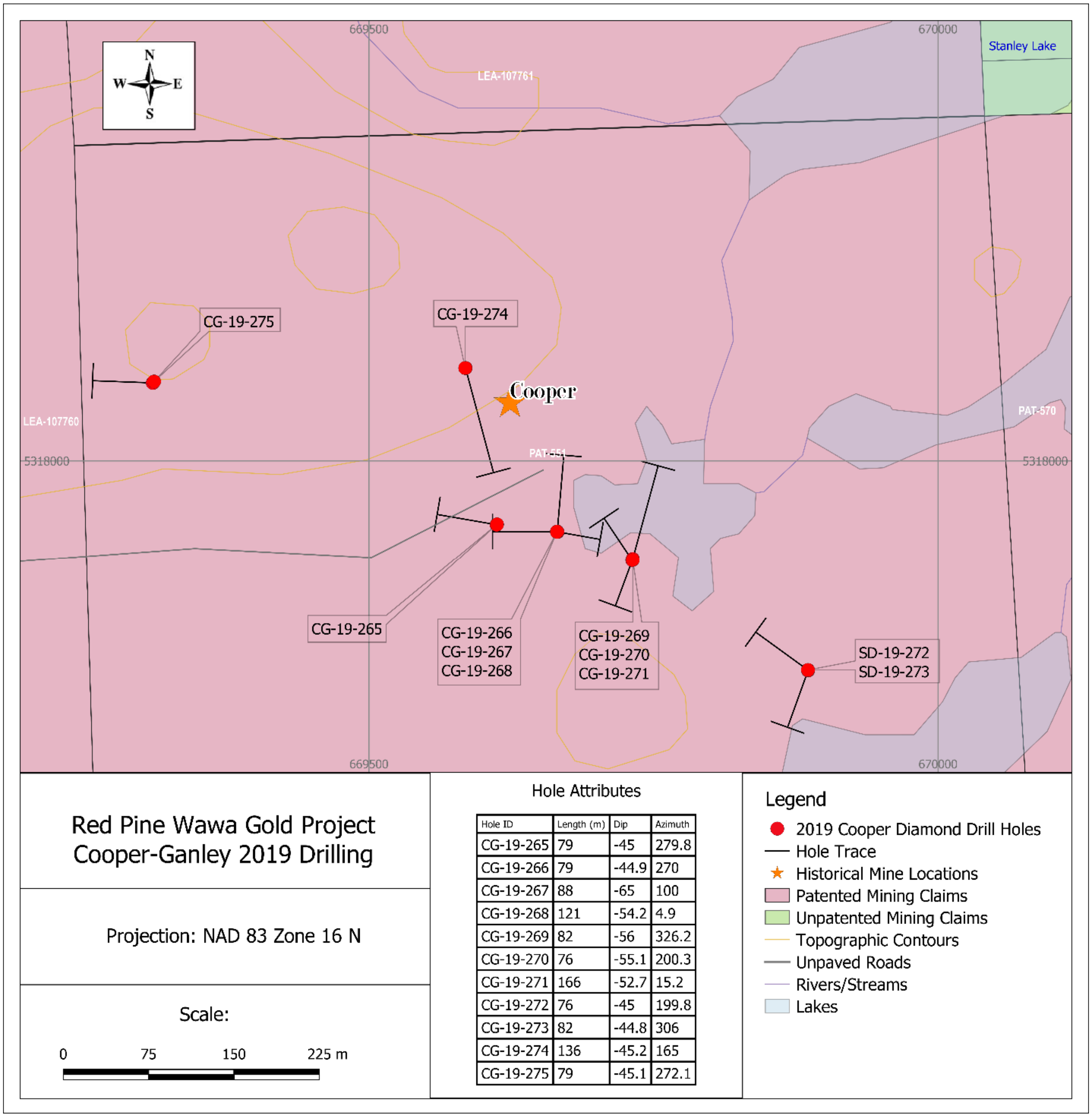
*Refer to Table 10-2 for a summary of Red Pine's 2019 claim ID's and associated drill holes.

Table 10-18: Cooper-Ganley Drilling Highlights

Hole ID	From (m)	To (m)	Length (m)	Au >0.5 g/t	Gold Zone
CG-19-268	58	59	1	1.59	Strain Zone
CG-19-275	62	63	1	0.512	Shear Zone
CG-19-275	69.6	70.5	0.9	0.659	Stringer Zone

**Refer to Table 10-2 for a summary of Red Pine's 2019 claim ID's and associated drill holes.*

**Intervals listed here do not represent true thickness.*



Hole ID	Length (m)	Dip	Azimuth
CG-19-265	79	-45	279.8
CG-19-266	79	-44.9	270
CG-19-267	88	-65	100
CG-19-268	121	-54.2	4.9
CG-19-269	82	-56	326.2
CG-19-270	76	-55.1	200.3
CG-19-271	166	-52.7	15.2
CG-19-272	76	-45	199.8
CG-19-273	82	-44.8	306
CG-19-274	136	-45.2	165
CG-19-275	79	-45.1	272.1

Figure 10-10: Cooper-Ganley 2019 Drilling

All drill hole cross sections included in Appendix XXXIII.

11 Sampling Preparation, Analyses, and Security

2017-2019 SAMPLING

FIELD WORK SAMPLING

All samples were taken directly from the bedrock. Most grab samples were taken using a hammer and chisel. Sample locations recorded using a Garmin Oregon handheld GPS. A total of 148 samples were collected during this period. A total of 6 quality control quality assurance (QA/QC) certified reference material (CRM, Standards) and blanks were inserted in the sample stream every 45 samples and 50 samples, respectively. Summary of the collected samples, CRM and blanks used are outlining in the Table 11-1. A total of 3 CRMs and 3 blanks were inserted and are listed in Table 11-6. All assay results and certificates can be found in Appendix II.

Table 11-1: Summary of sample submitted during 2019 Field Work program

By Area	Collected Samples	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	Certified Reference Materials and Blanks Total	Total Samples per Area
Cooper-Ganley	47	1	1	0	0	0	0	2	49
Jubilee Shear Zone Footwall	26	0	0	0	0	0	0	0	26
Darwin-Grace-Jubilee Shear Zone	56	1	0	0	1	1		3	59
Cooper-Ganley East	9	0	0	0	0	0	0	0	9
Stanley Mine	13	1	0	0	0	0	0	1	14
Total per program	**151**	**3**	**1**		**1**	**1**		**6**	**157**

CHANNEL SAMPLING

During 2018-2019 overburden stripping programs, channels were visually laid out close to perpendicular to the main vein or structure orientation and at variable angles to the minor visual indicators of gold mineralization. Channel samples were cut using a channel saw and their length and azimuth were recorded. Samples were collected in approximately 1m intervals (intervals range from 0.5 to 1.5 m) and their location recorded using a TopCon RTK GPS (Appendix XIII). A total of 391 channel samples were collected during this period. A total of 43 quality control quality assurance (QA/QC) certified reference material (CRM, Standards) and blanks were inserted in the sample stream every 20 samples and 25 samples, respectively. The summary of channel samples, CRM and blanks used are outlining in Table 11-2. A total of 21 CRMs and 22 blanks were inserted and are listed in Table 11-6. All assay results and certificates can be found in Appendix XVIII.

Table 11-2: Summary of sample submitted during 2018-2019 Overburden stripping programs

By Area	Channel Samples	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	Certified Reference Materials and Blanks Total	Total per Area
Cooper-Ganley and Gulch	156	11	2	0	2	2	2	19	175
Grace-Darwin	58	2	1	0	0	1	1	5	63
Jubilee South	171	9	3	0	3	3	1	19	190
Total per program	**385**	**22**	**6**	**0**	**5**	**6**	**4**	**43**	**428**

HISTORICAL CORE SAMPLING

During the 2018 historical sampling program some unsampled, high-medium confidence AQ, BQ, minor BTW sized core was selected for the sampling program. Core was sampled in intervals up to 2.4 m (BQ) and 4.4 m (AQ) length. Full core was grabbed for sampling, core cutting was not acceptable due to small diameter of the core. A total of 7,099 samples were collected during this period. A total of 706 quality control quality assurance (QA/QC) certified reference material (CRM, Standards) and blanks were inserted in the sample stream every 20 samples and 25 samples, respectively. The summary of historical core samples, used CRM and blanks are outlining in Table 11-3. A total of 389 CRMs and 317 blanks were inserted and are listed in Table 11-6. All assay results and certificates can be found in Appendix XXII.

Table 11-3: Summary of sample submitted during 2018 Historical core sampling program

Per Program	Collected Samples	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	Certified Reference Materials and Blanks Total	Total Samples
Historic core logging	7099	317	124	131	134	0	0	706	7805

CORE SAMPLING

The core collected by Red Pine during the 2017 to 2019 drilling programs was sampled in regular intervals of approximately 1.0 m within the mineralized zone and approximately 1.5 m outside the immediate mineralized zone observing lithological contacts. The core was cut in half for sampling using a core saw. A total of 18,632 samples were collected during this period. A total of 1,914 quality control quality assurance (QA/QC) certified reference material (CRM, Standards) and blanks were inserted in the sample stream every 20 samples and 25 samples, respectively. The summary of the core samples, CRM and blanks used are outlining in Table 11-4. A total of 1,041 CRMs and 873 blanks were inserted, and are listed in Table 11-6. All assay results and certificates can be found in Appendix XXIX (with exception two holes SD-18-181 and SD-18-243 which were not sampled).

Table 11-4: Summary of sample submitted during 2017-2019 Drilling programs

By Program	Collected Samples	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	Certified Reference Materials and Blanks Total	Total Samples per Area
2018 2018 Prospecting and Grab Sampling	151	3	1	0	1	1	0	6	157
2019 Overburden stripping	385	21	6	0	6	6	4	43	428
2018 Historical core sampling	7099	317	124	131	134	0	0	706	7805
2017-2019 Drilling	18632	873	312	287	245	47	150	1914	20546
Total	**26267**	**1214**	**443**	**418**	**386**	**54**	**154**	**2669**	**28936**

The used CRM and blanks are listed in Table 11-5.

For the 2017 to 2019 drilling, exploration, and historical core sampling programs, all core, channel, grab samples were placed into a plastic bag together with a pre-numbered sample tag, and then sealed. Individual sample bags were then placed into larger rice bags (2-5 per a rice bag) for shipping.

For all 2017 to 2019 programs, a numbered security tag was placed on each rice bag containing the individual sample bags to prevent tampering. Each security tag was recorded by Red Pine personnel and the information was transmitted to the receiving laboratory. The rice bags were transported by Red Pine personnel to Manitoulin transport in Wawa from where the samples were shipped to the laboratory. Red Pine, in collaboration with Manitoulin and the laboratories, kept track of each shipment upon its reception at the laboratory and the laboratory validated that the security tags on each rice bag were intact upon reception of the samples.

All core, channel, grab samples during the end of 2017 to the end of 2019 were shipped to Activation Laboratories Ltd. ("Actlabs") in Ancaster Ontario. Actlabs is a ISO/IEC 17025 certified laboratory and there is no relationship between Red Pine and Actlabs other than that Red Pine commissioned Actlabs to analyze all core, channel, grab samples from the Wawa project.

The remaining drill core of 2017-2019 programs is stored in Red Pine's secure outdoor drill core storage facility (Figure 11-1)

Figure 11-1: Secure core storage area next to Red Pine's core logging facility in Wawa, Ontario

11.1.1 Analytical Procedures

One independent certified laboratory was used for the gold analyses of the Project. A total of 26,340 core, channel, grab samples were analyzed at Activation Laboratories (Actlabs) in their facilities in Ancaster. Two routine gold analytical packages were selected by Red Pine for the analysis completed by Actlabs, including:

1) Fire-assay with an AAS finish (Actlabs method 1A2-50).
2) Metallic Screen on 1000 g of samples (Actlabs method 1A4).

For the fire-assay analysis, the entire sample is crushed to −10 mesh (1.7 mm), mechanically split and an aliquot of 250 g is pulverized to at least 95% −150 mesh (105 µm). Fifty grams of the pulverized sample is used for the fire assay procedure. Gold analysis was completed by AAS at Actlabs.

For the metallic screen analysis, a 1,000 g split is sieved at 100 mesh (149 µm). Assays are performed on the entire +100 mesh and on two splits of the −100 mesh fraction. The final assay is calculated using the weight and gold analysis of each fraction. Metallic screen assays were completed on every samples of the Minto vein where coarse gold is relatively abundant. All the samples with a gold grade over 2 g/t from the fire assay were systematically re-analyzed by metallic screen for validation.

Some samples flagged as high sulfide were analyzed with adjusted flux formula and the flux/rock ratio to ensure accurate results for precious metal analyses.

In addition to gold analyses, systematic multi-element analyses using ICP-MS and ICP-AES following a 4 acid near-complete digestion were completed on the drill core samples from 2017-2019 drilling, exploration, and historical core sampling programs.

Red Pine used the multi-element package ME-MS61 (internal laboratory's abbreviation throughout 2014-2018), UT-6M (after 2018) of Actlabs.

11.1.2 Physical Rock Property Measurements in Drill Core

During 2017-2019 Drilling programs magnetic susceptibility and specific gravity ("SG") on the drill core were recorded by Red Pine. SG was determined by weighing a piece of core in air and in water (Figure 11-2) and by calculating SG using the formula:

$$SG = \frac{Sample\ Weight\ in\ Air}{Sample\ Weight\ in\ Air - Sample\ Weight\ in\ Water}$$

Figure 11-2: SG measurement at Red Pine's core logging facility

11.1.3 Red Pine Data Management

All the exploration data existing for the Project, historic and collected during the 2017 to 2019 exploration programs, is amalgamated into three central Excel™ based databases maintained internally by Red Pine. Starting in the spring of 2017, all drilling data was first collected and validated with internal validation checks with MXDeposit, then exported and amalgamated into the central Excel™ based database. One database is for the drilling data, one database is for the trenching data and one database is for the prospecting sample data. Updates are made to the databases as new data, like geological drill logs or analytical results, becomes available or when Red Pine's internal validation procedures detect errors in the databases. Routine procedure for the validations of the CRMs inserted in every sample batches are also implemented into the drilling database of Red Pine and QAQC checks are also run in Oasis Montaj Drilling Module (Geosoft). All the geological modelling and interpretations made for the Project are using the data collected and validated in the main databases.

11.1.4 Quality Assurance and Quality Control Programs

Quality control (QC) measures are typically set in place to ensure the reliability and trustworthiness of exploration data. These measures include written field procedures and independent verifications of aspects such as drilling, surveying, sampling and assaying, data management, and database integrity. Appropriate documentation of QC measures and regular analysis of QC data are important as a safeguard for the project data and form the basis for the quality assurance (QA) program implemented during exploration.

Analytical control measures typically involve internal and external laboratory control measures implemented to monitor the precision and accuracy of the sampling, preparation, and assaying. They are also important to prevent sample mix-up and to monitor the voluntary or inadvertent contamination of samples. Assaying protocols typically involve regularly duplicating and replicating assays and inserting QC samples to monitor the reliability of assaying results delivered by the assaying laboratories. Check assaying is normally performed as an additional test of the reliability of assaying results. This generally involves re-assaying a set number of sample rejects and pulps at a secondary umpire laboratory.

Red Pine relied partly on the internal analytical QC measures implemented by Actlabs. In addition, Red Pine implemented external analytical control measures consisting of the use of control samples (blanks and CRM’s) inserted in all sample batches submitted for assaying. Umpire check assaying was not performed. The routine insertion rate was 1 standard per 20 samples and 1 blank per 25 core and channel samples sent, and 1 standard per 45 samples and 1 blank per 50 grab samples. Additional blanks were also inserted after vein samples when many specks of visible gold were observed in the sampled vein.

Five certified gold reference materials sourced from commercial suppliers were used (Table 11-5). Bell & Mackenzie White Lightning® 2040 sand was used from 2017 to 2019 as blanks.

Table 11-5: Certified reference material and blank material used by Red Pine during the 2017 to 2019 Drilling, Overburden stripping, Field Work, and Historical core sampling Programs

Standard	Certified Au (g/t)	Absolute Standard Deviations					Method Name*	Matrix	Mineralization Style
		1SD	2SD (Low)	2SD (High)	3SD (Low)	3SD (High)			
OREAS 209	1.58	0.044	1.49	1.66	1.44	1.71	FA-MS	A blend of Au-bearing Magdala ore from Stawell Au Mine, west-central Victoria, Australia and barren tholeiitic basalt from Epping, Victoria, Australia	Orogenic Lode Au
OREAS 210	5.49	0.15	5.18	5.79	5.03	5.94	FA-MS	Alkali olivine basalt and sulfide-bearing (pyrite, arsenopyrite) Au ore in quart-sericite-carbonate schist assemblage	
OREAS 218	0.531	0.017	0.497	0.565	0.48	0.582	FA-MS	A blend of Archean greenstone-hosted Wilber Lode primary ore from Andy Well Au Mine and barren Cambrian greenstone sourced from a quarry north of Melbourne, Australia	Orogenic Lode Au
OREAS 226	5.45	0.126	5.2	5.7	5.07	5.83	FA-MS	A blend of Archean greenstone-hosted Wilber Lode primary ore from the Andy Well Gold Mine and barren Cambrian greenstone sourced from a quarry north of Melbourne, Australia	Orogenic Lode Au

Standard	Certified Au (g/t)	Absolute Standard Deviations					Method Name*	Matrix	Mineralization Style
		1SD	2SD (Low)	2SD (High)	3SD (Low)	3SD (High)			
OREAS 229	12.11	0.206	11.7	12.53	11.49	12.73	FA-MS	Archean greenstone-hosted Wilber Lode primary ore from the Andy Well Au Mine	Orogenic Lode Au
Blank								Coarse silica sand provided by Actlabs or B&M White Lightning 2040 - expected grade of <0.005 g/t Au	

Note: *All standards are produced by Ore Research & Exploration Pty.

A summary of the total number of QA/QC samples inserted is presented in Table 11-6.

The exploration work completed by Red Pine was conducted using documented procedures and involved extensive verifications and validation of exploration data. During drilling, experienced Red Pine geologists implement industry standard measures designed to ensure the reliability and trustworthiness of the exploration data.

Red Pine monitored the analytical quality control data on a real-time basis. Failures of quality control samples were investigated, and appropriate actions taken, including potentially requesting re-assaying of certain batches of samples.

11.1.4.1 Review of Analytical QA/QC Data

Red Pine provided assay results for the external analytical QC samples for the period 2017 to 2019. The data was provided in the form of Excel™ spreadsheets. External QC samples comprised field blanks and CRMs.

Sample blanks and CRM's data were summarized on a series of control charts to highlight the performance of the control samples.

The analytical quality control data produced by Red Pine between 2017 through 2019 are summarized in Table 11-6 and presented in graphical format in Figure 11-3 through Figure 11-17 except 2018 Prospecting and Grab Sampling as per limited number of Blanks and SRM used (refer to Table 11-6).

Table 11-6: QA/QC sample submitted

By Program	Collected Samples	BLANK	OREAS 209	OREAS 210	OREAS 218	OREAS 226	OREAS 229	Certified Reference Materials and Blanks Total	Total Samples per Program
2018 Prospecting and Grab Sampling	148	3	1	0	1	1	0	6	154
2019 Overburden stripping	390	21	6	0	6	6	4	43	433
2018 Historical core sampling	7167	317	124	131	134	0	0	706	7873
2017-2019 Drilling	18635	873	312	287	242	47	150	1911	20551
Total	**26340**	**1214**	**443**	**418**	**383**	**54**	**154**	**2666**	**29011**

Typically, a CRM's failure was considered when the CRMs analyses were outside 3 standard deviations (SD) of the certified values. In those situations, Red Pine requested the laboratory to re-analyze the CRM and a certain number of core samples around the CRM that failed. In the few cases where multiple CRM failures were observed in one assay certificate or when many CRMs were outside the 2SD range of the certified value, Red Pine requested that the entire certificate to be re-tested. In a retrospective analysis, some of the outliers in the QA/QC data were found to be caused by sample misidentification whereas others were related to analytical problems at the laboratory.

All 6 Blanks and CRM used for 2018 Prospecting and Grab Sampling are matching expected value.

Quality Assurance and Quality Control of CRMs Used in the 2018 Historic Core Sampling Program

"White Lightning" silica sand was used as the blank material. An envelope was filled with approximately 200g of sand material and placed in sample bags in sequence every 25 samples. These samples generally return Au assays of 0.005, below detection limit. A QA/QC analysis has been done on each blank used during historic core sampling and can be found below.

The standards used were Ore Research & Exploration Pty Ltd (OREAS) 209, 210, and 218. Standards were inserted every 20 samples. The OREAS 209 standard used has a certified value of Au 1.58 ppm and two absolute standard deviations low 1.49 and high 1.66. The OREAS 210 standard has a certified value of Au 5.49 ppm and two absolute standard deviations low 5.18 and high 5.79. The OREAS 218 standard has a certified value of Au 0.531 ppm and two absolute standard deviations low 0.497 and high 0.565. A QA/QC analysis has been done on each standard used during historic core sampling and can be found below.

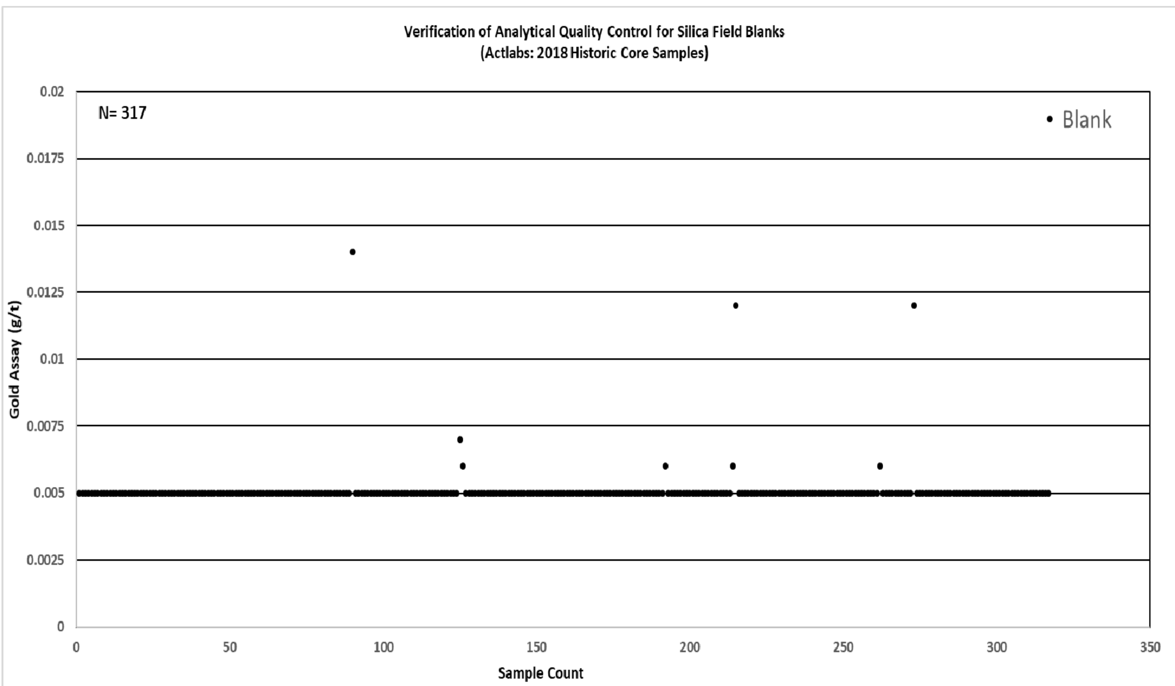


Figure 11-3: Analysis of Blank material in historic core samples depicting very limited deviation and well below detection limit of 0.05 g/t Au

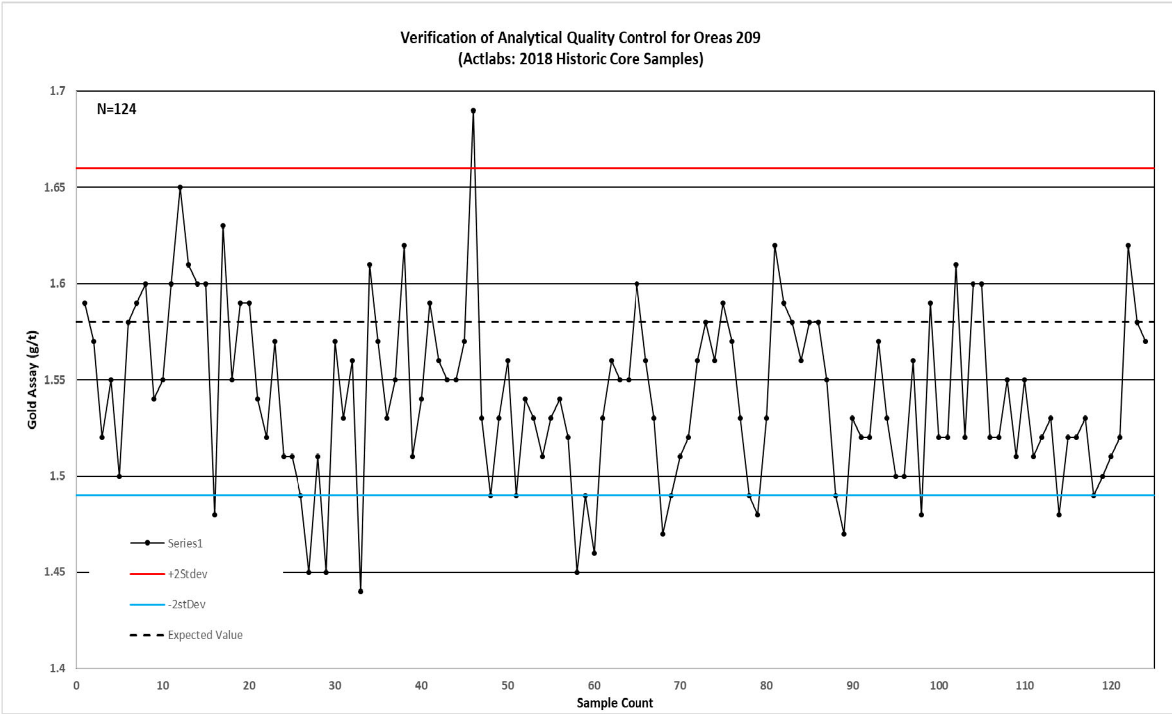


Figure 11-4: Analysis of OREAS 209 in historic core samples depicting most assay values well within the 2nd standard deviations. One is within the high third standard deviation and 11 samples in the low third standard deviation

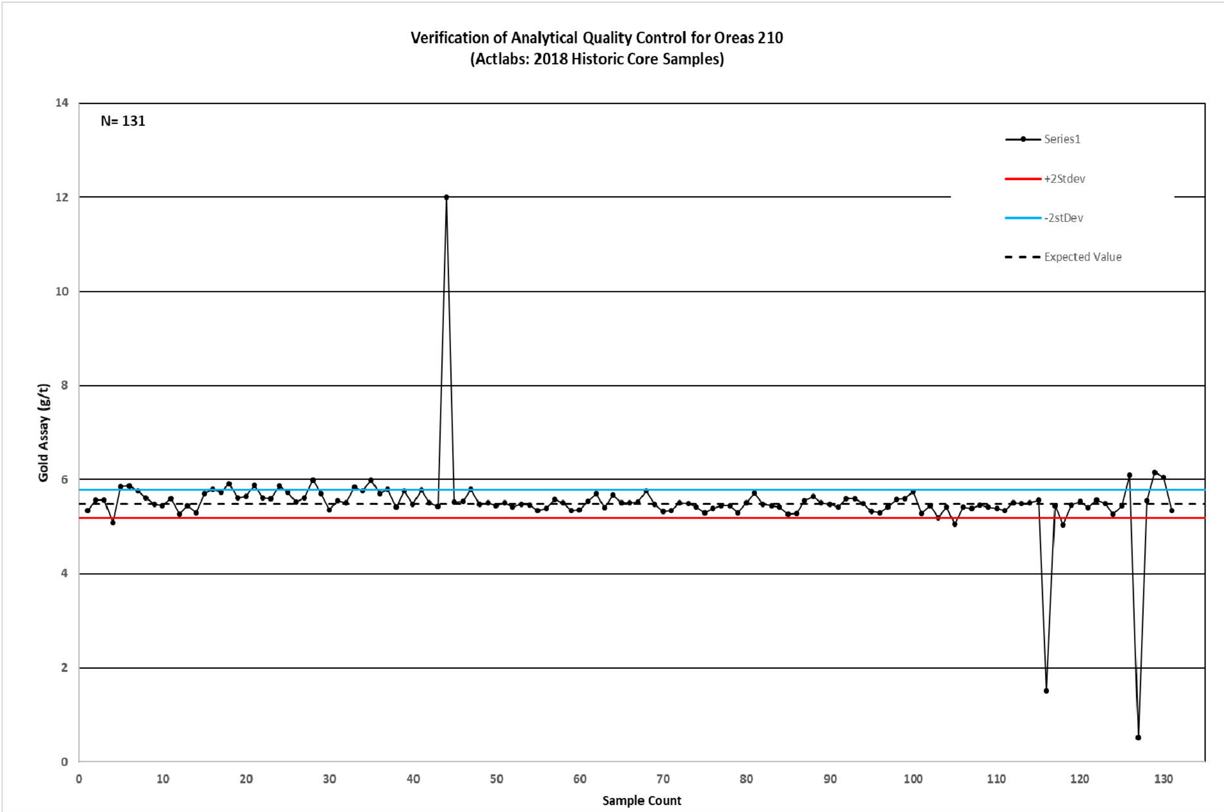


Figure 11-5: Analysis of OREAS 210 in historic core samples depicting most assay values well within the 2nd standard deviations and 14 in the third standard deviation brackets. It is possible that OREAS 210 sample number 920280, which returned Au 0.521 gpt, was mislabeled and in reality, was an OREAS 218 standard. It's also possible that sample number 919520, which returned Au 1.51 gpt, was mislabeled and in reality, was an OREAS 209 standard. The control which returned Au 12 gpt was likely a lab error

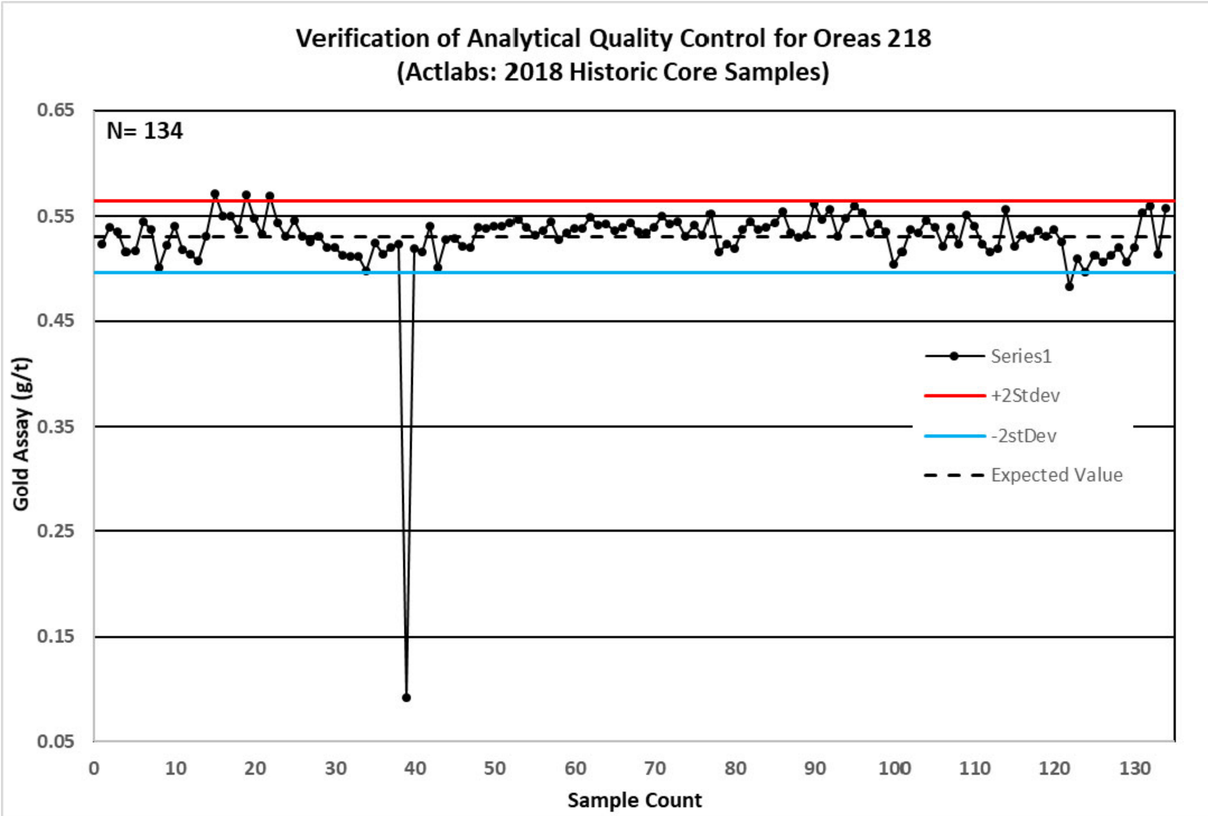


Figure 11-6: Analysis of OREAS 218 in historic core samples depicting most assay values well within the 2nd standard deviations and four in the third standard deviation brackets. OREAS 218 sample number 706698 fell well below the standard deviations, therefore failed, and was presumably a lab error

Quality Assurance and Quality Control of CRMs Used in Channel Samples of 2018-2019 Overburden Stripping Programs

43 Blanks and CRM total were used in channel samples. That is extremely limited per each kind of material.

Figure 11-7 is demonstrating all 21 analytical results of blank materials are bellow detection limit.

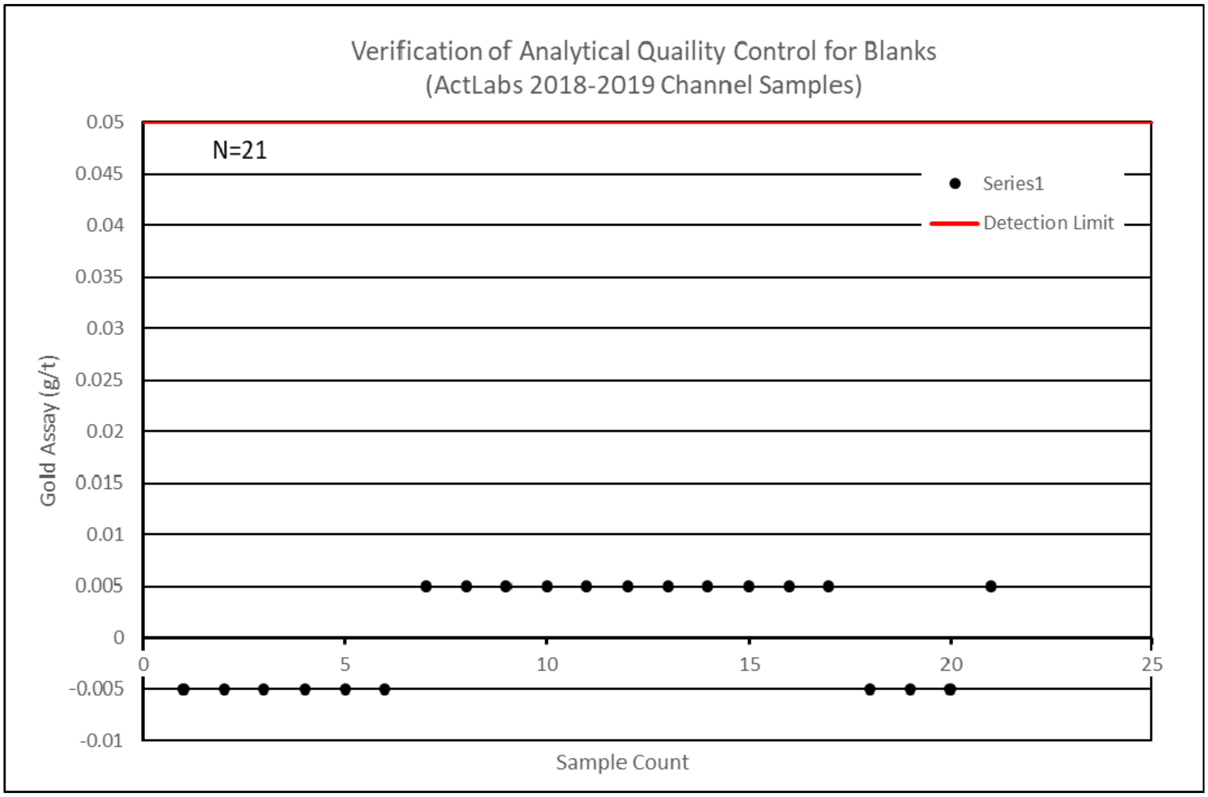


Figure 11-7: Control chart for Blanks, 2018-2019 Overburden Stripping programs

All 6 CRM OREAS 209 samples are withing the range of 2 standard deviation (Figure 11-8).

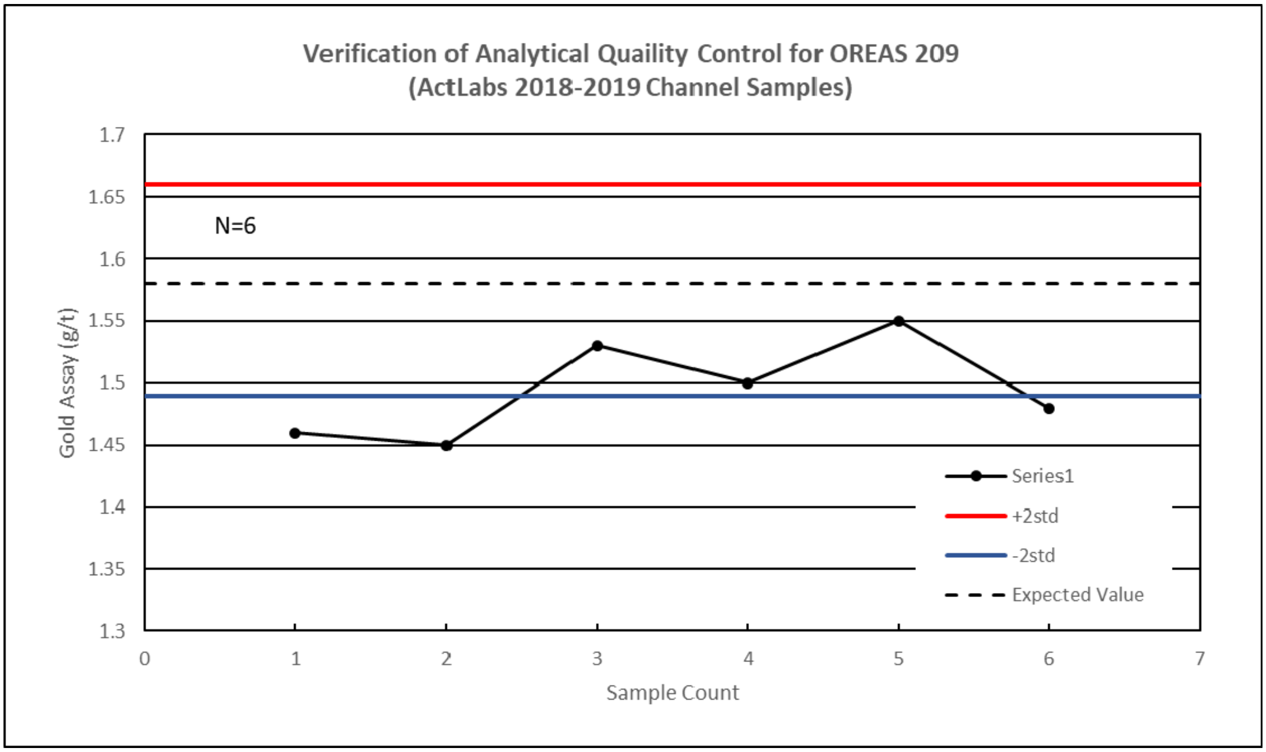


Figure 11-8: Control chart for CRM OREAS 209, 2018-2019 Overburden Stripping programs

6 CRM OREAS 218 samples are withing or behind the range of 2 standard deviation (Figure 11-9).

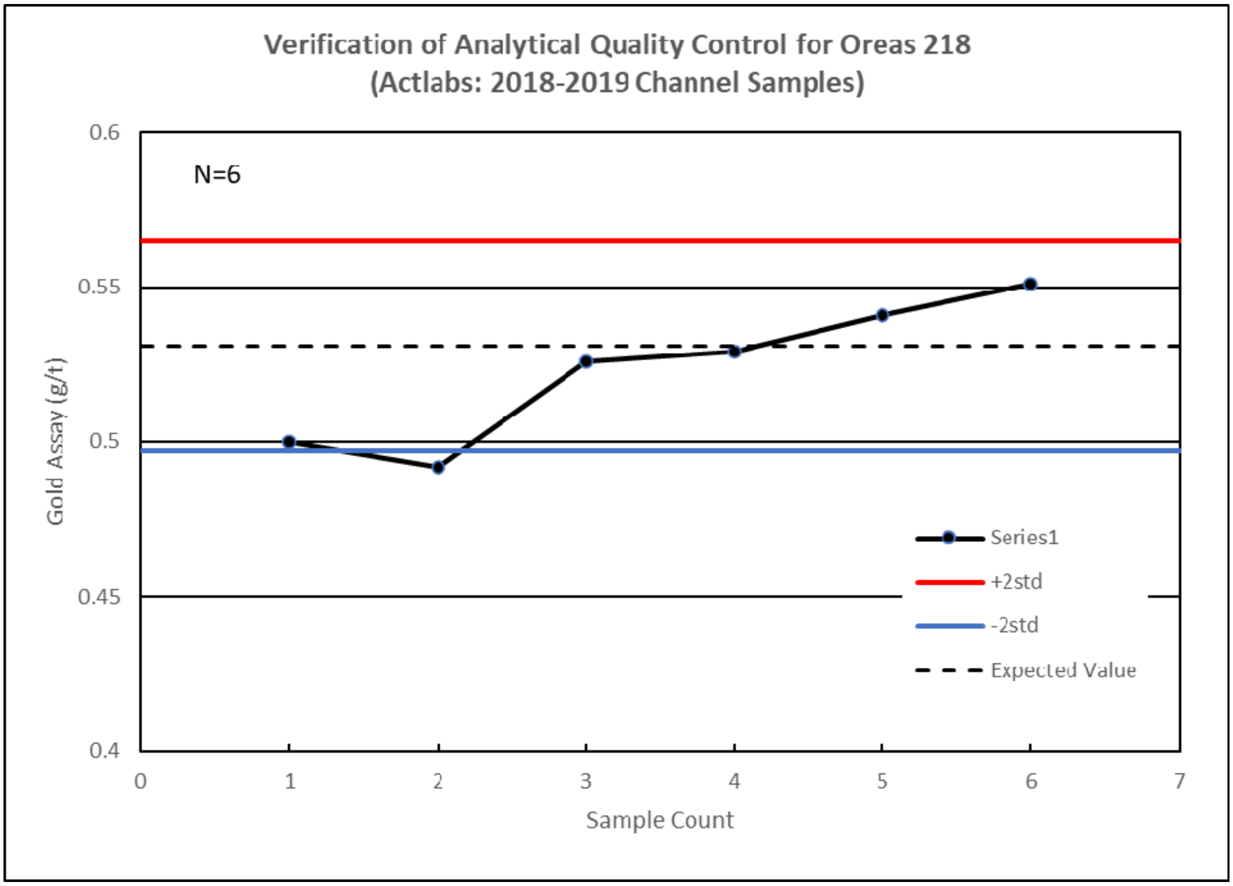


Figure 11-9: Control chart for CRM OREAS 218, 2018-2019 Overburden Stripping programs

All 6 CRM OREAS 226 samples are withing the range of 2 standard deviation (Figure 11-10).

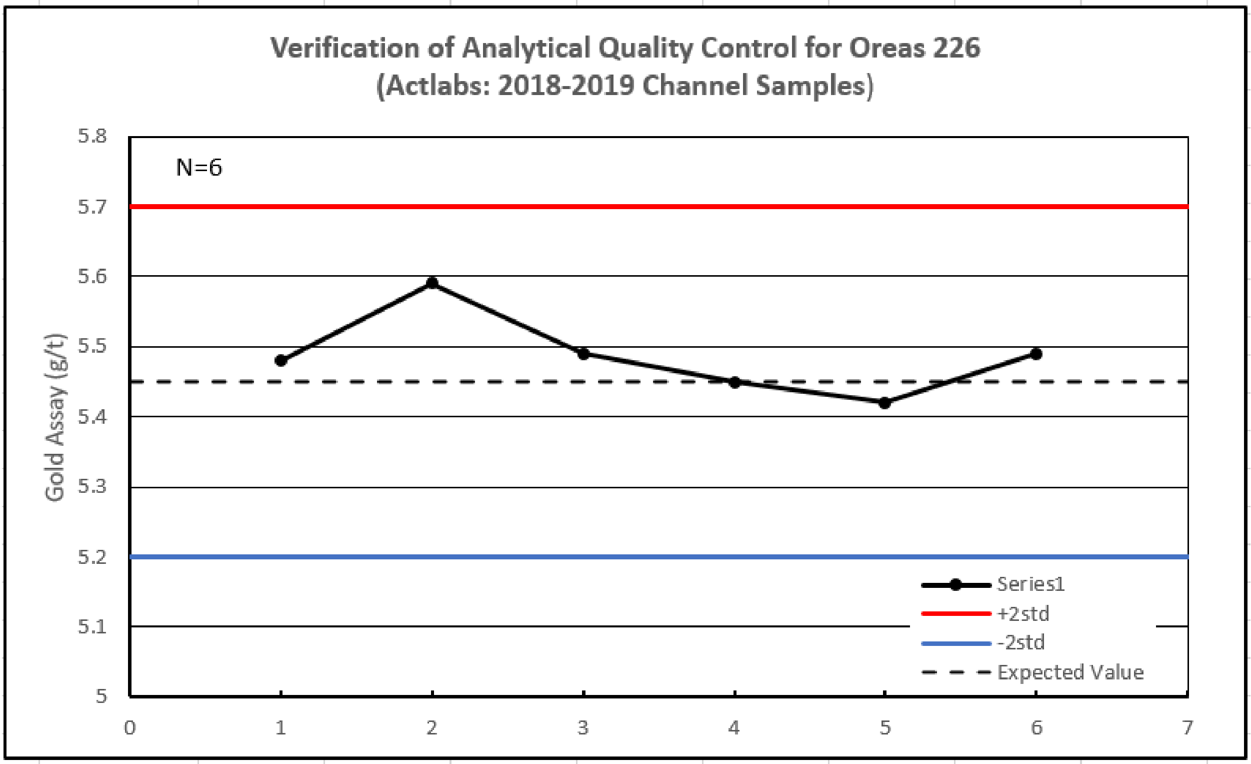


Figure 11-10: Control chart for CRM OREAS 226, 2018-2019 Overburden Stripping programs

Figure 11-11 is demonstrating 3 CRM OREAS 229 samples are within the range of 2 standard deviation, and one sample is bellow of 2 standard deviation level.

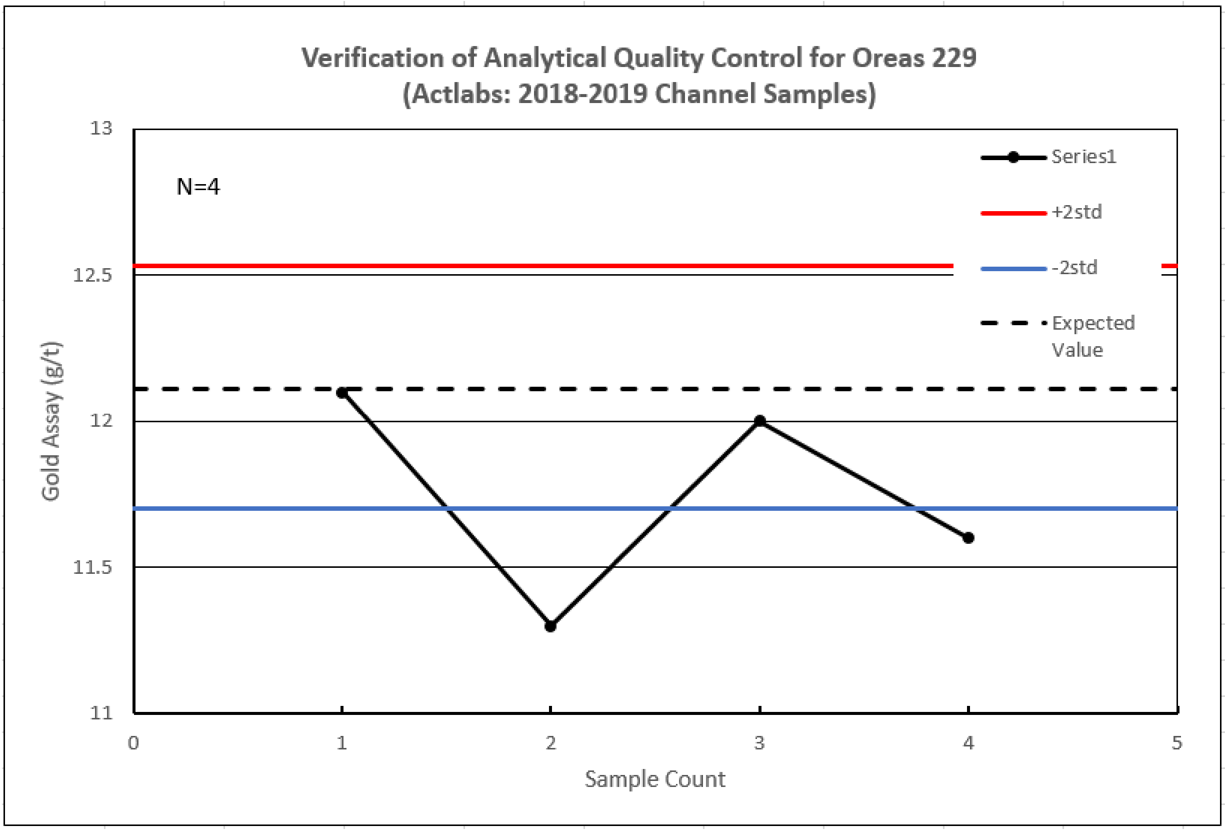


Figure 11-11: Control chart for CRM OREAS 229, 2018-2019 Overburden Stripping programs

Quality Assurance and Quality Control of CRMs Used in 2017-2019 drilling programs

Figure 11-12 is demonstrating all 873 analytical results of blank materials are bellow detection limit.

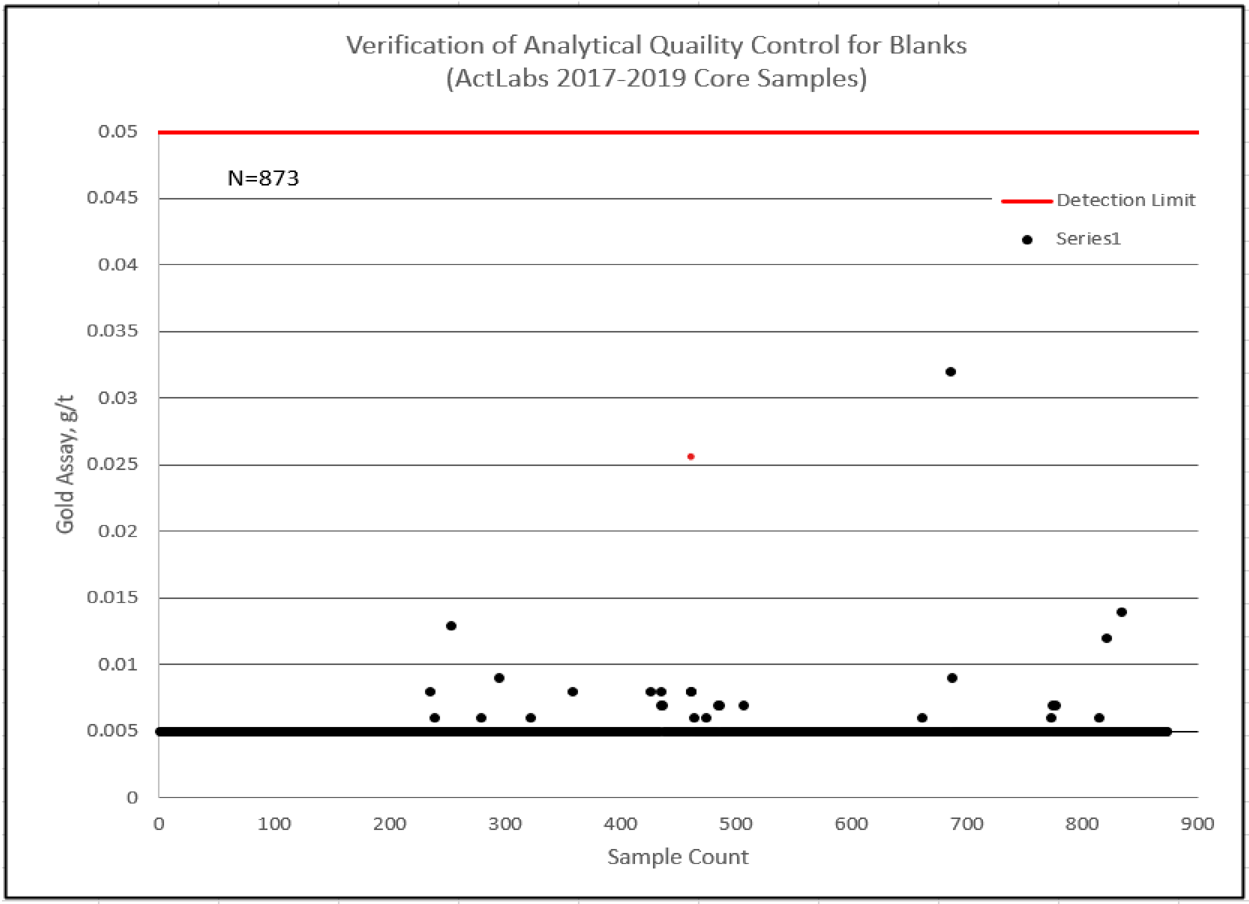


Figure 11-12: Control chart for Blanks, 2017-2019 Drilling program

Figure 11-13 is demonstrating only 4 (1.3%) of 312 OREAS 209 samples are outside 3 standard deviations (SD) of the certified values.

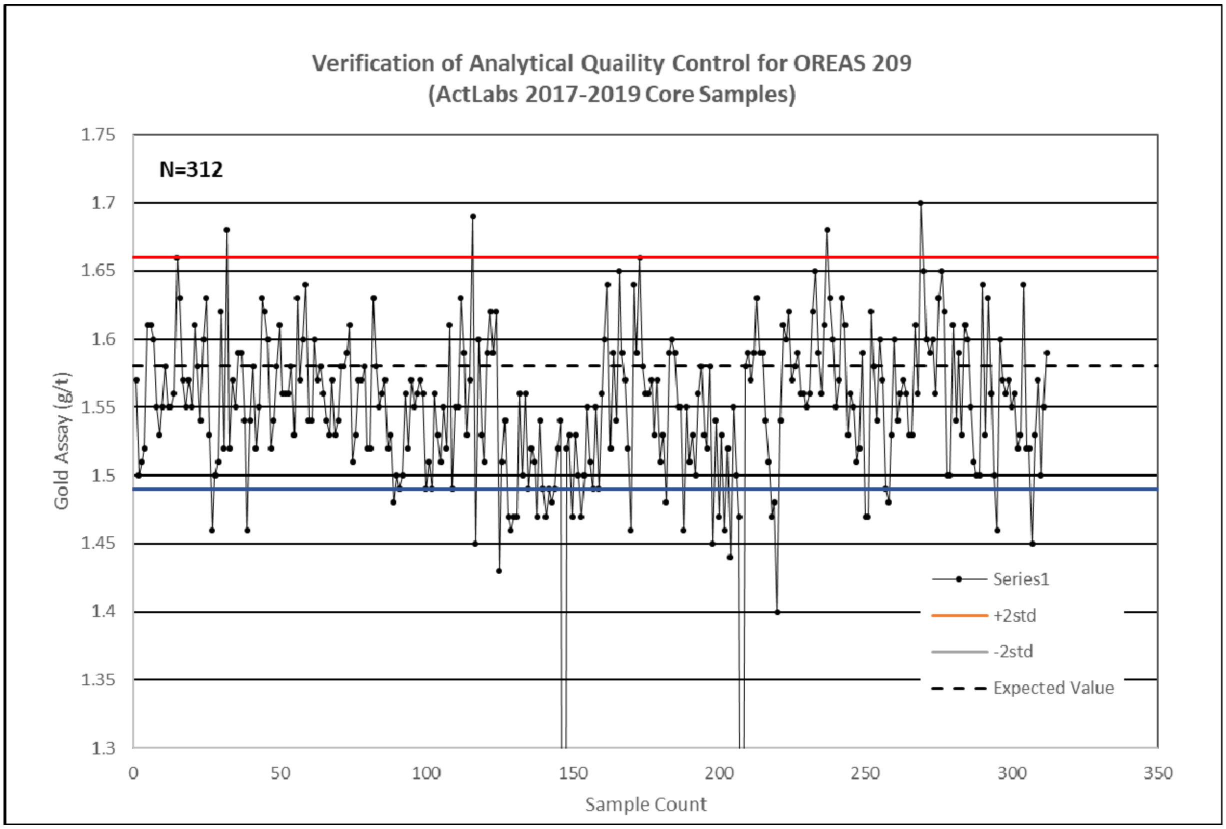


Figure 11-13: Control chart for CRM OREAS 209, 2017-2019 Drilling programs

Figure 11-14 is demonstrating only 6 (2.1%) of 287 OREAS 210 samples are outside 3 standard deviations (SD) of the certified values.

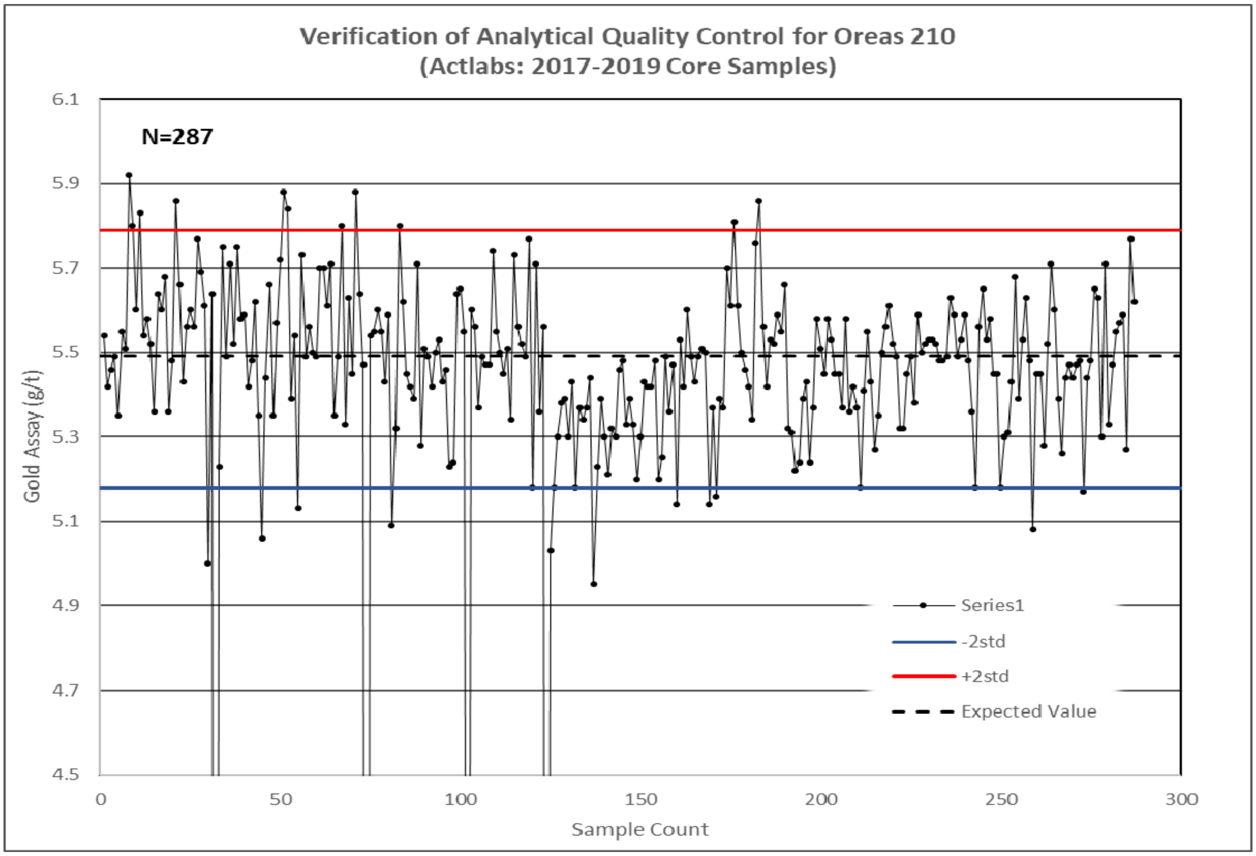


Figure 11-14: Control chart for CRM OREAS 210, 2017-2019 Drilling programs

Figure 11-15 is demonstrating only 3 (1.2%) of 245 OREAS 218 samples are outside 3 standard deviations (SD) of the certified values. One of them with gold value 0.005 g/t is likely to be sample misidentification.

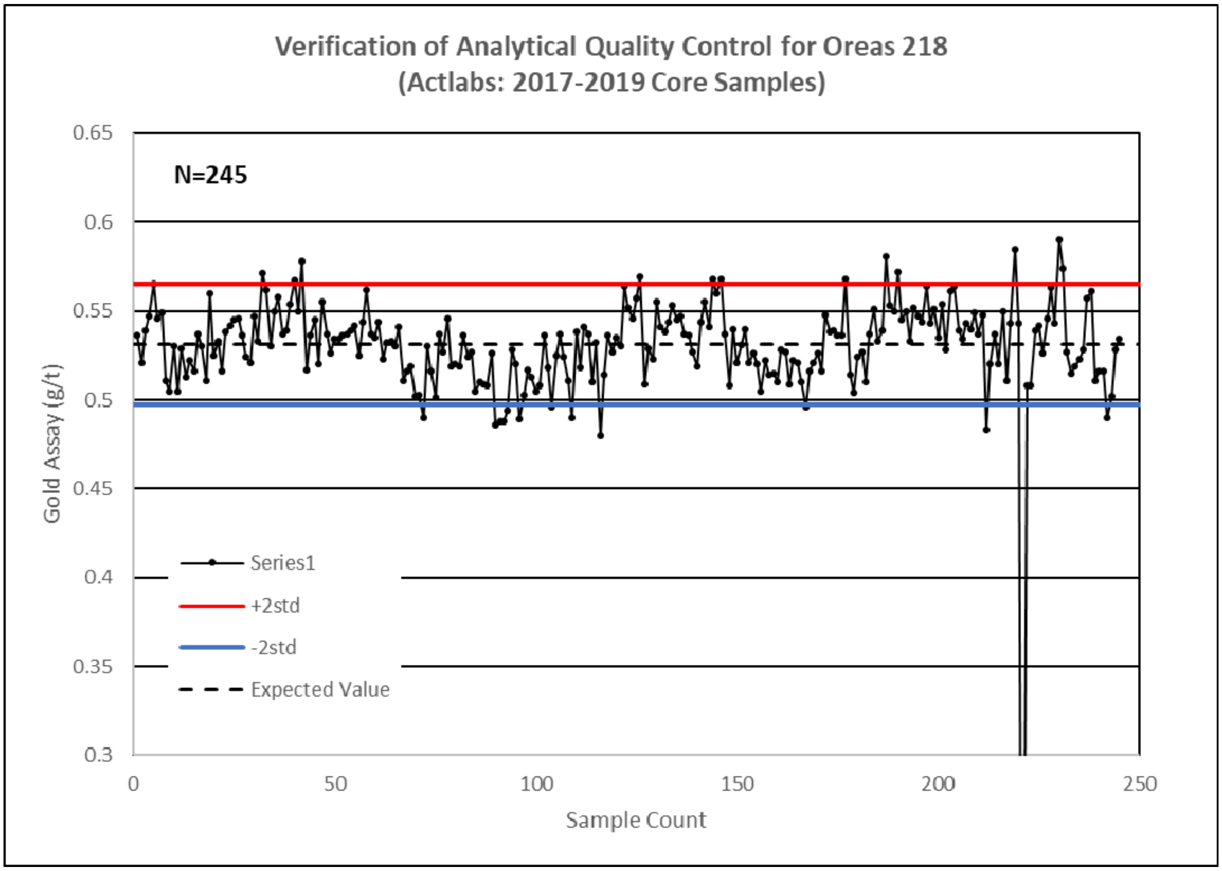


Figure 11-15: Control chart for CRM OREAS 218, 2017-2019 Drilling programs

All 47 CRM OREAS 226 samples are withing the range of 2 standard deviation (Figure 11-16).

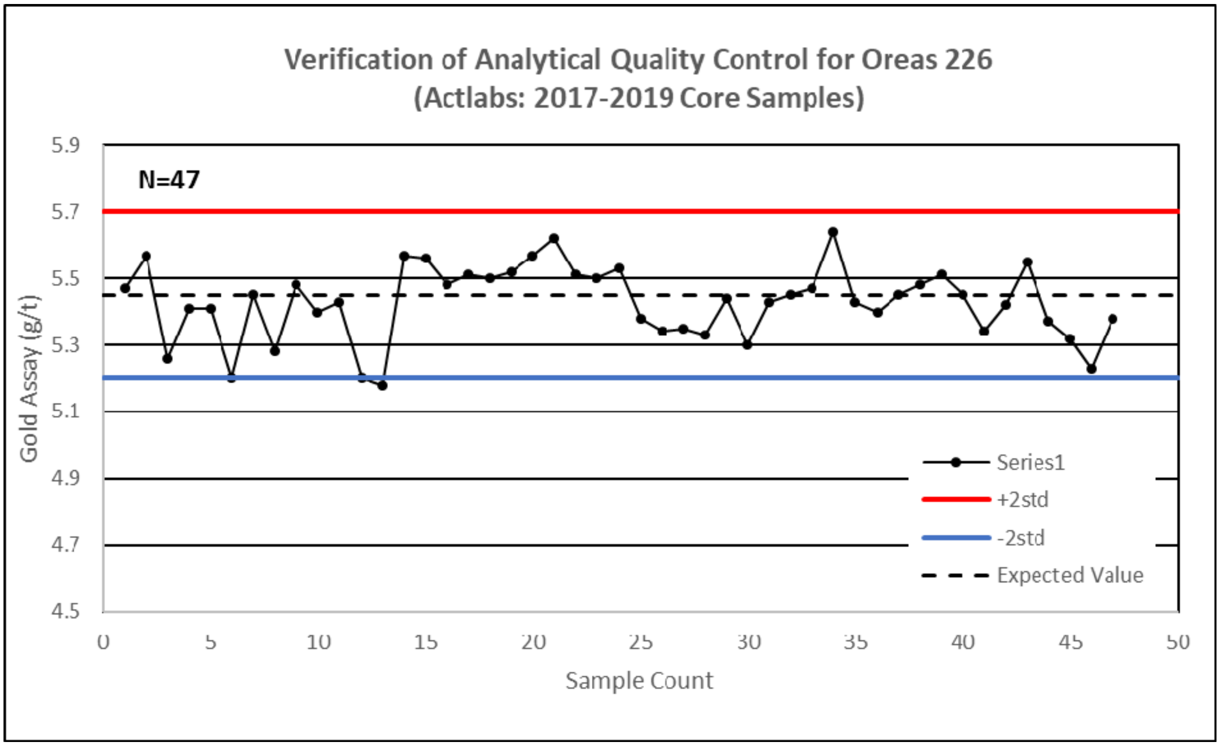


Figure 11-16: Control chart for CRM OREAS 226, 2017-2019 Drilling programs

Figure 11-17 is demonstrating 7 (4.7%) of 150 OREAS 229 samples are outside 3 standard deviations (SD) of the certified values.

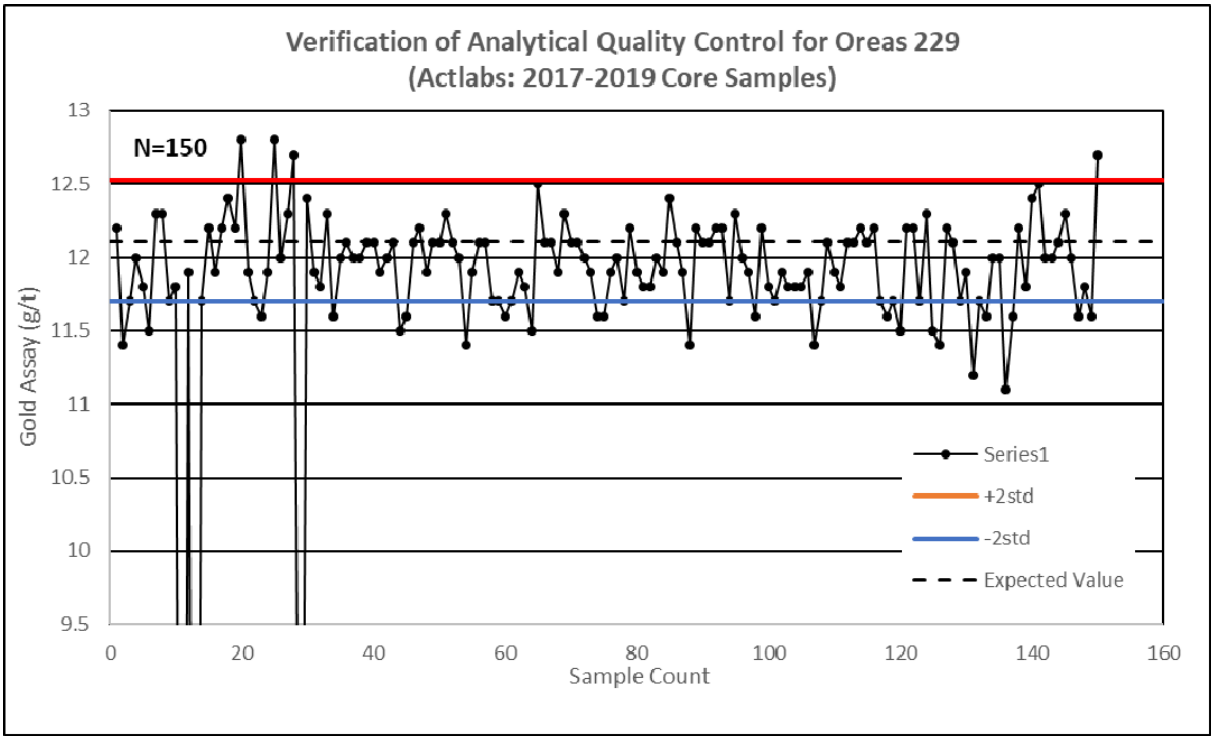


Figure 11-17: Control chart for CRM OREAS 229, 2017-2018 Drilling programs

11.2 COMMENTS ON QA/QC

The sample preparation, security and analytical procedures used by Red Pine are consistent with industry standard practices and that the analytical results delivered by Actlabs are sufficiently reliable. There are no concerns with the current Red Pine geological or analytical procedures used or the quality of the Red Pine data.

12 Data Verification

Several of the authors of this report were fully involved and/or supervised the prospecting, overburden stripping/trenching, historical core sampling, drilling programs of the Wawa Gold Project. One of authors went through all previous assessment reports, technical reports, and relevant publications to write this report. After reviewing analytical QA/QC data for all programs the data has been verified as accurate using standards and blanks. Red Pine set up the procedures for all exploration programs which are implementing by Red Pine team of geologists and technicians.

In June 2019, The National Instrument 43-101 Technical Report was completed by Golder, Brian Thomas who visited the site and completed all steps to inspect drill hole collar locations, review of procedure and collection data, select drill core samples for independent logging and assay verification. This report is stating “geological data collection, analytical methods and QA/QC procedures used by Red Pine are consistent with standard industry practices.”

13 Mineral processing and metallurgical testing

Red Pine has not completed any mineral processing and metallurgical testing.

14 Mineral resource estimates

14.1 INTRODUCTION

Completed in June 2019 The National Instrument 43-101 Technical Report represented an update to the June 2015 Technical Report, entitled "***Independent Technical Report; Wawa Gold Project, Ontario***" and provided a combined Mineral Resource estimate consisting of the Surluga and Minto Mine South deposits for the Project. The Minto Mine South Mineral Resource estimate was previously disclosed on November 15, 2018, in the news release entitled "***Red Pine Announces Initial Mineral Resource Estimate for it's Minto Mine South Project***" and is supported by the NI 43-101 Technical Report "***National Instrument 43-101 Initial Technical Report for the Minto Mine South Property; Report Effective Date: December 31, 2018.***" No changes have been made to the Minto Mine South Mineral Resource estimate since this time.

Golder has prepared an updated Mineral Resource estimate for the Surluga deposit, in accordance with NI 43- 101 and following the requirements of Form 43-101F1. Golder's estimates follow the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resource and Mineral Reserves Best Practices Guidelines (November 2003) and were classified following CIM Definition Standards for Mineral Resources & Mineral Reserves (May 2014).

The qualified person (QP) for this Mineral Resource estimate is Mr. Brian Thomas, P.Geo., an independent QP as defined under NI 43-101 and an employee of Golder based in Sudbury, Ontario, Canada. The effective date of this Mineral Resource estimate is May 31, 2019.

The Mineral Resource estimates were derived from geological models and drill hole data provided by Red Pine, using a 3D block modelling approach in Datamine Studio RM (Datamine) software.

14.2 COMBINED MINERAL RESOURCE ESTIMATE FOR THE WAWA GOLD PROJECT

This section is a copy of the section 14.4 Combined mineral resource estimate for the Wawa Gold Project from the Technical Report and provided here for general information.

“The combined Mineral Resource estimate for the Project, comprising the Surluga and Minto Mine South deposits, is summarized in Table 14-1.

Table 14-1: Wawa Project Combined Mineral Resource Estimate

Deposit	Resource Category	Tonnes (000s)	Au Grade (g/t)	Contained Gold (000 Ozs)
Surluga	Indicated	1,202	5.31	205
Minto Mine South	Indicated	105	7.50	25
Total	**Indicated**	**1,307**	**5.47**	**230**
Surluga	Inferred	2,362	5.22	396
Minto Mine South	Inferred	354	6.60	75
Total	**Inferred**	**2,716**	**5.39**	**471**

Notes:

1) Surluga Mineral Resources reported at a 2.7 g/t cut-off from a 2-g/t envelope. The 2.7 g/t cut-off is supported by the following economic assumptions for potential underground longhole mining: Gold Price: $1,200 $USD, Gold Recovery: 90%,Operating Expense (OPEX): $CAD $125 / tonne ($85 mining, $25 milling, $15 G&A).
2) Minto Mineral Resources reported at a 3.5 g/t cut-off which is supported by the following economic assumptions for potential underground cut and fill mining: Gold Price: $1,200 $USD, Gold Recovery: 90%, Operating Expense (OPEX): $CAD $160 / tonne ($120 mining, $25 milling, $15 G&A).
3) Tonnage estimates are rounded to the nearest 1,000 tonnes.
4) g/t – grams per tonne.
5) Ozs – troy ounces.

A reconciliation was completed to evaluate changes between the 2015 and 2019 Mineral Resource estimates, as summarized in Table 14-2.

Table 14-2: Wawa Gold Project Mineral Resource Reconciliation Summary

	2015 Resource Estimate			2019 Resource Estimate			Changes to the Resource Estimate		
Category	Tonnes (000)	Au Grade (g/t)	Contained Gold (000 Ozs)	Tonnes (000)	Au Grade (g/t)	Contained Gold (000 Ozs)	Tonnes (000)	Au Grade (g/t)	Contained Gold (000 Ozs)
Indicated	0	0	0	1,307	5.47	230	1,307	5.47	230
Inferred	19,824	1.71	1,088	2,716	5.39	471	-17,108	3.68	-617

There were significant changes to the estimation methodology between the 2015 and 2019 estimates that resulted in material differences to the stated Mineral Resource estimates, as summarized in the following list:

1) The deposit was evaluated as an underground project instead of as an open-pit project in 2015, which resulted in the use of a 2.7 g/t cut-off rather than the 0.4 g/t cut-off used for an open-pit scenario. This resulted in a material change in the estimated tonnage and grade.
2) The Jubilee shear zone was re-interpreted as three individual shears rather than as a single shear, which resulted in a change in volume and grade distribution.
3) The footprint of the 2019 Inferred Mineral Resource was significantly reduced from 2015 to reflect the uncertainty of mineral continuity at depth between widely spaced holes.
4) The estimation parameters were changed to reflect the differences in mining scenarios. The block size was reduced to 2 x 2 x 2 m from 4 x 4 x 4 m and the interpolation method was changed from Ordinary Kriging (OK) to Inverse Distance Cubed (ID^3). These changes have reduced the amount of grade smoothing in the model and are more representative of the scale of mineralization in the deposit.
5) Indicated Mineral Resources were classified in the 2019 model based on recent confirmation drilling, the large historical sample program completed by Red Pine and historical data analysis completed by Golder.
6) The Minto Mine South deposit was discovered, and the Mineral Resource was added in 2018.

The QP is unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that could materially affect the Mineral Resource estimate."

15 Interpretation and conclusion

The Wawa Gold deposit is a shear hosted Archean lode gold deposit, located near the town of Wawa, Ontario, Canada, in the Michipicoten greenstone belt. Mineralization is primarily located within the Jubilee Shear Zone and consists of visible gold and gold-bearing sulphide mineralization associated with quartz veins, and a potassic hydrothermal alteration assemblage hosted in mainly diorite. Mineralization plunges approximately 25^{o} to the south/south-west and dips approximately 30^{o} to the south-east. The deposit remains open along-strike and down-dip, along with other gold bearing structures in the area as disclosed in the June 21, 2019 news release entitled "*Red Pine Provides Comparison of 2015-2019 Block Models and Outlines Exploration Activity for the Remainder of 2019 at its Wawa Gold Project.*"

2017-2019 exploration and drilling programs support that Wawa Gold Corridor is an extensive progressive deformation with protracted hydrothermal activity and multiple episodes of gold mineralization (pre-, syn-, and post-kinematic). Figure 15.1 is highlighting main orogenic deformation episodes.

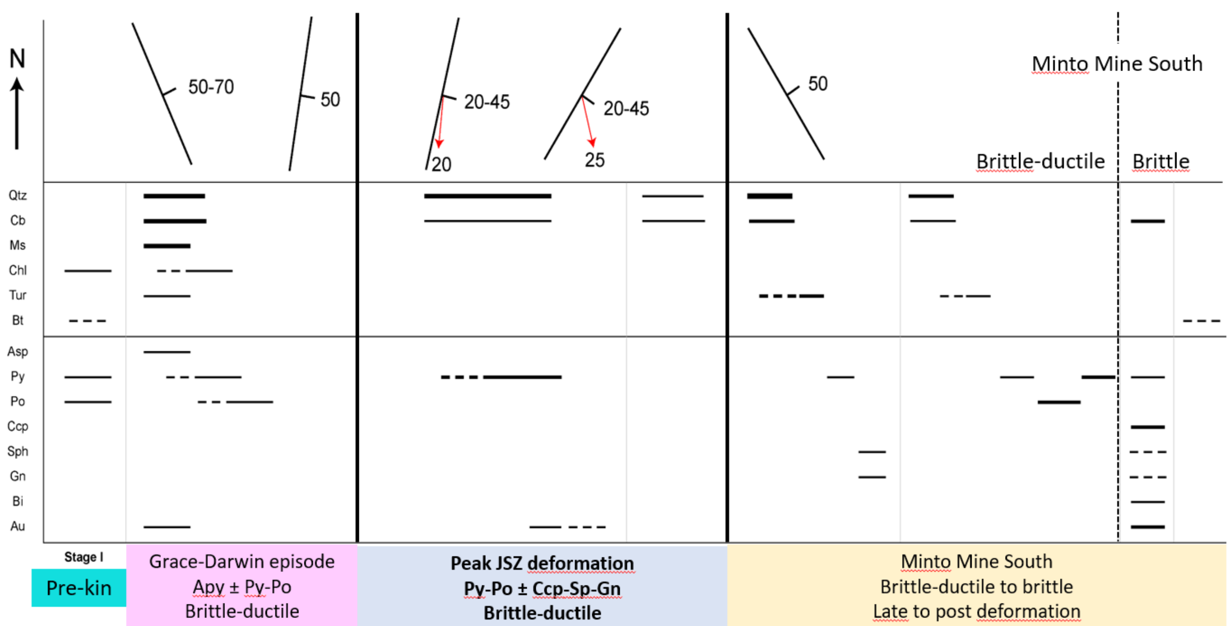


Figure 15-1: Summary of the main orogenic deformation episodes in the Wawa Gold Corridor

Figure 15.1 demonstrates three gold events such as early-kinematic, pre-stretching arsenopyrite-gold association (Grace-Darwin episode), syn-kinematic pyrite-gold association (Jubilee Shear Zone peak deformation), and post-kinematic chalcopyrite-pyrite-bismuth-gold association (Minto-Mine South episode).

Completed programs were helpful in interpretation of controls on the location and geometry of the high-grade gold zones:

- Strain intensity, deformation regime and timing of mineralization vs deformation in the Wawa Gold Corridor (Strong L-S fabrics better than pure S or L fabrics)
  - Positive feedback between increasing strain and fluid flow
  - Relative timing between gold mineralization and the stretching lineation controls the continuity of the mineralized zones
  - Different mineralizing events have different directions of continuity
- The geometry of the early mineralized structure deformed in the Jubilee Shear Zone
  - Interpreted to control the distribution of some of the arsenopyrite-rich zones in the Jubilee Shear Zone
- The geometry of the tholeiitic gabbro dykes and other primary contacts in the Jubilee Stock – Critical role of Jubilee Stock
  - Strain and fluid flows are preferentially partitioned in contact zones between the different intrusive phases of the Jubilee stock and between Jubilee Stock intrusions and volcanic rocks
  - Important control on the geometry of the high-grade zone the Jubilee and Minto Mine South zones

In 2017 Red Pine discovered the Minto Mine South Deposit the extension of the historic Minto Mine and discovers a high-grade gold zone in the extension of the Darwin-Grace Mine. After completion of the 2017 drilling program on the Minto Mine South Deposit, it was issued its first mineral resource estimate*:* 100,000 ounces gold at an average grade of 6.8 g/t (using a cut-off grade of 3.5 g/t gold) (Initial Technical Report for the Minto Mine South Property, Golder Associates Ltd. (effective Nov. 7, 2018)). Mineralization remains open in all directions. 2019 trenching programs confirmed Darwin-Grace zone.

In 2018 identifying exploration targets, Red Pine focused its drilling programs on converting the targets into mineral resources. This goal was reached when in 2019 it was issued mineral resource estimate for Surluga deposit was evaluated for an underground mining scenario: 1,202,000 tonnes at 5.31 g/t for 205,000 ounces gold in the Indicated category and 2,362,000 tonnes at 5.22 g/t for 396,000 ounces gold in the Inferred category using a cut-off grade of 2.7 g/t gold (National Instrument 43-101 Technical Report for the Wawa Gold Project).

Highlights of Golder's Mineral Resource estimates include:

- The combined Minto Mine South and Surluga deposits contain 1,307,000 tonnes @ 5.47 g/t gold for 230,000 ounces of gold in the Indicated Category;
- The combined Minto Mine South and Surluga deposits contain 2,716,000 tonnes @ 5.39 g/t gold for 471,000 ounces of gold in the Inferred Category; and
- Over 95% of the contained ounces at both deposits are located between surface and 350 metres depth;
- Both deposits remain open at depth
- The underground developments of the historic Jubilee and Surluga mines provide access to the zones of the Surluga resource.

Results of a ground gravity survey, completed in March 2019, confirm the extension of the Jubilee Stock and the Jubilee Shear Zone to the SW, opening new areas for gold exploration on the property

16 Conclusions and Recommendations

In the National Instrument 43-101 it was recommended by Golder that further exploration drilling to be completed to potentially expand the Mineral Resource for the Project by drilling along strike and down-dip of the Jubilee Shear Zone to test the current extent of the deposit, as well as surface exploration of other high priority exploration targets, consisting of mapping, trenching and sampling.

The current 2020 drilling program is designed to: 1) expand gold mineralization in the down-dip and down-plunge extensions of the Surluga Deposit in the Jubilee Shear Zone beyond the footprint of the current resource, 2) expand gold mineralization in the Hornblende Shear Zone, adjoining and parallel to Surluga and 3) test the Jubilee Shear Zone extension south of the Parkhill Fault.

Red Pine's 2020 drilling program in the Jubilee Shear Zone will target:

1. large drilling gaps (some exceeding 80 metres in width and covering a lateral extent of more than 150m) in the Jubilee Shear Zone that can host high-grade gold mineralization;
2. the down-plunge extension of the three (3) main ore shoots so far identified in the Jubilee Shear Zone;
3. the down-dip extension of the Jubilee Shear Zone with strategic fences of drill holes in order to discover new zones of high-grade mineralization.

2020 drilling program is fully funded to drill planned 16,000 with budget $3.9 M.

The southern, western and eastern boundaries of the Wawa Gold Corridor remain unknown. It is also recommended to prospect widely South area of the Jubilee Shear zone, and South of the Grace Shear zone with potential to map their intersection with Eagle Deformation zone which was defined early by a geophysics data.

The 2020 mapping program will: 1) gather well-constrained structural data to refine the Company's targeting matrix in the Parkhill #4 and the Grace Shear structures; 2) confirm the potential 900-metres strike length of the Grace Shear Zone to its intersection with the southern extension of the Jubilee Shear Zone; 3) include fieldwork in the extension of the Jubilee Shear Zone where trenching and channel sampling in 2019 identified promising zones of mineralization.

17 Statement of Qualifications

17.1 Quentin Yarie

I, Quentin Dale Yarie, P. Geo. of 196 McAllister Road, Toronto, Ontario, M3H 2N9, do hereby certify that:

- I am a member of the Association of Professional Geoscientists of Ontario since 2010 (License 1778) and a member of the Association of Professional Geoscientists of Nova Scotia since 2002 (License 121). I am also a member of the Society of Exploration Geophysicists (144385).
- I have practiced my profession in excess of 25 years
- I certify that by reason of my education and past relevant work experience, I fulfill with the requirements to be a “Qualified Person” for the purpose of this Assessment Report. My relevant work experience for the purpose of my activities identified in this report are:
- Experience with junior resource companies as a Director of Red Pine Resources (CNDX) and Red Pine Exploration (CNDX). Experience with junior resource companies as Vice President of Exploration of Red Pine Exploration Ltd. and Honey Badger Exploration Inc.
- Continuous work in the mineral exploration and mining industry since 1983. I ran my own geophysical consulting firm from 1990 through 2002. Work has included supervision of grassroots to advanced stage programs which have included airborne and ground geophysics, mapping, geochemical sampling, trenching and drilling. I have reviewed numerous gold, silver, base metals and diamond projects in a wide range of geological environments both in Canada, Mexico, Chile, China, Turkey, Jordan, Italy, and other international destinations.
- I am the author of several Technical Reports.

Dated at Toronto, Ontario, this this 1st day of April 6, 2020

17.2 OLGA PRIKHODKO

I, Olga Prikhodko, P.Geo, of 45 Springhead Gardens, Richmond Hill, Ontario, L4C 5C1, Canada, do hereby certify that:

- I am a member of the Professional Geoscientists of Ontario (PGO) since 2012, member #2210.
- I have completed a Master of Science degree in Geology from Ukraine National Mining University, Dnepropetrovsk
- I have practiced my profession more than twenty years
- I have worked as a geologist in the mineral exploration and mining industry in Russia and Canada where my roles have involved implementation and oversight of prospecting and diamond drilling programs, project budgeting and control.
- I am currently employed as a Geologist where I supervise Wawa gold exploration project activities, health and safety, implement field exploration programs, report company President and CEO on all exploration activities and supervision of exploration staff.

Dated at Toronto, Ontario, this 1st day of April 6, 2022

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Appendices

(*on accompanying DVDs*)

Appendix I: Abbreviations

Appendix II: Grab Samples Assay Results and Certificates

Appendix III: Prospecting Data – Stations and Travers Maps

Appendix IV: Prospecting Data – Field Descriptions

Appendix V: Prospecting Data - Structural Measurements

Appendix VI: Inversion of Versatile Time Domain Electromagnetic Data Report

Appendix VII: Gravity Survey Report

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Appendix X: Trench and Channel photos

Appendix XI: Channel Sample Coordinates

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Appendix XIX: Historical Drill Hole Collars

Appendix XX: Historical Drill Hole Collar Locations and Core Major Lithology

Appendix XXI: Historical Core Photos

Appendix XXII: Historical Core Assay Results and Certificates

Appendix XXIII: Historical Drill Hole Cross Sections

Appendix XXIV: Drill Hole Collar Locations

Appendix XXV: Down-Hole Survey

Appendix XXVI: Down Hole Structural Measurements

Appendix XXVII: Down Hole SWIR Measurements

Appendix XXVIII: Drill Hole Loges

Appendix XXIX: Drill Hole Assay Results and Certificates

Appendix XXX: Down Hole Magnetic Susceptibility

Appendix XXXI: Drill Hole Specific Gravity

Appendix XXXII: Drill Hole Core Photos

Appendix XXXIII: Drill Hole Cross Sections

Appendix XXXIV: High Resolution Images

Expenditure Details (Receipt entries)														Aging Credit Eligibility	
Primary Cost Category		Secondary Cost Category	Work Performed		Invoicee	Invoice Reference #	Invoice Date	Billing Unit	Unit Price	# Units	Total Cost (No Tax)	Rounded	Invoice Reference #	100% (< 2 yrs)	50% (2 - 5 yrs)
Primary Exploration Activity	Work Subtype	Associated Cost Type	Start Date	End Date											
round_Geophysical_Survey_Work			March 26, 2019	March 26, 2019	Abitibi Geophysics	19-4635C	March 26, 2019	Each	$ 18,759.50	1	$ 18,759.50	$ 18,760	1066	$ -	$ 9,380.00
round_Geophysical_Survey_Work			April 3, 2019	April 3, 2019	Abitibi Geophysics	19-4643	April 3, 2019	Each	$ 12,715.30	1	$ 12,715.30	$ 12,715	1067	$ -	$ 6,357.50
round_Geophysical_Survey_Work			May 1, 2019	May 1, 2019	Abitibi Geophysics	19-4657	May 1, 2019	Each	$ 3,497.20	1	$ 3,497.20	$ 3,497	1068	$ -	$ 1,748.50
Exploratory_Drilling	Core_Drilling		October 29, 2017	December 17, 2017	Red Pine			Total	$ 149,944.14	1	$ 149,944.14	$ 149,944	1069A	$ -	$ 74,972.00
Exploratory_Drilling	Core_Drilling		January 7, 2018	May 13, 2019	Red Pine			Total	$ 1,265,377.04	1	$ 1,265,377.04	$ 1,265,377	1069B	$ -	$ 632,688.50
Exploratory_Drilling	Core_Drilling		July 26, 2019	October 15, 2019	Red Pine			Total	$ 189,888.39	1	$ 189,888.39	$ 189,888	1069C	$ -	$ 94,944.00
Physical_Work	nized_Stripping_(>100m2_in_200m_radius)		August 7, 2018	August 17, 2017	Red Pine			Total	$ 29,922.00	1	$ 29,922.00	$ 29,922	1070A	$ -	$ 14,961.00
Physical_Work	nized_Stripping_(>100m2_in_200m_radius)		October 9, 2018	November 2, 2018	Red Pine			Total	$ 69,603.87	1	$ 69,603.87	$ 69,604	1070B	$ -	$ 34,802.00
Physical_Work	nized_Stripping_(>100m2_in_200m_radius)		May 28, 2019	November 5, 2019	Red Pine			Total	$ 374,839.18	1	$ 374,839.18	$ 374,839	1070C	$ -	$ 187,419.50
Sampling_Work	Drill_Core_Sampling		February 25, 2018	October 25, 2018	Red Pine			Total	$ 651,213.22	1	$ 651,213.22	$ 651,213	1071	$ -	$ 325,606.50
Geological_Survey_Work	Geological_Survey		May 24, 2019	July 25, 2019	Red Pine			Total	$ 146,597.91	1	$ 146,597.91	$ 146,598	1072	$ -	$ 73,299.00
										TOTAL	**$ 8,765,681.80**	**$ 4,960,537**		**$ 3,478.00**	**$ 4,380,981.00**