



**NI 43-101 TECHNICAL REPORT ON THE CLARENCE STREAM NORTH  
GOLD PROJECT  
NEW BRUNSWICK, CANADA**

Prepared For:

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## 1.0 SUMMARY

### 1.1 Overview

Red Lake Gold Inc. and its wholly-owned subsidiary, Alma Gold Inc. (“Alma Gold”) retained Mercator Geological Services Limited (“Mercator”) with respect to planning and completing an exploration program for the Clarence Stream North Gold Project (“Clarence Stream North” or the “Project”) located in New Brunswick, Canada, and reporting the results in a National Instrument 43-101 (“NI 43-101”) Technical Report. Alma Gold is a wholly-owned subsidiary of Red Lake Gold Inc. (“Red Lake Gold”). Red Lake Gold is a publicly-traded exploration company based in Vancouver, Canada. The term “Alma Gold” is used for the purposes of this current report to collectively refer to both Red Lake Gold and its subsidiary Alma Gold.

Alma Gold acquired the Project by way of map staking of mineral claims consisting of two mineral claim groups (claim numbers 9555 and 9556), held in trust for the Company for administrative purposes by its Director. The two claim groups are 100% owned by Alma Gold and there are no royalties, back-in rights or other payment obligations associated with the Project.

This technical report summarizes recent exploration work completed on the Project by Alma Gold including historical compilation work, prospecting and rock sampling, and a soil sampling program on both claim groups. In addition, this report makes recommendations for further exploration work on the Project. The exploration work described in this report was completed by Mercator staff on behalf of Alma Gold between July 23 and July 31, 2020.

### 1.2 Property Description and Ownership

The Clarence Stream North Project is comprised of mineral claim groups 9555 and 9556 (152 claim units in total - Table 1-1) and is approximately 3,440 hectares in size. The two mineral claim groups are located in Charlotte County, New Brunswick, approximately 40 km northeast of the Town of St. Stephen. The Project is centred at map coordinates 655,737 m Easting and 5,032,250 m Northing (UTM NAD83 Zone 19N) within NTS Map Sheets 21G/06 and 21G/07.

**Table 1-1: Mineral Claims Table for Clarence Stream North Project**

Claim Number	Claim Group Name	Beneficial Owner	Number of Claim Units	Issue Date	Expiry Date	Area (Ha)
9555	Pleasant Ridge	Alma Gold (100%) (held in Trust on behalf of Alma Gold)	13	2020-07-13	2021-07-13	294.4
9556	Kedron Stream	Alma Gold (100%) (held in Trust on behalf of Alma Gold)	139	2020-07-13	2021-07-13	3,145.4
			<b>152</b>			<b>3,439.8</b>

The Clarence Stream North Project is located on Crown land and private lands owned by either St. George Pulp & Paper Limited (a division of J.D. Irving Ltd.), Brian Covey, or Jeffrey Stewart. Alma Gold has executed land access agreements with the Crown, Brian Covey, and Jeffrey Stewart to complete the recent exploration work on its mineral claims (prospecting and soil geochemical surveys) and reported in this technical report. Amendments to these land access agreements would be required to conduct ground geophysical surveys requiring line cutting, trenching, and all drilling activities. These land access agreements would cover any land disturbance or other damage associated with the intended exploration work and need to be renewed on a regular basis.

Alma Gold has advised that it does not have a land access agreement with St. George Pulp & Paper Limited (St. George Pulp & Paper) to conduct exploration work on their lands as of the effective date of this technical report. It will be necessary to establish such customary agreements to carry out various future components of the exploration work recommended in this technical report.

The report author is not aware of any royalties, back-in rights, payments, or other agreements or encumbrances to which the Clarence Stream North Project licenses may be subject, other than customary Crown royalty obligations on minerals situated within the Province of New Brunswick.

### **1.3 Geology and Mineralization**

Clarence Stream North is situated near a major accretionary tectonostratigraphic boundary that separates the Gander Zone to the northwest from the Precambrian amalgamated terranes of the Avalon Zone to the southeast (Thorne et al., 2008). The geology of southwestern New Brunswick can be divided into a number of distinct belts on the basis of stratigraphic and structural characteristics. The New River, Brookville, and Caledonia terranes were included in the Avalon Zone by Williams and Hatcher (1982), but Barr et al. (1990) considered only the volcanic and plutonic rocks of the Caledonia terrane to be truly Avalonian. The Neoproterozoic carbonate sequences and plutonic rocks of the Brookville belt and Neoproterozoic volcanic and plutonic rocks of the New River belt are now generally considered to represent basement to the Gander Zone, whereas the Late Cambrian to Ordovician sedimentary rocks of the St. Croix belt are interpreted to have been deposited along the Ganderian continental margin (van Staal and Fyffe, 1991; van Staal et al., 1996; Whalen et al., 1996).

Much of the early Paleozoic bedrock, which is used to define the terrane affiliation in the Iapetus cycle, is covered by Silurian and younger rocks in New Brunswick. In particular, the boundary area between the Gander and Avalon zones is covered by Silurian rocks of the Mascarene belt, and intruded by the Saint George batholith. The Silurian cover rocks of the Mascarene belt include a basal conglomerate (Oak Bay Formation) and overlying volcanic and volcanoclastic rocks (Waweig Formation) of the Mascarene Group that rest with profound unconformity on Early Ordovician black shale (Calais Formation) of the Cookson Group (Fyffe et al., 1999).

The St. Croix belt, which lies immediately north of the Mascarene belt, is characterized by a highly deformed succession of clastic sandstones and shale of the Cookson Group (Crocker Hill, Calais, Woodland, and Kendall Mountain formations) ranging in age from Late Cambrian to Middle Ordovician. The boundary between the St. Croix belt and Mascarene belt is marked by the NE-trending Sawyer Brook

Fault (Fyffe et al., 1999). In contrast, the contact between Silurian feldspathic turbidites of the Kingsclear Group (Digdeguash, Sand Brook, and Flume Ridge formations) of the Fredericton belt and underlying quartzose turbidites of the Cookson Group (Kendall Mountain Formation) along the northwestern margin of the St. Croix belt appears to be gradational in the northern part of the Clarence Stream area (Fyffe et al., 1999).

Clarence Stream North includes stratified units of the Cookson Group in the eastern part of the St. Croix Belt; Kingsclear Group in the southernmost margin of the Fredericton Belt; and the Mascarene Group in the northern part of the Mascarene Belt. The Late Devonian Mount Pleasant Caldera Complex is located approximately 5 kilometres to the east of claim 9556 and is comprised of multi-phase intrusions known as the Mount Pleasant Granites, which also host and are responsible for the well known polymetallic deposits of this area (McCutcheon, 1990).

The dominant geological units at Clarence Stream North (claims 9555 and 9556) are rocks of the Silurian Kingsclear Group. The Kingsclear Group is comprised of medium to dark grey, medium- to coarse-grained, lithic to feldspathic wacke, light grey quartz wacke and polymictic, granule conglomerate, and dark grey to black shale of the Digdeguash Formation. This unit is overlain by graded, light green feldspathic wacke beds of variable thickness interbedded with distinctive, green to maroon, laminated siltstone and shale that comprise the Sand Brook Formation. The distinctive greenish colour of these rocks is attributed to the abundance of epidote and actinolite attesting to the formation's overall calc-silicate composition. The Sand Brook Formation is overlain by the Flume Ridge Formation, which consists of light grey to greyish green, calcareous wacke with characteristic large detrital muscovite flakes and shale as thin partings in the coarser grained clastics that are interstratified with light to medium grey, non-calcareous slate (Ruitenbergh and Ludman, 1978; Fyffe, 1991). The Digdeguash Formation appears to lie conformably on the Kendall Mountain Formation at some localities, but is generally faulted against various units of the Cookson Group (Fyffe and Riva, 2001).

The Saint George Batholith, which consists of several multiphase intrusive suites, crops out over the southern part of the Clarence Stream area and, based on geophysical information, underlies the entire area at shallow depths (Thomas and Willis, 1989; King and Barr, 2004a, 2004b). At the present-day surface in the vicinity of Anomaly A at the Clarence Stream deposit, apophyses of the batholith referred to as satellite plutons are prevalent. The suites and constituent intrusions of main interest here are the Early Devonian Magaguadavic Granite of the South Oromocto Lake Suite, and Late Devonian Kedron (formerly the Bonny River Granite), McDougall Brook, and Mount Pleasant granites of the Pomeroy Suite. The Magaguadavic Granite was emplaced at moderate crustal depths and consists of subequal proportions of granite and granodiorite, is xenolith-rich, and exhibits chemical and mineralogical features of oxidized "I"-type granites. This intrusion and its later fractionated components are considered the source of gold in the Clarence Stream deposits (Thorne et al., 2002).

In contrast, intrusions of the Pomeroy Suite were emplaced at very shallow crustal levels and are mostly, high-silica and/or topaz granites that are highly evolved and exhibit mostly "A"-type characteristics. Volcanism in the Mount Pleasant Caldera Complex is associated with this suite of intrusions, as is the mineralization at the Mount Pleasant polymetallic deposit and numerous other similar mineral

occurrences throughout the area. Minor gold mineralization is also related to the Pomeroy Suite, especially with relatively un-evolved granites such as the McDougall Brook Granite located a few kilometres east of claim 9556. The potential for significant gold deposits to be associated with these intrusions has yet to be fully evaluated.

In the Clarence Stream area, co-incident Au-As-Sb soil geochemical anomalies define the numerous mineralized gold-bearing subzones of the deposits' Main zone, the most significant of which are the East and West zones. In trenched exposures, gold mineralization occurs in a parallel series of recrystallized sulfide-quartz fault-fill veins focused within a 250 to 300 m-wide NE-trending, steeply N-dipping shear zone that locally crosscuts variably metamorphosed, deformed, and altered volcanic and volcanoclastic rocks of the Mascarene Group. This broad zone of deformation is related to the regional-scale Sawyer Brook Fault Zone located approximately 100–200 m to the north of the Clarence Stream deposit, and is subparallel to the host rock contact with the Early Devonian Magaguadavic granite that intrudes the sequence to the south and at depth. Late reactivation of this shear zone induced differential fabric development within the Late Silurian to Early Devonian metagabbroic and granitic dikes that were emplaced along it.

#### **1.4 Exploration**

Exploration work completed on the Clarence Stream North properties include prospecting and rock sampling, and soil geochemistry surveys. This exploration work was planned and completed by Mercator on behalf of Alma Gold in mid to late July 2020. Mercator also undertook a compilation of available geoscientific and geophysical data relating to the Project. This data was in the form of provincial and federal government digital datasets, plus assessment reports and maps, and historical assay data. Digital data was collected, organized and reviewed. Relevant data was extracted for use in geographic information system (GIS) software, based on the objective of identifying targets for soil geochemistry surveying.

Based on the results of this data compilation and 2002 Geological Survey of Canada (GSC) airborne magnetic survey maps (first vertical derivative) (Kiss et al., 2002a and 2002b) soil sample locations were selected over known geological and geophysical anomalies. Three large gaps in the soil sampling survey were due to the lack of a land access agreement with St. George Paper & Pulp (a subsidiary of J.D. Irving) prior to the start of the 2020 exploration program.

Field mapping and rock sampling of outcrops was completed by Mercator field staff in the Clarence Stream North Project, mainly focused on rivers and streams due to thick glacial till cover in the area impeding bedrock exposure. No rock samples were collected on claim 9555 due to poor bedrock exposure and a lack of rivers and streams in this area. The field mapping and sampling consisted of traversing the project areas by truck and by foot to assess where outcrops have been previously mapped by exploration or government programs. Sample locations were marked by handheld GPS units and available structural measurements were recorded along with lithological descriptions, including alteration and mineralization where applicable. Outcrops with quartz veining and sulphide mineralization were sampled for follow up testing and representative country rock samples were collected for use in alteration studies.

A total of 20 rock samples were collected from the Clarence Stream North Project on claim 9556 between July 23 and July 31, 2020 and all rock samples were sent to Activation Laboratories Ltd. (Actlabs) for multi-element analysis including gold and arsenic. No gold assay values were returned above the detection limit of 5 ppb Au, however As values were between 2 ppm to 747 ppm with the highest As values in outcrops located in the western part of claim 9556. These higher As rock assay results appear to correlate with an As soil anomaly in the area. Generally, gold assay results of 10 ppb or higher are considered very anomalous in the Clarence Stream area, but the relationship between gold and arsenic is still poorly understood in the project area and warrants further investigation.

Two teams of two field geologists completed a B-horizon soil sampling program on claims 9555 and 9556 on both Crown and private lands at Clarence Stream North. A land access agreement was not entered into with St. George Pulp & Paper, therefore soil samples were not collected on those particular private lands. Soil samples were collected by means of a Dutch Auger to a total depth of approximately 0.2 to 0.5 metres from the surface. The soil survey program included a detailed QAQC program comprised of the insertion of blanks and certified reference materials (standards) on a staggered 1 in 40 basis and duplicate pulp split and field sample duplicate analyses on separate 1 in frequencies. Data collection was completed using field tablets with the GPS location, soil texture, colour, and other soil descriptions recorded in a digital database.

A total of 426 B-horizon soil samples were collected between July 23 and July 31, 2020 and submitted for gold and multi-element geochemical analysis at Actlabs. B-horizon soil samples were mainly collected at 50 m stations along 100 m spaced survey lines with some stations spaced between 200 to 250 metres to maximize the soil survey grid coverage. The sampling grid on claim 9556 measures approximately 14.5 km by 2.5 km in size with the highest concentration of sample stations located in the central part of the claim block. A total of 24 soil samples were taken in claim 9555 focused on the western end of the claim block and 389 soil samples collected on claim 9556 spread evenly across the entire claim block on Crown and private lands (except St. George Pulp & Paper).

Clarence Stream North B-horizon soil samples returned gold values ranging from <5 ppb to 32 ppb with a detection limit of 5 ppb. A total of 36 soil samples returned gold results above 10 ppb. Generally, gold assay results of 10 ppb or higher in soils are considered anomalous in the Clarence Stream area. Arsenic in soil results returned values ranging from <2 ppm to 674 ppm with a detection limit of 2 ppm.

The soil survey was successful in outlining three main gold anomalies on claim 9556 with the centre anomaly (Au Anomaly 2) being the most prominent. Au Anomaly 2 appears to coincide with a weak magnetic high from airborne magnetic surveys in the area and warrants further investigation to determine whether this anomaly is related to a deeper intrusive body at subsurface or a fault structure.

Two large arsenic soil anomalies were detected in claim 9556, with As Anomaly 1 being the strongest of the two. A smaller As anomaly is evident in the northeastern part of claim 9555, but grid coverage in this area was poor due to land access issues and follow-up soil sampling is required to determine the size and significance of this particular As anomaly. The arsenic anomalies do not appear to correlate well with many of the gold anomalies detected. Based on a preliminary review of multi-element soil data, there appears to be a spatial association between gold and some of the more mafic-related elements such Mg,

Cr, Zn, Cu and Ni in the east and west extents of the soil grids (Au Anomaly 1 and 3). The gold anomaly in the center of the grid (Au Anomaly 2) does not appear to correlate with these elements or with arsenic, which needs to be investigated further through detailed statistical analysis and follow-up soil sampling in surrounding areas.

The total cost of the 2020 Alma Gold rock and soil sampling program at Clarence Stream North including field costs, laboratory analyses, geological interpretation, and technical reporting is approximately \$105,900 before taxes.

## 1.5 Interpretation and Conclusions

Detailed evaluation of all data collected from these exploration activities has been undertaken for the purposes of developing targets for further exploration work, including additional soil geochemistry surveys and ground or airborne (UAV) geophysics programs on the Project. Combining soil geochemistry results with historical airborne geophysics results has resulted in identification of several key target areas, the highest priorities of which are the central and eastern parts of claim 9556 and the majority of claim 9555. However, additional soil geochemistry survey work is required throughout the Project in areas not accessed during the July 2020 exploration program due to the lack of a private land access agreement with St. George Pulp & Paper (J.D. Irving).

The soil geochemistry survey was successful in outlining three main gold anomalies and several outliers on claim 9556, with the centre anomaly (Au Anomaly 2) being the most prominent. Au Anomaly 2 appears to coincide with a weak magnetic high in the area and warrants further investigation to determine whether this anomaly is related to a deep intrusive body at subsurface or a potential fault structure.

Two large arsenic soil anomalies were detected in claim 9556 and several outliers, with As Anomaly 1 being the strongest of the two main anomalies. A smaller As anomaly is evident in the northeastern part of claim 9555, but grid coverage in this area was poor due to the private land access issues noted above and follow-up soil sampling is required to determine the size and significance of this particular As anomaly. The arsenic anomalies do not appear to correlate well with many of the gold anomalies detected. Based on a limited multi-element analysis of the soil data, there does appear to be a spatial association with gold, particularly with some of the more mafic-association elements such as Mg, Cr, Zn, Cu and Ni in the gold anomalies in the east and west extent of the soil grids (Au Anomaly 1 and 3). The gold anomaly in the center of claim 9556 (Au Anomaly 2) does not appear to correlate with these elements or with arsenic. This needs to be investigated further through detailed statistical analyses of the soil geochemical data such as a principal component analysis (PCA) study to determine vectors for mineralization and alteration following the collection of additional soil samples in the project area.

Generally, gold assay results of 10 ppb or higher in soils are considered very anomalous in the Clarence Stream area according to Pennington and Smith (2017), and possible indicators of mineralization at depth where bedrock exposure is poor. Arsenic soil results indicate a significant trend near the Magaguadavic River and in the eastern part of claim 9556, but the reason for these As anomalies is unknown at this time as they do not correlate well with gold results in soils, thus warranting further investigation.

Determining potential exploration targets on the Clarence Stream North Project through the combined interpretation of airborne ground geophysics survey data and soil and rock geochemistry data has proven successful in identifying several gold and arsenic anomalies indicating the potential for gold mineralization. This technique has proven useful in other areas of southern New Brunswick under thick glacial till cover with poor bedrock exposure, including the Clarence Stream gold deposit area located 10 kilometres south of the Project. Additional soil geochemistry survey work is required in areas not covered during the July 2020 field program, followed by a detailed PCA study to determine vectors for gold mineralization and understanding the alteration in the project area. Geological mapping and prospecting of all property areas not covered to date should be also completed. The Project also requires a full ground geophysics program to fine tune the magnetic anomalies detected in the airborne magnetic data and to aid in the determination of potential targets for future diamond or reverse circulation (RC) drilling programs on the properties.

The report author does not foresee any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information disclosed in this technical report.

### 1.6 Recommendations

Additional exploration is recommended for the Clarence Stream North Gold Project based on the successful results from the summer 2020 exploration program completed by Alma Gold. This next phase of exploration should be focused on expanding Alma Gold’s understanding of the geology, structure, alteration, and mineralization potential within claim groups 9555 and 9556.

Historically, exploration in the area has been hampered by thick overburden (glacial till deposits) resulting in poor bedrock exposure. Therefore, additional soil geochemistry surveys, ground and/or UAV magnetometer and VLF-EM surveys, and the use of hyperspectral mineral analyzers (i.e. TerraSpec) could be important tools to discover gold mineralization within the project area. These combined exploration techniques have proven successful on adjacent properties including the Clarence Stream gold deposit area and other parts of southern New Brunswick.

The report author also recommends that Alma Gold secure a land access agreement with St. George Pulp & Paper (J.D. Irving) prior to the next phase of exploration to fill in existing gaps in the soil survey grid on the Project.

Table 1-2 below outlines the next phase of exploration and estimated costs associated with this program.

**Table 1-2: Recommended Program Budget**

Phase 1	Task	Estimated Cost
	Additional rock and soil geochemistry sampling focused on Irving-owned private lands not accessed during the 2020 exploration program (includes TerraSpec and laboratory geochemistry analyses)	\$75,000

	UAV or ground magnetometer and ground VLF-EM surveys over selected project areas	\$40,000
	Data interpretation, conceptual 3D modeling, and principal component analysis (PCA) of new and existing soil geochemistry data to determine vectors for mineralization based on alteration-related elements and lithological variations and for drilling targeting purposes	\$15,000
	<b>Total</b>	<b>\$130,000</b>

## **2.0 INTRODUCTION**

### **2.1 Scope of Reporting**

Red Lake Gold Inc. and its wholly-owned subsidiary, Alma Gold Inc. (“Alma Gold”) retained Mercator Geological Services Limited (“Mercator”) with respect to planning and completing an exploration program for the Clarence Stream North Gold Project (“Clarence Stream North” or the “Project”) located in New Brunswick, Canada, and reporting the results in a National Instrument 43-101 (“NI 43-101”) Technical Report. Alma Gold is a wholly-owned subsidiary of Red Lake Gold Inc. (“Red Lake Gold”). Red Lake Gold is a publicly-traded exploration company based in Vancouver, Canada. The term “Alma Gold” is used for the purposes of this current report to collectively refer to both Red Lake Gold and its subsidiary Alma Gold.

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This technical report summarizes recent exploration work completed on the Project by Alma Gold including historical compilation work, prospecting and rock sampling, and a soil sampling program on both claim groups. In addition, this report makes recommendations for further exploration work on the Project. The exploration work described in this report was completed by Mercator staff on behalf of Alma Gold between July 23 and July 31, 2020.

### **2.2 Qualified Persons**

The report author (Paul Ténrière) is a Professional Geologist (P.Geo.) registered in the Province of New Brunswick and in Ontario and is an employee of Mercator, which has its head office in Dartmouth, Nova Scotia, Canada. The report author has prepared this technical report after reviewing historical exploration work and assessment reports completed on the Project and supervising surface exploration activities on the Project by Mercator staff on behalf of Alma Gold. In addition, the report author completed a personal inspection (site visit) of the Project on July 29, 2020.

The report author is an independent Qualified Person (QP) as defined by NI 43-101 and is responsible for all sections of this report. Neither Mercator, nor the author of this report, has any material present or contingent interest in the outcome of this report, nor do they have any financial or other interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. This technical report has been prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report. The report author is not a director, officer or other direct employee of Red Lake Gold and its subsidiary Alma Gold and does not have shareholdings in any of these companies.

### 2.3 Personal Inspection (Site Visit) and Data Verification

The report author completed a personal inspection (site visit) of the Project on July 29, 2020. This site visit was completed for the purposes of site inspection, ground truthing, review of active exploration activities (prospecting and soil geochemical survey programs) and to satisfy NI 43-101 “personal inspection” requirements. During his personal inspection, the report author visited claim licenses 9555 and 9556 which comprise the Project and verified the geology, mineralization, local infrastructure, and accessibility into the project area for future exploration activities by Alma Gold.

During the site visit the report author completed the following tasks and inspections:

- Review of soil geochemical survey procedures on claim license 9556 including the collection of B-horizon soil samples, field data entry procedures, and ensuring QAQC protocols were met;
- Field reconnaissance of claim licenses 9555 and 9556 including verifying roadside and stream geology/mineralization and access into the project area via forestry roads on Crown and corporate-owned lands; and
- Reviewed the data and quality assurance/quality control (QAQC) procedures for the historical exploration programs, with a focus on work completed on both claim groups.

The personal inspection completed by the report author on July 29, 2019 confirmed the following:

- The prospecting and soil geochemical surveys were completed by Mercator staff using best practice methods and included a robust QAQC protocol (Figure 2-1);
- While visible sulphide or gold mineralization was not detected in outcrops on the properties due to limited exposure, the author was able to confirm the local geology and structure (Figure 2-2); and
- Access to the properties is excellent through secondary roads and well-maintained logging roads owned by JD Irving Ltd. Exploration activities can be carried out easily without material obstacle.

In addition, based on a detailed review of the available historical rock and soil geochemistry data, geophysical data, and QA/QC procedures, including exploration programs recently completed by Alma Gold, the report author is satisfied this meets the data verification requirements under NI 43-101. The Alma Gold field programs were designed according to CIM Mineral Exploration Best Practice Guidelines and no issues or fatal flaws were detected during the personal inspection.

**Figure 2-1: Soil sampling on claim 9556**



**Figure 2-2: Kingsclear Group chloritic greywacke and slate on claim 9556; note thin (~1 cm) white quartz vein cutting across bedding at a high angle**



## 2.4 Information Sources

Sources of information, data and reports reviewed as part of this technical report can be found in Section 27 (References). The report author (Qualified Person) takes responsibility for the content of this report and believes the data review to be accurate and complete in all material aspects.

Exploration claim information, historical assessment reports, and exploration data were acquired by Mercator. Historical and recent exploration data was loaded into a QGIS database and validated by Mercator staff prior to evaluation and reporting.

## 2.5 Table of Abbreviations

Abbreviation	Meaning
3D	three-dimensional
AA	atomic adsorption
Alma Gold	Alma Gold Inc.
Actlabs	Activation Laboratories Ltd.
CALA	Canadian Association for Laboratory Accreditation
CIM	Canadian Institute of Mining and Metallurgy
DEM	digital elevation model
DGPS	differential global positioning satellite
EL	exploration licence
EM	electromagnetic
FA-AA	fire assay-atomic absorption
GPS	global positioning satellite
GSC	Geological Survey of Canada
g/t	grams per tonne
ICP-OES	Inductively Coupled Plasma Optical Emission Spectrometry
IP	Induced Polarization
LiDAR	light detection and ranging
Mercator	Mercator Geological Services Ltd.
Mt	millions of tonnes
NI 43-101	National Instrument 43-101
NBDNR	New Brunswick Department of Natural Resources and Energy Development
NSR	net smelter return (royalty)
oz	ounce
P.Geol.	Professional Geologist
ppb	parts per billion
ppm	parts per million
QAQC	quality assurance and quality control
QP	Qualified Person
RC	reverse circulation
Red Lake Gold	Red Lake Gold Inc.
UTM	Universal Transverse Mercator
VLF-EM	very low frequency electromagnetic

k	thousand	°	degree symbol
Ma	million	%	percent
Ga	billion	Ba	Barium
ca	circa	PGE	Platinum Group Elements
et al.	and others	REE	Rare Earth Elements
C	Celsius	Pb	Lead
ha	hectare	Pd	Palladium
kg	kilogram	Au	Gold
km	kilometre	Ag	Silver
lbs	pounds	As	Arsenic
ft	foot	Cu	Copper
"	inch	Ni	Nickel
µm	micrometre	Zn	Zinc
m	metre	Fe	Iron
mm	millimetre	Mg	Magnesium
cm	centimetre	K	Potassium
ml	millilitre	Th	Thorium
/	per	Co	Cobalt
g	gram (0.03215 troy oz)	Pb	Lead
oz	troy ounce (31.04 g)	Bi	Bismuth
Oz/T to g/t	1 oz/T = 34.28 g/t	Ca	Calcium
Sn	tin	In	Indium
st	short ton (2000 lb or 907.2 kg)	ppm	parts per million
ppb	parts per billion	t	tonne (1000 kg or 2204.6 lb)

### **3.0 RELIANCE ON OTHER EXPERTS**

Mercator is relying upon information provided by Red Lake Gold and its subsidiary Alma Gold concerning any legal, political, environmental, or any option, joint venture or royalty matters relating to the Clarence Stream North Project. Mercator has acquired mineral titles information on the two mineral claims that are the subject of this technical report from the New Brunswick Department of Energy and Resource Development electronic database of mineral titles (known as “NB e-CLAIMS”). This information showed the subject mineral claims to be in good standing at the effective date of this report and at the report date. However, Mercator has not independently verified the status of, nor legal titles relating to, the mineral claims and associated claim units.

No warranty or guarantee, be it express or implied, is made by Mercator or the author with respect to the completeness or accuracy of the mineral titles comprising the Clarence Stream North Project.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

##### 4.1 Property Location and Description

The Clarence Stream North Project is comprised of mineral claim groups 9555 and 9556 (152 claim units in total - Table 4-1) and is approximately 3,440 hectares in size. The two mineral claim groups are located in Charlotte County, New Brunswick, approximately 40 km northeast of the Town of St. Stephen. The Project is centred at map coordinates 655,737 m Easting and 5,032,250 m Northing (UTM NAD83 Zone 19N) within NTS Map Sheets 21G/06 and 21G/07 (Figure 4-1).

**Table 4-1: Mineral Claims Table for Clarence Stream North Project**

Claim Number	Claim Group Name	Beneficial Owner	Number of Claim Units	Issue Date	Expiry Date	Area (Ha)
9555	Pleasant Ridge	Alma Gold (100%) (held in Trust on behalf of Alma Gold)	13	2020-07-13	2021-07-13	294.4
9556	Kedron Stream	Alma Gold (100%) (held in Trust on behalf of Alma Gold)	139	2020-07-13	2021-07-13	3,145.4
			<b>152</b>			<b>3,439.8</b>

The New Brunswick Department of Energy and Resource Development electronic database of mineral titles known as “NB e-CLAIMS” (<http://nbeclaims.gnb.ca/nbeclaims>) confirms that all mineral claims comprising the Clarence Stream North Project as described above in Table 4-1 were, at the effective date and report date, in good standing, and that no legal encumbrances were registered with New Brunswick Department of Energy and Resource Development against these mineral claims. The report author confirms that payment of claim acquisition fees associated with the claims identified in Table 4-1 have been documented in NB e-CLAIMS. The report author makes no further assertion concerning the legal status of the properties. None of the properties have been legally surveyed to date and there is no requirement to do so at this time.

##### 4.2 Option Agreements and Royalties

The report author is not aware of any royalties, back-in rights, payments, or other agreements or encumbrances to which the Clarence Stream North Project licenses may be subject, other than customary Crown royalty obligations on minerals situated within the Province of New Brunswick.

##### 4.3 Surface Rights and Permitting

As defined under the New Brunswick Mining Act (“*Mining Act*”), minerals are generally owned by the Crown, however, some land grants reserved only specific minerals to the Crown and therefore other minerals were, in fact, transferred to the grantee. Prior to 1810, it was common for gold and silver, and a

few other minerals to be reserved to the Crown. The *Mining Act* defines a mineral as any natural, solid, inorganic, or fossilized organic substance, and such other substances as are prescribed by regulation to be minerals, but does not include:

- Sand, gravel, ordinary stone, clay or soil unless it is to be used for its chemical or special physical properties, or both, or where it is taken for contained minerals;
- Ordinary stone used for building or construction;
- Peat or peat moss;
- Bituminous shale, oil shale, albertite, or intimately associated substances or products derived therefrom;
- Oil or natural gas; or
- Such other substances as are prescribed by regulation not to be minerals.

Crown-owned minerals are property separate from the soil; that is, a landowner owns the surface rights but does not own mineral rights, unless some minerals were granted with the land and each conveyance since the granting has preserved the ownership of those minerals. By means of the *Mining Act*, the province makes Crown-owned minerals available for exploration and development. Prospectors (persons or companies that hold prospecting licences), holders of claims, and holders of mining leases have the right to prospect, explore, mine, and produce those minerals, whether they are on Crown-owned or privately-owned lands. They also have the right of access to the minerals; however, they are liable for any damage they cause.

All Crown-owned minerals are available for prospecting and staking except in:

- Lands withdrawn from staking for all or certain minerals, e.g., coal and potash are currently withdrawn from prospecting and staking;
- Lands already staked or leased;
- First Nations reserves. Minerals in First Nations reserves are administered through the Indian Act of Canada; and
- National and Provincial Parks, Protected Natural Areas, and Military Lands.

Mineral claim acquisition in New Brunswick is an online process (NB e-CLAIMS) and can be completed by selecting mineral claim units (“claim units”) from an interactive map or by inputting claim unit numbers in the application. For acquisition, the minimum size of a claim is 1 unit and the maximum number of units in a claim should not exceed 256 contiguous available units. To fully benefit from all the options available via NB e-CLAIMS, holders of earlier ground staked claims should convert their titles to the current map staked system of claim units and claims. Conversion of ground staked mineral claims to map staked claims is to be voluntarily completed until such time as the Recorder’s office will control any outstanding conversions.

Mineral claim unit renewal fees and yearly work requirements are summarized in Table 4-2 below.

**Table 4-2: Amount of Assessment Work Required Per Mineral Claim Unit (Mines Act)**

Service Type	Description	Fee/Charge (\$)
<b>Renewal Fees</b>	1 to 5	10
	6 to 10	20
	11 to 15	30
	16 and more	50
<b>Other Fees</b>	Grouping $\geq 2$ contiguous Mineral Claims into 1 group (per resulting group)	20
	Transfer (all or part per Mineral Claim Unit)	10
	Notice of dispute (per Mineral Claim)	20
	Payment in lieu of required work in the first year of a Mineral Claim Unit (per Mineral Claim Unit)	20
<b>Mineral Claim Work Expenditure Requirement (per Mineral Claim Unit and per year)</b>	Year 1	100
	Year 2	150
	Year 3	200
	Year 4	250
	Year 5 to 10	300
	Year 11 to 15	500
	Year 16 to 25	600
	Year 26 and over	800

Land access permission is required from surface rights holders in New Brunswick before mineral exploration activities can be undertaken. Surface titles to lands covered by the Clarence Stream North Project are held by various private landowners or the Province of New Brunswick (the “Crown”). For both Crown land and private land, mineral exploration licence holders must come to an agreement with the landholder in order to gain the right to access and be able to conduct exploration work on the land.

For work on Crown Land it is necessary to submit a Notice of Planned Work on Crown Land – Form 18.1 to the Recorder (New Brunswick Regulation 86-99 under the Mining Act, s.20.1). The Recorder will review the submitted form and, in most cases, will grant permission on behalf of the Department of Natural Resources and Energy Development. In some cases, the Recorder will advise the claim holder that a reclamation plan and security are required before work can commence. If work is to be conducted on a Crown Land Lease, the claim holder needs to obtain permission from the Lessee (Mining Act, 1985 s.110).

For Private Land, a claim holder needs to contact the landowner as soon as possible after staking and advise of such. A Notice of Planned Work on Private Land - Form 18 (New Brunswick Regulation 86-99 under the Mining Act, 1985 s.20) must be delivered to the landowner if intrusive work of any kind is planned. A copy of the completed Form 18 must also be submitted to the Recorder indicating how and when the landowner was notified. The claim holder must attempt to reach an agreement with the landowner regarding any surface disturbance such as damage and/or interference with use and enjoyment of the land, including plans for reclamation. If the claim holder is unable to contact the

landowner, it is necessary to notify the Recorder that a reasonable effort to do so has been made. If the claim holder is unable to reach an agreement with a landowner within 60 days of contact, work may be done after a security is deposited with the Recorder. The claim holder is required to notify landowners prior to each year of work (Mining Act, 1985 s.110).

Special permission from a landowner or appropriate authority is required prior to causing actual damage to, or interference with the use and enjoyment of the following lands: lands in cities, town and villages, lands occupied by railway stations and switching yards and railway rights of way, lands within the boundaries of a public highway, lands occupied by a building or a public highway, lands occupied by a building or curtilage thereof, gardens and cultivated lands and other lands that are prescribed by regulation

Reference:

[https://www2.gnb.ca/content/gnb/en/departments/erd/energy/content/minerals/content/Minerals\\_exploration/LandAccessAndUse.html](https://www2.gnb.ca/content/gnb/en/departments/erd/energy/content/minerals/content/Minerals_exploration/LandAccessAndUse.html)

#### **4.4 Permits or Agreements Required for Exploration Activities**

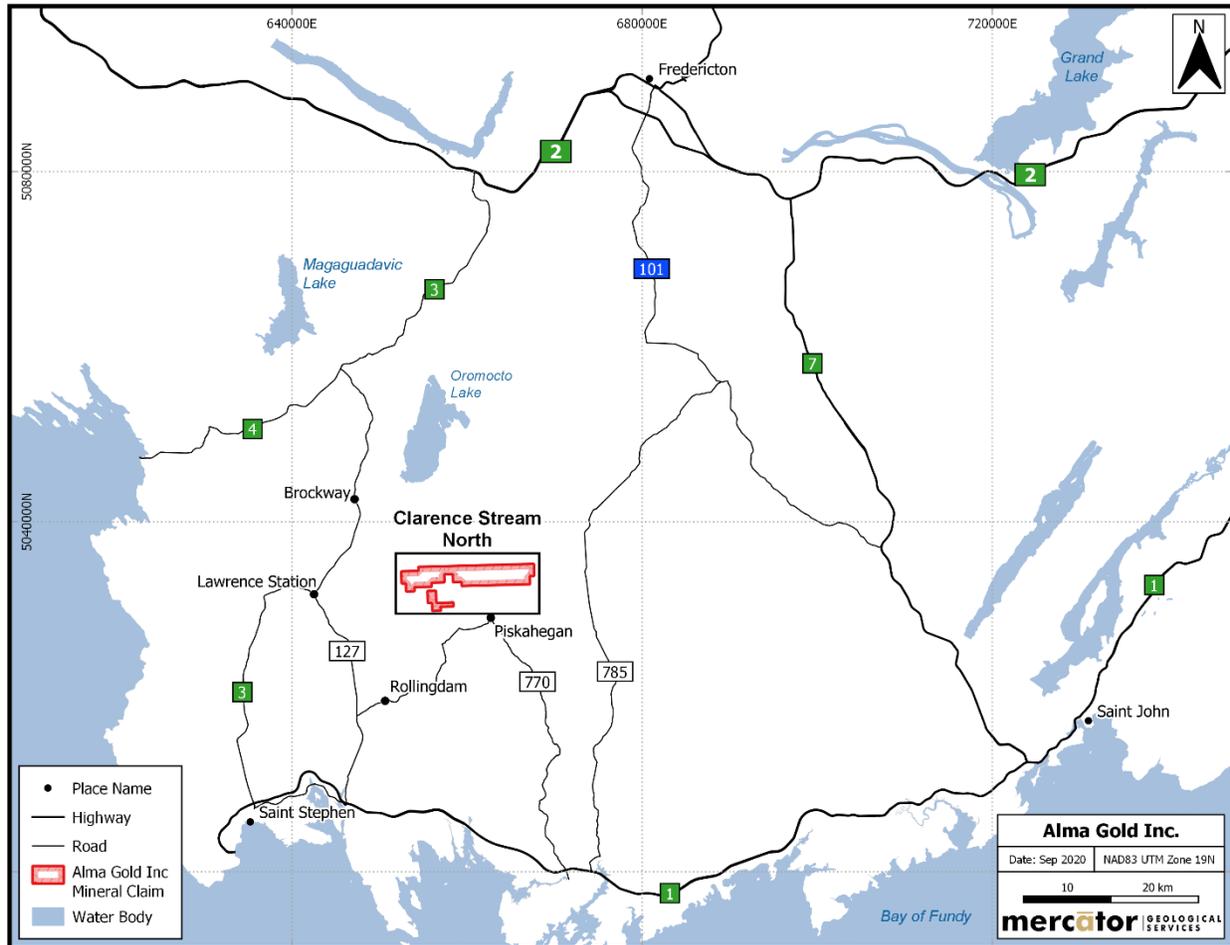
The Clarence Stream North Project is located on Crown land and private lands owned by either St. George Pulp & Paper Limited (a division of J.D. Irving Ltd.), Brian Covey, or Jeffrey Stewart. Alma Gold has executed land access agreements with the Crown, Brian Covey, and Jeffrey Stewart to complete the recent exploration work on its mineral claims (prospecting and soil geochemical surveys) and reported in this technical report. Amendments to these land access agreements would be required to conduct ground geophysical surveys requiring line cutting, trenching, and all drilling activities. These land access agreements would cover any land disturbance or other damage associated with the intended exploration work and need to be renewed on a regular basis.

Alma Gold has advised that it does not have a land access agreement with St. George Pulp & Paper Limited (St. George Pulp & Paper) to conduct exploration work on their lands as of the effective date of this technical report. It will be necessary to establish such customary agreements to carry out various future components of the exploration work recommended in this technical report.

#### **4.5 Other Liability and Risk Factors**

The report author is not aware of any environmental liabilities on the property. As noted above, Alma Gold will require permits to conduct recommended future exploration work on the property. The report author is not aware of any other significant factors and risks that may affect access, title, or the right or ability to perform the recommended work program on the property.

**Figure 4-1: Regional Map – Clarence Stream North Project**



## 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 5.1 Accessibility

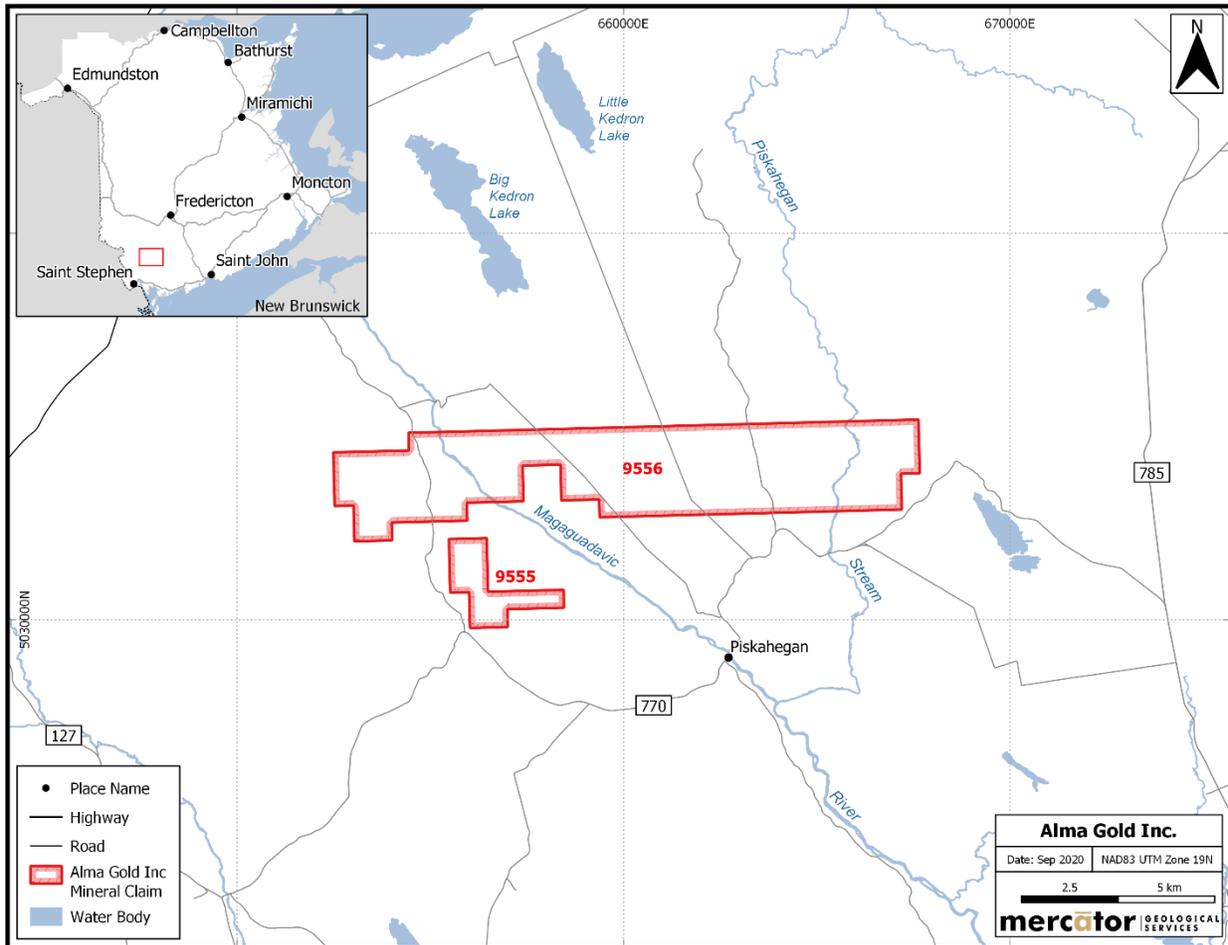
The Project is located in southern New Brunswick, Canada approximately 40 km northeast of the Town of St. Stephen (pop. 4,415), 115 km west of the City of Saint John (pop. 68,000), and 90 km south of the City of Fredericton (pop. 58,220) (Figure 5-1). The closest international airport is the Greater Moncton Roméo LeBlanc International Airport (YQM) located approximately 270 km northeast of the Project. Regional airline service (Air Canada and Porter Airlines) is also available from Saint John Airport (YSJ) and Fredericton Airport (YFC) with daily direct flights from Montréal and Toronto. The properties can be easily be accessed via New Brunswick Route 1 (four-lane controlled access highway) and then departing at Exit 45 if traveling from Saint John (Bethel/Elmsville exit) and heading north on Route 760 towards Elmsville. After approximately 14 km turn right onto Clarence Ridge Road and travel another 8 km on Route 770 until turning left onto Flume Ridge Road to reach Clarence Stream North near Pleasant Ridge and Piskahegan (Figure 5-1). Several small forestry roads located on Crown and private lands allow excellent access into claims 9555 and 9556 via truck, all-terrain vehicle or by foot in the Pleasant Ridge area. The closest town to offer full services is St. Stephen, which includes full-service accommodations, grocery stores and restaurants, shopping centres, hardware stores, and gas stations.

### 5.2 Climate and Physiography

The Project is located in the temperate zone of North America, and although the property is within 40 km of the ocean (Bay of Fundy), climatic conditions are more humid continental, governed by the eastward flow of continental weather patterns. The average annual temperature is approximately 10°C, with an average summer maximum of 30°C and an average winter minimum of -30°C. Winter conditions are prevalent on site from late October or early November until mid to late April. Frost depth is 2.0 m. Annual precipitation is approximately 1,000 mm with 60% of this occurring as rain and the remainder as snow. Mineral exploration field programs can efficiently be undertaken from May through to late November in all areas. Winter programs such as drilling and geophysical surveys can also be implemented year-round but delays due to poor winter weather conditions such as heavy snow fall should be expected.

The Project is located within the Magaguadavic River watershed and is topographically flat with generally moderate local relief. Surficial deposits consist of two tills, a basal till composed of locally derived material and an upper till composed primarily of Carboniferous aged material. Glacial till cover predominates with local bedrock exposures present intermittently as bedding-parallel ridges that conform with the east to northeast regional bedrock structural grain. Overburden thickness typically ranges between 0 and 20 metres or more in depth. Topographic elevations on the claims range between 115 and 150 metres above sea level. Surface drainage systems consist of abundant small lakes, rivers and streams that commonly show northwest-southeast orientations that reflect regional bedrock jointing and faulting trends and associated glacially developed bedrock scours.

**Figure 5-1: Location Map – Clarence Stream North Project**



### 5.3 Local Resources and Infrastructure

The Project is located in a region of southeastern New Brunswick that is sparsely populated, with motels, medical services, hardware stores, grocery stores, and gas stations being confined primarily to the town of St. Stephen 40 km to the southwest. Greater Moncton forms the largest population center of the province (approx. 115,000) and supports a wide range of government, business, medical, educational, industrial and transportation services. Access to the regional electrical grid is possible along the highway corridors located west of the Project but is lacking in more remote areas. Mainline rail facilities are available in a corridor extending from Moncton to Saint John and into the USA, and year-round, deep-water shipping facilities, including container port services are available through the Port of Saint John.

The extensive surface drainage systems present in the Magaguadavic River watershed provide readily accessible potential water sources for incidental exploration use such as diamond drilling. They also provide good potential as higher volume sources of water such as those potentially required for future mining and milling operations.

Exploration staff and consultants, as well as forestry, heavy equipment and drilling contractors can be readily sourced from within New Brunswick and surrounding provinces such as Nova Scotia and Quebec. Forest harvesting operations are the dominant employment in the region with J.D. Irving Ltd, being a major employer in southern New Brunswick. The local rural and urban economies provide a large base of skilled trades, professional, and service sector support that can be readily accessed for exploration and resource development purposes.

## 6.0 HISTORY

### 6.1 Historical Assessment Work

Past exploration work at Clarence Stream North is comprised of surface exploration activities such as prospecting, soil, stream, and till sampling surveys, geophysics, and geological mapping with very limited drilling. Historical assessment work in the area has mainly been focused on the Clarence Stream gold deposit to the south (currently held by Galway Metals Inc.) and the Mount Pleasant tin/tungsten/molybdenum/indium (polymetallic) deposit to the east, the site of a former underground mining operation. The Clarence Stream North project area encompasses part of the Pleasant Ridge and Pleasant Ridge North areas referenced in historical assessment reports discussed below.

Early exploration during the 1950's and 1960's at Clarence Stream North was focused on the Mount Pleasant area following the discovery of tin and base metals, including the Mount Pleasant tin-tungsten-molybdenum group of deposits located 10 km to the east of Clarence Stream North. Additional work during the 1960's to the 1980's period targeted tin, tungsten, molybdenum, antimony, and uranium and includes D.G. MacGregor's ("MacGregor") work in 1962 in the Pleasant Ridge North area (MacGregor, 1962). MacGregor conducted geological investigations and soil sampling programs west of the Magaguadavic River and tested for tin and total heavy metals. Multiple soil samples collected in these claims reported in the 50-100 ppm tin range with one sample reporting 700 ppm tin. MacGregor (1962) Anomaly H is within the Silurian Digdeguash sedimentary unit and near the margin of the Pleasant Ridge granite (Figure 3). This anomaly occurs close to a small circular magnetic anomaly, about 200 metres across (Figure 4). It also occurs on the margins of the high-K radiometric anomaly shown in Figure 7. Anomaly H is to the south of the present property and is characterized by soil sampling results (MacGregor, 1962), ranging up to 175 ppm tin.

Between 1979 to 1980, Billiton Canada Ltd. ("Billiton") conducted line-cutting, geological surveys, soil sampling and a scintillometer survey in the Pleasant Ridge North area including areas within claim 9555. A total of 2,381 soil samples were taken and analyzed for tin, tungsten, and molybdenum, but not gold (Billiton, 1980). In the eastern part of the property (covering the western part of claim 9555), two northwest trending linear belts of anomalies were noted in contact with the Pleasant Ridge stock. This area returned anomalous values of molybdenum and tungsten surrounded by localized high tin values.

Between 1981 and 1982, Shell Canada Resources Ltd. ("Shell") and M.E.X. Explorations Ltd. conducted prospecting, soil and stream silt sampling in the Pleasant Ridge North area (Bonny River claims) south of the Clarence Stream North claims (Rankin, 1982). Soil and stream silt sample results returned elevated tin values in some areas west of the Magaguadavic River and prospecting resulted in the discovery of four tin anomalies on the property.

In 2003, Pro-Max Resources Inc. ("Pro-Max") conducted prospecting and soil sampling in part of the Clarence Stream North area and completed multi-element soil analyses including gold, silver, copper, lead, zinc, tin and tungsten (Gardiner, 2003). Pro-Max acquired the claims in the area following the discovery of the Clarence Stream gold deposit to the south by prospector Reg Cox and Freewest Resources Canada

Inc. ("Freewest") in 1999. A total of 57 B-horizon soil samples were collected by Pro-Max and analysed by ICP for multi-element geochemistry and fire assay/ICP for gold. Prospecting did not encounter any outcrop or boulders containing massive sulphides, and Gardiner (2003) notes the thick till cover and minimal bedrock exposure in the area.

Between 2006 and 2012, Geodex Minerals Ltd. ("Geodex") conducted soil sampling and prospecting and completed a diamond drill hole (PRS-08-01) south of claim 9555 in the Pleasant Valley area. A total of approximately 620 soil samples were collected by Geodex in the Pleasant Valley and Pleasant Valley North areas over parts of claims 9555 and 9556. Multi-element geochemical analyses were conducted using Aqua Regia ICPMS methods with a focus on tin, tungsten, molybdenum indium and zinc. Multi-element soil results included anomalous results in Au (16.8 ppb), As (487 ppm), Pb (384 ppm), Zn (310 ppm), Cu (108 ppm), Mo (15.1 ppm), Bi (11.2 ppm), Sn (5.1 ppm), Ag (2.3 ppm), and In (0.76 ppm) (Watters, 2007; Martin, 2010). The Geodex soil geochemistry results confirmed Shell's 1982 lead and tin anomalies and identified several multi-element anomalous associations including Zn-Pb-Cd-Ag and Cu-Bi-As-W trends. The Cu-Bi-As-W anomalous trend lies in the direction of the Pleasant Ridge intrusion and Geodex inferred that this anomalous distribution reflects a zonation outward from an intrusive source related to that intrusion (Watters, 2007).

In 2008, Geodex completed one diamond drill hole (PRS-08-01) approximately ---m south of claim 9555 testing an area of anomalous soils (anomalous for Pb, Zn, Cu, In, Sn, and Ag) identified in the 2006 soil survey (Martin, 2010). This hole was drilled at a -45° dip at azimuth 030° to a depth of 263 metres. It intersected meta-sedimentary rocks of the Kingsclear Group ranging from argillite to mudstone to greywacke with variable amounts of chloritic alteration. Numerous narrow mineralized zones were intersected with the greatest concentration between 28-40 metres depth where sphalerite, chalcopyrite, pyrite, and/or galena was identified mainly in quartz stringers and veins (<2 cm thick). Analytical results confirmed zinc, lead, and copper mineralization with minor indium, silver, and low grade tin. The most significant interval encountered was between 35.7 and 36.3 metres which returned 1.66% Zn, 0.7% Cu, 0.65% Pb, 26.9 ppm In, 14.1 ppm Ag and 0.045% Sn. This intercept clearly defined the polymetallic nature of mineralization in this part of the Pleasant Valley area. Gold was included as part of the Aqua Regia ICP/MS analysis, however this method was not considered highly reliable for gold analysis and Geodex did not report any results. Geodex recommended further ground geophysics such as Induced Polarization (IP) and gravity surveys, and additional trenching and drilling over prospective areas following completion of ground geophysical surveys.

In 2009 and 2012, Geodex submitted certain 2007 soil samples for re-analysis using Fire Assay-AA gold analysis methods and to re-analyze for Sn, W, Mo, In, Cu, Pb, and Zn using Sodium Peroxide Fusion ICP. A total of 57 soil samples were re-submitted to Activation Laboratories during this period for re-analysis in an area that had indicated anomalous gold values during the 2007 soil survey. This soil sample re-analysis program produced mainly insignificant results over areas of arsenic and bismuth anomalies, and did not produce any significant results in gold, tin, and molybdenum. However, a small number of samples returned anomalous values for tungsten including 31.7 ppm W. Geodex recommended further work on the north-northeast slope of the ridge for which the Pleasant Ridge granite is mapped and where

anomalous soil results were detected in 2007. The Pleasant Ridge granite is located in the southern part of claim 9555.

## **6.2 Regional and Government Survey Work**

In 2002, the Geological Survey of Canada (“GSC”) published airborne magnetic survey maps of the NTS 21G/06E and 21G/07W sheet areas that include Clarence Stream North. The first derivative map shows a large area of moderately high magnetic response in the southern part of claim 9555, which represents the Pleasant Ridge Granite. To the east of claim 9555 and south of claim 9556 is a linear magnetic high that is believed to be related to the Kedron Granite. Both granites have associated Sn - W - Mo mineralization. The magnetic responses are likely due to pyrrhotite-bearing hornfels above and around the intrusions. To the north and northeast of the Clarence North claim groups there are a number of small bulls-eye and linear magnetic anomalies similar to those around the Kedron granite that are possibly related to as yet unmapped granitic intrusions.

In 2001 and 2002, the New Brunswick Department of Natural Resources and Energy Development (“NBDNRE”) carried out till geochemical surveys in the area. Although samples were widely spaced, two maps did show anomalous Bi and Sb in ablation till less than 1 kilometre down-ice (southeastward movement) of the muscovite-granite outcrop/subcrop and the granite boulders to the north of it. These anomalous samples have signatures similar to samples found around Mount Pleasant and to its west in the True Hill and Whopper zone tin areas. One sample was also found to contain 4.5 ppm W, a moderately anomalous value. A stream silt sampling program was also carried on by NBDNRE in 2002. The only sample of interest was from a stream drainage east of claim 9555. This sample contained 13 ppm Sn.

Published government radiometric surveys show several potassium radiometric anomalies over the claim groups. To the east, the Beech Hill Granite shows as the highest K response. The Pleasant Ridge granite appears to show only a moderate potassic anomaly. This granite has a lower potassium content than the Beech Hill granite and related intrusions and this is reflected in the K response (Thorne et al., 2002).

## **6.3 Historical Mineral Resource and Past Production**

To date no historical mineral resource has been completed at Clarence Stream North. No historical mining activity of any sort has taken place within the area covered by the Clarence North claims.

## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 Regional Geology

The Caledonian Highlands of southern New Brunswick consist mainly of Late Neoproterozoic volcanic, sedimentary, and plutonic rocks and overlying Cambrian to early Ordovician sedimentary rocks on the eastern margin of the Appalachian Orogen, known collectively as the Caledonia terrane (Barr and White 1996, 1999a). The Caledonia terrane forms part of the larger Avalon Zone, a composite peri-Gondwanan terrane containing segments generally recording Neoproterozoic to Cambrian histories of deposition, igneous activity, and deformation. In eastern North America, the Avalon Zone stretches from the Avalon peninsula in eastern Newfoundland, through southeastern Cape Breton Island, Nova Scotia, the Cobequid and Antigonish Highlands of Nova Scotia, southern New Brunswick, and into Massachusetts (Hibbard et al. 2006, Texidor-Carlsson, 2007). The Caledonia terrane has been interpreted as an accretionary complex on the trench side of the Broad River Group magmatic arc (White et al. 2001), indicating that subduction was to the southeast of the present-day location.

Clarence Stream North is situated near a major accretionary tectonostratigraphic boundary that separates the Gander Zone to the northwest from the Precambrian amalgamated terranes of the Avalon Zone to the southeast (Figure 7-1) (Thorne et al., 2008). The geology of southwestern New Brunswick can be divided into a number of distinct belts on the basis of stratigraphic and structural characteristics. The New River, Brookville, and Caledonia terranes were included in the Avalon Zone by Williams and Hatcher (1982), but Barr et al. (1990) considered only the volcanic and plutonic rocks of the Caledonia terrane to be truly Avalonian. The Neoproterozoic carbonate sequences and plutonic rocks of the Brookville belt and Neoproterozoic volcanic and plutonic rocks of the New River belt are now generally considered to represent basement to the Gander Zone, whereas the Late Cambrian to Ordovician sedimentary rocks of the St. Croix belt are interpreted to have been deposited along the Ganderian continental margin (van Staal and Fyffe, 1991; van Staal et al., 1996; Whalen et al., 1996).

Much of the early Paleozoic bedrock, which is used to define the terrane affiliation in the Iapetus cycle, is covered by Silurian and younger rocks in New Brunswick. In particular, the boundary area between the Gander and Avalon zones is covered by Silurian rocks of the Mascarene belt, and intruded by the Saint George batholith. The Silurian cover rocks of the Mascarene belt include a basal conglomerate (Oak Bay Formation) and overlying volcanic and volcanoclastic rocks (Waweig Formation) of the Mascarene Group that rest with profound unconformity on Early Ordovician black shale (Calais Formation) of the Cookson Group (Fyffe et al., 1999).

The St. Croix belt, which lies immediately north of the Mascarene belt, is characterized by a highly deformed succession of clastic sandstones and shale of the Cookson Group (Crocker Hill, Calais, Woodland, and Kendall Mountain formations) ranging in age from Late Cambrian to Middle Ordovician. The boundary between the St. Croix belt and Mascarene belt is marked by the NE-trending Sawyer Brook Fault (Fyffe et al., 1999). In contrast, the contact between Silurian feldspathic turbidites of the Kingsclear Group (Digdeguash, Sand Brook, and Flume Ridge formations) of the Fredericton belt and underlying quartzose turbidites of the Cookson Group (Kendall Mountain Formation) along the northwestern margin

of the St. Croix belt appears to be gradational in the northern part of the Clarence Stream area (Fyffe et al., 1999).

Other regional-scale geological units include plutonic suites associated with the Siluro-Devonian Saint George Batholith (McLeod, 1990) and extrusive and intrusive rocks constituting the Late Devonian Mount Pleasant Caldera Complex (McCutcheon et al., 1997).

**Figure 7-1: Regional map of southern New Brunswick and the Clarence Stream gold deposit area (taken from Thorne et al., 2008)**

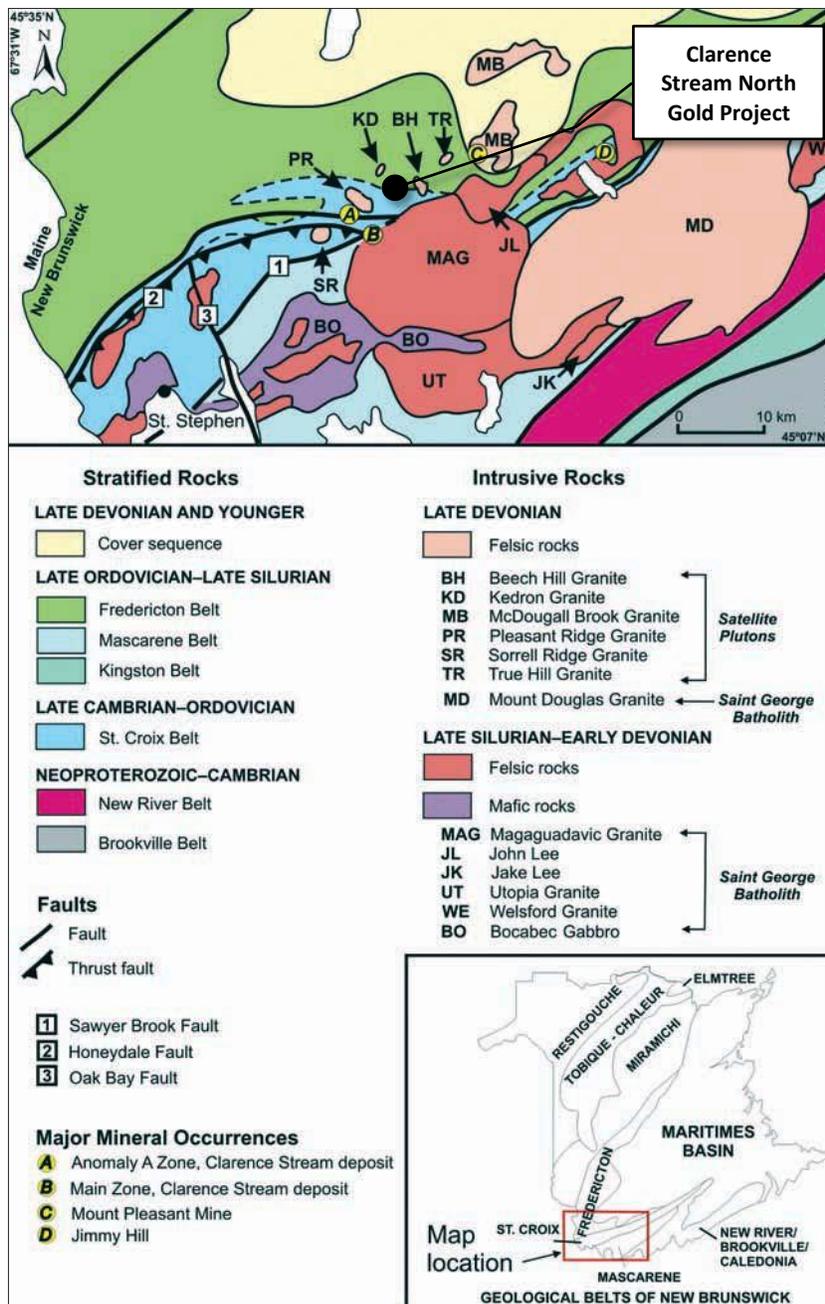
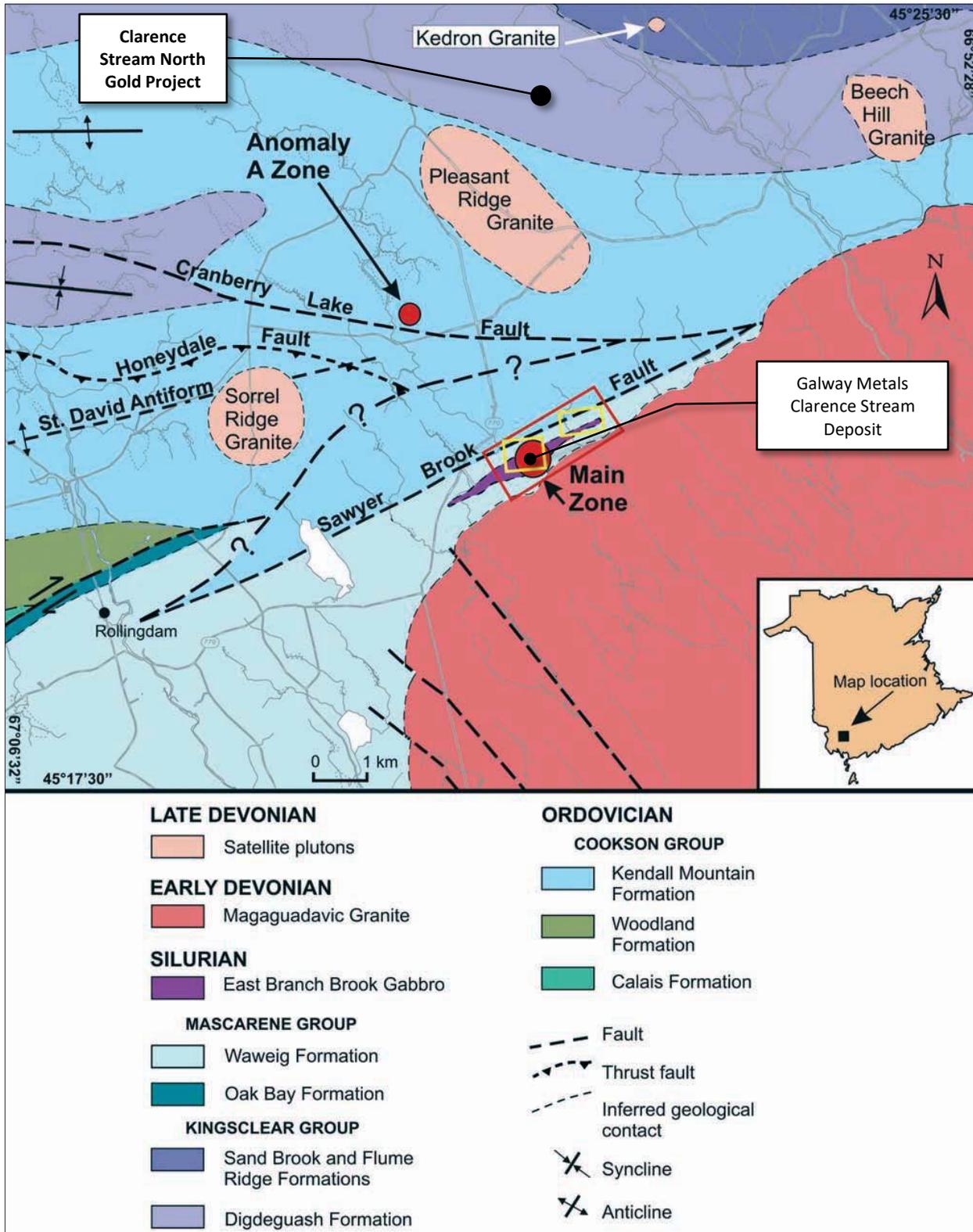


Figure 7-2: Clarence Stream deposit area geology including Pleasant Ridge (taken from Thorne et al., 2008)



## 7.2 Property Geology

Clarence Stream North includes stratified units of the Cookson Group in the eastern part of the St. Croix Belt; Kingsclear Group in the southernmost margin of the Fredericton Belt; and the Mascarene Group in the northern part of the Mascarene Belt. The stratigraphy and approximate ages of the lithological units that comprise these belts/groups are shown in Figure 7-3. The Late Devonian Mount Pleasant Caldera Complex is located approximately 5 kilometres to the east of claim 9556 and is comprised of multi-phase intrusions known as the Mount Pleasant Granites, which also host and are responsible for the well known polymetallic deposits of this area (McCutcheon, 1990).

### 7.2.1 Clarence Stream Area

The Ordovician Cookson Group consists of poly-deformed formations ranging from Tremadocian through Caradocian in age (Ludman, 1987; Fyffe and Riva, 1990) and includes the Calais, Woodland, and Kendall Mountain formations. These units predominantly consist of black shale and minor basalt, a feldspathic wacke sequence, and quartz arenite interbedded with shale, respectively.

The dominant geological units at Clarence Stream North (claims 9555 and 9556) are rocks of the Silurian Kingsclear Group (Figure 7-4). The Kingsclear Group is comprised of medium to dark grey, medium- to coarse-grained, lithic to feldspathic wacke, light grey quartz wacke and polymictic, granule conglomerate, and dark grey to black shale of the Digdeguash Formation. This unit is overlain by graded, light green feldspathic wacke beds of variable thickness interbedded with distinctive, green to maroon, laminated siltstone and shale that comprise the Sand Brook Formation. The distinctive greenish colour of these rocks is attributed to the abundance of epidote and actinolite attesting to the formation's overall calc-silicate composition. The Sand Brook Formation is overlain by the Flume Ridge Formation, which consists of light grey to greyish green, calcareous wacke with characteristic large detrital muscovite flakes and shale as thin partings in the coarser grained clastics that are interstratified with light to medium grey, non-calcareous slate (Ruitenbergh and Ludman, 1978; Fyffe, 1991). The Digdeguash Formation appears to lie conformably on the Kendall Mountain Formation at some localities, but is generally faulted against various units of the Cookson Group (Fyffe and Riva, 2001).

The Silurian Oak Bay Formation and conformably overlying Waweig Formation (Ruitenbergh, 1967; Fyffe et al., 1999) comprise the Mascarene Group to the south of the St. Croix Belt in the Clarence Stream area and constitute a homocline exhibiting effects of a single deformational event. The Oak Bay Formation constitutes the base of the group in the region and contains polymictic conglomerate, coarse-grained sandstone and tuffaceous rocks lying unconformably on top of the Cookson Group. The Waweig Formation is dominated by assorted volcanogenic sedimentary rocks plus medium-to fine-grained clastics interbedded with mafic to felsic volcanic rocks that are locally intruded by abundant mafic dykes (Fyffe et al., 1999).

The Saint George Batholith, which consists of several multiphase intrusive suites, crops out over the southern part of the Clarence Stream area and, based on geophysical information, underlies the entire area at shallow depths (Thomas and Willis, 1989; King and Barr, 2004a, 2004b). At the present-day surface

in the vicinity of Anomaly A at the Clarence Stream deposit, apophyses of the batholith referred to as satellite plutons are prevalent. The suites and constituent intrusions of main interest here are the Early Devonian Magaguadavic Granite of the South Oromocto Lake Suite, and Late Devonian Kedron (formerly the Bonny River Granite), McDougall Brook, and Mount Pleasant granites of the Pomeroy Suite (Figure 7-1 and 7-2). The Magaguadavic Granite was emplaced at moderate crustal depths and consists of subequal proportions of granite and granodiorite, is xenolith-rich, and exhibits chemical and mineralogical features of oxidized "I"- type granites. This intrusion and its later fractionated components are considered the source of gold in the Clarence Stream deposits (Thorne et al., 2002).

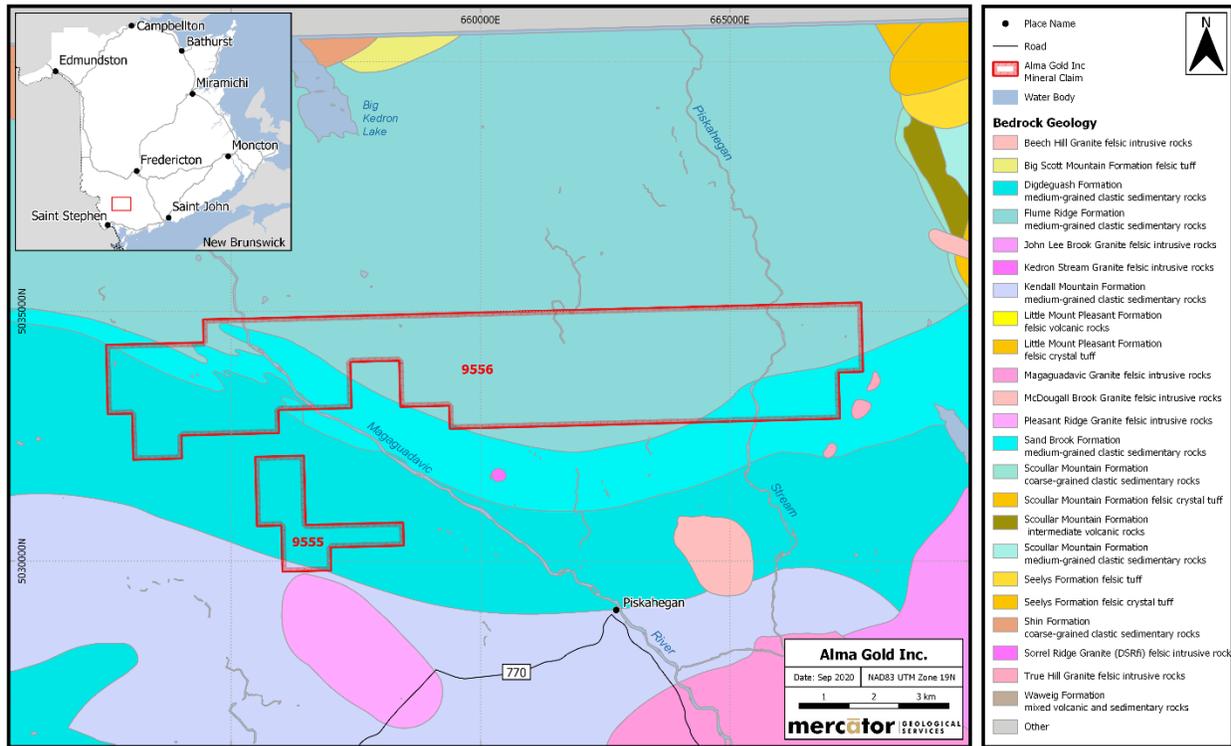
In contrast, intrusions of the Pomeroy Suite were emplaced at very shallow crustal levels and are mostly, high-silica and/or topaz granites that are highly evolved and exhibit mostly "A"- type characteristics. Volcanism in the Mount Pleasant Caldera Complex is associated with this suite of intrusions, as is the mineralization at the Mount Pleasant polymetallic deposit and numerous other similar mineral occurrences throughout the area (further discussed below in Section 7.2.2). Minor gold mineralization is also related to the Pomeroy Suite, especially with relatively un-evolved granites such as the McDougall Brook Granite located a few kilometres east of claim 9556. The potential for significant gold deposits to be associated with these intrusions has yet to be fully evaluated.

In the Clarence Stream area, co-incident Au-As-Sb soil geochemical anomalies define the numerous mineralized gold-bearing subzones of the deposits' Main zone, the most significant of which are the East and West zones (Figure 7-2). In trenched exposures, gold mineralization occurs in a parallel series of recrystallized sulfide-quartz fault-fill veins focused within a 250 to 300 m-wide NE-trending, steeply N-dipping shear zone that locally crosscuts variably metamorphosed, deformed, and altered volcanic and volcanoclastic rocks of the Mascarene Group. This broad zone of deformation is related to the regional-scale Sawyer Brook Fault Zone located approximately 100–200 m to the north of the Clarence Stream deposit, and is subparallel to the host rock contact with the Early Devonian Magaguadavic granite that intrudes the sequence to the south and at depth. Late reactivation of this shear zone induced differential fabric development within the Late Silurian to Early Devonian metagabbroic and granitic dikes that were emplaced along it.

**Figure 7-3: Stratigraphic column for the Kingsclear, St. Croix, and Mascarene Group rocks in Clarence Stream area (taken from Thorne et al., 2005)**

Age (Ma)	Period	Epoch	Kingsclear Group	Cookson Group	Mascarene Group	
418	Silurian	Pridolian				
420?		Ludlow				
424		Wenlock	Flume Ridge Formation		Waweig Formation	Simpson Corner Member
430		Llandovery	Sand Brook Fm.			Sawyer Bk Member
			Digdeguash Formation			Campbell Pt. Member
441					Oak Bay Formation	
447	Ordovician	Ashgill				
452?		Caradoc			Kendall Mountain Formation	
460		Llandeilo				
462		Llanvirn				
466		Arenig			Woodland Formation	
478	Tremadoc					
490	Cambrian	Late			Calais Formation	
500		Middle				
503?						
509	Early					
544						

Figure 7-4: Clarence Stream North Project Geology (taken from NBDNRE Map 2005-29 & Map 2005-30)

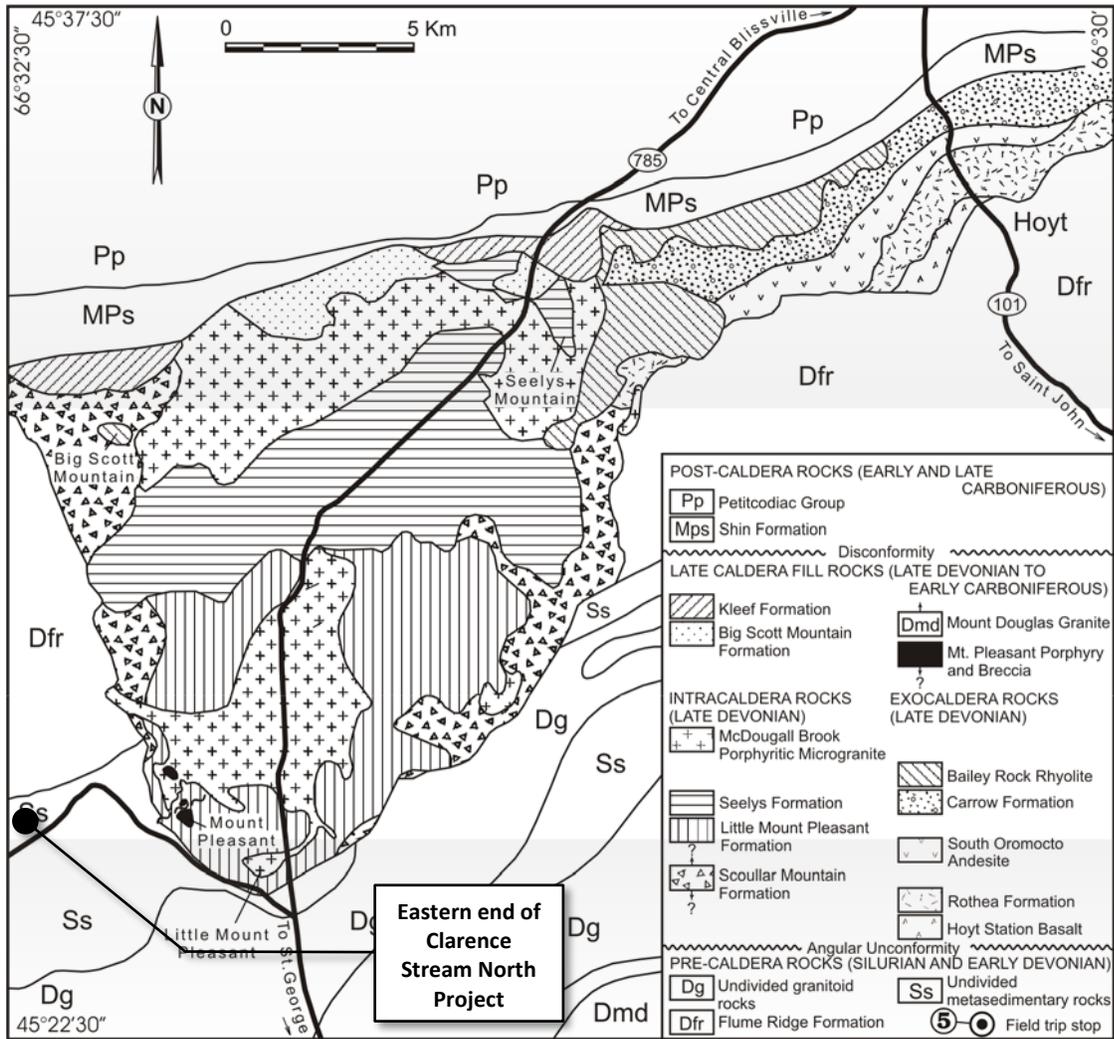


### 7.2.2 Mount Pleasant Caldera Complex

The Mount Pleasant Sn-W-Mo-Bi (polymetallic) deposit is located approximately 5 kilometres east of Clarence Stream North claim 9556 and occurs within the Late Devonian Mount Pleasant Caldera Complex (McCutcheon, 1990) (Figure 7-5). Due to their close proximity to Clarence Stream North, it is important to discuss these intrusions in the context of potential sources of mineralization on the property. The multi-phase intrusions of the Mount Pleasant Granites, responsible for the generation of the Mount Pleasant polymetallic deposit, and the McDougall Brook Granite, are part of the Pomeroy Intrusive Suite of the Saint George Batholith as discussed above. Several other small satellite intrusions southwest of the caldera, including the True Hill, Kedron, Beech Hill, and Sorrel Ride granites constitute the remainder of the Pomeroy Intrusive Suite.

The Mount Pleasant Caldera Complex crops out over a minimum area of 450 square kilometres and occurs as a cover sequence to the Fredericton Belt. It is bounded by younger, Late Carboniferous cover rocks and partly by the Saint George Batholith to the north and south, respectively. The caldera has been subdivided into several formations, members and intrusions assigned to major divisions termed Intracaldera, Exocaldera and Late Caldera-Fill sequences, all comprising parts of the Piskahegan Group (McCutcheon, 1990). The Intracaldera Sequence is predominantly composed of a variety of rhyolitic volcanic units with subordinate amounts of andesite and marginal sedimentary breccias, whereas the coeval to younger Exocaldera Sequence contains greater amounts of andesite in addition to basalt and alluvial red beds. The Late Caldera-Fill Sequence, composed of rhyolitic volcanic rocks and interbedded redbeds and basalt covers both the above sequences, and is in turn, overlain by Namurian-aged red beds. The McDougall Brook Granite is considered part of the Intracaldera Sequence, while the granite and associated breccia systems at the Mount Pleasant deposits are slightly younger and are associated with the Caldera-Fill Sequence.

**Figure 7-5: Simplified geological map of the Mount Pleasant Caldera Complex (modified after McCutcheon et al., 2001)**



## 8.0 DEPOSIT TYPES

The Clarence Stream North Project is located within a unique geological setting that includes a mix of intrusion-related orogenic gold deposits and sub-volcanic porphyry-type deposits, that may or may not be inter-related. This includes the Clarence Stream orogenic gold deposit located approximately 10 kilometres south of the project area and currently owned by Galway Metals, and the Mount Pleasant polymetallic deposit located approximately 5 km east of the project area and currently owned by Adex Minerals Inc. (see Section 23 – Adjacent Properties for further details). In order to assess the potential deposit types within the Clarence Stream North Project it is important to examine the dominant deposit styles in the vicinity (intrusion-related orogenic gold type and polymetallic, sub-volcanic porphyry type).

### 8.1 Intrusion-related Orogenic Gold Deposit

The Clarence Stream gold deposit has many characteristics similar to those described for typical orogenic lode-gold deposits including tectonic setting, mode of occurrence, and metal signature. However, mineralizing features at the Clarence Stream - Main zone deposit are more consistent with those described specifically for intrusion-related orogenic gold systems as described by Sillitoe and Thompson (1998) and others. Based on these studies, the distinguishing characteristics of intrusion-related orogenic gold systems include:

- (1) Gold association with metaluminous, subalkalic intrusions of intermediate to felsic composition;
- (2) Au±Bi±W±As±Mo±Te±Sb metal assemblages with non-economic concentrations of base metals;
- (3) CO<sub>2</sub>-bearing hydrothermal fluids;
- (4) Continental tectonic setting distal of inferred or recognized convergent plate boundaries; and
- (5) Location in magmatic provinces formerly known for Sn-W deposits.

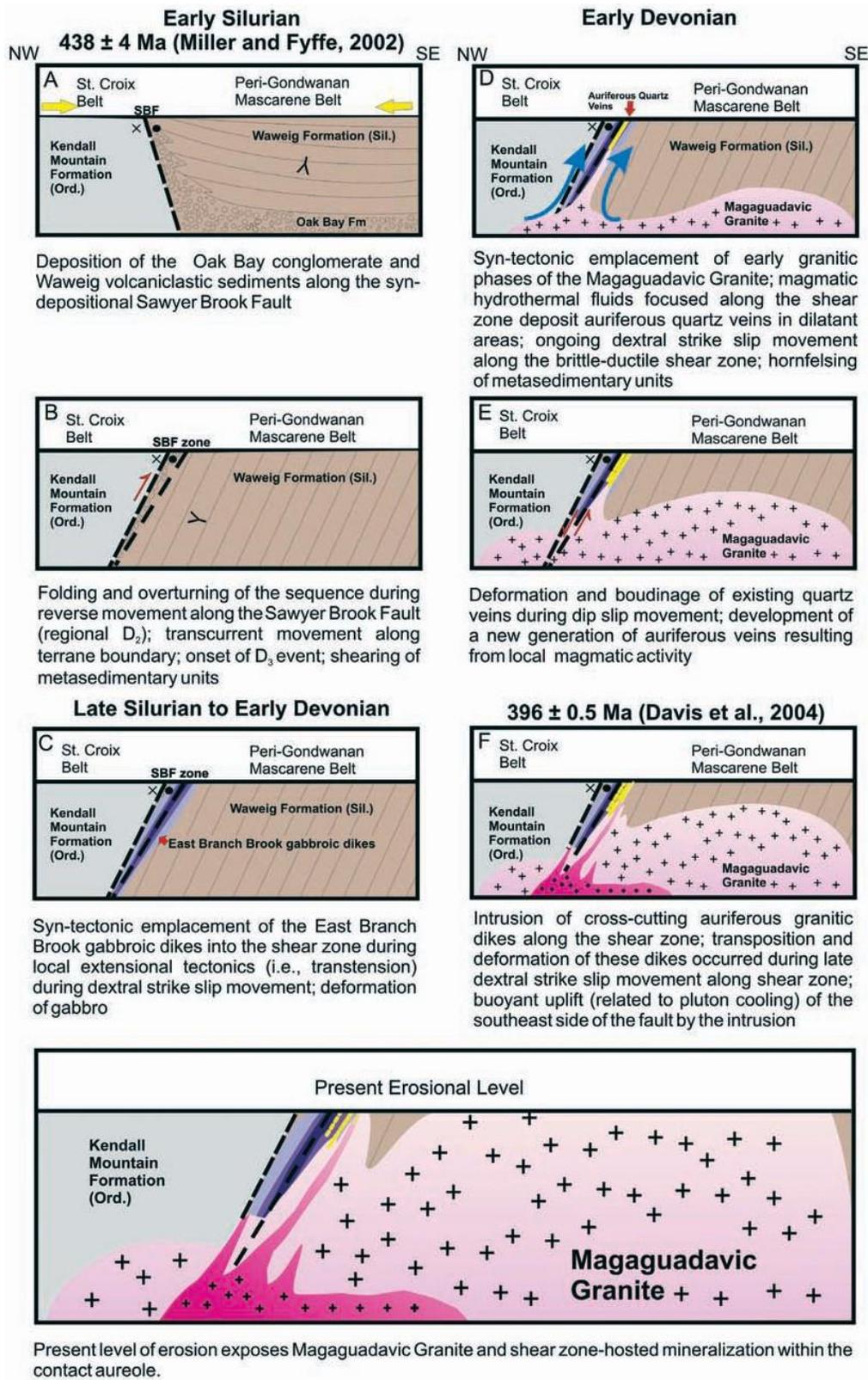
The similarities with this genetic model at the Clarence Stream deposit include a continental tectonic setting, petrologic signature of the mineralizing pluton, reduced mineral assemblages dominated by Au-Bi-Sb-As-bearing minerals, styles of mineralization, alteration, and temperature (Table 8-1). Supporting evidence for the applicability of the intrusion-related gold model at Clarence Stream includes the documented association between gold mineralization and the Magaguadavic granitic intrusion at several localities in southwestern New Brunswick, particularly near the intrusive contact (McLeod, 1990). For example, northeast of Clarence Stream, gold-bearing veins (up to 9.48 g/t Au over 0.7 m) have been seen in outcrop to directly emanate from the main mass of the Magaguadavic granite (McLeod, 1990), thus implying a genetic link between the gold and the intrusion.

The genetic model for the Clarence Stream shear zone hosted gold deposit is based on field relations and geochronological data which are interpreted as indicating that development of auriferous quartz veins occurred episodically associated with intermittent events of magmatism (and associated hydrothermal fluids) and fault deformation during Early Devonian time. A schematic diagram illustrating the proposed sequence of events that potentially led to the formation of the Clarence Stream gold deposit from the Early Silurian to Early Devonian is shown in Figure 8-1.

**Table 8-1: Summary of Clarence Stream Deposit Characteristics Compared to Intrusion-Related Gold Systems (modified from Thorne et al., 2008)**

Clarence Stream Mineralized Zones			
Deposit Characteristics	West Zone (Mafic Hosted)	East Zone (Metasedimentary Hosted)	Intrusion-Related Gold Systems Criteria
Tectonic Setting	Collisional (terrane boundary); located southwest of the former Mount Pleasant Sn-W-Mo-Bi-In mine		Continental setting inboard of convergent plate boundaries; in former Sn-W provinces
Associated Intrusion Petrogenesis	I-Type, syn- to post-collisional, metaluminous to slightly peraluminous, volcanic arc to syn-collisional monzogranite to granodiorite		Reduced I-Type, metaluminous, subalkalic granodiorite to granite
Host Rocks	Metagabbro	Metasedimentary rocks	Granitoids or adjacent host
Alteration	Potassic	Sodic	Dependent on host rock lithology
Style of Mineralization	Sheeted fault-fill veins, disseminated		Sheeted low-sulfide quartz veins predominate but stockwork and disseminated deposits are also common
Mineral Assemblages	Arsenopyrite-pyrrhotite predominate; Sb-bearing minerals, pyrite, sphalerite, chalcopyrite, scheelite, loellingite		arsenopyrite, pyrrhotite, pyrite
Gold Minerals	Native Au, aurostibnite, electrum		Native Au, gold alloys
Metal Signature	Au-Ag-Bi-Cd-Te-Pb-Sb	Au-Sb-Mo-W-Bi-Ag-Cu-Hg-S-Cd-Pb	Au-Bi-W-As-Mo-Te-Sb; low concentrations of base metals
Mineralizing fluids	High T, near-neutral to slightly acidic pH, low pCO <sub>2</sub> , Cl-bearing, H <sub>2</sub> S-poor		CO <sub>2</sub> -bearing, variable salinity
Temperature	360°C < T < 300°C		200°–600°C
Pressure	2 kb < P < 0.5 kb		0.5–3 kb
Timing of Mineralization	396 ± 1 Ma (synchronous with the emplacement of the Magaguadavic Granite)		Coeval with associated or host intrusions

Figure 8-1: Proposed sequence of events leading to Clarence Stream deposit (Thorne et al., 2008)



According to Thorne et al. (2008) and others, timing of the gold mineralization has been broadly constrained to have taken place some time after 418 to 423 Ma, which is an inferred age for the East Branch Brook metagabbro since these are in part host rocks to the auriferous veins. The age of the late fractionated melt (i.e., aplite-pegmatite dikes) derived from the Magaguadavic granite and associated with auriferous veins is between  $400 \pm 5$  Ma and  $396 \pm 0.5$  Ma. Geochemical and sulfur isotope evidence is consistent with the syn-tectonic Magaguadavic granite being the source of the mineralizing fluids, which has an age of  $396 \pm 1$  Ma.

Similar to other orogenic gold systems found globally, gold mineralization at the Main zone of the Clarence Stream deposit is hosted by a number of parallel, fault-fill quartz veins that occupy a broad brittle-ductile shear zone. Crosscutting relationships and geochronologic studies have constrained the timing of the mineralization to overlap the emplacement age of the Magaguadavic granite, which is the interpreted progenitor intrusion responsible for the generation of these mineralizing fluids (Thorne et al., 2008). The strongest evidence supporting a link between gold mineralization and felsic magmatism is the presence of aplitic and granophyric granitic dikes that laterally change into auriferous sulfide-bearing quartz veins (Thorne et al., 2008). These dikes are late fractionates of the Magaguadavic granite that represent the hypabyssal equivalents of the magmas at depth, and exhibit textural features consistent with a shallow level of emplacement, as well as the saturation of volatiles (i.e., granophyric texture).

Based on the intrusion-related gold deposit model, there is considerable potential for the discovery of additional gold deposits of this type in similar geological settings in southern New Brunswick, and this concept will be the primary basis for additional exploration work at Clarence Stream North.

## **8.2 Intrusion-related Porphyry Polymetallic Deposit**

The Fire Tower Zone W-Mo-Bi deposit is a complex porphyry-type system related to highly evolved, multi-phase, hypabyssal granite intrusions that were emplaced into the Intracaldera Sequence near the western margin of the Mount Pleasant Caldera Complex (McCutcheon et al., 2001). While this deposit is located in close proximity to the eastern part Clarence Stream North, the relationship between the Mount Pleasant polymetallic deposits and the geology and mineralization within the Clarence Stream North is poorly understood at this time.

Three main types of granite are recognized at depth in the Fire Tower Zone. These grade downward from an aplitic textured fine-grained granite, to similar aplitic textured granite porphyry characterized by quartz and K-feldspar phenocrysts, and eventually to an equigranular, fine- to medium-grained porphyritic microgranite. The phases are roughly analogous to successive phases of intrusions at the North Zone, which is located approximately 1 km north of the Fire Tower Zone and are renowned for their Sn-In-base metal deposits. At higher levels in the Fire Tower Zone, the fine-grained granite is highly fractured and stockwork veined and includes a variety of intensely altered and irregularly distributed hydrothermal breccias characterized by intense silica and topaz alteration. Apophyses of the granite porphyry intrude the fine-grained granite, the breccias, and surrounding intracaldera rocks at higher levels, and are in turn cut by still younger hydrothermal breccias, that in this case are typified by chlorite and biotite alteration.

During two years of mining of the Mount Pleasant deposit from 1983 to 1985 by Billiton Canada Ltd., 990,200 tonnes of tungsten ore was produced from the Fire Tower Zone, at an average grade of 0.35%  $WO_3$ . There was no attempt to extract molybdenum or any other metals. A total of 2,000 tonnes of tungsten concentrate grading 70%  $WO_3$  was produced (McCutcheon et al., 2013). The deposit is hosted mostly by the silicified breccias but also spans the fine-grained granite-breccia contact. The principal minerals present are wolframite, molybdenite, and minor bismuth and bismuthinite, which occur as fracture fillings, in quartz veinlets and as disseminations throughout the deposit. Quartz, topaz, fluorite, arsenopyrite and loellingite comprise the main gangue minerals. High-grade zones are characterized by an intense greisen-style (quartz-topaz-fluorite assemblage) and silicic alteration that grades outward over distances of up to 100 m away from the main deposit through less intense silicification (quartz-biotite-chlorite-minor topaz assemblage). The less intense silicified zone is rimmed by an extensive (> 1000 m wide) propylitic-type alteration zone (chlorite-sericite assemblage). The granites in the lower part of the deposit and elsewhere in the system commonly exhibit pervasive chloritization that varies in intensity and is frequently irregularly distributed.

## 9.0 EXPLORATION

### 9.1 Overview

Exploration work completed on the Clarence Stream North properties include prospecting and rock sampling, and soil geochemistry surveys. This exploration work was planned and completed by Mercator on behalf of Alma Gold in mid to late July 2020. These exploration programs are further described in detail below.

Mercator also undertook a compilation of available geoscientific and geophysical data relating to the Project. This data was in the form of provincial and federal government digital datasets, plus assessment reports and maps, and historical assay data. Digital data was collected, organized and reviewed. Relevant data was extracted for use in geographic information system (GIS) software, based on the objective of identifying targets for soil geochemistry surveying.

Based on the results of this data compilation and 2002 Geological Survey of Canada (GSC) airborne magnetic survey maps (first vertical derivative) (Kiss et al., 2002a and 2002b) soil sample locations were selected over known geological and geophysical anomalies (Figure 9-1). Three large gaps in the soil sampling survey were due to the lack of a land access agreement with St. George Paper & Pulp (a subsidiary of J.D. Irving) prior to the start of the 2020 exploration program. These three areas (gaps) are shown in Figure 9-1 and it is recommended that Alma Gold secure a land access agreement with St. George Pulp and Paper prior to the next phase of exploration in order to fill in these gaps in the soil survey grid.

### 9.2 Prospecting and Rock Sampling Results

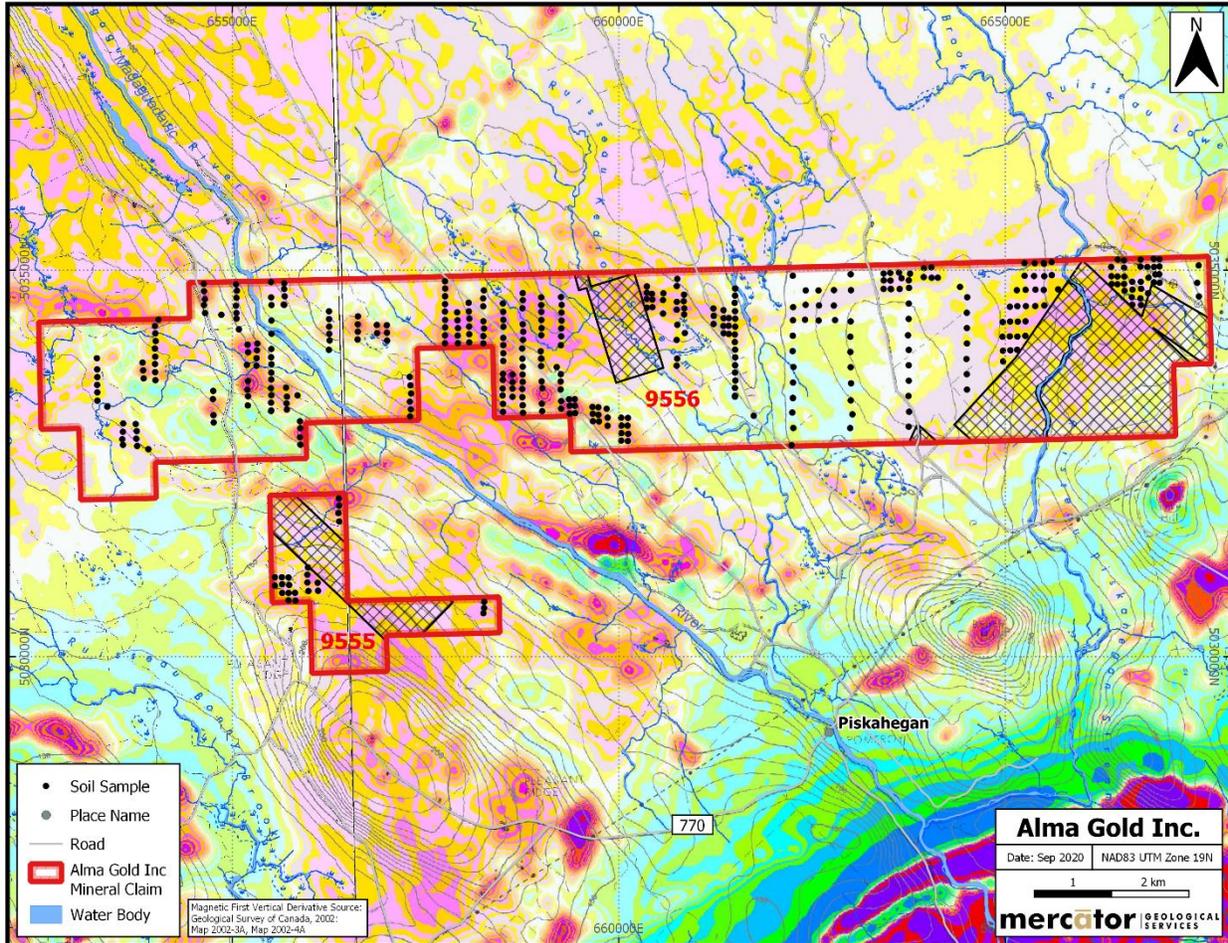
Field mapping and rock sampling of outcrops was completed by Mercator field staff in the Clarence Stream North Project, mainly focused on rivers and streams due to thick glacial till cover in the area impeding bedrock exposure. No rock samples were collected on claim 9555 due to poor bedrock exposure and a lack of rivers and streams in this area.

The field mapping and sampling consisted of traversing the project areas by truck and by foot to assess where outcrops have been previously mapped by exploration or government programs. Sample locations were marked by handheld GPS units and available structural measurements were recorded along with lithological descriptions, including alteration and mineralization where applicable. Outcrops with quartz veining and sulphide mineralization were sampled for follow up testing and representative country rock samples were collected for use in alteration studies.

A total of 20 rock samples were collected from the Clarence Stream North Project on claim 9556 between July 23 and July 31, 2020 and all rock samples were sent to Activation Laboratories Ltd. (Actlabs) for multi-element analysis including gold and arsenic. Rock sample locations and Au-As assay results are plotted on Figures 9-2 to 9-3. Gold (Au) and arsenic (As) assay results are also presented below in Table 9-1. No gold assay values were returned above the detection limit of 5 ppb Au, however As values were between 2 ppm to 747 ppm with the highest As values in outcrops located in the western part of claim 9556. These higher As rock assay results appear to correlate with an As soil anomaly in the area (refer to Section 9.3

below for further details). Generally, gold assay results of 10 ppb or higher are considered very anomalous in the Clarence Stream area, but the relationship between gold and arsenic is still poorly understood in the project area and warrants further investigation.

**Figure 9-1: Soil sampling locations with underlying GSC airborne magnetic map and St. George Pulp & Paper lands**



**Table 9-1: Assay Highlights from the Rock Sampling Program**

Sample #	*Easting (m)	*Northing (m)	Claim Group	Sample Type	Lithology	Au (ppb)	As (ppb)
R001024	665753	5035050	9556	outcrop	quartz	<5	3
R001025	665759	5035066	9556	outcrop	argillite	<5	<2
R001026	665755	5034942	9556	outcrop	quartz	<5	16
R001027	665403	5034756	9556	outcrop	sandstone	<5	1
R001028	654989	5033620	9556	outcrop	quartz	<5	747
R001029	654989	5033620	9556	outcrop	argillite	<5	647
R001030	655080	5033614	9556	outcrop	slate	<5	77
R001031	655477	5033685	9556	outcrop	sandstone	<5	43
R006251	655575	5034183	9556	outcrop	argillite	<5	15
R006252	655575	5034183	9556	outcrop	quartz	<5	46
R006253	655477	5034236	9556	outcrop	quartz	<5	6
R006254	655271	5034672	9556	outcrop	quartz	<5	5
R006255	655271	5034672	9556	outcrop	greywacke	<5	4
R006256	655859	5033904	9556	outcrop	argillite	<5	20
R006257	656370	5033256	9556	outcrop	greywacke	<5	14
R006258	656370	5033256	9556	outcrop	quartz	<5	6
R006259	656532	5033128	9556	outcrop	greywacke	<5	8
R006260	656532	5033128	9556	outcrop	quartz	<5	<2
R006261	655206	5033829	9556	outcrop	quartz	<5	24
R006262	655206	5033829	9556	outcrop	greywacke	<5	27

\*UTM NAD 83 Zone 20 coordination

**Figure 9-2: Gold results in rock samples**

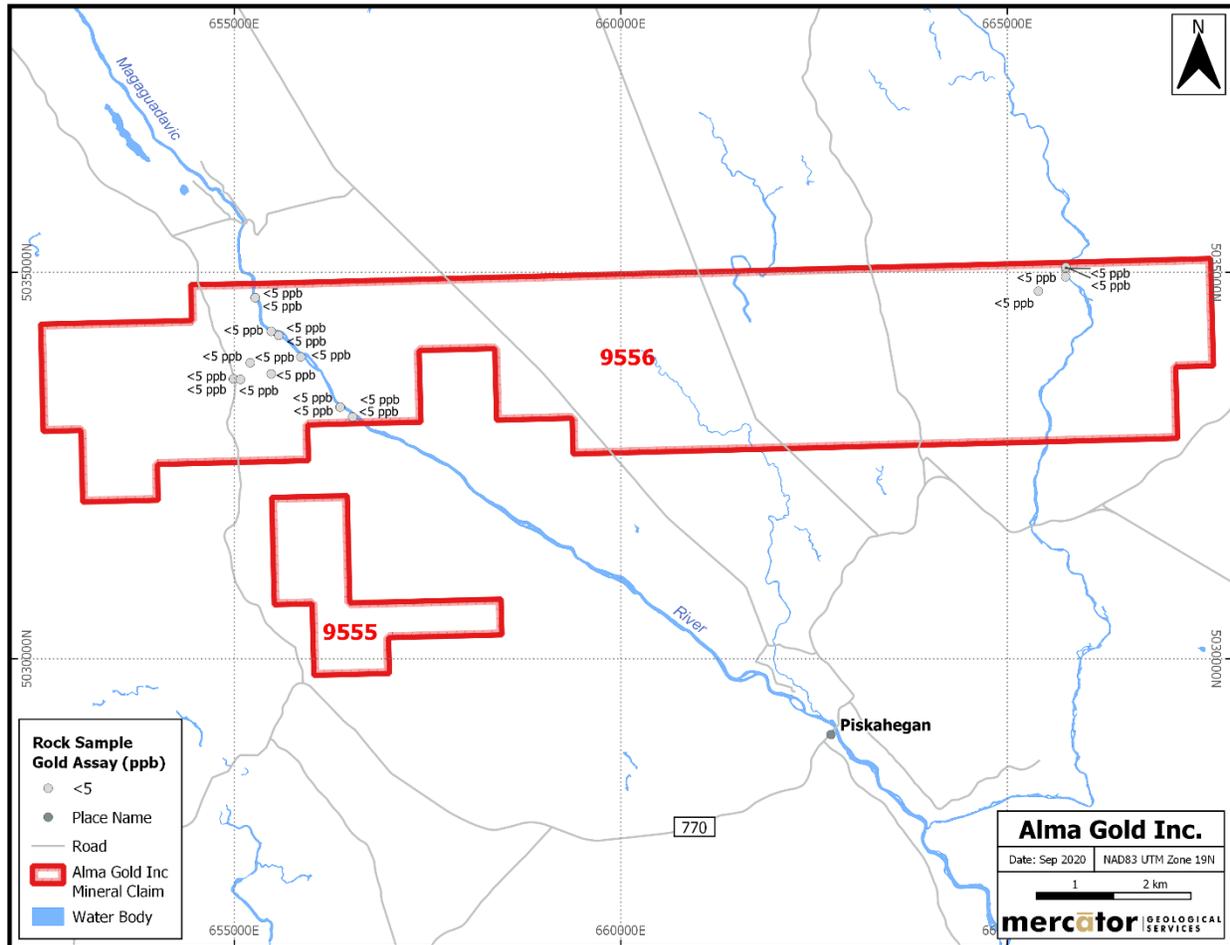
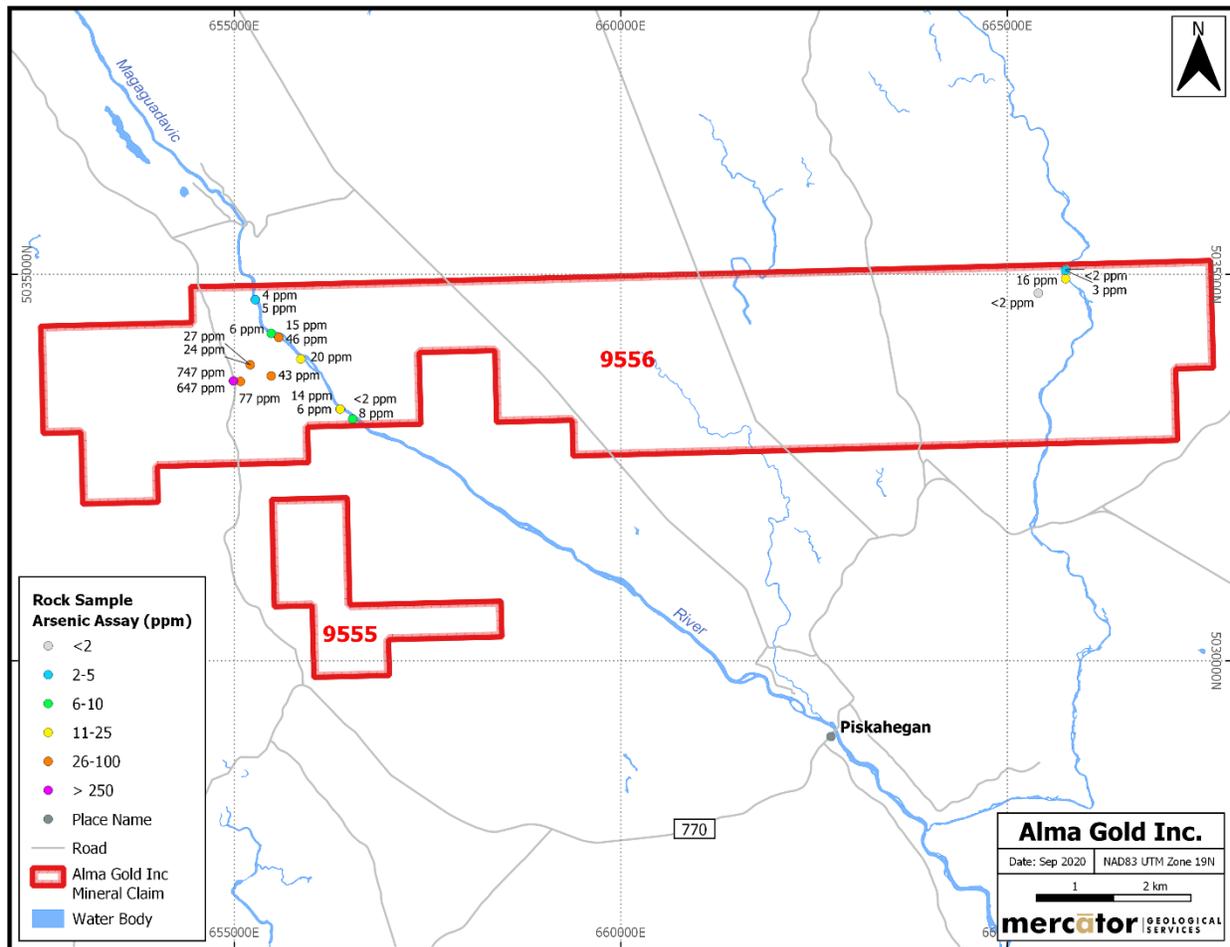


Figure 9-3: Arsenic results in rock samples



### 9.3 B-horizon Soil Sampling Results

Two teams of two field geologists completed a B-horizon soil sampling program on claims 9555 and 9556 on both Crown and private lands at Clarence Stream North. A land access agreement was not entered into with St. George Pulp & Paper, therefore soil samples were not collected on those particular private lands. Soil samples were collected by means of a Dutch Auger to a total depth of approximately 0.2 to 0.5 metres from the surface. The soil survey program included a detailed QAQC program comprised of the insertion of blanks and certified reference materials (standards) on a staggered 1 in 40 basis and duplicate pulp split and field sample duplicate analyses on separate 1 in frequencies. Data collection was completed using field tablets with the GPS location, soil texture, colour, and other soil descriptions recorded in a digital database.

A total of 426 B-horizon soil samples were collected between July 23 and July 31, 2020 and submitted for gold and multi-element geochemical analysis at Actlabs (Figure 9-4). B-horizon soil samples were mainly collected at 50 m stations along 100 m spaced survey lines with some stations spaced between 200 to 250 metres to maximize the soil survey grid coverage. The sampling grid on claim 9556 measures approximately 14.5 km by 2.5 km in size with the highest concentration of sample stations located in the

central part of the claim block. A total of 24 soil samples were taken in claim 9555 focused on the western end of the claim block and 389 soil samples collected on claim 9556 spread evenly across the entire claim block (Figure 9-4) on Crown and private lands (except St. George Pulp & Paper).

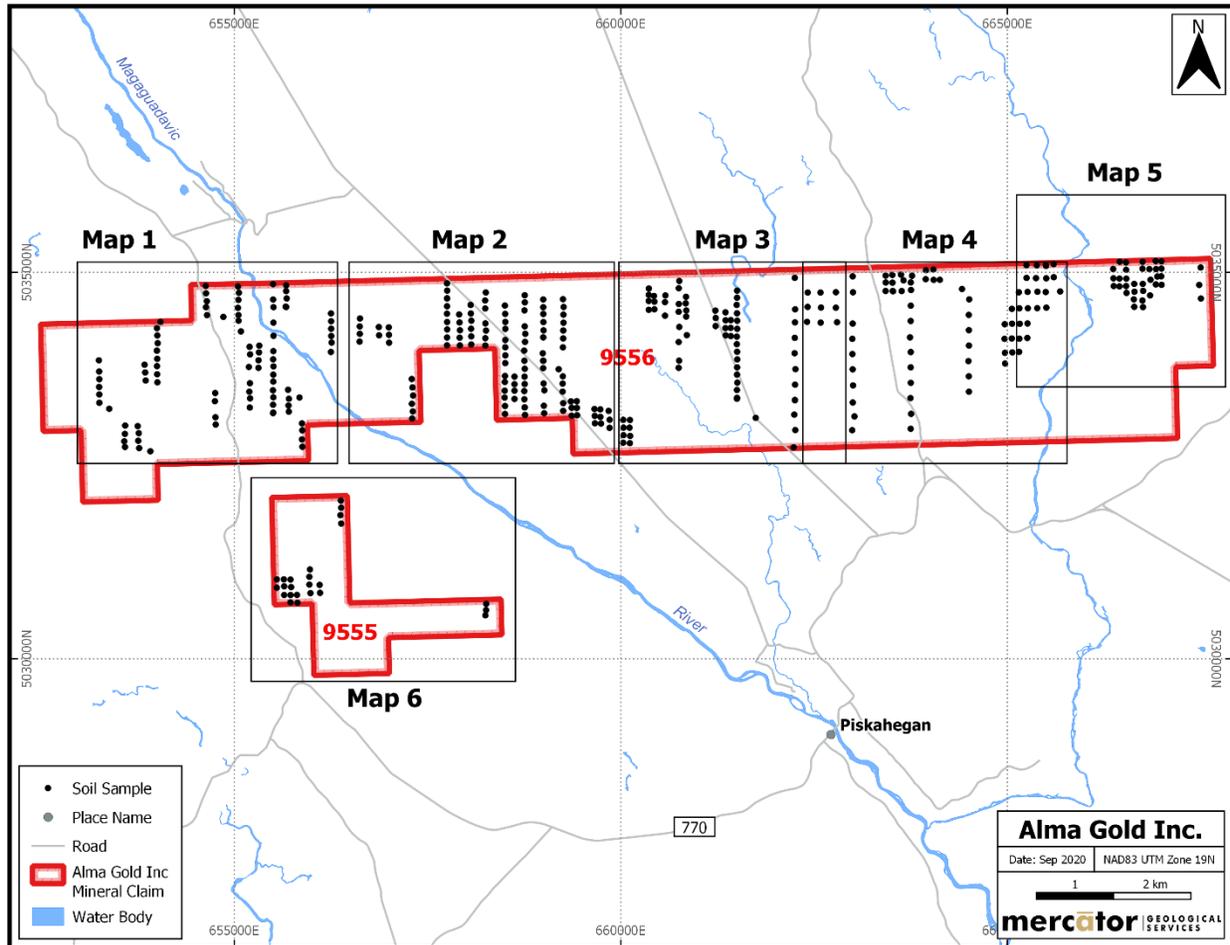
Clarence Stream North B-horizon soil samples returned gold values ranging from <5 ppb to 32 ppb with a detection limit of 5 ppb (Figures 9-5 to 9-11). A total of 36 soil samples returned gold results above 10 ppb. Generally, gold assay results of 10 ppb or higher in soils are considered anomalous in the Clarence Stream area. Arsenic in soil results returned values ranging from <2 ppm to 674 ppm with a detection limit of 2 ppm (Figures 9-12 to 9-16).

The soil survey was successful in outlining three main gold anomalies on claim 9556 (Figure 9-5) with the centre anomaly (Au Anomaly 2) being the most prominent. Au Anomaly 2 appears to coincide with a weak magnetic high in the area as indicated in Figure 9-1 and warrants further investigation to determine whether this anomaly is related to a deeper intrusive body at subsurface or a fault structure.

Two large arsenic soil anomalies were detected (Figure 9-12) in claim 9556, with As Anomaly 1 being the strongest of the two. A smaller As anomaly is evident in the northeastern part of claim 9555, but grid coverage in this area was poor due to land access issues and follow-up soil sampling is required to determine the size and significance of this particular As anomaly. The arsenic anomalies do not appear to correlate well with many of the gold anomalies detected. Based on a preliminary review of multi-element soil data, there appears to be a spatial association between gold and some of the more mafic-related elements such as Mg, Cr, Zn, Cu and Ni in the east and west extents of the soil grids (Au Anomaly 1 and 3). The gold anomaly in the center of the grid (Au Anomaly 2) does not appear to correlate with these elements or with arsenic, which needs to be investigated further through detailed statistical analysis and follow-up soil sampling in surrounding areas.

The total cost of the 2020 Alma Gold rock and soil sampling program at Clarence Stream North including field costs, laboratory analyses, geological interpretation, and technical reporting is approximately \$105,900 before taxes.

Figure 9-4: Soil sampling locations including index map for Au and As results



**Figure 9-5: All gold results in soils with three main anomalies shown**

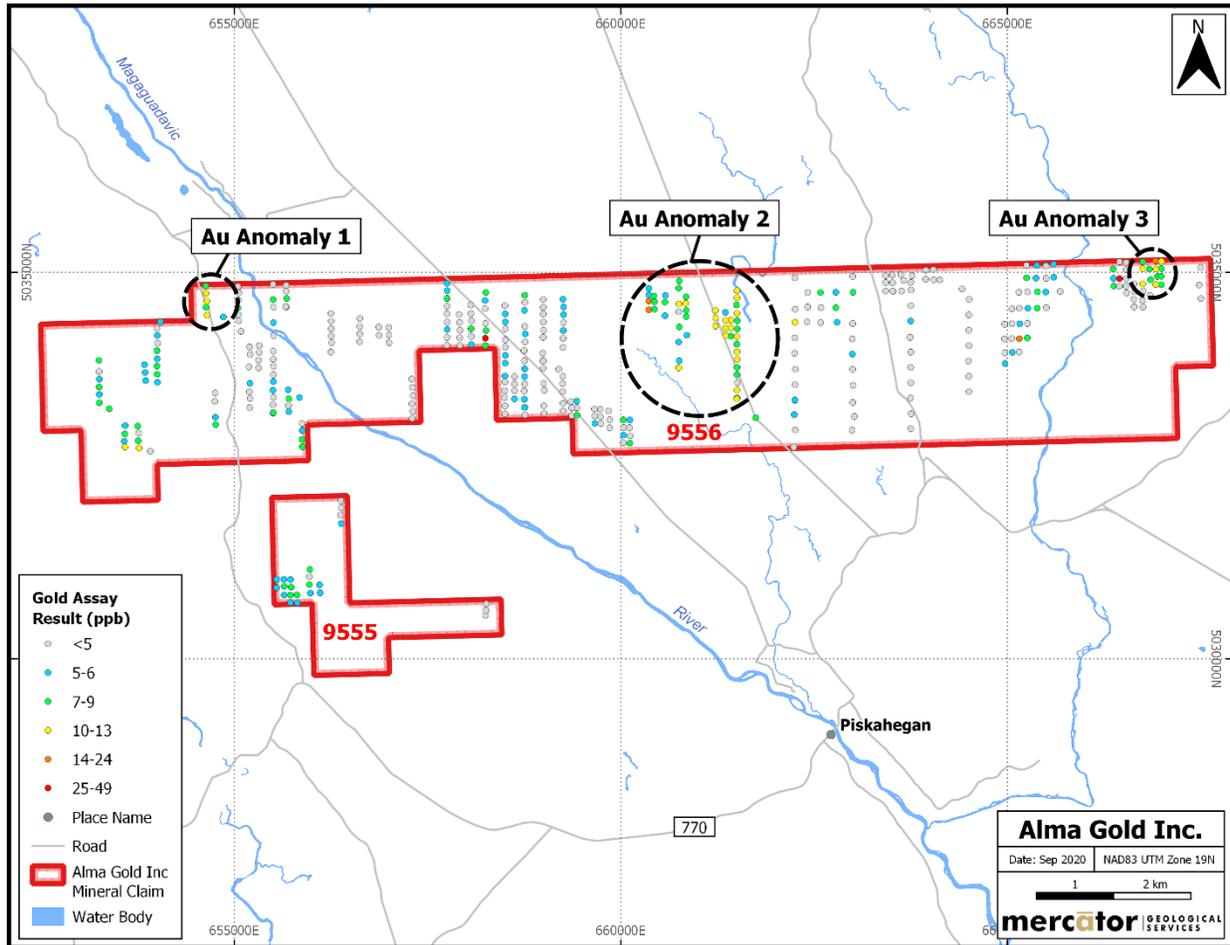


Figure 9-6: Gold results in soils – Map 1

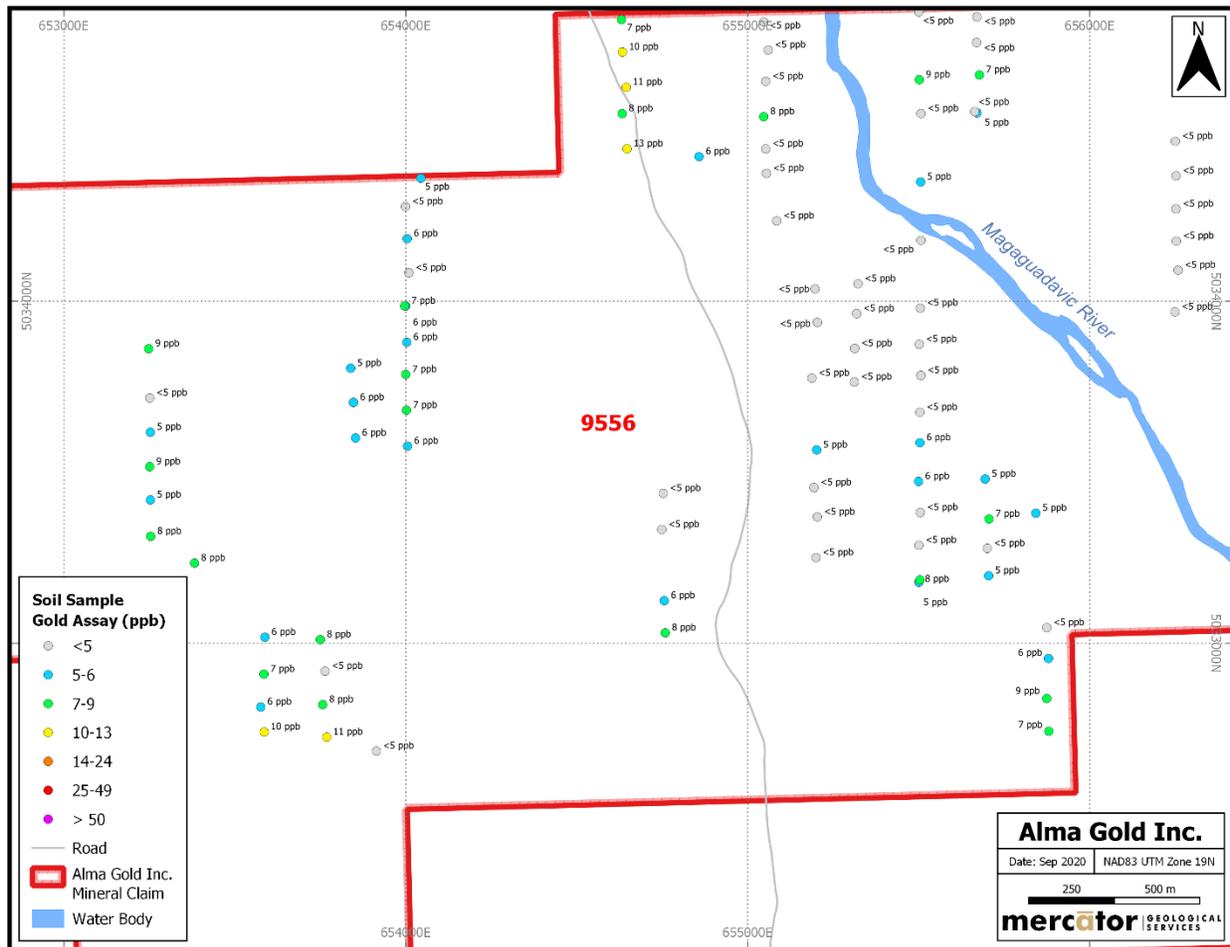
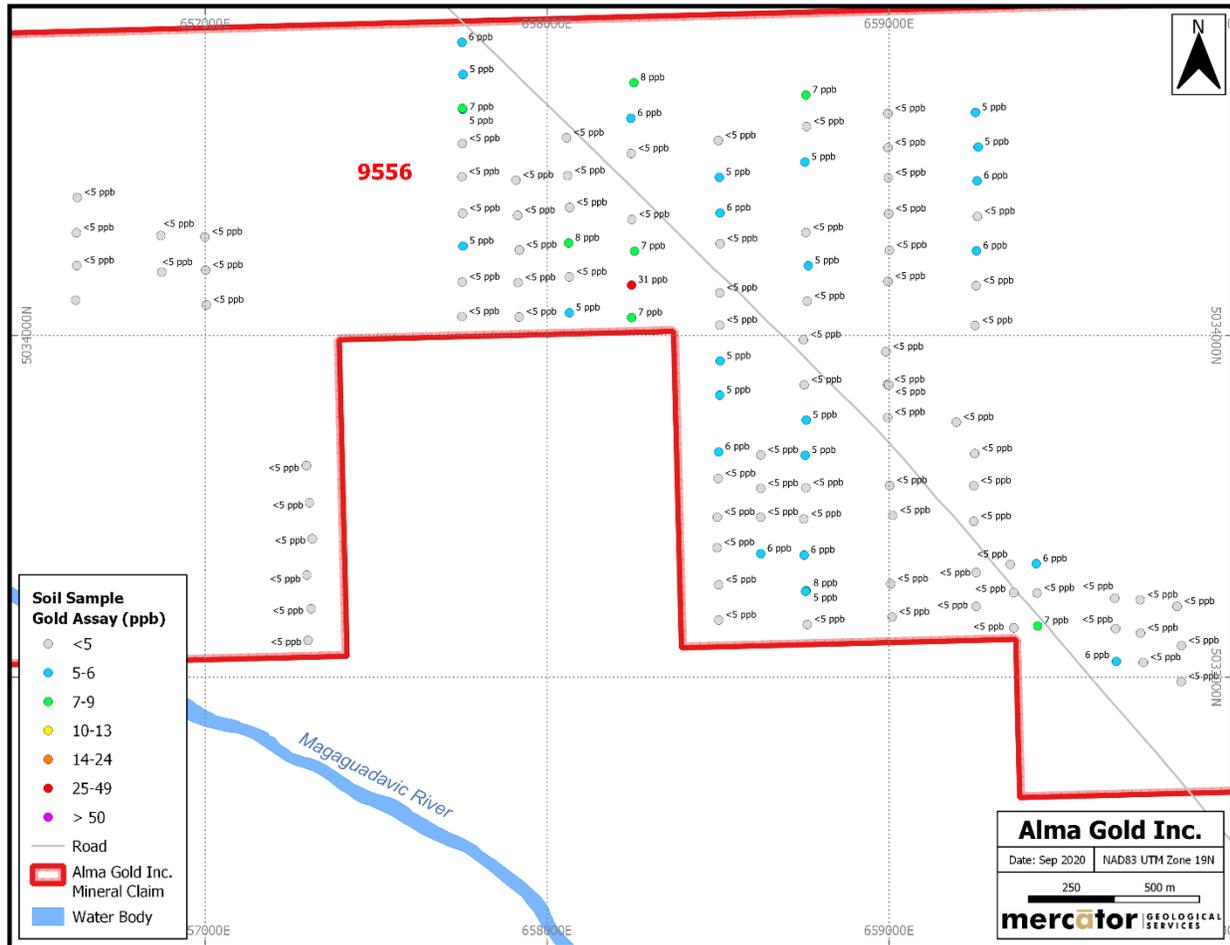
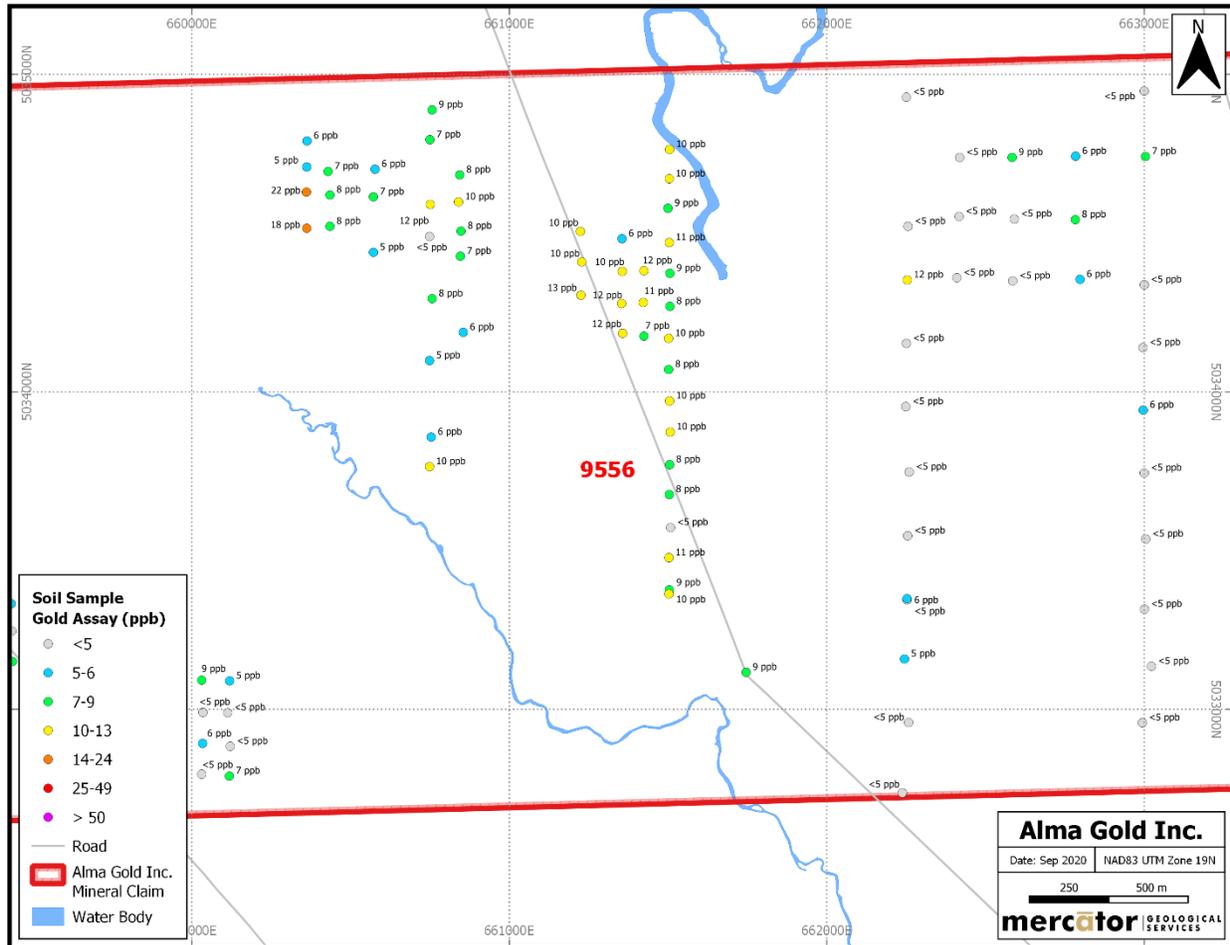


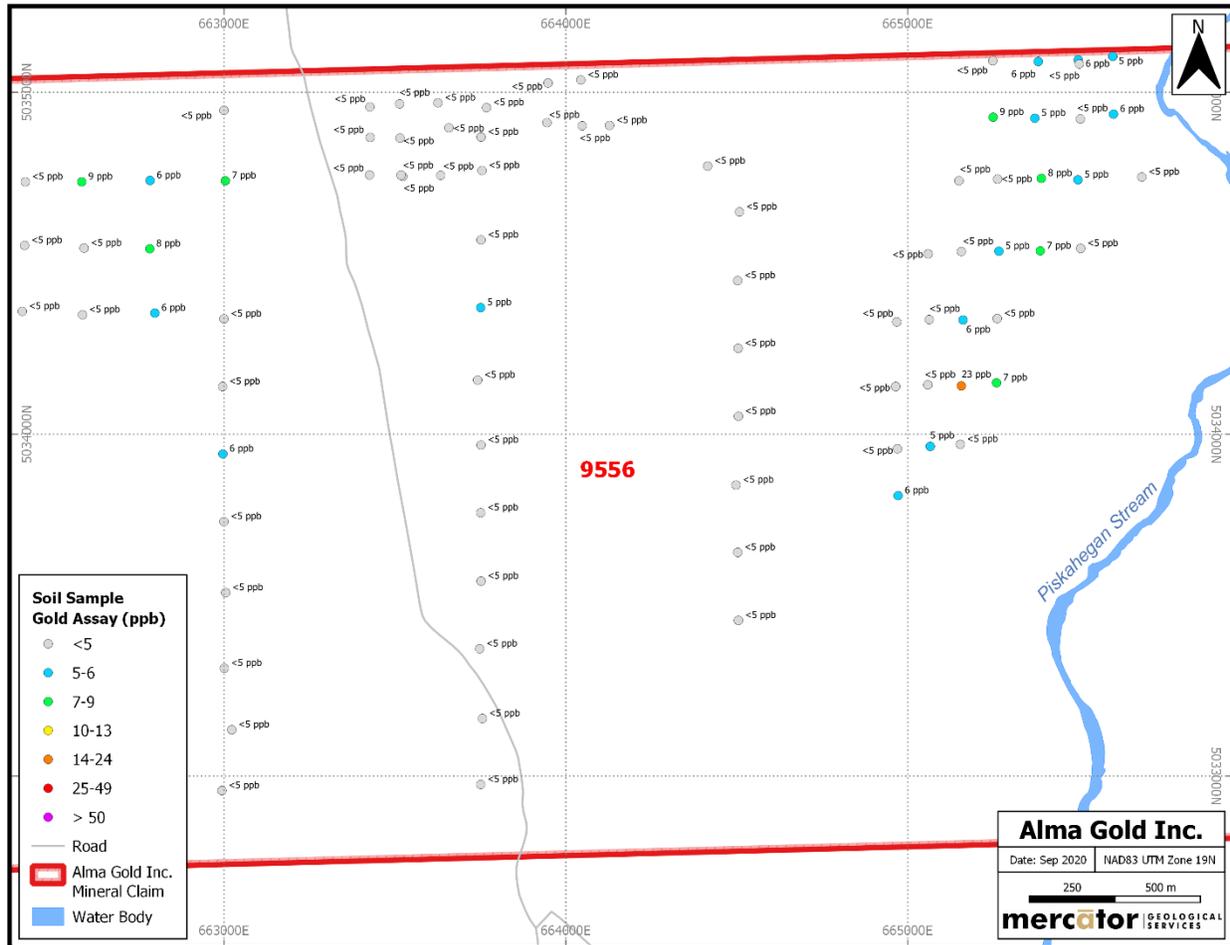
Figure 9-7: Gold results in soils – Map 2



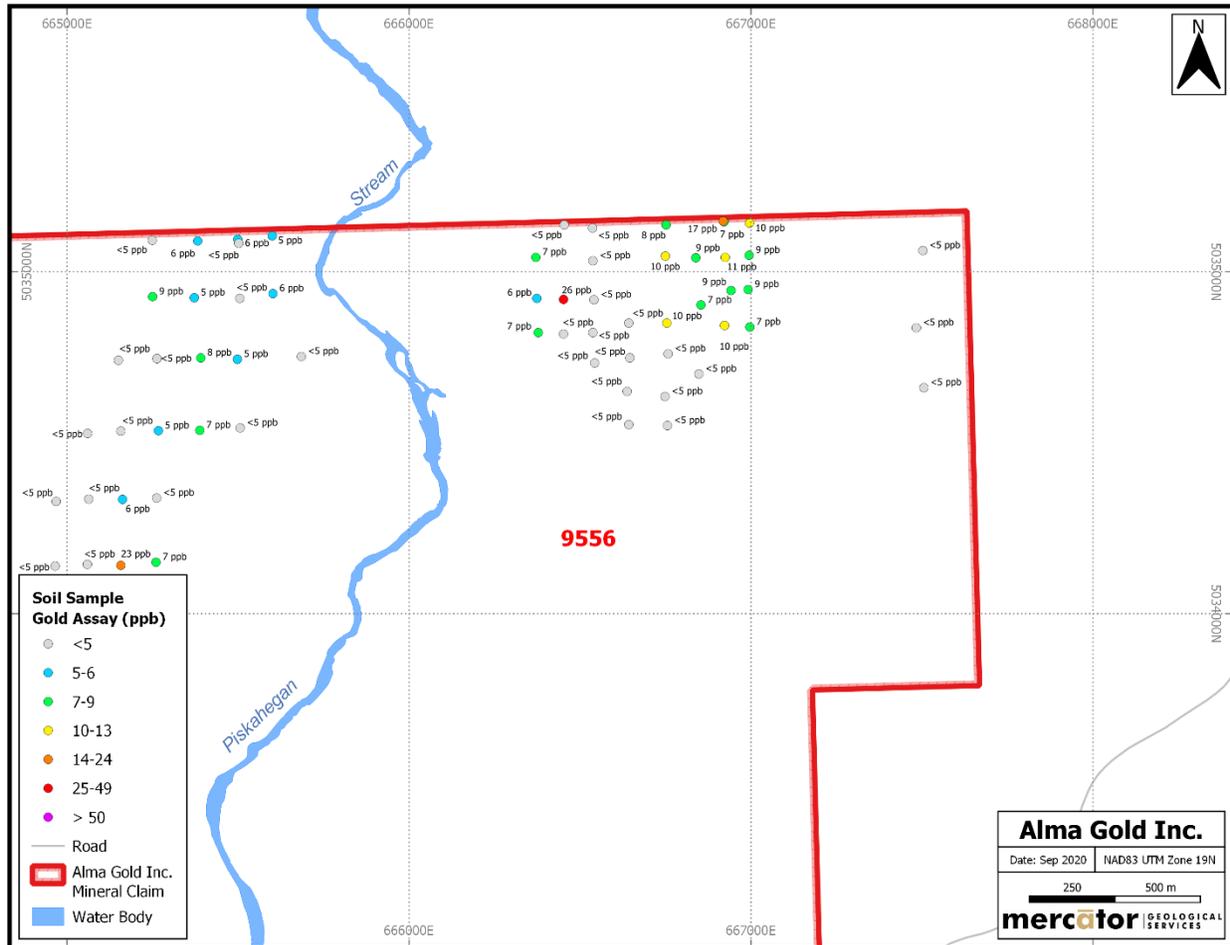
**Figure 9-8: Gold results in soils – Map 3**



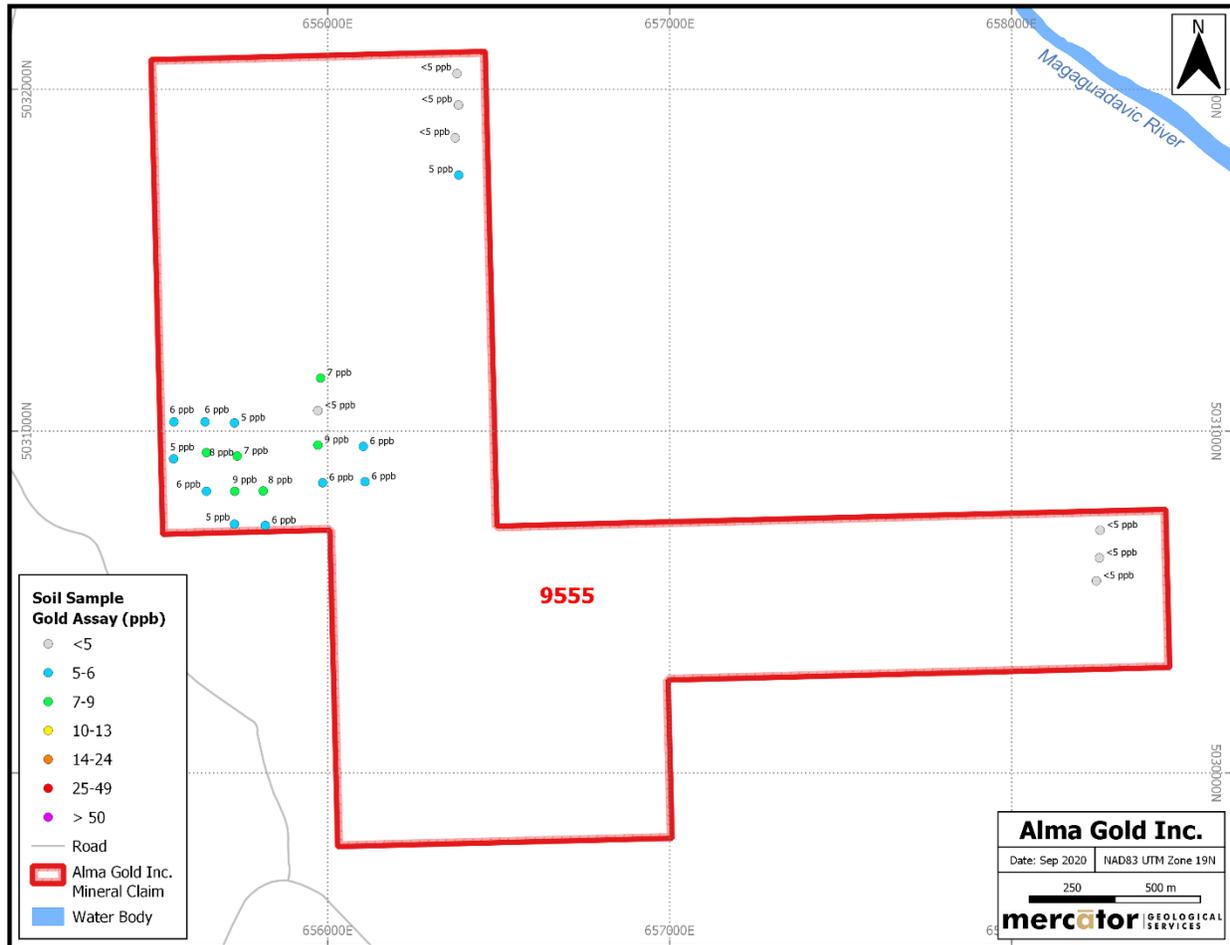
**Figure 9-9: Gold results in soils – Map 4**



**Figure 9-10: Gold results in soils – Map 5**



**Figure 9-11: Gold results in soils – Map 6**



**Figure 9-12: All arsenic results in soils with two main anomalies shown**

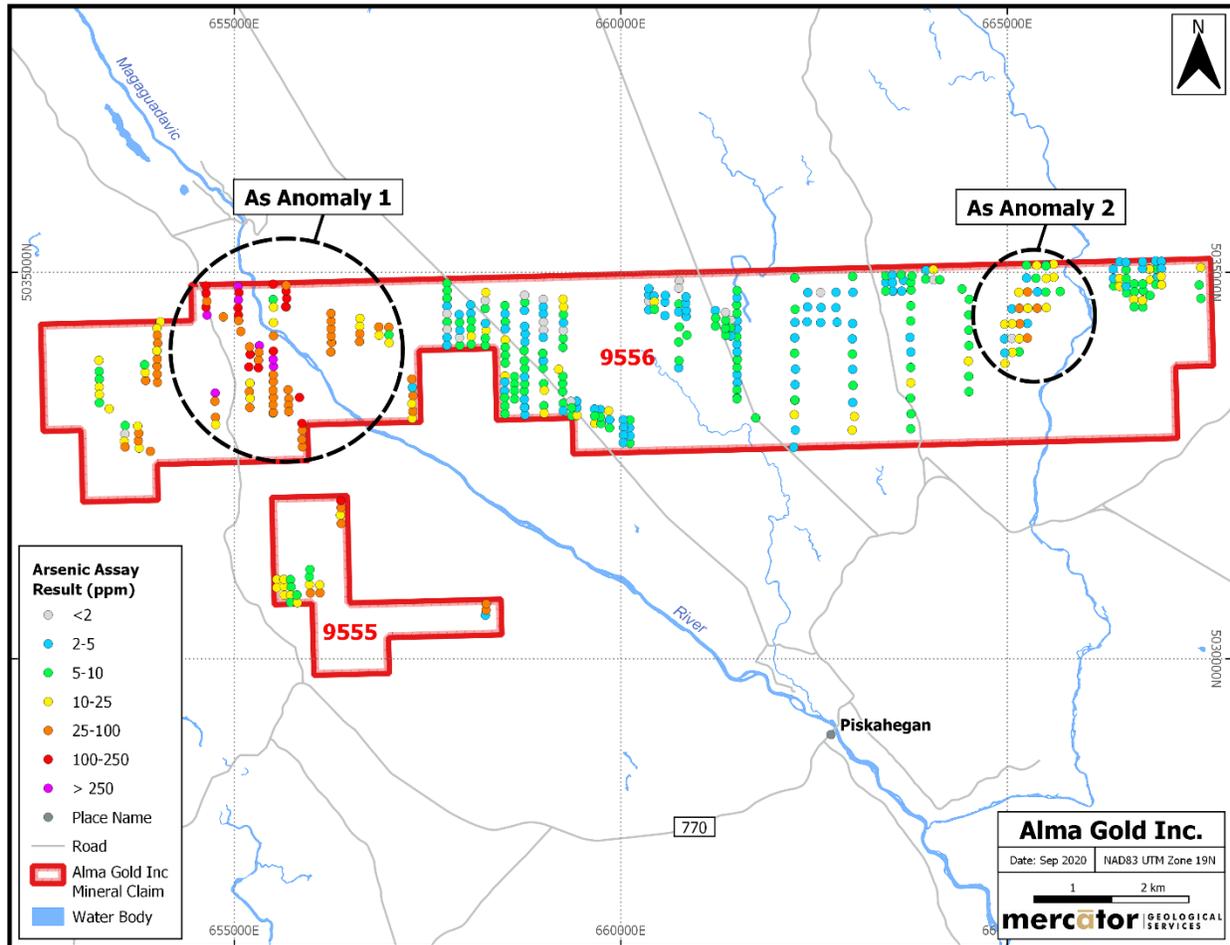
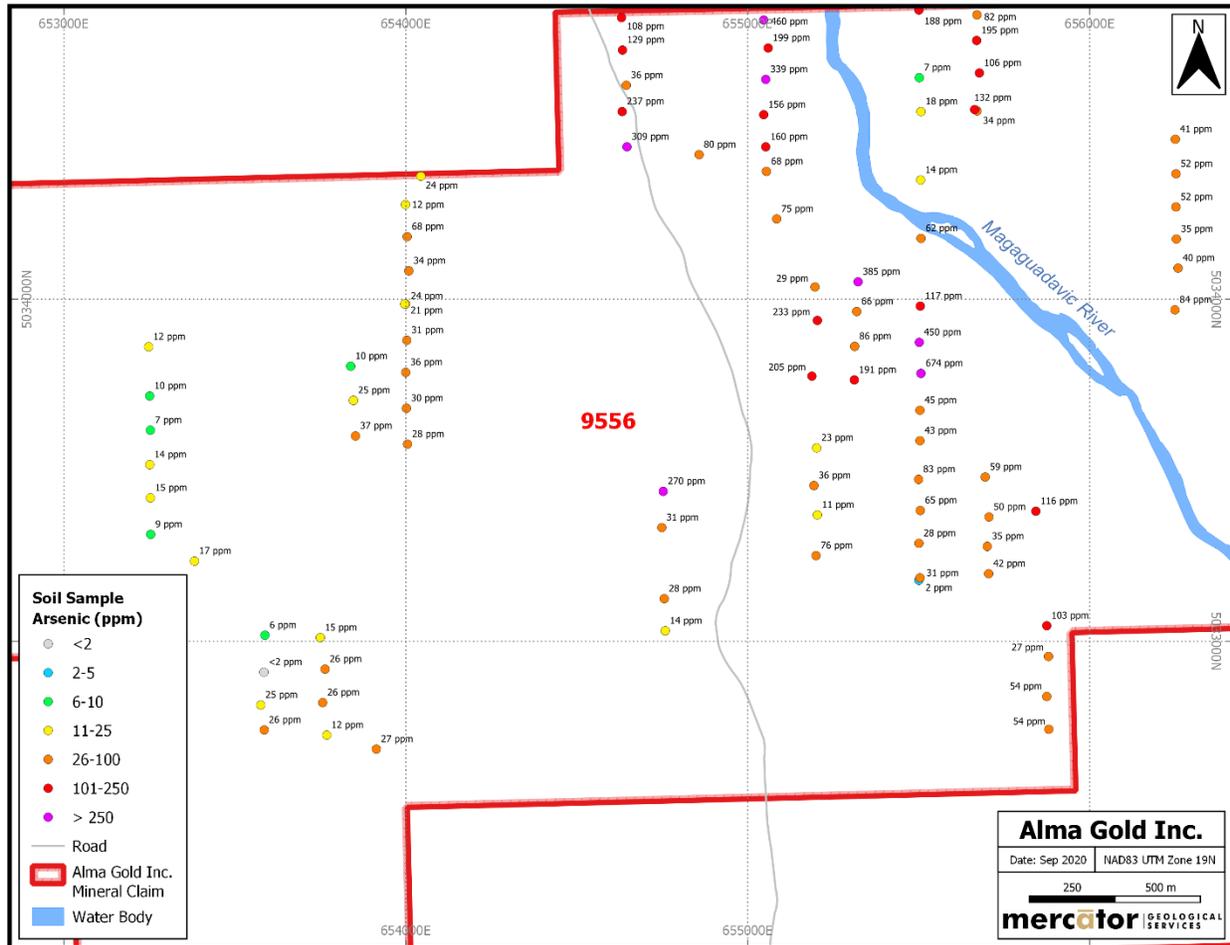
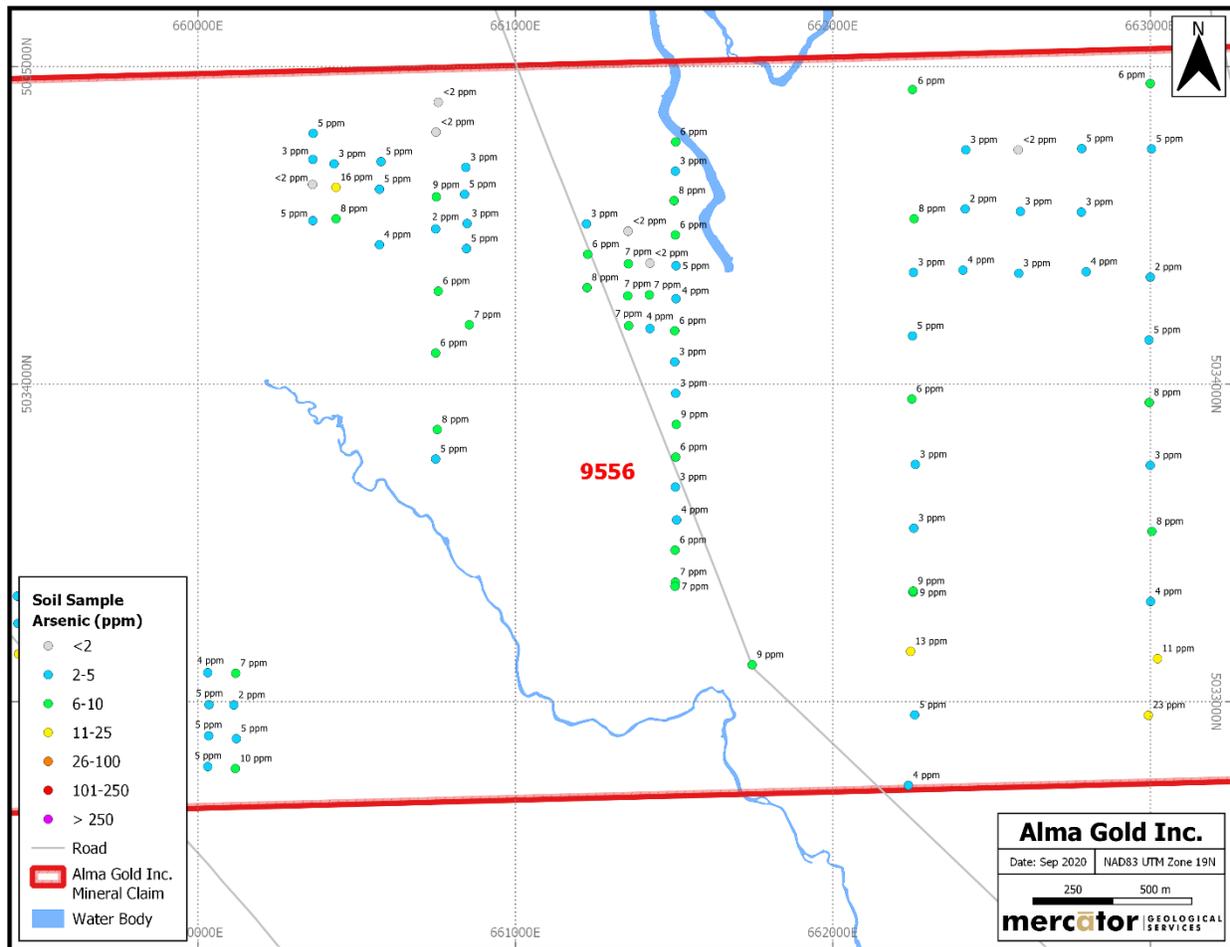


Figure 9-13: Arsenic results in soils – Map 1

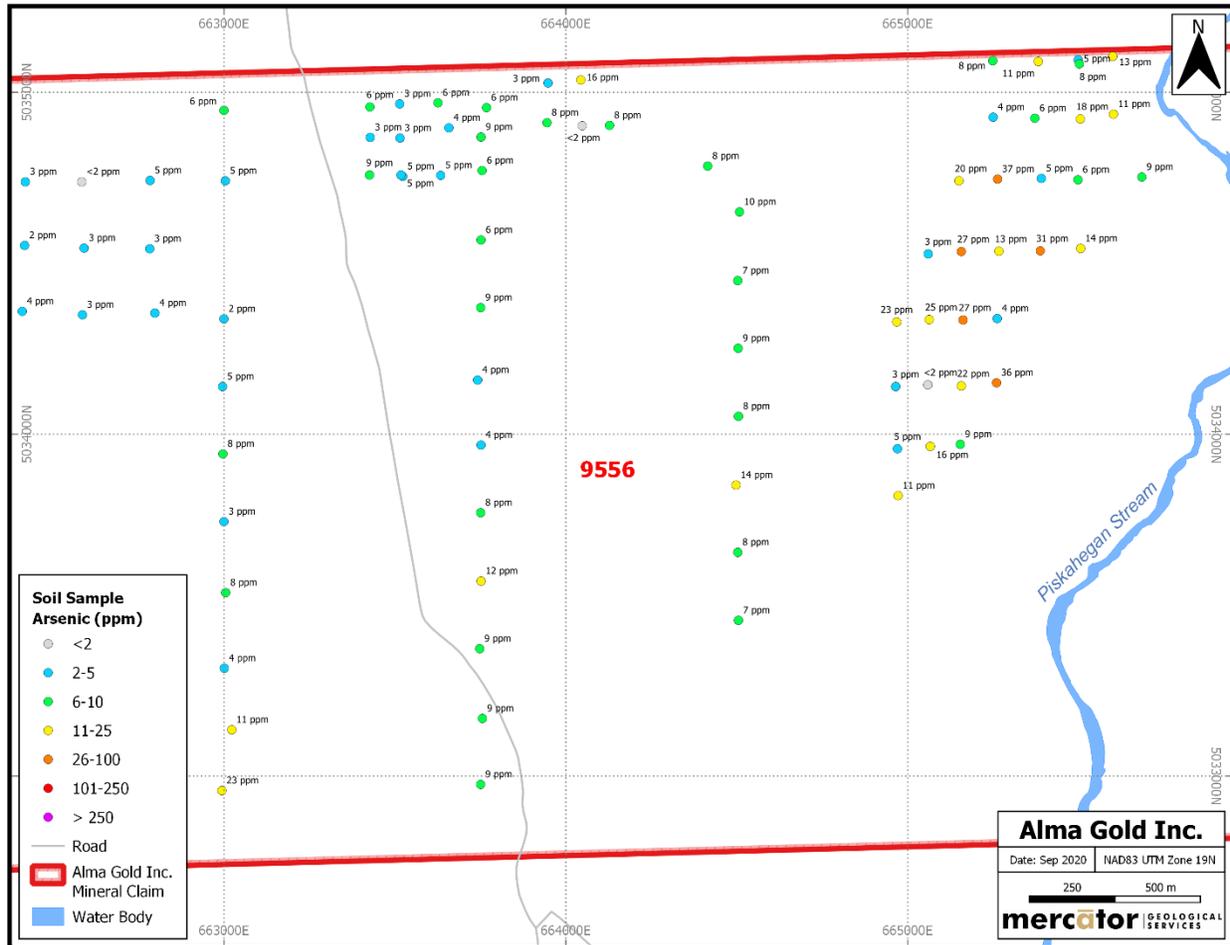




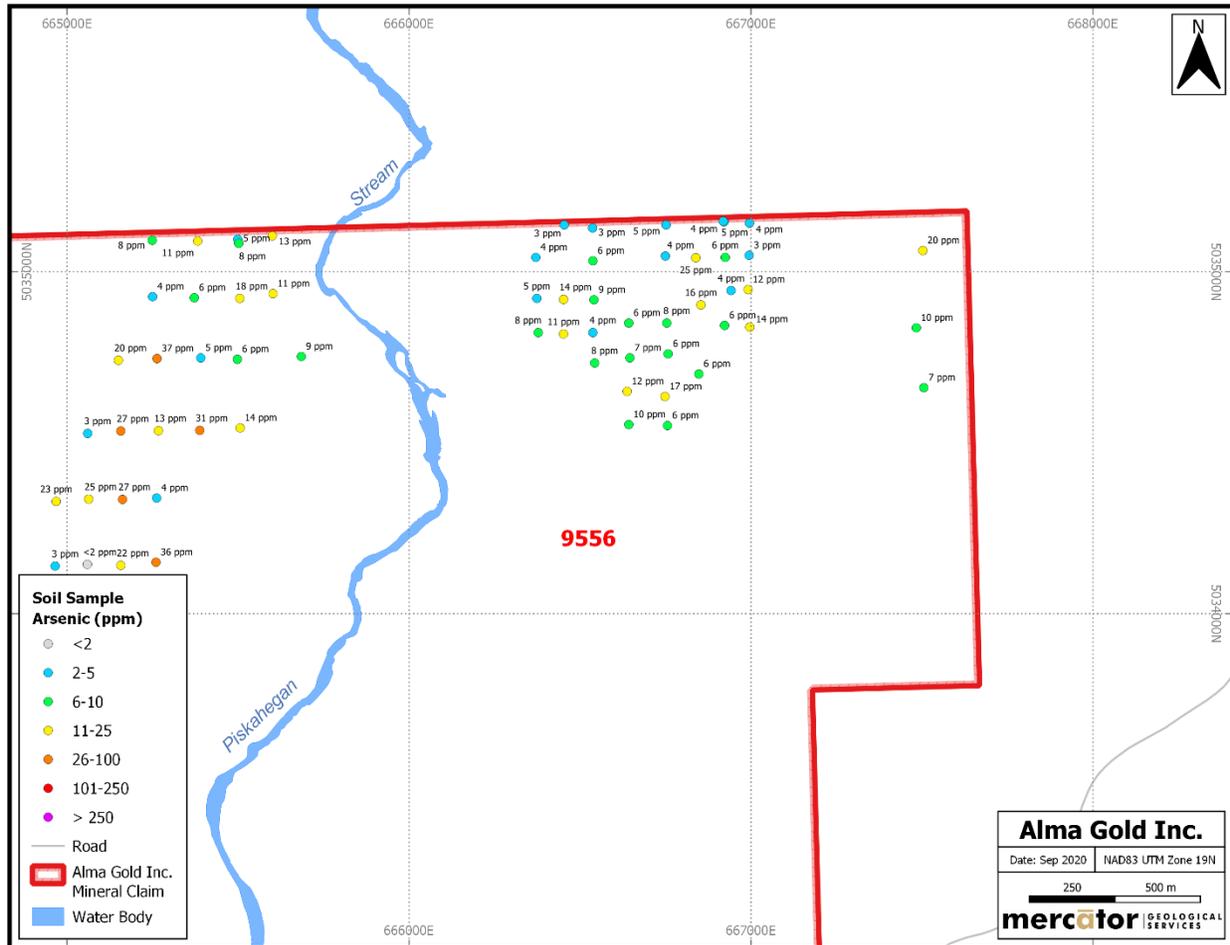
**Figure 9-15: Arsenic results in soils – Map 3**



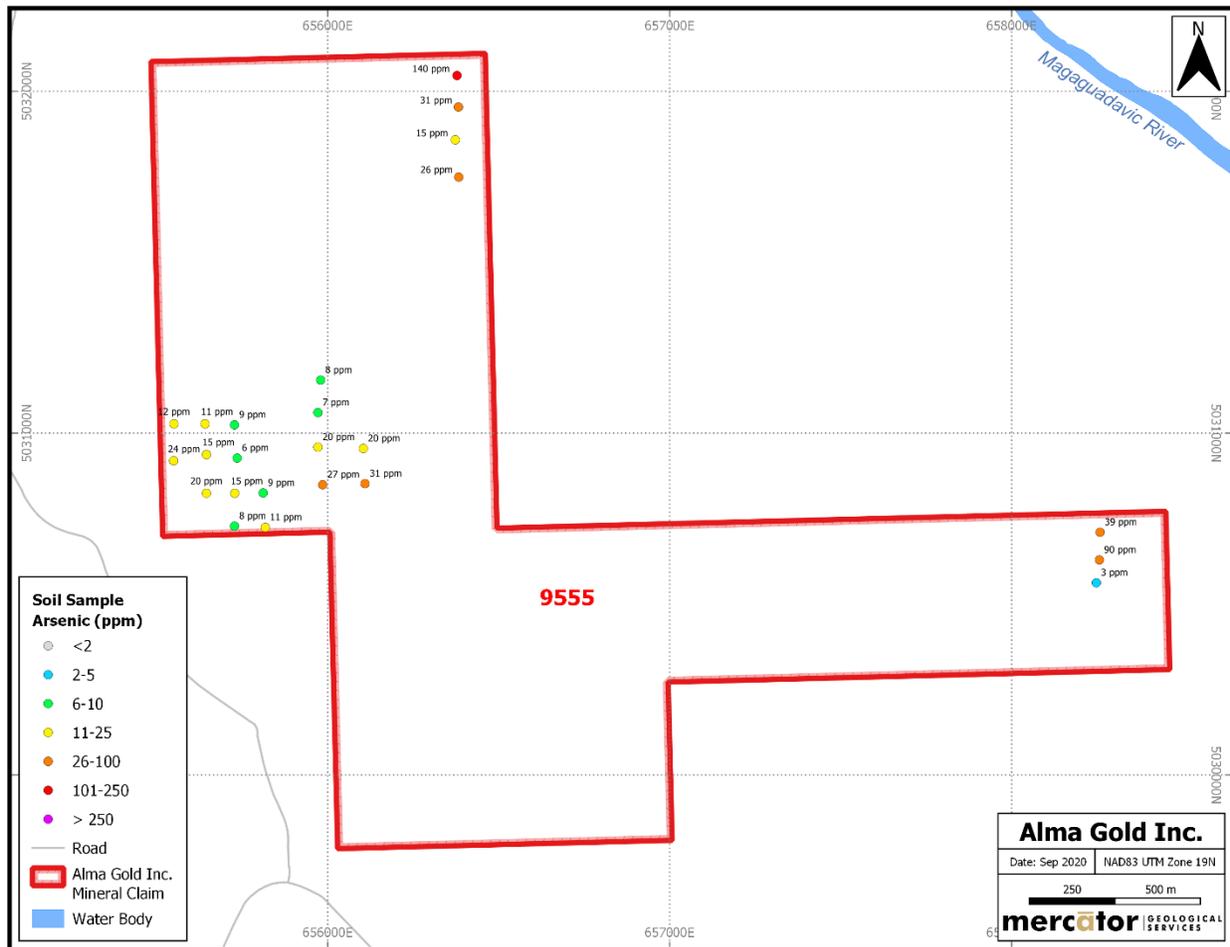
**Figure 9-16: Arsenic results in soils – Map 4**



**Figure 9-17: Arsenic results in soils – Map 5**



**Figure 9-18: Arsenic results in soils – Map 6**



## **10.0 DRILLING**

Alma Gold has not completed any drilling on the Clarence Stream North Project.

## **11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY**

### **11.1 Rock Sampling Program**

Samples from the rock sampling program were sent to Activation Laboratories Ltd. (Actlabs) in Ancaster, Ontario for laboratory analysis. Rock samples were crushed up to 80% passing 2 mm, riffled split to approximately 300 grams, and pulverized to 95% passing 105 microns. The pulverizer bowl was cleaned between each sample. Pulp samples were analyzed for gold by standard 30-gram fire assay with atomic absorption finish (FA-AA) and for multi-element geochemistry by ICP optical emission spectroscopy (ICP-OES). A total of 39 elements were determined using these methods. For QAQC purposes, two certified reference standard samples were included with the rock sample shipment. Samples and QAQC materials were placed in secured plastic sample bags, labeled, and sent via commercial courier to Actlabs in rice bags. The rock samples were kept in a dry, secure location prior to shipment. Actlabs is a commercially operated laboratory analytical services firm that is accredited by the Canadian Association for Laboratory Accreditation (CALA) and registered to ISO 17025 standards for specific procedures. Actlabs is independent of Alma Gold and Mercator.

### **11.2 B-horizon Soil Sampling Program**

Mercator field staff used handheld GPS receivers to locate sampling stations from a pre-planned sampling grid developed in a GIS program. At each soil sample site, a Dutch Auger was used to collect a B-horizon soil sample between approximately 0.2 to 0.5 metres below ground surface. A description for site type, depth to sample, oxidation, color, moisture, sample weight, clast percent, lithology, and angularity was collected using a digital, tablet-based form. The sample was sealed in a Kraft soil sample bag and marked with its sample number. Soil samples were kept in a dry, secure location in plastic bins prior to shipment to the laboratory via commercial courier.

B-horizon soil samples were sent to Actlabs for preparation and analysis using the same techniques as those discussed above in Section 11.1. Soil samples were dried and sieved to 177 microns. After drying and sieving, a 30-gram split of minus-mesh material was analyzed for gold using FA-AA methods. A second pulp split was prepared for multi-element analysis by Inductively Coupled Plasma (ICP-OES) methods after aqua regia partial acid digestion. As noted above, Actlabs is a commercially operated analytical services firm that is accredited by the Canadian Association for Laboratory Accreditation (CALA) and registered to ISO 17025 standards for specific procedures.

The Quality Assurance and Quality Control protocol for the soil geochemistry survey included:

- (1) analysis of Certified Reference Material (CRM) samples at a frequency of 1 in 40 to monitor accuracy of analytical results. The certified reference material used was CDN-HZ-2;
- (2) blind insertion of sand-sized blank material at a frequency of 1 in 40 to monitor for cross contamination. The blank material used was crusher dust obtained from Conrads Brothers quarry in Dartmouth, Nova Scotia;
- (3) analysis of duplicate pulp splits at a frequency of 1 in 40 to monitor precision of results; and

- (4) collection and analysis of a site duplicate sample at a frequency of 1 in 40 to monitor for site sampling error.

In addition to the QAQC samples incorporated by Alma Gold Inc., Actlabs monitored their own internal certified standards, blanks, and duplicates in compliance with ISO 17025 requirements. Mercator reviewed the results of the internal Actlabs QAQC samples and communicated all concerns to Actlabs. The only concern flagged by Mercator was the duplicate sample for S1137 which Mercator identified as having a significantly higher value (19 ppb) than the original assay value (<5 ppb) and was therefore requested to be rerun by Actlabs. The rerun of S1137 returned the same value as the original assay value (<5 ppb).

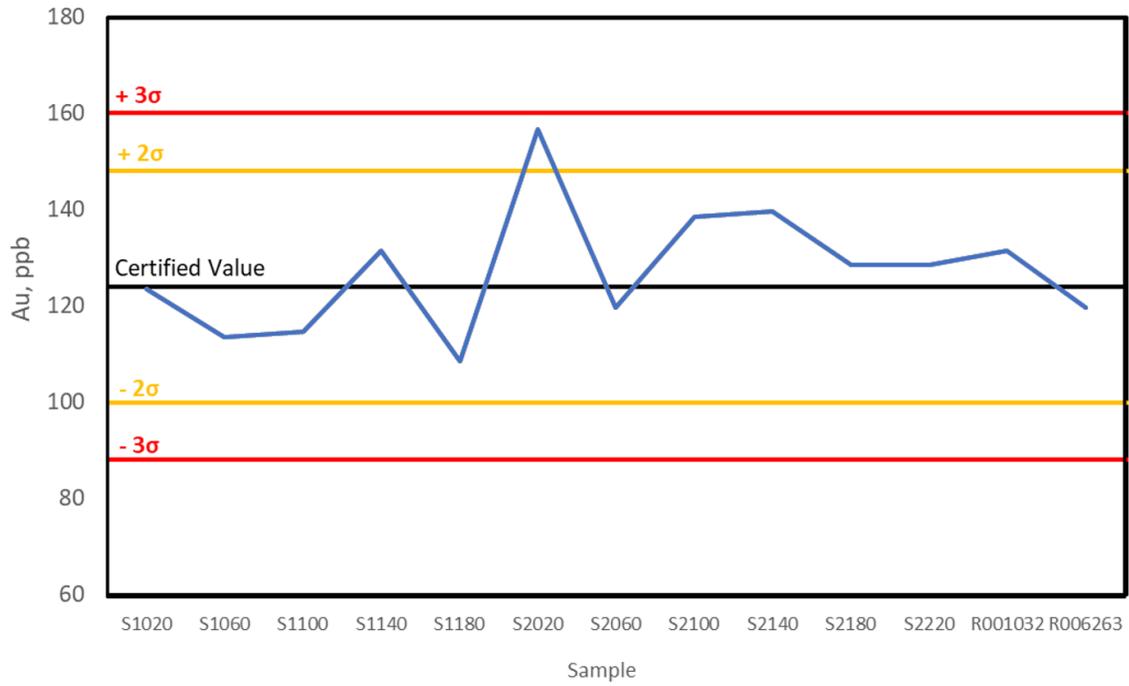
### 11.3 QAQC Results

The QAQC results for the rock and soil sampling program were monitored by Mercator staff. Anomalous blank gold values and CRM gold values returned outside of three standard deviations were flagged for investigation. Certified reference material (CRM) standard CDN-HZ-2 was used for the Clarence Stream North Project rock and soil sampling program and has a certified gold value of 0.124 g/t with two standard deviations of 0.024 g/t and a certified silver value of 61.1 g/t with two standard deviations of 4.1 g/t. In total, 13 blind certified reference standards and 12 blank samples were inserted with rock and soil samples submitted to Actlabs. One CRM sample (S1140) was flagged by Mercator as having a gold value greater than three standard deviations from the certified value and was therefore rerun by Actlabs. The rerun value was returned within the acceptable range. The five samples before and five samples after S1140 within the sample stream returned gold values below the detection limit (<5 ppb) and therefore it is concluded that contamination did not compromise gold assay values adjacent to this CRM sample.

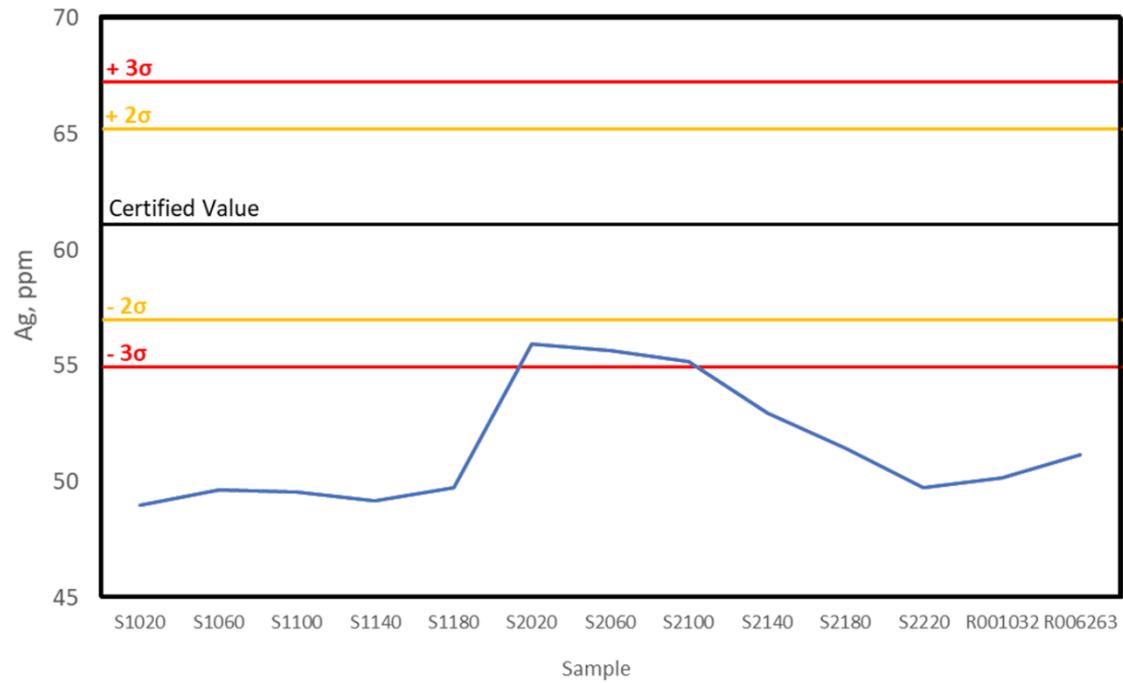
The results of the Actlabs analyses of the certified reference materials are plotted in Figures 11-1 and 11-2 for gold and silver, respectively. All CRM samples are within 3 standard deviations of the certified gold value and 12 of the samples are within two standard deviations of the certified gold values, supporting accurate measurement of gold by Actlabs. The Ag values for the 13 submitted CRM samples indicate a consistent negative bias in Ag measurements, with only two CRM samples having values within three standard deviations of the certified value. The difference between the certified value for CDN-HZ-2 and the measured value is likely the result of different analytical methods. The certified Ag value was measured using 4-acid digestion methods with an AA or ICP finish, whereas the CRM samples for the soil survey were analyzed using aqua regia digestion methods with an ICP-OES finish.

Analytical results for the blank samples analyzed at Actlabs are shown in Figures 11-3 and 11-4 for gold and arsenic, respectively. Most blank samples have gold values less than the detection limit (5 ppb), but three samples returned values in the range of 5 to 8 ppb gold, suggesting possibly a higher detection limit than reported by Actlabs. A detection limit value of 8 or 10 ppb is probably more representative of the dataset and values above 10 ppb can be interpreted as significant. Arsenic results for the 12 submitted blank samples returned values below 3 ppm As. The results appear to show no issues of laboratory analysis level cross contamination with respect to gold and arsenic content.

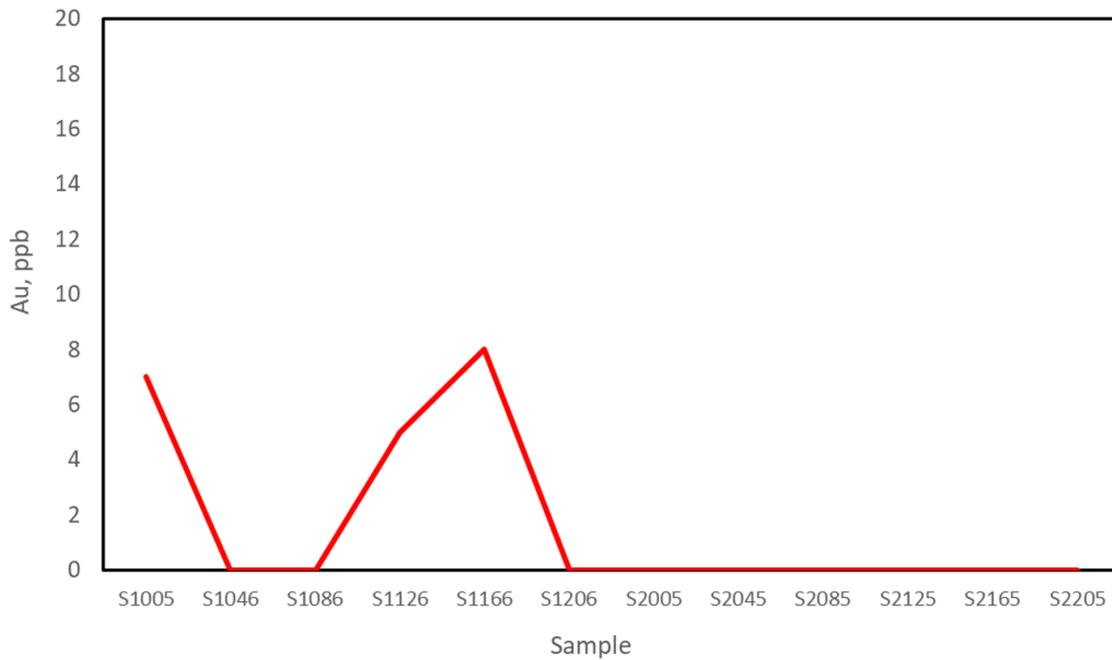
**Figure 11-1: Actlabs fire assay gold results for CDN-HZ-2**



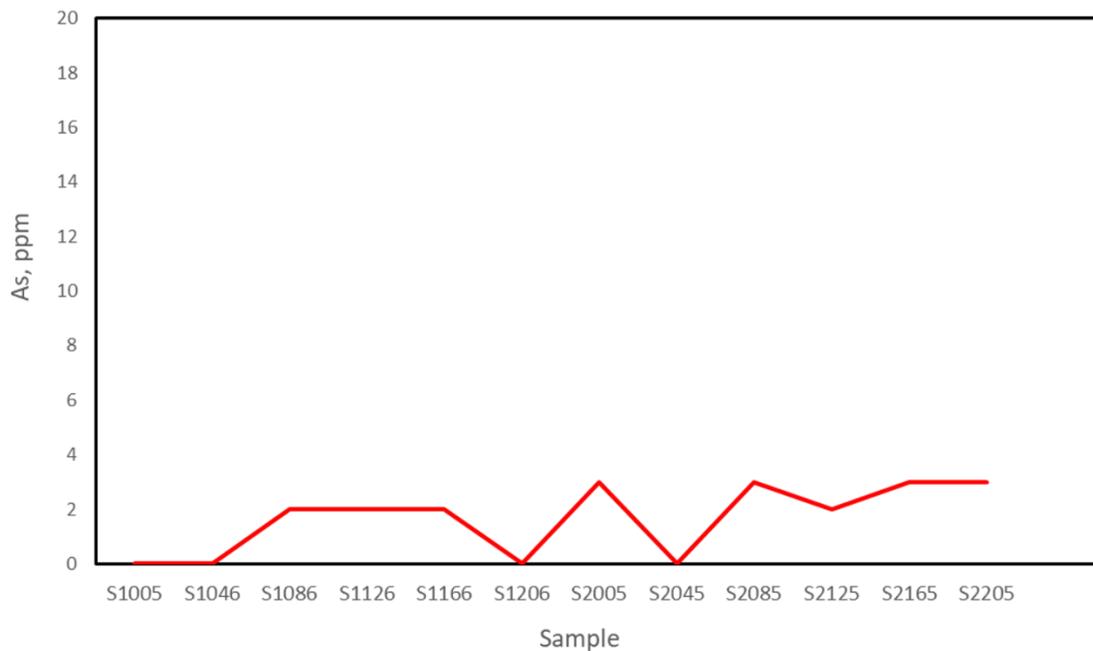
**Figure 11-2: Actlabs silver gold results for CDN-HZ-2**



**Figure 11-3: Actlabs gold assay results for blank samples**



**Figure 11-4: Actlabs arsenic assay results for blank samples**

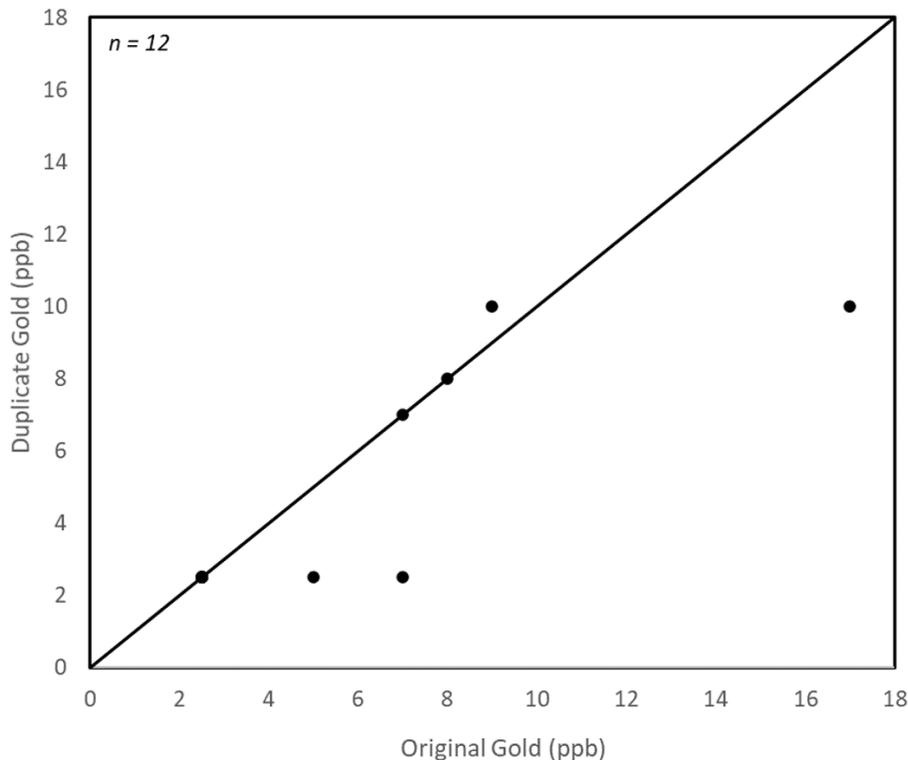


In total, 12 fire assay and ICP-OES analyses of duplicate pulp split materials and 9 field duplicates were conducted at Actlabs. The majority of these samples had original gold assay values that were below 10 ppb except for one sample that reported a gold value of approximately 17 ppb. Figure 11-5 compares the duplicate pulp split gold fire assay results by Actlabs to the original gold analyses, and Figure 11-6 compares the field duplicate gold fire assay results by Actlabs to the original gold analyses.

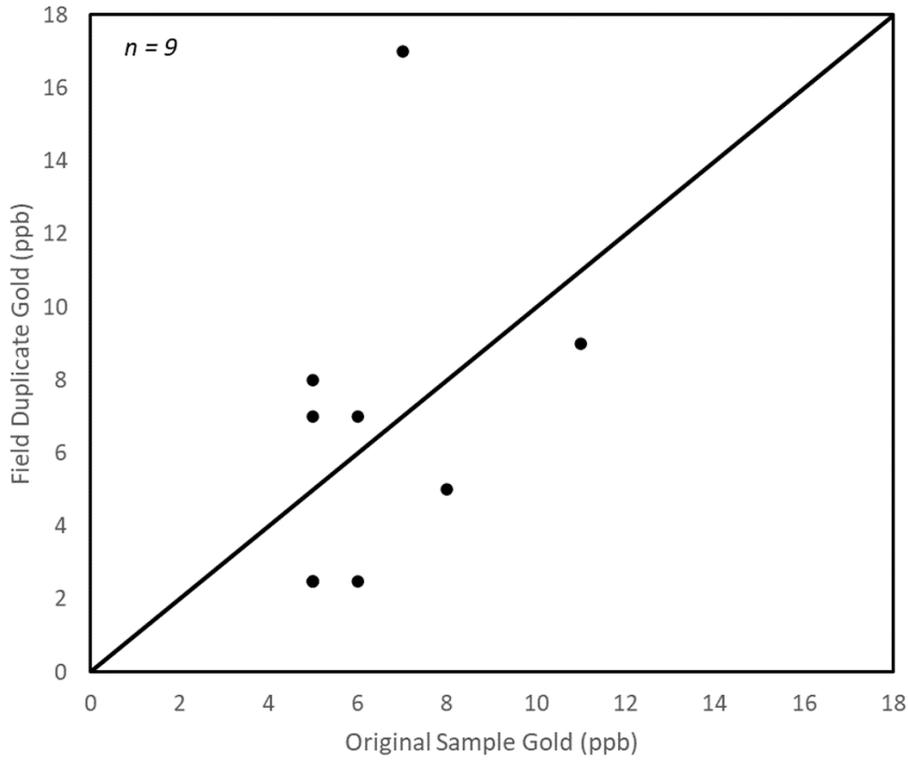
There is good agreement between original and duplicate pulp gold analyses with ICP results generally clustering along the line of equality (Fig. 11-4). Because of the small number of samples and small range in gold values, the report author cannot make any conclusive statements in regards to precision of gold analysis of the soil samples, but the variation between the original and duplicate analysis for the outlier sample S2030 in Figure 11-4 may indicate a nugget effect within the soil samples. Arsenic values for all 12 samples cluster along the line equality, supporting high precision within the ICP multi-element analyses (Figure 11-7).

Field duplicate samples were collected for every 40<sup>th</sup> sample from a separate hole in the range of 3 to 7 meters from the original soil sample site. Comparison between gold and arsenic values (Figure 11-8) between the original and field duplicate samples indicate that original-duplicate sample pairs cluster are generally in good agreement but with lower precision than observed for the pulp duplicates and with more frequent occurrence of outlier values. These results suggest that there is some small-scale spatial variability within the soil geochemistry that may affect obtaining a precise measurement of soil geochemistry and may result in occurrence of anomalous outlier values. Caution should be taken when interpreting the gold and multi-element geochemical results. Gold and geochemical anomalies should be defined by spatially continuous anomalous values between multiple sites and not just based on the occurrence of single outlier values.

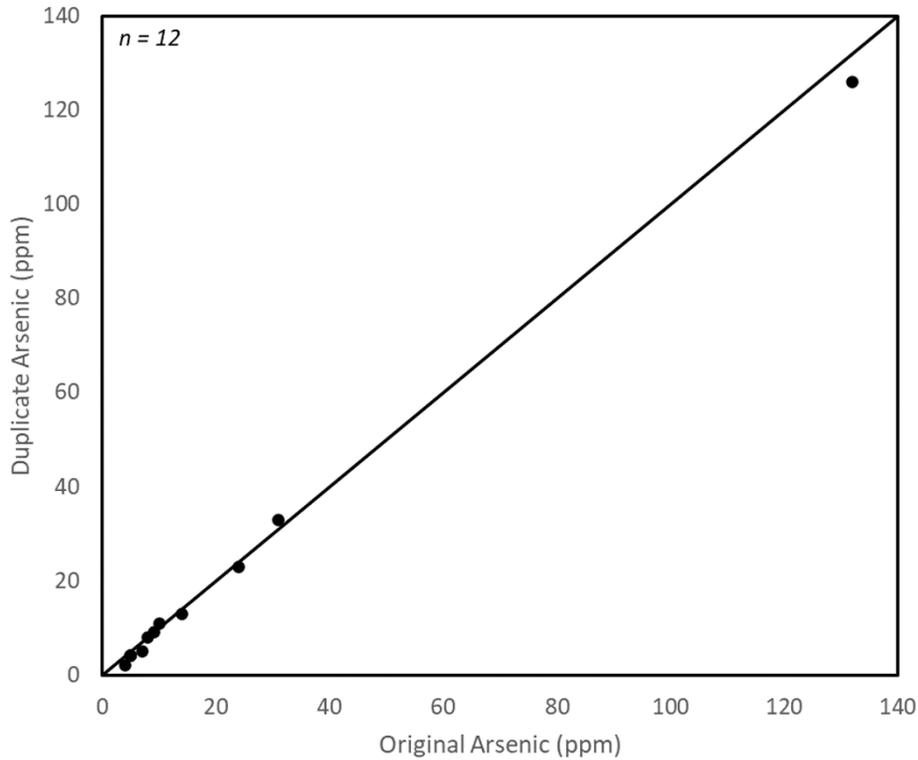
**Figure 11-5: Actlabs duplicate pulp split gold fire assay results**



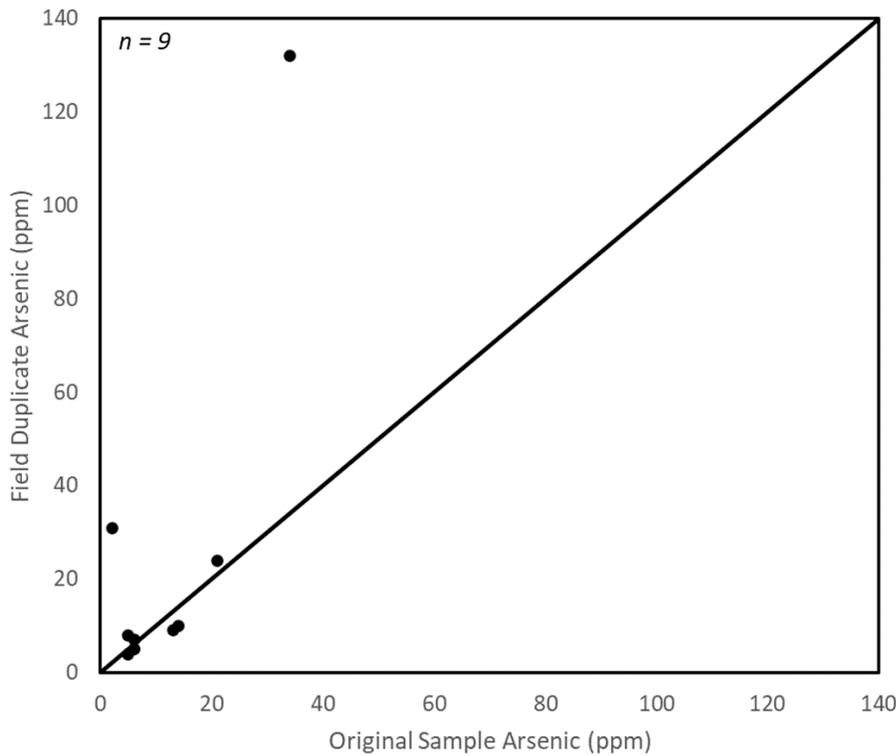
**Figure 11-6: Actlabs field duplicate gold fire assay results**



**Figure 11-7: Actlabs duplicate pulp split arsenic results**



**Figure 11-8: Actlabs field duplicate arsenic assay results**



**11.4 Authors’ Opinion on Sample Preparation, QAQC Protocols, and Analytical Methods**

The report author is of the opinion that the quality of the analytical results from the rock and B-horizon soil sampling programs are sufficiently reliable to support exploration targeting for future exploration programs on the Clarence Stream North Project. Sample preparation, analysis, and security procedures undertaken by Mercator field staff on behalf of Alma Gold were performed in strict accordance with CIM exploration best practices and mining industry standards.

## **12.0 DATA VERIFICATION**

### **12.1 Overview**

Data verification procedures carried out by the report author for the Clarence Stream North Project consisted of two main components:

- (1) Review of public record and internal source documents cited by previous operators with respect to key geological interpretations, previously identified geochemical or geophysical anomalies, and historical and current exploration results that support the arguments for gold potential on the Clarence Stream North Project; and
- (2) Completion of a site visit to the Clarence Stream North Project (claim groups 9555 and 9556) on July 29, 2020, which included investigating outcrops/subcrops within the claim groups and observing the soil sampling and QAQC procedures to assess the relative quality of exploration data to be used for geological interpretation. Details of site visit activities carried out by the report author are presented in Section 2.3 of this report. No issues were identified that negatively impact the findings and conclusions of this report.

Mercator staff were responsible for data compilation, designing, and implementing the Clarence Stream North exploration program and interpreting data sets for future exploration targeting using mining industry standards and CIM Mineral Exploration Best Practice Guidelines. The report author supervised these exploration activities on behalf of Alma Gold and routinely completed data verification procedures throughout the entire process.

### **12.2 Review of Supporting Documents and Assessment Reports**

As mentioned above, the report author obtained copies of relevant historical assessment work reports as part of the data validation procedures. Additional internal documents such as technical presentations summarising exploration program results were also made available. Key aspects of this historical reporting are in part referenced in this technical report and were obtained through online searching of historic assessment reports available through the provincial government online report database.

Results of the reference documentation checking program showed that in all instances considered, digital and hard copy records accurately reflect content of referenced source documents. Interpretations of results differ in many cases and this is not surprising, since re-interpretation of stratigraphic and structural histories for the Avalonia and Caledonia terranes has occurred within academia since the late 1990's. This has resulted in significant changes in stratigraphic assignments for some rock packages which has in turn resulted in changes in perception of associated exploration potential.

### **12.3 Review of Soil Sampling Procedures and Data Results**

The report author verified the data collection and QAQC procedures during the B-horizon soil sampling program in the field including whether field crews were following specific sampling procedures using the

Dutch Auger, the insertion of certified standards and blanks (QAQC materials), and collection of field duplicates. A complete validation of the rock and soil geochemistry database was also completed including checking for overlapping intervals and missing data. There were no issues identified with the geological and assay database. Inserted certified reference material standard results from Actlabs plotted within the accepted certified range for each standard defined by two standard deviations, with exceptions noted in Section 11.3. The few analytical results that were outside two standard deviations were reviewed by the report author and determined to have no material impact on the reported soil and rock assay results.

#### **12.4 Authors' Opinion on Data Verification**

The report author is of the opinion that results from the data validation program components discussed above indicate that industry standard levels of technical documentation and detail are evident in the recent exploration results for the Clarence Stream North Gold Project. Site visit field observations show that lithological and other field attributes were accurately recorded by Mercator field crews, and that CIM best practice standards were consistently applied for all aspects of Alma Gold's laboratory analytical programs related to the rock and soil sampling programs.

### **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

This section is not applicable.

#### **14.0 MINERAL RESOURCE ESTIMATES**

This section is not applicable.

## 23.0 ADJACENT PROPERTIES

The Project is located adjacent to two active mineral projects, namely the Clarence Stream gold deposit owned by Galway Metals Inc. and the Mount Pleasant polymetallic deposit owned by Adex Minerals Inc. Both projects include current mineral resource estimates prepared in accordance with NI 43-101 and respective public disclosure indicates that the Clarence Stream project is the more active of the two on an exploration basis at this time.

Please note: the adjacent properties discussed in this section contain broadly similar geology and structure to the Clarence Stream North Project. However, the report author has not independently verified the technical information for these adjacent properties and information related to the adjacent properties is not necessarily indicative of the mineralization potential at Clarence Stream North discussed in this technical report. Furthermore, any mineral resource estimates completed by the owners of these adjacent properties and disclosed below in Sections 23.1 and 23.2 have not been verified by the report author and are not necessarily indicative of the mineralization potential of the Clarence Stream North Project. As per Section 2.4(a) of NI 43-101, the source and date of these historical estimates and their associated technical reports have been disclosed below and in Section 27.

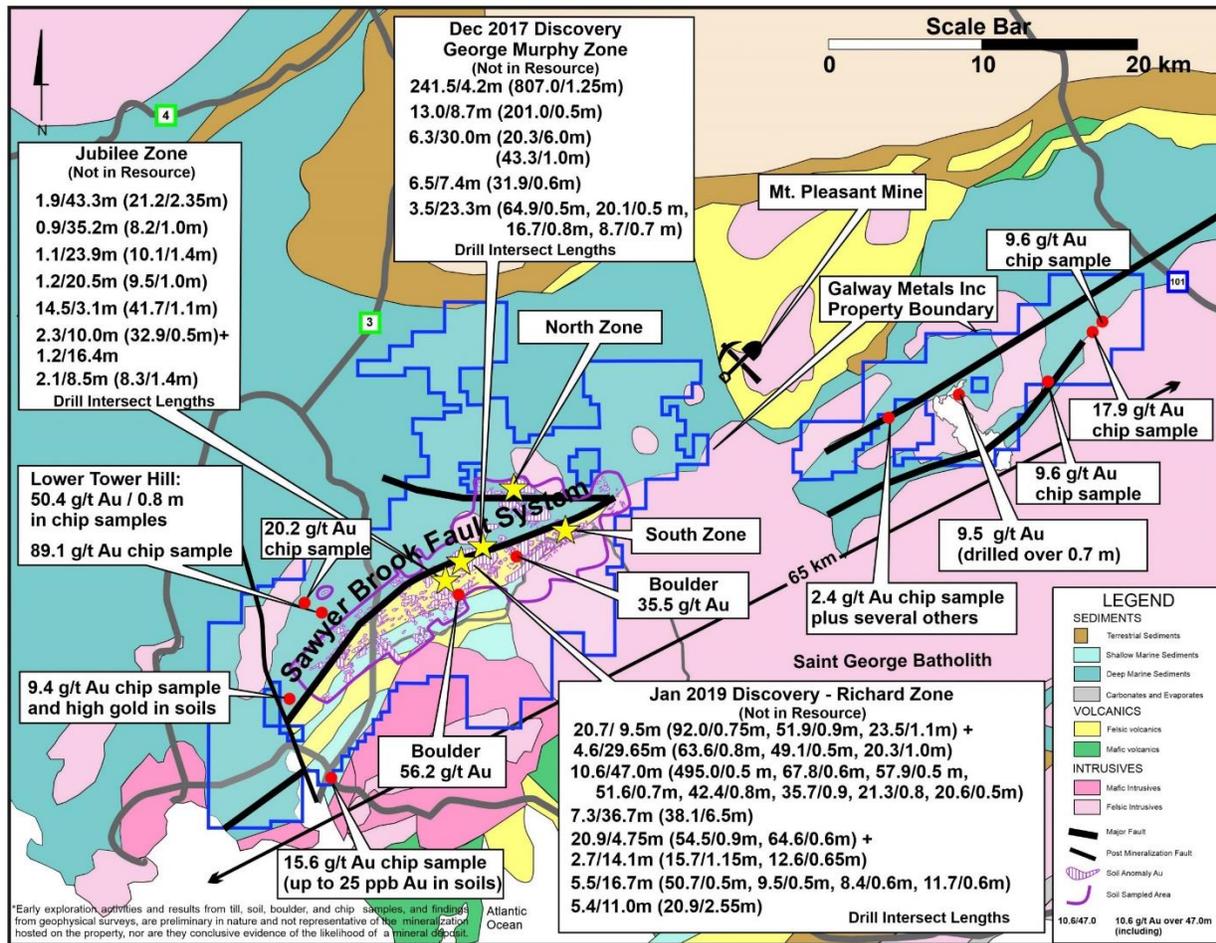
### 23.1 Clarence Stream Gold Project – Galway Metals Inc.

The Clarence Stream Project is owned by Galway Metals Inc. (“Galway”) and consists of two claim blocks comprising 2,666 claims totaling approximately 60,465 hectares with 65 km of strike length (and a width of up to 28 km) along the Sawyer Brook Fault System (Figure 23-1). The project includes a smaller block of 685 claims currently registered to Wolfden Resources Inc. (Wolfden), in which Galway has control due to an August 3, 2016 purchase agreement with Wolfden (Pennington and Smith, 2017).

Surface exploration, including mapping, soil sampling and geophysics is ongoing at the Clarence Stream Project as well as an active diamond core drilling program. The most recent targets being tested by Galway include the North Zone shallow structural zone, a 2.5 km trend that hosts the George Murphy Zone (GMZ), Richard Zone, and Jubilee Zones within a mineralized mafic intrusive similar to the South Zone. The South Zone currently hosts most of the property’s recently reported gold mineral resources (see below). There is no development or existing infrastructure on the site. Core handling, sampling and storage are carried out on the adjacent Mount Pleasant facility, which is currently dormant.

On November 13, 2017, Galway Metals Inc. filed a NI 43-101 technical report on SEDAR titled “*NI 43-101 Technical Report on Mineral Resources for the Clarence Stream Gold Project Charlotte County, New Brunswick, Canada*” with an effective date of August 21, 2017 (Pennington and Smith, 2017). This technical report included an updated mineral resource estimate completed to CIM 2014 Definition Standards, which included for the first time a pit-constrained resource for the Clarence Stream Project. All prior mineral resource estimates were based on an underground mining scenario only, but there are wide, high-grade and near-surface intersects in both the South and North Zones that indicate the potential for open-pit development (Pennington and Smith, 2017). The results of this updated mineral resource estimate are shown below in Table 23-1.

Figure 23-1: Galway Metals Clarence Stream Gold Deposit



Source: Galway Metals Inc. corporate website

**Table 23-1: Updated Mineral Resource Statement Clarence Stream Gold Deposit with an effective date of August 21, 2017 (Pennington and Smith, 2017)**

Area	Cutoff Grade Au (g/t)	Resource Category	Tonnes (000)	Au Grade (g/t)	Au Ounces (000)
North Pit	0.42	Measured	28	2.96	2.7
		Indicated	1,593	1.96	100.4
		<b>M&amp;I</b>	<b>1,622</b>	<b>1.98</b>	<b>103.0</b>
		Inferred	1,838	2.09	123.3
South Pit	0.42	Measured	207	1.66	11.0
		Indicated	4,081	1.81	38.0
		<b>M&amp;I</b>	<b>4,289</b>	<b>1.81</b>	<b>249.0</b>
		Inferred	709	1.31	29.9
Total Pit	0.42	Measured	236	1.81	13.7
		Indicated	5,675	1.86	338.4
		<b>M&amp;I</b>	<b>5,910</b>	<b>1.85</b>	<b>352.2</b>
		Inferred	2,723	1.87	153.1
Underground	2.55	Indicated	267	4.39	37.8
		Inferred	862	4.48	124.1
Combined Gold Resource	Variable	Measured	236	1.82	14.0
		Indicated	5,941	1.97	376.0
		<b>M&amp;I</b>	<b>6,178</b>	<b>1.96</b>	<b>390.0</b>
		Inferred	3,409	2.53	277.0

**Notes for the Clarence Stream Mineral Resource Statement for Gold:**

- (1) Reference for this mineral resource estimate (MRE): NI 43-101 Technical Report on Resources for the Clarence Stream Gold Project Charlotte County, New Brunswick, Canada, completed by SRK Consulting Inc. with an effective date of August 21, 2017. Filed on SEDAR under Galway Metals Inc.;
- (2) Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that any part of the Mineral Resources estimated will be converted into Mineral Reserves;
- (3) Pit constrained resources as stated are contained within a potentially economically mineable pit; pit optimization was based on an assumed gold price of US\$1,350/oz (CAD\$1,687.50/oz at a 0.8:1 CAD\$:US\$ conversion rate), an Au Recovery of 90%, a mining cost of CAD\$3.00/t, an ore processing and G&A cost of CAD\$20.00/t, and pit slopes of 45 degrees;
- (4) Pit constrained resources are reported using a gold cutoff grade of 0.42 ppm, which incorporates a 3% royalty and Au sales costs of CAD\$5.00/oz beyond the costs used for pit constrained optimization;
- (5) Underground resources as stated are contained within modeled underground stope shapes using a nominal 1.5m minimum thickness, above an Au cutoff grade of 2.55 ppm, and below the reported pit constrained resource;
- (6) The underground cutoff is based on an assumed gold price of US\$1,350/oz (CAD\$1,687.50/oz at a 0.8:1 CAD\$:US\$ conversion rate), Au recovery of 90%, a mining cost of CAD\$100/t, an ore processing and G&A cost of US\$20.00/t, a 3% royalty, and Au sales costs of CAD\$5.00/oz;
- (7) Tonnage estimates for the resource statement were informed by 139 new density determinations collected in 2017 by Galway technicians advised by SRK. Average density values were assigned to the block model by material type, with break-outs for major lithology units, overburden and mineralized zones.
- (8) Mineral Resources were classified based on NI 43-101 guidelines using distance to source data and geologic continuity. In general, Measured Resources required a minimum of four drill holes within 18m of a block. Indicated Resources required a minimum of two drill holes within 40m of a block. Inferred Resources required at least one drill hole within 80m of a block. All Mineral Resources are reported less than 80m from source data.
- (9) Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

Galway also reported an antimony (Sb) mineral resource estimate in this technical report, specifically a combined open-pit/underground constrained Inferred Resource of 2,736,000 tonnes at an average grade of 0.37% Sb resulting in 22,030,000 lbs of contained Sb.

Galway plans to complete up to 75,000 meters of diamond drilling in 2020 by increasing their drilling rig count to five and continue to focus on the GMZ, Richard and Jubilee zones and other areas between the South Zone and Jubilee Zone (South Zone Extension), and other North Zone Extensions of gold mineralization. Soil sampling programs will include up to 4,000 additional samples for target generation (source: Galway Metals Inc. July 2020 corporate presentation).

### 23.2 Mount Pleasant Project – Adex Mining Inc.

The Mount Pleasant Project is owned by Adex Mining Inc. (“Adex”) and comprises of 102 contiguous mineral claims over 1,600 hectares in the Mount Pleasant area 5 km east of Clarence Stream North. Adex holds surface rights to 405 hectares which include all facilities of the former Mount Pleasant Tungsten Mine, which produced 990,200 tonnes grading 0.35% WO<sub>3</sub> between 1983 and 1985 from the Fire Tower Zone (McCutcheon et al., 2013). Within the Mount Pleasant Project there are two distinct polymetallic mineral deposits, the Fire Tower Zone (“FTZ”) and the North Zone (“NZ”) (Figure 23-2).

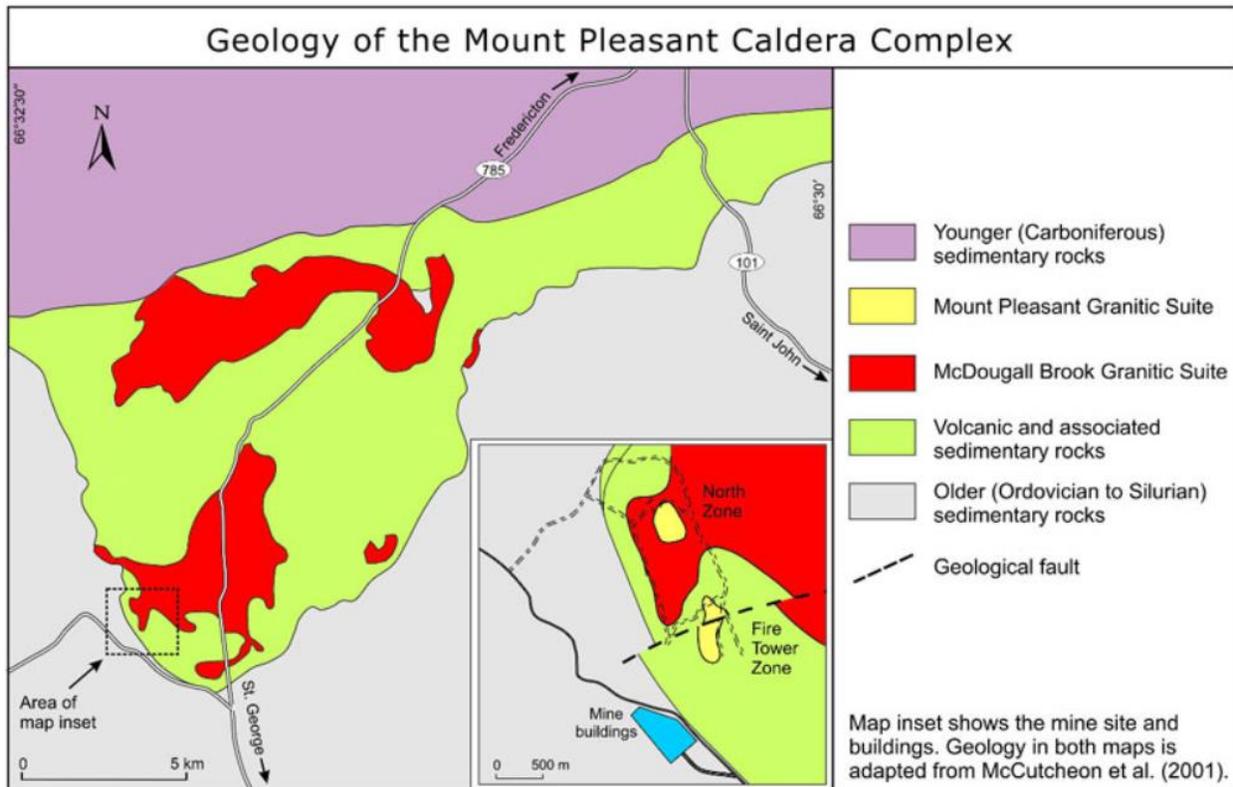
The FTZ is dominated by tungsten-molybdenum mineralization occurring within three distinct deposits, the Fire Tower North, the Fire Tower West and Fire Tower South. Mineralization occurs as veinlets and is disseminated in the matrix of silicified breccia that constitutes part of the Mount Pleasant Porphyry. Fine grained wolframite and molybdenite are the principal minerals of economic interest. Intense greisen-type alteration (quartz-topaz-fluorite) is associated with higher grade tungsten-molybdenum zones (McCutcheon et al., 2013).

The North Zone consists of eight distinct tin-indium-zinc bearing deposits or sub-zones, including three Tin Lodes, consisting of the Deep Tin Zone, Upper Deep Tin Zone, Endogranitic Zone, North Adit Zone, North W-Mo Zone and the #1-3, #4 and #5 Tin Lodes (McCutcheon et al., 2013). Mineralization occurs mostly in chlorite-altered and brecciated host rocks located adjacent to granite and porphyry dykes. Tungsten-molybdenum mineralization is also present in the “X” and “Y” zones, collectively referred to as the North W-Mo Zone, and is partly overprinted by tin-indium-zinc deposits of the North Adit Zone. The boundaries of each sub-zone are gradational and they commonly cross-cut geological units and structural boundaries. Consequently, resource boundaries were defined based solely on Sn, In, and Zn values (or WO<sub>3</sub> and MoS<sub>2</sub> values in the case of the North W-Mo subzone). The largest tin-base metal deposits occur along the contact of Granite I or within Granite II. The Deep Tin Zone is the shallowest major underground deposit and is hosted within brecciated Granite I.

The Saddle Zone, located between the Fire Tower Zone and the North Zone, contains an irregular distribution of both tin-indium-zinc and tungsten-molybdenum mineralization which is poorly understood at this stage due to the scarcity of drill holes (McCutcheon et al., 2013).

On October 11, 2013, Adex filed an amended NI 43-101 technical report on SEDAR titled “Amended NI 43-101 Technical Report of the Mount Pleasant Property, Including Mineral Resource Estimates, Southwestern

**Figure 23-2: Adex Mining Mount Pleasant Property**



Source: Adex Mining Inc. corporate website

New Brunswick” with an effective date of April 13, 2012 (McCutcheon et al., 2013), which included an updated mineral resource estimate for the Mount Pleasant Property completed to CIM 2010 Definition Standards. The results of this updated mineral resource estimate are shown below in Table 23-2.

**Table 23-2: Updated Mineral Resource Statement for Mount Pleasant Property (North Zone) with an effective date of April 13, 2012 (McCutcheon et al., 2013)**

Resource Category	Tonnage (Mt)	Sn grade (%)	Zn grade (%)	In grade (ppm)	Contained Sn (kg)	Contained Zn (kg)	Contained In (kg)
Indicated	12.4	0.38	0.86	63.5	47,000,000	107,000,000	789,000
Inferred	2.8	0.30	1.13	69.8	8,600,000	32,000,000	198,000

**Notes for the Mount Pleasant Mineral Resource Statement:**

- (1) Reference for this mineral resource estimate (MRE): Amended NI 43-101 Technical Report of the Mount Pleasant Property, Including Mineral Resource Estimates, Southwestern New Brunswick, completed by Watts, Griffis and McOuatt Limited with an effective date of April 13, 2012. Filed on SEDAR under Adex Mining Inc.;
- (2) Resources were estimated using composites within a Block Model with block dimensions of 5x5x5 m and using an inverse distance squared grade interpolation method. Top cuts were applied to Sn, Zn and In assays before compositing. A cutoff of US\$75 Gross Metal Value (“GMV”) was applied and a recovery of 100% is assumed;
- (3) Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues;

- (4) The quantity and grade of reported inferred mineral resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category;
- (5) The mineral resources in this press release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council November 27, 2010.
- (6) Top cuts of 3% Sn and 4% Sn were applied to Sn assays before compositing; top cuts of 5% Zn and 8% Zn were applied to Zn assays before compositing and top cuts of 500 ppm In and 600 ppm In were applied to In assays before compositing. The top cuts applied varied according to the domain. A cutoff of US\$75 GMV was applied and a recovery of 100% is assumed; and
- (7) Figures may not total due to rounding.

The Mount Pleasant Mine is currently under care and maintenance and Adex is in the process of securing additional funding in order to continue exploration and development work including the completion of a pre-feasibility study (PFS) on the Mount Pleasant Project (source: Adex Mining Inc. - March 31, 2020 MD&A).

#### **24.0 OTHER RELEVANT DATA AND INFORMATION**

No additional information or explanation is required to make this technical report understandable and not misleading.

## 25.0 INTERPRETATION AND CONCLUSIONS

### 25.1 Summary

This technical report summarizes the results of data compilation efforts and rock and soil sampling survey programs completed on the Clarence Stream North Gold Project in July 2020 by Mercator on behalf of Alma Gold. Detailed evaluation of all data collected from these exploration activities has been undertaken for the purposes of developing targets for further exploration work, including additional soil geochemistry surveys and ground or airborne (UAV) geophysics programs on the Project. Combining soil geochemistry results with historical airborne geophysics results (Kiss et al., 2002a and 2002b) has resulted in identification of several key target areas, the highest priorities of which are the central and eastern parts of claim 9556 and the majority of claim 9555. However, additional soil geochemistry survey work is required throughout the Project in areas not accessed during the July 2020 exploration program due to the lack of a private land access agreement with St. George Pulp & Paper (J.D. Irving).

The soil geochemistry survey was successful in outlining three main gold anomalies and several outliers on claim 9556, with the centre anomaly (Au Anomaly 2) being the most prominent. Au Anomaly 2 appears to coincide with a weak magnetic high in the area and warrants further investigation to determine whether this anomaly is related to a deep intrusive body at subsurface or a potential fault structure.

Two large arsenic soil anomalies were detected in claim 9556 and several outliers, with As Anomaly 1 being the strongest of the two main anomalies. A smaller As anomaly is evident in the northeastern part of claim 9555, but grid coverage in this area was poor due to the private land access issues noted above and follow-up soil sampling is required to determine the size and significance of this particular As anomaly. The arsenic anomalies do not appear to correlate well with many of the gold anomalies detected. Based on a limited multi-element analysis of the soil data, there does appear to be a spatial association with gold, particularly with some of the more mafic-association elements such as Mg, Cr, Zn, Cu and Ni in the gold anomalies in the east and west extent of the soil grids (Au Anomaly 1 and 3). The gold anomaly in the center of claim 9556 (Au Anomaly 2) does not appear to correlate with these elements or with arsenic. This needs to be investigated further through detailed statistical analyses of the soil geochemical data such as a principal component analysis (PCA) study to determine vectors for mineralization and alteration following the collection of additional soil samples in the project area.

Generally, gold assay results of 10 ppb or higher in soils are considered very anomalous in the Clarence Stream area according to Pennington and Smith (2017), and possible indicators of mineralization at depth where bedrock exposure is poor. Arsenic soil results indicate a significant trend near the Magaguadavic River and in the eastern part of claim 9556, but the reason for these As anomalies is unknown at this time as they do not correlate well with gold results in soils, thus warranting further investigation.

### 25.2 Conclusions

Determining potential exploration targets on the Clarence Stream North Project through the combined interpretation of airborne ground geophysics survey data and soil and rock geochemistry data has proven successful in identifying several gold and arsenic anomalies indicating the potential for gold

mineralization. This technique has proven useful in other areas of southern New Brunswick under thick glacial till cover with poor bedrock exposure, including the Clarence Stream gold deposit area located 10 kilometres south of the Project. Additional soil geochemistry survey work is required in areas not covered during the July 2020 field program, followed by a detailed PCA study to determine vectors for gold mineralization and understanding the alteration in the project area. Geological mapping and prospecting of all property areas not covered to date should be also completed. The Project also requires a full ground geophysics program to fine tune the magnetic anomalies detected in the airborne magnetic data and to aid in the determination of potential targets for future diamond or reverse circulation (RC) drilling programs on the properties.

The report author does not foresee any significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information disclosed in this technical report.

**26.0 RECOMMENDATIONS**

Additional exploration is recommended for the Clarence Stream North Gold Project based on the successful results from the summer 2020 exploration program completed by Alma Gold. This next phase of exploration should be focused on expanding Alma Gold’s understanding of the geology, structure, alteration, and mineralization potential within claim groups 9555 and 9556.

Historically, exploration in the area has been hampered by thick overburden (glacial till deposits) resulting in poor bedrock exposure. Therefore, additional soil geochemistry surveys, ground and/or UAV magnetometer and VLF-EM surveys, and the use of hyperspectral mineral analyzers (i.e. TerraSpec) could be important tools to discover gold mineralization within the project area. These combined exploration techniques have proven successful on adjacent properties including the Clarence Stream gold deposit area and other parts of southern New Brunswick.

The report author also recommends that Alma Gold secure a land access agreement with St. George Pulp & Paper (J.D. Irving) prior to the next phase of exploration to fill in existing gaps in the soil survey grid on the Project.

Table 26-1 below outlines the next phase of exploration and estimated costs associated with this program.

**Table 26-1: Recommended Program Budget**

<b>Phase 1</b>	<b>Task</b>	<b>Estimated Cost</b>
	Additional rock and soil geochemistry sampling focused on Irving-owned private lands not accessed during the 2020 exploration program (includes TerraSpec and laboratory geochemistry analyses)	\$75,000
	UAV or ground magnetometer and ground VLF-EM surveys over selected project areas	\$40,000
	Data interpretation, conceptual 3D modeling, and principal component analysis (PCA) of new and existing soil geochemistry data to determine vectors for mineralization based on alteration-related elements and lithological variations and for drilling targeting purposes	\$15,000
	<b>Total</b>	<b>\$130,000</b>

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**28.0 CERTIFICATE OF QUALIFIED PERSON**

**I, Paul J. Ténrière, M.Sc., P.Ge., do hereby certify that:**

1. I am currently employed as a Senior Geologist with:  
Mercator Geological Services Limited  
65 Queen Street, Dartmouth, NS B2Y 1GA Canada
2. The Technical Report to which this certificate applies is titled “*NI 43-101 Technical Report on the Clarence Stream North Gold Project, New Brunswick, Canada*” with an effective date of September 1, 2020.
3. I hold a M.Sc. in Geology from Acadia University (2002) and a B.Sc. (Honours) degree in Earth Sciences (1998) from Dalhousie University. I have worked as a geologist in Canada, USA, and internationally since my graduation over 20 years ago. My relevant experience with respect to this project includes extensive professional experience with respect to geology, mineral deposit styles, and exploration activities in the Northern Appalachians including the Avalonia terrane. I have exploration experience in the Bathurst Mining Camp in northern New Brunswick including prospecting and supervising field activities.
4. I am a member in good standing with the Association of Professional Geoscientists of Ontario (Registration Number: 2493) and the Association of Professional Engineers and Geoscientists of New Brunswick (Registration Number: M8502).
5. I have read the definition of a “Qualified Person” as set out in National Instrument 43-101 (“NI 43-101”), and certify that by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. I completed a personal inspection of the Clarence Stream North Gold Project on July 29, 2020.
7. I am responsible for all sections of this Technical Report and I have no prior involvement with the Clarence Stream North properties that are the subject of this Technical Report.
8. I am independent of Alma Gold Inc. and Red Lake Gold Inc. as described in Section 1.5 of NI 43-101.
9. I have read NI 43-101 and this Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Signed, sealed and dated this 1<sup>st</sup> day of September 2020.

***[Original signed and sealed “Paul Ténrière”]***

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Paul Ténrière, M.Sc., P.Ge.  
Senior Geologist, Mercator Geological Services Limited