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Geological Report/Mapping
Wolf Lake Property

BENOIT TOWNSHIPS

LARDER LAKE MINING DIVISION

November 20, 2015

NORTHERN GOLD

List of Illustrations

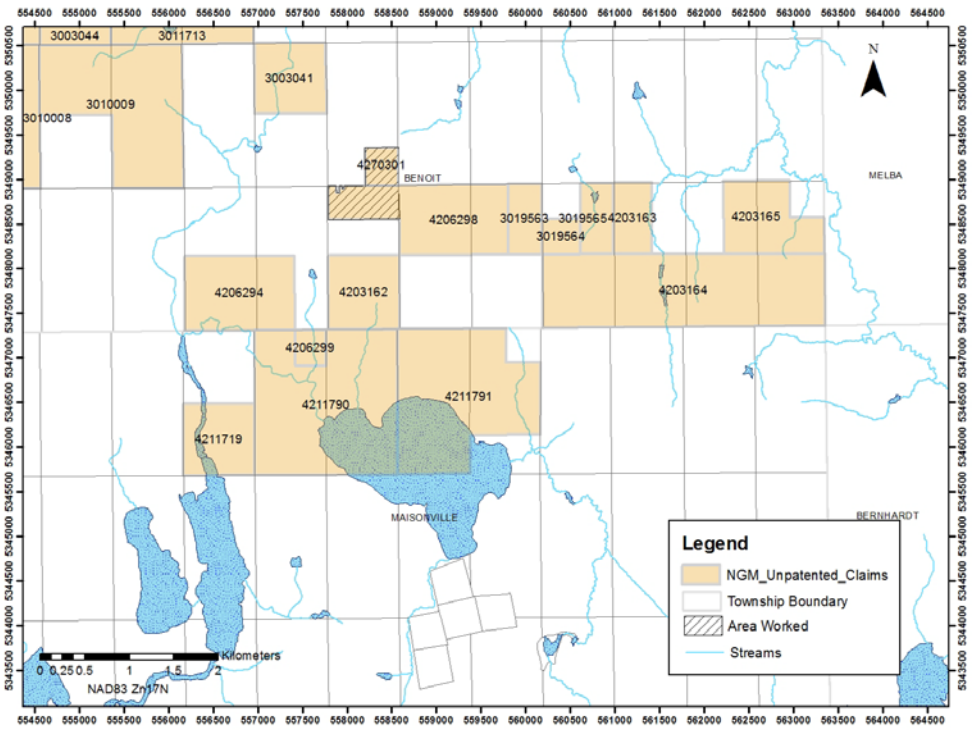
Introduction

On October 23rd, 2015 geological mapping and sampling was done on Northern Gold Mining's Wolf Lake Property. Mapping and sampling was completed by G. Matheson, the author of this report along with field assistant B. Madill. The Wolf Lake Property is comprised of unpatented mining claims in Benoit and Maisonville townships; the claim numbers covered by the current work program are listed below (see map #1):

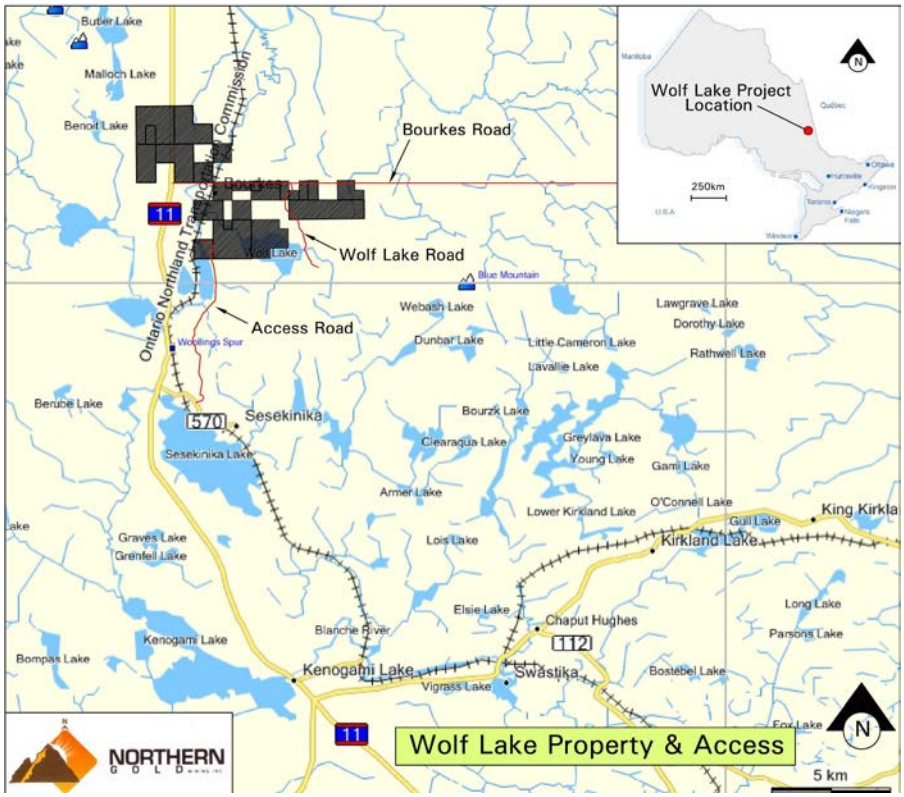
4270301(1 claim units)
4206298(8 claim unit)

The property is located in the Larder Lake mining division, northeastern Ontario, 20km northwest of the Town of Kirkland Lake (see map #2). The property is accessible from highway #11 along the Bourkes Road which runs through the property.

Hydroelectric power, road and rail transportation are readily available and a skilled labour force with all necessary facilities can be found in the nearby Town of Kirkland Lake.



Map #1 – Contiguity Plan for Wolf Lake property



Map #2 – Claim Access and Location

Property History

Prospecting in the vicinity of Wolf Lake began soon after the discovery of high grade gold mineralization at Bourkes Station in 1916. The earliest reports of prospecting on the claims under the current work program occurred in 1918. Since that time minor exploration projects by private prospectors and mining companies has occurred. An outline of previous work and gold discoveries are listed chronologically below.

1918 Wickstead

Early prospecting on claim# 4211719 in Maisonville township. Trenching along a wide shear zone striking to the northwest. Several quartz veins were uncovered, some of which were mineralized with gold. Trenching and pitting was done on several veins. A fifty foot shaft was sunk on one of these veins striking N40˚W which gave good gold values, up to 6.4oz/ton.

1921 Cotterill

Early prospecting on claim# 4203162 in Benoit township. Exposed two east striking veins by sinking test pits and trenching on the vein system. Gold assays up to 1.2oz/ton have been reported.

1948 Broulan Reef Mines

Excavated some of the Wickstead workings (claim #4211719) and conducted a channel sampling program which resulted in some encouraging gold values; a four foot sample assayed 0.22oz/ton and a two foot sample assayed 0.68oz/ton. Four x-ray diamond drill holes were drilled in the center of the current claim 4211719; these were drilled to intersect the main Wickstead shear zone. The drill holes intersected mafic volcanics and feldspar porphyry with no mention of gold assays. KL-2836.

1959 K.E. Skjonsby

Drilled five short diamond drill holes on claim # 4206294. A total of

695.6 ft. The holes intersected quartz stringers cutting mafic volcanic rocks, gabbro, and syenite. Reports of sulphide minerals.

1982 Syncon Explorations Ltd / Esso Minerals

Cut a line grid and completed a VLF-EM and Magnetometer Survey over the 6 claims in Maisonville Township; one northwest trending magnetic anomaly was found. Grab sampling of trenches at the Wickstead showing (claim# 4211719) gave gold assays of 0.07 to 2.13oz/ton.

1983 Pryme Energy

Held 6 mining claims in Maisonville township. Completed a nine hole drill program which totaled 544m. This was done to test mineralization beneath the old Wickstead (claim #4211719) workings, including the main shear zone. One hole PM-04 intersected a mineralized vein assaying 0.413oz/ton over 4 feet with 2.96oz/ton of silver.

1985 Noranda Exploration Co Ltd

Optioned 6 claims from Pryme Energy and completed a horizontal loop E.M. survery, outlining one weak E.M. responce. Also completed a geological survey which did not report any significant gold assays.

1987 T. Link

Completed work on the Wickstead workings. Drilled one diamond drill hole, 40m. No gold assays are listed. Sampling of pits and trenches with gold assays up to 1.56oz/ton and a 3.5 foot chip sample yielded 0.744oz/ton on the edge of the shaft.

1988 Queenston Gold Mines

Sampled old pits and trenches at the wickstead showing; gold assays up to 0.75oz/ton over 3.5ft and silver values up to 0.74oz/ton. Relogged and assayed the Pryme Energy core (9 holes) at the

Kirkland Lake Drill Core Library. A re-assay (1/4 Core) of PM-04 showed a gold value of 0.476oz/ton over 2 feet.

1990 G.J. Mullen

Prospecting and power stripping of old Wickstead workings. Completed a map of pits, trenches and shafts. Sampling of the old workings showed gold assays up to 0.132oz/ton.

1991 Trinity Explorations

Held claim group in Maisonville township which covered the historical Wickstead workings. Completed geophysical surveys: VLF-EM and Mag surveys. Powerstripping of Wickstead workings, mapping and sampling of old trenches and pits. Gold assays up to 0.707oz/ton over 16”.

1993 K. Skjonsby

Two diamond drill holes on the current claim# 4206294. Intersected disseminated pyrite mineralization with negligible gold. Total meterage was 187.2m.

1994 K. Skjonsby

Completed 5.4km of VLF-EM surveys. Three hole drill program which totals 242.5m. Negligible gold assays, best being 23ppb over 2.14m.

2000 T. Link

Held claim group in Maisonville township. Bedrock sampling and assaying from the pits and outcrops around the Wickstead showing. Core splitting, sampling and assaying of the Pryme Energy core at the Kirkland Lake Drill Core Library. Completed soil sampling along an E-W traverse; also till sampling which was unsuccessful. The re-assay of PM-03 revealed a section of 3.1g/t Au over 2ft. Also completed a GPS reconnaissance of drill holes and pits and created a compilation map there of.

2001-Present

The immediate project area has seen little to no work since other than that currently being carried out by current mining claim holders. The recent work is outlined below.

Recent Work

Northern Gold Mining Inc. staked the Wolf Lake claim group in 2006. Northern Gold Mining Inc. cut 56 line km of grid on the Wolf Lake Property in the spring of 2007. The geologic survey was conducted using these lines for both access and as reference points. The line grid was also used for an IP survey and MMI geochemical survey which was completed concurrently with the a geologic survey on the southern portion of the claim group in 2007.

Geography

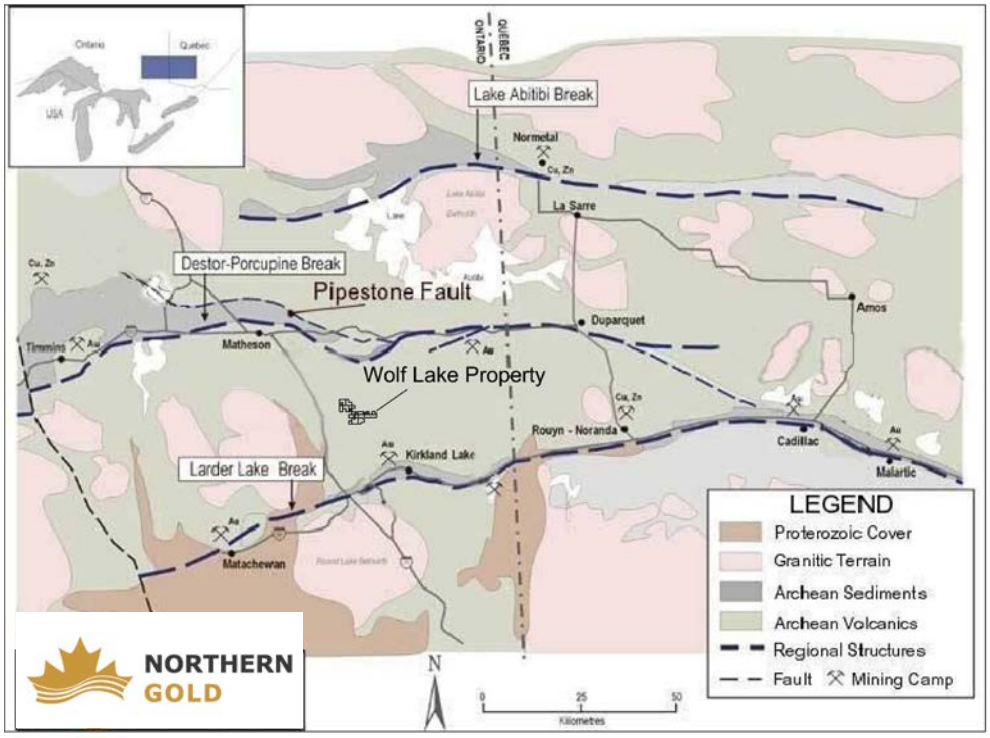
***Physiography*:** The project area lies within the central Canadian Shield in the central Abitibi geologic subprovince. The region can be generalized as being in the boreal climactic region, characteristically covered by forest, swamps and lakes with relatively little relief.

Relief on the Wolf Lake property is less than 25m. The Wolf lake property contains very little outcrop and is primarily lowlands. There is less than 10% outcrop coverage. Generally the property can be characterized by scattered outcrops and overburden thicknesses of less than 10m. The overburden is comprised of glaciofluvial and proglacial lacustrine sediments: primarily clay and sand but locally cobble and boulder sized clasts. Soils range from sandy loams to clayey loam.

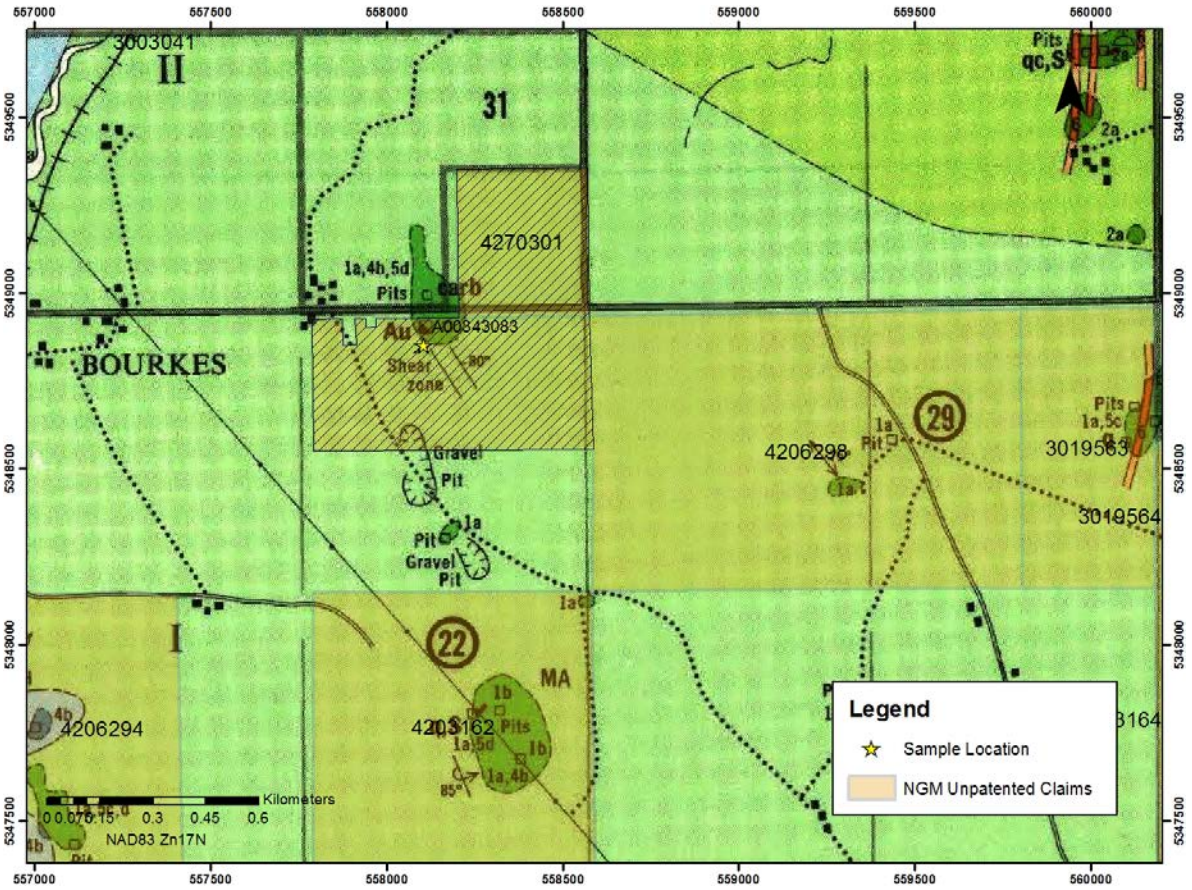
Climate: The climatic conditions are typical for the central Canadian Shield with short, mild summers and long, cold winters. Mean temperatures range from –17°C (0°F) in January, to 18°C (64°F) in July, and mean annual precipitation throughout the region ranges from 812 to 876 mm (32-35 inches).

Geology

Regional Geology: The Wolf Lake property lies in the Superior Geological province and the Abitibi subprovince. The Abitibi subprovince is an 800 by 300 kilometer area underlain by granite greenstone stratigraphy of Archean age (see map #3). In the Archean of northern Ontario, the supracrustal rocks are divided into rock packages based on their composition, morphology and geographic distribution. Individual "assemblages" consist of stratified volcanic and/or sedimentary rock units built during a discrete interval of time in a common depositional or volcanic setting. According to H. Lovell the geology in the project area is comprised of Keewatin type mafic and felsic volcanic flows and pyroclastic rocks, with thin interbedded and (or) overlying beds of sedimentary rocks. Both are cut by Haileyburian-type mafic to ultramafic stocks and sills and by Algoman-type felsic stocks, cupolas, and a few sills or flows. The intrusive rocks, in turn, are cut by Matachewan-type mafic dykes. Gently-dipping Cobalt sedimentary rocks overly all of the above rocks.



Map #3 – Regional Geology of Abitibi Subprovince showing Wolf Lake property



Map #4 – Property Geology, Modified Lovell, 1971

Property Geology: The Wolf Lake property geology was previously mapped in 1965/66 by H.L. Lovell and a field party. This mapping was published by the Ontario Geological Survey as map# 2215 in 1971 with the accompanying report "Geology of the Bourkes Area"; the report and map found conditions to be similar to those found by the author of this report. No major discrepancies were found between mapping completed by Lovell in 1965/66 and the current geologic mapping. However the current geologic mapping program has included more detail than the previous Ontario Geological Survey mapping; the OGS map was published at a scale of 1:31680, the current geological mapping program was completed at a scale of 1:5000. Lithological units published by the OGS concur with those found by the author of this report; each lithological unit occurring on the property is described below:

ARCHEAN

Mafic Metavolcanics

The Wolf Lake property is dominated by volcanic rocks known as “greenstones”. Compositionally these rocks are basalt or andesite. They have been metamorphosed to the greenshist facies; which is characterized as having chlorite and epidote alteration. Both chlorite and epidote alteration is found throughout the mafic metavolcanics on the Wolf Lake property. The metavolcanics are classified as being Keewatin and represent the oldest rocks on the property. The mafic metavolcanics range in colour from dark green to green-grey. Most of the mafic metavolcanics are aphanitic although some coarser sections of individual flows are found locally on the property. Quartz and quartz-carbonate fracturing is ubiquitous in the mafic metavolcanics. Locally hydrothermal quartz veins are found in the mafic metavolcanics which can reach widths up to several meters. Disseminated sulphide mineralization is also ubiquitous in the metavolcanics, typically iron pyrites. The mafic metavolcanics are typically massive and locally show an amygdoidular texture; the amygdules are filled with carbonate.

Felsic Metavolcanics

Felsic metavolcanics on the Wolf Lake property are only present in one region, this occurs on the west shore of Wolf Lake (see map #5). Compositionally these rocks are dacite and range in colour from light green to a grey-buff, possibly bleached colour. Pillows were present in all of the outcrops mapped. The relationship between the felsic and mafic metavolcanics was not witnessed in outcrop but according to Lovell the “ felsic metavolcanics are interbedded with the mafic metavolcanics, but most overlie them.” The felsic metavolcanics are classified as being Keewatin. Locally the felsic metavolcanics contain disseminated sulphide mineralization.

Mafic Intrusive Rocks

Haileyburian-type mafic rocks intrude the metavolcanics on the Wolf Lake property. These rocks compositionally are classified as gabbro. They are a dark grey-green to green-black; they are massive, medium to coarse grained and often contain veinlets and stringers of fibrous serpentine. Less commonly are quartz and quartz-carbonate fractures and veinlets.

Disseminated pyrrhotite appears to be the most common sulphide mineralization; assays for gold and nickel however were very low in these rocks. The mafic intrusive rocks are only present in two regions on the Wolf Lake property; one region lies east of the Wickstead gold showing on the banks of the Whiteclay river and the other lies in the northwest portion of the property (see map #5).

Felsic Intrusive Rocks

Algoman-type felsic intrusive rocks intrude both the Haileyburian-type mafic rocks as well as the Keewatin metavolcanics. Quartz feldspar porphyry was the only felsic intrusive found on the Wolf Lake property. The porphyry is often bimodal with feldspar phenocrysts from 4-6mm and quartz phenocrysts from 5-10mm; phenocrysts are subhedral to euhedral, those of the feldspar variety often exhibit zonation. Fresh rocks have a grey matrix, locally the quartz feldspar porphyry has a red hematite stained matrix. Locally on the property the QFP contains disseminated pyrite mineralization. QFP was found in many regions of the property and exists as dykes and cupolas; widths are from a few meters up to 30m wide; the highest concentration of QFP exists in the vicinity of the Wickstead gold showing (see map #5).

PROTEROZOIC

Huronian

Cobalt Sedimentary Rocks

Proterozoic age sedimentary rocks exist in only one portion of the Wolf Lake property, this is just west of the Wickstead gold showing (see map #5). These rocks are described as being black and red banded arkosic sandstone; grain sizes range from 0.2mm to 2mm; locally boulders of granitic composition are found. None of the known structures on the property extend into these sediments, indicating that they are post deformation.

STRUCTURAL GEOLOGY

Shear Zones

Several shear zones are known to occur on the property. Most of these strike N to NW, with near vertical dips. The most notable shear zones occur around the Wickstead gold showing; in this region the shear zones appear to be associated with gold mineralization.

ECONOMIC GEOLOGY

Gold, and minor amounts of copper appear to be the only metals which occur in anomalous concentrations. Gold mineralization on the Wolf Lake property is spatially associated with the quartz feldspar porphyry, and potentially with the northwest trending shear zones. Two areas on the property have gold showings, both of these regions are explained in detail below. There is only one region with concentrations of copper mineralization, this occurs on a small island on the north shore of Wolf Lake. This showing is also described in some detail below; each of the showings are designated on map #5 with a number.

(1) Wickstead Showing – This occurs is in the southwest corner of the Wolf Lake property. Gold and minor amounts of copper occur in hydrothermal quartz-carbonate veins which occur along the contacts of quartz feldspar porphyry bodies and metavolcanics. These are also spatially associated with several northwest trending shear zones. Many veins and stringers exist in the vicinity of the Wickstead showing; they are exposed in the dozens of pits and trenches which dot the area. One such vein known as the Wickstead main vein occurs as quartz-carbonate lenses in a northwest trending shear; gold values from this vein near the Wickstead shaft gave assays up to 22.3g/t Au.

(2) Cotterill Showing – This occurs in the northeast corner of the Wolf Lake property. Gold occurs in hydrothermal quartz veins with considerable amounts of pyrite. Several veins occur in this region, most strike east to northeast and occur in the metavolcanics. One such vein has a width up to 5m and was traced along strike for 50m. Minor amounts of silver were found to occur here as well, up to 17.8g/t Ag. Gold values from the quartz veins were low but pyrite rich wall rocks contained values up to 1.8g/t Au.

(3) Wolf Lake Copper Showing – On an island on the north shore of Wolf Lake is a quartz carbonate vein occurring in mafic metavolcanics. This vein strikes N19E; it is up to 10” in width and carries chalcopyrite and malachite alteration. This vein may be related to Timiskaming or Keewatin sediments which are reported to occur under Wolf Lake by Lovell; elsewhere in Maisonville township these Timiskaming or Keewatin sediments are known to carry base metal mineralization. The vein carries up to 0.74% Cu.

Sample ID	Easting	Northing	Description	Au (g/t)	Cert #
A00343083	558105	5348850	- Fine grained mafic volcanic in contact with med red felsic intrusive with 2-3% disseminated pyrite and 1cm qtz stringer. Minor epidote alteration in mafic. From water filled trench.	0.03	15-2354

Table #1 – Prospecting Samples, Descriptions and Assays *NAD83 Zn17N

The current work program focused on prospecting for the P. Culhane showing on claim 4270301 as indicated by the MNDM mdi database. Ground work has shown that this showing is not at the exact location indicated by the MNDM but rather occurs further west of the current claim boundaries.

Prospecting on claims 4270301 and 4206298 only located one area of limited outcrop several meters south of the Bourkes Road. At the outcrop location several long trenches were found however it appears that much of the trenching had been done in overburden. One water filled trench had exposed a fine grained mafic volcanic with minimal alteration and sample from the muck pile also contained felsic intrusive however this was not noted in the bedrock. This is possibly the location of the “Webb Shaft” as indicated by the MNDM mdi database. The depth of the trench was not determined. A single assay sample was collected from this location and shown on Map#4 and in Table#1. The assay analysis contained low levels of gold mineralization.

The remaining property is low lying and flat with very few topographic features. The bush is dominated by poplar with minor spruce.

Conclusions

Although no economic concentrations of precious or base metals were found during the current work program, potential still exists. The property contains very few outcrops; but of these outcrops, several contain sub-economic but highly anomalous concentrations of Gold, Silver and Copper. The use of modern exploration techniques, such as geophysical and geochemical surveys could be utilized for generating targets in areas covered in overburden.

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Certificate of Author

I, Greg Matheson of the Town of Kirkland Lake, Ontario hereby certify:

1) I am a graduate of Brock University, St. Catharines, Ontario having recieved a B.SC (Honours) in Earth Sciences in 2008.

2) I have worked as a geologist for 8 years, predominantly in the Kirkland Lake mining camp.

3) I am employed as an Exploration Manager with Northern Gold Mining Inc.

4) I am a registered P.Geo with the Ontario Association of Professional Geoscientists under license #2156.

5) I have made use of the records of the Ontario Geological Survey as well as field observations and personal knowledge of the area in the preparation of this report.

Respectfully Submitted

Greg Matheson

Appendix

#1 Certificates of Analysis – 15-2354

Swastika Laboratories Ltd

Established 1928

Assaying - Consulting - Representation

Assay Certificate

Certificate Number: 15-2354

Company: **Northern Gold Mining Inc.**

Project:

Report Date: 06-Nov-15

Attn: G. Matheson

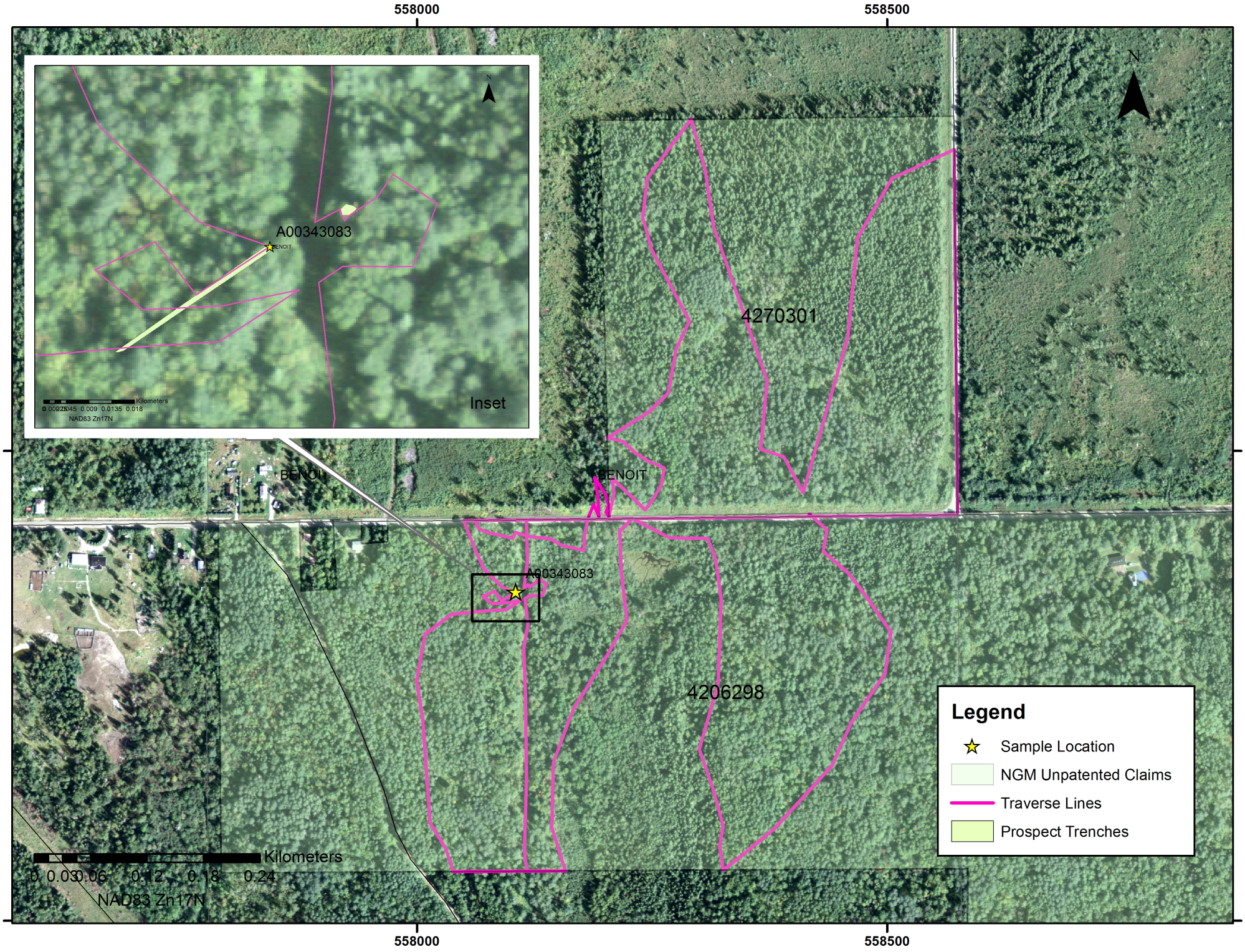
We hereby certify the following Assay of 1 rock/grab samples submitted 02-Nov-15 by G. Matheson

Sample Number	Au FA-MP g/Mt	Au Chk FA-MP g/Mt
A00343083	0.03	

Certified by J.G Lin

Jing Lin, M Sc.

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 Fax (705) 642-3300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