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**OVERBURDEN SAMPLING REPORT**  
**FOR THE TOMLINSON ROAD CLAIM**  
**ROBERT BAILEY**  
**TOMLINSON TWP.**  
**LARDER LAKE MINING DIVISION**  
**ONTARIO**

**Prepared By:**  
**Todd Keast, P. Geo.**

**December 4, 2020**

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**Summary:**

Between October 20, 2020 and October 25, 2020, Robert Bailey and Todd Keast completed an overburden/till sampling program over a claim situated within Tomlinson Township of the Larder Lake Mining Division. The sampling program consisted of the collection of seven overburden/till samples widely spaced across the claim group, the cleaning and screening of the samples to create individual sample concentrates, and the analysis of the individual concentrates. The purpose of the sampling program was to follow up on results of the Ontario Geological Survey (OGS) Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario* (2015). The program was designed to identify anomalous gold (Au) in till samples indicative of prospective bedrock targets.

Assay results from the sampling program did not identify anomalous Au results. The collection of the samples was limited to shallow depths permissible with a shovel. The sample material between sites showed considerable variation. It is suggested that the variation in sampling material did not provide for the desired single consistent continuous sampling medium across the project area.

**Introduction:**

*Property Description:*

Robert Bailey’s Tomlinson Road Property consists of 2 claim units (**Table 1**) in Tomlinson township, Larder Lake Mining Division, District of Cochrane, Ontario. The Property is located 86 kilometers east-northeast of Cochrane, Ontario (**Fig. 1**). The work involved simple prospecting type sample collection, and sample preparation which is not subject to a work plan or work permit.

**Table 1 Claim information Tomlinson Road Property**

<b>Township / Area</b>	<b>Tenure ID</b>	<b>Tenure Type</b>	<b>Anniversary Date</b>	<b>Work Required</b>
TOMLINSON	551428	Multi-cell Mining Claim	2021-06-13	800

*Property Access:*

Access to the property is from Cochrane, Ontario by traveling east via Hwy. 652 for 31 kilometers then turning right onto the Translimit Rd. and traveling 52 kilometers easterly to the Tomlinson Rd, and then traveling 31 km north to the centre of the claim. There is an open area sand pit on the claim at UTM co-ordinates 17U 576400E 5467800N.



**Figure 1 - Location of Tomlinson Road Property Claim**

*Property Background:*

The geology of this portion of the Abitibi Greenstone Belt consists of east west trending arcuate belts of mafic to felsic volcanic rocks which are intruded by several large granitic plutons. Thick sedimentary belts occur on the margins of the volcanic terrains, and the volcanic units are intercalated with volumetrically minor amounts of detrital sedimentary rocks and iron formations. Considerable overburden cover has hindered reliable bedrock mapping programs, thus much of the regional geology is interpreted from airborne geophysical surveys, widely spaced diamond drill holes and limited outcrop exposures.

### *Deposit Type:*

The exploration target on the Tomlinson Road claims is Orogenic gold. The project was generated based upon the sampling results of Ontario Geological Survey (OGS) Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario* (2015).

### **Regional Geology:**

The Tomlinson Road Project is situated within the Burntbush Area of the Abitibi greenstone belt of Ontario. The Burntbush Area is bounded to the north and the west by a massive granitoid intrusions of the Opitaca Subprovince. It is bounded to the south by Case and Mistawak batholith. The Burntbush assemblages continue east into Quebec. The Burntbush area is made up of the Adair, Noseworthy, Blakelock, Bradette and St. Laurent assemblages.

The Adair assemblage is composed of a mixture of tholeiitic basaltic metavolcanics, and calc-alkalic intermediate to felsic meta-volcanics. The basalts include massive, amygdaloidal, pillowed and coarse grained (1 to 3 cm) feldspar-megacrystic flows. The intermediate to felsic meta-volcanics include quartz- and feldspar-phyric, massive flows and fragmental rocks. The assemblage trends northwest-southeast crossing into Quebec. Structures (penetrative foliation) strike northwesterly, parallel to the overall trend of the assemblage. Regional metamorphism is generally, within the upper green-schist/lower amphibolite facies. The Adair assemblage is on strike with the past producing Norrmetal Mine, a volcanogenic massive sulphide base metal deposit (Cu-Zn). This was hosted within the felsic volcanic horizon. The Bradette assemblage is composed of calc-alkalic dacitic and rhyolitic tuffs and breccias, with flows interlayered with carbonaceous metasedimentary units.

**Quaternary Geology:** (taken from Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario*).

The major Quaternary deposits consist of till, glaciofluvial, glaciolacustrine, aeolian, recent alluvial, and peat deposits. Two regionally mappable surface till units exist: an older bouldery to sandy till and a younger silty to clayey till. Borehole records indicate that both tills can reach a thickness of over 20 m in the report area. The bouldery to sandy till has a sand-rich matrix and contains abundant cobbles and boulders, but with a low content of limestone clasts. Its matrix reacts weakly to 10% hydrochloric acid (HCl). This till occurs mostly in the southern part of the sample area and it is rarely seen at surface in the northern part. The silty to clayey till occurs extensively in the report area. It has a silt- and clay-rich matrix, contains low to moderate amounts of stones, but has a high proportion of limestone clasts (up to 85%) among the 2 to 7-mm-sized rock fragments (Appendix 2), derived from the Hudson Bay Lowland to the north. The till has a brownish colour and usually reacts strongly to 10% HCl. Concentrations of large stones occur at the base of this till.

The bouldery to sandy and silty to clayey tills can probably be correlated to the Matheson and Cochrane tills, respectively (Gao 2013a, 2013b). The Matheson Till was likely deposited during the major ice advance of the Late Wisconsinan, whereas the Cochrane Till was emplaced during the Cochrane ice readvance at or shortly before circa calendar (cal) 8200 years ago (Hughes 1965; Boissonneau 1966; Prest 1969; Veillette 1994; Vagners 2000; Dyke 2004; Roy et al. 2011). The majority of the flutings observed in the study area are a result of the Cochrane ice readvance. Drumlins, flutings and striae in the southern part of the report area indicate a regional ice flow direction averaging 165° and 150° for the Matheson and Cochrane tills, respectively. In the northern part, the ice flow direction for the latter is around 160°. As indicated by the occurrence of the till, the Cochrane ice sheet advanced from the northwest, with its southernmost extent reaching the Abbotsford Creek, a major branch of the Kabika River located in the southeastern part of the report area (Gao 2013a, 2013b).

A lower subsurface till occurs sporadically below the Matheson Till, indicating a possible earlier glacial advance, consistent with the stratigraphy proposed for adjacent regions (Steele, Baker and McClenaghan 1989; McClenaghan 1992; Smith 1992). As indicated by the borehole records in the study area, this till has a pebble lithology comparable with that of the Matheson Till (Gao and Day



2008; Gao 2013a, 2013b). The possibility that the 2 till units are contemporaneous or paracontemporaneous cannot be excluded. North of the study area, a silt- and clay-rich till occurs in close association with an array of southward-aligned flutings (Barnett, Yeung and McCallum 2011). This till appears to postdate the Cochrane Till, as recorded within the study area, and developed during a later phase of the Cochrane ice readvance.

Glaciofluvial ice-contact deposits occur typically in eskers, subaqueous fans and moraines. Eskers related to the Matheson Till generally align to the south and contain abundant boulders with limited amounts of limestone clasts. In comparison, those associated with the Cochrane Till tend to align southeastwards and contain smaller gravel clasts, fewer boulders, and a higher proportion of limestone clasts. Their pebble lithology contains 30 to 40% limestone clasts as counted in the field (Gao and Day 2008).

Massive to locally laminated glaciolacustrine clay and silt of Lake Ojibway is extensive, covering both Matheson and Cochrane tills, as well as eskers and subaqueous fans, with local thickness exceeding 1 m. Ice-rafted debris is present but rare in the glaciolacustrine fines beyond the Cochrane glacial limit. In contrast, such debris becomes extremely abundant in the lake deposit within the limits of the Cochrane Till. Although the glaciolacustrine deposit seemingly resembles the underlying Cochrane Till, it lacks compactness and fissility and contains characteristic laminations that attest to a glaciolacustrine origin (Gao 2013a, 2013b). That being said, it is not readily separable from the underlying Cochrane Till in the field without well-exposed sections for reference. In this case, the term “Cochrane Drift” may be used for such combined deposits. Iceberg keel marks related to the lake are abundant near and inside the glacial border.

At the terminal locations of the Cochrane readvance, the Cochrane Till is sandwiched between the glaciolacustrine deposits of this lake. Once it reached its terminal location, the ice sheet might have experienced rapid melting and retreat through enhanced ice calving in the lake. The presence of abundant ice-rafted debris in the glaciolacustrine fines and numerous iceberg keel marks within the lake plain appears to support this interpretation. This also explains, at least in part, the lack of prominent terminal moraines of this ice advance.

The lake level of Lake Ojibway reached at least 390 m above sea level (asl) as indicated by beach ridges and wave-cut benches preserved on the flanks of uplands. The maximum lake level could be higher, but it cannot be reconstructed because of the lack of higher terrain for it to be recorded

on. It is noteworthy that well-developed strandlines occur commonly at 340 to 360 m asl on bedrock hills. Many authors consider these elevations to be the level of the lake prior to its final drainage into Hudson Bay circa cal 8200 years ago (Veillette 1994; Dyke 2004; Roy et al. 2011). During and after the drainage of the lake, this region likely experienced aeolian and wave-washing processes (Gao 2013a, 2013b).

## **Economic Geology**

The Tomlinson Road Project does not host concentrations of minerals which could be classified in the resource or reserve categories. The very minimal historical exploration programs on these and the surrounding claims in the area would be indicative of grass roots type work.

The Detour Lake Gold Mine (115.8 Mt @ 1.13 g/t measured and indicated) is situated 74 km north of the Tomlinson Road Property in the Sunday Lake assemblage. Detour Gold Corporation also holds a significant land position north and west of the Tomlinson Road Property. Aurelius Minerals Inc. holds the Mikwam Deposit (1.81Mt @ 2.34 g/t, inferred), a gold property approximately 23 km NE of the Tomlinson Road Property. Hecla Mining Company operates the Casa Berardi gold mine in Quebec (23.743 Tons @ .08 oz/ton, proven & probable), which is located 56 km NE of the Tomlinson Road Property.

## **Property History:**

*1975 – Dome Exploration Canada Ltd.* - Completed ground magnetometer and VLF EM surveys. A number of conductive zones were identified for follow up work.

*1987 – Noranda Exploration Co Ltd.* - A largescale airborne magnetic, electromagnetic survey was flown (125m line spacing). Broad magnetic features associated with mafic volcanic and iron formations were identified.

1987 – *Noranda Exploration Co Ltd.* - Two diamond drill holes were completed on the north boundary outside the Tomlinson Road claims. The drilling intersected intermediate volcanics, felsic volcanics, graphitic argillites and semi massive sulphides. Assay results were not included in the assessment report.

1994 – *Glen Auden Resources Limited* - Completed ground magnetic and electromagnetic surveys as part of a diamond exploration program. One magnetic/EM target was identified for follow up work.

#### *Ontario Government Surveys:*

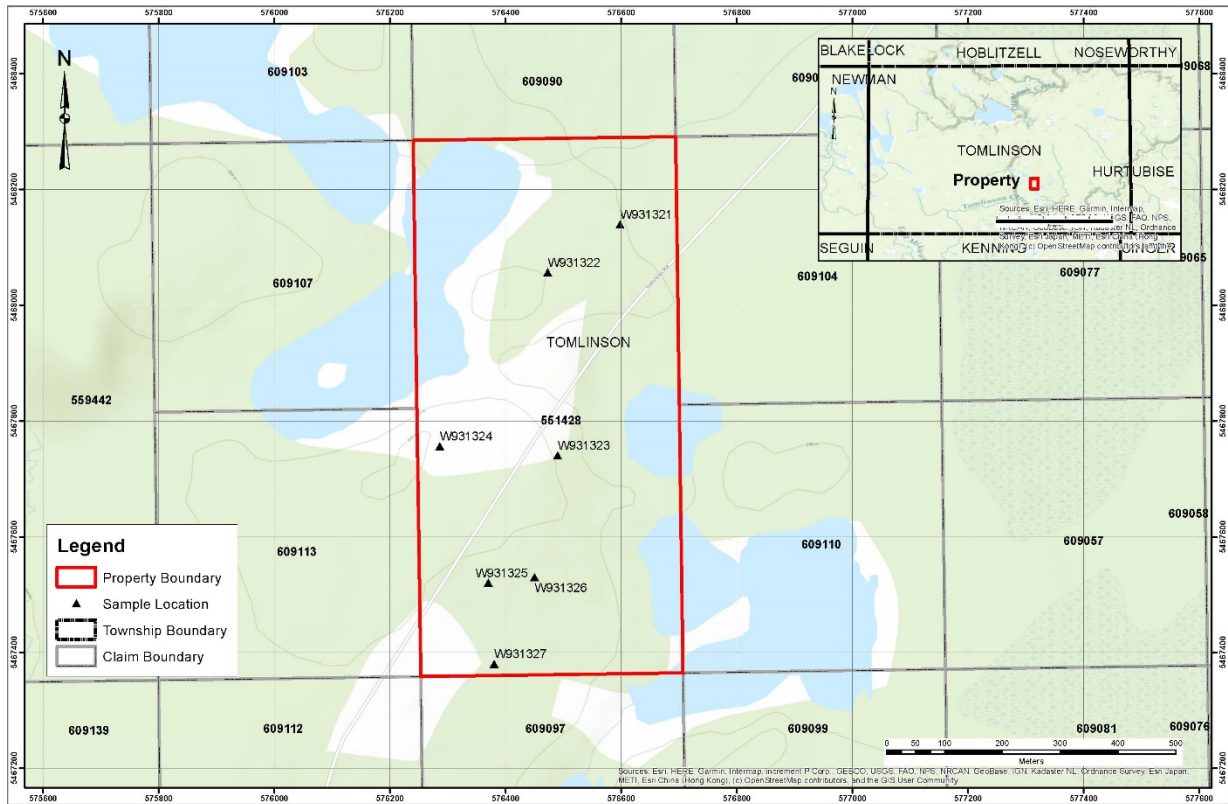
The Ontario Geological Survey, and its previous entities, have completed several regional type geological and geophysical surveys which include coverage of the Tomlinson Road Property. A listing of these programs includes:

- ARV27 - Twenty Seventh Annual Report of the Ontario Bureau of Mines, 1918
- ARV45-06 - Forty Fifth Annual Report of the Ontario Department of Mines, 1936, Part VI
- OFR5279 - Geology of the Burntbush- Detour Lakes Area-1979
- P0373 - Burntbush River Sheet
- Map2452 - Burntbush-Detour Lakes, 1981
- P2243 - Preliminary Map Burntbush-Detour Lake Area (Southern Part)
- Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario* (2015).

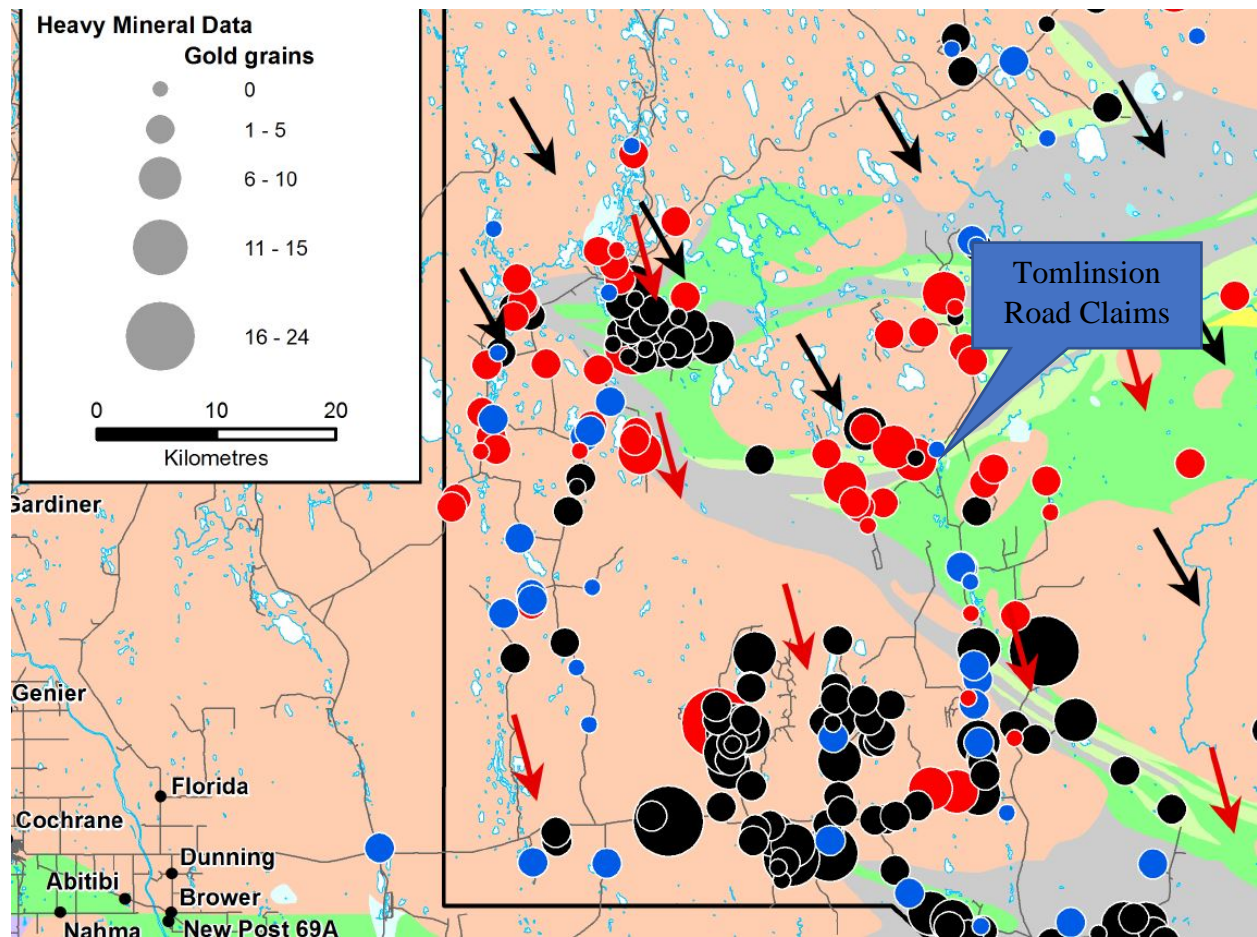
#### **2020 Sampling Program**

The sampling program was completed between October 20, 2020 and October 25, 2020. The program consisted of the collection of seven overburden/till samples widely spaced across the claim group (**Map 1**). The purpose program was to follow up on sample results from Ontario Geological Survey (OGS) Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario* (2015) (**Map 2**). Elevated Au in till sample results from the OGS survey suggest potential bedrock targets. The program was intended to confirm the OGS sample results and better define specific target locations.

Samples were collected on October 20, 2020 by Robert Bailey and Todd Keast. Sample locations were pre-selected prior to visiting the field (**Map 1**).



**Map 1 – Tomlinson Road Property Claim outline and sample locations**



**Map 2** – Gold grains in till from Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario* with location of Tomlinson Road Property.

*Sample collections Procedure* - At the pre determined sample location, a shovel was used to dig a small hole to determine if suitable sampling material was present (sand + gravel + clay). The presence of thick organic material in 2 locations necessitated the need to adjust the sample location. Organic material would not be a suitable sampling medium for the sampling program.

A photo was taken at each sample location before the sample was taken. The several centimetres of organic mater were removed and set aside. The sample of sand/gravel and clay were collected and placed in a rice bag at an estimated weight of 15-20 kilograms per sample. The sample bags were sealed and marked with an individual sample ID. The sample hole was photographed, the hole refilled and a final photo taken of the refurbished sample site. An orange sample flag with the sample number was placed at the sample location.

Sample details with brief descriptions are included in **Table 2**. Photographs of all seven locations are included in **Appendix I**.

**Table 2** – Sample locations and descriptions

Sample #	Zone	Easting	Northing	Sample Composition	Sample Weight (kg)	Concentrate Weight (g)
W931321	17 U	576598	5468139	Clay 75%, Sand 25%	13	430
W931322	17 U	576473	5468056	Clay 75%, Sand 25%	15	586
W931323	17 U	576490	5467740	Sand 80%, pebbles & cobbles 20%	18	639
W931324	17 U	576286	5467756	Sand 75%, pebbles & cobbles 25%	22	421
W931325	17 U	576370	5467520	Sand 100%	16	343
W931326	17 U	576450	5467530	Clay 50%, Sand 50%	14	695
W931327	17 U	576380	5467380	Clay 50%, Sand 50%	18	218

The second phase of the program was to reduce the sample size and create a heavy mineral concentrate. This work was performed by Todd Keast. The seven samples were examined during the cleaning and screening phase. The samples were washed down through three screen sizes (**Photo 1**) to create different sample size fractions and generate a heavy mineral concentrate. The fine material passing through the screens was collected in a pan and washed to remove excess light material. The purpose of the screening and washing stage was to generate a concentrate sample for each on the seven samples, each weighing approximately 250-750 grams. (**Photo 2**).



**Photo 1** – Screens and pan used to clean and concentrate till/overburden samples



**Photo 2** - Screened portions of sample W931324

*Quality Assurance and Quality Control:*

The grassroots nature of till/overburden sampling combined with the small size of the program does not warrant till standards blank samples. The assay laboratory institutes an internal QAQC program which is sufficient for this level of work. The internal QAQC results did not indicate any abnormalities in results.

*Results of the 2020 Sampling Program:*

Assay results from the Tomlinson Road Property till/overburden sampling program did not indicate any proximal anomalous gold targets. Samples returned 0.005 or < 0.00 g/t Au **Appendix II**. The variation in the sampling material sand dominant vs clay dominant material suggests may reduce the effectiveness of this type of work.

Additional work is possible. A small handheld auger and more complete mapping of the glacial material to assist in the sample location points may provide a better base map to select sample locations in the same sampling medium. An exploration budget of \$6,160 is recommended to further evaluate the Tomlinson Road Property (**Table 3**).

**Table 3 - Proposed Exploration Budget Tomlinson Road Property**

<b>Item (Amount/Cost)</b>	<b>Total</b>
Till mapping in Field	\$2,000
Sample collection	\$2,000
Assays	\$ 800
Reports, maps	\$800
Subtotal	\$5,600
Contingency 10%	\$560
<b>Total</b>	<b>\$6,160</b>



## Certificate of Qualified Personal

I, Todd Keast, am a professional geologist, residing at 78 Nova Drive, Sudbury, Ontario, P3E 0A6, and do hereby certify that:

I am the author of the report titled: “OVERBURDEN SAMPLING REPORT FOR THE TOMLINSON ROAD CLAIMS ROBERT BAILEY TOMLINSON TWP. LARDER LAKE MINING DIVISION ONTARIO.”

- I am a Practising Member of the Association of Professional Geoscientists of Ontario (membership #911). I am a graduate of University of Manitoba, 1987 with a B.Sc. Honours Geology degree.
- I have practised my profession in mineral exploration continuously since graduation. I have over twenty-eight years of experience in mineral exploration and have over eighteen years of experience as an independent consultant.
- I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101

Dated this 4th day of December, 2020.

**Todd Keast, P.Geo.**

*“Original Document signed and sealed by Todd Keast, P.Geo.”* Todd Keast, P.Geo.

## References:

- ALS. (2019). Schedule of Services and Fees, Geochemistry, 2019, Canada (pg. 1-52).  
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- Amedjoe, C.G. & Adjovu, I.T. (2013). Application of the mobile metal ion geochemical technique in the location of buried gold mineralization in Essase Concession, Eastern Region, Ghan. *Journal of Geology and Mining Research*, 5(6), 147-160.
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- Ontario Geological Survey (2001). Geological Compilation of the Abitibi Greenstone Belt – Digital data, Ontario Geological Survey MR D 143, scale 1:250,000
- Ontario Geological Survey (2015) Open File Report 6297, *Results of Regional Till Sampling in the Detour Lake and Burntbush Area, Northern Ontario*.

# **APPENDIX 1- Sample Site Photos**



**Sample W931321**





**Sample W931322**



**Sample W931323**







**Sample W931324**



**Sample W931325**



**Sample W931326**



**Sample W931327**

# **APPENDIX 2- Assay Certificate and Quality Control Certificate**

<b>Category</b>	<b>Date</b>	<b>Payee</b>	<b>Description</b>	<b>Amount</b>
Soil Sampling	October 20, 2020	Robert Bailey	Soil sampling	\$500
Soil Sampling	October 20, 2020	Todd Keast P.Geo	Soil sampling	\$850
Sample preparation	October 25, 2020	Todd Keast P.Geo	Sample screening, drying & bagging for assay lab	\$850
			subtotal	<u><b>\$2,200</b></u>
Transportation	October 20, 2020	Robert Bailey	Foley to site & return 650 km @ \$.60	\$390
			subtotal	<u><b>\$390</b></u>
Report Writing	October 21, 2020	Todd Keast P.Geo	report	\$850
Report Writing	December 2, 2020	Todd Keast P.Geo	report	\$425
			subtotal	<u><b>\$1,275</b></u>
Maps	November 30, 2020	Superior Geospatial	GIS maps for report	\$122
			subtotal	<u><b>\$122</b></u>
Assays	December 1, 2020	ALS Minerals	ALS assays	<u>\$245</u>
			subtotal	<u><b>\$245</b></u>
			<b>Total</b>	<b>\$4,232</b>