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**N.T.S. 41P15**

**REPORT ON A  
PROSPECTING TRAVERSE  
NORTHEAST MIDLOTHIAN LAKE AREA  
MIDLOTHIAN LAKE PROPERTY:  
LARDER LAKE MINING DIVISION  
MIDLOTHIAN TOWNSHIP, ONTARIO**

**By: ROBERT DILLMAN  
MOUNT BRYDGES, ONTARIO**

**December 28, 2021**

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## Summary

This report summarizes the results of a prospecting traverse on the Midlothian Lake Property in Midlothian Township. The traverse was completed in one day: September 17, 2020 by property owners: Dr. Jim Renaud and author, Robert Dillman. A total of 2.8 km was traversed using a GPS and compass to calculate distance and navigation. The area prospected is situated between the Stairs Mine Road and northeast of Midlothian Lake, on claims:

579359 cell 41P15L382

579371 cell 41P15E003

579372 cell 41P15L383

579373 cell 41P15L384

579367 cell 41P15E004

579391 cell 41P15L385

The traverses were initiated to examine a fuchsite (green mica) occurrence reported on the east side of the north arm of Midlothian Lake. Outcrops of conglomerate and diabase dikes were found. No areas of sulphide mineralization or alteration were found. One rock sample was collected during the traverse. The sample assayed 0.003 ppb Au.

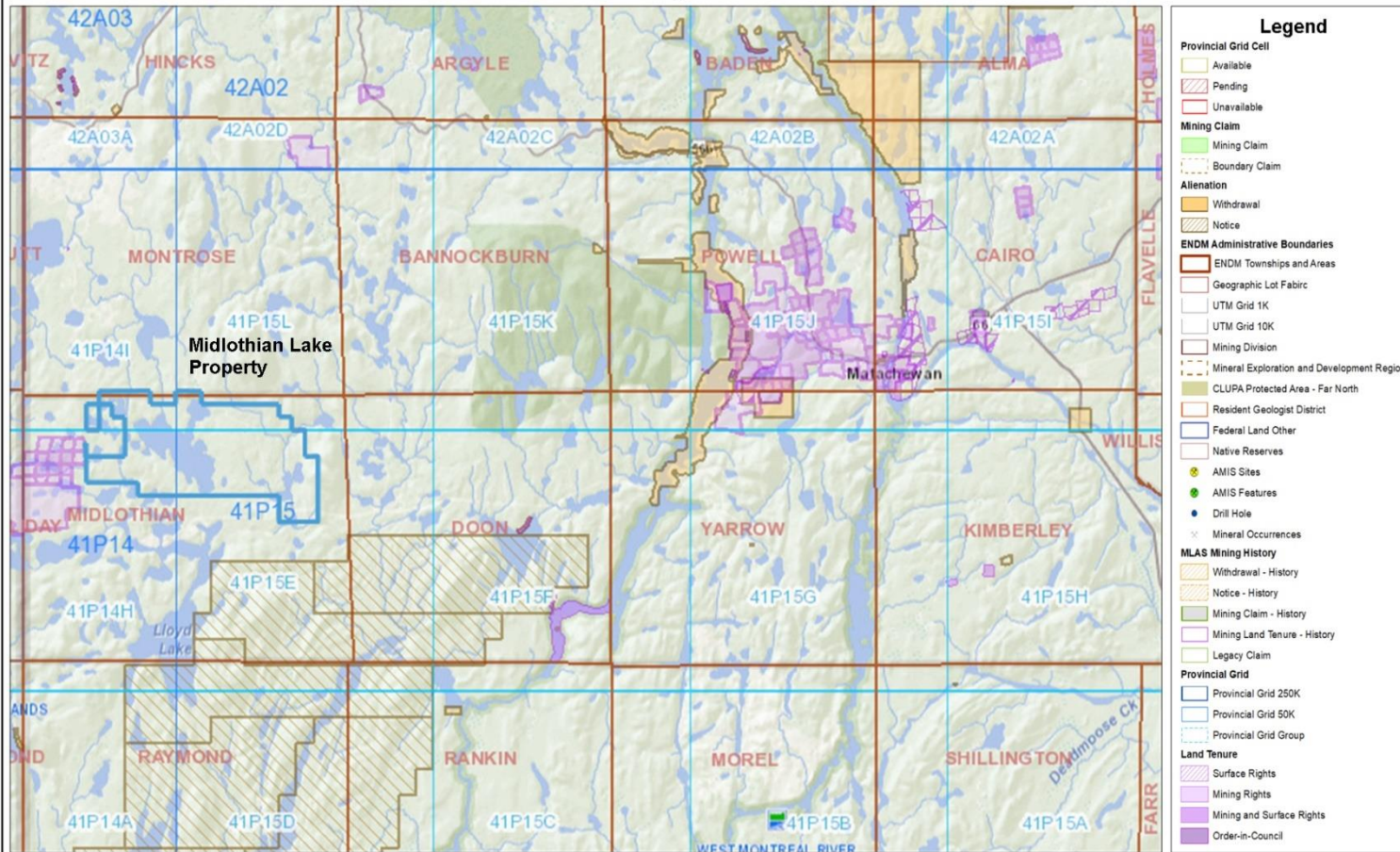
## Location and Access

The Midlothian Lake Property is situated in Midlothian Township in the Larder Lake Mining Division of Ontario. The property is located approximately 23 kilometres southwest of the town of Matachewan (Figure 1).

The property is accessible by truck and ATV. From the town of Matachewan, the property can be reached by travelling 2.9 km southwest on Highway 566 to the Asbestos Mine Road. Go west on the mine road for 23 km at which point the road is washed out and the rest of the journey must be made on ATV. The property boundary is located 2.7 km from the wash out. The Stairs Mine Road is 1.5 km west of east boundary of the property. The area traversed is located 4.1 km north on the Stairs Mine Road.

Figure 1.  
Property Location Map

Notes: **Midlothian Lake Property**



Those wishing to register mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Energy, Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources and Forestry. The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Energy, Northern Development and Mines web site.



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## **Claim Logistics and Location of Work**

The Midlothian Lake Property consists of 113 mining claim cells. The property covers an approximate area of 2450 hectares (Figure 2).

All claims comprising the Midlothian Lake Property are held by Jim Renaud of London, Ontario and the author, Robert Dillman of Mount Brydges, Ontario.

The area on the property where traverses were conducted is shown in Figure 3. Areas were prospected on the following claims:

579359 cell 41P15L382	579371 cell 41P15E003
579372 cell 41P15L383	579373 cell 41P15L384
579367 cell 41P15E004	579391 cell 41P15L385

## **Land Status and Topography**

The Midlothian Lake Property is situated entirely on Crown Land. The property is uninhabited. There are no buildings or habitats. An electrical powerline follows the Asbestos Mine Road which crosses the southeast section of the property. A system of non-maintained logging roads provide access to most areas of the property.

Sections of the property have been logged within the last 3 decades. Some of these areas are partially reforested with spruce trees. Uncut forest consisting of large spruce, balsam and poplar trees can be found bordering bodies of water and growing in higher elevations. Cedar trees and alders grow in lower areas.

The property is at a mean elevation ranging between 360 to 400 metres above sea level. Most of the property has gentle relief with rounded hills averaging 20 metres in height. Rugged terrain exists east of Elizabeth Lake where steep hills rise over 40 metres above the lake and close to Midlothian Lake where ridges and knobby outcrops range between 5 to 40 metres in height and follow the outline of the lake. The northeast section of the property where the traverse was done is situated at the base of a large, steep hill rising over 540 metres above sea level.

There are several lakes on the property. The largest is Midlothian Lake which covers an approximate area of 366 hectares.



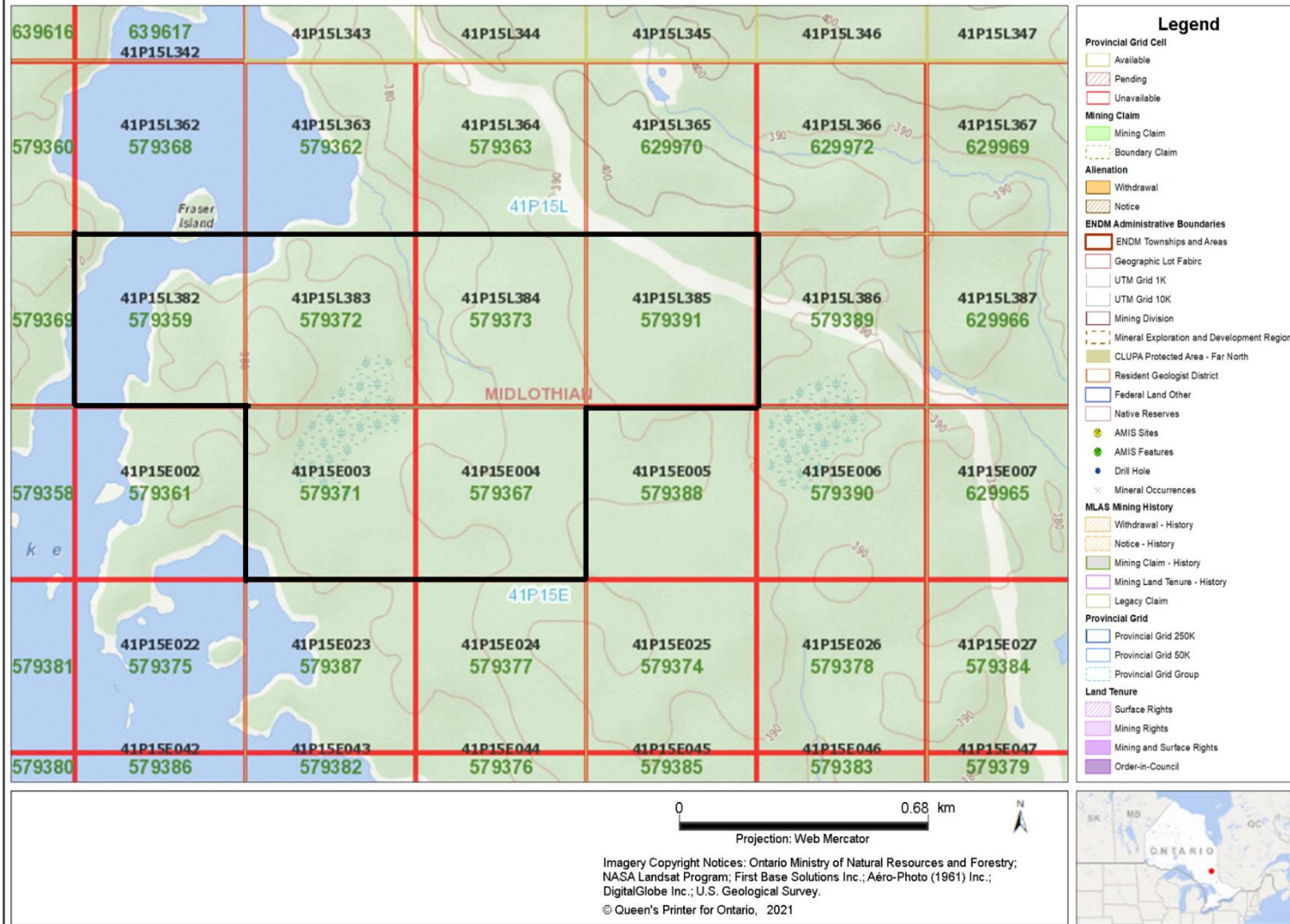
● Location of Work

**Figure 2.**  
**Claim Map: Midlothian Lake Property**  
**Midlothian Township, Ontario**



Figure 3.  
Location of Work  
Northeast Midlothian Lake Area

Notes: Midlothian Lake Property  
Midlothian Township  
Ontario





Outcrop exposure in many sections of the property is good. Outcrops are abundant in higher elevations and variable exposures occur in lower elevations. Overburden is generally shallow and consists of glacial till deposited by a glacier initially moving from the northeast to the southwest and shifting northwest to southeast in its final advance.

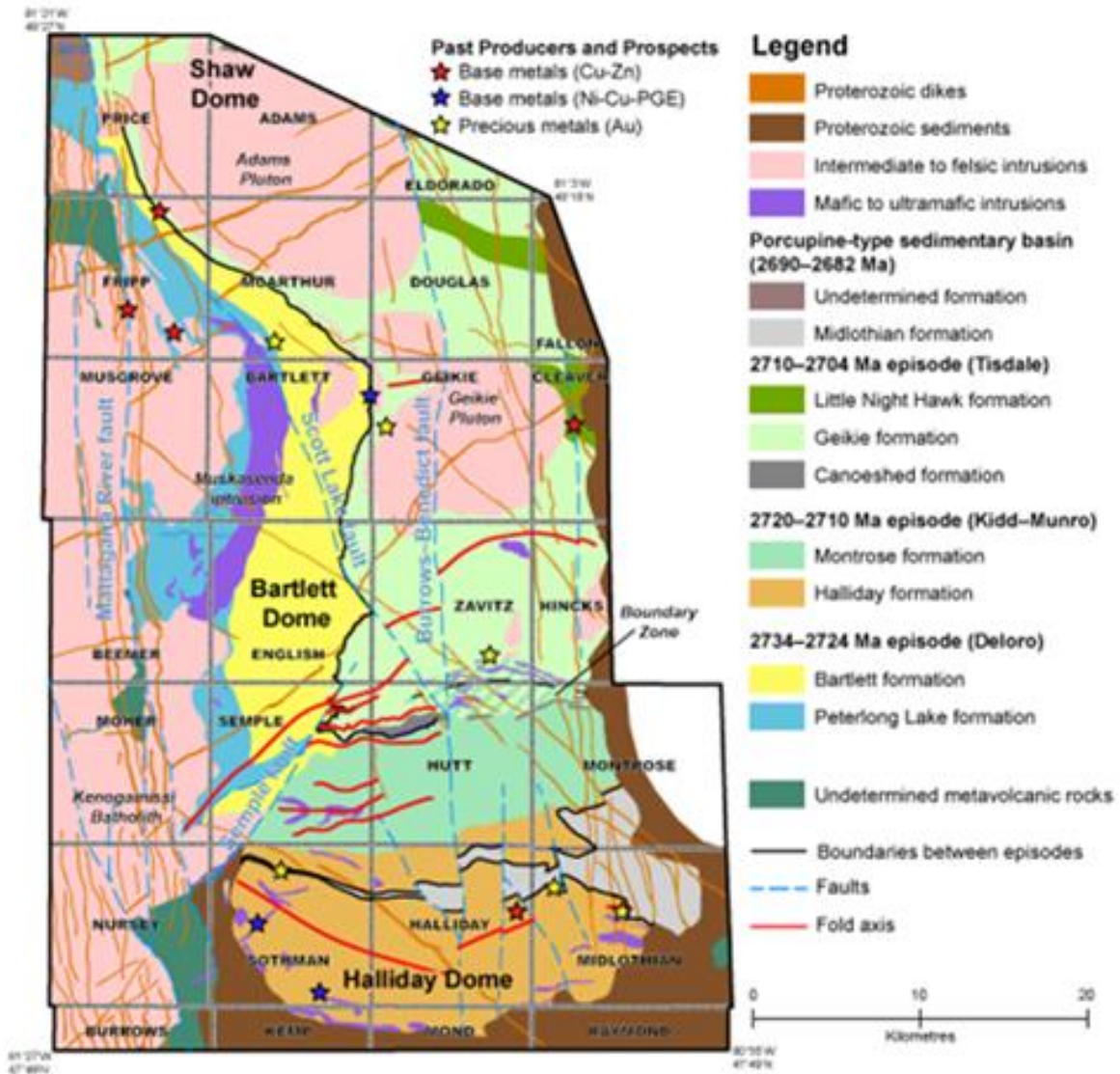
## **Regional and Local Geology**

The Midlothian Lake Property is located in the Halliday Dome area within the western portion of the Abitibi Subprovince of the Superior Province. The Halliday Dome consists mainly of calc-alkaline felsic and intermediate volcanic rocks with minor quantities of iron formation and basaltic rocks of the Tisdale Assemblage, unconformably overlain by younger Kinojevis Assemblage rocks, which are in turn unconformably overlain by sedimentary rocks of the Porcupine Assemblage.

Midlothian Township is located on the southeast quadrant of the dome and consists of intermediate to felsic volcanics, flows and pyroclastics, "Temiskaming" sediments and a series of mafic to ultramafic sills. The Coleman Member of the Gowganda Formation lies unconformably on top of the Archean volcanics and sediments. It is thought that the Larder Lake Break extends beneath the Gowganda Formation west of Matachewan and continues through the south portion of Midlothian Township. Surrounding geology in the Bannockburn Township area describes Neoproterozoic-age calc-alkaline intermediate to felsic volcanic rocks, mafic volcanic rocks, komatiitic basalt to dunite, silicate to sulphide iron formation, gabbro intrusions, and a series of sedimentary rocks including diamictite, arkose, and conglomerate (Préfontaine and Berger, 2005). Proterozoic-age (Huronian Supergroup) sediments (Cobalt Group - Gowganda Formation), composed mainly of clastic metasedimentary rocks such as conglomerate, sandstone, wackes and argillite, unconformably overlie the Archean supracrustal assemblages.

The area northeast of Midlothian Lake is underlain by arkose, sandstone and conglomerates of the Midlothian Formation dated 2688.5 Ma (Préfontaine and Robichaud, 2013). Rock units generally strike northwest to southeast and dip steeply to the north. The area has been intruded by north trending diabase dikes of the Matachewan Swarm dated 2454 Ma (Préfontaine and Robichaud, 2013). To the east, rocks of the Midlothian Formation and Matachewan diabase swarm are unconformably overlain by Huronian rocks consisting of conglomerates, argillite and greywacke of the Cobalt Group of the Gowganda Formation dated *circa* 2300 Ma (Préfontaine

and Robichaud, 2013). Diabase dikes of the Sudbury Swarm dated 1238 Ma also have intruded rocks of the Midlothian Formation and cross the unconformity into the Cobalt Group.



**Figure 3.** Schematic map of the study area depicting part of the Shaw Dome as well as the Bartlett and Halliday domes. The Bartlett and Halliday domes are further broken down into volcanic- and sediment-dominated episodes (assemblages) and formations. The green hatched pattern at the Zavitz–Hutt township boundary represents the boundary zone between the 2720–2710 Ma volcanic episode (Kidd–Munro) and the 2710–2704 Ma volcanic episode (Tisdale).

**Figure 4. Regional Geology**



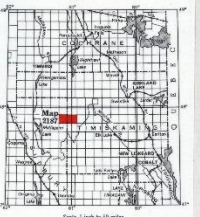
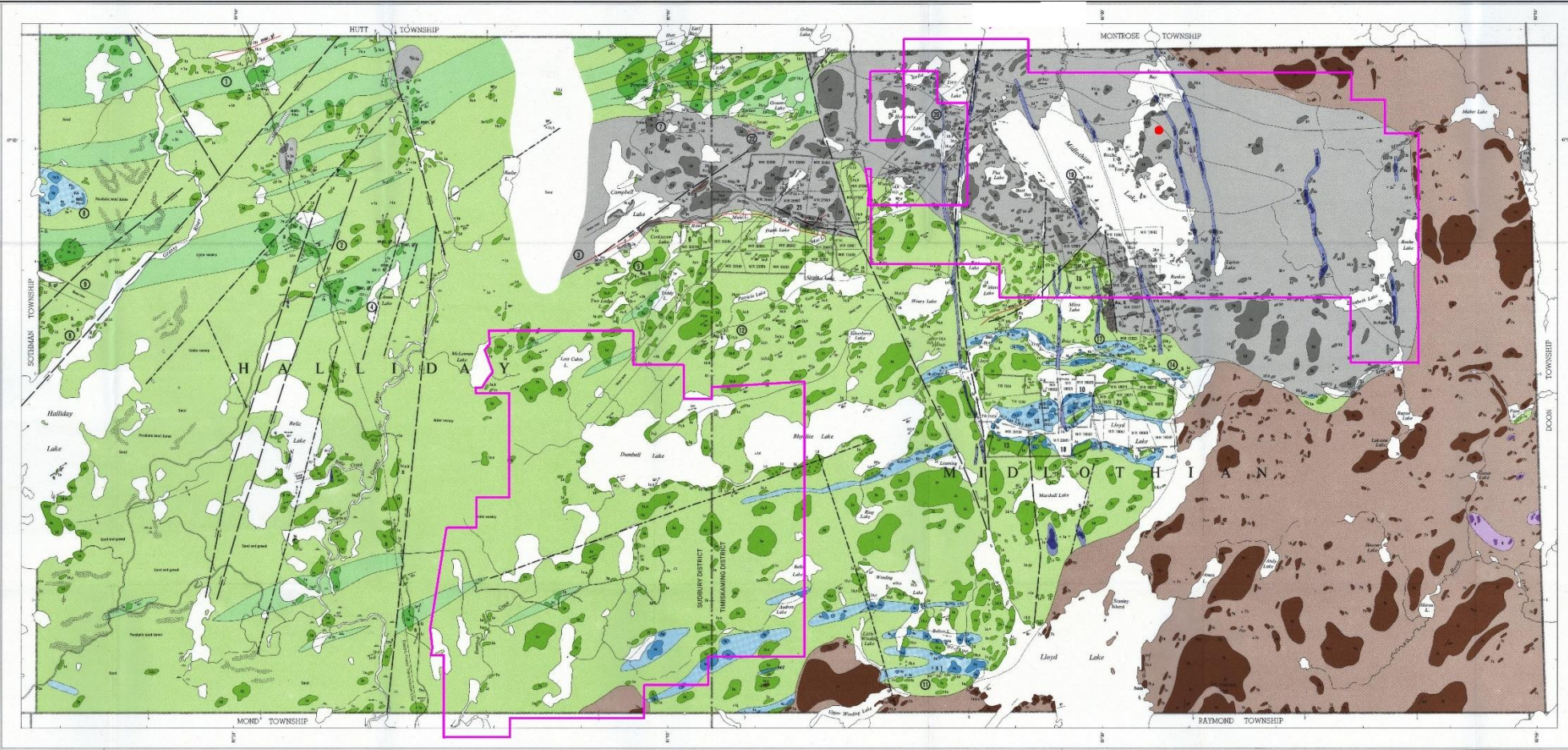
ONTARIO  
DEPARTMENT OF MINES  
HON. ALAN F. BIRCHENCO, Minister of Mines  
D.F. Douglas, Deputy Minister I.E. Thomson, Director, Geological Branch

# MIDLOTHIAN LAKE PROJECT

Map 2187  
Halliday and Midlothian Townships

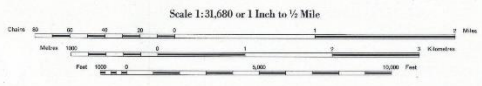
- SYMBOLS**
- Glacial striae.
  - Small bedrock outcrop.
  - Area of bedrock outcrop.
  - Bedding, horizontal.
  - Bedding, top unknown (inclined, vertical).
  - Bedding, top (arrow) from graph position (inclined, vertical, overturned).
  - Bedding, top (arrow) from cross bedding (inclined, vertical, overturned).
  - Lava flow top (arrow) from pillow shape and packing.
  - Dip-slip (horizontal, inclined, vertical).
  - Fault (horizontal, inclined, vertical).
  - Geological boundary, observed.
  - Geological boundary, position interpreted.
  - Fault (horizontal, assumed). Spot marks show where strike-slip, reverse indicate horizontal movement.
  - Unconformity.
  - Drop block with plunger.
  - Anticline, syncline, with plunge.
  - Drill hole (vertical, inclined).
  - Well, vein network.
  - Shaft, vertical.
  - Magnetic attraction.
  - Marking or swamp.
  - Motor road.
  - Other road.
  - Trail, portage, winter road.
  - Dashed boundary, approximate position only.
  - Township boundary, approximate position only.
  - Property boundary, approximate position only.
  - Survey line, approximate position only.
  - Location of mining property. (See list of properties.)

- LIST OF PROPERTIES**
- HALLIDAY TOWNSHIP**  
Areas Exploration Incors.
1. Aulsebrook Group.
  2. Pit Group.
  3. Barbers Group.
  4. Connors Ltd., Acme Lake Group, 1995.
  5. Landfill, J. Jones 1987.
  6. Stone Exploration and Mining Co. Ltd.
  7. Sylvanite Gold Mines Ltd. (since 1942)
  8. Tachewas Mines Ltd.
  9. Texas Gulf Sulphur Co.
- MIDLOTHIAN TOWNSHIP**
10. Ashcroft Gold Mines Ltd.
  11. Connors Ltd., Lloyd Lake Group, 1995.
  12. Connors Ltd., Hayes Group, 1995.
  13. Dominion Gold Co. (1982-1994)
  14. Dominion Gold Co. (1995)
  15. Lorne Midlothian Mines Ltd.
  16. Miller, T. H. - Executive.
  17. Morgan, C.B. (1986)
  18. Parsons, G.
  19. Phoenix Mines Ltd. 1962
  20. Phoenix Mines Ltd. 1962
  21. Stone Exploration and Mining Co. Ltd.
  22. Sylvanite Gold Mines Ltd. (since 1942)
  23. VanCleave, W. G.
- Ownership of properties as of March 31, 1988. Data in square brackets, 1995, indicates year of last major work on property. For further information, see report.



- LEGEND**
- CENOZOIC\***
- FLEISTOCENE AND RECENT**  
Glacial drift, gravel, sand and silt.
- PRECAMBRIAN\***
- PROTEROZOIC**
- LATE MAFIC INTRUSIVE ROCKS**
- Diabase.
- INTRUSIVE CONTACT**
- HURONIAN**  
**CORALLI GROUP (GOWANDA FORMATION)**
- Conglomerate.
  - Quartzite and schist.
  - Argillite.
- ARCHAIC**
- MAFIC INTRUSIVE ROCKS (MAGNETIC)**
- Diabase.
- INTRUSIVE CONTACT**
- FELSIC INTRUSIVE ROCKS**
- Granite, granodiorite (dikes).
  - Amphibole gneiss (dikes).
- INTRUSIVE CONTACT**
- ULTRAMAFIC AND MAFIC INTRUSIVE ROCKS**
- Gabbro, diorite.
  - Amphibole gneiss, quartz.
  - Serpentine.
- INTRUSIVE CONTACT**
- METASUBSTRATUM**
- Unconformity.
  - Amphibole gneiss.
  - Shale argillite.
  - Conglomerate.
  - Amphibole metasediments.
  - Amphibole metasediments of Precambrian origin.
- DISCONFORMABLE AND INTERFINGERING CONTACT**
- INTERMEDIATE AND MAFIC META-VOLCANIC\***
- Andesite.
  - Amphibole andesite.
  - Amphibole diorite.
  - Amphibole gneiss.
  - Amphibole schist.
  - Chlorite-veined schist.
- FELSIC METAVOLCANIC\***
- Granite diorite.
  - Amphibole granite diorite.
  - Amphibole schist.
  - Amphibole schist.
  - Chlorite-veined schist.
- Breccia**
- Carbonaceous rock**
- Siliceous.
  - Aluminous.
  - Gabbro.
  - Copper.
  - Graphite.
  - Hematite.
  - Magnetite.
  - Nickel.
  - Lead.
  - Quartz.
  - Quartz-carbonate.
  - Sulfide mineralization.
  - Zinc.
- \* Unconformable rocks. Contact deposits are represented by the lighter colored parts on the map.
- \* Bedrock geology. Outcrop and inferred extension of each rock unit are shown, respectively, in open and light traces of the same colour. Where it pieces a formation is too narrow to show colour and must be represented in black, a short black bar appears in the appropriate block.
- \* Some metasediments are younger than the metavolcanics.
- \* The metavolcanics are interbedded, but felsic metavolcanics predominate in the lower part of the unconformity succession. The order does not imply age relationships.
- Magnetic declination in the area was 11°W, 1985.

Map 2187  
**HALLIDAY and MIDLOTHIAN TOWNSHIPS**  
SUDBURY and TIMISKAMING DISTRICTS



**Area of Work**

**SOURCES OF INFORMATION**  
Geology by G. G. Bright and associates, 1966. Geology is not tied to surveyed lines.

Marshall, N. L., Geology of Midlothian Township, Ontario Department of Mines, 1961, 26 p., 1:25,000, accompanied by Map 1947-4.

Geological and petrological maps and reports of mining companies.

Preliminary maps, P. 285 Halliday Township and P. 286 Midlothian Township, scale 1 inch to 1/2 mile, issued 1967.

Cartography by C. C. Cashin, Ontario Department of Mines, 1965.

Base map derived from maps of the Forest Resources Inventory, Ontario Department of Lands and Forests, with revisions by E. G. Bright.

**Figure 5.**  
**Geology of Halliday and Midlothian Townships**  
**ODM Map 2187**

## History of Exploration

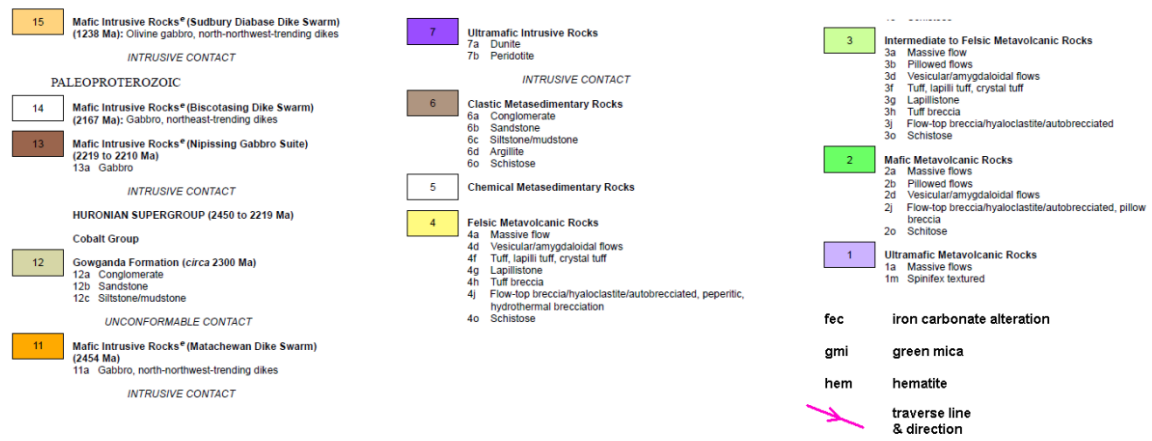
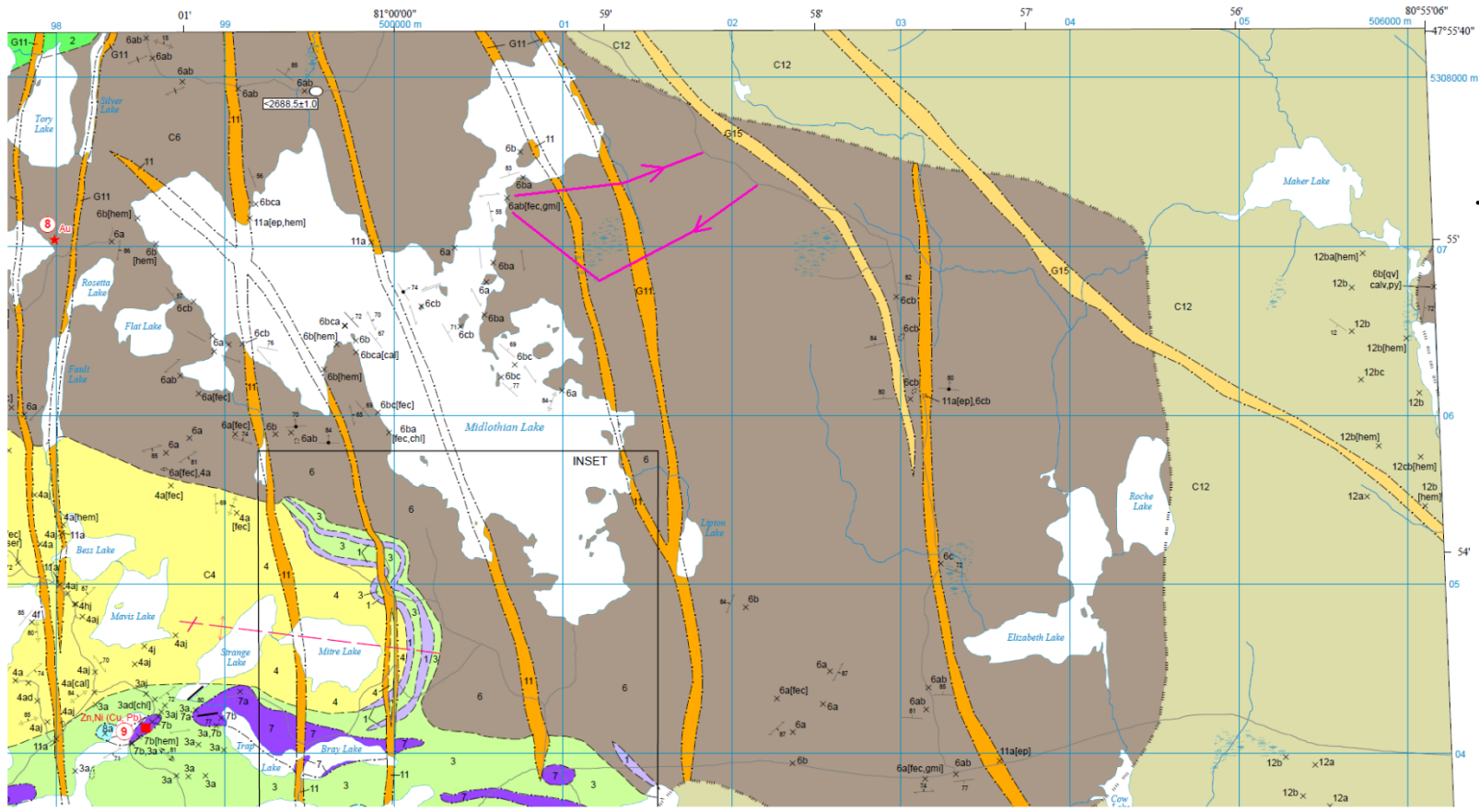
Historic mineral exploration in Midlothian Township has occurred in several periods from as early as 1907 to present day. As a result, different sections of the property have been explored at various times. Historic exploration has led to the discovery of gold, copper, pyrite, graphite and marcasite on the property.

In 1947, H.I. Marshall produced a preliminary report for the Ontario Department of Mines detailing the geology of Midlothian Township. The township was mapped again in 1970 by E.G. Bright, also for the Ontario Department of Mines. In 2011, Midlothian Township was mapped by S. Préfontaine, and L. Robichaud on behalf of the Ontario Geological Survey.

In 1944, gold was discovered between Midlothian Lake and Mitre Lake by Laroma Midlothian Mines Limited. Gold-bearing quartz veins were discovered in a “green carbonate” rock. The company drilled 17 holes for a total length of 7,214 feet. Subsequent overburden stripping in 1967 traced the green carbonate zone 2,000 feet along strike and ranging 250 to 350 feet wide. Quartz veins were noted in most areas and are particularly concentrated with gold in some areas. A large pit on current claim 549439, cell 41P15E081 is reported to have assayed 1.38 oz/t gold. A sample by the current property owners taken in September 2020 assayed 15.6 g/t gold (0.456 oz/t Au).

In 1963, Canadian Aero Mineral Services Limited flew an airborne magnetometer and electromagnetic survey over east part of Midlothian Township and the west part of Doon Township. The survey covers most of the area covered by the Midlothian Property. A strong conductive feature was identified under the north section of Midlothian Lake.

The area traversed has seen little to no exploration work. The closest work occurred between 1995 and 1997 by WMC International Limited and Premier Exploration Inc. on their Doon Property which partially extended over the east section of the area traversed. A till sampling program was conducted on the area for gold. Heavy mineral concentrates derived from till samples collected to the south and southeast contained gold grains and assays ranging >1,000 ppb to 65,700 ppb gold.



fec iron carbonate alteration  
gmi green mica  
hem hematite  
↗ traverse line & direction

**Figure 6.**  
**Northeast Section of**  
**Midlothian Twp., Ontario**

## **Survey Date and Personnel**

Field work for this report was completed in 1 day on September 17, 2020. The traverse was completed by: Jim Renaud of London, Ontario and author, Robert Dillman of Mount Brydges, Ontario.

## **Survey Logistics**

The traverse was initiated to prospect an unexplored area of the Midlothian Property and examine an occurrence of green mica and carbonate alteration on the east side of the north arm of Midlothian Lake as reported on OGS Map P.3772 (Préfontaine and Robichaud, 2013). The traverse is plotted at a scale of 1 : 20,000 in Figure 7 and as a map at a scale of 1 : 5,000 is appended to this report. A total of 2.8 km was traversed.

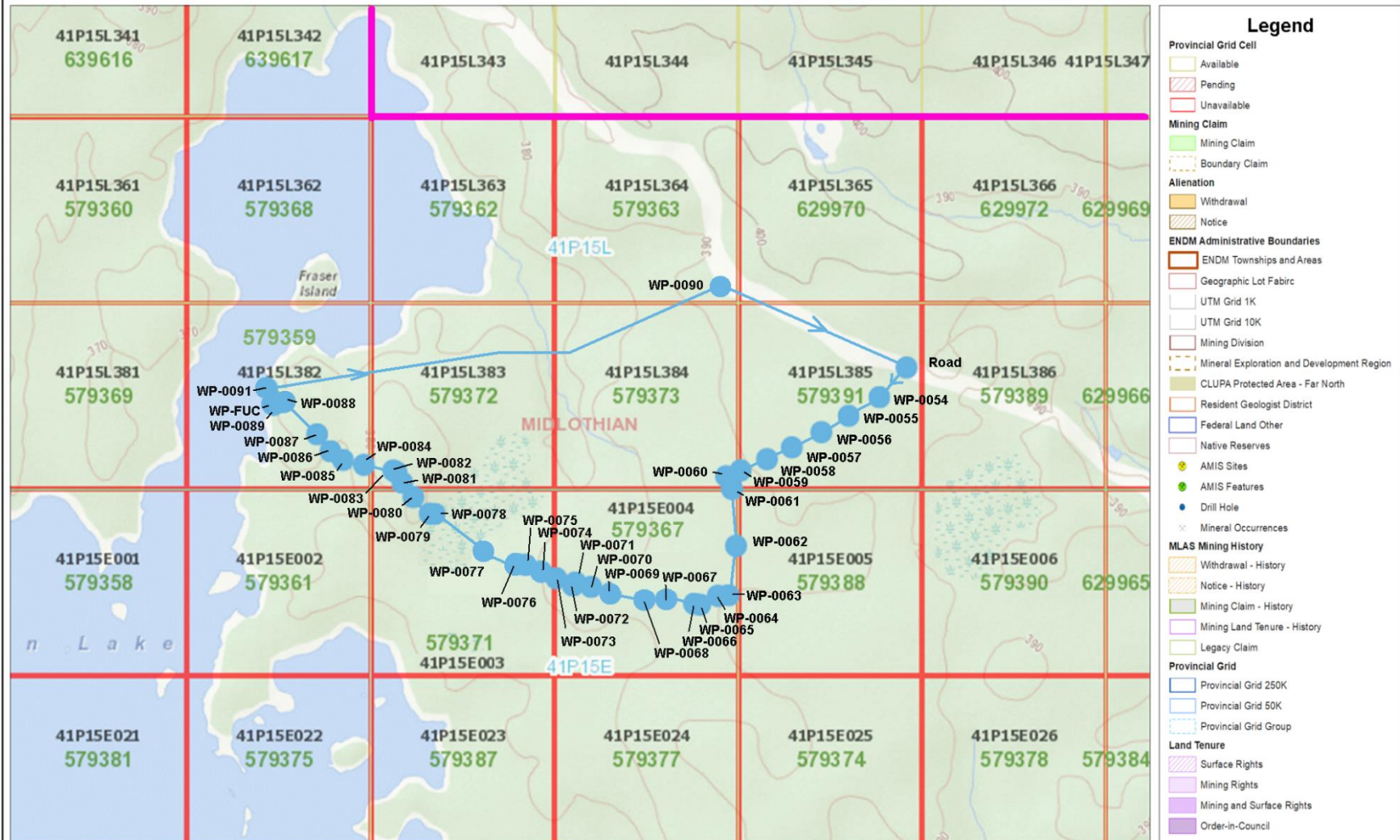
A compass and a Garmin GPS model GPSMAP 66st were used to navigate. The GPS unit was set to NAD83, Zone 17. Waypoints (WP) for the traverse were periodically recorded and are listed in Table 1.

One rock sample was collected during the traverse. All rock samples from the property were delivered to AGAT Laboratory for analyses. The lab is in Mississauga, Ontario. All rock samples were Fire Assayed for gold using a 50 gram charge and finished by Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES) to measure the gold concentration. Assay certificates from the lab are appended to this report.

Rock sample locations, descriptions and assay results are also presented in Table 1 and plotted with geology and surface features on the appended map at a scale of 1 : 5,000.

Figure 7.  
Traverse Map  
NE Midlothian Lake

Notes: Midlothian Property  
Midlothian Twp., Ontario



### Legend

- Provincial Grid Cell**
  - Available
  - Pending
  - Unavailable
- Mining Claim**
  - Mining Claim
  - Boundary Claim
- Alienation**
  - Withdrawal
  - Notice
- ENDM Administrative Boundaries**
  - ENDM Townships and Areas
  - Geographic Lot Fabric
  - UTM Grid 1K
  - UTM Grid 10K
  - Mining Division
  - Mineral Exploration and Development Region
  - CLUPA Protected Area - Far North
  - Resident Geologist District
  - Federal Land Other
  - Native Reserves
- AMIS Sites**
  - AMIS Sites
  - AMIS Features
- Drill Hole**
  - Drill Hole
- Mineral Occurrences**
  - Mineral Occurrences
- MLAS Mining History**
  - Withdrawal - History
  - Notice - History
  - Mining Claim - History
  - Mining Land Tenure - History
  - Legacy Claim
- Provincial Grid**
  - Provincial Grid 250K
  - Provincial Grid 50K
  - Provincial Grid Group
- Land Tenure**
  - Surface Rights
  - Mining Rights
  - Mining and Surface Rights
  - Order-in-Council

- WP-0080
- GPS WAYPOINT Traverse Line & Direction
- Property Boundary

0 1 : 20,000 0.68 km

Projection: Web Mercator

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Table 1. Waypoint &amp; Rock Sample Locations, NAD 83 Zone 17

oc = outcrop September 17, 2020

Waypoint	Easting	Northing	Claim Cell	Rock Sample Number	Assays Gold ppm	Notes
Road	502294	5307341	579391 41P15L385			Stairs Mine Road, flat, low, mixed forest, birch, spruce, balsam, cedar no outcrop, boulder till
0054	502226	5307267	579391 41P15L385			Base of gentle north facing slope, no outcrop, till, spruce, balsam, birch
0055	502147	5307220	579391 41P15L385			Old road 20°, top of hill reforested spruce, no oc
0056	502078	5307180	579391 41P15L385			Top of hill facing SW, till, spruce, balsam, birch
0057	502004	5307142	579391 41P15L385			flat, till, spruce, balsam, birch no oc
0058	501940	5307113	579391 41P15L385			Gentle slope SW, till, spruce, balsam, birch
0059	501873	5307085	579391 41P15L385			Low, boulder till, alders, spruce, balsam, birch
0060	501836	5307070	579373 41P15L384			Low, alders, spruce, balsam, birch, hemlock no oc
0061	501851	5307039	579373 41P15L384			Flat, birch, alders no outcrop
0062	501862	5306897	579367 41P15E004			Base of north facing slope, possible esker N-S, poplar no oc
0063	501843	5306775	579367 41P15E004			West side of esker? gentle slope SW no oc
0064	501815	5306773	579367 41P15E004			Base of slope, birch, spruce, balsam, till no oc
0065	501770	5306751	579367 41P15E004			Low, cedar birch, hemlock, birch, spruce, balsam
0066	501755	5306753	579367 41P15E004			Rise, boulder till, spruce, balsam, birch no oc
0067	501684	5306766	579367 41P15E004			Outcrop. Sandstone & conglomerate, strike 86°, 84°N
0068	501629	5306764	579367 41P15E004			Boulders, rubble crop, spruce, balsam, birch
0069	501543	5306780	579367 41P15E004			Top of NW facing slope, till, spruce, balsam, birch
0070	501495	5306795	579367 41P15E004			base of slope, low cedar, alders, birch no oc
0071	501454	5306806	579367 41P15E004			Base of steep SE facing slope no oc
0072	501447	5306799	579367 41P15E004			Top of hill, diabase
0073	501404	5306816	579367 41P15E004			Hummocky, base of W facing slope, cedar low
0074	501366	5306833	579371 41P15E003			Base of E facing slope
0075	501326	5306851	579371 41P15E003			Outcrop 10 x 5 m arkose 82°, 82°N
0076	501303	5306845	579371 41P15E003			Cedar low, wet no oc
0077	501220	5306885	579371 41P15E003			Low, wet spruce no oc
0078	501095	5306976	579371 41P15E003			Base of east facing slope, moderate steep, birch, spruce
0079	501083	5306977	579371 41P15E003			On slope, large boulders/ outcrop? Conglomerate.
0080	501042	5307018	579371 41P15E003	ML-36	0.003	Hummocky, very large boulder, conglomerate with 1-2% fine py & cpy
0081	501013	5307054	579372 41P15L383			Several outcrops, greywacke-arkose, hummocky
0082	500999	5307080	579372 41P15L383			Several small outcrops at top of W facing slope, conglomerate
0083	500991	5307085	579359 41P15L382			Diabase strike 18°, several outcrops
0084	500916	5307098	579359 41P15L382			Base of steep slope, low cedar, alders, boulders
0085	500863	5307111	579359 41P15L382			Slight rise, till, spruce, balsam, cedar
0086	500831	5307132	579359 41P15L382			Conglomerate outcrop
0087	500797	5307174	579359 41P15L382			Greywacke and conglomerate, strike 80°, dip 90° trace py
0088	500712	5307255	579359 41P15L382			Greywacke and conglomerate outcrop, cedar, balsam
0089	500683	5307251	579359 41P15L382			Greywacke and conglomerate outcrop, cedar, balsam
Fuc	500686	5307247	579359 41P15L382			Conglomerate outcrop, fuchsite pebbles? cedar, balsam
0091	500670	5307289	579359 41P15L382			Conglomerate outcrop beside lake, 10x5 m, strike 168°, dip 62°E



## Survey Results

The area prospected northeast of Midlothian Lake has gentle topography which gradually becomes more rugged with increasing outcrop exposure towards Midlothian Lake. The area west of the Stairs Mine Road is covered by boulder till and mixed forest consisting of mature birch, spruce, balsam and cedar trees. Several overgrown roads crossing the traverse line indicate the area has been logged in the past two decades.

No outcrops were found for a distance of 600 metres from the Stairs Mine Road. The first outcrop was marked at WP-0067 and consisted of sandstone and conglomerate striking  $86^{\circ}$  and dipping  $84^{\circ}$ N. Boulder-rubble crop consisting of conglomerate present over the next 50-100 metres suggests more outcrops occur in this area. Small hills also give rise to hummocky topography with cedar filled lows.

A diabase dike was marked by WP-0072.

An outcrop of arkose striking  $82^{\circ}$  and dipping  $82^{\circ}$ N was marked with WP-0075. The outcrop is situated on the east side of a wide northeast trending, wet and open to cedar filled lineament. A steep hill with boulders and rubble crop of conglomerate runs along the west side of the lineament. On the top of the hill, some of the boulders are very large and traces of fine pyrite and possible chalcopyrite can be found (figure ##). Rock sample ML- 36 was collected at WP-0080 and assayed 0.003 ppb Au. Several small outcrops of sandstone were found within 50 metres of the boulder. Conglomerate and an outcrop of diabase occur within 100 metres of the rock sample site. The diabase dike at WP-83 strikes  $18^{\circ}$ .

There are many outcrops of conglomerate and sandstone near Midlothian Lake and the terrain is rugged. A large outcrop of conglomerate on the lake shore was found to strike  $168^{\circ}$  and dips  $62^{\circ}$ E. Carbonate alteration and green mica was not observed, although several light green pebbles in a conglomerate outcrop marked at WP-FUC maybe fine fuchsite.

Due to time, not much effort was made to prospect on the traverse back to the Stairs Mine Road. On the return trip, it was noted many outcrops occur between Midlothian Lake and the northeast extension of the wide lineament situated between WP-75 and WP-78.



Sample site ML-36 501042mE, 5307018mN



Rock Sample ML-36, 0.003 ppb Au

Figure 8.



**Figure 9. Conglomerate, east shore of Midlothian Lake, WP-0091**

## Discussion of Results

Outcrops northeast of Midlothian Lake strike an average of 80° and dip steeply north. Closer to the lake, outcrops strike towards the northwest and dip steeply northeast. This could be indicative of a fault in the area, possibly occurring in the wide lineament situated to the east of the lake.

The outcrops observed during this traverse do not have widespread carbonate alteration, quartz veining and sulphides present compared to similar conglomerates situated south of Midlothian Lake. Also, the green mica occurrence reported on OGS Map 3772 was not located. It is possible such zones do exist in the northeast section of the property and additional prospecting and mapping is required to confirm this.


## Conclusions and Recommendations

Further prospecting and mapping are required in the northeast section of the Midlothian Property to establish the mineral potential of the area.

An estimated cost for the survey is \$15,000. A budget for the proposed work is:

Geological mapping & prospecting	\$13,000
Rock Assays	<u>2,000</u>
	\$15,000

Respectfully Submitted,

  
**Robert James Dillman** P.Ge  
**Arjadee Prospecting**



Robert Dillman B.Sc. P.Ge.

December 29, 2021

## References

- Baker, C.J., Goodwin, T. and Tykajlo, R., 1997.** Report On The 1995-1996 Geological, Geochemical and Geophysical Exploration At Doon Property (Project 4057), Matachewan Area (NTS 41P/15). Unpublished assessment report: 41P15NW0014.
- Bright, E. G. 1970.** Geology of Halliday and Midlothian Townships. Geological Report 79. Ontario Department of Mines.
- Marshal, H.I. 1947.** Preliminary report on the geology of Midlothian Township, District of Timiskaming. Report P.R 1947-1. Ontario Department of Mines.
- Préfontaine, S. and Robichaud, L. 2013.** Precambrian geology of Midlothian Township; Ontario Geological Survey, Preliminary Map P.3772, scale 1:20 000.
- Prefontaine, S. 2011.** Geology and mineral potential of Midlothian Township, Halliday Dome, Abitibi greenstone belt; in Summary of Filed work and other activities 2011, Ontario Geological Survey, Open File Report 6270, p 4-1 to 4-12.
- Rattew, A. R. 1967.** Airborne Geophysical Survey of Portions of Midlothian and Doon Townships, Ontario. On Behalf of B. W. Lang. Survey by: Canadian Aero Mineral Surveys Limited. Unpublished assessment report: 41P15NW005

Robert J. Dillman P.Ge, B.Sc.  
ARJADEE PROSPECTING  
8901 Reily Drive, Mount Brydges, Ontario, Canada, N0L1W0  
Phone/ fax (519) 264-9278

**CERIFICATE of AUTHOR**

I, Robert J. Dillman, Professional Geologist, do certify that:

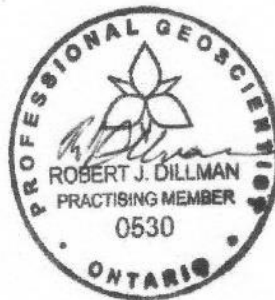
1. I am the President and the holder of a Certificate of Authorization for:  
  
ARJADEE PROSPECTING  
8901 Reily Drive, Mount Brydges, Ontario, Canada N0L1W0
2. I graduated in 1991 with a Bachelor of Science Degree in Geology from the University of Western Ontario.
3. I am an active member of:  
  
Professional Geoscientists of Ontario, PGO  
Prospectors and Developers Association of Canada, PDAC
4. I have been a licensed Prospector in Ontario since 1984.
5. I have worked continuously as a Professional Geologist for 30 years.
6. Unless stated otherwise, I am responsible for the preparation of all sections of the Assessment Report titled:  
  
REPORT ON A PROSPECTING TRAVRSE, NORTHEAST MIDLOTHIAN LAKE AREA  
MIDLOTHIAN LAKE PROPERTY: LARDER LAKE MINING DIVISION, MIDLOTHIAN TOWNSHIP,  
ONTARIO  
dated, December 28, 2021
7. I am not aware of any material fact or material change with respect to the subject matter of the Assessment Report that is not contained in the Assessment Report and its omission to disclose makes the Assessment Report misleading.

Dated this 31th day of December 2021



**Robert James Dillman**  
**Arjadee Prospecting**

**P.Ge**



CLIENT NAME: ROBERT DILLMAN  
8901 REILY DRIVE  
MOUNT BRYDGES, ON N0L 1W0  
519-264-9278

ATTENTION TO: ROBERT DILLMAN

PROJECT: Midlothian

AGAT WORK ORDER: 20T658893

SOLID ANALYSIS REVIEWED BY: Sherin Moussa, Senior Technician

DATE REPORTED: Nov 04, 2020

PAGES (INCLUDING COVER): 11

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

**\*NOTES**

Sample ML-36  
NE Midlothian  
Lake Area

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



**Certificate of Analysis**

AGAT WORK ORDER: 20T658893  
PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
http://www.agatlabs.com

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

**(200-) Sample Login Weight**

DATE SAMPLED: Oct 01, 2020      DATE RECEIVED: Oct 02, 2020      DATE REPORTED: Nov 04, 2020      SAMPLE TYPE: Rock

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Sample Login Weight kg 0.01
ML-1 (1510264)		1.8878
ML-2 (1510265)		1.6703
ML-3 (1510266)		2.9444
ML-4 (1510267)		2.9539
ML-5 (1510268)		1.5933
ML-6 (1510269)		1.8404
ML-7 (1510270)		1.9479
ML-8 (1510271)		1.9917
ML-9 (1510272)		2.6681
ML-10 (1510273)		0.5319
ML-11 (1510274)		0.4137
ML-12 (1510275)		1.1501
ML-13 (1510276)		1.5793
ML-14 (1510277)		2.0276
ML-15 (1510278)		2.0442
ML-16 (1510279)		2.5128
ML-17 (1510280)		2.2099
ML-18 (1510281)		1.8629
ML-19 (1510282)		2.0634
ML-20 (1510283)		1.5745
ML-21 (1510284)		1.8476
ML-22 (1510285)		0.4298
ML-23 (1510286)		1.5969
ML-24 (1510287)		1.1463
ML-25 (1510288)		1.9677
ML-26 (1510289)		2.0501
ML-27 (1510290)		2.0415
ML-28 (1510291)		0.5661
ML-29 (1510292)		2.2187
ML-30 (1510293)		1.0119
ML-31 (1510294)		1.1802

**Certified By:**

*Sherin Moussa*





# Certificate of Analysis

AGAT WORK ORDER: 20T658893

PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)601-9998  
FAX (905)601-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

## (200-) Sample Login Weight

DATE SAMPLED: Oct 01, 2020

DATE RECEIVED: Oct 02, 2020

DATE REPORTED: Nov 04, 2020

SAMPLE TYPE: Rock

Sample ID (AGAT ID)	Analyte:	Sample Login Weight
	Unit:	kg
	RDL:	0.01
ML-32 (1510295)		2.4386
ML-33 (1510296)		1.1106
ML-34 (1510297)		0.6618
ML-35 (1510298)		1.3149
ML-36 (1510299)		0.6789
ML-37 (1510300)		1.5537
ML-38 (1510301)		2.2511
ML-39 (1510302)		1.1628
ML-40 (1510303)		2.3481
ML-41 (1510304)		2.6463
ML-42 (1510305)		2.4423
ML-43 (1510306)		0.9147
ML-44 (1510307)		2.7605
ML-45 (1510308)		1.6197
ML-46 (1510309)		1.0768
ML-47 (1510310)		1.8423
ML-48 (1510311)		0.6544
ML-49 (1510312)		1.7742
ML-50 (1510313)		1.2844
ML-51 (1510314)		2.0646
ML-52 (1510315)		1.7463

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

**Certified By:**



**Certificate of Analysis**

AGAT WORK ORDER: 20T658893

PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
http://www.agatlabs.com

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

<b>(202-121) Fire Assay - Metallic Gold - ICP Finish (1000g)</b>												
DATE SAMPLED: Oct 01, 2020			DATE RECEIVED: Oct 02, 2020			DATE REPORTED: Nov 04, 2020			SAMPLE TYPE: Rock			
Analyte:	Sample Login Weight	Sample Weight (+)	Sample Weight (-)	Au Assay (+) Fraction 1	Au Assay (+) Fraction 2	Au Assay (+) Fraction 3	Au Assay (+) Fraction 4	Au Assay (+) Fraction 5	Au Assay (-) Fraction 1	Au Assay (-) Fraction 2	Total Au	
Unit:	g	g	g	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g/t	
RDL:				0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Sample ID (AGAT ID)												
ML-47 (1510310)	1000	100	896	0.183	0.256	-	-	-	0.493	0.560	0.496	
ML-50 (1510313)	896.70	89.9	805	89.4	134	-	-	-	3.19	4.04	14.5	

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

**Certified By:**

*Sherin Mousa*



**AGAT** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 20T658893

PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

**(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)**

DATE SAMPLED: Oct 01, 2020

DATE RECEIVED: Oct 02, 2020

DATE REPORTED: Nov 04, 2020

SAMPLE TYPE: Rock

Sample ID (AGAT ID)	Analyte: Unit: RDL:	Au ppm 0.001
ML-1 (1510264)		0.003
ML-2 (1510265)		0.001
ML-3 (1510266)		0.002
ML-4 (1510267)		0.003
ML-5 (1510268)		0.002
ML-6 (1510269)		0.004
ML-7 (1510270)		0.027
ML-8 (1510271)		0.026
ML-9 (1510272)		0.002
ML-10 (1510273)		0.022
ML-11 (1510274)		0.001
ML-12 (1510275)		0.001
ML-13 (1510276)		<0.001
ML-14 (1510277)		0.001
ML-15 (1510278)		<0.001
ML-16 (1510279)		0.002
ML-17 (1510280)		<0.001
ML-18 (1510281)		0.002
ML-19 (1510282)		0.015
ML-20 (1510283)		0.001
ML-21 (1510284)		0.003
ML-22 (1510285)		0.001
ML-23 (1510286)		0.002
ML-24 (1510287)		0.002
ML-25 (1510288)		0.002
ML-26 (1510289)		<0.001
ML-27 (1510290)		<0.001
ML-28 (1510291)		0.003
ML-29 (1510292)		0.001
ML-30 (1510293)		<0.001
ML-31 (1510294)		0.001
ML-32 (1510295)		<0.001

**Certified By:**

*Sherin Moussa*



### Certificate of Analysis

AGAT WORK ORDER: 20T658893  
PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

**(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)**

DATE SAMPLED: Oct 01, 2020	DATE RECEIVED: Oct 02, 2020	DATE REPORTED: Nov 04, 2020	SAMPLE TYPE: Rock
	Analyte: Au		
	Unit: ppm		
Sample ID (AGAT ID)	RDL: 0.001		
ML-33 (1510296)	<0.001		
ML-34 (1510297)	<0.001		
ML-35 (1510298)	0.002		
ML-36 (1510299)	0.003		
ML-37 (1510300)	0.005		
ML-38 (1510301)	0.007		
ML-39 (1510302)	0.018		
ML-40 (1510303)	0.002		
ML-41 (1510304)	0.006		
ML-42 (1510305)	0.005		
ML-43 (1510306)	0.377		
ML-44 (1510307)	0.010		
ML-45 (1510308)	0.074		
ML-46 (1510309)	0.108		
ML-47 (1510310)	0.527		
ML-48 (1510311)	0.074		
ML-49 (1510312)	0.072		
ML-50 (1510313)	>10		
ML-51 (1510314)	0.104		
ML-52 (1510315)	0.031		

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

**Certified By:**



**AGAT** Laboratories

### Certificate of Analysis

AGAT WORK ORDER: 20T658893

PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

#### Sieving - % Passing (Crushing)

DATE SAMPLED: Oct 01, 2020

DATE RECEIVED: Oct 02, 2020

DATE REPORTED: Nov 04, 2020

SAMPLE TYPE: Rock

	Analyte:	Pass %
	Unit:	%
Sample ID (AGAT ID)	RDL:	0.01
ML-1 (1510264)		78.74

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

**Certified By:**



**AGAT** Laboratories

### Certificate of Analysis

AGAT WORK ORDER: 20T658893

PROJECT: Midlothian

5623 McADAM ROAD  
MISSISSAUGA, ONTARIO  
CANADA L4Z 1N9  
TEL (905)501-9998  
FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

Sieving - % Passing (Pulverizing)			
DATE SAMPLED: Oct 01, 2020	DATE RECEIVED: Oct 02, 2020	DATE REPORTED: Nov 04, 2020	SAMPLE TYPE: Rock
	Analyte: Pass %		
	Unit: %		
Sample ID (AGAT ID)	RDL:	0.01	
ML-1 (1510264)		88.89	

Comments: RDL - Reported Detection Limit

Analysis performed at AGAT 5623 McAdam Rd., Mississauga, ON (unless marked by \*)

**Certified By:**



**AGAT** Laboratories

**Quality Assurance - Replicate**  
**AGAT WORK ORDER: 20T658893**  
**PROJECT: Midlothian**

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

**(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)**

Parameter	REPLICATE #1				REPLICATE #2				REPLICATE #3							
	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD	Sample ID	Original	Replicate	RPD				
Au	1510264	0.003	0.003	0.0%	1510278	< 0.001	< 0.001	0.0%	1510303	0.002	0.002	0.0%				



**Quality Assurance - Certified Reference materials**  
 AGAT WORK ORDER: 20T658893  
 PROJECT: Midlothian

5623 McADAM ROAD  
 MISSISSAUGA, ONTARIO  
 CANADA L4Z 1N9  
 TEL (905)501-9998  
 FAX (905)501-0589  
<http://www.agatlabs.com>

CLIENT NAME: ROBERT DILLMAN

ATTENTION TO: ROBERT DILLMAN

**(202-552) Fire Assay - Trace Au, ICP-OES finish (50g charge) (ppm)**

Parameter	CRM #1 (ref.GSP6C)				CRM #2 (ref.GS7F)												
	Expect	Actual	Recovery	Limits	Expect	Actual	Recovery	Limits									
Au	0.767	0.746	97%	90% - 110%	6.9	6.8	98%	90% - 110%									





## Method Summary

CLIENT NAME: ROBERT DILLMAN

AGAT WORK ORDER: 20T658893

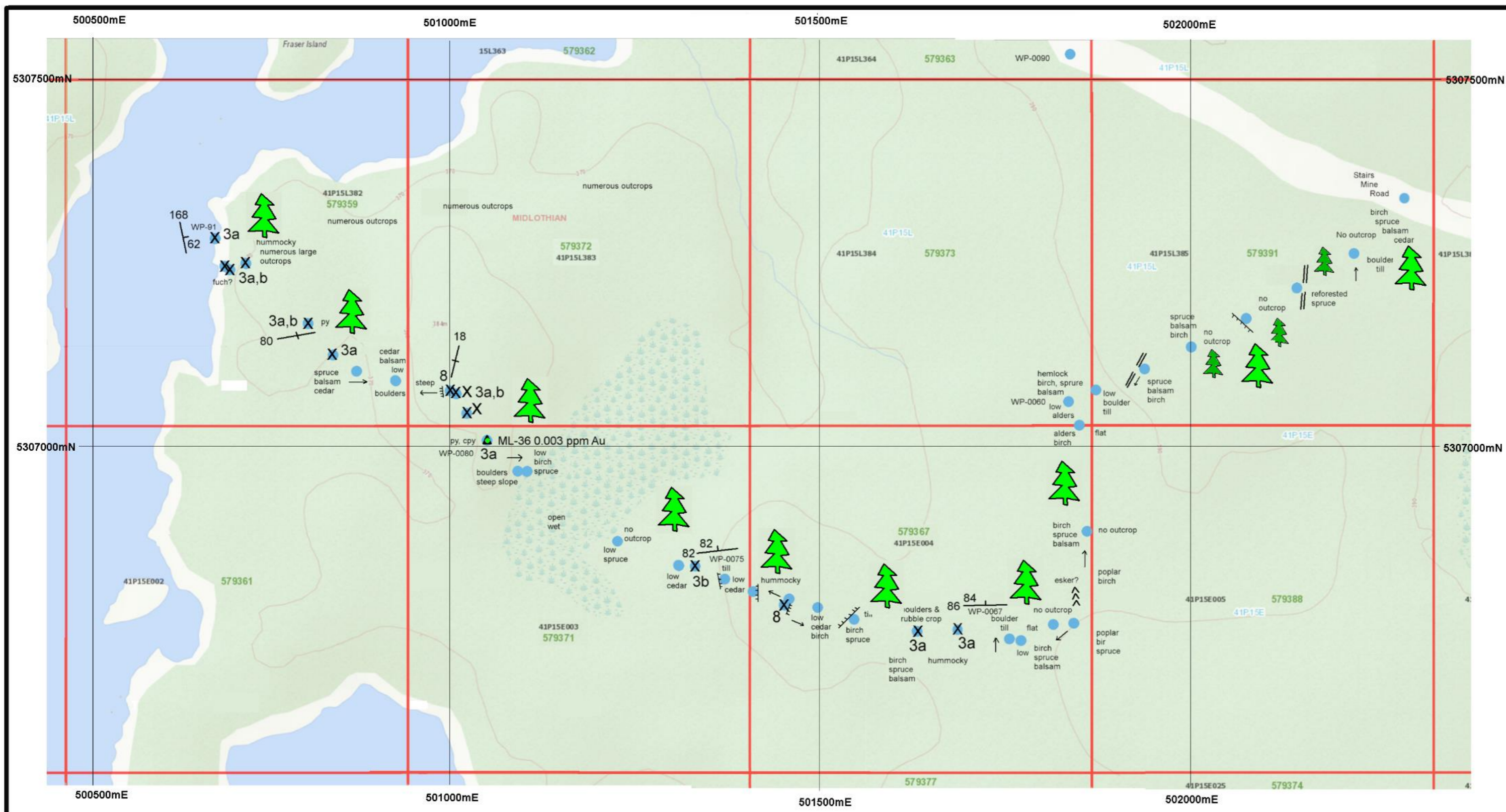
PROJECT: Midlothian

ATTENTION TO: ROBERT DILLMAN

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Solid Analysis</b>			
Sample Login Weight	MIN-12009		BALANCE
Sample Weight (+)	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	BALANCE
Sample Weight (-)	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	BALANCE
Au Assay (+) Fraction 1	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Au Assay (+) Fraction 2	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Au Assay (+) Fraction 3	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Au Assay (+) Fraction 4	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Au Assay (+) Fraction 5	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Au Assay (-) Fraction 1	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Au Assay (-) Fraction 2	MIN-200-12040	Johnson, W.: Laboratory Sampling of Geological Mat	ICP/OES
Total Au	MIN-200-12040		N/A
Au	MIN-12006, MIN-12004		ICP/OES
Pass %			BALANCE



N

- X Outcrop
- 8 Diabase
- 3a Conglomerate
- 3b Sandstone
- ▲ Boulder
- Higher Ground
- Trail, road
- Drainage
- GPS Waypoint
- Rock Sample Site
- Large Trees
- Reforested Trees
- py Pyrite
- cpy Chalcopyrite

<b>GEOLOGY MAP: NORTHEAST MIDLOTHIAN LAKE AREA</b>	
<b>MIDLOTHIAN LAKE PROPERTY MIDLOTHIAN TWP., ONTARIO</b>	
Survey By: JR, RJD	Map By: RJD
Survey Date: SEPT 2020	Scale: 1 ; 5,000