

We are committed to providing [accessible customer service](#).

If you need accessible formats or communications supports, please [contact us](#).

Nous tenons à améliorer [l'accessibilité des services à la clientèle](#).

Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez [nous contacter](#).



PROSPECTING REPORT ON THE WHIRLWIND JACK PROPERTY

Dedee, Faulkenham Lake,
Medicine Stone, & Rainfall Lakes Areas
NTS 52K13E,F, & 52L16A,B,G,H
439800E 5639000N
Approx.. 50⁰ 53' 58" N 93⁰ 51' 22" W
UTM NAD 83 Zone 15N
Red Lake District
North-west Ontario

-Prepared for-

Red Lake Gold Inc.
815 Hornby Street, Suite 605
Vancouver, British Columbia
V6Z 2E6

-Authored by-

T.N.J. Hughes, P. Geo.
Antediluvial Consulting Inc.

Vancouver, British Columbia,
Canada

18.02.20

Contents

SUMMARY	1
1.0 INTRODUCTION	2
2.0 PROPERTY DETAILS	2
2.1 Location & Access	2
2.2 Topography & Vegetation	3
2.3 Claim Status	3
3.0 HISTORY	5
4.0 REGIONAL GEOLOGY	10
5.0 PROPERTY GEOLOGY	14
6.0 2019 PROSPECTING	22
6.1 SUMMARY OF FINDINGS	23
Area 1	23
Area 2	24
Area 3	25
Area 4	26
Area 5	27
Area 6	28
7.0 RESULTS	74
8.0 CONCLUSIONS	81
9.0 RECOMMENDATIONS	83
10.0 REFERENCES	84
11.0 Statement of Qualifications	86

Table of figures

Figure 1 Property Location	2
Figures 2a,b Whirlwind Jack property with prospected/traversed claims	4
Figure 3 Regional Geology	10
Figure 4 Uchi Subprovince	11
Figure 5 Property Geology	15
Figure 6 Property Geology, western area	17
Figure 7 Property Geology, centre-east.	19
Figure 8 Compilation geology map for centre-east of property	20
Figure 9 Regional Location	22
Figure 10 Traverse areas	23
Figure 11 EM conductor trends, Grandcru, 2004	26
Figure 12 Generalised Geology, with EM Conductor, Grandcru, 2004	27
Figures 13-27	60
Table 1 Waypoint locations.....	29
Table 2 Sample Summary.....	75
Table 3 Sample Results.....	76

APPENDIX

1. Actlabs Certificate pdf format
2. Expenditures – Invoices/Receipts pdf format
3. Claim List

SUMMARY

From the 23rd September to the 3rd October, 2019. T. Hughes and M. Long, geologists, prospected Red Lake Gold Inc.'s Whirlwind Jack property. Located approximately 11 km south south-west of Red Lake, Ontario, it comprises 1042 single cell mining claims, in the Dedee Lake, Rainbow Lake, Medicine Stone Lake and Faulkenham Lake Administrative areas, north-western Ontario. Access off Highway 105 is afforded by a trail leading West and south-west from a vehicle park at Highway 105 and Bug Lake creek, and ultimately to the North tip of a lake in the north-east of the claim block. Unmaintained old logging roads off the Dixie Lake haul road, located just South of Highway 105 and Stone Lake, provide access to south-eastern areas. Central and western areas of the property can be reached by float plane onto a number of lakes. A cabin, owned by Medicine Stone Lodge situated at the East end of Bug Lake, provided lodging and boats for access in the area, including onto Alcock, Lower Bug, Clear, and Insect lakes.

Far western areas may also be accessed by float plane, flying into Rainfall, Longlegged and Dedee lakes.

Prospecting work covered an assessment of lithology, stratigraphy, terrain and cover to determine the viability of a more extensive and comprehensive mapping and geochemical sampling programme. Traverses used handheld GPS for navigation. A total of 28 samples were taken, with all analysed for Au and a multi-element (ICP) package. The majority of samples returned less than 5 ppb Au, with one returning 24 ppb Au. All samples were representative grabs of the local lithology, taken with rock hammers. The UTM system used for location recording was NAD 83, Zone 15N.

The report provides traverse routes in tabulated and digital/visual format, with pertinent notes on lithology, terrain, and natural vegetation.

A programme of geochemical soil sampling and airborne magnetic surveying is recommended, with budget included. Follow-up ground work should be completed, prior to diamond drilling. Recommended is cross-property prospecting, detailed mapping and lithological sampling over areas defined by a broader soil geochemical programme. In areas with a suitable geophysical signature and significant cover, IP surveys should be considered.

1.0 INTRODUCTION

The Whirlwind Jack property is located 10 km South of Red Lake, Thunder Bay Mining Division, north-west Ontario. The property, with property epicentre at UTM Zone 15N NAD83, co-ordinates 439800E 5639000N, comprises a contiguous claim block of 1042 single cell mining claims.

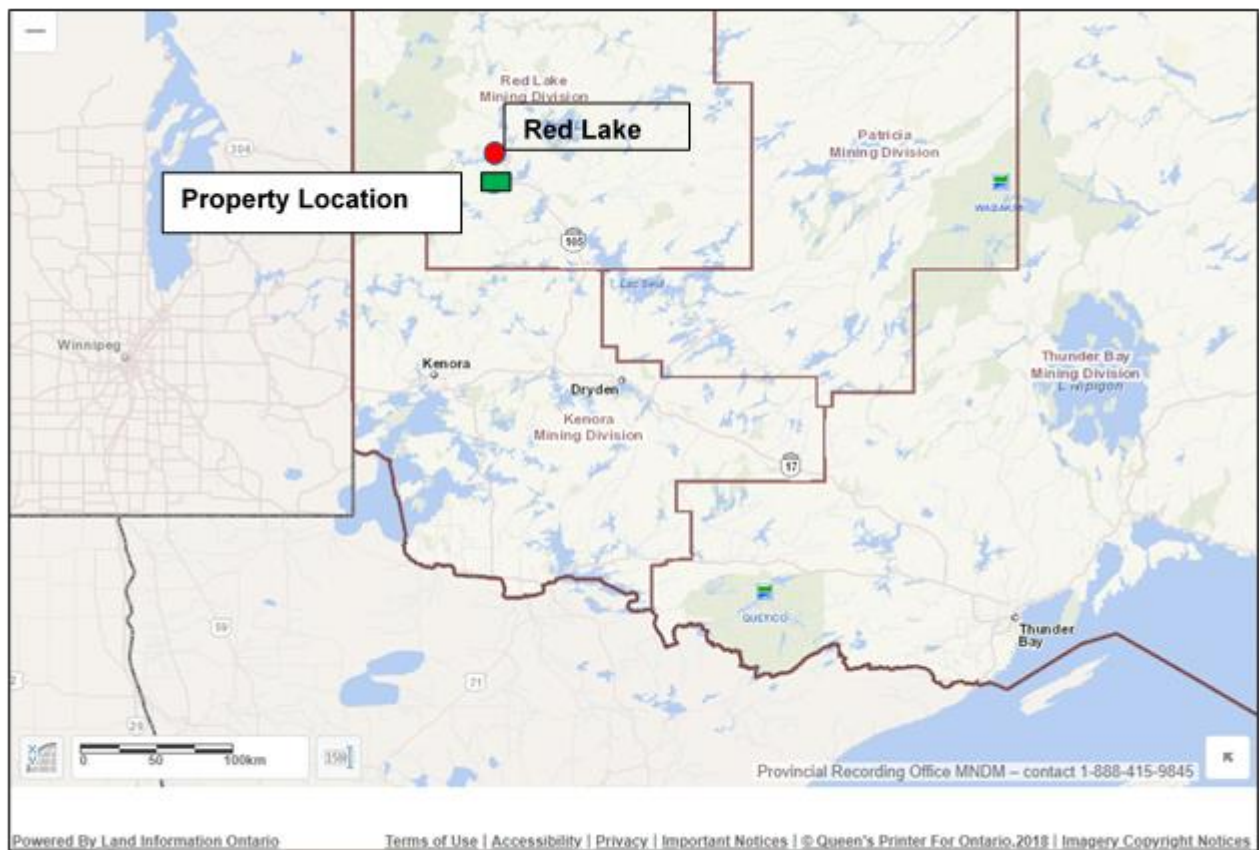
From 23rd September to 3rd October, a programme of prospecting and sampling was completed on the Whirlwind Jack property. This programme forms the basis of this report.

2.0 PROPERTY DETAILS

2.1 Location & Access

The claims are located 10 km. South of the Town of Red Lake, within the Red Lake Mining Division, (Fig. 1), property epicentre at UTM Zone 15N NAD83 co-ordinates 15439800E 5639000N, NTS map sheet 52K/13.

Figure 1 Property Location



Access is afforded by float-plane to several lakes on the property, with ground access by trails or cross-country to northern and eastern portions of the block, and vehicle access to the south-east portion of the block using the Dixie Lake road, off Highway 105.

The majority of the property can be accessed by boat with several portages providing access between several of the larger bodies of water. Creeks are generally shallow, providing limited navigation. The author did note several skidoo trails in the area under investigation, but their overall suitability is unknown.

Red Lake provides a small range of services, skilled labour, supplies and accommodations, with the regional centres of Thunder Bay and Winnipeg providing more comprehensive technical and logistical support and sources of equipment and labour.

2.2 Topography & Vegetation

The terrain is fairly typical for the Pre-Cambrian of north-west Ontario, with low rolling hills and swamp/marsh. Property elevation ranges from 388 to 435 metres above sea level ('asl'). Natural vegetation has been dramatically modified by logging, dating back nearly 100 years, periodic fires (notably the Red Lake fire of 1980), several infestations resulting in near complete loss of mature balsam, and more recently jackpine budworm. Storms and associated microbursts have caused local, significant blow down. Hill tops are generally clearer, with relict jackpine predominant; otherwise, the area now supports a mixed bush of spruce, poplar, pine, birch and alders with almost no old growth remaining.

The climate is classified as boreal, (Dfc under the Koppen classification system). Red Lake climate data (eldoradoweather.com), indicates minimum and maximum daily average temperatures of, respectively, -19.6° C. and 18.1° C, maximum average snow depths of 33.4 cm (January) and maximum rainfall of 87.3 mm (June).

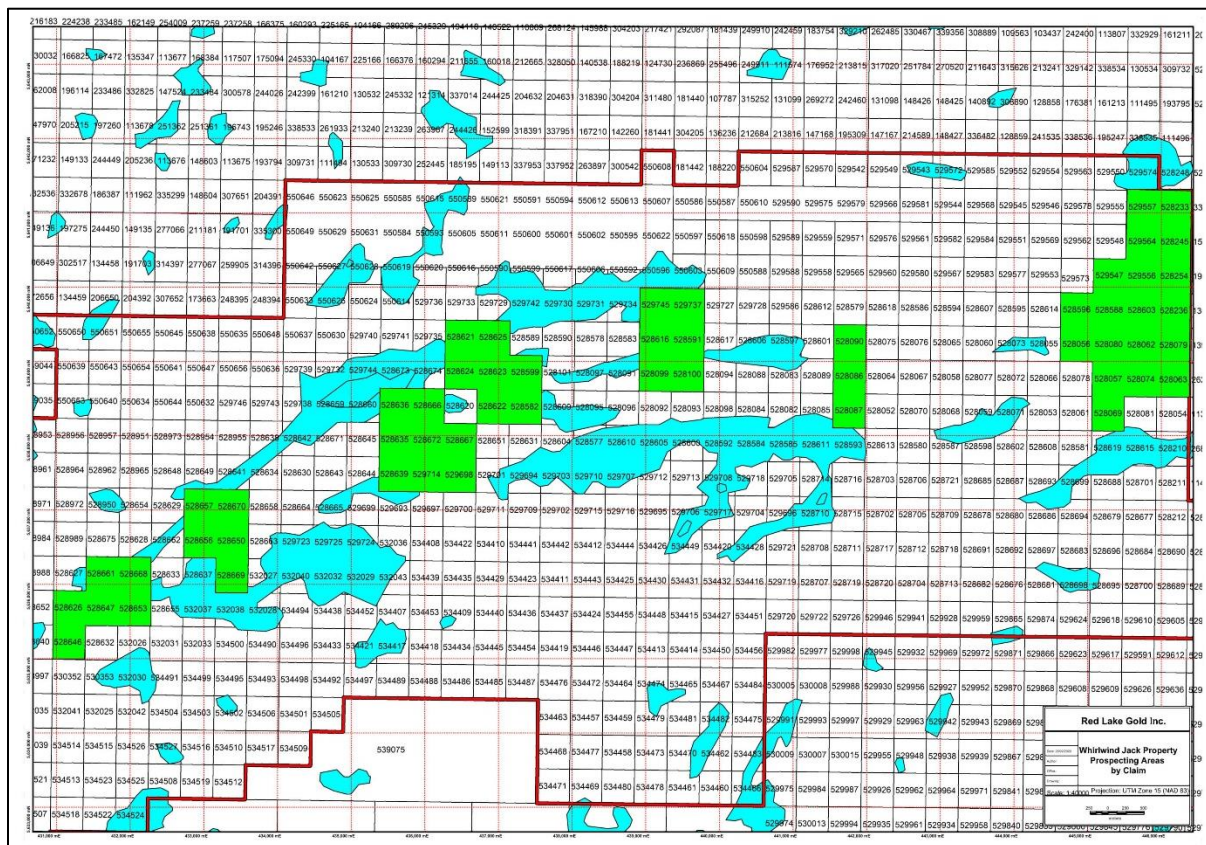
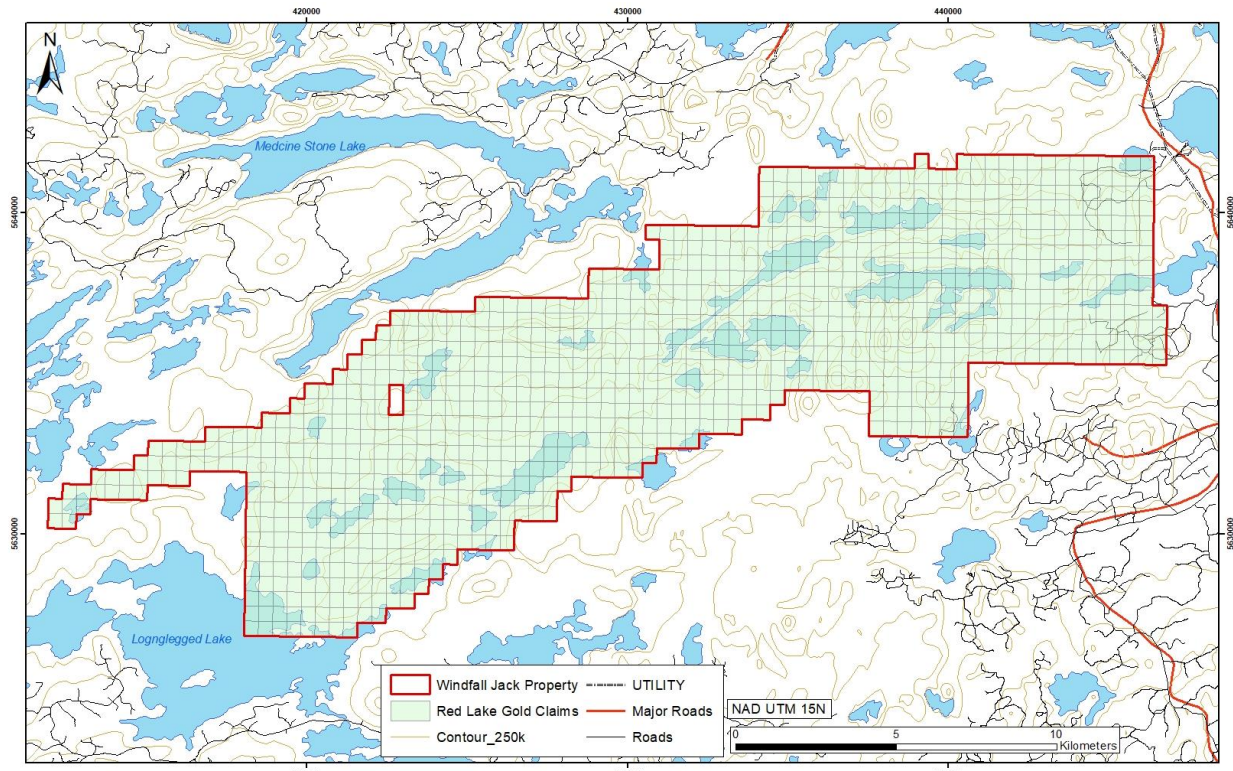
2.3 Claim Status

The property comprises a total of 1042 active Single Cell Mining claims, with Red Lake Gold Inc. the registered holder (100%).

The claims are located in the Dedee Lake, Rainbow Lake, Medicine Stone Lake and Faulkenham Lake Administrative areas, of North-west Ontario. See overleaf, fig. 2

Due to the large number of claims, additional claim information is provided as a separate (excel) file, 'RGLD Claim List'.

Figures 2a,b Whirlwind Jack property with prospected/traversed claims



3.0 HISTORY

1973 Selco Mining Division in partnership with Cochenour Willans Gold Mines and Coin Lake Gold Mines, carried out reconnaissance and grid mapping in the Longlegged-Rainfall lakes area in the south-west of the Whirlwind Jack claims, this as part of several programmes executed in their *Sydney Lake Project*. A number of sequences of open to tight folded ortho-, paragneiss, iron formation, amphibolite and pyroxenite, granite gneiss, granite, diorite and migmatite were mapped. Minor, poorly documented pyrite, pyrrhotite, magnetite and molybdenite mineralisation was noted. A single, ?-X-ray drill hole, L73-7-1, was shown on Claim Group 7, East of Rainfall Creek, between the two major expanses of Longlegged Lake, (and West of Dedee Lake), but the report provides no other information. The drill hole appears to have targeted pyrite-pyrrhotite mineralised amphibolite (gneiss).

1973 Selco Mining Division (Cochenour – Coin – Selco) drilled six holes for a total of 923 feet, as follows:

Group 3	LL-73-3-1	122 feet
Group 3	LL-3-73-2	172 feet
Group 5	LL-5-73-1	174 feet
Group 7	LL7-73-1	174 feet
Group 10	LL-10-73-1	175 feet
Group 11	LL-11-73-1	106 feet

Varying amounts of weak, trace to stringer pyrrhotite-pyrite were intersected, usually within amphibolite gneiss. Very minor sampling was reported, but no assays.

1974 Selco Mining Division (Cochenour – Coin – Selco) drilled two holes, numbers LL -2 -74 -1 and -2, on Longlegged Lake Group 2, claim KRL 357253. Hole 1 was drilled to a depth of 347 feet, hole 2, 209 feet. Pyrite, pyrrhotite, trace chalcopyrite and magnetite mineralisation were intersected in amphibolite (orthogneiss). No assays were reported. Another hole was drilled LL-4-74-1 on Group 4 claim, (KRL 357057), this to a depth of 279 feet. Disseminated and ‘blebby’ pyrrhotite and trace pyrite in paragneiss was intersected but no assays reported.

A single hole, LL-9-74-1 on Group 9 was drilled to a depth of 353 feet. Apparently, it tested a conductor, described as 30-40% mainly pyrrhotite, minor pyrite and occasional chalcopyrite over 0.7 feet. Sampled, no assays were reported from the hole which intersected paragneiss throughout.

A single hole, 128-foot hole, LL-17-74-1, was drilled on their Group 17 Block. Amphibolite gneiss, pegmatite, mylonite and feldspar-biotite gneiss were intersected. Results were not reported. The location was reported as Insect Lake, but no map was provided in the file. The Google Earth MNDM drill hole database has no location nearby, and the claim block is shown 1.2 km to the South. It appears the hole targeted a MaxMin EM anomaly.

1976 Selco conducted geophysical surveying on their Block 150 – 6, Dixie Lake area, located in the south-west quadrant of claim sheet M-2146, Faulkenham Lake. The Block covers ground immediately South of Bug Lake, extending East to the East end of Lower Bug Lake, and as far

South as the North shore of Clear Lake. A Geonics E.M. 17 horizontal loop unit with 400 ft coil separation using a frequency of 1600 cps (cycles per second), and a McPhar M-700 magnetometer were used. Several conductive zones were noted, with one considered to be caused by a bedrock conductor, and recommended for drilling. This conductor, trending around 080°, appears to be partially co-incident with anomalous MMI results and siliceous pyritic float later recorded by Precambrian Ventures (see below).

Similar geophysical surveying was completed on their 150 – 5 claim block, located in the south-east quadrant of the same map sheet. One strong in-phase anomaly with a very high direct magnetic correlation was noted on lines 1200W and 1600W, at approximately 300 ft. North. It was suggested it represents a (magnetic) iron formation, and a recommendation was made to drill this feature. Some ground investigations indicate the conductor may lie near a dacite-mafic volcanic contact. The grid is located immediately South of an elongate East-West wider portion the Bug Lake river, with access by a cut trail from Stone Lake, approximately 1 km to the south-east. Other grids were cut, 150 – 10, 150-11 with similar surveying thereon. Block 150 – 11 is located less than 400 metres South of an irregular isosceles triangular shaped (North-South) lake, a little over 1.2 km North of the West end of Stone Lake, and over 400 metres East of Block 150 – 5. An East-West trending conductive response was recorded, but a bedrock source could not be determined. Access was afforded by a cut trail North of Stone Lake, and a series of old logging roads leading West off Highway 105 at Stone Lake.

Block 150 – 10 is located just North of the Whirlwind Jack property.

1985 Aerodat Limited, on behalf of **Golden Terrace Resources**, flew a combined helicopter-borne magnetic and VLF-EM survey in the Dixie Lake Area. The survey covered an area from Bug Lake in the West, eastwards across Clear and Stone Lakes, North of Genessee Lake and over to Tote Road Lake, north-west of Pakwash Lake, West of Highway 105.

A series of ‘lenticular’ magnetic high features were outlined, and 13, possibly 14 conductors identified. These magnetic trends run along the ‘long axes’ of the west and centre blocks, with smaller and broader features considered to be late-stage intrusions.

1990 Noranda Exploration Co. Ltd. Staked 28 claims to cover a weak airborne EM-magnetic feature and carried out a geological survey. The area is located between Genessee and Pakwash lakes on what is currently the easternmost portion of the Whirlwind Jack property, extending eastwards.

The company mapped an east-west striking sequence of mafic and felsic volcanic rocks flanked to the North and South by felsic plutons. Massive and pillowed flows were mapped, plus flow-banded rhyolite and tuff. Metamorphic grade is amphibolite, with moderately well-defined gneissic texture developed. Several felsic dykes of granite, aplite and feldspar porphyry were reported to cut this sequence, and ‘weak shearing’ noted at several locales. The EM conductor was concluded to be co-incident with the felsic-mafic volcanic contact and a soil geochemical survey was recommended. No lithological sampling was reported.

1995 Inco Exploration and Technical Services Inc. conducted a multi-disciplinary exploration programme on their Loydex Resources Inc. option, aka Bug River property. The property was located immediately North of what is now the far north-east corner of the Whirlwind Jack claims, with a small overlap to the South.

The property covered a “newly discovered intense hydrothermal alteration zone within quartz phytic felsic volcanics. The alteration is spatially associated with a zone of massive pyrrhotite-pyrite.” (From the Inco report). Gridding, geological mapping, geophysical surveys (magnetometer and EM-57), and diamond drilling were carried out, but results were negative, with the sulphide zone hosting no (appreciable) copper and zinc. The option was dropped, however, there is no mention of the gold potential. The single drill hole, number 79841 was drilled less than 250 metres from Bug River, West of the Highway and the exit of the river into Gullrock Lake. The log reports no massive sulphides, only minor pyrite in felsic volcanic rocks, ICP analyses but no gold assays. The report also shows two Noramco diamond drill holes numbers NB-88-09 and -10 located respectively, approximately 250 and 725 metres North and north-west, of Bug River. Inco analyses included re-sampling of some of the Noramco core. All reported drilling was North of the Whirlwind Jack property.

1998 Noranda Exploration Co. Ltd. Continued work on their Bug River Project, with geological mapping, diamond drilling and borehole TEM (‘Transient electromagnetic) Surveying. The property essentially covered the Loydex option, though extending farther South onto what is now the north-eastern corner of the Whirlwind Jack property. The first phase focussed on sulphide mineralisation associated with iron formation, culminating with the drilling of two holes, BR98-1, and 98-2, the former intersecting said mineralisation, this on the Bug Lake West Grid, North of Bug River. The company considered the property to cover the western strike extension of the Dixie area felsic volcanic sequence, Dixie 17,18 and 19 and Joy Copper-Zinc occurrences in the Birch-Uchi greenstone belt.

The Phase II drilling comprised the completion of eight holes, BR98-2 to 98-10, for a total of 2,330 metres, intersecting a volcanic sequence of massive to pillowed mafic flows and massive to porphyritic intermediate to felsic volcanic, mainly pyroclastic rocks. Mineralised, often stringer pyrrhotite-pyrite quartz-sericite schist, magnetic mafic intrusion, and minor narrow massive to semi-massive sulphides were intersected in several holes. Five holes, numbers 1,2,3,4 and 7 were surveyed with a borehole Pulse TEM system. The poor base metal and precious metal (gold and silver results), and weak EM responses prompted the company to drop the option.

2004 Grandcru Resources Corporation performed magnetic surveying and 32.7 line km of Horizontal Loop E.M. (‘HLEM’) surveys on their Clear Lake property, Faulkenham Lake area. The magnetic survey defined a “group of more or less linear, discontinuous anomalies that coincide, on a gross scale with the conductive trend that crosses the grid. The strongest of these anomalies has a peak amplitude of 2500 nT. This trend, shown on figure 11, lies close to the volcanic-sedimentary contact as mapped by Thurston & Paktunc (1985). To the South of this trend/contact, within the volcanic terrain, the magnetic pattern is quite flat, with a few isolated magnetic highs with amplitudes up to 1000 nT.

“In the area underlain by metasediments north of the conductive/magnetic trend, the magnetic pattern is much more active. There are numerous erratically distributed magnetic highs, a few of that are linear and are presumed to be caused by formational units. The number and intensity of these anomalies increase progressively from east to west.

“In the northwest corner of the grid, presumed to be underlain by granodiorite, the magnetic pattern is again quite flat.

“The horizontal loop survey shows four separate conductors, which line up to form a more or less continuous trend along the volcanic-sedimentary contact. There is a possible structural disruption in the vicinity of line 700W, where the magnetic-conductive trend may be offset by 100 to 150 metres.

“Conductor A is 950 metres long, and is mostly narrow, with a section up to 60 metres wide between lines 1200W and 1500W. Apparent conductance is between 2 and 27 siemens. There is an irregular magnetic response, with alternating highs and lows, suggestive of concentrations of pyrrhotite.

“Conductor B is 200 metres long and up to 25 metres wide, with apparent conductance of up to 23 siemens. The magnetic response again features highs and lows.

“Conductor C is 150 metres long and is up to 15 metres wide, with much lower conductance, up to 6 siemens. It has no magnetic association.

“Conductor D has been traced for 1400 metres, and extends beyond the east end of the grid. It is very weak, and conductance calculations derived from in-phase/quadrature ratios would suggest a moderately good conductor at considerable depth, which would probably be misleading.

“It is probably narrow, but the amplitudes are so low that widths cannot be reliably measured. It loosely follows a number of magnetic anomalies, but it tends to flank them.” (From Grandcru report).

Grandcru concluded most if not all the conductors followed the trend of a mafic volcanic-clastic sediment contact trending east north-east, and recommended grid mapping, re-locating mineralised (pyritic) boulders described by Thomson (1946) and a single drill hole reported by Thurston and Paktunc (1985).

2009 Precambrian Ventures Ltd. On behalf of Precambrian, Mount Morgan Resources Ltd carried out a Mobile Metal Ions (MMI) geochemical survey over a portion of their Alcock property, (re-naming the property previously held by Grandcru), located just South of the eastern portion of Bug Lake. A total of 368 inorganic and organic samples were collected with a view to delineating precious and base metal anomalies. A number of ‘high-contrast base and metals anomalies were identified, though the majority were “areally restricted, single and multi-sample responses that are often restricted to one sampling transect.” One high contrast gold anomaly was identified as spatially related to pyritic, siliceous boulders, and the HLEM conductor (see above), apparently has no significant MMI response.

2010 Precambrian Ventures continued exploration with a programme of prospecting, rock sampling and a follow-up MMI survey. Focus was on prospecting on and around siliceous boulders just West of Alcock Lake. Sampling of these and more float closer to the shoreline, returned no significant precious metal values. The report recommended prospecting a cluster of airborne EM anomalies in the western part of the property, where metasedimentary and iron formation rocks are apparently exposed. Additional work was recommended to the north-west along a high strain zone identified by past government work, (Muir, 1994), located just South of Bug Lake.

The report mentioned anomalous base metal values in soils should be targeted for follow-up, but evidential material is lacking.

4.0 REGIONAL GEOLOGY

The property lies within the Uchi Subprovince, comprising several regional greenstone belts and intervening granitoid batholiths, see Fig. 3, below, (from Sanborn-Barrie et al., 2001 after Stott & Corfu, 1991).

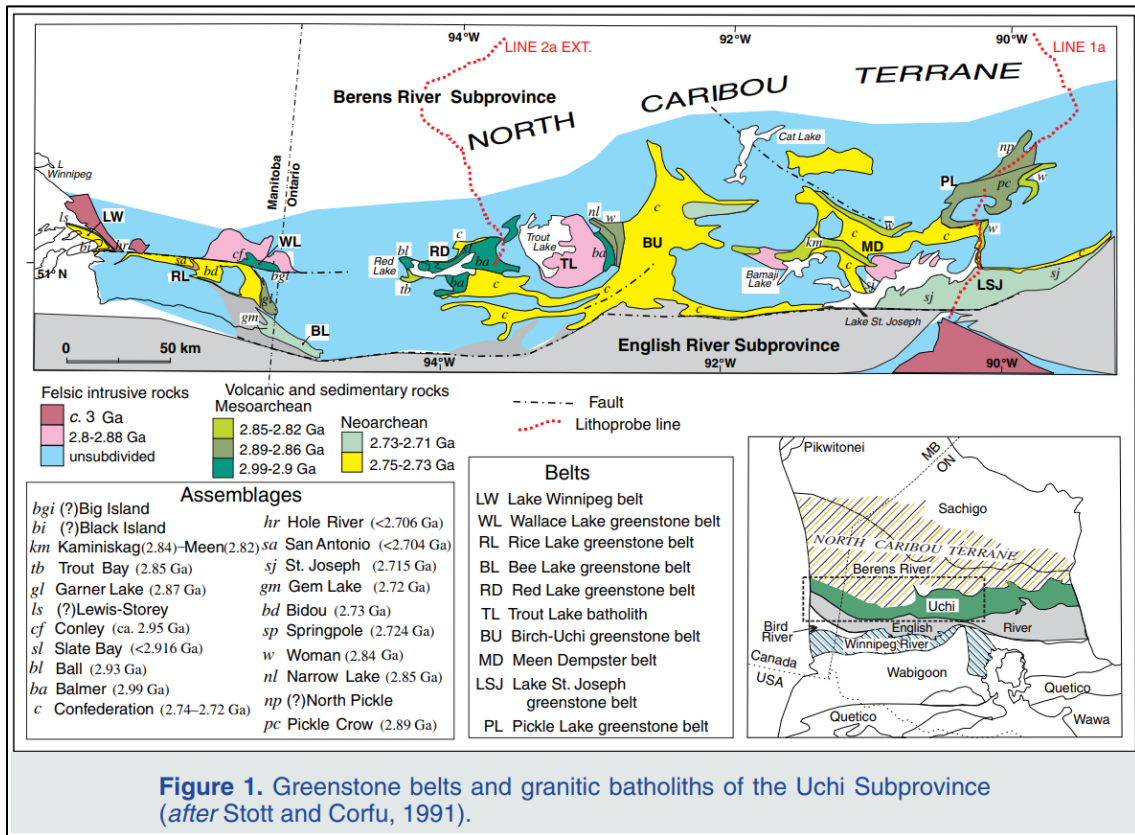


Figure 3 Regional Geology

The property area is located in the western portion of the Subprovince, a region comprising two major greenstone belts, Red Lake and Birch-Uchi. See overleaf, Fig. 4, from Sanborn-Barrie et al., 2004. The red star is the epicentre of Whirlwind Jack property.

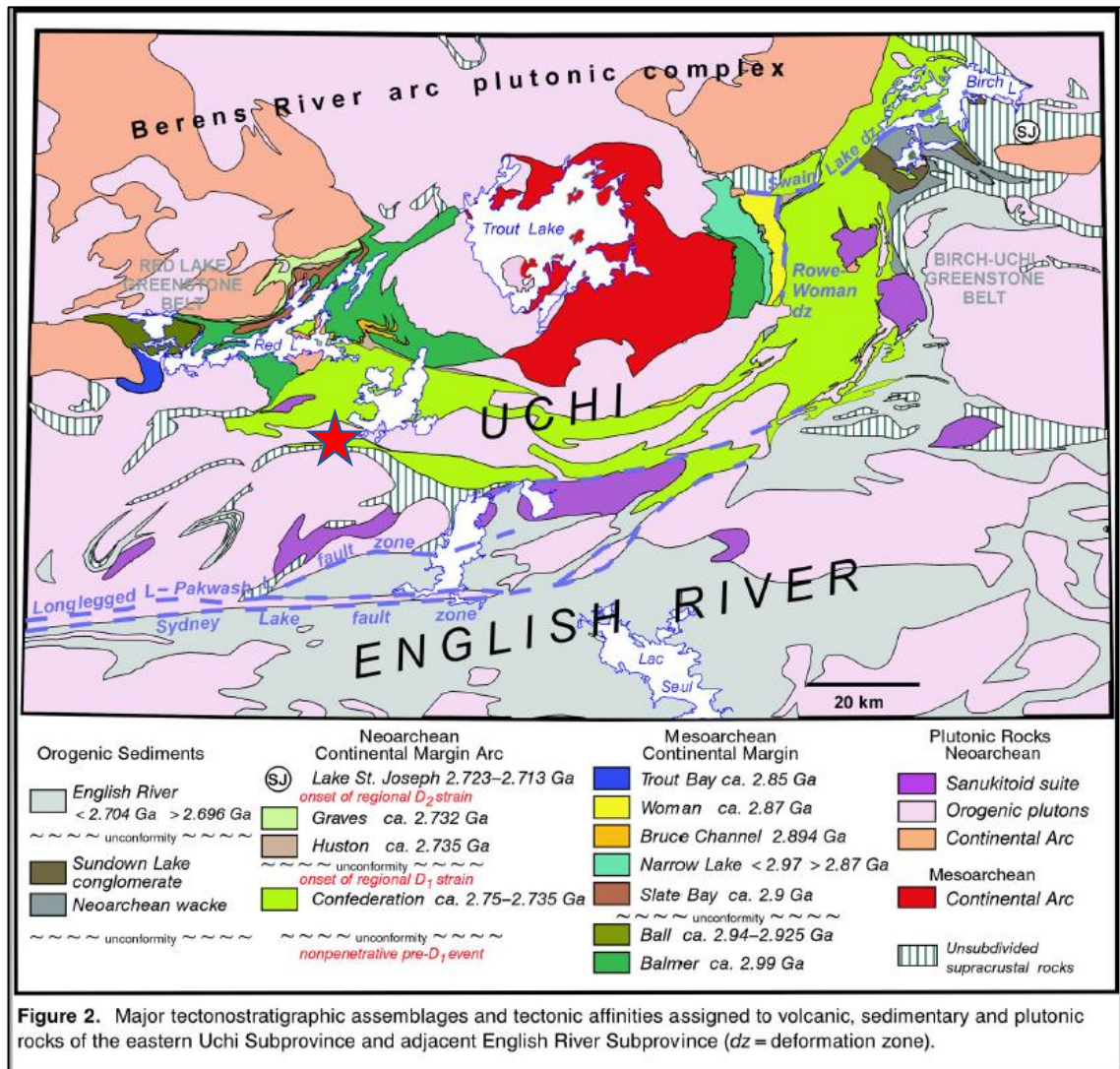


Figure 4 Uchi Subprovince

Red Lake Greenstone Belt ('RLGB')

The Belt comprises a series of ca. 2.99–2.70 Ga supracrustal rocks and three main granitoid batholiths. A brief description of the major units follows, this taken from Dubé et al, 2004. The prefix, 'meta' (metamorphosed) is excluded. Ga = 'billion years'.

“The Red Lake greenstone belt is located in the Uchi subprovince of the Superior province. The greenstone belt is dominated by Mesoproterozoic... (marine-deposited, tholeiitic basalt to komatiitic) ...volcanic rocks of the Balmer assemblage (2.99–2.96 Ga), ... (with intercalated felsic and ultramafic intrusive and extrusive rocks and turbidites, volcanoclastic rocks and iron formations)...

“...intermediate to felsic calc-alkaline flows and pyroclastic rocks of the Ball assemblage (2.94–2.92 Ga), and intermediate calc-alkaline pyroclastic rocks (are) overlain by clastic sedimentary

rocks and banded iron-formation of the Bruce Channel assemblage (2.894 Ga; first volcanic cycle; Pirie, 1981; Andrews et al., 1986; Wallace et al., 1986; Corfu and Andrews, 1987; Parker 2000; Sanborn-Barrie et al., 2000, 2001, 2002, and references therein).”

The Slate Bay Assemblage lies disconformably on Balmer and Ball assemblage volcanic rocks, and comprises clastic rocks of three main lithological facies, conglomerates, quartz-rich arenites, wackes, and mudstones. The material is mostly derived from Ball Assemblage rocks with minor input from Balmer Assemblage rocks. Based on the youngest zircon ages, the maximum age of deposition for the Slate Bay Assemblage is ca. 2.916 Ga with the overlying ca. 2.85 Ga volcanic rocks of the Trout Bay Assemblage providing a minimum age for deposition (Corfu et al., 1998 and Sanborn-Barrie et al., 2004).

From Dubé et al., 2004, “The Bruce Channel assemblage appears to disconformably overlie the Balmer assemblage (Sanborn-Barrie et al., 2001). The Mesoarchean rocks were tilted by a pre-D1 episode of deformation and a regional angular unconformity separates the Mesoarchean rocks from the Neoproterozoic (i.e., 2.8–2.5 Ga) volcanic rocks (Sanborn-Barrie et al., 2000, 2001).” A thin, less than 500-metre-thick sequence of rhyodacitic pyroclastic rocks, clastic sedimentary rocks and banded iron formation, it has been dated at ca. 2.89 Ga.

“The unconformity is locally draped by polymictic conglomerate that gives way to a Neoproterozoic volcanic succession, including calc-alkaline and tholeiitic volcanic rocks of the ca. 2.75 to 2.73 Ga Confederation assemblage (McNeely and Heyson sequences, respectively) and calc-alkaline rocks of the ca. 2.732 Ga Graves assemblage. Polymictic conglomerate and finer clastic sedimentary rocks of the Huston assemblage separate the Confederation and Graves assemblages on the North shore of Red Lake. In the vicinity of the Red Lake mine, the conglomerate of the Huston assemblage rests unconformably on a substrate of supracrustal rocks of the Balmer and Bruce Channel assemblages (Sanborn-Barrie et al., 2001, 2002).” Geochemical data suggests the McNeely age rocks were formed in a shallow marine to sub-aerial arc-like setting on the continental margin, with later intra-arc extension and eruption forming the Heyson sequence.

Post- Confederation Assemblage formation, the Huston Assemblage (dated around 2.742 and 2.733 Ga), records a period of clastic sedimentary deposition characterised by immature conglomerates to wackes.

The ca. 2.73 Ga Graves Assemblage comprises andesitic to dacitic pyroclastic tuff on the north shore of Red Lake, and is interpreted to represent volcanic deposits in a shallow water to subaerial arc complex setting. It overlies and is locally transitional with the Huston Assemblage.

The Trout Bay Assemblage, located in the north-west of the RLGB, was previously correlated with Balmer rocks but is now considered to represent a distinct sequence. It comprises tholeiitic basalt, clastic rocks and iron formation, gabbros and ultramafic rocks. An interbedded, intermediate tuff returned a ca. 2.85 Ga age for this assemblage (Dubé et al., 2004, Sanborn-Barrie, 2004).

Four stages of post-volcanic plutonism, at ca 2.74, 2.73, 2.72 to 2.71, and 2.7 to 2.698 Ga, are recorded in the belt, (Dubé et al, 2004). Granitoid intrusions include the McKenzie Island Stock,

Dome Stock and the Abino granodiorite (2.72 and 2.718 Ga). Arguably, the last major magmatic event in the RLGB is the post-tectonic Killala-Baird batholith, dated at around 2.7 Ga.

“Two main episodes of deformation (D1, D2) took place after ca. 2742 Ma volcanism (Sanborn-Barrie et al., 2001). The main stages of penetrative deformation produced two sets of folds (F1 and F2). A locally recognized northerly trending S1 foliation is axial planar to north-northeast-trending F1 folds. According to Sanborn-Barrie et al. (2001, 2002), D1 coincided with the deposition of the polymictic conglomerate of the Huston assemblage and preceded the eruption of the Graves assemblages at ca. 2733 Ma (Sanborn-Barrie et al., 2001). D1 deformation probably occurred between 2742 and 2733 Ma in response to east-directed shortening. A weakly to moderately developed S2-L2 fabric and associated southeast-trending F2 folds are widespread in the eastern Red Lake area where the deposit is located. The main cleavage-forming stage of D2 deformation and associated metamorphism predated 2718 Ma (i.e., the age of the Dome stock), but foliation coplanar with S2 and amphibolite facies metamorphism outlasted emplacement of the Dome stock, indicating that D2 shortening continued beyond its emplacement (Sanborn-Barrie et al., 2002, 2004). Sanborn-Barrie et al. (2004) suggest that D2 strain across the Red Lake greenstone belt occurred between ca. 2720 to 2715 Ma and recorded the collisional stage of the Uchian phase of the Kenoran orogeny (cf. Stott et al., 1989; Stott and Corfu, 1991). Across the Red Lake belt, and elsewhere throughout the Uchi subprovince, the Uchian phase of the Kenoran orogeny was related to collision between the ca. 3.0 Ga North Caribou terrane to the north of the Red Lake greenstone belt and the ca. 3.4 Ga Winnipeg River terrane to the south (Fig. 1). Post-collisional D3 strain is locally recorded in the Red Lake belt after 2700 ± 6 Ma, the maximum age of a deformed and metamorphosed conglomerate near the Madsen mine area that displays a penetrative foliation coplanar with D2 fabrics (Sanborn-Barrie et al., 2004).” (Dubé et al., 2004)

5.0 PROPERTY GEOLOGY

There are no records of systematic geological work on the property and published maps are the product of regional mapping by various government workers.

The property geology is shown below, fig., 5, from Sanborn-Barrie et al., 2004. Their map is derived from a number of OGS maps and reports. For the Whirlwind Jack property, information was taken mainly from Breaks et al., 1975a,b.

Southern and western portions of the property are underlain by an extensive sequence of unsubdivided Archæan, medium, locally coarse-grained tonalite and granodiorite, variably foliated to banded, locally migmatitic, plagioclase-hornblende-biotite-quartz gneiss hosting relatively thin, (often less than 100 metre wide) mafic volcanic rocks, amphibolite, other ultramafic rocks, and minor wackes, iron formations and siltstones; all of which are considered to be Archæan age (4.00 to 2.80 Ga).

Much of the North of the property is underlain by Nearchæan (2.80-2.50 Ga) quartz monzonite to granodiorite, with local phases of plagiogranite, granite, potassic rich pegmatite and plagioclase-quartz pegmatite. They may appear as relatively homogeneous, massive to lineated to banded, fine to coarse grained, with negligible to considerable amounts of partially to near completely altered to assimilated supracrustal material.

Separating these two major lithological ‘domains’ is a sequence of generally less altered and deformed, generally East-West trending supracrustal rocks characterised by massive to pillow lavas, related mafic volcanoclastic rocks, (dark green in figure below), intermediate to felsic flows and related pyroclastic and volcanoclastic units, (lime green in the figure below), wackes and iron formations (grey). This sequence extends from the eastern boundary of the property, North of Stone Lake, westwards through the Bug Lake-Clear Lake area, and south-westwards, generally following the trend of the centre-west portions of Bug Lake. The intermediate-felsic sequence is assigned by e.g. Sanborn-Barrie et al., 2004 to the Confederation assemblage, ca. 2,745-2,735 million years old (Ma), with the sequence extending south-eastwards towards Pakwash Lake, then ‘turning’ North, North of the Bruce Lake Pluton and the old Griffith Iron Ore Mine near Ear Falls, forming an integral portion of the Birch-Uchi greenstone belt. The U-Pb dated 2,742-2,735 Ma Earngey Sequence characterised by andesitic to dacitic tuffs, pyroclastic breccia, lapilli tuffs and crystal tuffs.

Regional mapping by Thurston & Paktunc, 1985 resulted in the publication of the Madsen map sheet, wherein is shown the major units described, in particular, the East-West to south-west trending sequence of Archean supracrustal rocks

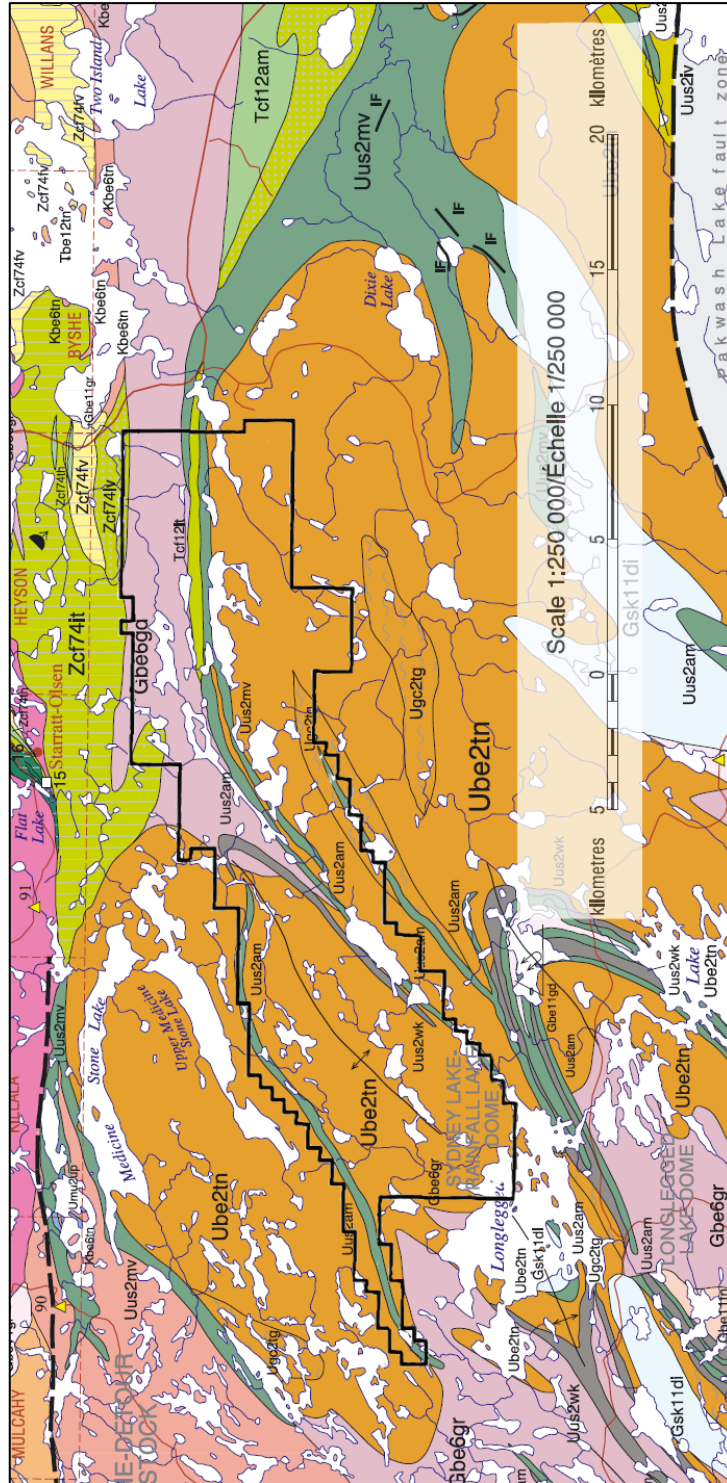


Figure 5 Property Geology

Overleaf, Lithology legend for the Region.

Prospecting Report – Whirlwind Jack Property

EXPLANATION OF LEGEND CODE

This map uses codes that are to be read from right to left. An example is given below. Format of legend code from the legend:

- The lithology code (L) identifies the dominant rock type in map units. See lithology key to right. More detail on lithologic constituents is contained in the unit descriptions in the Legend.
- The age code (A) indicates the age of the unit. Inferred from U/Pb zircon dates of individual samples. In areas with abundant geochronology, a unit can be assigned an age within a 5 Myr span interval (code numbers 0-70). Otherwise, other units of this age can be constrained only to within 10 Myr (0-40, 100 Myr (0-10) or larger). 7 is age interval. See age list (right) and corresponding ranges in Figure 4. Lithology of units.
- The tectonostratigraphic assemblage name (M) for supracrustal units or suite name for plutonic rocks identifies packages of stratigraphic or magmatically related lithologic units of similar age. See list of assemblages and suite names to right.
- The tectonic affinity (X) describes the environment of deposition or crystallization of a map unit based on available lithologic and petrochemical information. See tectonic affinity list to right.

LEGEND

ARCHEAN (4000–2500 Ma) (Unsubdivided)

- Ubc2n** Tonalite to granodiorite, medium-grained, variably foliated biotite, hornblende-biotite tonalite, and associated rocks, calcic-alkaline adjacent to Longueval Lake – **Palawan Lake lead zone.**
- Ulv2n** Tonalite to granodiorite, medium-grained, variably foliated hornblende- and biotite-hornblende tonalite, and associated rocks.
- Uln2up** Gabbro intrusive rocks (various ages) includes gabbro and gabbroic anorthosite exposed in western Trout Bay and eastern Newton Bay, Dufferin Lake.
- Uln2up** Ultramafic intrusive rocks of unknown age and affinity.
- Ulg2n** Tonalite gneiss of unknown age and affinity.
- Uln2ca** Supracrustal rocks of unknown affinity. Conglomerate, polymorphic pebbles and cobble conglomerate consisting of ashtrounded volcanic and sedimentary clasts (80% and gabbroic and/or mafic igneous clasts); quartz grading bedding, load casts and flame structures, interbedded wacke.
- Uln2nd** Fine silicified rock (siltstone, covering Trout Bay and Bell assemblages in western Red Lake).
- Uln2sk** Wacke, wacke, lithologic wacke, near northwestern Shabu Lake occurs with lesser quartzite and quartzose wacke, locally cut by gabbro; quartzose wacke may be interbedded with conglomerate, matrix, calcic-alkaline rocks and chert-magnetite non-formation; occurs as narrow screens with magnetite texture locally, in structural zones at Longueval and Sydney lakes.
- Uln2r** Felic volcanic rocks: diorite to tholeiite, predominantly tuff and lapilli tuff.
- Uln2av** Epitaxial rocks: wacke, volcanoclastic conglomerate, east of Papawa Lake pluton and central Birch Lake.
- Uln2k** Intermediate volcanic rocks: andesite to diorite, predominantly tuff and lapilli tuff (i.e., State Lake area) with lesser flows (i.e., Palawan Lake).
- Uln2m** Mafic volcanic rocks: foliated, massive to pillowed basalt, amphibolite, and associated gabbroic rocks; locally gabbroic mafic dykes and/or mafic sills; lesser associated intermediate to felsic flows, tuff and wacke near Dixie Lake.
- Uln2am** Amphibolite.
- Uln2kn** Ultramafic rocks of uncertain origin and unknown age, west of Red Lake.

NEOARCHEAN (2600–2000 Ma) Unsubdivided

- Gak5p** Spring Lake Alkaline Intrusion Complex: carbonatic breccia clast consisting of tholeiitic porphyry and trachyte breccia, syenite, minor fluorite-bearing carbonatite, and associated mafic dikes.
- Gln6p** Quartz monzonite to granodiorite: variably foliated hornblende-bearing quartz monzonite, granodiorite, locally leucocratic and quartz and/or K-feldspar porphyry.
- Gln6p** Granite, granodiorite: massive to weakly foliated, sheeted, fine- to coarse-grained monzonitic/quartz monzonitic and associated pegmatite rocks, locally K-feldspar porphyry.
- Gln6p** Quartz monzonite to granodiorite: variably foliated biotite quartz monzonite, granodiorite and granite, locally leucocratic and quartz and/or K-feldspar porphyry; xenolite south of Gullhorn Lake.
- Kln6n** Tonalite to granodiorite: variably foliated biotite-tonalite to quartz diorite/granodiorite; coarse-grained granitic, white to grey (10–30% biotite-bearing).
- Kln6n** Tonalite to granodiorite: variably foliated hornblende-biotite to quartz diorite/granodiorite; coarse-grained granitic, white to grey with 10–30% biotite-bearing.
- Uln6k** Near-charnofic supracrustal rocks of unknown affinity.
- Uln6k** Wacke, wacke, lithologic wacke with lesser associated argillite, siltstone and minor conglomerate, possibly unconformable on mafic volcanic rocks southeast of Birch Lake.
- Uln6k** Intermediate pyroclastic rocks, diorite tuff horizons in central Spring Lake.

NEOARCHEAN (2000–2500 Ma)

- Gak1d** Diorite, quartz diorite, hornblende and biotite-hornblende diorite, syenitoid/quartz diorite with inclusions of English River metabasement rocks locally (i.e., Palawan pluton and mafic volcanic rocks (i.e., eastern Bruce Lake pluton).
- Gln11n** Syenite: amphibole syenite, south of State Lake, possibly part of the intermediate to mafic sandstone suite that has intruded the Uln2n/Eng River interface.
- Gln6up** Gabbroic rocks: generally undated gabbroic rocks intrusive into Confederation assemblage, including fine-grained tholeiitic dikes and sills intrusive into the Sundown Lake metabasement; includes English River metabasement rocks locally (i.e., Palawan pluton and mafic volcanic rocks (i.e., eastern Bruce Lake pluton).
- Gln11p** Granite, granodiorite: massive to variably foliated biotite granite to granodiorite and associated pegmatite rocks, known to be post-volcanic and syn- to post-igneous.
- Gln1d** Granodiorite, quartz monzonite: massive to variably foliated biotite granodiorite to quartz monzonite and associated pegmatite rocks, known to be post-volcanic and syn- to post-igneous.
- Gln11n** Tonalite, granodiorite: massive to variably foliated biotite-hornblende tonalite to granodiorite, commonly syenitic or containing biotite schlieren, locally leucocratic (hornblende) (C-5); intrusive into English River metabasement assemblage (i.e., < 2.7 Ga), with associated diorite and quartz diorite phases (Birch Lake batholith), calcic-alkaline within the Sydney Lake pluton zone.
- Gak6d** Diorite: diorite-quartz diorite-hornblende and associated pegmatite with elevated Mg and Cr consistent with sanukitoid affinity; mafic siltstone phase of the 2008 Ma Birch Lake batholith (LAP 951).
- Gak12p** Maficoidite-quartz monzonite-granodiorite of sanukitoid affinity; wacke (quartzite) (initial) in hornblende- and biotite-phryic with high Mg#, Ni, K, Co, Ba, and Sr, and is enriched in LREE; granodiorite is biotite-hornblende and associated pegmatite with siltstone, includes monzonitic and granodiorite of the Fairweather Lake stock, near Madson and the Pempgo Lake pluton.
- Tln12p** Granite, granodiorite: variably foliated biotite granite to granodiorite/quartz monzonite and associated pegmatite rocks, known to be post-volcanic and syn- to post-igneous.
- Tln12p** Granodiorite: variably foliated hornblende-bearing granodiorite/biotite of the Beavers River or plutonic complex.
- Tln12n** Tonalite: massive to weakly foliated biotite-tonalite to hornblende-biotite typically associated with, or intrusive into, < 2.7 Ga Confederation assemblage.

Migmatite ca. 2600 Ma

- Gln65p** Pelitic-granite to granodiorite: homogeneous diorite with > 50% medium-grained to pegmatite granoblastic material, typically garnet and muscovite bearing; locally quartzite and hornblende-bearing (i.e., southeast of Jubber Lake); commonly contains inclusions and areas of inhomogeneous diorite; calcic-alkaline within the Sydney Lake pluton zone.
- Gln65p** Inhomogeneous diorite with 70–80% medium-grained to pegmatite granoblastic material, typically garnet and muscovite bearing; commonly contains inclusions and areas of inhomogeneous diorite; calcic-alkaline within the Sydney Lake pluton zone.

English River assemblage >2650 Ma - <2700 Ma

- Fag6m** Metasedimentary megacryst: garnet-biotite-hornblende-quartz gneiss, generally metacalcite with 10–70% interbedded granitic inclusions.
- Fag6p** Chert-magnetite ironstone: banded, thin bedded to thickly laminated chert-magnetite ironstone. Blue Lake where reduced chert-magnetite ironstone has been lithologically flattened, resulting in minable reserves (see prospecting GDM 016).
- Fag6k** Fine-grained clastic rocks and siltstones: biotite-quartz-plagioclase wacke (<10% granitic material) and associated chert-magnetite ironstone.
- Fag6p** Conglomerate: polymorphic pebbles conglomerate e.g., near Madson (Red Lake) where fragmental rocks historically considered consistent with the Aberdeen thrust but contain detrital dated at 2.58 Ga, 2.68 Ga, 2.85 Ga, 4.45 Ga, 2.7 Ga with youngest detrital zircon at 2700 ± 5 Ma, indicating late-orogenic (metacalcite) deposition.
- Gln60d** Neo-volcanic plutonic rocks: Granodiorite-quartz monzonite: massive to weakly foliated, relatively unaltered and unrecrystallized biotite granodiorite-hornblende-quartz monzonite, commonly with megacrysts of K-feldspar and/or by fine grained pegmatite dikes, locally biotite porphyry with elevated Mg#, Ni and enriched LREE reflecting sanukitoid affinity; includes main phase of the ca. 2697 Ma East Island pluton (LAPs 448) at Ranger Lake.
- Gln60d** Granodiorite-hornblende-diorite: massive to weakly foliated, relatively unaltered and unrecrystallized hornblende-biotite granodiorite-quartz monzonite, commonly with megacrysts of K-feldspar and commonly cut by fine grained pegmatite dikes; includes a 2699 ± 1 Ma marginal phase of the Car Lake pluton (LAPs 147) at Wain Lake.
- Gln67m** Quartz monzonite-granodiorite: massive to weakly foliated amphibole-bearing quartz monzonite-granodiorite-diorite, locally biotite porphyry with elevated Mg#, Ni and enriched LREE reflecting sanukitoid affinity; includes main ca. 2700 Ma phase of the Charley Lake stock (LAPs 970) see also unit Tln12p.
- Gln67p** Granodiorite-diorite-megacrystic-diorite: massive to weakly foliated, relatively unaltered and unrecrystallized biotite granodiorite-quartz monzonite, commonly with megacrysts of K-feldspar and/or by fine grained pegmatite dikes. Includes main phase of the 2704 Ma Kilmahoney batholith (unit of the 2702 ± 3 Ma granite at Job Lake 15 km west of map sheet).
- Gln60d** Granodiorite-quartz monzonite: weakly foliated equigranular to porphyritic biotite granodiorite-quartz monzonite, massive to weakly foliated and locally unaltered; includes the ca. 2712 Ma Little Lake granodiorite (LAP 852) and Shabumun Lake stock (LAPs 873) in the Birch-Club 2714 ± 4 Ma quartz monzonite porphyry (LAPs 144) that cuts gabbro mineralization at the Red Lake (formally A.W. White) mine.
- Gln70n** Tonalite-granodiorite: variably foliated and recrystallized hornblende and biotite-hornblende tonalite, commonly with megacrysts of K-feldspar and/or by fine grained pegmatite dikes; may include the main phase of the Hammett Lake pluton (LAPs 113).
- Gln70p** Granodiorite: variably foliated and recrystallized biotite granodiorite-hornblende-quartz monzonite, commonly with megacrysts of K-feldspar and/or by fine grained pegmatite dikes and locally by Mn-enriched metabasite dykes (not shown); includes the central 2712 ± 2 ± 1 Ma phase of the Dome stock (LAPs 922), may include an intrusion in State Bay (Red Lake).
- Gln71p** Granodiorite: variably foliated and recrystallized biotite granodiorite-hornblende-quartz monzonite with coarse-grained marginal phases, including the 2700 ± 2 Ma Madson Island stock (LAPs 129) and 2700 ± 2 Ma Abino granodiorite (LAPs 936); locally with monzonite megacrysts (e.g., near Clear Lake, LAPs 41).
- Gln12d** Diorite: variably foliated and recrystallized diorite, includes locally argillite and hornblende-bearing mafic bodies; phases in the ca. 2712 Ma Dome and Madson Island stocks.
- Gln71p** Granodiorite: variably foliated and recrystallized biotite granodiorite-hornblende-quartz monzonite with coarse-grained marginal phases and biotite-hornblende tonalite (LAPs 872); commonly monzonite megacryst, inclusion of amphibolite.
- Kln27n** Tonalite: fine to medium-grained, equigranular, variably foliated, sheeted, and Anorthositic tonalite of the 2725 ± 2.5 Ma Horseshoe Island stock (LAPs 177).
- Kln27n** St. Joseph Assemblage (Spring Lake) ca. 2723 Ma
- Kln27n** Porphyritic tuff: porphyritic lapilli tuff (LAPs 478).
- Sln12p** Conglomerate: massive to poorly-bedded polymorphic conglomerate containing pebbles to boulder-size clasts of volcanic and chemical sedimentary rocks, porphyry and vein-quartz; associated with thickly bedded argillite, lenses of wacke-siltstone.
- Sln12k** Wacke: thickly laminated to medium-bedded, medium and fine silt wacke with argillite, bedding, and quartz concretions; minor conglomeratic beds, deposited at < 2722 Ma (LAPs 465); cut by fine-grained basalt (LAPs 478).

Interbedded unconformity

- Grn6p** Grn6p plutonic suite (Red Lake)
- Gln72d** Diorite to quartz diorite, diorite-quartz diorite, gabbro, syenitoid, commonly plagioclase amphibolite, including the 2708 ± 1.1 Ma Red Deer stock (LAPs 812) and marginal phase to the Douglas Lake pluton (LAPs 422).
- Kln72p** Granitoid-granodiorite: variably foliated, equigranular medium-grained to K-feldspar megacrystic diorite and biotite-bearing hornblende-bearing granite and granodiorite-quartz monzonite, including the 2721–342 Ma Little Ternion Lake batholith (LAPs 427); calcic-alkaline affinity.
- Kln72n** Tonalite: foliated to gneiss; biotite-bearing tonalite/granodiorite, including the 2724 ± 2 Ma Douglas Lake pluton (LAPs 426); calcic-alkaline affinity.
- Kln72k** Huston assemblage ca. 2723 Ma – ca. 2743 Ma
- Flu34k** Wacke, siltstone, argillite: well-bedded, graded turbiditic wacke, siltstone/argillite, with medium-grained diorite and associated silt, e.g., adjacent to plutons.
- Flu34k** Conglomerate: polymorphic conglomerate (LAPs 417, 488); with variation to well-sorted volcanic, plutonic and sedimentary clasts that locally show evidence of intense hydrothermal alteration. Body may be interpreted as metamorphism; possibly syngenetic with respect to D₁ in the Red Lake area at < 2740–2735 Ma.

Interbedded unconformity

- Flu34k** Grn6p plutonic suite (Red Lake)
- Tln12p** Porphyritic rocks: light-greenish, feldspar- and quartz-labile quartz porphyry, intrusively hydrothermal veins with 20–30% biotite, interpreted to be subvolcanic to the Confederation assemblage.
- Ycl7p** Porphyritic rocks: light-greenish, feldspar- and quartz-labile quartz porphyry, intrusively hydrothermal veins with 20–30% biotite; includes the 2742–342 Ma Brews Island Lake porphyry (LAPs 445).
- Zln12d** Diorite/quartz diorite rocks with Filaga REE profiles (high and flat such as the Duan Lake stock, likely subvolcanic to the Filaga Agneis sequence in the Birch-Club belt, and the Pelitic Honey diorite, likely subvolcanic to the ca. 2714 Ga Honey sequence, Red Lake belt).
- Zln70p** Granodiorite porphyry: granophyric granodiorite to quartz-diorite porphyry intrusions associated with biotite flows and associated rocks of the Confederation assemblage (Agneis Filaga sequence); includes the 2741–342 Ma Fossil Lake stock (LAPs 469) and the South Bay porphyry intrusion with associated Cu-Dyke mineralization.
- Ycl90p** Felic dyes at Hatch Beach, Red Lake, interpreted age of 2757–94 Ma (LAPs 425).
- Tln12p** Gabbroic rocks: petrographically anorthositic rocks intrusive into, and possibly related to, the Confederation assemblage.

Confederation assemblage ca. 2745–2735 Ma

- Tln12nd** Silicified volcanic rocks: interbedded fine sand silt lithoclastic wacke, silt wacke, and chert with lesser argillite and siltstone.
- Tln12n** Epitaxial rocks: epitaxial rocks of intermediate composition associated with the Confederation volcanic assemblage.
- Tln12p** Intermediate volcanic rocks: predominantly intermediate pyroclastic rocks considered to be part of the Confederation assemblage.
- Tln12m** Mafic volcanic rocks: basaltic rocks considered part of the Confederation assemblage formed at a tectonically continental margin setting.
- Tln12am** Amphibolite: amphibolite-facies mafic volcanic rocks, locally pillowed east of Dixie Lake, considered part of the Confederation assemblage.
- Ycl90m** Energy sequence (Birch-Club belt) ca. 2742–2735 Ma
- Ycl90m** Mafic volcanic rocks: pillow basaltic/hornblende rocks of the Waboussay and Hesperus Bay suites with minor interbedded intermediate volcanic rocks (e.g., 2747.7–13–3.2 Ma (Fox Bay area) (LAPs 475)).
- Ycl90m** Intermediate to felsic volcanic rocks: andesite to diorite tuff dated at 2738 ± 643 Ma (Waboussay suite) (LAPs 471); 2738 ± 2 ± 3 Ma, tholeiitic pyroclastic breccia and lapilli tuff (LAPs 469); diorite tuff and felsic tuff including 2738 ± 738 Ma, Shabumun Lake formation (LAPs 974) and associated quartz bedded porphyry dykes (Jackson-Manson) dated at 2739 Ma (LAPs 462).
- Ycl90m** Agneis sequence (Birch-Club belt) ca. 2744 Ma
- Ycl90m** Intermediate to felsic volcanic rocks: diorite flows with minor tuff, locally pyritic texture; tholeiitic (type F9) affinity.
- Ycl90m** Felic volcanic rocks: tholeiite flows (Keeweenaw Bay) and associated quartz bedded porphyry rocks dated at 2744 Ma (LAPs 466); tholeiite (type F9) affinity.
- Ycl90m** Mafic volcanic rocks: pillowed basalt and pillow breccia of dominantly tholeiitic affinity.
- Ycl90m** Mafic volcanic rocks: calcic-alkaline pillowed basalt flows, pillow breccia, and tuff of dominantly calcic-alkaline affinity.

Knot sequence (Birch-Club belt) ca. 2745–2742 Ma

- Ycl90m** Felic volcanic rocks: including ignimbritic tholeiite flows dated at ca. 2742 Ma (LAPs 466).
- Ycl90m** Intermediate volcanic rocks of andesitic composition.
- Ycl90m** Mafic volcanic rocks: massive to pillowed calcic-basalt.
- Ycl90m** Mafic volcanic rocks: lower massive to pillowed tholeiite basalt; locally vesicular.
- Ycl90m** Heyson sequence (Red Lake) ca. 2739 Ma
- Ycl90m** Intermediate volcanic rocks: andesite to diorite calc-alkaline flows, commonly plagioclase-phyric, possibly consistent with the Emery sequence of the Birch-Club belt.
- Zcl74n** Mafic volcanic rocks: massive to pillowed tholeiite basalt; locally plagioclase-phyric.
- Zcl74n** Felic volcanic rocks: tholeiitic rocks of tholeiite (type F9) affinity (Red Lake to LREE-enriched) consisting of tholeiite flows that may be quartz-phyric and locally exhibit primary lobate structure; lesser crystal tuff (LAPs 452); associated gabbro sills.
- Zcl74n** Intermediate volcanic rocks: massive and pyroclastic rocks of tholeiite affinity, generally dated to andesitic flows, tuff, lapilli tuff and pyroclastic tuff; flows may be pillowed and plagioclase-phyric; commonly cut by quartz porphyry near Madson.
- Ycl90m** Mafic volcanic rocks: massive to pillowed, calcic-alkaline basaltic/andesitic; locally amygdaloidal.
- Ycl90m** Intermediate to felsic volcanic rocks: diorite to tholeiitic pyroclastic rocks and associated calcic-alkaline rocks (LAPs 416, 418, 419, 420, 421, 422, 423, 424, 425); locally overlying base conglomerate unit (Tus2co).
- Tus2co** Oligoclite conglomerate: unbedded, poorly sorted oligoclite conglomerate derived mainly from unaltered better assemblage rocks and variably dominated by chemical sedimentary clasts (Wolf Bay, Red Lake) or basaltic clasts (North central shore, Red Lake); minor silt wacke and/or argillite beds; interpreted to mark an angular unconformity between Red Lake's Mesoproterozoic time and the ca. 2745 Ma Confederation assemblage.

Interbedded unconformity

- Zln12p** Trout Lake plutonic suite ca. 2860–2800 Ma
- Zln12p** Gabbro: medium-grained gabbro dykes cutting the Balmer assemblage in the Birch-Club belt, dated at ca. 2832 Ma on Spot Lake (LAPs 459).
- Yln13n** Tonalite-granodiorite: variably foliated tonalite to granodiorite/quartz diorite of the Trout Lake batholith (LAPs 461, 22, 53, 55); local inclusions of amphibolite; possibly correlated with quartz gabbro dated at 2875 ± 12 Ma from the Red Lake belt (Red Lake Mine, LAPs 424).
- Yln13p** Tonalite gneiss: heterogeneous, variably foliated, layered and commonly foliated grades of tonalite, granodiorite, and quartz diorite (LAPs 461), varying as a function with the central and southern Red Lake batholith (LAPs 460); correlation cut by unconformity to discordant, dikes of tonalite/granodiorite.
- Yln13k** Mesoproterozoic (3100–2800 Ma) Trout Bay assemblage (Red Lake) ca. 2855–2848 Ma
- Yln13k** Gabbroic rocks: locally pyroclastic megacrystic gabbro and leucocratic intrusive into lower tholeiite basalt of the Trout Bay assemblage and characterized by displaced REE profiles similar to upper Trout Bay tholeiite basalt sequence.
- Yln13k** Mafic volcanic rocks: upper sequence of northward-fingering pillowed tholeiite basalt flows.
- Yln13k** Intermediate volcanic rocks: diorite tuff (LAPs 424, 425) and tuff flows with associated calcic-alkaline rocks and oxide facies intrusion within central Red Lake.
- Yln13k** Diorite and epitaxial rocks (LAPs 423) with minor interbedded intermediate tuff dated at ca. 2854 Ma (LAPs 423), overlain by a fragmental tuff containing intermediate to mafic volcanic and layered non-formation clasts; minor siltstone, and siltstone, and siltstone by Trout Bay gabbro.
- Yln13k** Mafic volcanic rocks: lower sequence of northward-fingering pillowed tholeiite basalt flows, possibly correlated with Zcl74n.
- Yln13k** Middle Red assemblage (Birch-Club belt) ca. 2870 Ma
- Yln13k** Wacke: interbedded felsitic and/or grey brown siltstone exposed at interface between the Newton Lake and ca. 2870 Ma Waboussay assemblage and containing detrital zone of Bannock Bay, 2.88 Ga (LAPs 468) and 2.88 Ga (LAPs 461).

Interbedded unconformity

- Yln13k** Woman assemblage (Birch-Club belt) ca. 2870 Ma
- Yln13k** Felic to intermediate volcanic rocks: ignimbritic to subvolcanic tholeiite and diorite flows dated at ca. 2870 Ma (LAPs 464); capped locally by 4 m thick anorthositic mafic.
- Yln13k** Mafic volcanic rocks: massive to pillowed tholeiite and calcic-alkaline basaltic flows, capped locally by 2 m thick mafic.
- Yln13k** Bruce Channel assemblage (Red Lake) ca. 2894 Ma
- Yln13k** Feldspathic wacke, siltstone, sheeted wacke, and argillite unconformably and capped by chert-magnetite ironstone; includes biotite schlieren and pegmatite associated with the contact hornblende aureole of the Car Island pluton.
- Yln13k** Felic to intermediate pyroclastic rocks: felsic to intermediate tuff and lapilli tuff (LAPs 320, 445).

Interbedded unconformity

- Yln13k** Narrow Lake assemblage (Birch-Club belt) ca. 2875 Ma – 2870 Ma
- Yln13k** Basalt: tholeiite, massive to pillowed basalt and intermediate-medium-grained equigranular gabbro exposed east of Trout Lake batholith.
- Yln13k** State Bay assemblage (Red Lake) < 2903 Ma
- Yln13k** Siltstone: multicolour-aminated facies at the entrance to State Bay; locally unbedded porphyritic.
- Yln13k** Quartz-rich calcic rocks: quartzose wacke, quartz arenite, quartzite; quartz tuff; common conglomerate with dominant felsic volcanic clasts; commonly fault-bearing (LAPs 48, 426, 134).
- Yln13k** Interbedded unconformity
- Yln13k** Ball plutonic suite
- Yln13k** Ultramafic intrusive rocks: serpentinite, serpentinized peridotite, and rare pyroxenite, variably carbonatized, intrusive into the Ball assemblage; these element date indicate affinity with Ball tonalite and granitic batholith.

Ball assemblage (Red Lake) < 2925 Ma – 2940 Ma

- Yln13k** Upper ultramafic flows: massive to pillowed tonalite and basaltic tonalite flows.
- Yln13k** Upper felsic to intermediate volcanic rocks: felsic flows (type F1) interbedded with diorite flows dated at 2925.4 ± 643.9 Ma (LAPs 477), while weathering, typically 3–5% quartz phenocrysts, locally spineliferous texture, locally plagioclase microphyric.
- Yln13k** Chert-magnetite: locally stronomitic; generally transitional with, and/or capped by, chert-magnetite ironstone; includes coarse-grained nodular and/or diorite-bearing metamorphosed equivalents on northern Pipestone Bay.
- Yln13k** Middle felsic to intermediate volcanic rocks: tholeiitic and tholeiitic flows and tuff with lesser diorite to andesitic pyroclastic tuff and lapilli tuff; minor granitic megacrystic; calcic-alkaline affinity (type F2); includes 2940.1 ± 2.4 ± 7 Ma massive tholeiite flows (LAPs 466).
- Yln13k** Middle mafic to ultramafic volcanic rocks: massive basalt and hornblende basalt with minor associated spineliferous megacrystic; includes some serpentinite and gabbro.
- Yln13k** Intermediate calcic-alkaline volcanic rocks: diorite to lesser andesitic rocks dominated by pyroclastic tuff and lapilli tuff; with minor spineliferous basalt and chert-magnetite ironstone texture; minor intermediate basalt.
- Yln13k** Lower basalt: massive to locally pillowed, calcic-alkaline basalt.

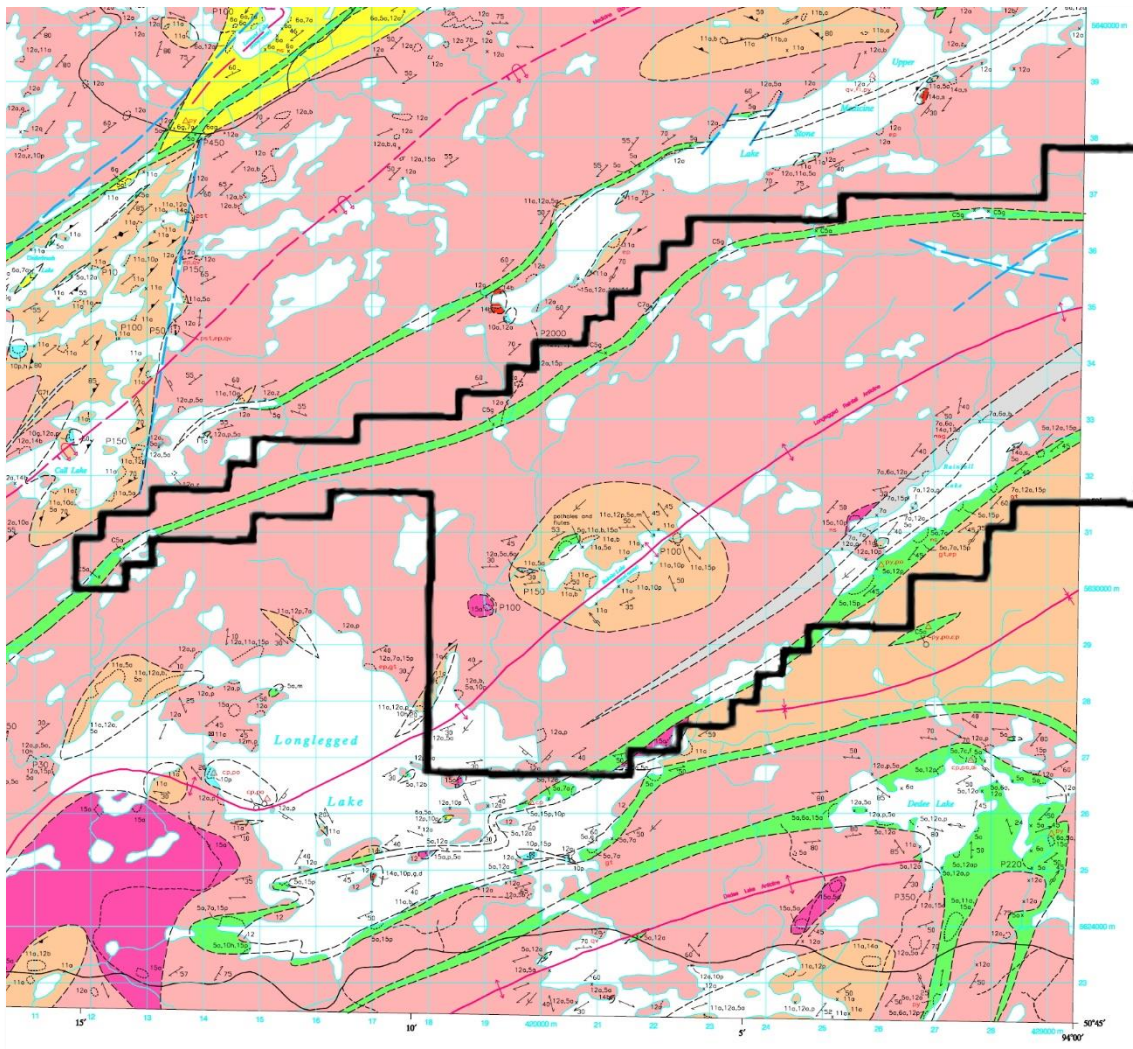
Balmer Plutonic Suite

- Yln13k** Gabbro/diorite/leucogabbro: intrusive into Balmer assemblage, locally plagioclase-phyric (i.e., north shore of central Red Lake).
- Yln13k** Serpentinized, serpentinitized peridotite: pyroxenite, typically actinolite-bearing, locally hornblende and/or actinolite; variably carbonatized; intrusive into, and geochronologically related to, the ca. 2490 Ma Balmer assemblage, possibly equivalent to the middle tonalite complex.
- Yln13k** Balmer assemblage (Red Lake and Birch-Club belt) ca. 2992–2964 Ma
- Yln13k** Rhyolite: upper rhyolite dated at 2964 ± 54 (LAPs 440) near Bannock Bay and possible tuff (thinly bedded) of Trout Lake batholith dated at ca. 2965.2 ± 1.7 Ma (LAPs 456).
- Yln13k** Felic volcanic rocks: thinly bedded to massive quartz and feldspar rhyolite tuff (ca. 2969 Ma) (Glover porphyry), LAPs 457 and associated volcanoclastic deposits.
- Yln13k** Intermediate to mafic volcanic rocks: massive basaltic andesite to andesite (Tina Creek) flows with minor diorite dated at ca. 2973 Ma at Spot Lake (LAPs 458), underlain by minor pyroclastic basalt.
- Yln13k** Sedimentary rocks: thinly bedded silt wacke and siltstone locally cut by gabbro dykes.
- Yln13k** Felsic to intermediate volcanic rocks: tholeiite to diorite flows, pyroclastic rocks, and associated calcic-alkaline rocks dated at 2993.0 Ma (Campbell Gold Mine, LAPs 441), ca. 2989 Ma (Chon Lake, LAPs 421).
- Yln13k** Diorite volcanic rocks: generally porphyritic including tuff, 2992–2049 Ma lapilli tuff (LAPs 435) and tuff breccia with clasts more tritic than mafic, locally gabbro-bearing.
- Yln13k** Ultramafic volcanic rocks: hornblende/andesitic basalt, locally with preserved argillite texture, forming lower (Red Lake, Russell Lake, Rungas Bay) and middle sequences (Post Narrows, Madson Narrows, Golden Arm).
- Yln13k** Mafic volcanic rocks: tholeiite basalt, commonly variably foliated and pillowed, locally aphyric, sparsely vesicular; consisting of a lower sequence with Tln1 + 1% tuff to enriched LREE profiles, and middle and upper sequences with Tln1 + 1% tuff to depleted LREE profiles.

The mid-90's saw new regional mapping of the Red Lake region, resulting in the publication of OGS Map P.3397, Medicine Stone Lake. Baird and Killala townships were (re-)mapped, and additional information was incorporated from work on Red Lake gold and related mineralisation. There was no new mapping to the South, and Map P.3397 used the geological information from Thurston and Paktunc's 1985 publication, and data from assessment work files.

Figure 6 Property Geology, western area

From OGS P.3397 with western property boundary. One grid square = 1 km²



Legend is overleaf.

Central and eastern portions of the property and adjacent areas were partially mapped by Thurston and Paktunc (1985). See Fig. 7 ff. The region was re-mapped in part with results presented in OGS P.3300, Dixie Lake Area (Central), P. 3301, Dixie Lake Area (East), and P. 3299, Dixie Lake Area (West). The sheets were not updated to accurately UTM registered colour maps. A compilation map covering the Whirlwind Jack property is shown following. Due to the regional and preliminary nature of the publications, the image is not UTM registered.

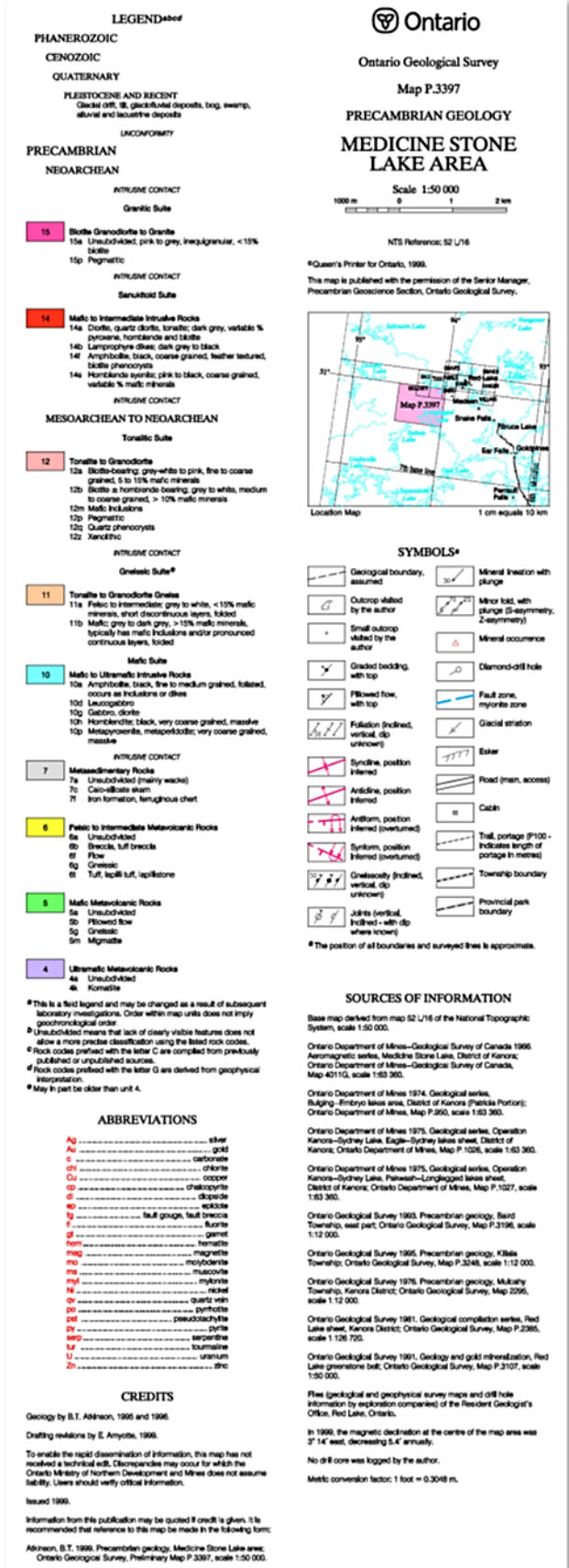


Figure 7 Property Geology, centre-east.

From OGS P.2857, Madsen Sheet (Thurston & Paktunc, 1985)

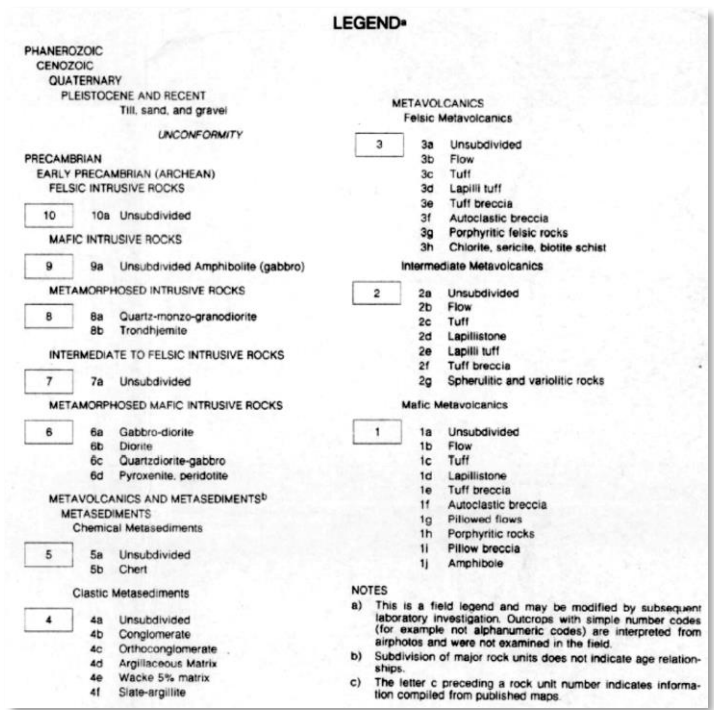
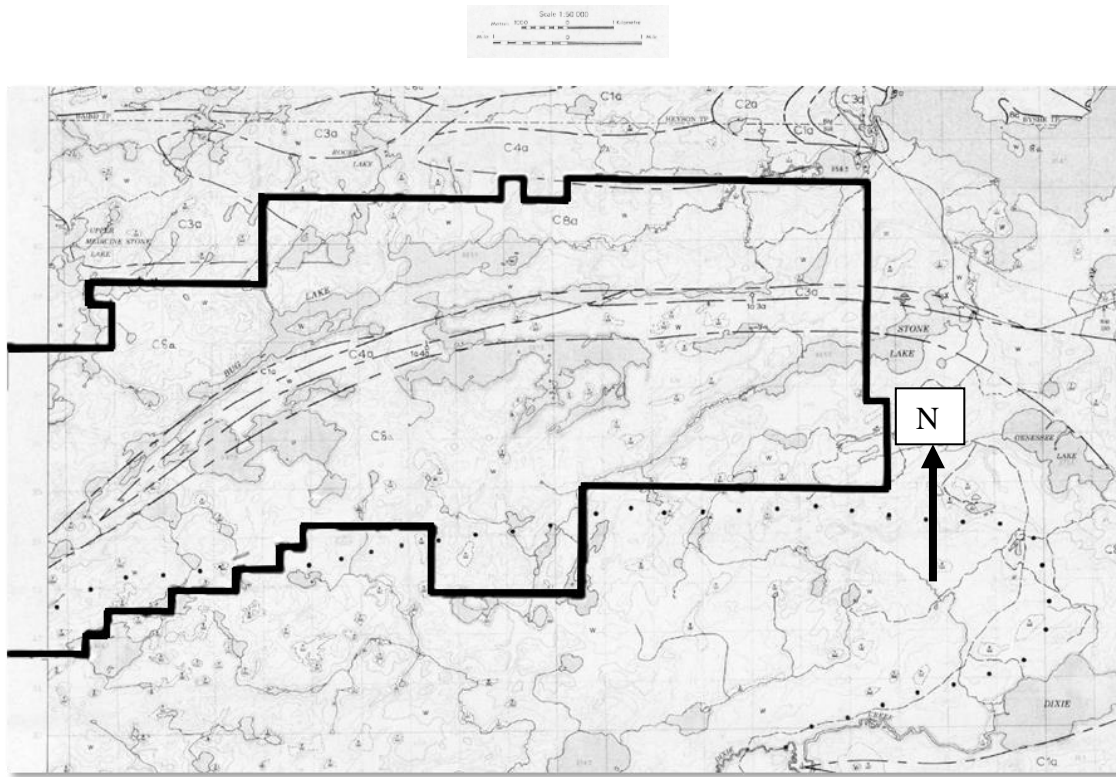
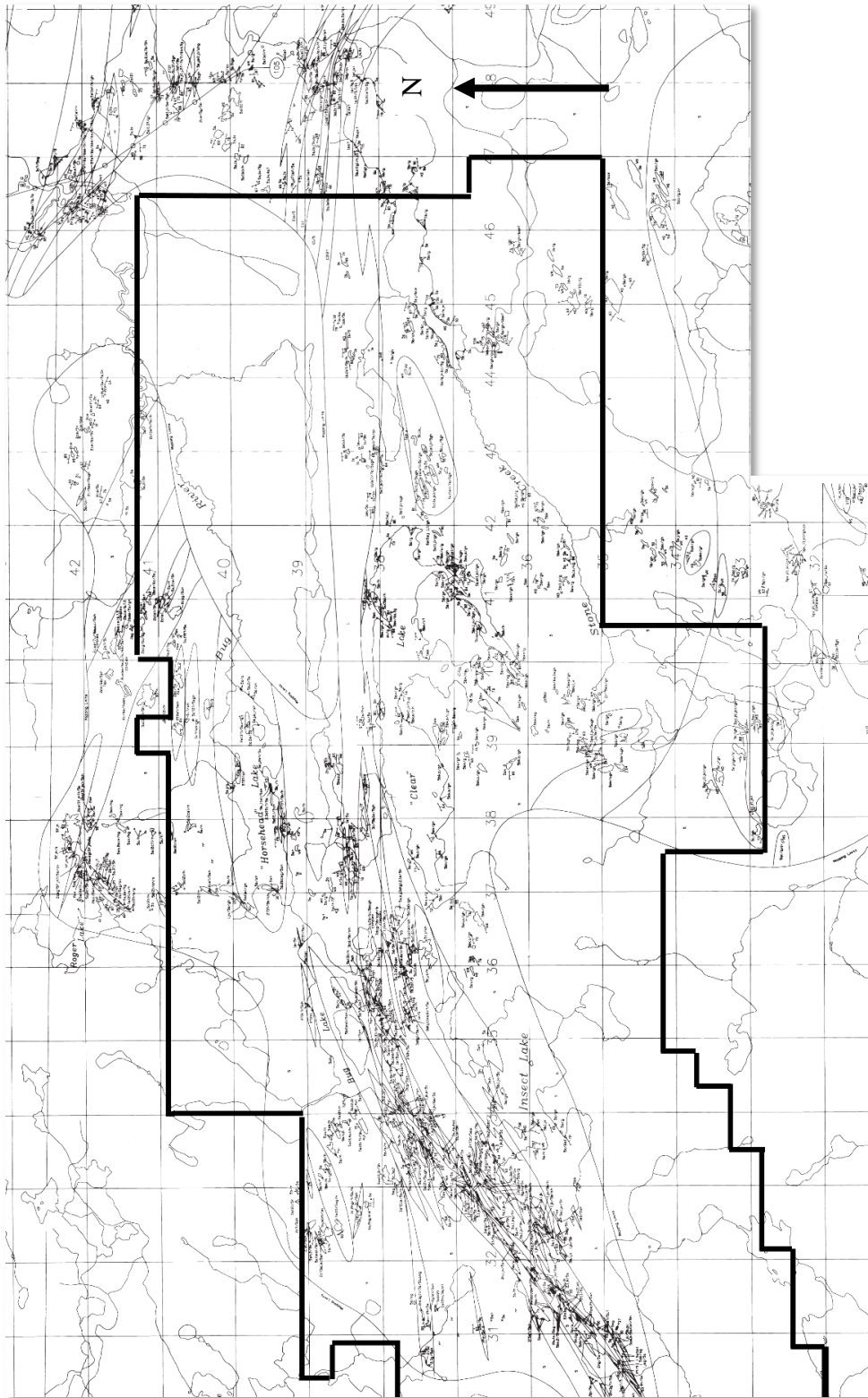


Figure 8 Compilation geology map for centre-east of property



From Preliminary Maps. P.3299, P.3300, Muir, 1994.





























LEGEND^{ab}

PHANEROZOIC
CENOZOIC
 QUATERNARY
 PLEISTOCENE AND RECENT
 Sand, gravel, till, clay

PRECAMBRIAN
ARCHEAN

- 7 Metamorphosed Intermediate To Felsic Dikes^c**
 - 7a Quartz porphyritic dike
 - 7b Feldspar porphyritic dike
 - 7c Massive dike
 - 6 Metamorphosed Mafic Dikes^c**
 - 6a Variably foliated, medium- to fine-grained gabbro/diorite
 - 6b Variably foliated, fine- to medium-grained lamprophyre
 - 6c Variably foliated, vari-textured, net-veined lamprophyre dikes with exotic inclusions
 - 6d Plagioclase phenocrysts
 - 6e Amphibole phenocrysts
 - 6f Biotite phenocrysts
 - 5 Metamorphosed Felsic to Intermediate Plutonic Rocks^c**
 - 5a Variably foliated, medium- to fine-grained biotite granite and quartz monzonite
 - 5b Variably foliated, medium-grained biotite- and biotite-hornblende granodiorite
 - 5c Variably foliated, medium-grained biotite-hornblende and hornblende-biotite tonalite
 - 5d Variably foliated, medium-grained hornblende quartz diorite, hornblende quartz gabbro
 - 5e Variably foliated, fine- to medium-grained hornblende quartz monzodiorite, quartz monzogabbro
 - 5f Weakly foliated, fine-grained diorite with various inclusions
 - 5g Aplite
 - 5h Pegmatite
 - 5j Plagioclase phenocrysts
 - 5k Potassic feldspar megacrysts
 - 5m Hornblende phenocrysts
 - 5n Quartz megacrysts
 - 5p Gneissic
 - 5q Migmatitic
 - () Lists types of inclusions present
- INTRUSIVE CONTACT*
- 4 Metamorphosed Mafic to Ultramafic Rocks^c**
 - 4a Gabbro
 - 4b Pyroxenite/Hornblendeite
 - 4c Plagioclase phenocrysts
 - Metasedimentary Rocks**
 - 3 Clastic And Chemical Metasedimentary Rocks^c**
 - 3a Feldspathic siltstone
 - 3b Medium to dark gray siltstone
 - 3c Lithic arkose, arkose
 - 3d Lithic arkosic wacke, arkosic wacke
 - 3e Pebble to cobble conglomerate
 - 3f Magnetite iron formation: chert
 - 3g Gneissic (undifferentiated sandstones unless followed by qualifier)
 - Metavolcanic Rocks^c**
 - 2 Felsic To Intermediate Metavolcanic Rocks^c**
 - 2a Massive felsic rocks
 - 2b Felsic tuff, lapilli-tuff
 - 2c Intermediate tuff, lapilli-tuff
 - 2d Intermediate pyroclastic breccia
 - 2e Plagioclase phenocrysts
 - 2f Quartz phenocrysts
 - 2g Amphibole phenocrysts
 - 2h Gneissic (undifferentiated unless followed by qualifier)
 - 1 Mafic Metavolcanic Rocks^c**
 - 1a Massive flows
 - 1b Pillowed and locally amygdaloidal flows
 - 1c Variolitic flows
 - 1d Medium- to coarse-grained flows or gabbro intrusions
 - 1e Amphibolite
 - 1f Coarse-grained plagioclase phenocrysts
 - 1g Medium- to fine-grained plagioclase phenocrysts
 - 1h Amphibole phenocrysts/porphyroblasts
 - 1j Gneissic (undifferentiated unless followed by qualifier)
 - 1k Epidote layers and lenses

SYMBOLS

- | | | | |
|---|---|--|---|
|  | Foliation, 1st generation: inclined, vertical |  | Fracture: inclined, vertical |
|  | Foliation, 2nd generation: inclined |  | Gneissosity: inclined |
|  | Foliation, 3rd generation: inclined |  | Axial plane: inclined |
|  | Foliation, unknown generation A: inclined |  | S-Fold axial plane: inclined |
|  | Foliation, unknown generation B: inclined |  | Z-Fold axial plane: inclined |
|  | Shear foliation, 1st generation: inclined |  | Shear, left lateral: inclined |
|  | Shear foliation, 2nd generation: inclined, vertical |  | Shear, right lateral: inclined |
|  | Shear foliation, 3rd generation: inclined |  | Vein: inclined, vertical |
|  | Cleavage, 1st generation: inclined |  | Crenulation lineation, 3rd generation: plunging |
|  | Cleavage, 2nd generation: inclined, vertical |  | Elongation lineation: plunging |
|  | Cleavage, 3rd generation: inclined |  | Mineral lineation: plunging |
|  | Crenulation cleavage, Z asymmetry: inclined |  | Intersection lineation: plunging |
|  | Crenulation cleavage, Z asymmetry, 3rd generation: inclined |  | Slickenside lineation: plunging |
| | |  | U-Fold axis: plunging |
| | |  | Glacial striae |

ABBREVIATIONS

MINERALS

- | | | | |
|----------|-------------|----------|------------|
| cb | carbonate | mt | magnetite |
| gh | graphite | po | pyrrhotite |
| gt | garnet | py | pyrite |
| mo | molybdenite | tm | tourmaline |

STRAIN INTENSITY

- | | | | |
|----------|------------------|----------|--------------------|
| WK | weak | MS | moderate to strong |
| WM | weak to moderate | ST | strong |
| MD | moderate | IN | intense |

MISCELLANEOUS

- | | | | |
|-----------|---------------|-----------|---|
| / | intruded by | pst | pseudotachylite |
| qv | quartz vein | alt | alteration (bleaching; silicification?) |
| myl | mylonite | nr | no outcrop (field confirmed) |
| fbx | fault breccia | | |
| cat | cataclasite | | |

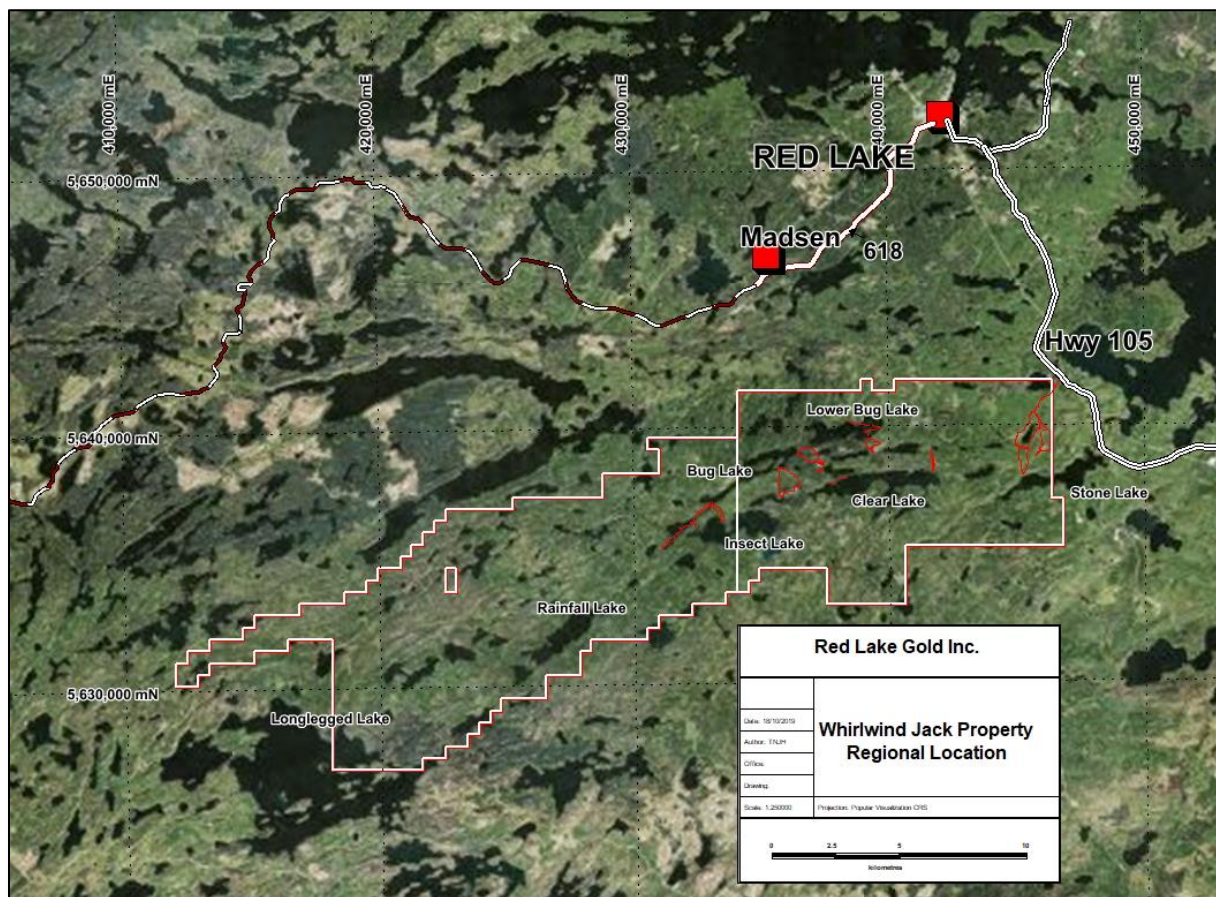
6.0 2019 PROSPECTING

Following a review of historical property work, related semi-regional geology and exploration, and analysis of regional, airborne geophysical surveying, several areas were chosen for ground truthing and prospecting.

Preliminary field investigations focussed on characterisation of the volcano-sedimentary sequence, loosely defining the extent and location of the mainly north-bounding granitoid and the South-bounding tonalite intrusive suites, and assessing the overall geology and terrain in order to develop a comprehensive ground exploration programme. All samples were reasonably representative grabs taken with a geological hammer, with locations recorded using a handheld GPS.

Between the 23rd September and 3rd October, four areas were prospected, these being the West end of Bug Lake; central Bug Lake, South to Alcock Lake, and East Lower Bug Lake; North of Clear Lake, and an area between Stone Lake and Bug Creek in the north-east of the property.

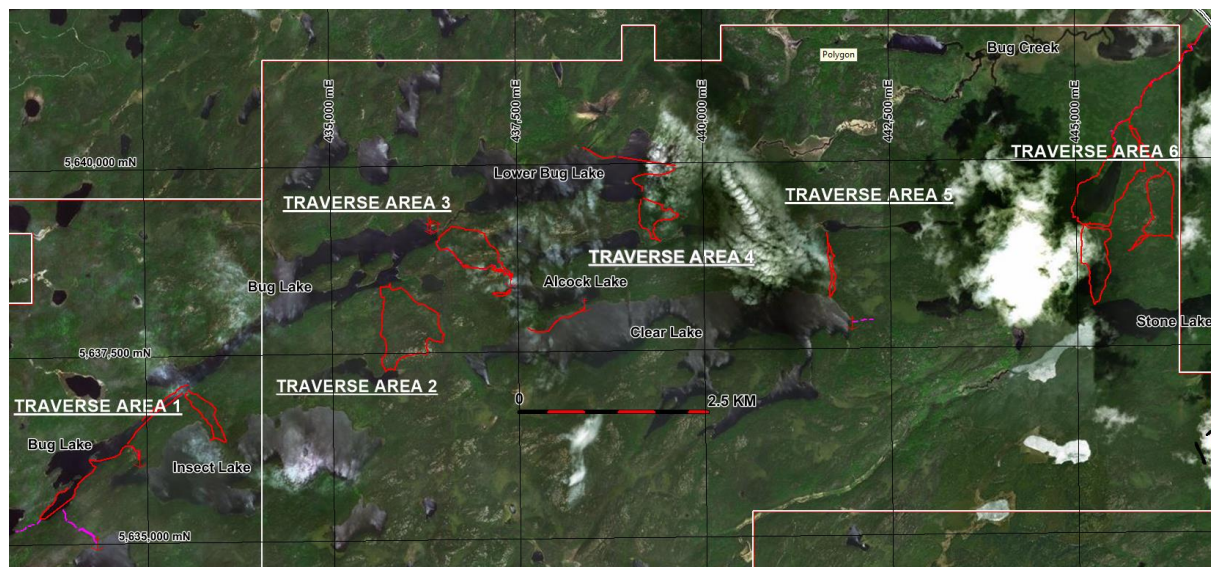
Figure 9 Regional Location



Far eastern and north-eastern areas were accessed by road, boat and foot, with reasonably good access to the property. All other areas were accessed by float plane, using a cabin at the East end

of Bug Lake as a base for traverses to the East and West. The areas of investigation are shown below, figure 10, with traces of the traverses displayed as red lines. Detailed information follows. Datum is NAD 83 Zone 15. Navigation used a Garmin GPSmap 62S.

Figure 10 Traverse areas



Dates of examination of the areas are as follows:

- Traverse Area 1: 29th September
- Traverse Area 2: 27th September
- Traverse Area 3: 26th, 27th and 30th September
- Traverse Area 4: 28th September
- Traverse Area 5: 29th September
- Traverse Area 6: Northern, western and eastern portions on 23rd and 24th September;
Southern and south-eastern portions on the 3rd October.

6.1 SUMMARY OF FINDINGS

Area 1

This included shoreline examination of the North and South shores of the West end of Bug Lake. The effects of the granitoid intrusion are widespread and pervasive. Granodiorite, monzodiorite, plagiogranite, minor granite, s.s., granite gneiss and more potassic, alkalic, often coarser igneous phases have intruded a suite of interbanded, often layered, gneissic supracrustal rocks. Compositions of the supracrustal sequence are relatively homogeneous due to the modifying effects of the intrusion(s), regional metamorphism and related deformation. Mineralogies are combinations of feldspar (plagioclase)-biotite-amphibole-quartz, with significant to negligible potassic overprint. Crystal habit and size variation provide some clues as to the origin of some of the lithologies, with sedimentary units classified on the basis of more variable crystal size, more distinct and prevalent layering, and obviously, quartz content with weak to negligible amphibole.

Distinct sedimentary textures are rare. A mixture of quartz-rich and feldspar-amphibole rich layers suggests intercalated flows and sediments, or volcanoclastic rocks. Several exposures of quite silicic, usually much finer grained, quite homogeneous rocks were considered to represent felsic-intermediate volcanic lithologies.

Granite intrusion and modification can be widespread, and manifest as a gradational transition via feldspathization of the country rock, or often sharp, discordant or layer parallel intrusion with negligible contact metamorphism or mineral diffusion. Supracrustal rocks may appear granitised or simply veined by granitoid material. Pure quartz veining was rarely noted.

Structural fabrics are principally an S_2 lineation defining the main mineral fabric. Where gneissic banded fabrics are prevalent, S_2 is parallel. Small scale, tight to isoclinal and rarely, intrafolial folding is poorly preserved. There are reasonably well-preserved examples of steeply East plunging L_1/L_2 lineations. Such sub-metre-scale phenomena have been largely destroyed by lateral and sub-vertical D_2 thrusting and subsequent regional scale strike-slip faulting. This is evidenced by shoreline exposures of shallow, typically South-dipping supracrustals overlain and in some locales, underlain by concordant granite, with sharp, planar contacts and sub-metre-wide protomylonitic fabric development (seen coarsely as finer gneissic layering).

Despite the generally poor exposure of the supracrustal sequence, there is sufficient bedding-cleavage and simple S_2 and bedding changes to indicate the presence of significant upright to steeply dipping, locally overturned supracrustals subsequently infolded and injected by granitoids. The middle of the south-west portion of Bug lake clearly defines a broad moderately dipping relatively upright antiform.

Distinctly magnetic units, be they amphibolite or iron formation were not discovered, and overall, magnetism is weak and typically negligible in all units.

No sulphides were noted during field investigations.

Area 2

Located on the South shore of the central portion of Bug Lake with basically the same lithological, structural intrusive characteristics as Area 1, though shallow-dipping sequences are poorly preserved. Shoreline exposures of steeply to sub-vertically dipping granitoid indicate the entire sequence is also steeply dipping, with extensive exposures of same to the South. Therein are exposed a multitude of sub-metre-wide, strongly altered, often highly flattened, dislocated, pinched, and probably boudinaged supracrustal layers with erratic, often short strike extent. Some stacking arising from dislocated mesoscopic isoclinal folding is likely within both mafic-intermediate volcanic and sedimentary sequences. Several felsic-intermediate exposures were also noted. Dislocation (fault) distances are unknown.

Within this area and continuing East are large well exposed ridges of pale pink monzodiorite that are clearly visible on satellite imagery. (These are widespread across the property and to the South and West.)

Distinctly magnetic units, be they amphibolite or iron formation were not discovered, and overall, magnetism is weak and typically negligible in all units. Several airborne geophysical magnetic highs appear co-incident with large expanses of granitoid, exposures reveal very weak to negligible magnetic material, suggesting they are related to buried more strongly magnetic material within the granitoid sequence.

No sulphides were noted during field investigations.

Area 3

Traverse area 3 is the locale for the most significant work on the property, notably by Teck, Selco, Precambrian Ventures and Grandcru (see ‘History’).

Teck’s direct involvement is poorly documented, though it’s likely they carried out some geophysical work in the area, and certainly farther East, where there is assessment work documentation (see Area 6). Selco carried out airborne geophysics then MaxMin EM and ground magnetometer surveys, defining several probably stratigraphic conductors, with several shown below, figs., 11 and 12.

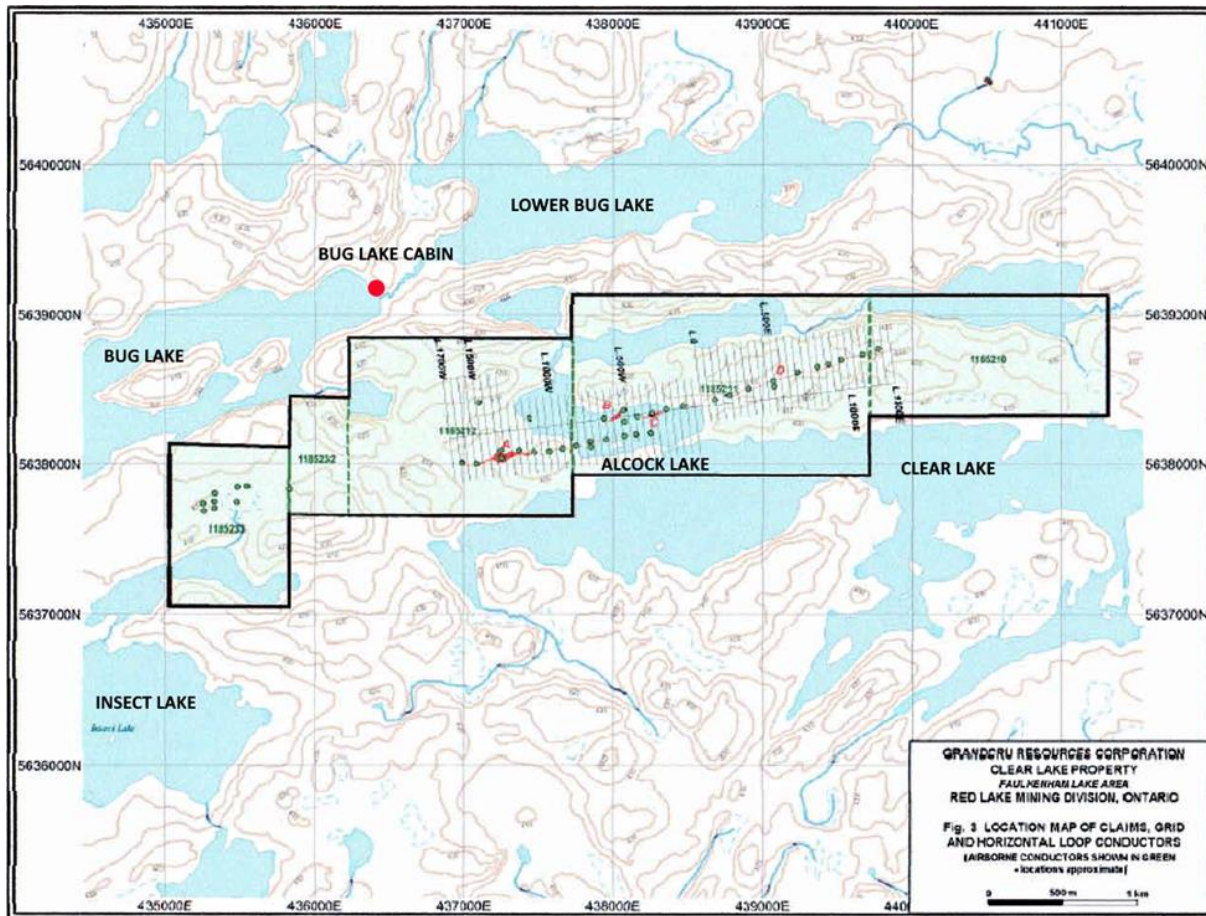
Assessment reports note they may have drilled a hole to test one conductor, though the location could not be found by Grandcru and its’ contractors, and the drill core was understood to have been lost.

In the past, geological information on the area was gathered from reconnaissance and grid mapping, (the latter by Precambrian Ventures and Grandcru), though save for the location of two small lengths of cut line and a grid just west of the West shore of Alcock Lake, any other grid has been lost through fire, storms and related windfall. A broad east north-east band of (meta)sedimentary rocks is flanked by mafic volcanic rocks, with conductors located within both sequences. Investigations by the author suggest this is an oversimplification, with significant, albeit often very thin interlayered granitoid-supracrustals or merely relict lensoid to streaky gneissic to, in extreme instances, xenocrystic supracrustal material within largely poorly altered but moderately deformed potassic granitoid, a feature very prevalent to the West.

Across the property, the larger exposures of granitoid display quite complex relationships with the supracrustal sequence and on slopes and flat areas, with expansive forest cover, there’s likely a similar relationship though with one suspects, better preserved volcano-sedimentary units. Cross-property, overburden thickness could be considerable based on extensive boulder terrain covered with thick moss or third generation mixed bush. Ridge slopes clearly show the size and extent of the boulder terrain, which drapes the topography and infills lower topography.

Personal field observations indicate the same lithological, structural and mineralogical relationships to those in areas one and two. As part of the investigations, a check was made on the mineralised occurrences ‘A’ and ‘B’ described in Grandcru’s reports accompanying their soil and MMI geochemical work. (see ‘History’). The two locales are the sites of mineralised and barren float, with no known provenance. Locations are shown in fig. 11.

Figure 11 EM conductor trends, Grandcru, 2004



Note: Original assessment report imagery is poor – enhancements were made where possible

Sampling of a central portion of this area was carried out, with what was considered to be volcanic and sedimentary lithologies. Results were inconclusive.

Area 4

A similar sequence was noted during a traverse southwards, from the south-(east) shore of Lower Bug Lake. Extensive, largely unaltered granitoid flanks narrow, often less than 10-metre-wide east-north east trending, steeply dipping sediments, mafic-intermediate volcanic rocks, all with varying degrees of felsic alteration from negligible to near-complete assimilation. (Fig. 11, overleaf). Earlier published work in assessment files (Grandcru) indicates only granitoid in the area. This sequence would be sub-parallel to that in the Alcock Lake area (fig. 10), separated by granite, or represent a dislocated extension trending across the property to the East.

No sulphides were located in this area.

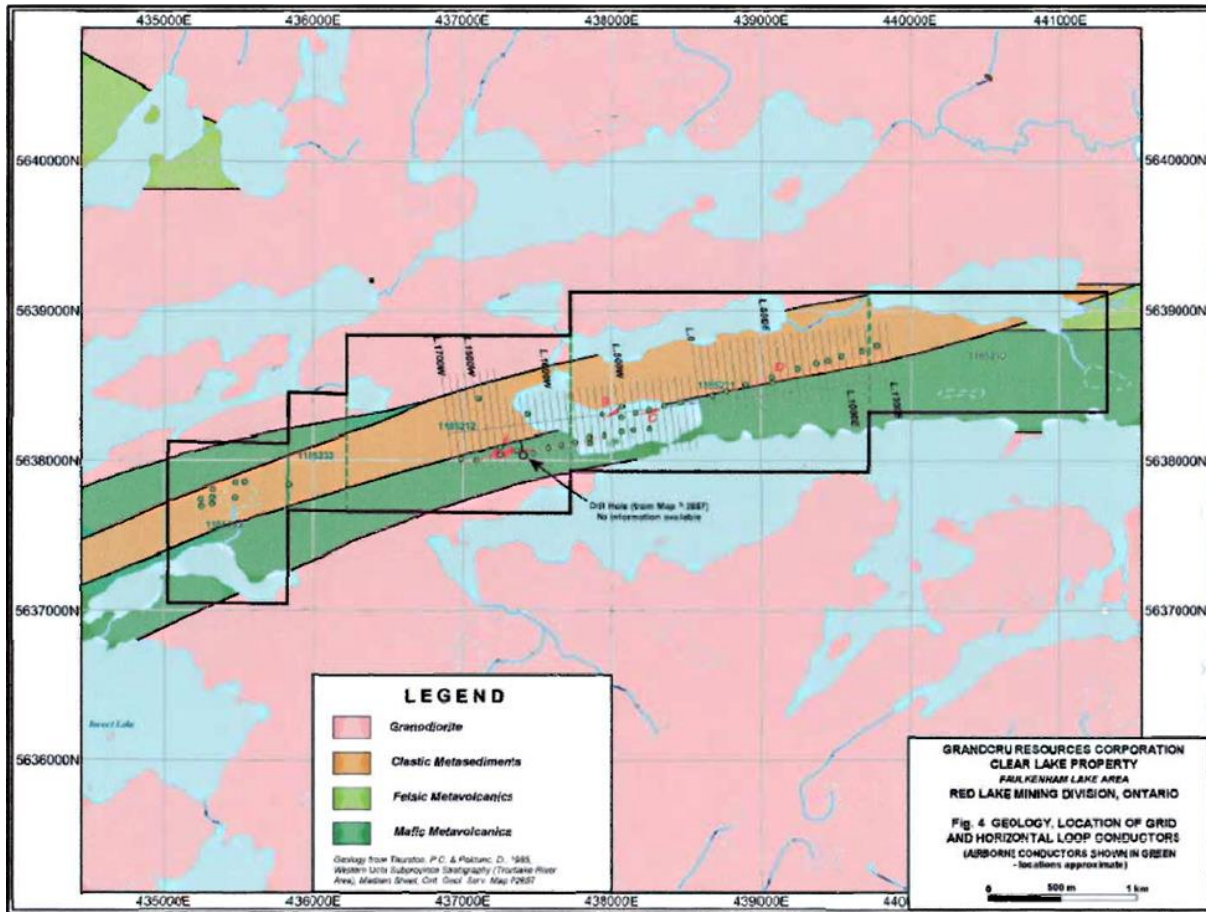


Figure 12 Generalised Geology, with EM Conductor, Grandcru, 2004

Note: Original assessment report imagery is poor – enhancements were made where possible

It is quite apparent that the mafic volcanic-sediment-mafic volcanic sequence shown above is grossly simplified. It can appear interlayered with, intruded, injected or veined by, granitoid, with minor to considerable granitisation and gneissic development. Several fairly well-preserved, i.e. unaltered supracrustal zones were noted, they ranging in width from a few metres to ten of metres in width. This can be seen in the larger granite exposures and thicknesses are probably greater in low-lying, heavily forested areas.

Area 5

The traverse was designed to avoid the large granitoid exposures and locate supracrustal sequences. Much of the area is underlain by relatively flat-lying, forest, or centrally, muskeg. There are likely expansive exposures of granitoid to the East (based on satellite interpretation and regional magnetic data). Only very small, discontinuous and narrow outcrops of supracrustals were located, with these recorded as mainly homogeneous, mafic-intermediate volcanic rocks.

No sulphides were located in this area. If large wide granitoid ridges represent the majority of the underlying geology, then the area is more representative of hosting more significant sequences of

supracrustal rocks. Compared to western exposures, there is a slight decrease in granitoid alteration, and better preservation of albeit very minor sedimentary textures, this due in no small part to a lower strain regime.

No sulphides were located in this area.

Area 6

This covers the easternmost areas traversed. Expansive granitoid was noted North of scattered but relatively broad and better preserved supracrustal rocks, characterised by low strain deformed mafic-intermediate flows, pillow lavas with interflow sediments, medium to fine grained intermediate-mafic volcanic derived sediments and felsic volcanic rocks, the latter defined by fine blastic felsic mineralogies, coarser, elongate lapilli pyroclastic or banded rocks. Northern contacts between intrusion and supracrustal are defined by a broad, up to 100-metre-wide alteration zone where the latter may appear banded, lensoid, streaky to xenoblastic, variably to negligibly feldspathised, a phenomenon also noted in Areas 1 through 4. Most supracrustal exposures show only weak to no feldspathization/'granitisation'. The southern contact with the basement granitoid and granite gneiss was not seen in Area 6, though it may be fault related. Clear evidence is lacking. Basement gneiss exposures are seen on the North and South shores of Stone Lake.

In general, cross-property, a transitional northern contact possesses these same characteristics, whilst a southern one is hidden, displaying similar, but much more poorly exposed trends.

The relationship between these two main sequences and the tonalitic basement exposed at shoreline along Clear Lake is unknown due to cover.

Several magnetic high trends were crossed, but there is no apparent lithological signature.

No sulphides were noted on these traverses, except very fine pyrite and perhaps trace chalcopyrite in sample 5562267 and elsewhere in the immediate area, wherein crops out significant exposures of volcanic rock.

In accordance with MNDM regulations on technical and assessment report writing, below, Table 1 provides information on terrain, vegetation, drainage and outcrops. Waypoint locations are provided for all observation stations. Table 2, following, is a summary of samples taken with related waypoint and GPS locations.

Table 2 Waypoint Locations, terrain and outcrop descriptions

Waypt No.	Date	Easting	Northing	Elevation	Comments	Sample Number
2	23.9.19	446510	5641490	412	At trail to property	
3	23.9.19	445600	5640020	412	Mixed bush, mainly poplar and spruce	
4	23.9.19	445010	5639190	413	Mixed bush, mainly poplar and spruce	
5	23.9.19	445470	5638930	412	Mixed bush, mainly poplar and spruce	
6	23.9.19	445490	5639200	413	Mixed bush, mainly poplar and spruce	
7	23.9.19	445910	5639820	412	Mixed bush, mainly poplar and spruce	
8	23.9.19	445730	5639700	413	Mixed bush, mainly poplar and spruce	
9	23.9.19	445940	5640230	413	Mixed bush, mainly poplar and spruce	
11	23.9.19	446597	5641817	365	Car Park, trail	
12	23.9.19	446578	5641439	366	Mixed bush, mainly poplar and spruce	
13	23.9.19	446478	5641415	367	Mixed bush, mainly poplar and spruce	
14	23.9.19	446447	5641345	368	Mixed bush, mainly poplar and spruce	
15	23.9.19	446409	5641280	370	Mixed bush, mainly poplar and spruce	
16	23.9.19	446378	5641212	376	Mixed bush, mainly poplar and spruce	
17	23.9.19	446322	5641165	376	Mixed bush, mainly poplar and spruce	
18	23.9.19	446277	5641137	376	Mixed bush, mainly poplar and spruce	
19	23.9.19	446181	5641093	374	Mixed bush, mainly poplar and spruce	
20	23.9.19	446108	5641046	372	Mixed bush, mainly poplar and spruce	
21	23.9.19	446060	5641034	372	Mixed bush, mainly poplar and spruce	
22	23.9.19	446029	5641003	372	Mixed bush, mainly poplar and spruce	
23	23.9.19	446005	5640975	374	Small trail heading SE to S to an old camp site	
24	23.9.19	446017	5640945	377	Old campsite	

25	23.9.19	445923	5640869	381	Mixed Bush	
26	23.9.19	445892	5640807	386	Mixed Bush	
27	23.9.19	445884	5640718	392	Mixed Bush	
28	23.9.19	445851	5640677	396	Mixed Bush	
29	23.9.19	445781	5640637	401	"Ridge" top, relatively flat	
30	23.9.19	445716	5640526	405	Mixed Bush	
31	23.9.19	445681	5640503	406	Mixed Bush	
32	23.9.19	445665	5640498	407	Fairly flat, mainly birch	
33	23.9.19	445622	5640490	408	Mixed Bush	
34	23.9.19	445567	5640453	410	Mixed Bush	
35	23.9.19	445511	5640366	412	Y junction of trails	
36	23.9.19	445511	5640367	411	Mixed Bush	
37	23.9.19	445511	5640367	412	Mixed Bush	
38	23.9.19	445512	5640350	412	Mixed Bush	
39	23.9.19	445499	5640303	412	Mixed Bush	
40	23.9.19	445492	5640274	415	Mixed Bush	
41	23.9.19	445530	5640262	414	Mixed Bush	
42	23.9.19	445549	5640228	412	Mixed Bush	
43	23.9.19	445528	5640195	411	Mixed Bush	
44	23.9.19	445498	5640156	413	Mixed Bush	
45	23.9.19	445494	5640130	410	Trail turns South	
46	23.9.19	445505	5640094	411	Mixed Bush, increasing spruce and wet	
47	23.9.19	445544	5640032	409	N. end of the lake, with old boat	
48	23.9.19	445489	5640038	410	Flat, shoreline heading SW	
49	23.9.19	445456	5640022	411	Slight rise into mixed bush, mainly poplar, minor spruce, birch	
50	23.9.19	445378	5639930	417		
51	23.9.19	445353	5639896	420		
52	23.9.19	445303	5639800	428	Massive to homogeneous pink to reddish grey granitoid with several cm wide, slightly rusty amphibole rich mafic volcanic gneiss bands	
53	23.9.19	445303	5639802	429	Same outcrop as previous	
54	23.9.19	445289	5639781	428	Heading SSW, same outcrop essentially	
55	23.9.19	445280	5639766	429	Same outcrop going down to the E.	
56	23.9.19	445251	5639754	429	Small outcrop. Qz-feldspar-biotite granitoid, weakly alkalic	
57	23.9.19	445220	5639742	430	Subcrop & outcrop of quite silicic granitoid, with patchy overprinting alkalic granite (potassic feldspar)	
58	23.9.19	445204	5639732	429		

59	23.9.19	445190	5639720	430	Grey med. grained poorly lineated granitoid/plagiogranite.
60	23.9.19	445160	5639713	430	Pale pink-gey, med grained granitoid, quartz-feldspar-biotite with weak alkalic content (and variable). Quite homogeneous
61	23.9.19	445127	5639700	430	As preceding. Topography is down to the S and SE
62	23.9.19	445102	5639683	429	Outcrop + float. Shows relict mafic volcanic material in potassic feldspar rich felsic volcanic
63	23.9.19	445086	5639677	429	Outcrop of mafic volcanic as lenses or bands in felsic igneous rock (quartz-biotite-potassic feldspar-plagioclase)
64	23.9.19	445066	5639681	431	Outcrop of 90% + plagiogranite to potassic granite/monzodiorite
65	23.9.19	445053	5639677	430	Outcrop appears previously bashed. ML images
66	23.9.19	445022	5639526	414	
67	23.9.19	444959	5639386	409	
68	23.9.19	444955	5639380	408	Flat, relatively wet, mainly deciduous bush
69	23.9.19	444955	5639380	410	Flat, relatively wet, mainly deciduous bush
70	23.9.19	444942	5639316	410	Flat, relatively wet, mainly deciduous bush
71	23.9.19	444952	5639277	410	Mixed Bush, drier
72	23.9.19	444955	5639240	413	Mixed Bush, drier
73	23.9.19	444955	5639225	414	Mixed Bush, drier
74	23.9.19	444960	5639214	414	E-W knoll 60 m long and 20 m N-S. Possible sub/crop. Target area is in lowland birch, with no outcrop
75	23.9.19	444991	5639224	414	Heading to 445470/ 5638930, the mag high is South of the target area, parallel to a creek.
76	23.9.19	445034	5639213	415	
77	23.9.19	445097	5639125	421	Outcrop approx. 60 m E-W and 30 N-S, with more expansive subcrop only (moss). Banded intermediate volcanic rock, well finely banded, pale grey, mainly quartz-(plagioclase) biotitic with weak amphibole. Contains fabric parallel quartz-

					plagiogranite veins and bands. Trends 090, dips steeply North	
78	23.9.19	445156	5639125	420		
79	23.9.19	445190	5639128	421		
80	23.9.19	445263	5639120	423	Subcrop	
81	23.9.19	445265	5639120	424	Subcrop	
82	23.9.19	445298	5639120	426		
83	23.9.19	445323	5639125	427		
84	23.9.19	445351	5639111	428		
85	23.9.19	445367	5639108	429	Epicentre of large E-W granite outcrop, trending E for 150 m. Intermediate gneiss? With considerable if not predominantly felsic intrusive material. Dips are E-W sub-vertical to North steep. Plagioclase rich volcanic bands. Lineated to gneissic texture, fine to medium grained supracrustal material.	
86	23.9.19	445373	5639105	427		
87	23.9.19	445451	5639028	419		
88	23.9.19	445466	5638985	418	Edge of bog	
89	23.9.19	445467	5638985	418	Edge of bog	
90	23.9.19	445464	5638951	418		
91	23.9.19	445455	5638939	418		
92	23.9.19	445455	5638937	417	Middle of bog. Labrador Tea, tamarack, small pine. 60 m South heading into poplar/mixed bush again	
93	23.9.19	445467	5639003	417		
94	23.9.19	445461	5639141	416		
95	23.9.19	445479	5639163	416		
96	23.9.19	445468	5639181	414		
97	23.9.19	445471	5639210	413	20 m ESE to target. Low, flat, and 1-2 degrees up to the North. Dense alders, wet. No outcrop	
98	23.9.19	445522	5639358	414		

99	23.9.19	445527	5639410	412	NE trending pink weathered granitoid. Lineated, med grained, non-magnetic, grey, non-magnetic. In an exposed outcrop showing considerable granitoid intrusive material and modification.
100	23.9.19	445588	5639458	416	N. end of same outcrop
101	23.9.19	445609	5639482	418	
102	23.9.19	445631	5639522	421	
103	23.9.19	445650	5639554	424	
104	23.9.19	445660	5639569	424	
105	23.9.19	445678	5639604	427	N-S trending outcrop, exhibiting low strain. Quite homogeneous, weakly potassic plagiogranite to slightly monzodioritic
106	23.9.19	445687	5639633	428	As preceding, with low to negligible strain.
107	23.9.19	445687	5639633	428	
108	23.9.19	445687	5639633	427	
109	23.9.19	445697	5639652	428	Homogeneous plagiogranite to monzodioritic. Pink quite massive, med grained, weathering to dirty pale pink to pale reddish brown. Plagioclase-rich host.
110	23.9.19	445723	5639669	428	
111	23.9.19	445738	5639693	429	New outcrop with float and boulders. Trends North for 30 m and E-W 30 m Subcrop for 35 metres. Less than 5% potassic/sodic feldspar. Biotitic in both felsic volcanic rocks
112	23.9.19	445795	5639763	426	
113	23.9.19	445829	5639811	428	
114	23.9.19	445846	5639845	428	
115	23.9.19	445886	5639818	430	Possible outcrop of previous lithology
116	23.9.19	445876	5639819	428	
117	23.9.19	445877	5639838	428	Small outcrop monzodiorite to weakly potassic quartz diorite to granodiorite

118	23.9.19	445911	5639958	427	SW corner of large outcrop, trending 50 m N-S and 35 E. As preceding lithology
119	23.9.19	445884	5640030	426	Open area with old jackpine - old campsite for logging. No outcrop.
120	23.9.19	445874	5640036	427	Low lying, cleared bush with immature mainly deciduous and sparse conifer trees
121	23.9.19	445844	5640126	421	Low lying, cleared bush with immature mainly deciduous and sparse conifer trees
122	23.9.19	445820	5640334	410	Low lying, cleared bush with immature mainly deciduous and sparse conifer trees
123	23.9.19	445807	5640385	407	Low lying, cleared bush with immature mainly deciduous and sparse conifer trees
124	23.9.19	445761	5640401	407	Low lying, cleared bush with immature mainly deciduous and sparse conifer trees
125	23.9.19	445737	5640417	405	Creek to the North.
126	23.9.19	445735	5640450	403	In creek, at beaver dam
127	23.9.19	445707	5640519	403	Exit point on trail to car park. Flagged
130	24.9.19	445994	5639178	404	
131	24.9.19	445881	5638955	403	
132	24.9.19	445744	5638793	401	
133	24.9.19	446266	5638957	403	
134	24.9.19	446297	5639287	403	
135	24.9.19	445870	5639850	403	Pink granodiorite. Homogeneous
136	24.9.19	445953	5640121	435	As preceding outcrop
137	24.9.19	446019	5640046	433	Small outcrop 5b
138	24.9.19	446049	5640004	433	NE end of outcrop monzodiorite to plagiogranite. outcrop extends W for 20 m and SW for 50 m.
139	24.9.19	446075	5639929	431	
140	24.9.19	446104	5639893	430	Small outcrop 5b, with larger outcrop to the West.
141	24.9.19	446177	5639846	429	Walking over expansive granodiorite exposures
142	24.9.19	446194	5639834	429	Same outcrop, extending S for 40 m, W for 45 m and SE for 60 m, and E for 40 m. Massive, homogeneous, with rare pegmatitic

					alkalic material. NVS NM, NS
143	24.9.19	446176	5639809	428	Outcrop same lithology as preceding
144	24.9.19	446163	5639787	428	Outcrop new
145	24.9.19	446150	5639770	430	Outcrop
146	24.9.19	446135	5639763	430	Same outcrop as preceding. Felsic intrusion, plagiogranite to monzodioritic with alkalic bands and veining
147	24.9.19	446090	5639758	433	Quite alkalic felsic intrusion.
148	24.9.19	446058	5639747	434	Edge of previous outcrop
149	24.9.19	446034	5639743	433	Edge of another felsic outcrop, with similar lithologies
150	24.9.19	446016	5639746	435	Epicentre of previous outcrop. Target area is outcrop of same lithology. Cannot discern any significant magnetic component. Minor probably amphibole rich bands but quite rare, and dm scale, maximum. More outcrop to the North, 80 m away.
151	24.9.19	445968	5639700	434	Heading to next target area. Edge of large outcrop and walking along it. Lithology as preceding
152	24.9.19	445956	5639682	434	Same outcrop as preceding. Felsic intrusion, plagiogranite to monzodioritic with alkalic bands and veining
153	24.9.19	445962	5639648	431	Heading downslope, with a series of parallel felsic outcrops.
154	24.9.19	445953	5639628	429	As preceding
155	24.9.19	445969	5639609	424	Outcrop massive relatively homogeneous felsic intrusion. 5a. 5c (govt) type. outcrop extends SW for 70 m and 50 m W. Target '3' is 35 m SE in same lithology. (small outcrop, so magnetic high could be unexposed)

156	24.9.19	445969	5639572	424	Heading to next target area, SSW onto a long ridge with bands of sub-metre wide mafic gneiss. Grey, with sub-parallel and oblique cutting (steep) alkalic granite to pegmatite. Some relatively unaltered mafic volcanic material preserved but still essentially gneissic to massive finer grained, greenish grey. Typically, however, banded to streaky, with pronounced assimilation by 'granite'. outcrop extends W for 40 m, and to the S. Overall, the felsic host is quite massive, with weak to only localised strain (fabric developed).
157	24.9.19	445971	5639432	414	Into muskeg
158	24.9.19	446011	5639375	414	Heading into mixed bush (MB), relatively flat
159	24.9.19	446008	5639363	414	
160	24.9.19	446011	5639338	415	
161	24.9.19	446011	5639309	421	Up onto low small outcrop of 5b/1a (govt) type, essentially gneissic mafic-intermediate gneiss
162	24.9.19	446009	5639289	426	Undulose slow weak rise up onto large outcrop. Essentially granitoid, with very rare relict ?mafic-intermediate volcanic material Slight development of strain within the intrusion, which host weak, sub-planar to slightly wavy (boudinage type) supracrustal material Host is weakly alkalic. Fabric is weak, irregular. Supracrustal was deformed, flattened, intruded by granitoid then intruded by more pegmatitic alkalic material
163	24.9.19	446012	5639255	429	

164	24.9.19	446018	5639236	431	Onto another large outcrop extending S for 80 + m, and W for 70 m. Highest point in area with view of distant Hwy. Locally banded streaky to flattened pseudo fragmental mafic material trending 140. Trace magnetite noted. Looks like very elongate parallel lithophysae in a plagioclase-quartz rich host	
165	24.9.19	446042	5639187	428	Heading South with outcrop all around. Very open park like outcrop continues E and S. 90% + pale pink weathering plagiogranite to monzodiorite	
166	24.9.19	445984	5639144	433	Same outcrop	
167	24.9.19	445956	5639114	427	Same outcrop	
168	24.9.19	445901	5639050	425	Same outcrop. In part lineated to gneissic 272, North 80, with 5% reddish vein type alkalic granite. Relict mafics are grey, finely banded quartzose, and possibly intermediate to volcanoclastic. Evidence of past work in area, with chain sawn trees. Possible trail but to where?	
169	24.9.19	445900	5639011	426	Possible evidence of past geology work (bashing). 1a-2a type. Fine-med grained, locally almost aphanitic, and considered to be an intermediate volcanic rock. Boudinage supracrustal material also present. NS, NVS, NM	5562274
170	24.9.19	445870	5638953	422		
171	24.9.19	445883	5638950	420	Onto an outcrop of relatively homogeneous 2a/2g (govt) type	
172	24.9.19	445884	5638893	414	Heading to ML 24 waypoint 26. Down to a small outcrop of mafic-intermediate volcanic exhibiting high strain	
173	24.9.19	445865	5638878	413	Heading down but along strike with same lithologies seen. Minimum width of unit is 20 m.	

174	24.9.19	445866	5638861	408	Poplar and birch bush with an exposure of weakly alkalic pinkish plagiogranite. Crossing a major E-W fault then down and flat terrain. Essentially heading along strike to the target area
175	24.9.19	445820	5638838	411	Small exposure of 1-2a/gneiss
176	24.9.19	445742	5638786	406	Open bush
177	24.9.19	445742	5638786	406	Ditto with old jackpine
178	24.9.19	445700	5638757	403	Blobby outcrop possibly only subcrop of 1-2A? Quite homogeneous, with apparent low strain, and relatively little differentiation appearing like a fine-med grained feldspar-quartz-biotite-amphibole lithotype. Steep S dips
179	24.9.19	445806	5638878	416	Up as outcrop steps Northwards onto more 1a/2A
180	24.9.19	445813	5638898	421	Med grained, intermediate to sediment gneiss. Paler, transitioning to ?- N dips, with negligible igneous material
181	24.9.19	445829	5638917	423	As preceding
182	24.9.19	445932	5638972	421	Small outcrop of 1-2a type.
183	24.9.19	445945	5638997	425	Grey, felsic plagiogranite + assimilated volcanic plus alkalic coarser grained vein material
184	24.9.19	445975	5638979	415	Same outcrop as preceding, on ENE face of the exposure. Heading down eastwards
185	24.9.19	446054	5638963	403	
186	24.9.19	446116	5638961	405	
187	24.9.19	446189	5638959	408	
188	24.9.19	446264	5638950	405	Open area heading S and slightly to the East. Very open but no exposures though float common.
189	24.9.19	446296	5638921	403	Heading S across an old haul road? To a long 30 plus metre int to felsic outcrop some 20 m E-W and 3-4 m N-S Gneiss, homogeneous
190	24.9.19	446283	5638983	409	Heading back North and up into pine and mixed bush. 2a type, E-W strike

191	24.9.19	446292	5639078	408	Float of same	
192	24.9.19	446288	5639155	415	Sub-planar grey-green 2A 20 x 20 m outcrop extending NW for 20 m. Separate outcrop to the NW (30 m), 60 m away. Partly felsic intrusive material.	
193	24.9.19	446291	5639200	418	Relatively flat, long E-W outcrop of grey granitoid (plagiogranite) 45 m W and 70 m E and 25-20 m N-S. Rock is very similar to the outcrop at the highest topography pt.	
194	24.9.19	446283	5639282	419	Flat, MB, no outcrop	
195	24.9.19	446283	5639381	413	Gulley, no outcrop	
196	24.9.19	446299	5639443	410		
197	24.9.19	446296	5639485	411		
198	24.9.19	446314	5639554	414	Going uphill	
199	24.9.19	446312	5639598	417	Going uphill	
200	24.9.19	446308	5639631	418		
201	24.9.19	446278	5639739	422		
202	24.9.19	446273	5639770	421		
203	24.9.19	446241	5639799	425		
204	24.9.19	446216	5639807	426	Monzogranodiorite. Large, extending 25 m West and North for >50 m. Back onto morning traverse route	
205	24.9.19	446094	5639942	433		
206	24.9.19	445997	5640010	433		
207	24.9.19	445971	5640031	433	Outcrop extending 55 m WNW, 5-8 m wide, lithology largely as preceding.	
208	24.9.19	445955	5640064	432		
209	24.9.19	445954	5640117	433	Relatively flat, with small outcrop of preceding.	
210	24.9.19	445935	5640160	435	Float of same, proceeding downhill.	
211	24.9.19	445899	5640194	428		
212	24.9.19	445866	5640208	424		
213	24.9.19	445839	5640233	416		
214	24.9.19	445802	5640277	411		
215	24.9.19	445769	5640326	409		
216	24.9.19	445772	5640400	409		
217	26.9.19	436360	5639197	423	Dock at cabin on Bug Lake	

218	26.9.19	436420	5638988	392	N. end of portage	
219	26.9.19	436431	5638920	400	Walking along portage to Alcock lake	
220	26.9.19	436493	5638881	410	W. end of med grained monzo- to plagiogranite with small float of gneissic mafic volcanic in vicinity reddish weathering, with med-coarse grained alkalic potassic veining	
221	26.9.19	436513	5638882	411	Same outcrop	
222	26.9.19	436575	5638878	410	Same outcrop is 15 m East	
223	26.9.19	436582	5638874	410	On trail mainly spruce and pine	
224	26.9.19	436695	5638756	411		
225	26.9.19	436720	5638731	413		
226	26.9.19	436743	5638704	413		
227	26.9.19	436763	5638660	413		
228	26.9.19	436789	5638660	417	Off trail on s/c or fluvioglacial deposit trending E-W. No definite outcrop seen	
229	26.9.19	436849	5638647	413	On trail/portage again	
230	26.9.19	436933	5638631	413		
231	26.9.19	436987	5638622	411		
232	26.9.19	437027	5638616	412		
233	26.9.19	437065	5638612	414	Ca. 25 m low outcrop, quite long, moss covered with limited exposure, on W. side of trail. Pinkish weathered monzogranodiorite to diorite, quite homogeneous, with low to no strain. Plagioclase rich	
234	26.9.19	437096	5638625	411	Same outcrop as preceding waypoint. Grey-green mafic volcanic, with increasing granitisation including by veining. Some contacts are sharp, with no thermal event or diffusion. Typically, the volcanic is feldspathised, with blastisation and weak alkalic overprint	
235	26.9.19	437125	5638650	413	Same outcrop is 15 m W. Heading up to large outcrop	
236	26.9.19	437165	5638668	418	Intermediate feldspar-quartz-biotite-amphibole gneiss. Note pattern of the mafic-intermediate	

					volcanic. Overall strike 240.
237	26.9.19	437167	5638667	420	Same outcrop as at preceding waypoint. Large and extending SW. Predominantly granitoid with minor bands to streaks of patches of volcanic material
238	26.9.19	437190	5638657	422	Large outcrop of predominantly granitoid, relatively massive with relict volcanic material as gneissic sub-metre wide bands
239	26.9.19	437203	5638627	432	Uphill, slippery, wet, same outcrop as preceding waypoint. Contains <2% banded intermediate gneiss. Otherwise, medium grained homogeneous pale dirty pink grey monzodiorite to granodiorite
240	26.9.19	437292	5638604	427	Downhill, and increasing strain noted in the host rock. Paler, med grained, gneissic perhaps volcanoclastic to 'sediment', with pale grey homogeneous med grained blast size. Strike 246 and >75 dips S.
241	26.9.19	437293	5638693	425	Increasingly granitoid to the South.
242	26.9.19	437326	5638582	419	End of outcrop, dioritic, moderate strain with >>> streaky sub-metre wide gneiss
243	26.9.19	437356	5638555	417	Outcrop extending to the West. Dioritic with gneissic sediments (quartz-plagioclase-biotite). Locally plagiogranitic
244	26.9.19	437378	5638539	415	outcrop edge, pale grey-pink monzodiorite intruding gneissic sediment. Dips are <65 South.
245	26.9.19	437406	5638542	411	
246	26.9.19	437414	5638527	411	Small outcrop of metasediment, gneissic, with vein-type reddish monzogranodiorite to monzodiorite
247	26.9.19	437428	5638521	408	Pale pink grey diorite with relict gneissic plagioclase-biotite-quartz-amphibole and chlorite

248	26.9.19	437420	5638521	408	Same outcrop as preceding waypoint.
249	26.9.19	437383	5638329	398	About 20 m to shoreline, a cut-line heading SSW. Boat motor malfunctioning, obviously not serviced. Return towards camp.
250	26.9.19	437434	5638519	405	Same outcrop as at waypoints 248/247
251	26.9.19	437433	5638551	411	
252	26.9.19	437402	5638507	409	Pale pink monzodiorite with streaky relict volcanic rock (elongate streaky to blastophyric), wispy, lenticular as mm-cm bands in the dioritic intrusive
253	26.9.19	437371	5638597	413	
254	26.9.19	437351	5638596	415	Heading up WNW to W onto a large outcrop of pinkish grey mainly feldspathic host with minor streaks of relict volcanic rock
255	26.9.19	437350	5638595	414	Same outcrop as preceding waypoint.
256	26.9.19	437329	5638623	417	Around 80% felsic intrusive material with rare int-mafic xenolithic rock
257	26.9.19	437308	5638634	419	E edge of large pale pink monzodioritic to dioritic intrusive. On a cut line with azimuth 250, but bush too disturbed to follow
258	26.9.19	437295	5638670	410	
259	26.9.19	437256	5638702	408	
260	26.9.19	437247	5638706	409	
261	26.9.19	437250	5638729	411	Up onto another large outcrop of felsic intrusion. Contains minor streaky relict haematitic metasediments, with weak silicic fracture surfaces (rare)
262	26.9.19	437249	5638755	419	
263	26.9.19	437249	5638755	418	
264	26.9.19	437249	5638775	424	Up to top of outcrop. Mainly reddish intrusion with banded to streaky gneiss within pink plagiogranite. Locally brick red to dirty reddish grey, med grained, non-magnetic. Heading North, still on same

					outcrop. Significant exposure of the intrusions with considerable boulders	
265	26.9.19	437242	5638807	426		
266	26.9.19	437228	5638859	431	Downhill, mossy	
267	26.9.19	437178	5638904	416		
268	26.9.19	437141	5638931	413		
269	26.9.19	437105	5638983	402	Flat, wet, with small lake 50-60 m to the East. Rough bush	
270	26.9.19	437082	5639022	404	Up onto a large outcrop 60 m North	
271	26.9.19	437071	5639057	417	Med grained, homogeneous pale reddish grey brown plagiogranite. Minor gneissic amphibole-bearing volcanic rocks and rare epidote (wispy). Matrix is homogeneous and with generally fine but well developed fabric	5562277
272	26.9.19	437064	5639084	425	Continuing up on same outcrop	
273	26.9.19	437044	5639094	433	Top of outcrop and continuing to the North, W and E, large	
274	26.9.19	437029	5639101	435	Heading West on ridge top	
275	26.9.19	436001	5639108	435		
276	26.9.19	436972	5639129	433	Down. Lake is around 250 m away Poor bush. Heading West down in boulders and moss	
277	26.9.19	436906	5639139	431		
278	26.9.19	436817	5639145	407		
279	26.9.19	436767	5639161	395	Flat	
280	26.9.19	436623	5639188	391		
281	27.9.19	435781	5638481	393		
282	27.9.19	435785	5638435	413		
283	27.9.19	435785	5638431	418	Outcrop that extends ENE to the shoreline. Med- to coarse grained, homogeneous, low strain, pale pink to pale grey. Weak fabric developed. Non-magnetic	
284	27.9.19	435786	5638429	422	Top of outcrop, relatively coarse grained	
285	27.9.19	435802	5638367	417		

286	27.9.19	435843	5638345	414	On S. side of the ridge, a small outcrop of granitoid. (Brick red late alkalic overprinting pale pink grey granitoid) Birch
287	27.9.19	435860	5638356	416	Small outcrop as preceding lithology
288	27.9.19	435884	5638357	417	On ridge, same outcrop as preceding waypoint.
289	27.9.19	435943	5638374	420	
290	27.9.19	435964	5638354	419	Into Mixed bush
291	27.9.19	436012	5638305	422	Mixed bush with slight uphill incline
292	27.9.19	436040	5638265	425	
293	27.9.19	436072	5638238	427	Boulders and slightly downhill southwards. Old pine and birch. A 110 trending low outcrop of granitoid, some 60 m long. Essentially a second ridge/knoll.
294	27.9.19	436076	5638208	423	
295	27.9.19	436117	5638192	425	
296	27.9.19	436145	5638185	426	
297	27.9.19	436162	5638173	427	
298	27.9.19	436165	5638164	426	
299	27.9.19	436167	5638157	427	
300	27.9.19	436180	5638147	427	Top of the same large plagiogranite to monzodioritic exposure/outcrop
301	27.9.19	436212	5638154	426	Down to the ESE, 140 azimuth
302	27.9.19	436270	5638129	420	Small flat outcrop appears pale, finer than preceding, but quite homogeneous, granitoid but likely a strongly replaced supracrustal.
303	27.9.19	436286	5638116	420	15 x 15 m flattish outcrop, coarser than preceding outcrop in some locations. Possible intermediate volcanic rock
304	27.9.19	436322	5638091	417	Very small outcrop of pale pink grey plagiogranite/monzodiorite. Flat, mixed bush

305	27.9.19	436370	5638071	417	Outcrop of ?intermediate volcanic gneiss but weakly biotitic, as bands or xenoliths in pale grey-pink medium to coarse grained granitoid. Strike is 250 +/- Minor weak Qz-plagioclase veining noted	
306	27.9.19	436423	5638013	410	Sub-metre wide mafic-intermediate volcanic gneiss in pale pink granitoid. Overall strike is E-W with 70+ South dips. Locale has been previously examined by ?govt. Non-magnetic, plagioclase-quartz-biotitic, with S edge likely metasedimentary, and with coarser crystal size.	5562283
307	27.9.19	436427	5637963	495	Heading downslope	
308	27.9.19	436439	5637859	402	Flat, muskeg	
309	27.9.19	436508	5637738	400	Wet, muskeg, heading into birch and spruce	
310	27.9.19	436486	5637727	400	Up onto subcrop with old jackpine. Heading West	
311	27.9.19	436475	5637646	404		
312	27.9.19	436439	5637652	408		
313	27.9.19	436348	5637680	419	Heading upslope with boulders	
314	27.9.19	436316	5637694	425	Onto medium to coarse, locally pegmatitic alkalic granitoid intruding the monzodiorite/plagiogranite. Pegmatite has minor chlorite. Very weak Qz veining noted.	
315	27.9.19	436296	5637687	431	Same outcrop mossy and minor incline upslope	
316	27.9.19	436291	5637698	430	Claim post No. 3 of 1185212 with outcrop of banded gneissic int volcanic rock in medium grained plagiogranite. Supracrustal is quartz-plagioclase-amphibole mineralised. <0.2% Qz veining parallel to S2	
317	27.9.19	436282	5637683	434		

318	27.9.19	436277	5637640	434	N. edge of a very long and wide outcrop. East edge is granitoid, with planar to wavy gneissic fabric for 1 metre, then homogeneous, pale pink. Gneiss is quartz-plagioclase-biotitic, so considered a metasediment	5562268
319	27.9.19	436255	5637636	435	Following the knife edge contact with possible closure of a tight near isoclinal drag fold 5 m West.	
320	27.9.19	436247	5637643	435	Separate 'parallel' outcrop of pink weathered granitoid	
321	27.9.19	436270	5637568	434	Continuation of very large relatively homogeneous felsic granitoid with very weak, scattered sub-metre gneiss. At the 'leg' of the outcrop and heading West, following the ridge top	
322	27.9.19	436288	5637513	432		
323	27.9.19	436030	5637481	434		
324	27.9.19	435963	5637460	431	Pale pink-grey plagiogranite with weak minor alkalic overprint. En route, one may observe <0.1% xenolithic supracrustal material with rare barren quartz veining. Possibly mafic volcanic material.	
325	27.9.19	435903	5637415	421	Boulders and heading downslope. No outcrop Can see the lake from this location.	
326	27.9.19	435871	5637376	412		
327	27.9.19	435861	5637338	402	Flat, muskeg	
328	27.9.19	435844	5637289	399	Boulders	
329	27.9.19	435840	5637277	398	Lake	
330	27.9.19	435724	5637254	398	Small outcrop, pale cream grey medium grained, quite homogeneous, with minor reddish pegmatite alkalic granite which may appear pegmatitic. Probably still in the northern granitoid not the tonalite	

331	27.9.19	435670	5637421	424	Heading back up slope to a small outcrop of ?int. volcanic, trending E-W, with 70 S dips and SE plunge at ca. 72 50 m West is the west end of the granitoid outcrop with minor coarser near pegmatitic alkalic phases outcrop continues E for over 100 m and is 35-50 m wide	
332	27.9.19	435683	5637443	428	As preceding lithology	
333	27.9.19	435718	5637477	427	Off outcrop, into moss, mixed bush and boulders. Relatively flat	
334	27.9.19	435733	5637576	422	Down, onto an outcrop of < 1 dm wide, intermediate or volcanosedimentary gneiss in plagiogranite	
335	27.9.19	435724	5637667	408	Flat, muskeg	
336	27.9.19	435660	5637760	409	Wet, dense, then into dry jackpine	
337	27.9.19	435660	5637775	410	Small outcrop of pale pink grey monzodiorite	
338	27.9.19	435677	5637885	410		
339	27.9.19	435675	5637918	412	Boulder strewn ridge with E-W strike. Relatively low, then down into mixed bush	
340	27.9.19	435678	5638021	405	Plagiogranite outcrop trending SW for 40 m and is <5 m wide. Metasediment bands or streaks. Mixed bush, mainly spruce	
341	27.9.19	435703	5638244	404	Subcrop	
342	27.9.19	435675	5638262	409	Subcrop?	
343	27.9.19	435665	5638391	410	Plagiogranite outcrop	
344	27.9.19	437405	5638544	412	Qz-biotite gneiss, fine-medium grained, lined	5562286
345	27.9.19	437405	5638544	412	Same location as previous waypoint	
346	27.9.19	437366	5638556	417	Qz-biotite gneiss, fine-medium grained, lined	5562263
347	27.9.19	437320	5638586	421	Qz-biotite gneiss, fine-medium grained, lined	5562288
348	27.9.19	437286	5638613	427	Granitoid, with K-epidote alteration. +metasediment	5562262
349	27.9.19	437253	5638612	430	Metasediment. Weathers paler, with slightly more SiO ₂ than preceding	5562278

350	27.9.19	437206	5638628	433		
351	27.9.19	437204	5638630	430	Mafic-intermediate gneiss and granitoid	5562261
352	27.9.19	437206	5638637	425	Same location as previous waypoint. Int-mafic gneiss with epidote and granitoid	5562281
353	27.9.19	437172	5638664	417	Streaky to elongate lenticular fabric parallel <1 cm wide supracrustal in granitoid	5562279
354	28.9.19	439202	5639544	386	Boat Location	
355	28.9.19	439314	5639495	401	090 trending pink plagiogranite/monzodiorite. 20 m long	
356	28.9.19	439390	5639465	414	Same outcrop as preceding waypoint.	
357	28.9.19	439418	5639450	418	Same outcrop as preceding waypoint.	
358	28.9.19	439435	5639444	421	Same outcrop as preceding waypoint.	
359	28.9.19	439459	5639422	427	Gneissic granitoid with varying degrees of supracrustal assimilation 210 Az, metasediment	
360	28.9.19	439455	5639410	429	Pale pink granitoid, gneissic. >60 m length. Contains xenolithic to sub-m wide int-mafic gneiss or as streaky, relict elongate blast defining gneissic fabric	
361	28.9.19	439446	5639387	431	As preceding waypoint	
362	28.9.19	439444	5639393	431	SW end of outcrop and heading downslope. <1 m wide /volcaniclastic gneissic band	5562284
363	28.9.19	439468	5639382	432	Az 210, 4 m wide, 40 m long metasediment/volcaniclastic rock	
364	28.9.19	439499	5639382	430	Intermediate rock with considerable alteration by granitoid	
365	28.9.19	439512	5639382	430	Onto multiple exposure of pale pink weathered intrusion, extending ESE, WSW, W, with the No edge distinctly metasedimentary. The vast majority is intrusion	
366	28.9.19	439526	5639385	430	Mafic-intermediate gneissic volcanic rock with plagiogranite. Previously examined by unknown workers	

367	28.9.19	439555	5639401	430	Heading up onto 080 trending ridge. At E end of outcrop. Predominantly plagiogranite, with remnant <0.2 m wide gneissic bands of mafic-intermediate volcanic rock	
368	28.9.19	439567	5639379	431	Up onto pink-orange weathered granitoid with minor fabric developed. Considered to be at the S edge of the contact zone between felsic intrusion, s.s. and supracrustal sequence outcrop trend is 060. S. edge of outcrop has blastophytic chlorite after amphibole, thus appearing elongate/spotty, lineated with weak epidote-haematite	
369	28.9.19	439568	5639367	429	Banded mafic gneiss, trace magnetite, with incipient brecciation by felsic fluids. 1 m wide max.	5562270
370	28.9.19	439582	5639363	430	Onto a large outcrop of pink-pale grey monzodiorite. Oriented E-W. Still heading upslope.	
371	28.9.19	439611	5639343	433	Same outcrop as preceding waypoint.	
372	28.9.19	439617	5639332	434	Same outcrop as preceding waypoint.	
373	28.9.19	439644	5639318	434	Same outcrop as preceding waypoint. Top	
374	28.9.19	439659	5639311	433	Int-mafic volcanic gneiss? 25 m wide	
375	28.9.19	439659	5639311	435	Granitoid/supracrustals showing clear sharp angular contacts. Supracrustals are intermediate, with plagioclase-quartz-biotite and altered amphibole, and may be a lens parallel to gneissosity/main fabric	5562287
376	28.9.19	439649	5639292	429	Granitoid. Contact is 15 m North	
377	28.9.19	439583	5639267	430		
378	28.9.19	439560	5639257	426	Down off the outcrop	
379	28.9.19	439541	5639242	426	Small lozenge of mafic gneiss in granitoid. Mafic appears like a lens, with an abrupt steep planar contact (faulted) with the granitoid	

380	28.9.19	439514	5639248	426	New outcrop 50:50 granitoid and intermediate. Volcanic or sedimentary gneiss
381	28.9.19	439507	5639249	427	Heading West, onto mafic gneiss. Relatively homogeneous, plagioclase-amphibole-quartz-biotite with 5% plagioclase veinlets. 5 m wide. Northwards, more intermediate in composition, with granitoid, then pinching out to pure granitoid (monzodiorite). Most of the outcrop to the W is granitoid
382	28.9.19	439466	5639251	429	Contact which appears fault-related
383	28.9.19	439460	5639236	428	70:30 mafic gneiss and granitoid. 'Wet', folded, with late, more alkalic veins overprinting. E-W and NNW-SSE contacts. Overall, steep S. dips
384	28.9.19	439426	5639237	430	Heading West. 75% granitoid with podiform or lensoid mafic gneissic supracrustal material, with thin interbanded intermediate lithotypes and finally, purely granitoid. On a large scale, one sees sub-m wide pods (very elongate) of parallel supracrustal material within the intrusive material. Thus, several bands exposed, all m wide, parallel
385	28.9.19	439398	5639226	429	Granitoid only - one outcrop of monzodiorite
386	28.9.19	439386	5639233	428	Downslope into dense spruce bush. A dogs breakfast. Isoclinal folding at contact, then pic looking S of the mix of volcanic and granitoid
387	28.9.19	439327	5639165	428	E. end of outcrop and heading West, streaky grey gneiss, possibly a volcanic. 60 m long, extending N for 25 m and S for over 80, but only 3-4 m wide
388	28.9.19	439328	5639153	429	Pink weathered monzodiorite

389	28.9.19	439342	5639123	432	Ridge top. Pale pink to pale dirty pink-brown weathered plagiogranite	
390	28.9.19	439330	5639119	431	Heading W then SW, with a thin sub-m wide band of mafic gneiss in granitoid	
391	28.9.19	439319	5639098	421	Boulders, open with deadfall	
392	28.9.19	439329	5639063	409	Flat, open birch and pine	
393	28.9.19	439365	5639011	402		
394	28.9.19	439407	5638974	392	Creek is 50 m N, minor float, no outcrop. but some subcrop of felsic igneous rock	
395	28.9.19	439349	5638994	405		
396	28.9.19	439314	5639005	408		
397	28.9.19	439288	5639080	419	Up, no outcrop but float. Heading E, 20 m to W end of mainly monzodiorite or plagiogranite. Upslope is E.	
398	28.9.19	439260	5639119	412		
399	28.9.19	439219	5639129	407		
400	28.9.19	439156	5639173	407	Claim post. 4 of 1185211 1200-M-E	
401	28.9.19	439154	5639177	409	Well exposed medium grained, pale grey to pale pinkish grey plagiogranite with very weak chloritisation and very weak, blebby relict mafic gneiss	
402	28.9.19	439150	5639208	418	Mafic gneiss and alkalic vein type granite	5562269
403	28.9.19	439153	5639269	424	Plagiogranite to monzodiorite, medium to locally, coarse grained with rare stringers or 'smears' of supracrustal material	
404	28.9.19	439153	5639270	422	Sedimentary gneiss. Relatively silicic, small outcrop trending WSW-ESE. Outcrop is predominantly monzodioritic to plagiogranite	
405	28.9.19	439137	5639283	425		
406	28.9.19	439147	5639342	423	W end of low outcrop 35-45 m long minimum. Possibly sediment or intermediate volcanic striking 050. Qz-plagioclase biotitic in composition	
407	28.9.19	439173	5639522	389		

408	28.9.19	439579	5639896	388	Shoreline with ellipse/lens of gneissic banded ?intermediate volcanic under plagiogranite Relatively flat-lying.	
409	28.9.19	439622	5639921	388	Shoreline with ellipse/lens of gneissic banded ?intermediate volcanic under plagiogranite Relatively flat-lying.	
410	28.9.19	439641	5639943	388	Shoreline monzodiorite to plagiogranite, dipping south at 35-45	
411	28.9.19	438650	5640056	390	99% granitoid. Shoreline	
412	28.9.19	438488	5640152	390	Shoreline, pale, mainly granitoid	
413	28.9.19	438424	5640189	390	99% granitoid with rare gneissic banding and relatively flat dips	
415	28.9.19	431086	5635391	385	NW shore, with several images of the intrusions and gneiss and gneissic granite. <30 North dips	
416	28.9.19	431116	5635424	386	Similar to preceding outcrop. Banded to elongate flattened supracrustals mafic gneiss and granitoid. Dips appear sub-vertical and strike is sub-parallel to shoreline	5562280
417	28.9.19	431203	5635511	385	As preceding waypoint, with steep NW dips to the banded sequence	
418	28.9.19	431215	5635523	385		
419	28.9.19	431250	5635558	387	NE striking 40 N dipping sequence with streaky gneiss and vein-type monzodiorite	
420	28.9.19	431493	5635662	385	Over to SE shoreline. Banded mafic gneiss NE strike, 25 SE dips	
421	28.9.19	431530	5635734	384	As preceding waypoint. Small exposure at water level	
422	28.9.19	431546	5635768	385	Drag folded mafic gneiss. Reclined folding with 28-32 dips + 2% 1-5 cm vitreous quartz veining Outcrop is 30 m long at water level	
423	28.9.19	431583	5635826	386	mafic-intermediate gneiss. Banded tight to isoclinal folded, 38-40 N dips	
424	28.9.19	431644	5635884	387	8 m E, a 50 m long int. gneiss or gneissic sediment striking NE with 15-20 SE dips	
425	28.9.19	431709	5635930	386	Banded mafic-int gneiss	5562265

426	28.9.19	431806	5636108	386	Island Gneissic to blotchy gneiss in gneissic granitoid. Dips steeply SE at 55 and contains ribbon plagioclase-quartz veining
427	28.9.19	432135	5636221	386	SE shore, 35-38 dips SE. Int. gneiss
428	28.9.19	432226	5636316	386	Creek exit
429	28.9.19	432298	5636308	394	On portage
430	28.9.19	432306	5636288	396	On portage
431	28.9.19	432325	5636262	397	On portage
432	28.9.19	432404	5636237	398	On portage
433	28.9.19	432403	5636202	396	On portage
434	28.9.19	432391	5636183	395	On portage
435	28.9.19	432396	5636120	395	Insect lake at boat (with motor and paddles) Qz-biotite gneiss, with NE S2, and L2/L3 plunging 60 NE
436	28.9.19	432388	5636239	398	Large outcrop of mafic gneiss. Coarse plagiogranite also noted
437	28.9.19	432492	5636611	384	Water level mafic gneiss overlain by m + wide granite and granite gneiss
438	28.9.19	432761	5636843	385	Shallow SE dipping mafic gneiss. Shore is 25 m East.
439	28.9.19	432838	5636891	385	Shoreline is 20 m East. Mafic gneiss
440	28.9.19	432982	5637007	385	Steepening granite exposures
441	28.9.19	433991	5637818	385	40 m to shore. Granitoid exposures, relatively flat then steepening with SW plunge? (opposing...)
442	29.9.19	441693	5638194	399	At Boat dock
443	29.9.19	441688	5638329	412	East edge of a gneissic sediment - qtz biotite with minor to moderate, cm-dm wide plagiogranite and alkalic granite veins sub-parallel to gneissosity. outcrop extends W for 40 m, is ca. 14 m wide. S2 is around 080. Sub-vertical dips. No plunge determined
444	29.9.19	441712	5638410	413	

445	29.9.19	441711	5638427	417	Small outcrop of felsic volcanic rock, pale grey, relatively aphanitic, with some streaky int. mafic volcanic bands? Under fallen tree. Appears silicic-feldspathic with negligible mafics	
446	29.9.19	441717	5638473	414	Down into bog/muskeg	
447	29.9.19	441713	5638486	411		
448	29.9.19	441697	5638577	410		
449	29.9.19	441694	5638630	410	Into mixed bush and on bear trail.	
450	29.9.19	441675	5638711	415	West end of outcrop, extending east for ca. 30 m. E-W trend. Qz-biotitic for the most part and deemed a sediment (gneiss), but with amphibole, so possible volcanoclastic. NS	
451	29.9.19	441668	5638743	417		
452	29.9.19	441668	5638784	413	Muskeg, E-W with rare tamarack	
453	29.9.19	441683	5638853	413	Into jackpine	
454	29.9.19	441666	5638915	410	Slight North slope down to Lake, in birch, pine and spruce.	
455	29.9.19	441666	5638952	404		
456	29.9.19	441660	5639004	400		
457	29.9.19	441661	5639007	400		
458	29.9.19	441657	5639057	394		
459	29.9.19	441657	5639057	393	Edge of bush then 40 m to the lake shore (too wet to traverse). North shore has no outcrop	
460	29.9.19	441712	5638775	414	Edge of muskeg, small 20 x 20 muskeg quartz-plagioclase-amphibole-rich. Gneissic with plagiogranite veins	5562271
461	29.9.19	441728	5638722	414		
462	29.9.19	441718	5638656	414	Small outcrop of gneissic mafic volcanic and granite	
463	29.9.19	441740	5638547	408		
464	29.9.19	441754	5638743	408		
465	29.9.19	441765	5638445	412		
466	29.9.19	441755	5638410	414	Small outcrop of gneissic mafic volcanic and granite	
467	29.9.19	441738	5638364	410	Outcrop, as preceding	
468	29.9.19	441750	5638330	411		
469	29.9.19	441756	5638305	410		
470	29.9.19	441736	5638265	406		

471	29.9.19	441692	5638195	399		
472	29.9.19	441961	5637833	399	Boats and trail 20 m East. Well cut, probably a skidoo trail	
473	30.9.19	433069	5637045	390	Boat dock	
474	30.9.19	433095	5637017	396	Corner of elongate 60 m + outcrop of banded 5g. Dips 35-45 South, with sub-metre wide amphibole-rich bands. MB	
475	30.9.19	433144	5636806	405	MB	
476	30.9.19	433158	5636795	404	MB	
477	30.9.19	433213	5636757	403	MB	
478	30.9.19	433224	5636719	403	Muskeg area	
479	30.9.19	433243	5636707	404	15 x 10 m outcrop of 3g. Off muskeg area, with low rise upslope	5562285
480	30.9.19	433311	5636638	399		
481	30.9.19	433313	5636623	400	Low long outcrop < 1m high of relatively coarse grained sediment Az. 230. Contains <2% cm scale plagiogranite. 72 south dips	
482	30.9.19	433350	5636603	405	50:50 5g and 3 g. First pic of the day. MB	
483	30.9.19	433358	5636595	404	small outcrop of pale grey well lineated gneiss ?-sediment. MB	
484	30.9.19	433393	5636460	399	As preceding. Qz-plagioclase biotite gneiss. MB	5562282
485	30.9.19	433412	5636413	405	West end of a long granitoid outcrop, almost extending to Insect Lake Relatively homogenous, pale pink plagiogranite to monzodiorite, with a 1-2 m wide consistently trending quartz-plagioclase-biotite-?hornblende band within. Well lineated, medium grained, locally with streaky banding from flattening and lesser stretching. 65 South dips. Sharp contacts between supracrustal and granitoid showing minimal shearing/strain. MB	
486	30.9.19	433409	5636409	405		
487	30.9.19	433445	5636387	403		
488	30.9.19	433462	5636379	403		
489	30.9.19	433529	5636364	402		
490	30.9.19	433551	5636352	403		

491	30.9.19	433555	5636349	402	Flat, minor float, spruce and down into MB	
492	30.9.19	433540	5636381	403		
493	30.9.19	433511	5636472	403		
494	30.9.19	433495	5636491	404		
495	30.9.19	433498	5636521	404	Small outcrop of gneissic sediment type, trending 040-050, and 70 S dips Possible SE plunge. Muskeg	
496	30.9.19	433466	5636570	409	Long <10 m wide, 90 m long + outcrop of predominantly granitoid with likely several metre to sub-m wide 1a gneiss Outcrop continues West for 70 m and E for ca 45 m. Strike is 060. <muskeg heading into MB	
497	30.9.19	433455	5636578	410	<10 m wide, 90 m long + outcrop of predominantly granitoid with likely several metre to sub-m wide 1gneiss Outcrop continues West for 70 m and E for ca 45 m. Strike is ca. 060	
498	30.9.19	433400	5636709	408		
499	30.9.19	433414	5636750	408		
500	30.9.19	433423	5636764	408		
501	30.9.19	433414	5636800	410		
502	30.9.19	433403	5636836	413		
503	30.9.19	433365	5636868	414		
504	30.9.19	433309	5636892	421	30 m long, 1.5 m high outcrop of 50:50 quartz-biotite-plagioclase-amphibole gneiss and parallel trending plagiogranite	
505	30.9.19	433216	5636944	419		
506	30.9.19	433149	5637003	414	1a/2a outcrop with 5c-g type. Strike is 060 shallow dipping with isoclinal folding within	
507	30.9.19	433125	5637020	410	Long outcrop of 5 type, 6 m high and 060 strike/trend	
508	30.9.19	433125	5637020	410		
509	30.9.19	437391	5638309	399	Boat	
510	30.9.19	437294	5638184	397	B location. Alcock property. Old flag reading 92.75 8*2. 1 m banded and c-grained massive quartz boulder	5562272

					Also images of local bush - DSCN8009, DCN8010	
511	30.9.19	437298	5638255	402	Cut line-BL location	
512	30.9.19	437298	5638255	402	Cut line-BL location	
513	30.9.19	437340	5638264	403	12+50W line	
514	30.9.19	437340	5638264	403		
515	30.9.19	437369	5638300	406	A location, Alcock property. Felsic-int. volcanic float	5562273
516	30.9.19	436480	5638878	409	On portage, outcrop of 5, 15 m east and continues south for 40 m	
517	3.10.19	446100	5637917	348	Good clear MB	
518	3.10.19	445562	5637992	364	Good clear MB	
519	3.10.19	445505	5638001	364	Good clear MB	
520	3.10.19	445241	5638045	366	Boat station, North shore, heading North upslope. Clear, MB	
521	3.10.19	445238	5638045	365	Good clear MB	
522	3.10.19	445195	5639150	384	Good clear MB	
523	3.10.19	445190	5638223	387	Good clear MB	
524	3.10.19	445190	5638257	385		
525	3.10.19	445188	5638301	380	Just beside old beaver dam, with drainage to SW and widening swamp to ENE. Flat	
526	3.10.19	445168	5638329	380	Cross small creek. MB relatively open	
527	3.10.19	445163	5638400	391		
528	3.10.19	445169	5638439	392		
529	3.10.19	445157	5638526	397	Small E-W outcrop trending 080 of medium grained subidiomorphic tonalite + minor alkalic monzodiorite as irregular veins blebs and patches D2 location of ML is 40 m W, with at azimuth 260 large outcrop	
530	3.10.19	445157	5638543	396		
531	3.10.19	445127	5638595	402		
532	3.10.19	445068	5638598	407	Pillowed int.-mafic flows. Small, sub-metre, with little strain, around 3:1 + sub-metre wide interflow sediments Minor, 5-25% granitoid blocks, veins outcrop continues W for 40m, N for 20+ and E for ca. 35 m.	5562275

					Heading N and NE after this waypoint	
533	3.10.19	445063	5638720	407	Small E-W outcrop trending 080 of tonalite + minor alkalic monzodiorite as irregular veins blebs and patches D2 location of ML is 40 m W, with at azimuth 260 large outcrop Most of the outcrop is relatively homogeneous, with 080 strike, steep, sub-vertical plunge and 75-80 dips	
534	3.10.19	445068	5638796	420	Same outcrop or s/c	
535	3.10.19	445063	5638814	423	Same outcrop or s/c	
536	3.10.19	445073	5638833	424	Heading to N/NE corner of the large outcrop which extends NE for another 30 m outcrop is like a flattened bent T with long axis to the W and WNW	5562267
537	3.10.19	445069	5638925	417		
538	3.10.19	445075	5639005	412		
539	3.10.19	445084	5639047	412		
540	3.10.19	445094	5639091	414		
541	3.10.19	445093	5639119	416	Crossing a small bog, onto the SW /W edge of an outcrop that extends E for 35-40 m and is <15 m wide. Mafic volcanic rocks in large part	
542	3.10.19	445096	5639127	414	N side of a volcanoclastic unit, trending azimuth 100 and steep N. dips. Overall, likely interflow sediments with fragmented flows including rare pillows, the latter appearing more flattened than those noted earlier.	5562264
543	3.10.19	445098	5639127	415	Same location as preceding waypoint.	
544	3.10.19	445106	5639123	417		
545	3.10.19	445216	5639073	420	S/c of 1A and pillow lavas or pillow breccias/ Non-magnetic	
546	3.10.19	445233	5639069	420		

547	3.10.19	445264	5639074	421	E continuation of outcrop at waypoint 545. Fractured and slightly brecciated volcanic rocks and volcanoclastic rocks with intrusion by granitoid. (10%) The sample appears in part clastic	5562276
548	3.10.19	445279	5639072	421	Same outcrop as preceding waypoint.	
549	3.10.19	445313	5639064	417	Off outcrop but it extends E for over 60 m and is 25-35 m wide. Heading at 135 Az slightly downslope	
550	3.10.19	445396	5638896	409	Heading more S. to avoid Day 1 traverse, so heading to ML's E5, around 43 m away	
551	3.10.19	445402	5638888	409		
552	3.10.19	445419	5638715	422	080 trending outcrop. Pillows, with interflow sediments. Steep South dips, non-magnetic. outcrop extends E for 50 m and W for 35-40 m	
553	3.10.19	445418	5638631	422		
554	3.10.19	445423	5638623	421		
555	3.10.19	445418	5638623	422	Slight S slope down then on edge of outcrop and probably an E-W fault Homogeneous, massive int-mafic lavas. Higher strain noted here, and trace mt. 070 strike, >80 S dips. Outcrop extends W for 65+ m and E for ca 55 m	5562266
556	3.10.19	445430	5638601	419	Heading down via a series of small step outcrop's and float into mainly deciduous open bush Minor tonalite seen but relatively uncommon. Flattened pillows.	
557	3.10.19	445439	5638579	410	Heading to ML D5. At a large outcrop with good S facing exposure due to fault 1a and flattened pillows, with fault/step exposures then large float and downslope	
558	3.10.19	445439	5638579	411	Mixed bush, poplar, birch and spruce with rare jackpine	
559	3.10.19	445454	5638506	387	Heading back to boat	

560	3.10.19	445418	5638425	386	Downhill, mixed bush with sparse conifer in poplar-birch	
561	3.10.19	445392	5638367	388		
562	3.10.19	445384	5638310	394		
563	3.10.19	445330	5638202	396		

Traverse areas

The following are graphic representations of the traverses made during these autumnal investigations. All images use Bing Aerial for background, NAD 83 Zone 15, and are depicted at a scale of 1:5000 or less, as per regulations. Traverse Area numbers and related claim numbers are shown below.

Figures 13-27

- Fig. 13** Traverse Area 1, West Half, far end of Bug Lake
- Fig. 14** Traverse Area 1, centre, western Bug Lake
- Fig. 15** Traverse Area 1, East half, west-centre, Bug Lake – Insect Lake
- Fig. 16** Traverse Area 2 North, central Bug Lake
- Fig. 17** Traverse Area 2 South, central Bug Lake
- Fig. 18** Traverse Area 3 North, eastern Bug Lake
- Fig. 19** Traverse Area 3 South, eastern Bug Lake and Alcock Lake
- Fig. 20** Traverse Area 4, Lower Bug Lake
- Fig. 21** Traverse Area 5, North of Clear Lake
- Fig. 22** Traverse Area 6, North end
- Fig. 23** Traverse Area 6, centre-North
- Fig. 24** Traverse Area 6, centre-west
- Fig. 25** Traverse Area 6, centre-east
- Fig. 26** Traverse Area 6, south-east
- Fig. 27** Traverse Area 6, South

Traverse

Area	Claim Number									
1	528626	528647	528646	528661	528668	528657	528670	528656	528650	528669
2	528636	528635	528672	528666	528667	528639	529714	529698		
3	528621	528625	528624	528623	528599	528622	528582			
4	529745	528616	528591	528099	528100					
5	528090	528086	528087							
6	528233	528069	529557	529564	529547	529556	528254			
6	529547	528596	528588	528603	528056	528080	528062			
6	528236	528079	528057	528074	528063	528078	528061			


Legend for Figs. 13 to 27

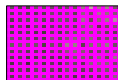
- Waypoint and number
- Sample Location (using waypoint designation)
- ▲ Sulphide Boulder
- 🏠 Cabin (Bug Lake)


⚓ Boat Location


*White dashed lines represent traverse lines


- — — — — Cut trail/portage
- ➡ Creek


 Swamp, muskeg or marsh


 Granitoid (granite, granodiorite, monzodiorite, quartz diorite)

 Sedimentary to volcanosedimentary rock

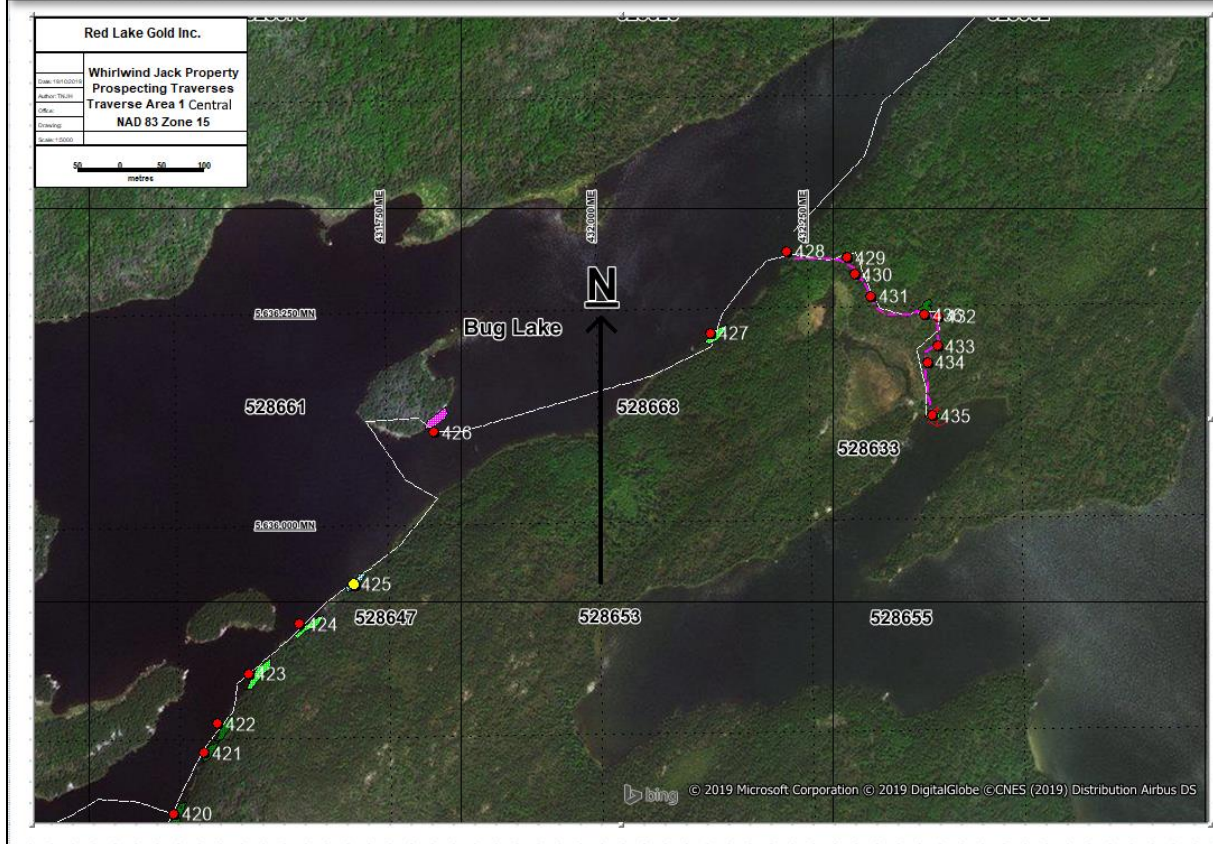
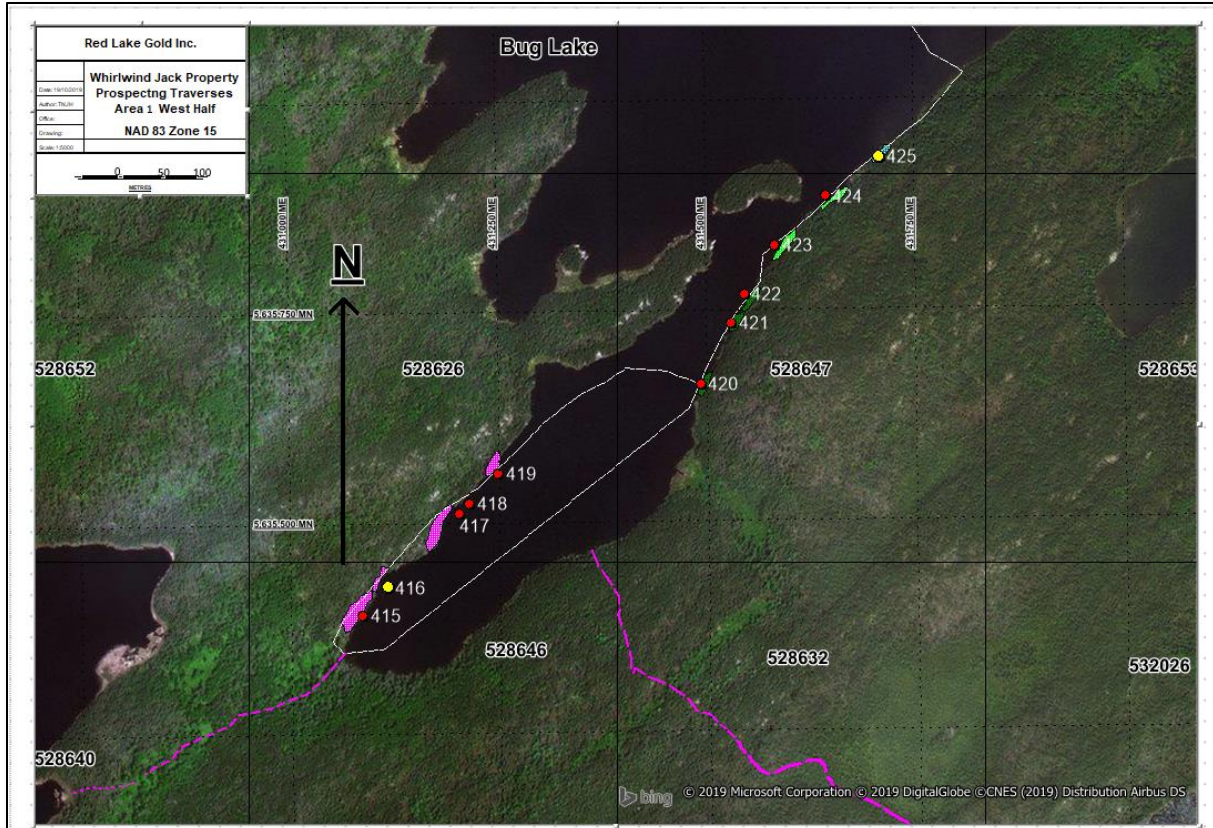
 Interlayered volcanic and sedimentary rock +/- granitoid

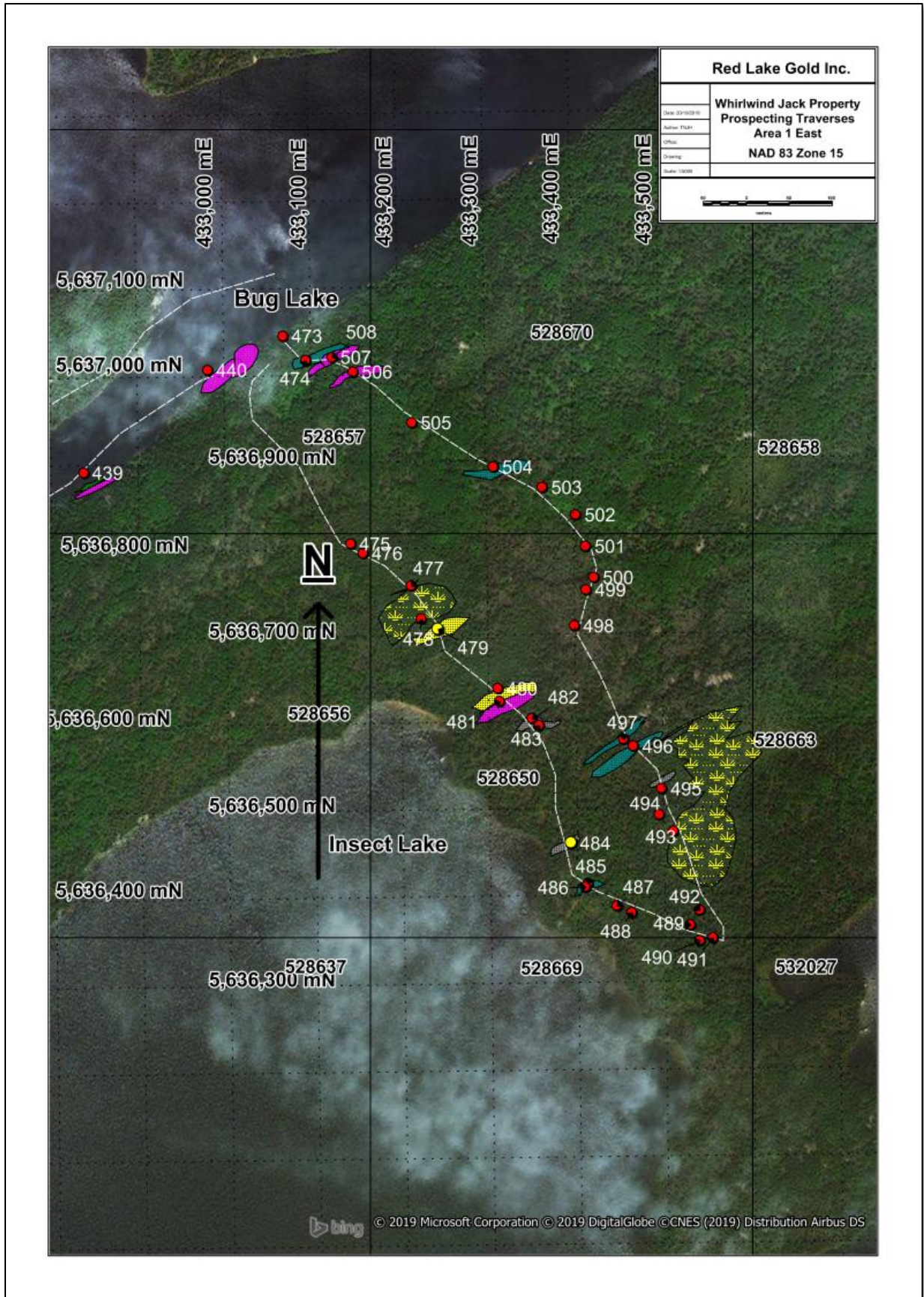
 Intermediate to felsic volcanic rock

 Intermediate to mafic volcanic or volcanoclastic rock

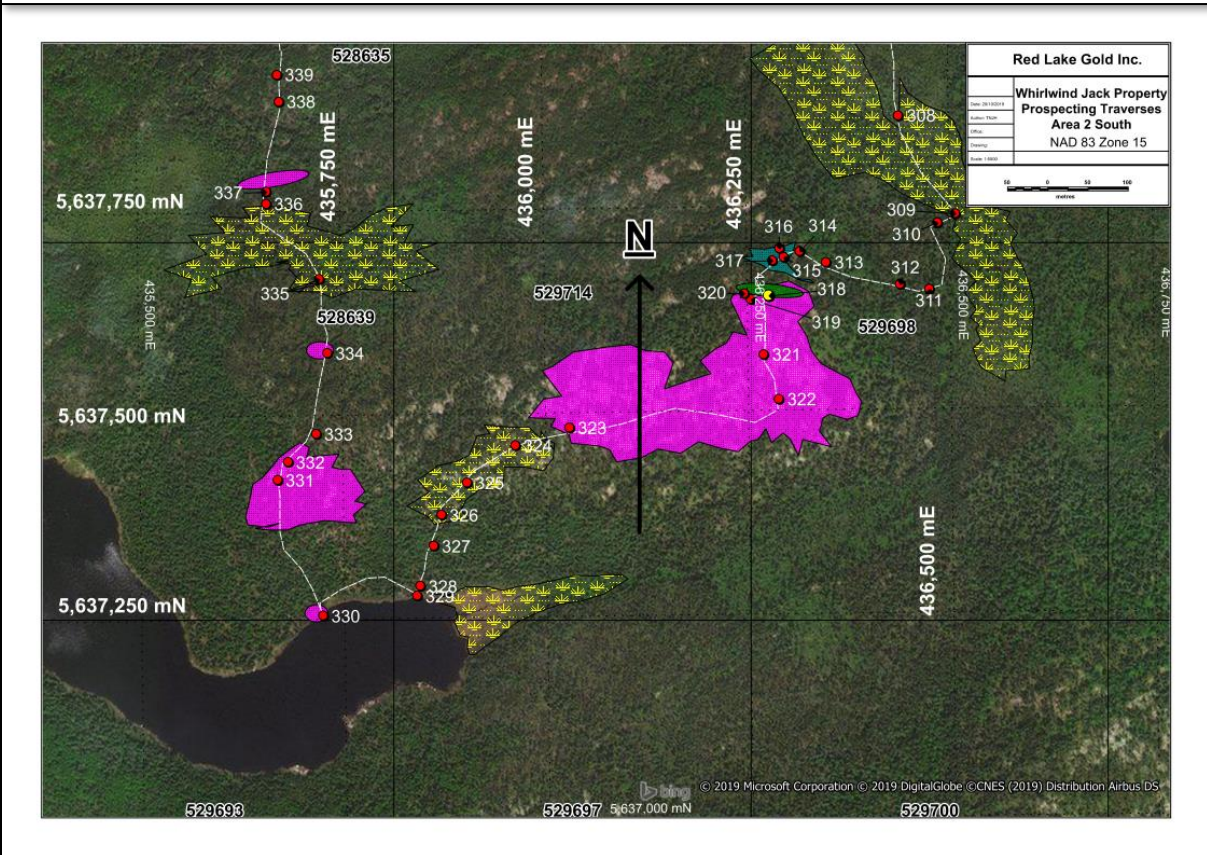
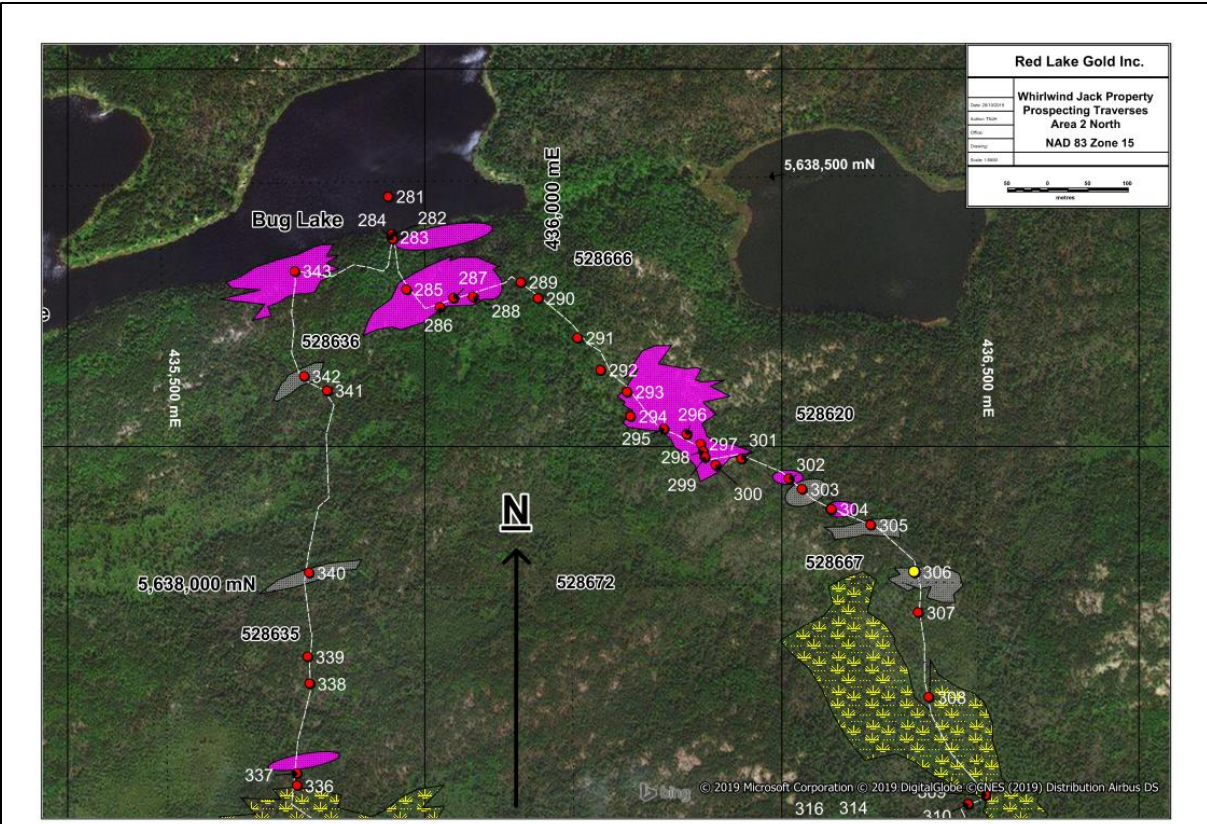
 Mafic volcanic rock

Prospecting Report – Whirlwind Jack Property

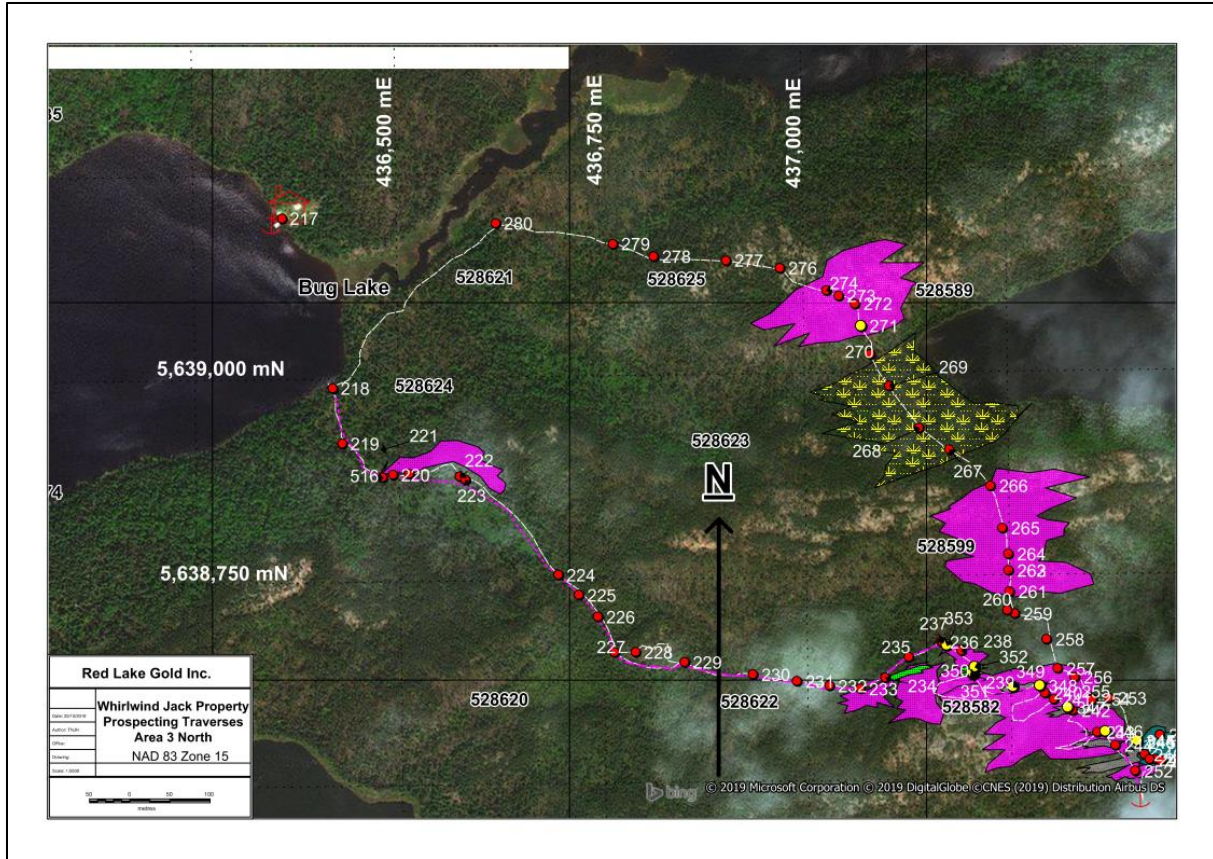




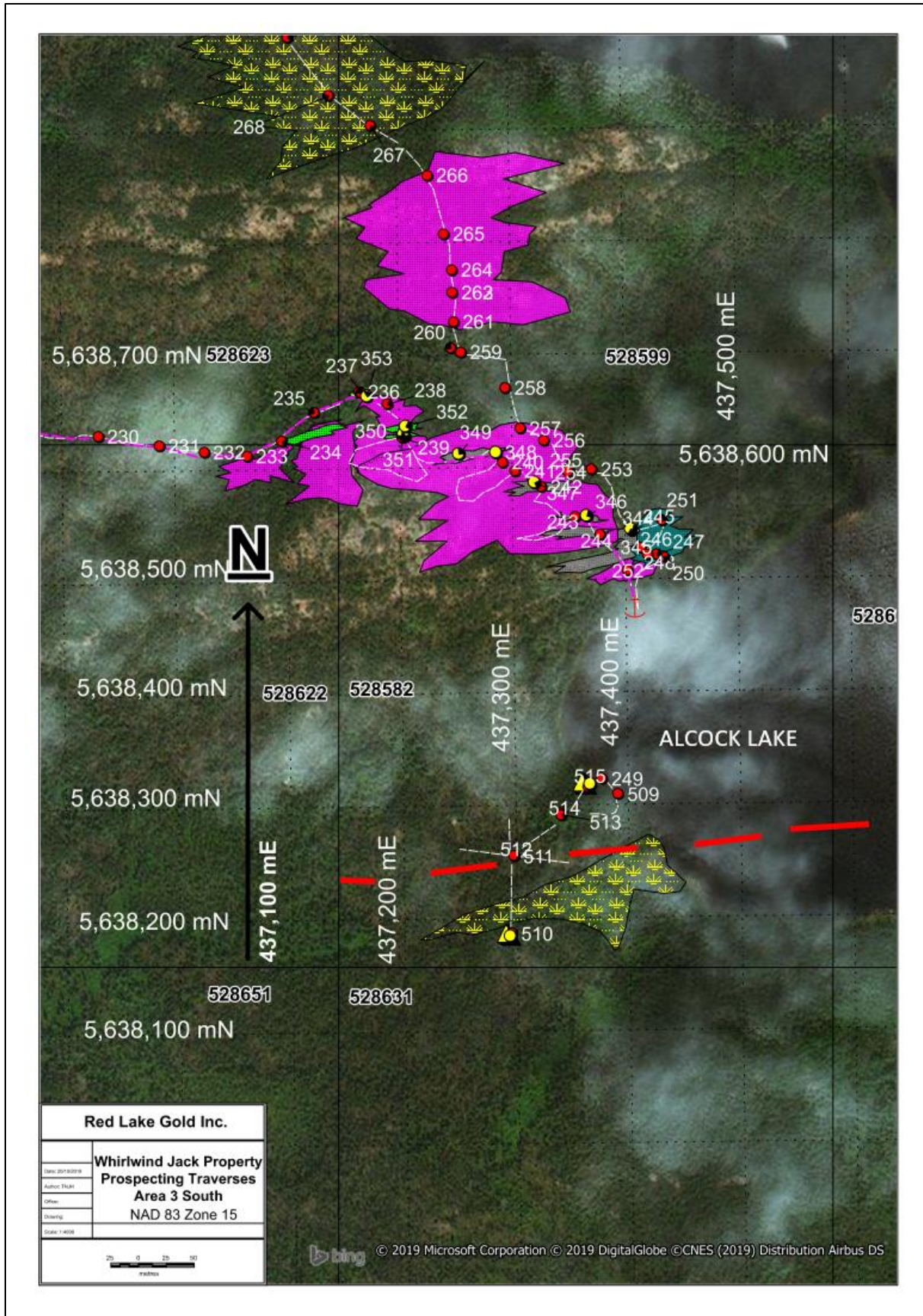
Prospecting Report – Whirlwind Jack Property



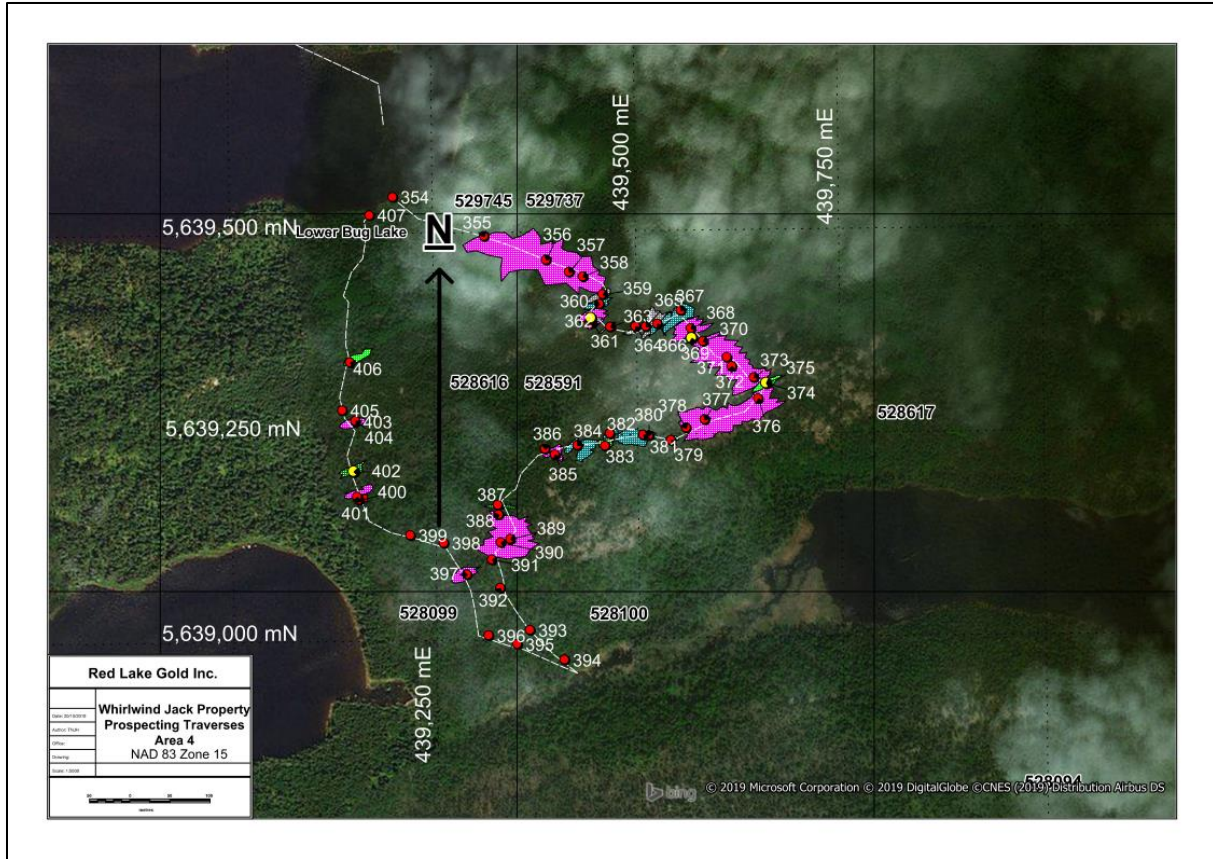
Prospecting Report – Whirlwind Jack Property

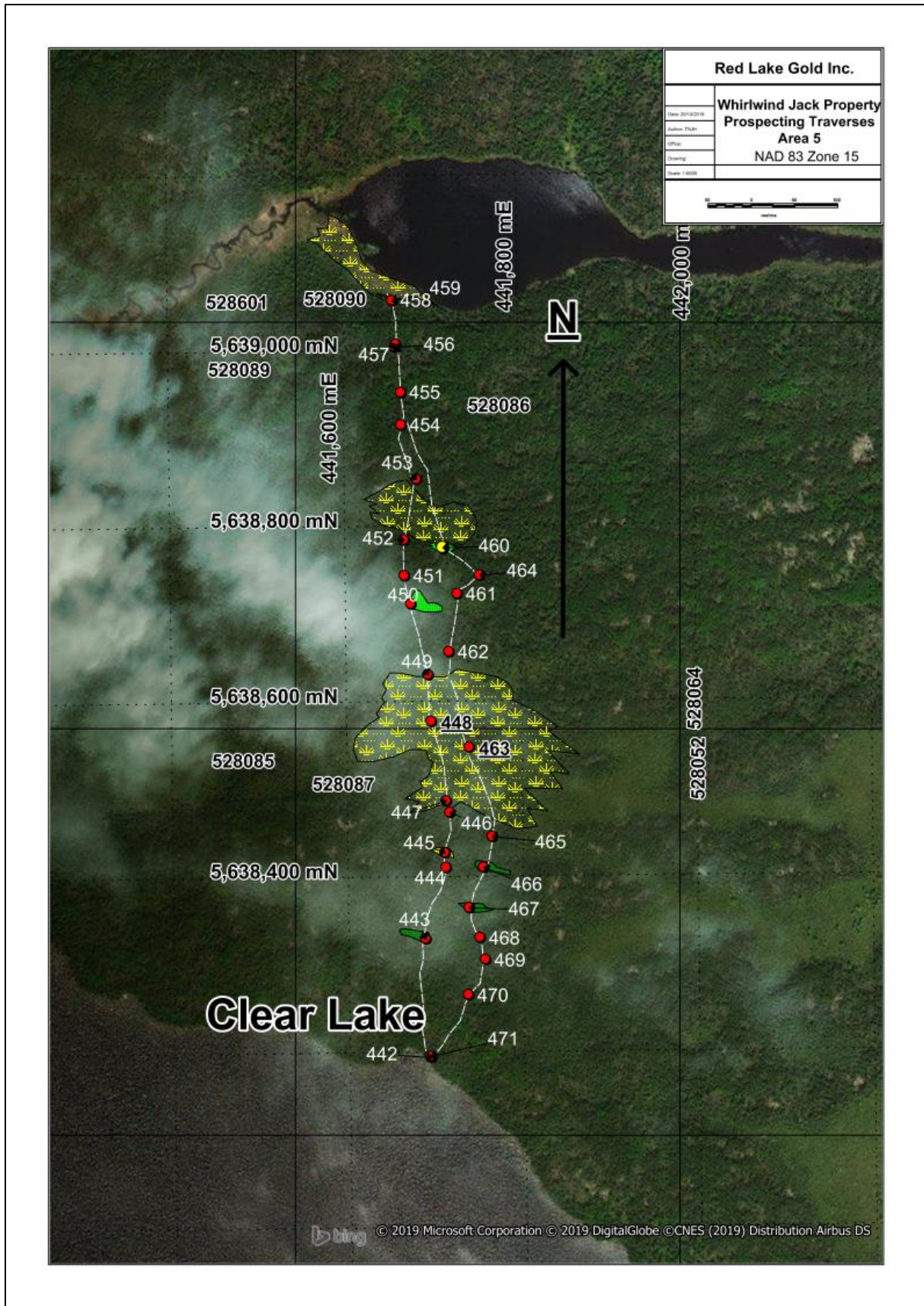


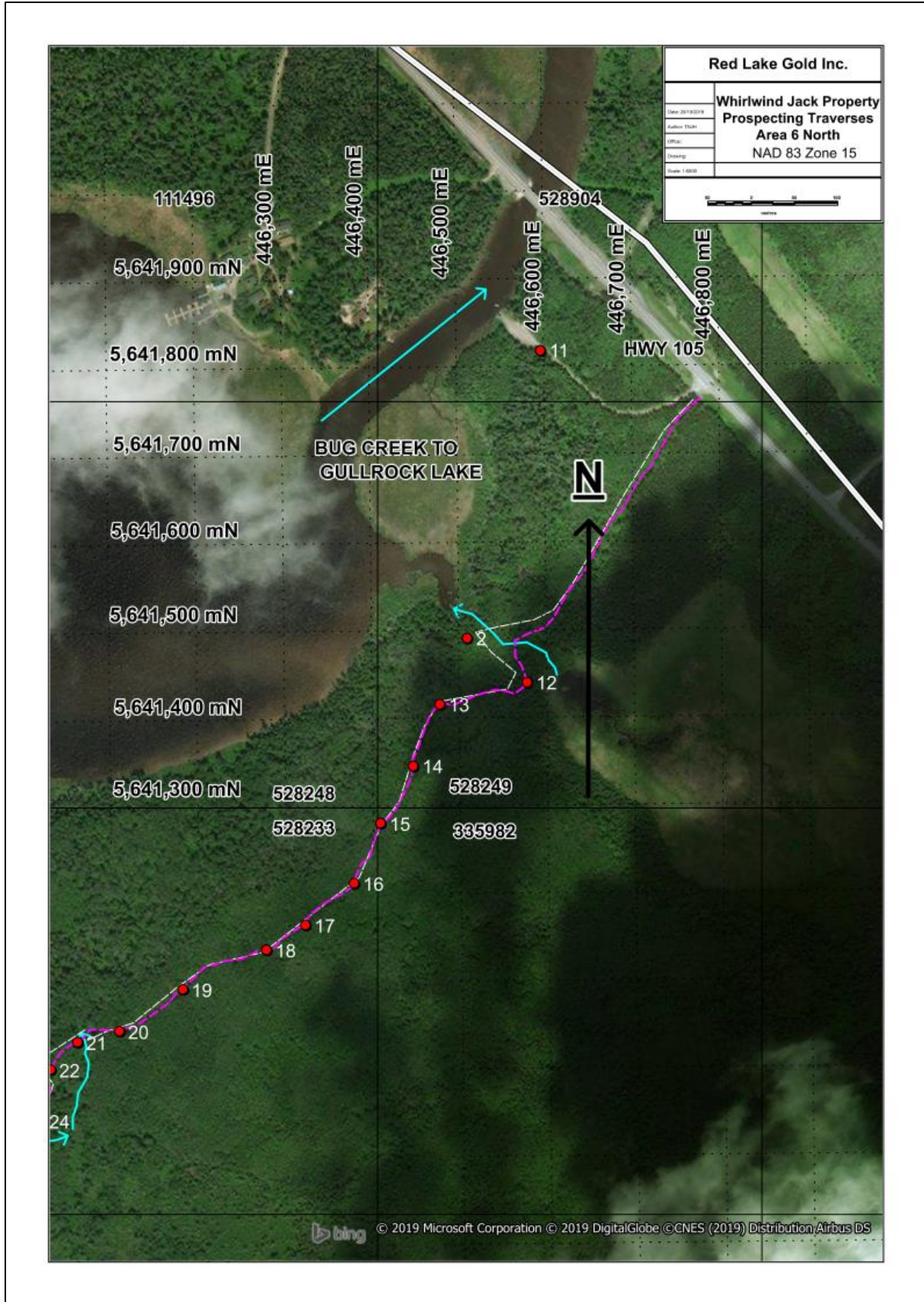
Overleaf, Area 3 South, Alcock Lake, showing approximate trend of airborne VLF conductor as red dashed line (Podolsky, 1985)

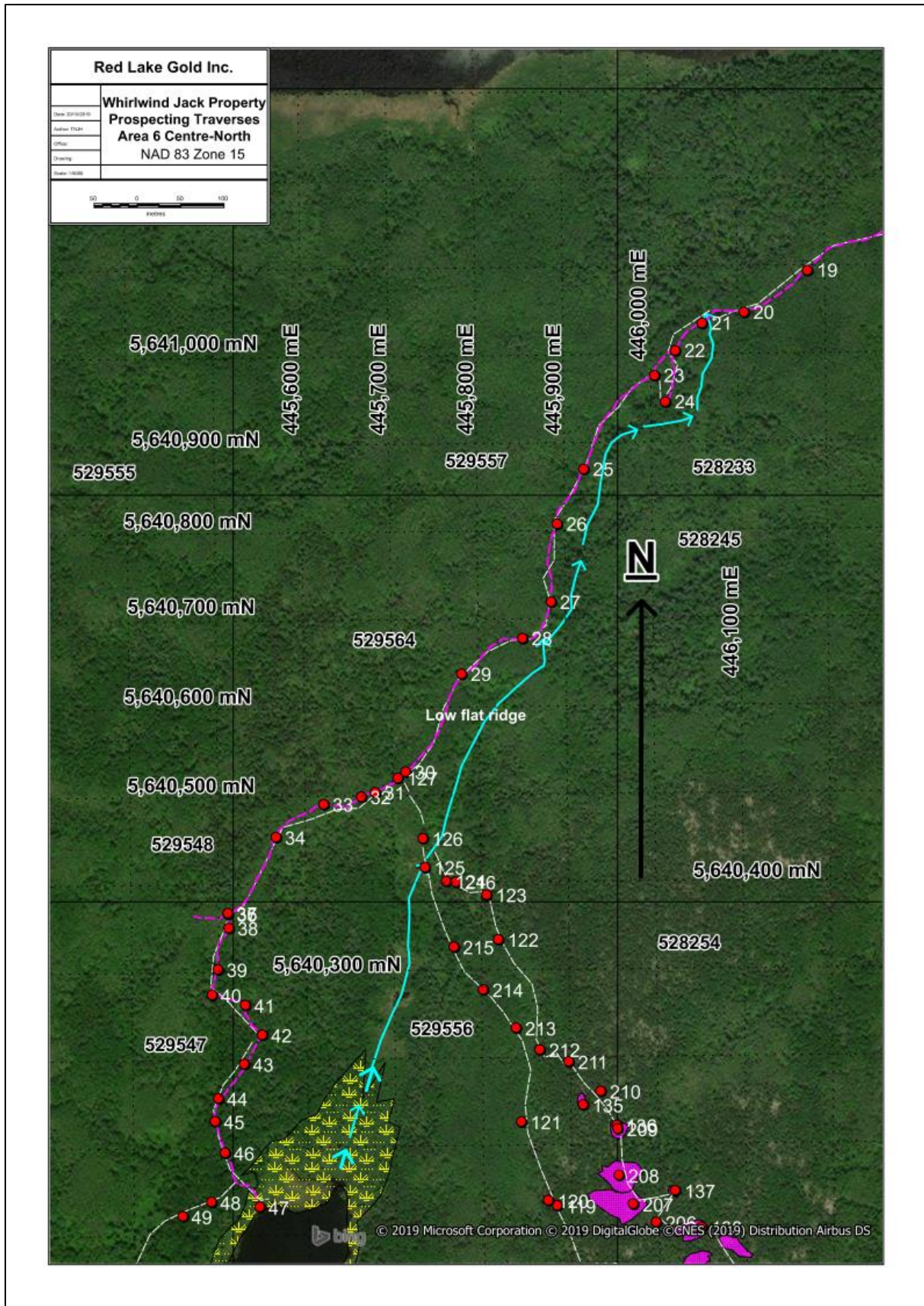


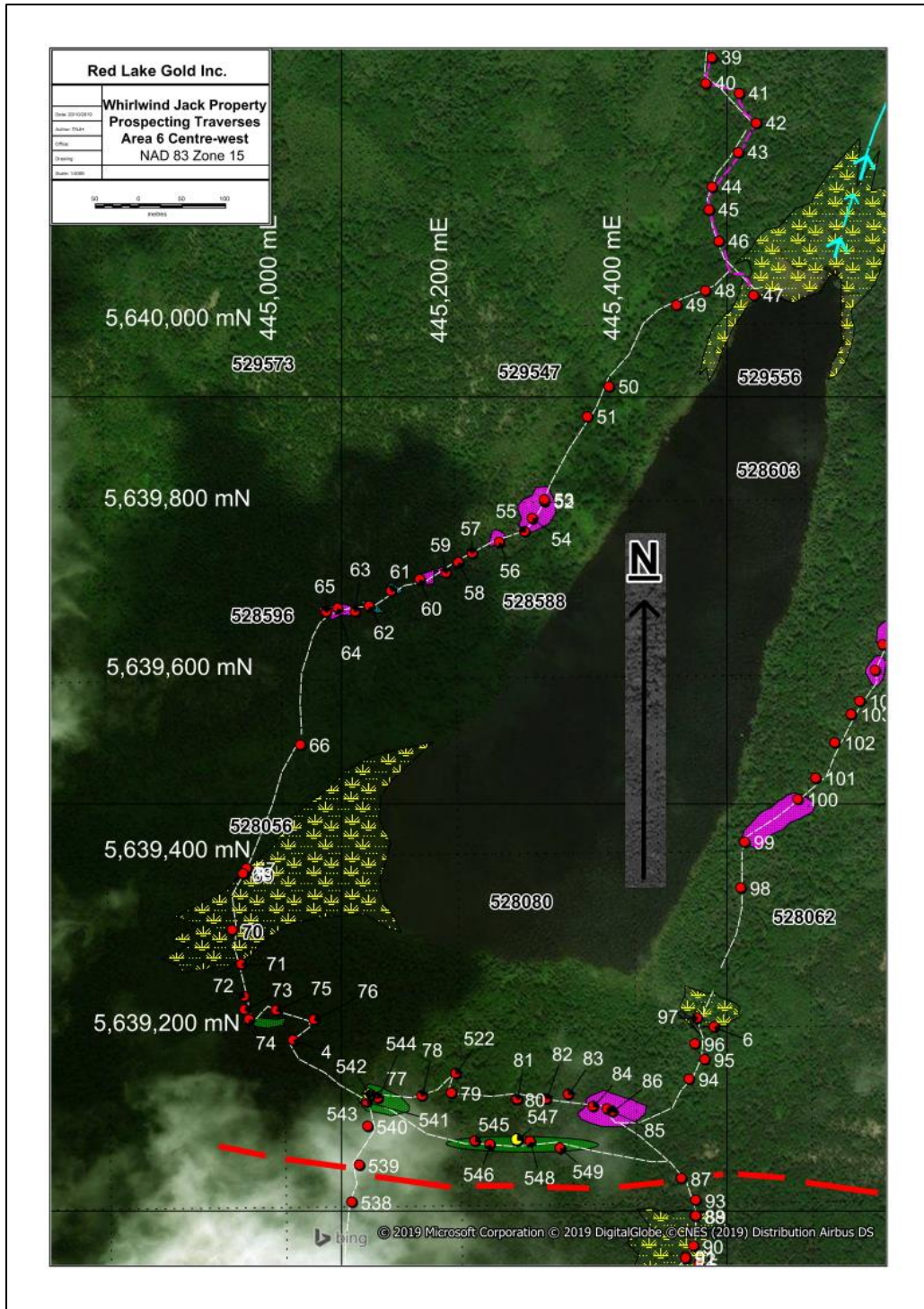
Prospecting Report – Whirlwind Jack Property





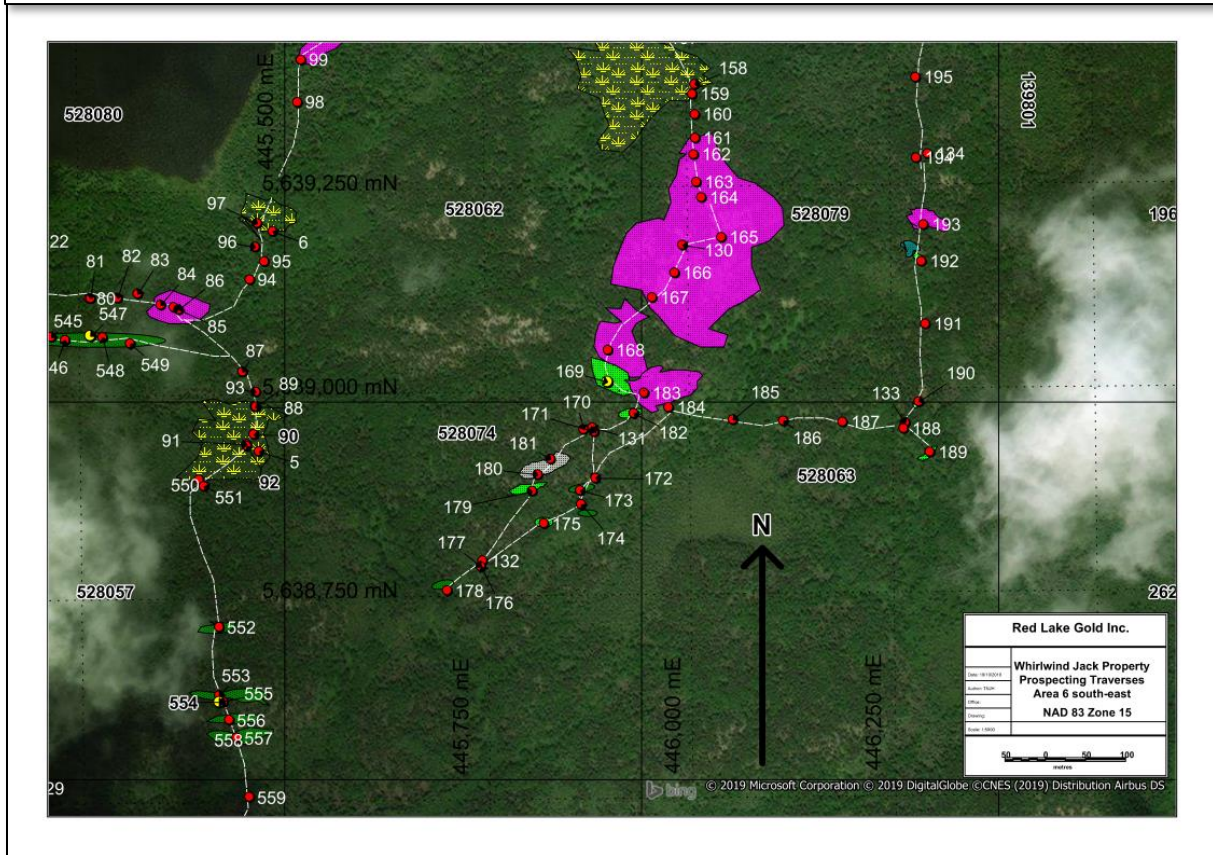
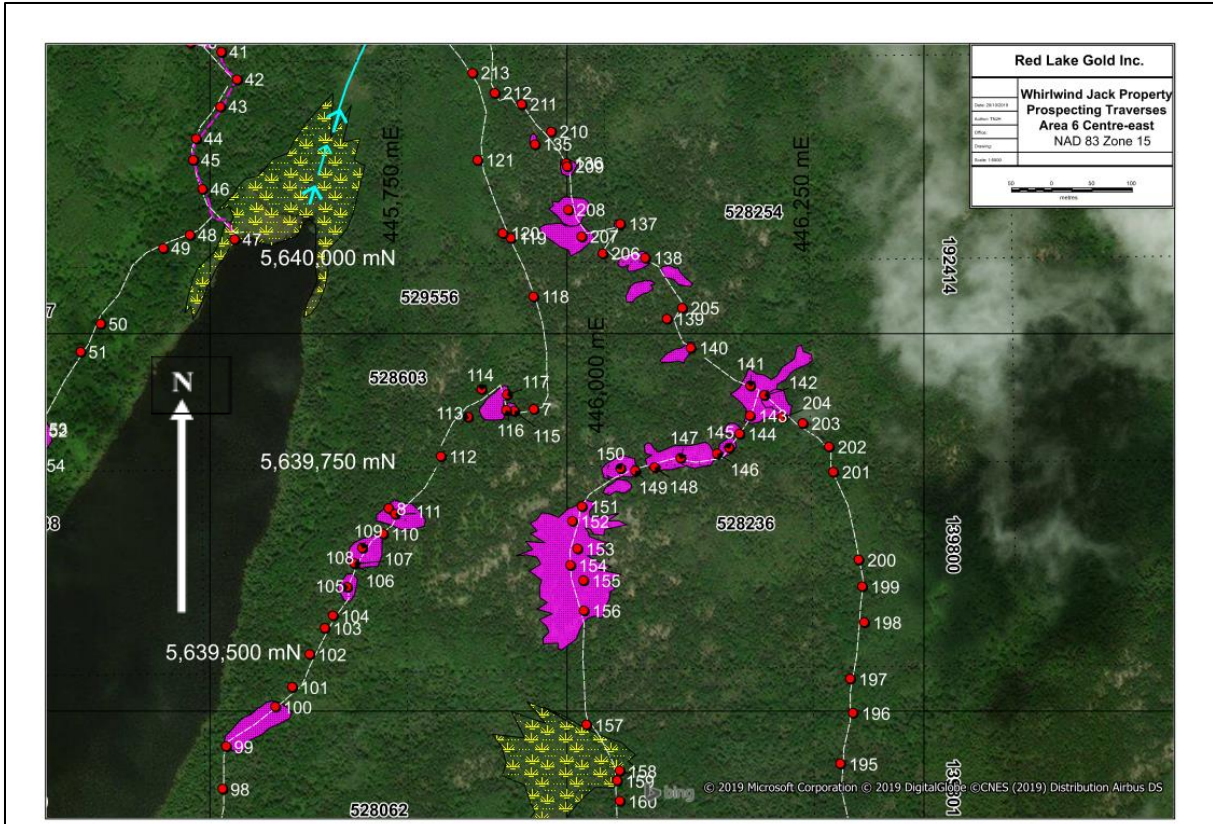


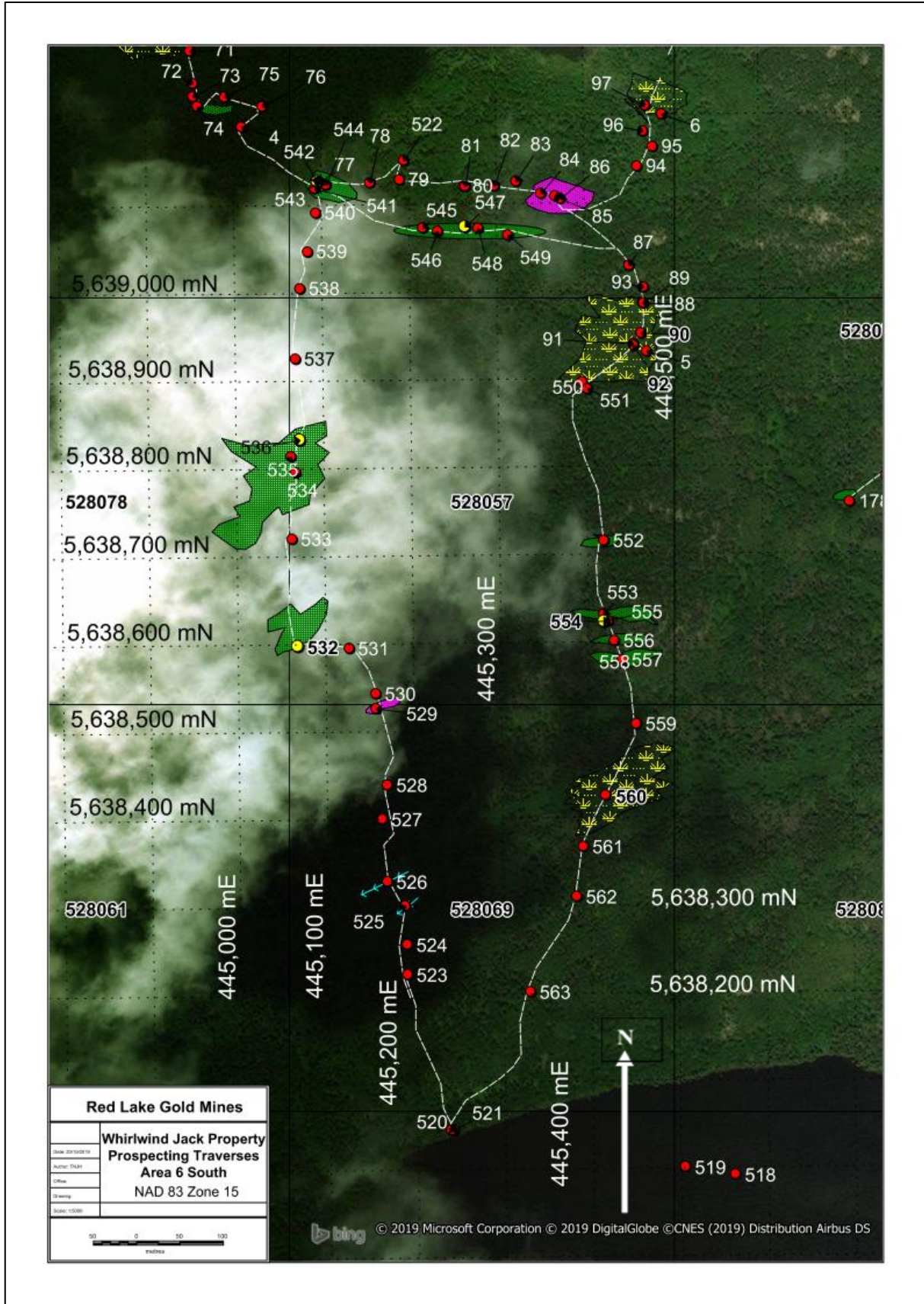




Dashed red line represents approximate trend of airborne VLF conductor (Aerodat, survey, Podolsky, 1985)

Prospecting Report – Whirlwind Jack Property





7.0 RESULTS

All samples were grabs and deemed representative of the source exposures. Samples were tagged and sealed in the field, and upon completion of the programme, sent via Gardewine, Red Lake, to the Actlabs processing facility in Thunder Bay. Subsequently, the material was sent to Actlabs facility in Ancaster, Ontario for analysis.

The samples were analysed for Au and multi-element analysis, (ICP). Codes are as follows.

The following analytical package(s) were requested:		Testing Date:
1A2-50-Tbay	QOP AA-Au (Au - Fire Assay AA)	2019-10-16 07:33:11
1E3-Tbay	QOP AquaGeo (Aqua Regia ICPOES)	2019-10-29 18:57:11

Details on the preparation methods and analytical procedures can be found on the company website, <http://www.actlabs.com/list.aspx?menu=64&app=226&cat1=549&tp=12&lk=no>

Samples are of a prospective nature and may not fully represent the underlying geology. QA/QC data was provided by Actlabs as part of their quality control procedures. Their results are shown in the Appendix. There appears to be no anomalous results when comparing ICP analyses of the samples, with the standard, blank and duplicate material, and the author considers the results to be accurate.

Gold results are generally at what is considered to be background level, except for Sample 5562267, which may reflect very fine pyrite and perhaps trace chalcopyrite (sample ran 657 ppm Cu), in an otherwise quite homogeneous mafic-intermediate volcanic rock.

A brief assessment of the ICP data indicates a broad, ‘cross-property’, narrow range of values in elements, Na, Ca, Al, Mg, Fe, and Ti, and one may infer the overall chemistry for the majority of the samples taken to be of similar geochemistry, probably, calc-alkalic with a very weak trend towards more alkalic in what are considered to be more felsic-intermediate volcanic or volcanoclastic rock samples. This is purely a preliminary observation, and significantly more data is required to classify the geochemistry, specifically whole rock geochemical and trace element analyses from the collection of representative suites for all lithologies.

Table 2 Sample Summary

Waypt	Date	Easting	Northing	Elevation	Comments	Sample No.
351	27.9.19	437204	5638630	430	Mafic-intermediate gneiss	5562261
348	27.9.19	437286	5638613	427	K-epidote-potassic altered plagioclase-quartz biotite gneiss	5562262
346	27.9.19	437366	5638556	417	Quartz-biotite gneiss, fine-medium grained, lineated	5562263
542	3.10.19	445096	5639127	414	Interflow sediment. Quartz-feldspar-biotite-amphibole gneiss	5562264
425	28.9.19	431709	5635930	386	Banded mafic-intermediate gneiss	5562265
555	3.10.19	445418	5638623	422	Intermediate-mafic volcanic rock.	5562266
536	3.10.19	445073	5638833	424	Mafic-intermediate volcanic rock	5562267
318	27.9.19	436277	5637640	434	Gneiss is quartz-plagioclase-biotitic, so considered a metasediment	5562268
402	28.9.19	439150	5639208	418	Mafic gneiss and alkalic vein type granite	5562269
369	28.9.19	439568	5639367	429	Banded mafic gneiss, trace magnetite, with incipient brecciation by felsic fluids.	5562270
460	29.9.19	441712	5638775	414	Quartz-plagioclase-amphibole-rich. Gneissic with plagiogranite veins	5562271
510	30.9.19	437294	5638184	397	B location. Alcock property. Banded and coarse-grained massive quartz boulder. <0.1% pyrite	5562272
515	30.9.19	437369	5638300	406	A location, Alcock property. Felsic-intermediate volcanic float. Trace fine speckled sulphide (pyrite)	5562273
169	24.9.19	445900	5639011	426	Fine-med grained, locally almost aphanitic, intermediate volcanic rock.	5562274
532	3.10.19	445068	5638598	407	Pillowed intermediate-mafic flows	5562275
547	3.10.19	445264	5639074	421	Brecciated intermediate volcanic rocks and volcanoclastic rocks with intrusion by granitoid. (10%). Quartz-plagioclase-biotite-?amphibole and minor potassic feldspar	5562276
271	26.9.19	437071	5639057	417	Med grained, homogeneous pale reddish grey brown plagiogranite.	5562277
349	27.9.19	437253	5638612	430	Minor gneissic amphibole-bearing volcanic rocks. Metasediment. Quartz-biotitic, medium grained, lineated	5562278
353	27.9.19	437172	5638664	417	Streaky to elongate lenticular fabric parallel <1 cm wide supracrustal in granitoid. Metasediment.	5562279
416	28.9.19	431116	5635424	386	Intermediate-mafic volcanic rock and interflow quartz-biotite gneiss.	5562280
352	27.9.19	437206	5638637	425	Intermediate-mafic gneiss with epidote and granitoid	5562281
484	30.9.19	433393	5636460	399	Quartz-plagioclase biotite gneiss	5562282
306	27.9.19	436423	5638013	410	Sub-metre wide mafic-intermediate volcanic gneiss in pale pink granitoid. Non-magnetic, plagioclase-quartz-biotitic.	5562283
362	28.9.19	439444	5639393	431	SW end of outcrop and heading downslope. <1 m wide /volcanoclastic gneissic band	5562284
479	30.9.19	433243	5636707	404	Quartz-rich, medium grained lineated intermediate-flexic volcanic rock	5562285
344	27.9.19	437405	5638544	412	Qz-biotite gneiss, fine-medium grained, lineated	5562286
375	28.9.19	439659	5639311	435	Intermediate volcanic rock, with plagioclase-quartz-biotite and altered amphibole.	5562287
347	27.9.19	437320	5638586	421	Qz-biotite gneiss, fine-medium grained, lineated	5562288

Table 3 Sample Results

Report Number: A19-13652

Report Date: 31/10/2019

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.2	0.5	1	5	1	1	2	2
Analysis Method	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562261	< 5	< 0.2	< 0.5	5	366	2	18	5	34
5562262	< 5	< 0.2	< 0.5	10	419	< 1	31	5	75
5562263	< 5	< 0.2	< 0.5	35	519	< 1	26	< 2	73
5562264	< 5	0.3	< 0.5	47	533	2	20	< 2	66
5562265	< 5	< 0.2	< 0.5	41	505	3	53	< 2	40
5562266	< 5	< 0.2	< 0.5	84	528	< 1	74	< 2	35
5562267	24	0.8	< 0.5	657	427	< 1	46	< 2	31
5562268	< 5	< 0.2	< 0.5	55	872	< 1	83	< 2	67
5562269	< 5	< 0.2	< 0.5	4	132	2	2	11	17
5562270	< 5	< 0.2	0.6	7	622	2	46	< 2	39
5562271	< 5	< 0.2	< 0.5	74	613	< 1	44	< 2	35
5562272	< 5	< 0.2	< 0.5	3	39	49	2	< 2	< 2
5562273	< 5	0.3	< 0.5	38	65	9	14	2	3
5562274	9	< 0.2	< 0.5	58	508	< 1	62	< 2	34
5562275	9	< 0.2	0.6	146	633	< 1	72	< 2	36
5562276	< 5	< 0.2	< 0.5	18	539	< 1	24	3	81
5562277	< 5	< 0.2	< 0.5	44	693	< 1	64	< 2	58
5562278	< 5	< 0.2	< 0.5	28	329	1	18	< 2	52
5562279	< 5	< 0.2	< 0.5	1	289	< 1	6	11	18
5562280	< 5	< 0.2	< 0.5	35	683	2	45	< 2	63
5562281	5	< 0.2	< 0.5	52	683	< 1	58	5	57
5562282	< 5	< 0.2	< 0.5	18	266	2	2	< 2	41
5562283	< 5	< 0.2	< 0.5	76	624	< 1	34	< 2	49
5562284	< 5	< 0.2	< 0.5	1	286	< 1	42	2	30
5562285	< 5	< 0.2	< 0.5	1	236	< 1	3	10	49
5562286	< 5	< 0.2	< 0.5	14	439	< 1	14	< 2	66
5562287	< 5	< 0.2	< 0.5	64	700	2	51	10	94
5562288	< 5	< 0.2	< 0.5	4	528	< 1	30	< 2	58

Prospecting Report – Whirlwind Jack Property

Analyte Symbol	Al	As	B	Ba	Be	Bi	Ca	Co	Cr
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	2	10	10	0.5	2	0.01	1	1
Analysis Method	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562261	1.22	< 2	< 10	72	< 0.5	< 2	0.65	14	23
5562262	1.92	< 2	< 10	40	< 0.5	< 2	1.82	14	32
5562263	2.51	< 2	< 10	262	< 0.5	< 2	1.18	42	13
5562264	2.02	< 2	< 10	182	< 0.5	< 2	0.76	9	41
5562265	2.56	< 2	< 10	31	< 0.5	< 2	3.24	23	82
5562266	4.53	< 2	< 10	25	< 0.5	< 2	4.07	22	126
5562267	5.56	< 2	< 10	12	< 0.5	< 2	4.73	18	92
5562268	3.1	< 2	< 10	77	< 0.5	< 2	2.26	31	78
5562269	0.6	< 2	< 10	33	< 0.5	< 2	0.4	1	17
5562270	2.55	< 2	< 10	23	< 0.5	< 2	3.6	21	101
5562271	2.1	< 2	< 10	17	< 0.5	< 2	2.15	22	66
5562272	0.11	< 2	< 10	< 10	< 0.5	< 2	0.02	< 1	36
5562273	0.35	< 2	< 10	18	< 0.5	< 2	0.06	7	74
5562274	2.54	< 2	< 10	22	1	< 2	2.93	21	121
5562275	4.93	< 2	< 10	23	< 0.5	2	4.45	22	124
5562276	2.11	< 2	< 10	143	< 0.5	< 2	1.65	13	41
5562277	2.52	< 2	< 10	29	< 0.5	3	2.78	25	104
5562278	1.76	< 2	< 10	168	< 0.5	< 2	0.35	17	17
5562279	1.62	< 2	< 10	12	0.7	< 2	2.54	2	44
5562280	2.39	< 2	< 10	29	0.6	< 2	2.47	22	82
5562281	2.05	< 2	< 10	33	< 0.5	< 2	2.59	17	70
5562282	1.48	< 2	< 10	190	< 0.5	< 2	0.33	6	9
5562283	2.1	< 2	< 10	20	< 0.5	< 2	3.15	24	77
5562284	1.54	< 2	< 10	70	< 0.5	< 2	1.14	13	84
5562285	0.95	< 2	< 10	166	< 0.5	< 2	0.23	4	14
5562286	2.34	< 2	< 10	197	< 0.5	< 2	1.95	20	9
5562287	2.21	< 2	< 10	20	1.9	< 2	2.88	24	83
5562288	1.97	< 2	< 10	159	< 0.5	< 2	1.56	14	22

Prospecting Report – Whirlwind Jack Property

Analyte Symbol	Fe	Ga	Hg	K	La	Mg	Na	P	S
Unit Symbol	%	ppm	ppm	%	ppm	%	%	%	%
Detection Limit	0.01	10	1	0.01	10	0.01	0.001	0.001	0.01
Analysis Method	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562261	1.71	< 10	< 1	0.37	< 10	0.31	0.157	0.025	< 0.01
5562262	2.39	< 10	< 1	0.17	12	0.63	0.093	0.057	< 0.01
5562263	4.23	10	< 1	1.24	17	0.93	0.264	0.12	< 0.01
5562264	3.84	< 10	< 1	0.94	< 10	0.57	0.239	0.054	0.1
5562265	3.76	< 10	< 1	0.19	< 10	1.5	0.246	0.029	0.02
5562266	3.48	< 10	2	0.11	< 10	1.21	0.747	0.022	0.01
5562267	2.63	< 10	< 1	0.06	< 10	1.09	0.484	0.02	0.06
5562268	5.47	< 10	1	1.19	< 10	2.74	0.263	0.026	< 0.01
5562269	0.72	< 10	< 1	0.24	36	0.15	0.067	0.019	< 0.01
5562270	3.74	< 10	< 1	0.28	< 10	1.1	0.22	0.029	< 0.01
5562271	2.98	< 10	< 1	0.08	< 10	1.32	0.304	0.025	0.01
5562272	0.37	< 10	< 1	0.02	< 10	0.01	0.02	0.003	< 0.01
5562273	1.72	< 10	< 1	0.1	16	0.01	0.04	0.026	1.02
5562274	2.68	< 10	< 1	0.17	< 10	1.01	0.322	0.019	< 0.01
5562275	3.66	< 10	3	0.11	< 10	1.74	0.643	0.022	0.02
5562276	2.76	< 10	< 1	1.12	48	1.3	0.118	0.119	0.18
5562277	4.71	< 10	1	0.2	< 10	1.98	0.205	0.073	0.04
5562278	2.21	< 10	< 1	0.92	18	0.69	0.155	0.043	0.01
5562279	1.84	< 10	< 1	0.05	19	0.26	0.134	0.091	< 0.01
5562280	4.4	< 10	< 1	0.33	16	1.61	0.186	0.087	0.03
5562281	4.51	< 10	< 1	0.15	< 10	1.06	0.233	0.043	0.04
5562282	2.32	< 10	< 1	0.85	< 10	0.64	0.177	0.04	0.03
5562283	4.6	< 10	< 1	0.19	< 10	1.7	0.295	0.028	< 0.01
5562284	1.81	< 10	< 1	0.7	15	0.99	0.157	0.041	0.02
5562285	1.05	< 10	< 1	0.62	43	0.31	0.081	0.048	< 0.01
5562286	4.65	< 10	< 1	0.68	< 10	1.34	0.297	0.1	< 0.01
5562287	3.67	< 10	< 1	0.3	< 10	1.34	0.254	0.104	0.01
5562288	2.69	< 10	< 1	0.79	12	0.54	0.143	0.038	< 0.01

Prospecting Report – Whirlwind Jack Property

Analyte Symbol	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V
Unit Symbol	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	1	1	0.01	20	1	2	10	1
Analysis Method	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562261	< 2	4	24	0.11	< 20	< 1	< 2	< 10	33
5562262	< 2	6	209	0.26	< 20	3	< 2	< 10	39
5562263	< 2	15	32	0.29	< 20	< 1	< 2	< 10	174
5562264	< 2	7	46	0.25	< 20	4	< 2	< 10	83
5562265	< 2	13	52	0.33	< 20	4	< 2	< 10	111
5562266	< 2	13	48	0.29	< 20	3	< 2	< 10	103
5562267	< 2	10	79	0.25	< 20	3	< 2	< 10	70
5562268	< 2	18	11	0.3	< 20	2	< 2	< 10	152
5562269	< 2	1	43	0.07	< 20	3	< 2	< 10	10
5562270	< 2	15	58	0.34	< 20	4	< 2	< 10	131
5562271	< 2	16	24	0.18	< 20	1	< 2	< 10	109
5562272	< 2	< 1	< 1	< 0.01	< 20	< 1	< 2	< 10	< 1
5562273	< 2	1	4	0.01	< 20	< 1	< 2	< 10	5
5562274	< 2	14	29	0.33	< 20	2	< 2	< 10	97
5562275	< 2	14	54	0.26	< 20	2	< 2	< 10	97
5562276	< 2	3	203	0.28	< 20	3	< 2	< 10	54
5562277	< 2	15	73	0.31	< 20	4	< 2	< 10	121
5562278	< 2	5	22	0.18	< 20	< 1	< 2	< 10	55
5562279	< 2	5	286	0.26	< 20	5	< 2	< 10	37
5562280	< 2	11	83	0.29	< 20	4	< 2	< 10	108
5562281	< 2	8	110	0.22	< 20	3	< 2	< 10	71
5562282	< 2	4	27	0.21	< 20	4	< 2	< 10	43
5562283	< 2	20	12	0.33	< 20	3	< 2	< 10	146
5562284	< 2	6	86	0.22	< 20	2	< 2	< 10	63
5562285	< 2	< 1	27	0.11	< 20	3	< 2	< 10	12
5562286	3	13	20	0.26	< 20	< 1	< 2	< 10	131
5562287	< 2	14	23	0.24	< 20	2	< 2	< 10	102
5562288	< 2	3	37	0.21	< 20	3	< 2	< 10	44

Prospecting Report – Whirlwind Jack Property

Analyte Symbol	W	Y	Zr
Unit Symbol	ppm	ppm	ppm
Detection Limit	10	1	1
Analysis Method	AR-ICP	AR-ICP	AR-ICP
5562261	< 10	7	8
5562262	< 10	5	15
5562263	< 10	20	9
5562264	< 10	6	16
5562265	< 10	13	5
5562266	< 10	10	2
5562267	< 10	8	2
5562268	< 10	9	6
5562269	< 10	7	22
5562270	< 10	12	5
5562271	< 10	6	2
5562272	< 10	< 1	< 1
5562273	< 10	3	21
5562274	< 10	11	4
5562275	< 10	9	2
5562276	< 10	21	16
5562277	< 10	12	8
5562278	< 10	5	21
5562279	< 10	9	12
5562280	< 10	13	9
5562281	< 10	8	12
5562282	< 10	4	8
5562283	< 10	14	4
5562284	< 10	7	11
5562285	< 10	3	16
5562286	< 10	12	9
5562287	< 10	32	8
5562288	< 10	5	6

8.0 CONCLUSIONS

The evaluation provided the following information:

- A sequence of as yet poorly defined supracrustal rocks extends West from the eastern boundary of the property, continuing North of Stone Lake and Clear Lake, then turning slowly south-westwards, following the outline of Bug Lake towards Longlegged Lake.
- Broadly, this sequence can be described as steeply dipping (East) to steeply to moderately, locally shallow-dipping (West), planar, but with significant tight to locally, isoclinal folding within.
- The supracrustal geology is characterised by greenschist to amphibolite metamorphic grade mafic-intermediate massive to pillowed flows and intercalated volcanic-derived sediments; lesser wacke and intermediate to felsic volcanic rocks, the latter defined as fine-grained, poorly to slightly banded, quite siliceous, texturally homogeneous rocks. Old reports described exposures siltstone, argillite and iron formation, but none was noted.
- The supracrustal sequence is flanked to the North by an extensive suite of felsic, often weakly potassic granitoid rocks with various chemistries ranging from granite, s.s., to granodiorite, quartz diorite, plagiogranite, monzodiorite and quartz syenite. Typically, a broad contact zone defined by variably altered supracrustals is characterised by weak to intense feldspathization, ‘granitisation’, granite gneiss development and minor to near complete assimilation. Banded/interlayered granitoid and supracrustals are a common feature both within the transition zone and the major supracrustal sequence(s).
- Extensive exposures of granitoid also host thin meter to sub-metre scale layers, bands and pods of folded, flattened, sheared, faulted and dislocated supracrustal rocks. In some places, contacts are abrupt, protomylonitic to sharp, faulted. This reflects a complex relationship between intrusions and the supracrustal sequence.
- The contact between the supracrustals with the southern tonalite is poorly exposed and there was insufficient data obtained from field investigations to accurately describe it.
- Overall metamorphic grade increases from greenschist to lower amphibolite in the East to amphibolite grade in the West.
- The overall strain regime increases from brittle to semi-brittle in the East, to semi-brittle to semi-ductile, in the West.
- Limited sulphide mineralisation was noted during field investigations. Two small locales with felsic boulders in a low-lying area just West of Alcock Lake were sampled. Previously located by prospecting, these were re-sampled with negligible gold returned. Their provenance is unknown and the lithologies were not noted elsewhere during the Fall investigations.
- The granitoid exposures are essentially quite resistant, forming the higher ridges, knolls, and slopes, whilst the majority of the terrain is low-lying, covered, less resistive, and probably underlain mainly by supracrustals. The overall width of the main supracrustal sequence is probably quite consistent, from East to West, but internally, it has been modified by felsic intrusive activity to varying degrees.
- There is extensive dense forested cover across the property. Ridge slopes are often boulder strewn, and one suspects most of the low-lying areas are infilled with boulders. Covering this is a thick layer of organic debris (often mossy). This terrain lends itself to geochemical

soil sampling, and the SGH (soil gas hydrocarbon) geochemical sampling programme would be an option for locating buried targets.

- A comparison with the geology of the Dixie property (Great Bear Resources), would be premature, though based on previous work by T. Hughes on portions of that property, the eastern Traverse Area 6 would have a closer lithological and structural relationship. The central Dixie area is generally flatter, with a broader supracrustal sequence that has overall, less intense deformation and a lower metamorphic grade. Westwards, towards the Whirlwind Jack property, there is an increase in thermal gradient and granitoid intrusions exposed along the highway north-west of the current focus of work at Dixie by Great Bear Resources.

9.0 RECOMMENDATIONS

The following programme is recommended for the Whirlwind Jack property:

1. Airborne Survey to cover the supracrustal sequence trending approximately East-West across the property
2. Spring follow-up to examine targets in part defined by the airborne survey.
3. Based on items 1 and 2, execute a soil geochemical survey over portions of the property.
4. Diamond drilling on selected targets.

10.0 REFERENCES

- MNDM Assessment File 52L16SE0001 Selco Mining Corp., Sydney Lake option. Geological mapping, (maps only). 1973
- MNDM Assessment File 52L16SE8170 Selco Mining Corp., Sydney Lake option, Rainfall Lake Drilling report, 1973
- MNDM Assessment File 52L16SE0005 Selco Mining Corp., Sydney Lake option, Rainfall Lake Drilling report, 1974
- MNDM Assessment File 52L16SE0006 Selco Mining Corp., Sydney Lake option, Rainfall Lake Drilling report, 1974
- MNDM Assessment File 52L16SE0007 Selco Mining Corp., Sydney Lake option, Rainfall Lake Drilling report, 1974
- MNDM Assessment File 52K13NW0154 Claremont Mines Ltd. Diamond Drilling, June, 1975
- MNDM Assessment File 52K13NW0056 Selco Mining Corporation, Blocks 150 – 5, 10, 11, Dixie Lake Area, Geophysics report(s), 1976
- MNDM Assessment File 52K13NW8937 Selco Mining Corporation, Block 150 – 6, Dixie Lake Area, Geophysics report, 1976
- MNDM Assessment Report 52K13NW0051 1990. Noranda Exploration Co., Ltd. Report of Work, Geological Survey, Genessee Central Group.
- Bell, R.C. 1995. Assessment Report – Geological, EM-57 Surveys and Diamond Drilling, Bug River Project. Loydex Resources Inc. Option, Heyson and Byshe Townships and Faulkenham Lake Area, Ontario. NTS 52-K-13. November 27th, 1995.
- Bowdidge, C. 2004. Report on Magnetic and Horizontal Loop E.M. Surveys, Clear Lake Property, Faulkenham Lake Area. October 2004. MNDM Report 2.30258
- Breaks, F.W. et al., 1975a Operation Kenora-Sydney Lakes, Eagle-Sydney Lakes Sheet, District of Kenora, ODM, P. Map P.1206, Geol. Ser. Scale 1:63,360
- Breaks, F.W. et al, 1975b Operation Kenora-Sydney Lakes, Pakwash-Longlegged Lakes Sheet, District of Kenora; ODM P. Map P.1027 Geol. Sr. Scale 1:63,360
- Campbell, G.J. 2009. Assessment Report. 2.42254. Results of a Mobile Metal Ions Process (MMI-M) Soil Geochemical Survey on the Alcock Base and Precious Metal Property, Red Lake – Madsen Area, Northwest Ontario. 2009.
- Campbell, G.J., 2010. Assessment Report. 2010 Prospecting, Rock Sampling and MMI Soil Sampling Follow-up Survey on the Alcock Base and Precious Metal Property, Red Lake – Madsen Area, Northwest Ontario. MNDM Assessment File 2.46880

Dubé, B. et al, 2004 Timing of Gold Mineralization at Red Lake, Northwestern Ontario, Canada: New Constraints from U-Pb Geochronology at the Goldcorp High-Grade zone, Red Lake Mine, and the Madsen Mine. *Econ. Geol.*, No.8, Vol. 99, p. 1611-1541, 2004

Ferguson, S.A., Brown, D.D., Davies, J.C., Pryslak, A.P., Robeson, D.W., Karpetas, C., 1968, Red Lake – Birch Lake Sheet. Map 2175, Ontario Geological Survey, M2175.

Muir, T.L. 1994. Geology of the Dixie Lake area, District of Kenora (Patricia Portion); OGS OFR 5904, 53 p. With OGS Prelim. Maps P.3299, 3300

OGS Map P.3397 Precambrian Geology Medicine Stone Lake Area, 1:50,000, 1999. Geology by B.T. Atkinson, 1995, 1996.

Podolsky, G., 1985. Report on Combined Helicopter-borne Magnetic, Electromagnetic and VLF Survey. Dixie Lake Area, Ontario for Golden Terrace Resources by Aerodat Ltd. MNDM Assessment File 52K13NW0053

Sanborn-Barrie, M., Rogers, N., Skulski, T., Parker, J., McNicoll, V., Devancy, J., 2004, Geology and tectonostratigraphic assemblages, East Uchi Subprovince, Red Lake and Birch-Uchi belts, Ontario; Geological Survey of Canada, Open File 4256; Ontario Geological Survey, Preliminary Map. P.3460. Scale 1:250,000.

Smith, A., 1999. Report on 1988 Geological Mapping, and Phase II Diamond Drilling/Borehole TEM Surveying, Bug River Project. MNDM Assessment File 52K13NW2004

Thomson, R., 1946. Report on a Visit to the Alcock Property. Unpublished report in MNDM Red Lake Resident Geologist Files.

Thorsen, K., 1976. Selco Mining Corporation. Block 150-6, Dixie Lake Area, Geophysical Report. MNDM Assessment File 52K13NW8937

Thurston, P.C. & Paktunc, D., 1985. Western Uchi Subprovince (Troutlake River Area), Madsen Sheet, District of Kenora (Patricia Portion): OGS Survey Map P.2857.

11.0 Statement of Qualifications

I, Toby Hughes of Marinaside Crescent, Vancouver, declare that:

- I graduated with an Hons. B.Sc. Geology, from Dundee University, Scotland in 1980
- I have worked as an exploration geologist for 39 years since graduation
- I am a Practicing Geologist in good standing with Professional Geoscientists Ontario, No. 1318
- I supervised and conducted work on the Whirlwind Jack property this fall, 2019, and am the author of this report, titled ‘Prospecting Report on the Whirlwind Jack Property’

T. Hughes

A handwritten signature in black ink, appearing to read 'T. Hughes', with a long horizontal stroke extending to the right.

APPENDIX

CERTIFICATE OF ANALYSIS

Quality Analysis ...



Innovative Technologies

Ryan Kalt
605-815 Hornby St
Vancouver
BC V6Z2E6
Canada

Report No.: A19-13652
Report Date: 31-Oct-19
Date Submitted: 08-Oct-19
Your Reference: WJack

ATTN: Ryan Kalt

CERTIFICATE OF ANALYSIS

28 Rock samples were submitted for analysis.

The following analytical package(s) were requested:		Testing Date:
1A2-50-Tbay	QOP AA-Au (Au - Fire Assay AA)	2019-10-16 07:33:11
1E3-Tbay	QOP AquaGeo (Aqua Regia ICPOES)	2019-10-29 18:57:11

REPORT A19-13652

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

A handwritten signature in black ink, appearing to read "Emmanuel Esemé".

Emmanuel Esemé, Ph.D.
Quality Control Coordinator

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Prospecting Report – Whirlwind Jack Property

Results Activation Laboratories Ltd. Report: A19-13652

Analyte Symbol	Au	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10
Method Code	FA-AA	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562261	<5	<0.2	<0.5	5	366	2	18	5	34	1.22	<2	<10	72	<0.5	<2	0.65	14	23	1.71	<10	<1	0.37	<10
5562262	<5	<0.2	<0.5	10	419	<1	31	5	75	1.92	<2	<10	40	<0.5	<2	1.82	14	32	2.39	<10	<1	0.17	12
5562263	<5	<0.2	<0.5	35	519	<1	26	<2	73	2.51	<2	<10	262	<0.5	<2	1.18	42	13	4.23	<10	<1	1.24	17
5562264	<5	0.3	<0.5	47	533	2	20	<2	66	2.02	<2	<10	182	<0.5	<2	0.76	9	41	3.84	<10	<1	0.94	<10
5562265	<5	<0.2	<0.5	41	505	3	53	<2	40	2.56	<2	<10	31	<0.5	<2	3.24	23	82	3.76	<10	<1	0.19	<10
5562266	<5	<0.2	<0.5	84	528	<1	74	<2	35	4.53	<2	<10	25	<0.5	<2	4.07	22	126	3.48	<10	2	0.11	<10
5562267	24	0.8	<0.5	657	427	<1	46	<2	31	5.56	<2	<10	12	<0.5	<2	4.73	18	92	2.63	<10	<1	0.06	<10
5562268	<5	<0.2	<0.5	55	872	<1	83	<2	67	3.10	<2	<10	77	<0.5	<2	2.26	31	78	5.47	<10	1	1.19	<10
5562269	<5	<0.2	<0.5	4	132	2	2	11	17	0.60	<2	<10	33	<0.5	<2	0.40	1	17	0.72	<10	<1	0.24	36
5562270	<5	<0.2	0.6	7	622	2	46	<2	39	2.55	<2	<10	23	<0.5	<2	3.60	21	101	3.74	<10	<1	0.28	<10
5562271	<5	<0.2	<0.5	74	613	<1	44	<2	35	2.10	<2	<10	17	<0.5	<2	2.15	22	66	2.98	<10	<1	0.08	<10
5562272	<5	<0.2	<0.5	3	39	49	2	<2	<2	0.11	<2	<10	<10	<0.5	<2	0.02	<1	36	0.37	<10	<1	0.02	<10
5562273	<5	0.3	<0.5	38	65	9	14	2	3	0.35	<2	<10	18	<0.5	<2	0.06	7	74	1.72	<10	<1	0.10	16
5562274	9	<0.2	<0.5	58	508	<1	62	<2	34	2.54	<2	<10	22	1.0	<2	2.93	21	121	2.68	<10	<1	0.17	<10
5562275	9	<0.2	0.6	146	633	<1	72	<2	36	4.93	<2	<10	23	<0.5	<2	4.45	22	124	3.66	<10	3	0.11	<10
5562276	<5	<0.2	<0.5	18	539	<1	24	3	81	2.11	<2	<10	143	<0.5	<2	1.65	13	41	2.76	<10	<1	1.12	48
5562277	<5	<0.2	<0.5	44	693	<1	64	<2	58	2.52	<2	<10	29	<0.5	<2	2.78	25	104	4.71	<10	1	0.20	<10
5562278	<5	<0.2	<0.5	28	329	1	18	<2	52	1.76	<2	<10	168	<0.5	<2	0.35	17	17	2.21	<10	<1	0.92	18
5562279	<5	<0.2	<0.5	1	289	<1	6	11	18	1.62	<2	<10	12	0.7	<2	2.54	2	44	1.84	<10	<1	0.05	19
5562280	<5	<0.2	<0.5	35	683	2	45	<2	63	2.39	<2	<10	29	0.6	<2	2.47	22	82	4.40	<10	<1	0.33	16
5562281	5	<0.2	<0.5	52	683	<1	58	5	57	2.05	<2	<10	33	<0.5	<2	2.59	17	70	4.51	<10	<1	0.15	<10
5562282	<5	<0.2	<0.5	18	266	2	2	<2	41	1.48	<2	<10	190	<0.5	<2	0.33	6	9	2.32	<10	<1	0.85	<10
5562283	<5	<0.2	<0.5	76	624	<1	34	<2	49	2.10	<2	<10	20	<0.5	<2	3.15	24	77	4.60	<10	<1	0.19	<10
5562284	<5	<0.2	<0.5	1	286	<1	42	2	30	1.54	<2	<10	70	<0.5	<2	1.14	13	84	1.81	<10	<1	0.70	15
5562285	<5	<0.2	<0.5	1	236	<1	3	10	49	0.95	<2	<10	166	<0.5	<2	0.23	4	14	1.05	<10	<1	0.62	43
5562286	<5	<0.2	<0.5	14	439	<1	14	<2	66	2.34	<2	<10	197	<0.5	<2	1.95	20	9	4.65	<10	<1	0.68	<10
5562287	<5	<0.2	<0.5	64	700	2	51	10	94	2.21	<2	<10	20	1.9	<2	2.88	24	83	3.67	<10	<1	0.30	<10
5562288	<5	<0.2	<0.5	4	528	<1	30	<2	58	1.97	<2	<10	159	<0.5	<2	1.56	14	22	2.69	<10	<1	0.79	12

Results Activation Laboratories Ltd. Report: A19-13652

Analyte Symbol	Mg	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562261	0.31	0.157	0.025	<0.01	<2	4	24	0.11	<20	<1	<2	<10	33	<10	7	8
5562262	0.63	0.093	0.057	<0.01	<2	6	209	0.26	<20	3	<2	<10	39	<10	5	15
5562263	0.93	0.264	0.120	<0.01	<2	15	32	0.29	<20	<1	<2	<10	174	<10	20	9
5562264	0.57	0.239	0.054	0.10	<2	7	46	0.25	<20	4	<2	<10	83	<10	6	16
5562265	1.50	0.246	0.029	0.02	<2	13	52	0.33	<20	4	<2	<10	111	<10	13	5
5562266	1.21	0.747	0.022	0.01	<2	13	48	0.29	<20	3	<2	<10	103	<10	10	2
5562267	1.09	0.484	0.020	0.06	<2	10	79	0.25	<20	3	<2	<10	70	<10	8	2
5562268	2.74	0.263	0.026	<0.01	<2	18	11	0.30	<20	2	<2	<10	152	<10	9	6
5562269	0.15	0.067	0.019	<0.01	<2	1	43	0.07	<20	3	<2	<10	10	<10	7	22
5562270	1.10	0.220	0.029	<0.01	<2	15	58	0.34	<20	4	<2	<10	131	<10	12	5
5562271	1.32	0.304	0.025	0.01	<2	16	24	0.18	<20	1	<2	<10	109	<10	6	2
5562272	0.01	0.020	0.003	<0.01	<2	<1	<1	<0.01	<20	<1	<2	<10	<1	<10	<1	<1
5562273	0.01	0.040	0.026	1.02	<2	1	4	0.01	<20	<1	<2	<10	5	<10	3	21
5562274	1.01	0.322	0.019	<0.01	<2	14	29	0.33	<20	2	<2	<10	97	<10	11	4
5562275	1.74	0.643	0.022	0.02	<2	14	54	0.26	<20	2	<2	<10	97	<10	9	2
5562276	1.30	0.118	0.119	0.18	<2	3	203	0.28	<20	3	<2	<10	54	<10	21	16
5562277	1.98	0.205	0.073	0.04	<2	15	73	0.31	<20	4	<2	<10	121	<10	12	8
5562278	0.69	0.155	0.043	0.01	<2	5	22	0.18	<20	<1	<2	<10	55	<10	5	21
5562279	0.26	0.134	0.091	<0.01	<2	5	286	0.26	<20	5	<2	<10	37	<10	9	12
5562280	1.61	0.186	0.087	0.03	<2	11	83	0.29	<20	4	<2	<10	108	<10	13	9
5562281	1.06	0.233	0.043	0.04	<2	8	110	0.22	<20	3	<2	<10	71	<10	8	12
5562282	0.64	0.177	0.040	0.03	<2	4	27	0.21	<20	4	<2	<10	43	<10	4	8
5562283	1.70	0.295	0.028	<0.01	<2	20	12	0.33	<20	3	<2	<10	146	<10	14	4
5562284	0.99	0.157	0.041	0.02	<2	6	86	0.22	<20	2	<2	<10	63	<10	7	11
5562285	0.31	0.081	0.048	<0.01	<2	<1	27	0.11	<20	3	<2	<10	12	<10	3	16
5562286	1.34	0.297	0.100	<0.01	3	13	20	0.26	<20	<1	<2	<10	131	<10	12	9
5562287	1.34	0.254	0.104	0.01	<2	14	23	0.24	<20	2	<2	<10	102	<10	32	8
5562288	0.54	0.143	0.038	<0.01	<2	3	37	0.21	<20	3	<2	<10	44	<10	5	6

Prospecting Report – Whirlwind Jack Property

QC Activation Laboratories Ltd. Report: A19-13652

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-6 Meas	0.5	< 0.5	65	999	1	24	82	121	7.01	231	< 10	693	0.9	3	0.13	11	79	5.06	20	2	1.17	< 10	0.37
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
GXR-6 Meas	0.4	< 0.5	72	1070	2	27	88	128	7.67	258	< 10	751	1.0	3	0.14	11	84	5.75	20	< 1	1.29	10	0.40
GXR-6 Cert	1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680	1.87	13.9	0.609
OREAS 922 (AQUA REGIA) Meas	0.7	< 0.5	2130	745	< 1	36	52	249	2.99	6		77	0.8	11	0.42	18	48	4.62	< 10		0.53	38	1.25
OREAS 922 (AQUA REGIA) Cert	0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62		0.376	32.5	1.33
OREAS 922 (AQUA REGIA) Meas	0.9	< 0.5	2210	771	< 1	36	55	264	3.08	9		87	0.8	9	0.44	18	48	5.12	< 10		0.56	39	1.36
OREAS 922 (AQUA REGIA) Cert	0.851	0.28	2176	730	0.69	34.3	60	256	2.72	6.12		70	0.65	10.3	0.324	19.4	40.7	5.05	7.62		0.376	32.5	1.33
OREAS 923 (AQUA REGIA) Meas	1.4	< 0.5	4340	836	< 1	34	74	328	2.97	5		62	0.7	22	0.42	20	42	5.50	< 10		0.44	35	1.36
OREAS 923 (AQUA REGIA) Cert	1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01		0.322	30.0	1.43
OREAS 923 (AQUA REGIA) Meas	1.9	< 0.5	4480	906	< 1	35	75	353	3.11	4		70	0.8	23	0.44	20	44	6.16	< 10		0.47	36	1.51
OREAS 923 (AQUA REGIA) Cert	1.62	0.40	4248	850	0.84	32.7	81	335	2.80	7.07		54	0.61	21.8	0.326	22.2	39.4	5.91	8.01		0.322	30.0	1.43
Oreas 96 (Aqua Regia) Meas	10.2		> 10000				80	412						65		44							
Oreas 96 (Aqua Regia) Cert	11.50		39100.00				100	448						27.9		49.2							
Oreas 96 (Aqua Regia) Meas	10.5		> 10000				83	430						49		44							
Oreas 96 (Aqua Regia) Cert	11.50		39100.00				100	448						27.9		49.2							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
OREAS 220 (Fire Assay) Meas																							
OREAS 220 (Fire Assay) Cert																							
Oreas 621 (Aqua Regia) Meas	66.7	266	3490	524	14	27	> 5000	> 10000	1.87	79			0.6	12	1.71	34	32	3.17	10	5	0.41	20	0.42
Oreas 621 (Aqua Regia) Cert	68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93	0.333	19.4	0.436
Oreas 621 (Aqua Regia) Meas	66.1	269	3520	519	14	27	> 5000	> 10000	1.89	78			0.6	10	1.70	31	33	3.13	10	4	0.42	20	0.42
Oreas 621 (Aqua Regia) Cert	68.0	278	3660	520	13.3	25.8	13600	51700	1.60	75.0			0.530	3.85	1.65	27.9	31.3	3.43	9.29	3.93	0.333	19.4	0.436
OREAS 238 (Fire Assay) Meas																							
OREAS 238 (Fire Assay) Cert																							
5562263 Orig	< 0.2	< 0.5	35	517	< 1	26	< 2	72	2.51	< 2	< 10	261	< 0.5	< 2	1.17	43	13	4.18	10	< 1	1.25	17	0.92
5562263 Dup	< 0.2	< 0.5	35	521	< 1	25	< 2	73	2.51	< 2	< 10	264	< 0.5	< 2	1.18	41	13	4.28	10	< 1	1.22	17	0.93
5562270 Orig																							

QC Activation Laboratories Ltd. Report: A19-13652

Analyte Symbol	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg	K	La	Mg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	%
Lower Limit	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1	0.01	10	0.01
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
5562270 Dup																							
5562276 Orig	< 0.2	< 0.5	18	549	< 1	24	3	82	2.15	< 2	< 10	145	< 0.5	< 2	1.70	13	42	2.80	10	< 1	1.12	48	1.32
5562276 Dup	< 0.2	< 0.5	18	529	< 1	24	3	80	2.07	< 2	< 10	140	< 0.5	< 2	1.61	14	40	2.72	< 10	< 1	1.12	48	1.27
5562280 Orig																							
5562280 Dup																							
5562287 Orig																							
5562287 Dup																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01
Method Blank	< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1	< 0.01	< 10	< 0.01

Prospecting Report – Whirlwind Jack Property

QC Activation Laboratories Ltd. Report: A19-13652

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA
GXR-6 Meas	0.106	0.034	0.01	4	19	26		<20	<1	<2	<10	159	<10	5	10	
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
GXR-6 Meas	0.120	0.037	0.01	6	20	27		<20	<1	<2	<10	173	<10	5	12	
GXR-6 Cert	0.104	0.0350	0.0160	3.60	27.6	35.0		5.30	0.0180	2.20	1.54	186	1.90	14.0	110	
OREAS 922 (AQUA REGIA) Meas	0.033	0.061	0.35	2	4	14		<20		<2	<10	34	<10	20	6	
OREAS 922 (AQUA REGIA) Cert	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3	
OREAS 922 (AQUA REGIA) Meas	0.037	0.065	0.37	3	4	15		<20		<2	<10	37	<10	22	7	
OREAS 922 (AQUA REGIA) Cert	0.021	0.063	0.386	0.57	3.15	15.0		14.5		0.14	1.98	29.4	1.12	16.0	22.3	
OREAS 923 (AQUA REGIA) Meas		0.059	0.66	3	4	13		<20		<2	<10	33	<10	18	7	
OREAS 923 (AQUA REGIA) Cert		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5	
OREAS 923 (AQUA REGIA) Meas		0.061	0.67	2	4	14		<20		<2	<10	37	<10	21	8	
OREAS 923 (AQUA REGIA) Cert		0.061	0.684	0.58	3.09	13.6		14.3		0.12	1.80	30.6	1.96	14.3	22.5	
Oreas 96 (Aqua Regia) Meas			3.58	6												
Oreas 96 (Aqua Regia) Cert			4.38	4.53												
Oreas 96 (Aqua Regia) Meas			3.65	5												
Oreas 96 (Aqua Regia) Cert			4.38	4.53												
OREAS 220 (Fire Assay) Meas																887
OREAS 220 (Fire Assay) Cert																866
OREAS 220 (Fire Assay) Meas																859
OREAS 220 (Fire Assay) Cert																866
Oreas 621 (Aqua Regia) Meas	0.171	0.035	4.50	95	2	16		<20		2	<10	12	<10	8	67	
Oreas 621 (Aqua Regia) Cert	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0	
Oreas 621 (Aqua Regia) Meas	0.171	0.034	4.56	94	2	17		<20		<2	<10	12	<10	8	65	
Oreas 621 (Aqua Regia) Cert	0.160	0.0335	4.50	107	2.20	18.9		5.91		0.770	1.63	10.9	1.00	6.87	55.0	
OREAS 238 (Fire Assay) Meas																2970
OREAS 238 (Fire Assay) Cert																3030
5562263 Orig	0.259	0.120	<0.01	<2	15	31	0.29	<20	3	<2	<10	173	<10	20	9	
5562263 Dup	0.269	0.120	<0.01	<2	16	33	0.29	<20	<1	<2	<10	174	<10	21	9	
5562270 Orig																<5

QC Activation Laboratories Ltd. Report: A19-13652

Analyte Symbol	Na	P	S	Sb	Sc	Sr	Ti	Th	Te	Tl	U	V	W	Y	Zr	Au
Unit Symbol	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.001	0.001	0.01	2	1	1	0.01	20	1	2	10	1	10	1	1	5
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	FA-AA
5562270 Dup																<5
5562276 Orig	0.121	0.120	0.18	<2	3	215	0.29	<20	3	<2	<10	55	<10	22	15	
5562276 Dup	0.114	0.118	0.18	<2	3	191	0.28	<20	3	<2	<10	53	<10	21	16	
5562280 Orig																<5
5562280 Dup																<5
5562287 Orig																<5
5562287 Dup																<5
Method Blank																<5
Method Blank																<5
Method Blank																5
Method Blank	0.013	<0.001	<0.01	<2	<1	<1	<0.01	<20	<1	<2	<10	<1	<10	<1	<1	
Method Blank	0.014	<0.001	<0.01	<2	<1	<1	<0.01	<20	<1	<2	<10	<1	<10	<1	<1	
Method Blank	0.013	<0.001	<0.01	<2	<1	<1	<0.01	<20	<1	<2	<10	<1	<10	<1	<1	

Expense Sheet

Red Lake Gold Inc.										
Period:	September - October 2019									
Currency:	Can\$			Record Numbers on receipts						
Project	Whirlwind jack									
Rec #	Date	Location	Description	Air Transport	Ground	Meals	Contractors	Lodging	Other Field Supplies +	TOTAL (NO HST)
1	21.9.19	Red Lake	Accommodation					250.00		250.00
3	3.10.19	Red Lake	Gas		9.04					9.04
5	1.10.19	Red Lake	Meal			19.51				19.51
6	2.10.19	Red Lake	Meal			17.22				17.22
7	4.10.19	Winnipeg	Vehicle Rental Enterprise 4 days claimed from \$1639.98 (excl GST) total		385.88					385.88
8	26.9.19	Red Lake	Potable Water			37.00				37.00
9	2.10.19	Red Lake	RL Marine Generator Rental						192.59	192.59
10	2.10.19	Red Lake	Food and water			17.47				17.47
11	24.9.19	Red Lake	Meal			24.50				24.50
12	4.10.19	Winnipeg	Satellite Phone Rental						417.30	417.30
13	2.10.19	Red Lake	Meal			17.35				17.35
14	1.10.19	Red Lake	Meal			24.93				24.93
15	22.9.19	Balmertown	Food			9.45				9.45
16	3.10.19	Red Lake	Field Supplies NW Timbermart						12.68	12.68
17	3.10.19	Red Lake	Boat & motor rental L'side Marine		125.00					125.00
21	3.10.19	Red Lake	Hotel accommodation					300.00		300.00
22	24.9.19	Red Lake	Food			14.33				14.33
23	23.9.19	Red Lake	Provisions for camp			660.89				660.89
24	23.9.19	Balmertown	Meal			34.85				34.85
25	26.9.19	Red Lake	Gas		69.07					69.07
26	26.9.19	Balmertown	Meal			9.25				9.25
27	22.9.19	Ear Falls	Gas		103.44					103.44
28	26.9.19	Balmertown	Accommodation					472.00		472.00
29	22.9.19	Red Lake	Accommodation					142.00		142.00
30	25.9.19	Red Lake	Food			7.26				7.26
31	19.9.19	Winnipeg	Maps for fieldwork						208.04	208.04
32	21.9.19	Ear Falls	Food			35.76				35.76
33	21.9.19	Ear Falls	Food			15.25				15.25
34	19.9.19	Red Lake	Meals			76.95				76.95
35	21.9.19	Ear Falls	Field Supplies for emergency						163.70	163.70
36	20.9.19	Red Lake	Meal			27.50				27.50
37	21.9.19	Ear Falls	Gas					99.92		99.92
39	3.10.19	Ear Falls	Gas		76.12					76.12
40		Red Lake	Superior Airways Bug Lake flight 1. October	741.60						741.60
41		Red Lake	Flights for Cabin/Camp set-up, Bug Lake September	741.60						741.60
42		Red Lake	Cabin rental, Bug Lake					1,680.00		1,680.00
43		Ancaster	Actlabs Analyses						1,251.60	1,251.60
44		Red Lake	M. Long Prospecting 9 days				6,900.00			6,900.00
45		Red Lake	T. Hughes Prospecting 11 days				6,000.00			6,000.00
46		Red Lake	flights dock repairs, camp opening	1,000.00						1,000.00
47		Vancouver	T. Hughes Report						3,000.00	3,000.00
Note: Item 7 is calculated at 4 days out of a total of 17 days & \$1639.98										
			Sub-Totals	2,483.20	768.55	1,049.47	12,900.00	2,943.92	5,245.91	25,391.05

Prospecting Report – Whirlwind Jack Property

WHIRLWIND JACK MINING CLAIMS - ALL

Township / Area	Tenure ID	Tenure Type All single cell mining claim, 'SCMC'	Anniversary Date	Tenure Status	Tenure %age	Work Required	Work Applied	Available Consultation Reserve	Available Exploration Reserve	Total Reserve	Conversion Bank Credit
DEDEE LAKE AREA	528626	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528632	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528640	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528646	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528647	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528652	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528653	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528655	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528980	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528982	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528994	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	528997	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529605	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529610	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529618	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529624	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529628	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529720	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529722	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529726	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529865	SCMC	2020-08-28	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529874	SCMC	2020-08-28	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529928	SCMC	2020-08-28	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529941	SCMC	2020-08-28	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529946	SCMC	2020-08-28	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	529959	SCMC	2020-08-28	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	530351	SCMC	2020-08-29	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	530352	SCMC	2020-08-29	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	530353	SCMC	2020-08-29	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532025	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532026	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532028	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532030	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532031	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532033	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532034	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532035	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532037	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532038	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532039	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532041	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	532042	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534407	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534409	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534413	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534414	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534415	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534417	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534418	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534419	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534421	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA	534424	SCMC	2020-11-10	Active	100	400	0	0	0	0	0

Prospecting Report – Whirlwind Jack Property

DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528695	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528698	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528700	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528704	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528707	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528713	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528719	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528720	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528987	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	528988	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	529719	SCMC	2020-08-27	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	532027	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	532029	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	532032	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	532040	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	532043	SCMC	2020-10-01	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534411	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534416	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534423	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534425	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534429	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534430	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534431	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534432	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534435	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA	534439	SCMC	2020-11-10	Active	100	400	0	0	0	0	0
DEDEE LAKE AREA, FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	528992	SCMC	2020-08-24	Active	100	400	0	0	0	0	0

Prospecting Report – Whirlwind Jack Property

FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528952	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528959	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528960	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528966	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528969	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528981	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528985	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
FAULKENHAM LAKE AREA, MEDICINE STONE LAKE AREA	528983	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
LEANO LAKE AREA, RAINFALL LAKE AREA	529279	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
LEANO LAKE AREA, RAINFALL LAKE AREA	529280	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	528958	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	528967	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	528968	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	528977	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529152	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529153	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529154	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529157	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529159	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529162	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529163	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529164	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529167	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529168	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529170	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529171	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529172	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529173	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529176	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529178	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529193	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	529201	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	530347	SCMC	2020-08-29	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	530348	SCMC	2020-08-29	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA	530349	SCMC	2020-08-29	Active	100	400	0	0	0	0	0

Prospecting Report – Whirlwind Jack Property

MEDICINE STONE LAKE AREA	530350	SCMC	2020-08-29	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	528986	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529155	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529156	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529158	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529160	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529161	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529165	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529166	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529169	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529174	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529175	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529180	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529188	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	529200	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	553681	SCMC	2021-07-10	Active	100	400	0	0	0	0	0
MEDICINE STONE LAKE AREA, RAINFALL LAKE AREA	553697	SCMC	2021-07-10	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528974	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528975	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528978	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528990	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528995	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528996	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528998	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	528999	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529000	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529001	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529003	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529004	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529005	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529006	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529007	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529008	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529009	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529010	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529011	SCMC	2020-08-24	Active	100	400	0	0	0	0	0
RAINFALL LAKE AREA	529012	SCMC	2020-08-24	Active	100	400	0	0	0	0	0

Whirlwind Jack Claims Flown**Whirlwind Jack Claims Prospected**

528052	528056
528053	528057
528054	528057
528055	528061
528056	528062
528057	528063
528058	528069
528059	528074
528060	528078
528061	528079
528062	528080
528063	528086
528064	528087
528065	528090
528066	528099
528067	528100
528068	528233
528069	528236
528070	528254
528071	528547
528072	528582
528073	528588
528074	528591
528075	528596
528076	528599
528077	528603
528078	528616
528079	528621
528080	528622
528081	528623
528082	528624
528083	528625
528084	528626
528084	528635
528085	528636
528086	528639
528087	528646
528088	528647
528088	528650
528089	528656
528090	528657
528091	528661
528092	528663
528093	528666
528094	528667
528095	528668

528096	528669
528097	528670
528098	528672
528099	529547
528100	529556
528101	529557
528210	529564
528211	529698
528212	529714
528213	529737
528214	529745
528215	
528233	
528236	
528245	
528248	
528254	
528577	
528578	
528579	
528580	
528581	
528582	
528583	
528584	
528584	
528585	
528586	
528587	
528588	
528589	
528590	
528591	
528592	
528593	
528594	
528595	
528596	
528597	
528598	
528599	
528600	
528601	
528602	
528603	
528604	
528605	

528606
528606
528607
528608
528609
528610
528611
528612
528613
528614
528615
528616
528617
528618
528619
528620
528621
528622
528623
528624
528625
528630
528631
528634
528635
528636
528638
528639
528642
528643
528644
528645
528651
528658
528659
528660
528663
528664
528665
528666
528667
528671
528672
528673
528674
528676
528677

528678
528679
528680
528681
528682
528683
528684
528685
528686
528687
528688
528689
528690
528691
528692
528693
528694
528695
528696
528697
528698
528699
528700
528701
528702
528703
528704
528705
528706
528707
528708
528709
528710
528711
528712
528713
528714
528715
528716
528717
528718
528719
528720
528721
529542
529543
529544

529545
529546
529547
529548
529549
529550
529551
529552
529553
529554
529555
529556
529557
529558
529559
529560
529561
529562
529563
529564
529565
529566
529567
529568
529569
529570
529571
529572
529573
529574
529575
529576
529577
529578
529579
529580
529581
529582
529583
529584
529585
529586
529587
529588
529589
529590
529605

529610
529618
529624
529628
529693
529694
529695
529696
529697
529698
529699
529700
529701
529702
529703
529704
529704
529705
529706
529707
529708
529709
529710
529711
529712
529713
529714
529715
529716
529717
529718
529718
529719
529720
529721
529722
529723
529724
529725
529726
529727
529728
529729
529730
529731
529732
529733

529734
529735
529736
529737
529738
529739
529740
529741
529742
529743
529744
529745
529865
529874
529928
529941
529946
529959
532029
532032
532036
532040
532043
534407
534408
534409
534410
534411
534412
534413
534414
534415
534416
534416
534417
534418
534419
534420
534421
534422
534423
534424
534425
534426
534427
534428
534428

534429
534430
534431
534432
534433
534434
534435
534436
534437
534438
534439
534440
534441
534442
534443
534444
534445
534446
534447
534448
534449
534450
534451
534451
534452
534453
534454
534455
534456
534457
534458
534459
534460
534461
534462
534463
534464
534465
534466
534467
534468
534469
534470
534471
534472
534473
534474

534475
534476
534477
534478
534479
534480
534481
534482
534483
534484
534485
534486
534487
534488
534489
534492
534494
534496
534497
534498
534501
534505
534506
534509
550584
550585
550586
550587
550588
550589
550590
550591
550592
550593
550594
550595
550596
550597
550598
550599
550600
550601
550602
550603
550604
550605
550606

550607

550608

550609

550610

550611

550612

550613

550614

550615

550616

550617

550618

550619

550620

550621

550622

550623

550624

550625

550626

550627

550628

550629

550630

550631

550633

550636

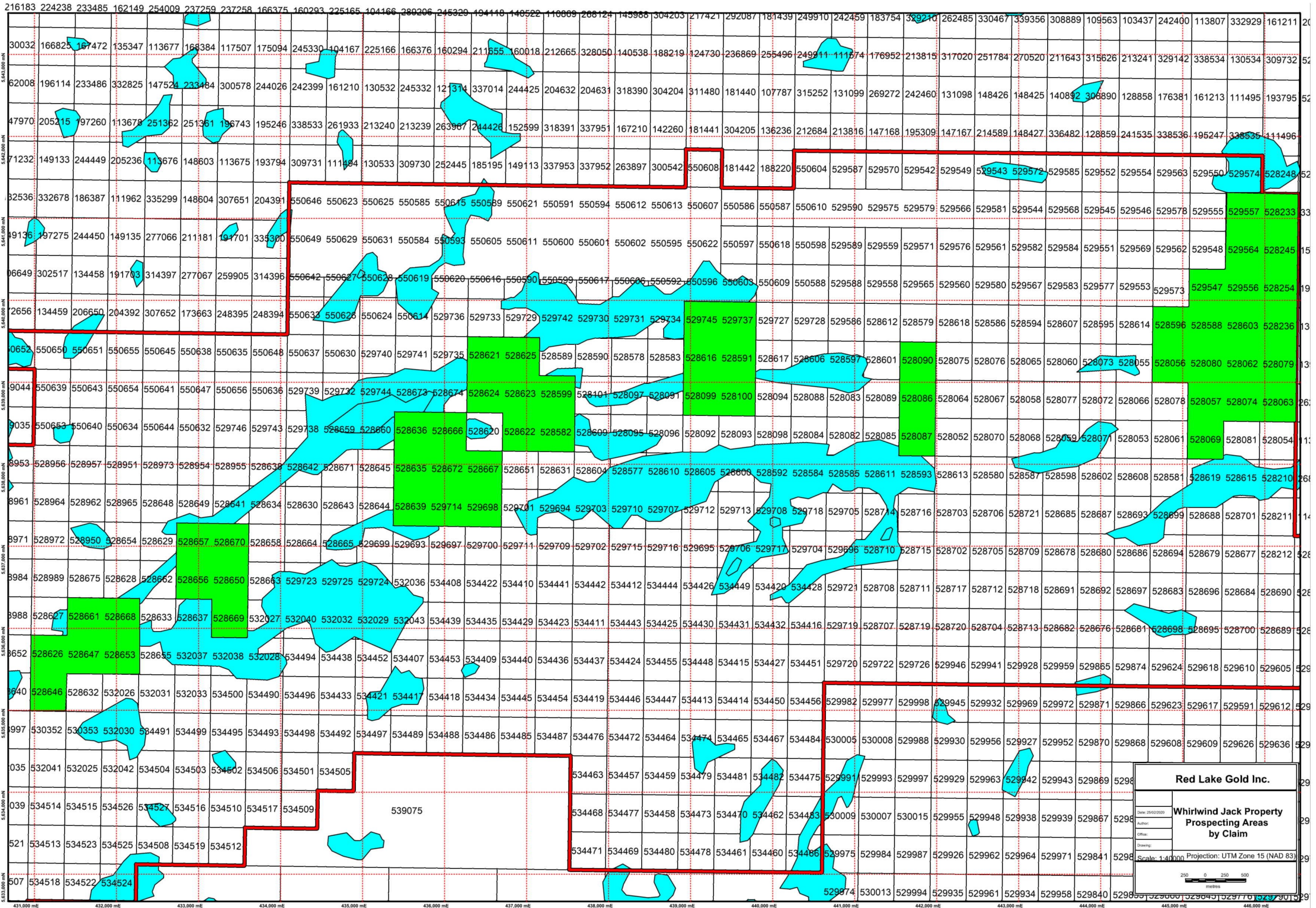
550637

550642

550646

550648

550649



Red Lake Gold Inc.

**Whirlwind Jack Property
Prospecting Areas
by Claim**

Date: 2002/02/02
 Author:
 Office:
 Drawing:
 Scale: 1:40,000
 Projection: UTM Zone 15 (NAD 83)

250 0 250 500
metres