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INTERNATIONAL EXPLORERS & PROSPECTORS INC.

AIRBORNE DRONE MAG SURVEY

LACKNER TOWNSHIP PROPERTY

LACKNER TOWNSHIP (G-1160)
PORCUPINE MINING DIVISION, ONTARIO

PREPARED FOR

INTERNATIONAL EXPLORERS & PROSPECTORS INC

AUTHORED BY
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TIMMINS, ONTARIO

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Property Description and Location

The Lackner Lake property comprises 98 cells in Lackner and McNaught townships. These contiguous claims cover an area of 1053 hectare.

Regional Highway 101 between Timmins and Highway 129, which extends south from Chapleau, is the main access route to the property; it passes approximately 8 kilometres to the north. Logging roads extending south from Highway 101 provide final access; they skirt the western and southern parts of the property.

Access to the southwestern part of the complex is gained by the Serviss Lake Road that is a maintained logging road. However, vehicle access by the Lackner Lake and Camp Lake roads over the complex is hampered by beaver dam flooding of the Camp Lake Road and bushed-in sections of both roads by dense clusters of alder. Access by all-terrain vehicles, however, is feasible to the Camp Lake area and former Ontario 20

Dept. of Lands and Forests fire tower site near the Pole Lake REE-Ba-Th-Nb showing. Much of the property is unfortunately covered with old blow-down and dense secondary tree growth of poplar and alder that renders traversing difficult. Areas that are dominated by coniferous trees, as in the higher parts of the complex, have less blow-down and easier access via the old fire tower road.

The property consists of 98 cells that variously tie onto two patented claims blocks in the area. The staked claims roughly straddle the north-south McNaught-Lackner Township line. All claims lie within the Porcupine Mining Division.

GENERAL GEOLOGY

The 1138 ± 29 Ma Lackner Lake alkalic complex is situated within the Kapuskasing structural zone that also hosts several other alkalic rock-carbonatite intrusions such as at Seabrook Lake, Borden Lake, Nemegosenda Lake and in Cargill Township (Bell and Blenkinsop 1980; Sage 1988b). Woolley and Kjarsgaard (2009) assigned number 210 to the Lackner Lake complex on the world carbonatite map: *see* ftp://ftp2.cits.rncan.gc.ca/pub/geott/ess_pubs/225/225115/gscof_5796_e_2008_mn01.pdf

The Lackner Lake complex exhibits a partial ring structure marked by an outer unit of nepheline syenite, an inner partial ring of ijolite and ijolite breccia and an adjacent inner mass of nepheline syenite. Late

veins and masses of magnetite- and apatite-magnetite-rich rocks are well developed around the Zone 6 deposit of Multi-Minerals Ltd. and also around the McVittie pit, 650 m to the north.

The Lackner Lake alkalic complex is hosted by tonalite to granodiorite gneiss of the Kapuskasing Structural Zone and appears as a prominent ovoid anomaly in the first vertical derivative magnetic field.

The main rock types in the Lackner Lake alkalic complex comprise foliated and massive ijolite, malignite, melteigite, ijolite breccia, leucocratic and melanocratic nepheline syenite and sparse, late dykes of carbonatite (sövite and silico-carbonatite) and apatite-magnetite masses and veins. Local fenitization of granitic gneiss host-rocks has been documented by Sage (1988a).

Minor rock types include mafic and ultramafic alkalic enclaves in nepheline syenite, urtite and glimmerite, a phlogopite-rich rock considered to represent a metasomatic derivative as at the Araxá alkalic complex in Brazil (Traversa *et al.* 2001). Magnetite-rich veins, commonly with green apatite, represent the youngest intrusive unit in the complex and cross-cut all units. Exposed carbonatite veins are rare and cross-cut magnetite-rich mineralization at formerly undocumented historic trenches named the NE Camp Lake magnetite zone.

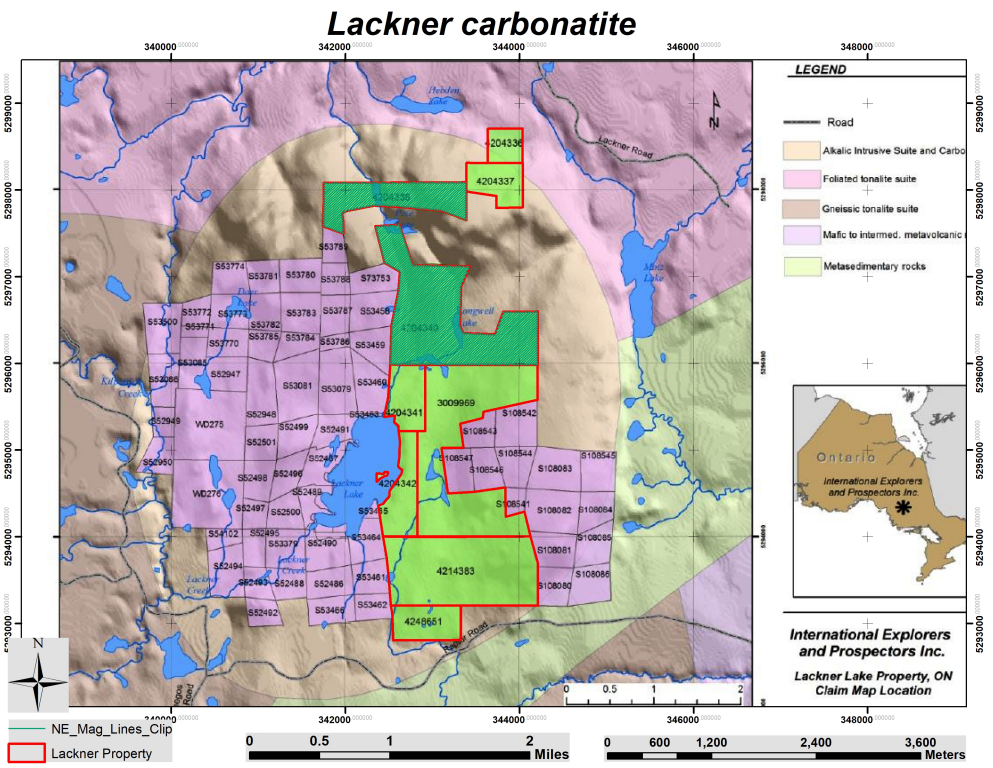
The centre of the complex is heavy drift covered and may contain a carbonatite core as the greatest amount of erosion has occurred in that area relative to the resistant ijolite ring structure and adjacent nepheline syenite. No drilling has investigated the possibility of a carbonatite core zone to date.

Mineral exploration conducted to 1988 has been comprehensively documented by Sage (1988a) and was also summarized by Vale Exploration Canada Limited (2007). A total of 40,101 m of drilling was amassed on various properties in the complex prior to the early 1970's (Sage 1988a, p.39).

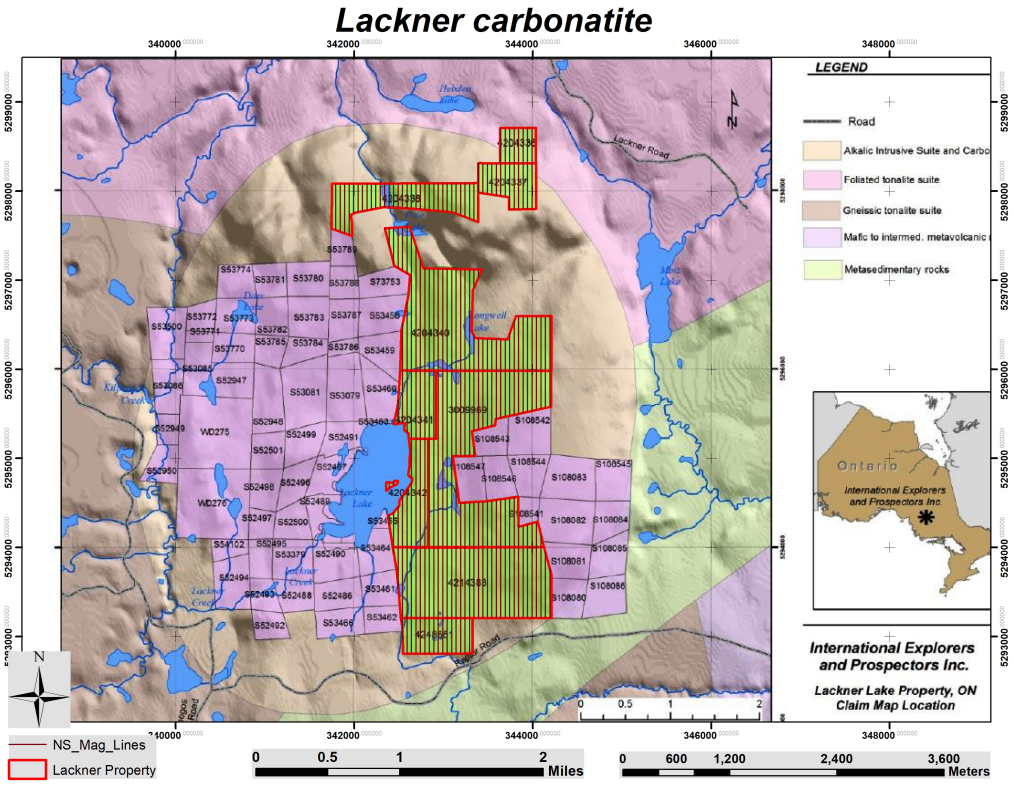
GEOPHYSICS

The Lackner Lake complex has been covered by airborne magnetic and radiometric surveys at several scales: 1:50 000 (GSC 2001) and 1: 20 000 by Fugro Geophysics (2010).

International Explorers and Prospectors decided to fly a drone mag survey on the property. The tighter line spacing's and lower flight elevations by the drone would allow for more detailed data to better delineate the different horizons in the complex. IEP hired a contractor to review the historical surveys and design the flight line patterns.

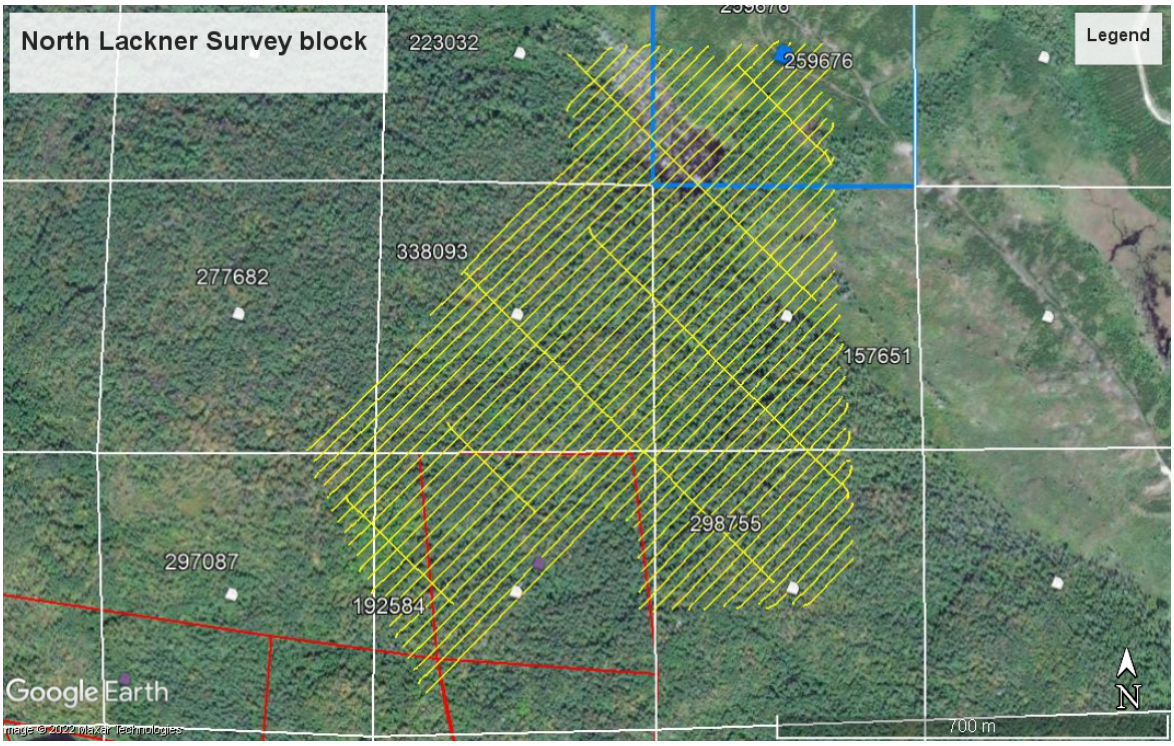


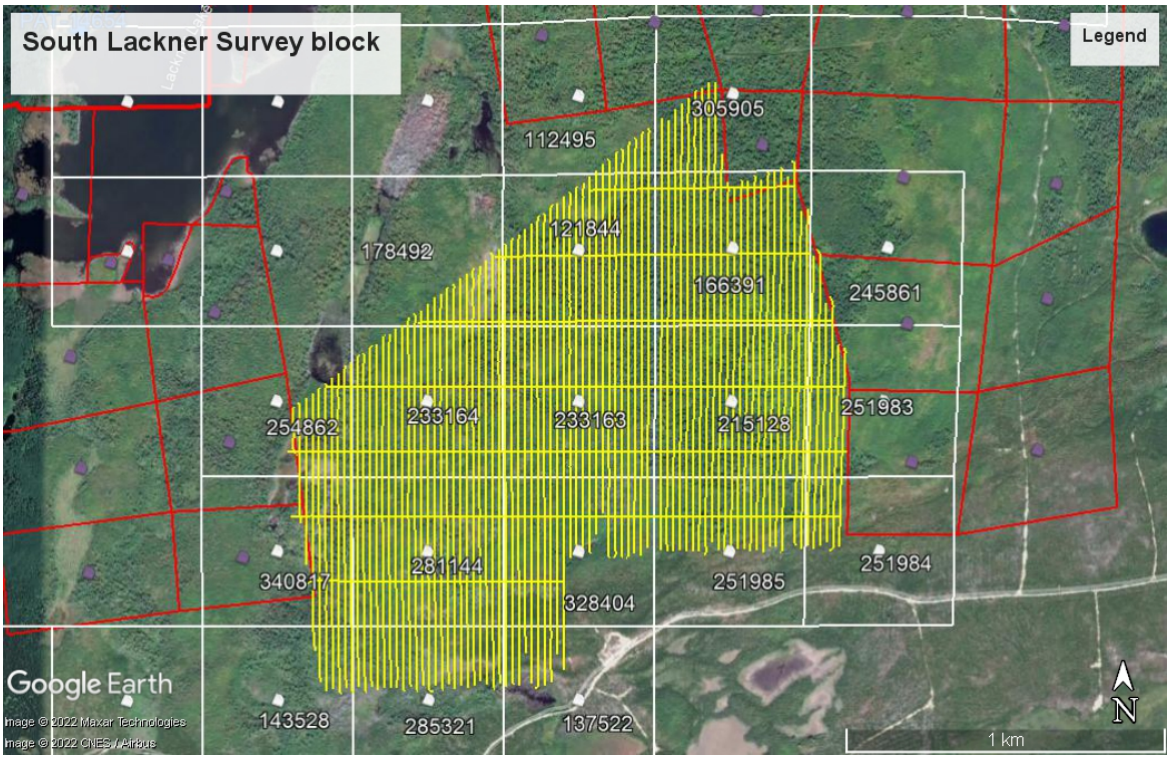
Proposed NE-SW flight lines



Proposed North-South lines

Due to logistical and scheduling problems the Drone Survey contractor was unable to start the program on time and was only able to complete parts of the northern and southern portion of the grids. IEP will endeavor to work with the contractor to establish a time line to finish the survey.





Conclusions

The focus of the drone survey was to identify magnetic signatures that would indicate the path of faults and crosscutting structures that would lead to develop a program to identify the enriched zones of Niobium, Rare Earth Elements, Tantalum, Uranium, Thorium that would lead to the centre of the carbonatite complex where anomalous EM zones may also contain some copper-precious metals.

The survey on the north block confirmed the 2009 mag-EM survey attached, in confirming the north ijolite ring boundary. The ground to the southeast was the primary target but could not be flown in the winter due to elevated rugged terrain with the potential of the loss of the drone.

The survey on the south block did enhance and precisely identify a magnetic break slightly east of previous drilling in 2011. This break confirms a slight fault bearing slightly east of due north to the centre of the complex that could help structurally when coupled with north survey completion.

It does appear the fault suggested by R Hodder U of W to the northwest of the north block could be confirmed by completion of the remainder of flight lines in the summer.

The contractor is on standby to complete the survey.

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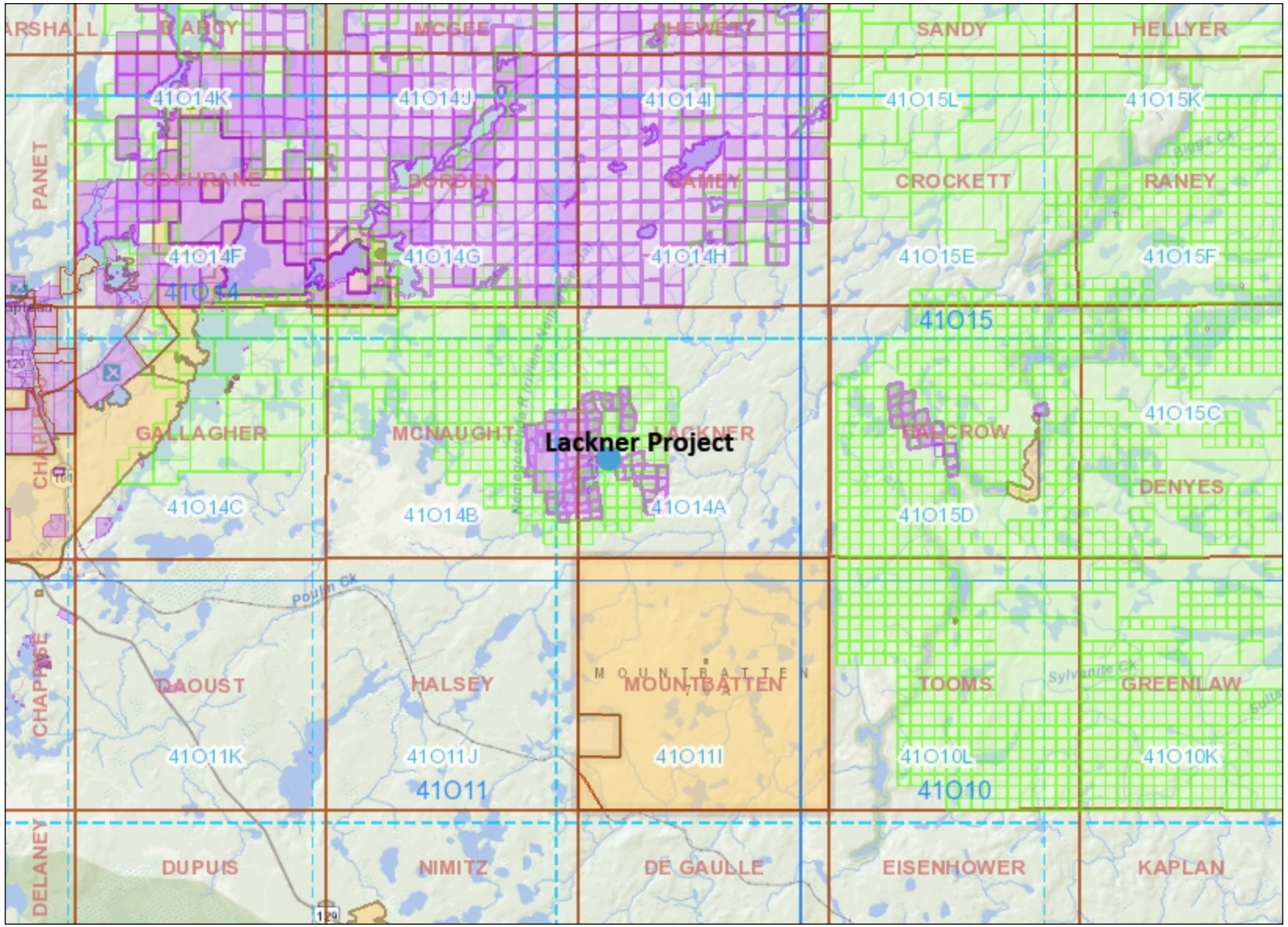
Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)
MLAS Map Viewer

Lackner Project

Notes:



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim
- Mining Claim
- Boundary Claim

Alienation
- Withdrawal
- Notice

NDM Administrative Boundaries
- NDM Townships and Areas
- Geographic Lot Fabirc
- UTM Grid 1K
- UTM Grid 10K
- Mining Division
- Mineral Exploration and Development Region
- CLUPA Protected Area - Far North
- Resident Geologist District
- Federal Land Other
- Native Reserves
- AMIS Sites
- AMIS Features
- Drill Hole
- Mineral Occurrences

MLAS Mining History
- Withdrawal - History
- Notice - History
- Mining Claim - History
- Mining Land Tenure - History
- Legacy Claim

Provincial Grid
- Provincial Grid 250K
- Provincial Grid 50K
- Provincial Grid Group

Land Tenure
- Surface Rights
- Mining Rights
- Mining and Surface Rights
- Order-in-Council

0 11.53 km

N

Projection: Web Mercator