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**Assessment Report on**

**Aerial Survey (LIDAR) conducted by RME Geomatics**

**On the Jackpot Property,**

**Thunder Bay Mining Division, Barbara Lake Township**

Claim Cell Unit Numbers (107842, 113822, 124776, 124777, 136783, 142300, 142301, 142302, 151543, 172782, 188774, 200956, 200957, 202344, 213194, 217480, 217481, 227396, 227397, 236040, 236041, 236042, 246865, 255543. 292125. 292126, 304761, 304762, 311532, 311533, 312951. 343010, 343011),

Barbara Lake Area (G-0006), Nipigon MNR District, Thunder Bay Division

NTS Sheet 42E05SW

UTM 432551 E, 5461493 N, Zone 16, NAD83

Longitude 87º55'40" W Latitude 49º18'9" N

For:

**Infinite Lithium Corp**

Client number # 191078


Prepared By:

Robert Weicker

Suite 2801, 1166 Melville St.,

Vancouver, B.C. V6E 4P5


May 29, 2019

(Revised October 30, 2019)

## Executive Summary

This assessment report summarizes the results of a LIDAR (Light Detection and Ranging) remote sensing survey over the main Jackpot property (core Jackpot claims) to establish high-resolution topographic control for resource calculations and to assist with geological interpretation of the lithium bearing pegmatites. The Jackpot Property covers known historic, lithium-rich, spodumene-bearing pegmatites hosted by quartz-mica schist. The LIDAR survey was completed in conjunction with a large exploration program that ran from December 2017 to November 2018, and included geological mapping, prospecting, rock sampling, stripping of overburden, trenching and diamond drilling.

The Jackpot Property is located approximately 50 km northeast of the town of Nipigon by road and 140 km northeast of Thunder Bay. The Jackpot can be accessed by driving 40 km north of the town of Nipigon on TransCanada Highway #11, then drive 10 km east on a dirt road towards Georgia Lake. Rough trails constructed for a recent (2018) drill program can access the showings lithium shows by 4 x 4 trucks in dry weather, and by quads or snowmobile at other times of the year.

The Jackpot Property is comprised of one claim cell unit and 32 boundary cell units (Claim Cell Unit Numbers (107842, 113822, 124776, 124777, 136783, 142300, 142301, 142302, 151543, 172782, 188774, 200956, 200957, 202344, 213194, 217480, 217481, 227396, 227397, 236040, 236041, 236042, 246865, 255543. 292125. 292126, 304761, 304762, 311532, 311533, 312951. 343010, 343011), covering 2.56 square kilometers (256 ha), owned by Infinite Lithium Corp. ("Infinite Lithium") a publicly traded company on the TSV.V exchange.

Field work for this report was carried out on November 2, 2019 and contracted to RME Geomatics surveyors from the Ottawa area, completing a high-resolution LIDAR aerial survey of the Jackpot property.

Two flights, performed as 8 flight lines at 1000' AGL was flown, covering the project area of 1.9 km2. The flying speed was 40 knots (ground speed). GPS base station BASE was set up and operated continuously during data acquisition. The LiDAR scanner and camera are mounted together on the same bracket to allow for simultaneous data capture. LiDAR data was collected using a Riegl VUX-1 LR scanner operating at 400 kHz at 1000' AGL resulting in an overall point density of 12.0 points/$m^2$. Photos were acquired using a Nikon D810 shooting in RAW format at an interval of 2 seconds to ensure forward overlap of 80%. The raw pixel size on the ground is 7 cm.

LIDAR is a remote sensing method that measures the distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor. Differences in laser return times and wavelengths can then be used to make digital 3-D representations of the target. "Lidar is commonly used to make high-resolution maps, with applications in geodesy, geomatics, archaeology, geography, geology, geomorphology, seismology, forestry, atmospheric physics, laser guidance, airborne laser swath mapping (ALSM), and laser altimetry. The technology is also used in control and navigation for some autonomous cars." (Google, 2019).

The LIDAR survey was commissioned and paid for by Infinite Lithium, whom own a 100-per-cent interest in the Jackpot property (less a Net Smelter Royalty to the previous owners). The Jackpot core claims are part of a larger property in the Georgia Lake area, focused on lithium mineralization.

The Jackpot was previously staked and extensively worked by Conwest Exploration Company Limited ("Conwest") in May 1955. Conwest mapped the pegmatite outcrops in the spring 1955. From July to November 1955, Conwest drilled 31 holes for a total of 3284 m on the Jackpot deposit. A resource estimate was calculated for the Jackpot in March 1956. The Jackpot claims were transferred from Conwest to Ontario Lithium Company Limited ("Ontario Lithium") in April 1956.

The spodumene-bearing pegmatites on the Jackpot property are hosted by quartz-mica schist. The pegmatites are zoned with an occasional aplite border zone, and common quartz-feldspar-mica outer zone and spodumene-bearing pegmatite inner zone. The outer zone is muscovite-rich and the inner zone is spodumene-rich. The spodumene-bearing pegmatite contains up to 25 vol.% spodumene in hole 411 in the historic Conwest program. The best lithium ("Li") assay from Conwest's 1955 drill program for the spodumene-bearing pegmatite is 4 ft (=1.22 m) of 3.03 % $Li_2O$ in hole 425. Other highlights from drill assays are 45 ft (=13.72 m) of 1.31 % $Li_2O$ in hole 407, 25.5 ft (=7.77 m) of 1.42 % $Li_2O$ in hole 423, and 22 ft (=6.71 m) of 1.41 % $Li_2O$ in hole 427.

The mineralogy of the spodumene pegmatites at Jackpot is relatively simple. The principle constituents are quartz, feldspar and spodumene with minor amounts of muscovite. Accessory minerals include apatite and beryl. The spodumene is very pale apple green colour when fresh and is occasionally weathered to a pale cream colour. The spodumene ranges in size from about ½ inch (=1.27 cm) to 2 ft (=0.61 m) long, with individual crystals of feldspar and spodumene usually have a random arrangement.

The expenditures of the LIDAR survey by RME Geomatics was $25,430.00, with the compilation and reporting cost of $2,100.00 for a total of $27,530.00 before GST/HST (invoice file separately, Appendix B). The total cost with taxes was $30,686.60.

The topography on the Jackpot property varies significantly on a local scale, and the LIDAR survey's detailed topography assists greatly in planning drill sites and for resource estimations. The LIDAR survey was alo used for ongoing section modeling and planning drill holes. The LIDAR survey will be useful for future resource estimations. Additional exploration is recommended on the Jackpot property, incorporating the LIDAR survey to assist with an updated resource calculation and geological interpretations and to benefit logistics.

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## .0 Introduction

This assessment report documents the results of a LIDAR (Light Detection and Ranging) remote sensing survey over the Jackpot property to establish high-resolution topographic control for resource calculations and to assist with geological interpretation of the lithium bearing pegmatites. The Jackpot Property is located in Barbara Lake Area (G-0006), Nipigon MNR District, Thunder Bay Division.

The Jackpot Property covers known historic spodumene-bearing pegmatites hosted by quartz-mica schist. The work was carried out a third-party contractor, RME Geomatics surveyors from the Ottawa area, Ontario, on November 2, 2018.

Expenditures by RME Geomatics before GST/HST were $25,430 (invoice filed separately, Appendix B).

## 2.0 Location and Access

The Jackpot is located about 1 km southeast of Georgia Lake shore, approximately 50 km northeast of the town of Nipigon by road and 140 km northeast of Thunder Bay (Figure 4- 1). The Jackpot is located within Thunder Bay Mining Division, Barbara Lake Township in NTS sheet 42E05SW. The approximate center of Infinite Lithium's claims is UTM 432551 E, 5461493 N, Zone 16, NAD83 and longitude/latitude 87º55'40" W and 49º18'9"N.

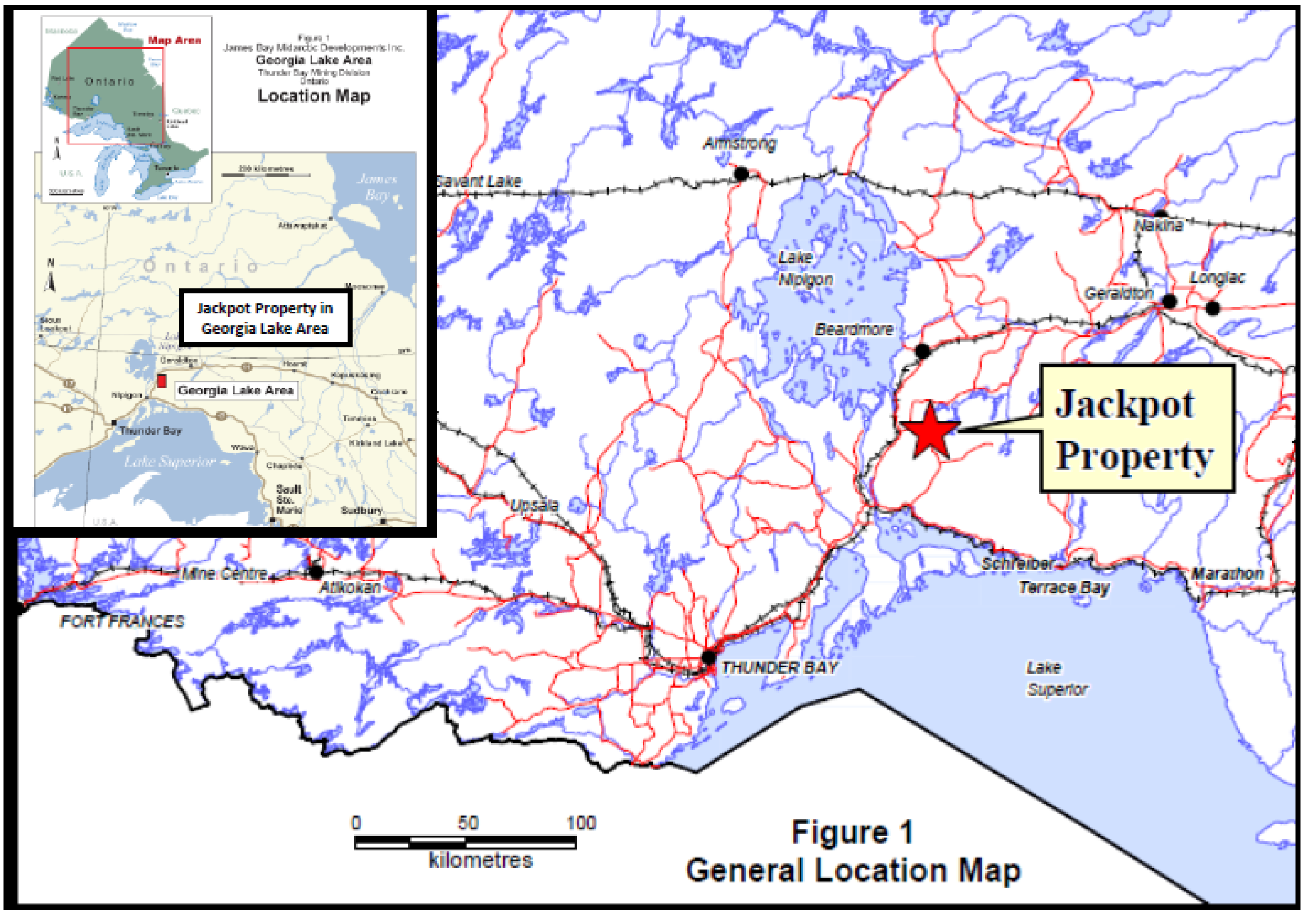
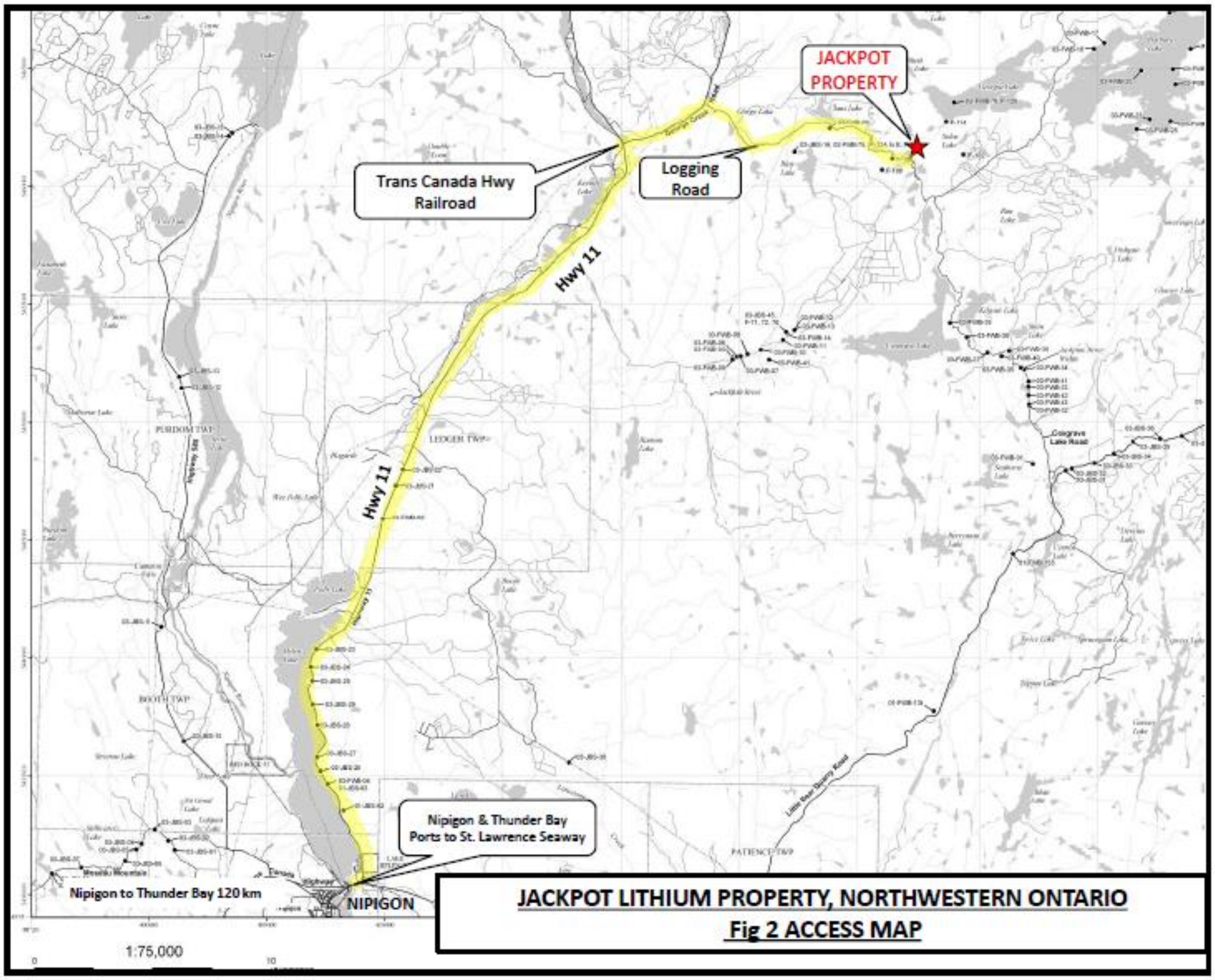


Figure 1
General Location Map

The Jackpot can be accessed by driving 40 km north of the town of Nipigon on TransCanada Highway #11, then drive 10 km east on a dirt road towards Georgia Lake. Rough trails constructed for a recent (2018) drill program can access the showings lithium shows by 4 x 4 trucks in dry weather, and by quads or snowmobile at other times of the year.


JACKPOT PROPERTY
Trans Canada Hwy
Railroad
Logging Road
Hwy 11
Hwy 11
Nipigon & Thunder Bay Ports to St. Lawrence Seaway
Nipigon to Thunder Bay 120 km
NIPIGON
1:75,000
JACKPOT LITHIUM PROPERTY, NORTHWESTERN ONTARIO
Fig 2 ACCESS MAP

## 3.0 Claim Holdings and Property Disposition

The Jackpot Property is comprised of 33 unit claim cells (1 unit and 32 boundary cells) (107842, 113822, 124776, 124777, 136783, 142300, 142301, 142302, 151543, 172782, 188774, 200956, 200957, 202344, 213194, 217480, 217481, 227396, 227397, 236040, 236041, 236042, 246865, 255543. 292125. 292126, 304761, 304762, 311532, 311533, 312951. 343010, 343011), covering 256 ha. The claim units are 100% owned by Infinite Lithium Corp. a publicly traded B.C. incorporated company, trading on the TSX.V exchange, Under the symbol ILI.

Infinite Lithium acquired the property through an Option-Purchase agreement that was announced by Alix Resources Ltd. ("Alix", a predecessor company) on April 13, 2016, and was approved by the TSX.V on April 18, 2016. Cumulative terms of the deal call for Alix to issue 2.4 million shares plus cause expenditures of $350,000 on the property over a two-year period. In addition, a 1.5-per-cent net smelter return (NSR) will be granted to the vendors with the company able to purchase back 1 per cent for $1 million. All terms were met, and the property is 100% owned by Infinite Lithium and the NSR is held by the vendors comprising: 2254022 Ontario Ltd., John Rapski, Jim Forbes and Steve Forbes, whereby the company is acquired a 100-per-cent interest in the Jackpot property for consideration of 2.4 million shares, issued as shown in the attached table.

| | |
|---|---|
| 2254022 Ontario Ltd. (Donald McKinnon) | 1.2 million common shares |
| John Rapski | 570,000 common shares |
| Jim Forbes | 546,000 common shares |
| Steve Forbes | 84,000 common shares |

There is an alienation (WP2006-23), type notice, class wind power which covers the claims. The alienation is for surface rights only.

There are no historic mine workings, tailings or environmental liabilities on the property. The description of the mineral titles is based on a review of land tenure under Ontario's Ministry of Energy, Northern Development and Mines, Mining Lands Administration System (MLAS) program (https://www.mndm.gov.on.ca/en/mines-and-minerals/applications/mlas-map-viewer).

**Fig 3. CLAIM MAP OF JACKPOT PROPERTY**

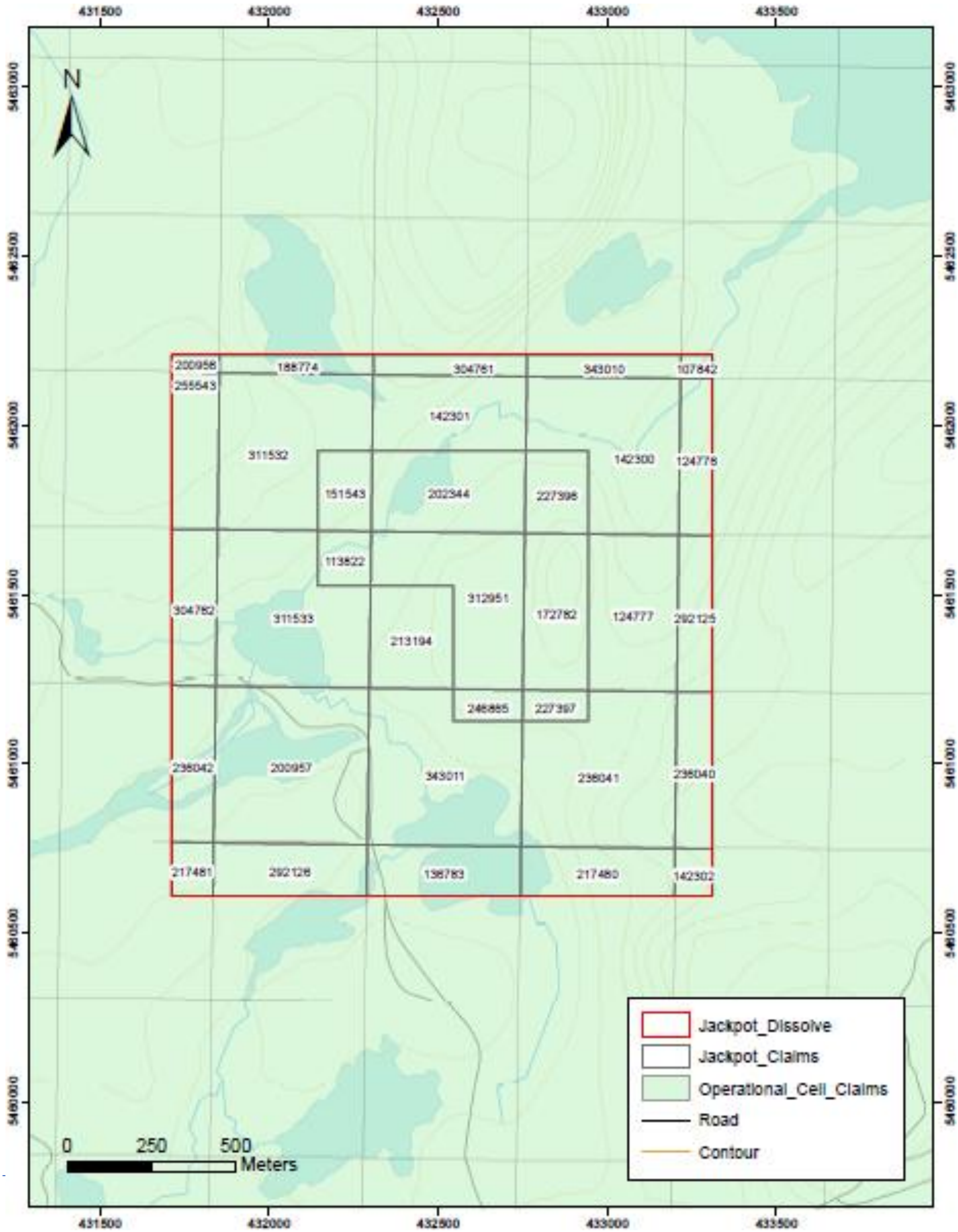


**Table 1 Jackpot Property Claim Schedule**

| Claim# | Type | Status | Issue Date | Anniversary Date | Area /# of Cells | Owner Client# |
|---|---|---|---|---|---|---|
| 113822 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 151543 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 172782 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 202344 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 227396 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 227397 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 246865 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 312951 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 107842 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 124776 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 124777 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 136783 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 142300 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 142301 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 142302 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 188774 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 200956 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 217480 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 217481 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 236040 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 236041 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 236042 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 255543 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 292125 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 292126 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 304761 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 304762 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 311532 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 343010 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 200957 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 213194 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 311533 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| 343011 | Claim | Active | 4/10/2018 | 7/17/2019 | 1 | (10000292) Infinite Lithium Corp |
| | | | | Total Cells | 33 | |

## 4.0 History and Previous Work

### 4.1 Discovery of Spodumene in the Georgia Lake Area 1955

The discovery of spodumene in the Georgia Lake area was summarized in an excellent report by E.G. Pye (1965):

*"One of the topics featured on the program of the annual convention of the Prospectors and Developers Association in spring 1955 was the lithium deposits of the Preissac-Lacorne area in Quebec (Latulippe and Ingham 1955). Samples of the lithium-bearing mineral spodumene were on display. Many years ago, Eric W. Hadley of Auden had discovered a body of pegmatite forming a reef in Georgia Lake (now known as Island Deposit). He noted that the pegmatite contained a prismatic mineral, which he could not identify and which he considered then to be of no value. At the convention, however, he observed that the spodumene on display was very similar to the mineral in the pegmatite at Georgia Lake. He immediately contacted Gordon Miller of Conwest Exploration Company Limited ("Conwest"). An examination was made at once, and impressed with the occurrence, Mr. Miller submitted samples to E.G. Pye for positive identification. Pye, in turn, presented the samples to Dr. H. Quackenbush, a Fort William dentist and amateur mineralogist, who as part of his hobby, had built a spectroscope. With this spectroscope, Dr. Quackenbush confirmed that the mineral was spodumene, and immediately Mr. Miller proceeded to stake a large group of claims for his company."*

*"As news of Hadley's discovery was publicized, prospectors entered the area. About 3,200 claims were staked and within a short time numerous additional lithium deposits were located. Many of these deposits were tested by diamond drilling in 1955 and 1956. Due to lack of adequate markets, however, none of these have been developed. Except for some limited diamond drilling by the Ontario Lithium Company Limited to test the original discovery in July 1957, the area has remained inactive since 1956" (as of Pye's 1965 report).*

### 4.2 Summary of Exploration History on the Current Jackpot Property

The Jackpot was previously staked and extensively worked by Conwest Exploration Company Limited ("Conwest") in May 1955. Three properties were staked, comprising the Jackpot, Salo and the Southwest properties. Conwest mapped the pegmatite outcrops on all properties in the spring 1955. From July to November 1955, Conwest drilled 31 holes for a total of 3284 m on the Jackpot deposit.

The best historic Li assay is 4 ft (=1.22 m) of 3.03 % Li2O which correlates to 15 vol.% fresh spodumene in hole 425 (Table 6-3). Other highlights from drill assays are 45 ft (=13.72 m) of 1.31 % Li2O which correlates to 15 vol.% fresh spodumene in hole 407, 25.5 ft (=7.77 m) of 1.42 %

Li2O correlates to 10 vol.% fresh spodumene in hole 423, and 22 ft (=6.71 m) of 1.41 % Li2O correlates to 5- 15 vol.% fresh spodumene in hole 427.

A resource (historic, non-43-101 compliant) estimate was calculated by Conwest for the Jackpot in March 1956. This contains at least 2,000,000 tons (1,814,369 tonnes), with an average grade from the drilling of 1.09% lithia (Li2O)" (Northern Miner, March 22, 1956, p. 32,). This estimate is not a NI 43-101 compliant resource. It has not been verified by the author and should not be relied upon.

The Jackpot, Salo and Southwest claims were transferred from Conwest to Ontario Lithium in April 1956. In August 1957, Ontario Lithium drilled additional holes on the Salo property. In August 1960, the Jackpot claims were converted to leases. The Jackpot claims were transferred from Conwest to Ontario Lithium Company Limited ("Ontario Lithium") in April 1956. A summary of the exploration history for the Jackpot, Salo and Southwest properties is given in Table 2.

**Table 2 Summary of exploration history on the Jackpot (1955-1960)**

| Date | Company | Activity | Results |
|---|---|---|---|
| Mar. 1955 | E.W. Hadley | discovered spodumene on Island showing | |
| May 2, 1955 | Gordon Miller | staked original claims on Jackpot | |
| May 16, 1955 | Conwest | Miller transferred Jackpot claims to Conwest | |
| spring 1955 | Conwest | outcrop mapping | outcrop maps |
| Jul. to Nov. 1955 | Conwest | drilled 31 holes, totalling 3284 m | drill logs, plan maps, cross sections, 13.72 m of 1.31 %$Li_2O$ |
| Mar. 1956 | Conwest | resource calculation | 2,000,000 tons at 1.09 %Li2O * |
| April 16, 1956 | Ontario Lithium | Conwest transferred Jackpot claims to Ontario Lithium | |
| Aug. 24, 1960 | Ontario Lithium | Jackpot claims converted to leases (M.R.O.) | |

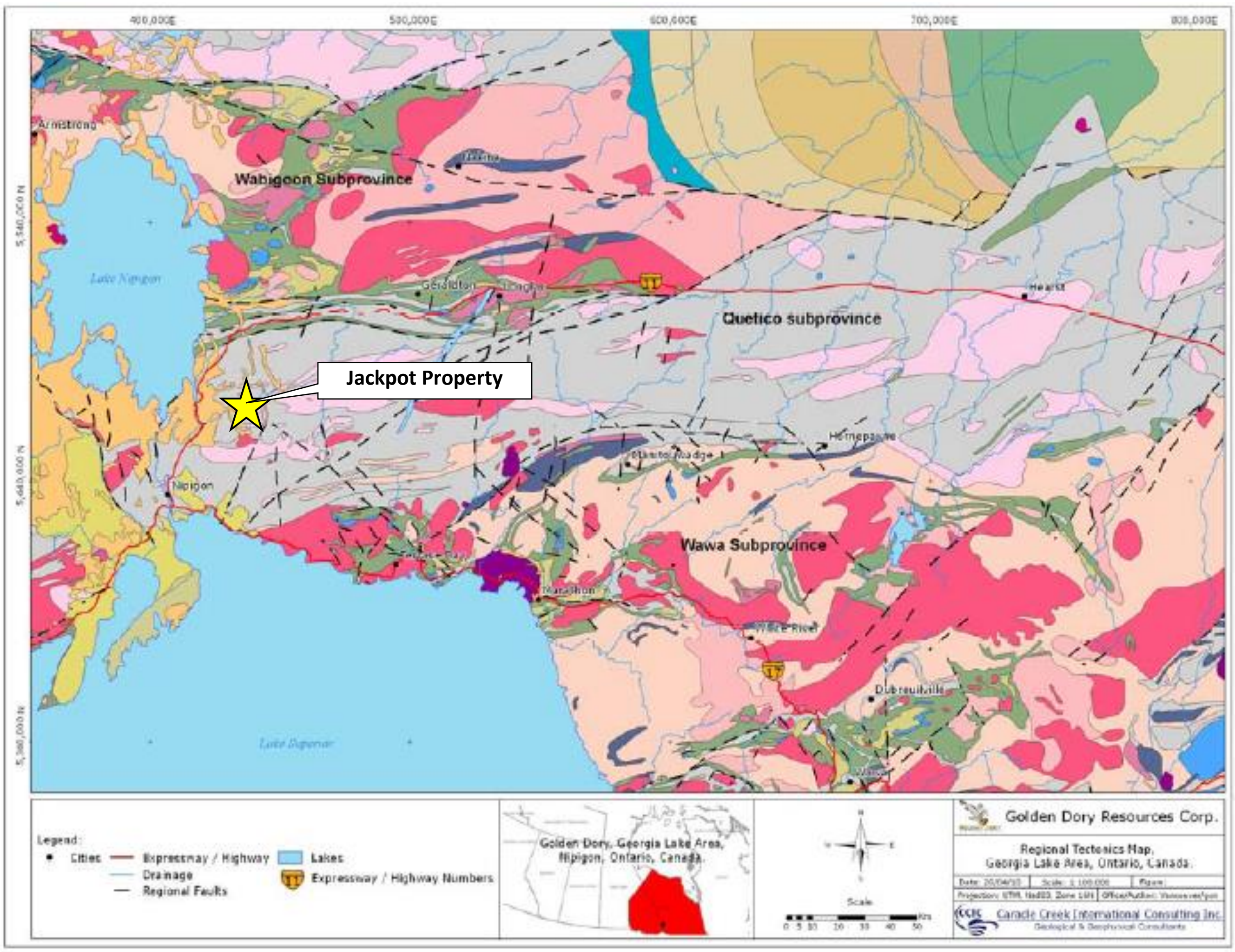
## 5.0 GEOLOGICAL SETTING

### 5.1 Regional Geology

This section on regional geology is excerpted from the Golden Dory, 2010 Report on the Jackpot Property:

*"The Georgia Lake area is located within the metasedimentary Quetico Subprovince of the Superior Province (Figure 4). The Quetico is bounded by the granite-greenstone Wabigoon Subprovince to the north and Wawa Subprovince to the south.*

**Fig 4. Regional Geology** *Regional bedrock geology map (from Ontario Geological Survey Map 2542).*




### 5.2 Local and Property Geology

This section on regional geology is excerpted from the Golden Dory, 2010 Report on the Jackpot Property:

*"The geology of the Georgia Lake area is of Precambrian age and is discussed by Pye (1965) (Figure 7- 2). The oldest rocks are the Archean metasediments. The metasediments strike east-northeast and dip steeply, in general, to the north. The dominant metasedimentary rock is biotite-quartz-feldspar schist or gneiss. It is a grey, rather dark coloured rock, having a distinct banded appearance due to compositional variations reflecting an original sedimentary stratification, with individual layers less than an inch to several feet thick. There is a distinct foliation due to parallel alignment of biotite crystals. Microscopic examination of the biotite-quartz-feldspar schist shows that it is made up of: 15-40 vol.% biotite , 20-35 vol.% quartz, 25-45 vol.% plagioclase, 1-3 vol.% magnetite, trace amounts of zircon and rare hornblende. Secondary minerals include chlorite, sericite and epidote. The plagioclase shows myrmekite texture. The most abundant texture in the biotite-quartz-feldspar schist or gneiss is granoblastic, but porphyroblastic rocks are also present with porphyroblasts of garnet, staurolite and cordierite.*

*Metagabbro*

*East of Cosgrave Lake and south of Barbara Lake, the metasediments were intruded by metagabbro. Since the metagabbro is not present on the Jackpot, it is not discussed here and the reader is referred to Pye (1965) for more information on them.*

*Granite*

*The metasediments were also intruded by large masses of granitic rocks and by numerous sills and dykes of genetically-related porphyry, pegmatite and aplite. The granitic rocks are pale-grey or pale-pink in colour and their essential components are: 45-65 vol.% feldspar (microcline and plagioclase), 40 vol.% quartz, and one or both of muscovite and biotite and rarely little hornblende. The plagioclase has a composition of albite. Minor components of the granites include magnetite, zircon, and garnet, and secondary minerals: chlorite, sericite and epidote. For the most part the granites are equigranular, but porphyritic phases with microcline phenocrysts also occur. The contacts between the equigranular granitic rocks and the metasediments are generally abrupt.*

*Pegmatite*

*There is an abundance of pegmatites close to and within the large masses of granitic rocks. A regional zoning is apparent and a genetic association of pegmatites and granite is indicated. The pegmatites occur in two geometries: as irregular-shaped bodies and as thin dykes, sills and attenuated lenses. The irregular bodies of pegmatite are intimately associated with the granite bodies often within a few hundred feet of the contact zone. They typically are medium- to coarse-grained, up to very coarse-grained and are made up of quartz, microcline, perthite and little muscovite. These would be classified as potassic pegmatites. Accessory minerals include biotite, tourmaline and garnet. The pegmatite dykes, sills and lenses can be subdivided into rare-element pegmatites and granitic pegmatites. The rare-element pegmatites are of economic significance and they contain microcline or perthite, albite, quartz, muscovite and spodumene and minor amounts of beryl, columbite-tantalite and cassiterite. The granitic pegmatites are similar to the irregular pegmatites described above except that they contain more abundant plagioclase. Some of the pegmatites are parallel to the foliation or bedding of the metasediments, whereas others occur in joints in either the metasediments or granite. Contacts are usually sharp and, except where dykes cut granitic rocks, often found to be marked by a thin border zone of aplite or granitoid composition. A few pegmatites are internally zoned with mica-rich or tourmaline-rich rock along or close to the walls and quartz cores.*

*Sedimentary rocks*

*The Proterozoic is represented by sedimentary rocks (sandstone and shale). Since these are not present on the Jackpot, they are not discussed here and the reader is referred to Pye (1965) for more information on them.*

*Diabase*

*Intrusive into the Proterozoic sedimentary rocks and the older formations are bodies of diabase. The largest occur as flat sheets (Logan sills), up to about 650 feet in thickness, and as dykes of vertical or near-vertical attitude. Most of the dykes are related closely to the sheets and are Keweenawan age. The gently dipping diabase sheets are dark coloured and massive. The diabase sheets are well-jointed and most of the joints are vertical or steeply dipping. In outcrop, the diabase shows poorly-formed columnar structure.*

*The property geology was summarized by Dr. Paul Gilmour in MNDMF assessment file 42E05SW0026 which was filed by Ontario Lithium after the drilling and outcrop mapping was completed on the property (Figure 5).*

*The following formations are present on the property and in its immediate neighbourhood:*

- *Diabase and basalt*
- *Granite rocks (including pegmatites)*
- *Quartz-mica schist*

*The quartz-mica schist (greywacke) appears to be the oldest rocks in the area. They are poorly exposed, but, judging by the wide distribution of the exposures, they make up most of the area of the property. The relative proportion of quartz and mica in the rock is widely variable, so that the rock grades from a coarse-grained micaceous quartzite to a quartzose mica schist. The contact between the granite and the country rock of quartz-mica schist was not seen, but it appears to be gradational. The contact between the pegmatites and the country rock is sharp and occurs at many localities. The pegmatites obviously post-date the country rocks.*

*Diabase occurs as cappings on most of the high ground on the property. Narrow dykes of basalt may be seen to intrude the quartz-mica schist and the pegmatites.*

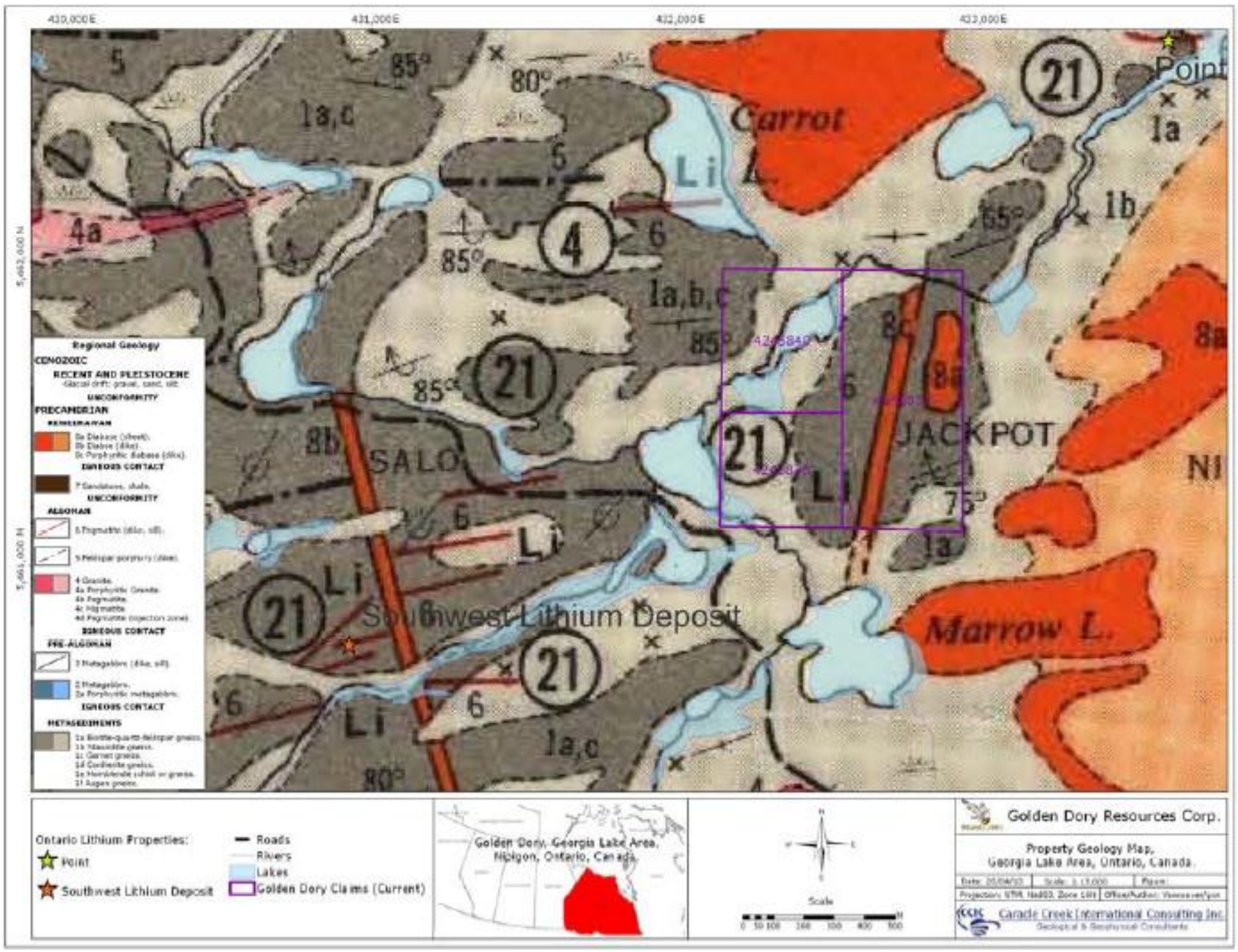
*Mineralogy and internal structure of the spodumene-pegmatites*

*The mineralogy of the Jackpot and Salo pegmatites was summarized by Dr. Paul Gilmour in MNDMF assessment file 42E05SW0026. The mineralogy of the pegmatites is relatively simple. The principle constituents are quartz, feldspar and spodumene with minor amounts of muscovite. Accessory minerals include apatite and beryl. The quartz is usually interstitial and occasionally intergrown with feldspar to form a graphic texture as in the Salo showing. The feldspar is white and occurs in crystals varying in size from small plates and laths ½ inch (=1.27 cm) long to large rectangular crystals up to 2 to 3 ft (=0.61-0.91 m) long. The spodumene is very pale apple green colour when fresh and is occasionally weathered to a pale cream colour. Infrequently, the spodumene is altered to masses of dark green, very fine-grained mica. The spodumene*

*ranges in size from about ½ inch (=1.27 cm) to 2 ft (=0.61 m) long as in the Salo and northernmost*

*Jackpot outcrops. The muscovite is pale silvery grey and does not appear to contain lithium in its* *composition. The pegmatite dykes rarely show zoning from fine-grained or aplitic texture on the margins to coarse grained, spodumene-bearing texture in the center of the dykes. The zonation is rarely consistent along the length of a single outcrop. Individual crystals of feldspar and spodumene usually have a random arrangement. Occasionally, a preferred orientation may be noted as at outcrop 22 of the Jackpot..*

<u>**Fig 5. Property Geology**</u> *Jackpot geology map (from Pye, 1965, Map 2056).*



## 6.0 LIDAR SURVEY THEORY AND INTERPRETATION PROCEDURES

LIDAR (Light Detection and Ranging) is a remote sensing method that measures the distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor. Differences in laser return times and wavelengths can then be used to make digital 3-D representations of the target. "Lidar is commonly used to make high-resolution maps, with applications in geodesy, geomatics, archaeology, geography, geology, geomorphology, seismology, forestry, atmospheric physics, laser guidance, airborne laser swath mapping (ALSM), and laser altimetry. The technology is also used in control and navigation for some autonomous cars." (Google, 2019).

The Jackpot Property covers known historic lithium-rich, spodumene-bearing pegmatites hosted by quartz-mica schist. This assessment report summarizes the results of a LIDAR remote sensing survey over the Jackpot property to establish high-resolution topographic control for resource calculations and to assist with geological interpretation of the lithium bearing pegmatites. Field work for this report was carried out on November 2, 2019 and contracted to RME RME Geomatics surveyors from the Ottawa area, completing a high-resolution LIDAR aerial survey of the Jackpot property.

Two flights, performed as 8 flight lines at 1000' AGL was flown, covering the project area of 1.9 km2. The flying speed was 40 knots (ground speed). GPS base station BASE was set up and operated continuously during data acquisition. The LiDAR scanner and camera are mounted together on the same bracket to allow for simultaneous data capture. LiDAR data was collected using a Riegl VUX-1 LR scanner operating at 400 kHz at 1000' AGL resulting in an overall point density of 12.0 points/m$^2$. Photos were acquired using a Nikon D810 shooting in RAW format at an interval of 2 seconds to ensure forward overlap of 80%. The raw pixel size on the ground is 7 cm.

Expenditures before GST/HST from RME Geomatics were $25,430 (invoice included).

Two flights, performed as 8 flight lines at 1000' AGL was flown (Bell 206 Helicopter based in Thunder Bay), covering the project area of 1.9 km2. The flying speed was 40 knots (ground speed). GPS base station BASE was set up and operated continuously during data acquisition. The LiDAR scanner and camera are mounted together on the same bracket to allow for simultaneous data capture. LiDAR data was collected using a Riegl VUX-1 LR scanner operating at 400 kHz at 1000’ AGL resulting in an overall point density of 12.0 points/m². Photos were acquired using a Nikon D810 shooting in RAW format at an interval of 2 seconds to ensure forward overlap of 80%. The raw pixel size on the ground is 7 cm.

Survey Summary:

- Survey area: Jackpot Mine
- Collection date: November 2nd, 2018
- Survey platform: Bell 206
- Horizontal Datum: NAD83 CSRS
- Vertical Datum: CGVD28
- Geoid Model: HTv2.0
- Projection: UTM Zone 16
- Deliverables:
  - o Classified (Ground, low/med/high veg) LiDAR .las point cloud
  - o ASCII Grid (.xyz) 1m
  - o 1m Contours (.dwg)
  - o BE DEM Hillshade 1m
  - o FF DSM Hillshade 1m
  - o 8 cm RGB orthomosaic (GeoTtfif and .ecw)

**Survey Equipment**

RME RME Geomatics partnered with Wiskair to use their Bell 206 helicopter as the survey aircraft.

The sensor platforms included:

- Riegl VUX-1 LR laser scanner
- KVH1750 IMU
- Novatel GNSS 638/615
- Nikon D810 digital SLR

Ground Survey Equipment

- Leica iCON gps 60 base station

- Leica iCON gps 60 rover

The entire RME Geomatics Report is included in Appendix A.

Fig 6. From RME Geomatics Report – LIDAR IMAGE of JACKPOT Claims

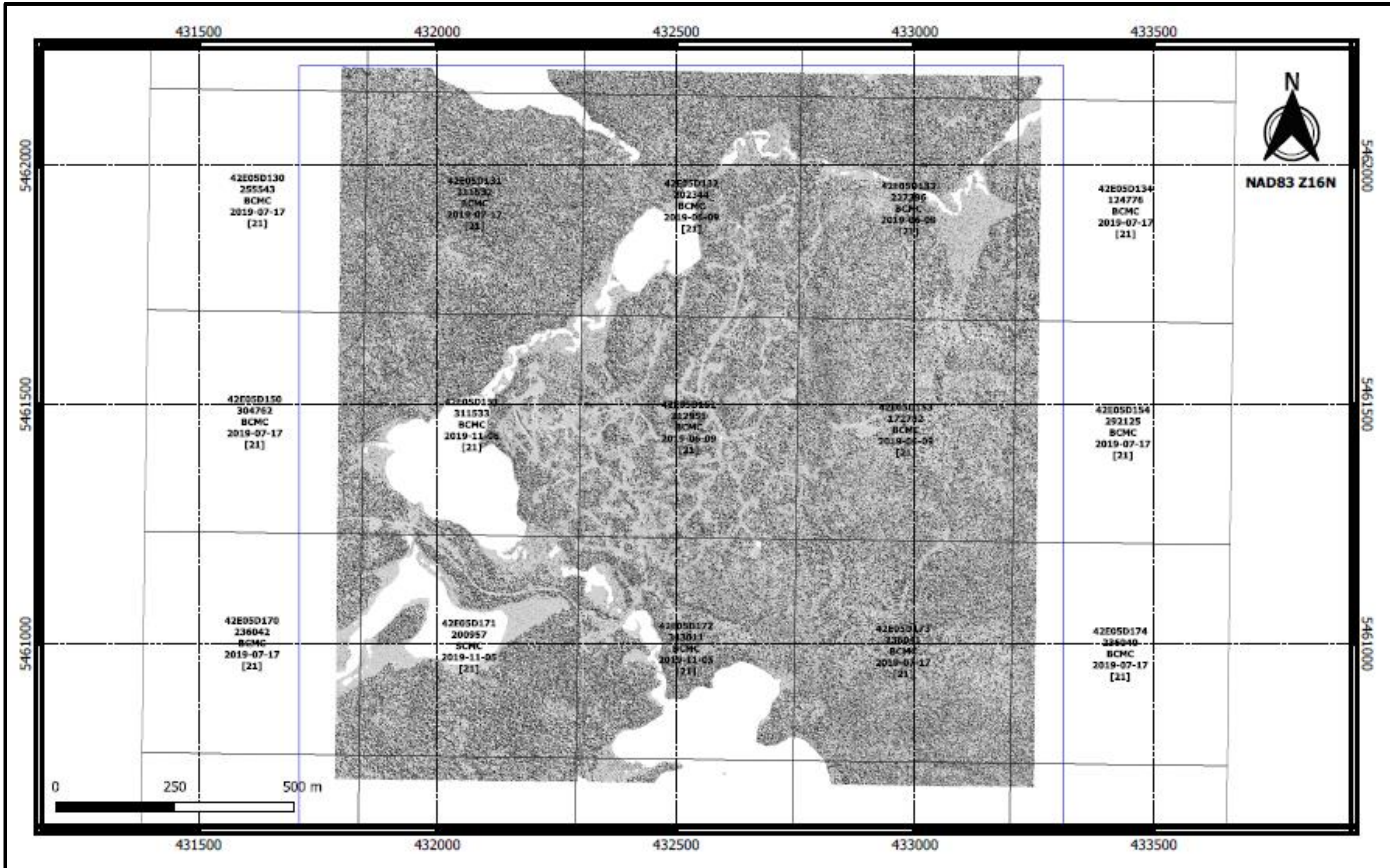


Fig 7. From RME Geomatics Report – LIDAR and Shadow Topography Map of JACKPOT Claims

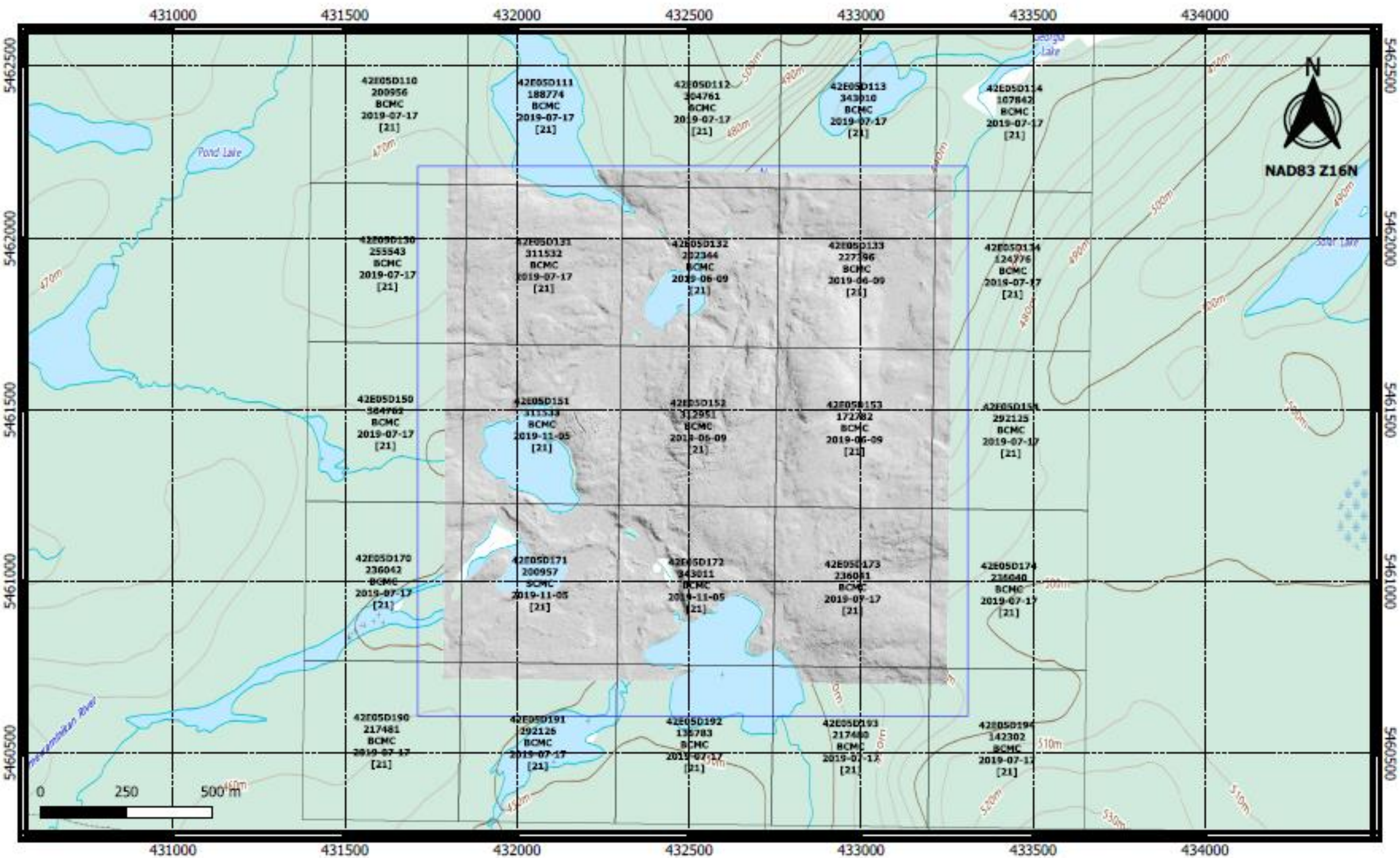


Fig 8. From RME Geomatics Report – Detailed Topography Map of JACKPOT Claims (blue line-property boundary)

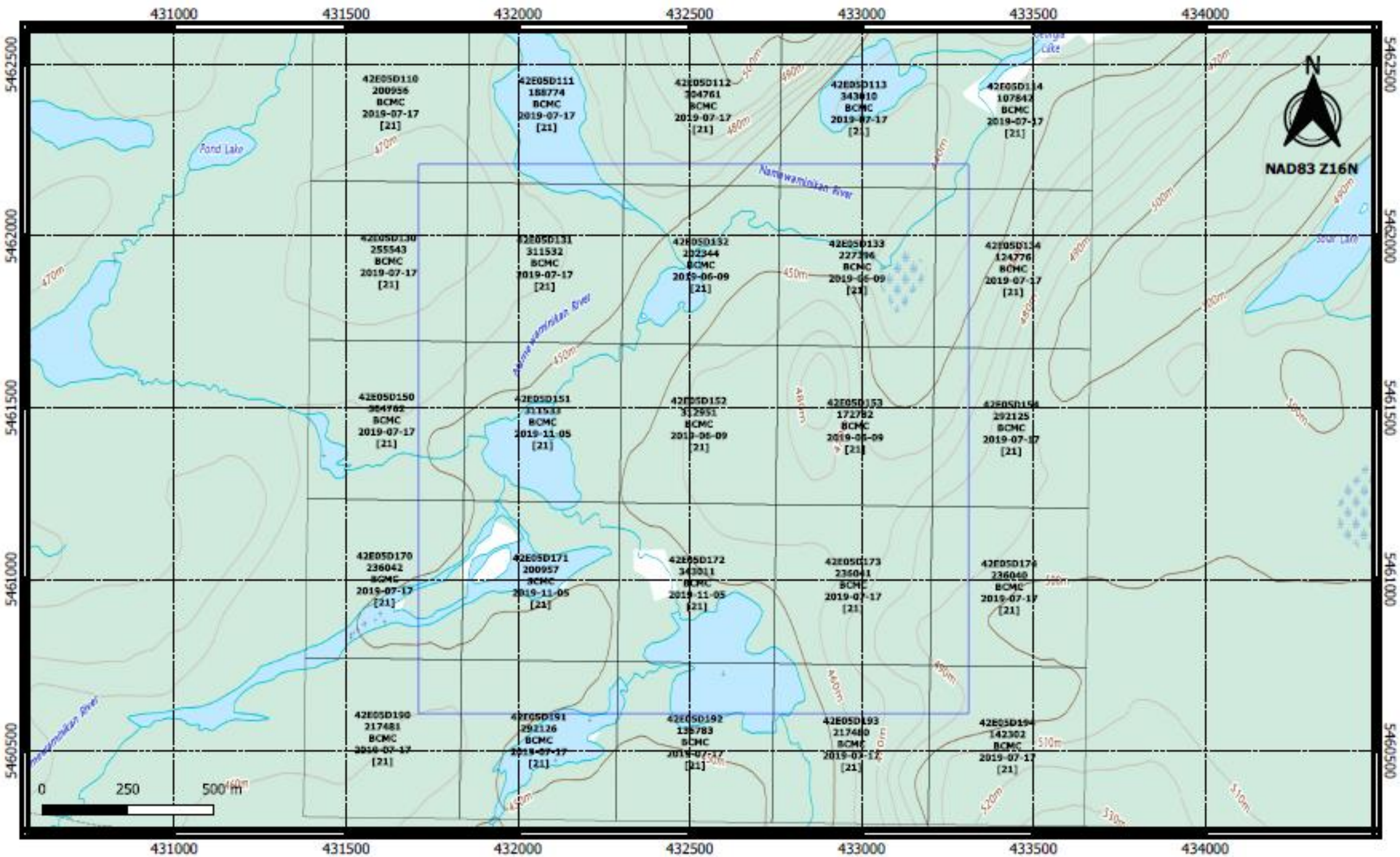


Fig 9. Detailed Topography Map with Cell Numbers from the Provincial Grid (included as a separate file)

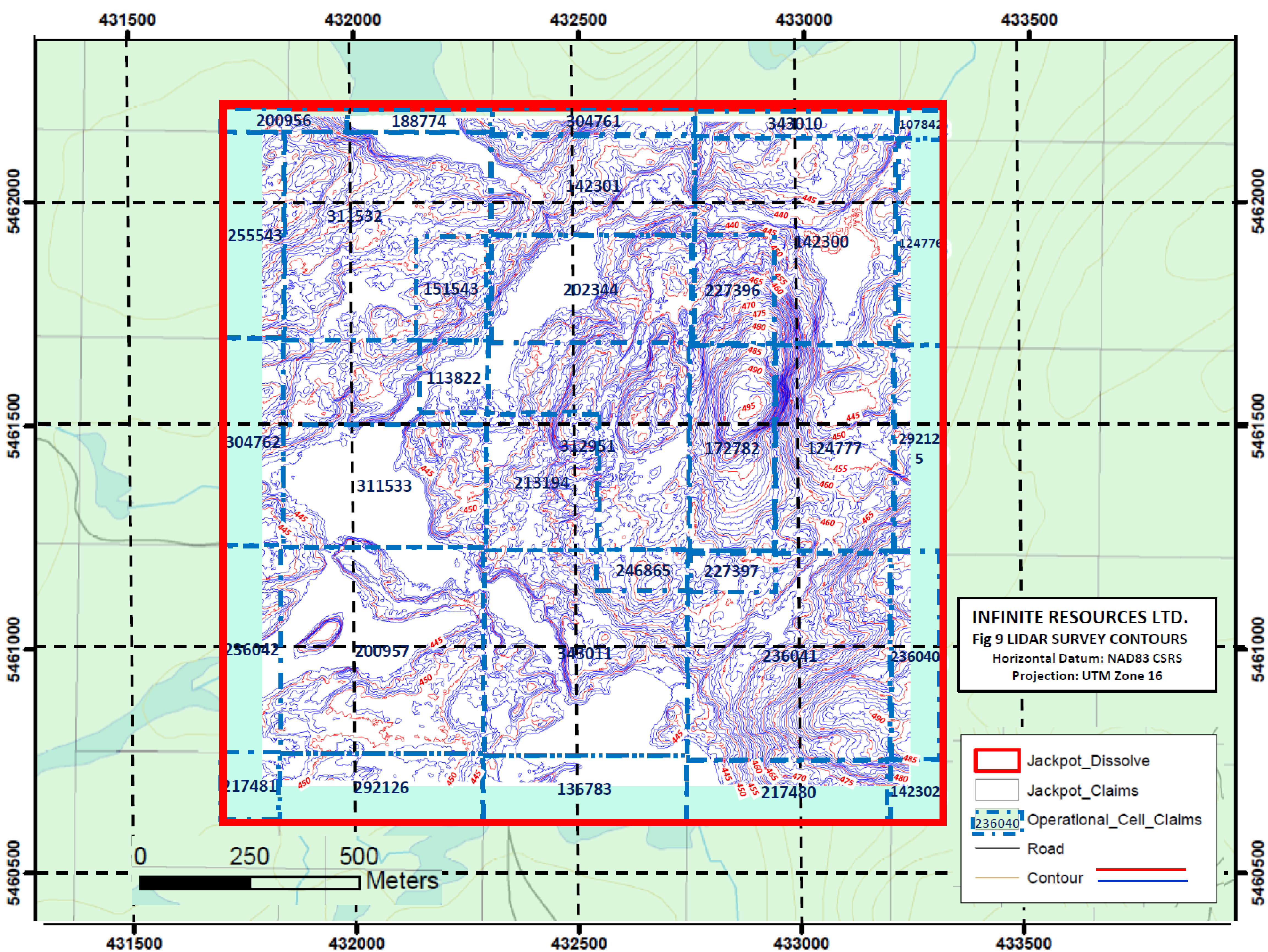


Fig 10 Detailed Topography Map with Roads, Cell Numbers, and UTM Co-ordinates (included as a separate file)

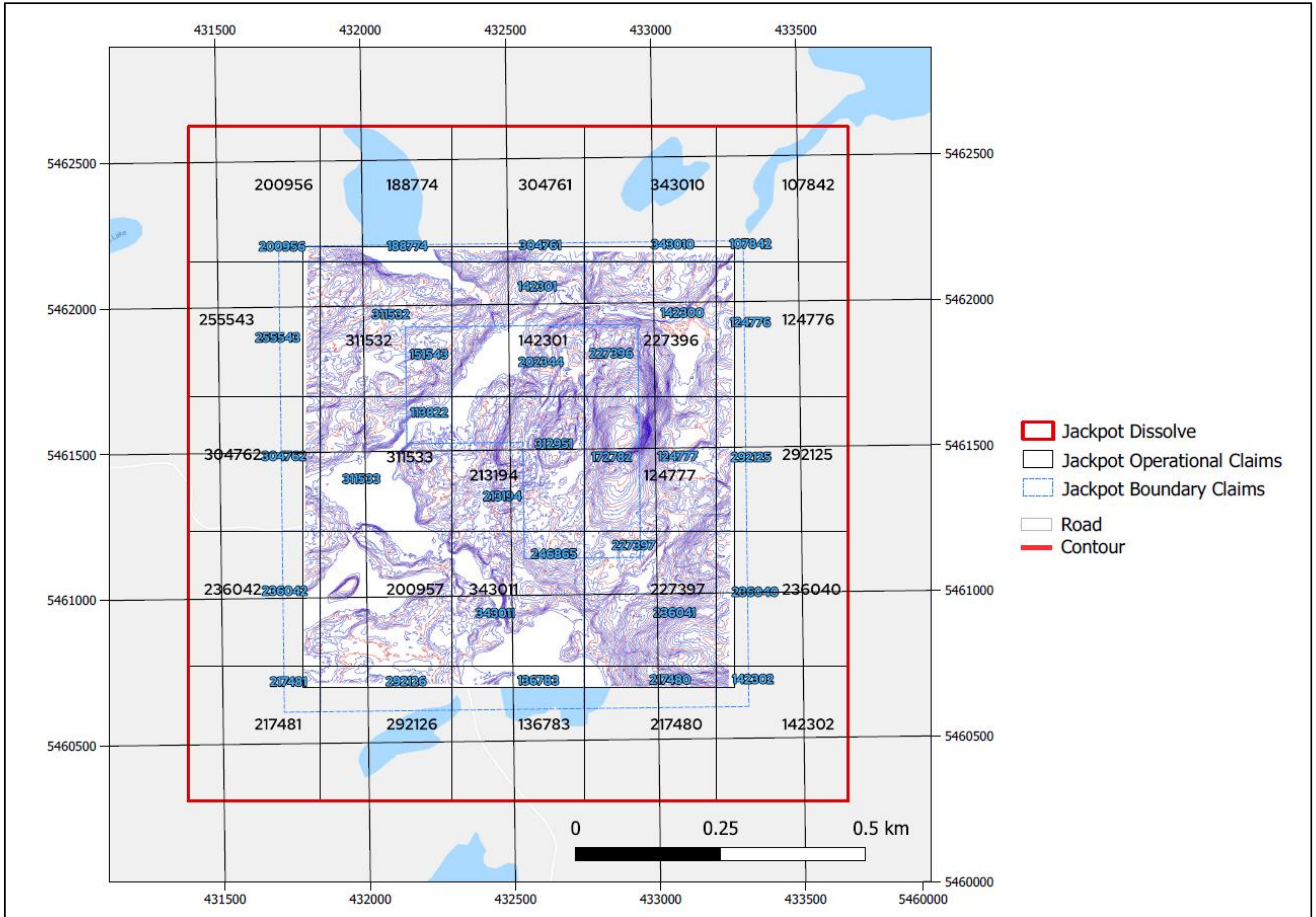
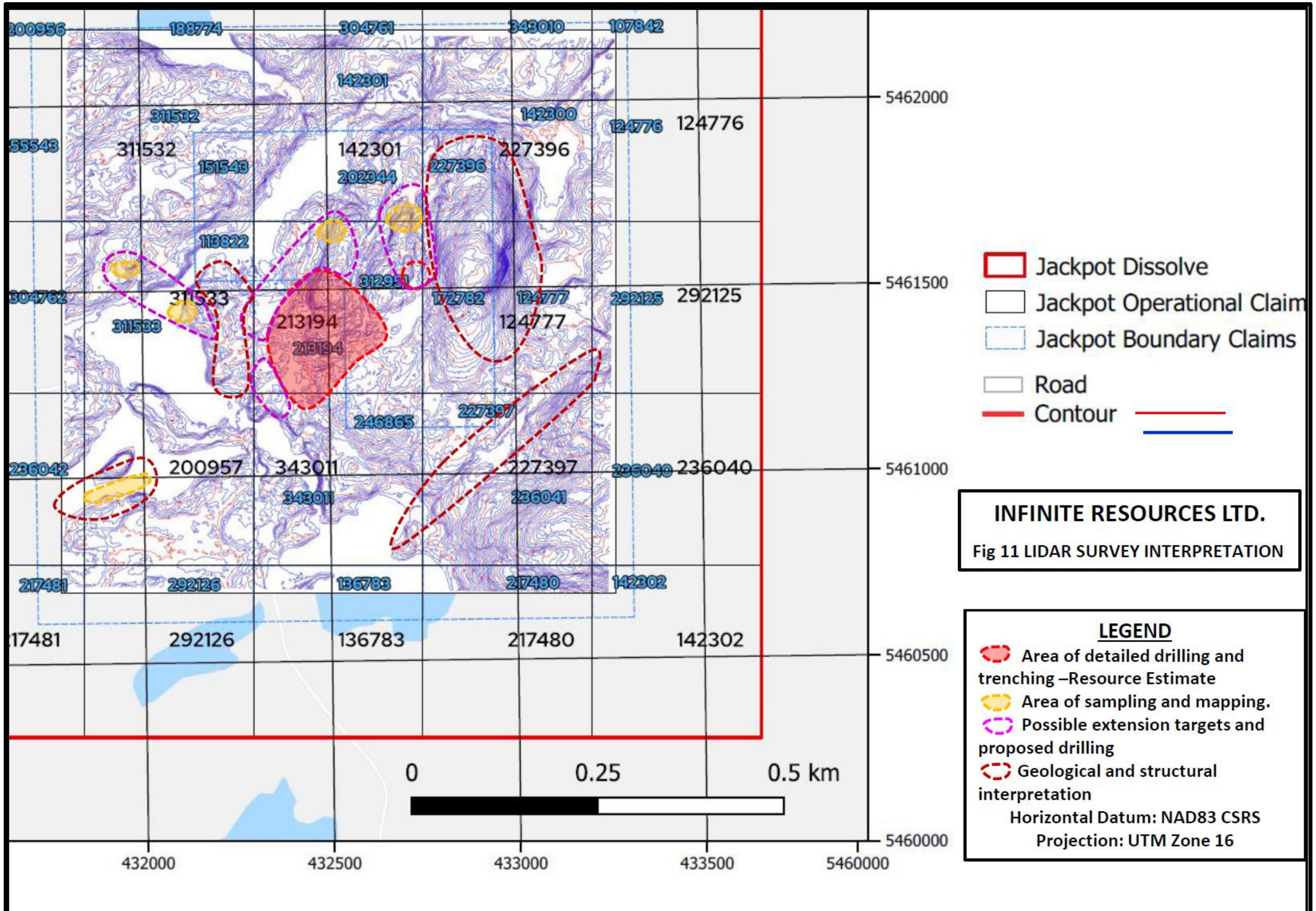


Fig 11. LIDAR SURVEY – INTERPRETATION – AREA OF ACTIVTIES AND TARGETS



**7.0 INTERPRETATION**

It should be noted that the LIDAR survey was flown in November 2018, towards the end of a major exploration program conducted on the Jackpot, comprising geological mapping, rock sampling, overburden drilling and diamond drilling, with the objective to be incorporated into a resource estimation, that is forthcoming, but has not been completed.

The LIDAR survey resulted in high-resolution maps with detailed topographic contours that were aided the interpretation of the geology and structure, access to targets, estimate of overburden thicknesses and geological modeling of sections, that are summarizes on Figure 11:

- Areas of detailed diamond drilling and trenching. Over these areas the LIDAR survey will supply detailed surface contours interval that will be reflected in cross sections for resource estimations on the Jackpot deposits.
- Areas of sampling and geological mapping that require additional prospecting, sampling, possibly trenching, prior to diamond drilling. On these targets the LIDAR survey will be used to estimate the extent and depth of overburden that might be encountered, and aid the optimum access routes to these targets.
- Possible extensions of drilled or sampled targets. Here the LIDAR survey will be used to project trends of the mineralized units (harder rock types forming ridges or hills, altered zones, being more deeply eroded and filled with till). Again, the detailed LIDAR survey will allow for the best access to these targets.
- Geological and structural interpretation. Here, the LIDAR survey will be used to assist the interpretation of larger scale structures and geological units.

**8.0 Conclusions and Recommendations**

This assessment report summarizes the results of a LIDAR (Light Detection and Ranging) remote sensing survey over the Jackpot property to establish high-resolution topographic control for resource calculations and to assist with geological interpretation of the lithium bearing pegmatites. The Jackpot Property covers known historic, lithium-rich, spodumene-bearing pegmatites hosted by quartz-mica schist. The LIDAR survey was completed in conjunction with a large exploration program that ran from December 2017 to November 2018, and included geological mapping, prospecting, rock sampling, stripping of overburden, trenching and diamond drilling.

The expenditures of the LIDAR survey by RME Geomatics was $25,430.00, with the compilation and reporting cost of $2,100.00 for a total of $27,530.00 before GST/HST (invoice file separately, Appendix B). The total cost with taxes was $30,686.60.

The topography on the Jackpot property varies significantly on a local scale, and the LIDAR survey's detailed topographic controls assists greatly in planning drill sites and for resource estimations

Additional exploration is recommended on the Jackpot property, incorporating the LIDAR survey to assist with an updated resource calculation and geological interpretations and to benefit logistics.

## 8.0 References


– Breaks, F.W. and Tindle, A.G., 2001: Rare element mineralization of the Separation Lake area, northwest Ontario: Characteristics of a new discovery of complex type, petalite-subtype, Li-Rb-Cs-Ta pegmatite. In Industrial Minerals in Canada. Edited by S. Dunlop and G.J. Simandl. Canadian Institute of Mining, Metallurgy and Petroleum, Special Volume 53, p. 159-178.

– Breaks, F.W., Selway, J.B. and Tindle, A.G., 2003: Fertile peraluminous granites and related rare element mineralization in pegmatites, Superior province, northwest and northeast Ontario: Operation Treasure Hunt. Ontario Geological Survey, Open File Report 6099, 179 p.

– Černý, P., 1991: Rare element granitic pegmatites. Part I: Anatomy and internal evolution of pegmatite deposits. Geoscience Canada, 18, p. 49-67.

– Černý, P., Ercit, T.S. and Vanstone, P.J., 1998: Mineralogy and petrology of the Tanco rare element pegmatite deposit, southeastern Manitoba. International Mineralogical Association, 17th General Meeting, Field Trip Guidebook B6, 74 p.

– Černý, P., Trueman, D.L., Ziehlke, D.V., Goad, B.E. and Paul, B.J., 1981: The Cat Lake-Winnipeg River and the Wekusko Lake pegmatite fields, Manitoba. Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER80-1, 216 p.

– Latulippe, M. and Ingham, W.N., 1955: Lithium deposits of the Lacorne area, Quebec; paper presented at the 1955 Convention of the Prospectors and Developers Association.

– London, D., 2008: Pegmatites, Mineralogical Association of Canada, Special Publication 10, Quebec City.

– Northern Miner, March 22, 1955 issue: Tonnage Estimates at Ontario Lithium, p. 32.

– Pye, E.G., 1965: Georgia Lake Area. Ontario Department of Mines, Geological Report No. 31.

– Selway, J.B., Breaks, F.W., and Tindle, A.G., 2005: A review of rare-element (Li-Cs-Ta) pegmatite exploration techniques for the Superior Province, Canada and large worldwide Tantalum deposits, Exploration and Mining Geology, v. 14, p. 1-30.

– Selway, J.B., 2010: Property Report on the Jackpot Lithium Property, 43-101 report completed by Caracle Creek International Consulting Inc., on behalf of Golden Dory Resources Corp., Gander, Newfoundland

## 10.0 Statement of Qualifications

I, Robert Weicker, of Suite 2801, 1166 Melville St., Vancouver, B.C., do hereby certify that:

- I am a graduate of University of Waterloo (B.Sc. Earth Sciences, 1977), and I have been practicing my profession as a geologist since, with over 30 years of exploration, development, and production experience, across Canada, and internationally.
- I have visited the Jackpot Property.
- I have direct knowledge of the exploration work performed for this assessment.

Signed

"R.F, Weicker"

Robert F. Weicker Geologist

May 29, 2019

(revised October 30, 2019)

Vancouver, B.C.

## APPENDIX A: RME GEOMATICS REPORT

RME geomatics

# Caracle Creek International Consulting

## Jackpot Mine

**November 2nd, 2018**

## Introduction

RME Geomatics conducted an aerial survey of the Jackpot mine site for Caracle Creek International Consulting on November 2nd, 2018. The project site (see Figure 1) was located approximately 145 km [NE] of YQT (Thunder Bay International Airport) and covered approximately 1.9 km². The project area was surveyed in 2 flights at 1000' AGL.

Survey Summary:

- Survey area: Jackpot Mine
- Collection date: November 2nd, 2018
- Survey platform: Bell 206
- Horizontal Datum: NAD83 CSRS
- Vertical Datum: CGVD28
- Geoid Model: HTv2.0
- Projection: UTM Zone 16
- Deliverables:
    - Classified (Ground, low/med/high veg) LiDAR .las point cloud
    - ASCII Grid (.xyz) 1m
    - 1m Contours (.dwg)
    - BE DEM Hillshade 1m
    - FF DSM Hillshade 1m
    - 8 cm RGB orthomosaic (GeoTtfif and .ecw)

## Survey Equipment

RME Geomatics partnered with Wiskair to use their Bell 206 helicopter as the survey aircraft.

The sensor platforms included:

- Riegl VUX-1 LR laser scanner
- KVH1750 IMU
- Novatel GNSS 638/615
- Nikon D810 digital SLR

Ground Survey Equipment

- Leica iCON gps 60 base station
- Leica iCON gps 60 rover

## Survey Control

RME surveyors established a control monument on site named BASE (see Figures 2, 3 and 4). The monument is an 8" steel spike embedded in the ground. Coordinates for BASE were provided by NRCAN's PPP service (see Table 1). All RME survey data is referenced to the BASE control monument.

*Table 1– BASE control monument location.*

| NAME | SOURCE | LATITUDE | LONGITUDE | ELLIPSOIDAL HEIGHT (m) | HT2.0 GEOID ADJUSTMENT (m) |
|---|---|---|---|---|---|
| BASE | NRCAN PPP | 49° 18' 0.39320" | -87° 56' 10.75192" | 408.666 | 36.753 |
| UTM Zone 16 [N] | | EASTING (m) | NORTHING (m) | ORTHOMETRIC HEIGHT (m) | |
| | | 431928.050 | 5461240.072 | 445.419 | |

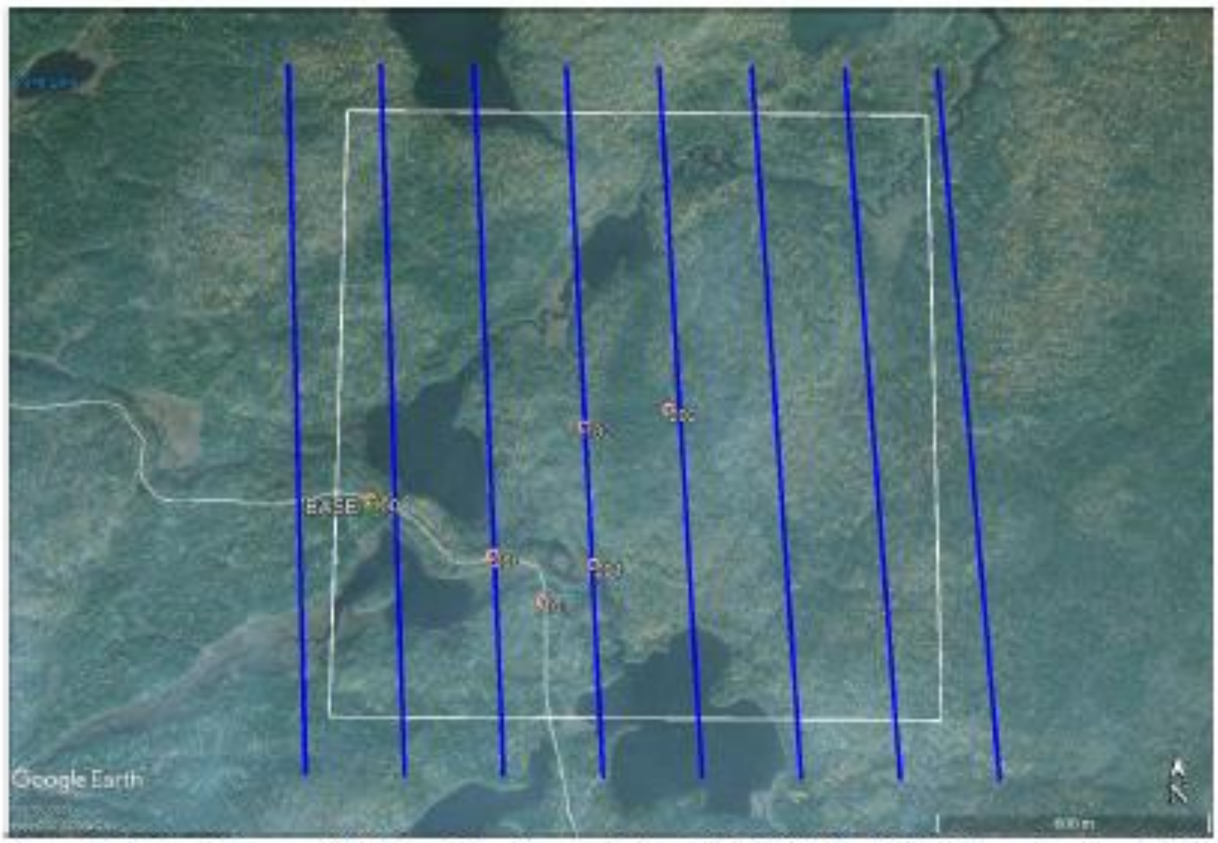



*Figure 1 – Jackpot Mine area flight lines (blue), area of interest (white), GCPs (red/white markers), and BASE monument (green triangle) overlain on Google Earth imagery.*

## Check Point Data

RME surveyors provided six ground control targets (approximately 3ftx3ft) within the survey area for LiDAR and orthomosaic data analysis. Three of the points were used for calibration and processing of the LiDAR data. The remaining three points have been compared vertically to the delivered LiDAR data in Table 2. Four of the points were used for calibration of the orthomosaic and are compared horizontally to the delivered orthomosaic in Table 3.

*Table 2 – LiDAR Ground targets and vertical accuracy measurements.*

| SURVEYED GROUND CONTROL POINT | | | | | LIDAR |
|---|---|---|---|---|---|
| POINT NUMBER | COMMENT | EASTING (m) | NORTHING (m) | ORTHO. HEIGHT (m) | MEASURED Z DIFFERENCE (m) |
| 1 | 200 | 432197.969 | 5461116.141 | 447.659 | -0.019 |
| 2 | 201 | 432427.546 | 5461093.576 | 443.128 | 0.001 |
| 3 | 202 | 432600.109 | 5461443.491 | 466.374 | 0.021 |
| | | | | **MEAN** | **0.001** |
| | | | | **RMSE** | **0.016** |
| | | | | **STDEV** | **0.020** |

*Table 3 – Orthomosaic ground target locations and horizontal accuracy measurements*

| SURVEYED GROUND CONTROL POINT | | | | | RGB IMAGERY |
|---|---|---|---|---|---|
| POINT NUMBER | COMMENT | EASTING (m) | NORTHING (m) | ORTHO. HEIGHT (m) | MEASURED X-Y DIFFERENCE (m) |
| 1 | 100 | 431921.416 | 5461241.450 | 445.909 | 0.050 |
| 2 | 101 | 432310.752 | 5461013.210 | 447.687 | 0.050 |
| 3 | 102 | 432404.354 | 5461405.966 | 452.351 | 0.000 |
| 4 | 200 | 432197.969 | 5461116.141 | 447.659 | 0.070 |
| | | | | **MEAN** | **0.043** |
| | | | | **RMSE** | **0.050** |
| | | | | **STDEV** | **0.030** |

## Data Acquisition

RME Geomatics surveyors completed the survey on November 2nd, 2018 to cover the project area of 1.9 $km^2$. Two flights, performed as 8 flight lines at 1000' AGL was flown.

The flying speed was 40 knots (ground speed). GPS base station BASE was set up and operated continuously during data acquisition. The LiDAR scanner and camera are mounted together on the same bracket to allow for simultaneous data capture.

LiDAR data was collected using a Riegl VUX-1 LR scanner operating at 400 kHz at 1000' AGL resulting in an overall point density of 12.0 points/$m^2$.

Photos were acquired using a Nikon D810 shooting in RAW format at an interval of 2 seconds to ensure forward overlap of 80%. The raw pixel size on the ground is 7 cm.

## Data Processing

### LiDAR

#### *Calibration*

A calibration pattern was flown at the RME Geomatics test facility to compute the roll, pitch and heading offsets for the IMU and laser scanner. Sloped targets have been set out in various orientations and a calibration flight pattern is flown over. New calibration values are computed every time the IMU is attached to the laser scanner.

Project specific calibration adjustments are made on a flightline-to-flightline basis and are unique to each flight.

#### *Classification*

ASPRS standard classified LiDAR point clouds version 1.2 are delivered in LAS format (see Table 4 below).

*Table 4 – LiDAR point classification scheme.*

| CLASS NAME | CLASS NUMBER |
|---|---|
| Ground | 2 |
| Low Vegetation | 3 |
| Medium Vegetation | 4 |
| High Vegetation | 5 |

Automated classification algorithms determined the ground points from non-ground points. LiDAR technicians inspected the automated ground classification and adjusted any misclassified points where necessary. The next step is to classify the vegetation by height from ground into their respective classes; low, medium and high vegetation.

The Ground grid is delivered in ASCII XYZ format. The grid is determined by exporting a TIN model of the ground classified points at 1 m.

The Hillshade raster BE DEM and FF DTM have been created by meshing the ground and full feature point clouds, respectively and exporting as a Geotiff.

Contours are extracted from the ground class at intervals of 1 m. Break lines are established around water bodies to ensure that contours do not cross water bodies.

### Orthomosaic

The raw photos are automatically aerial triangulated (AT) using Correlator3D software and initially georeferenced using the photo centres extracted from the differential GPS trajectory of the aircraft. An AT technician then ties the photos to the control target locations collected during the ground survey and a more robust AT is performed. Colour balancing and image touch ups are done to ensure a seamless orthomosaic is generated. The orthomosaic is exported in tiles in both

GeoTIFF and ECW formats at 8 cm pixel resolution and the accuracy is compared against the control targets.

## Final Remarks

RME Geomatics appreciates the opportunity to complete this survey for Caracle Creek International Consulting and is available to answer any questions regarding the data collection and deliverables.

Please feel free to contact me at my coordinates below,

Dave Melanson, M.Sc.
Production Coordinator
RME Geomatics
613-883-4626
dmelanson@rmegeomatics.com

Curtis Parks, P.Eng.
General Manager, Geomatics
RME Geomatics
613-564-8490
cparks@rmegeomatics.com

## APPENDIX

RME geomatics

### RTK & BASE FIELD NOTES

Client: Cascade Creek Project Code: CC1-01

Completed by: B Vallieres Date: Nov 1/18

Job Name: Jackpot ¼:__ Sec: __ Twp: __ Rnge: __ W__ M

Temperature: 2 Wind: Ø Cloud: 8/8

Survey Equip: ICON 60 UAV-☐ Marine-☐ Manned-☑ Airframe: B206

Base File Name: ____________ Base Stn ID: 300 Marker Type: SPK

Base Location: SW Corner Coordinate System: NAD83 UTM Zone: 16

Base Height: 1.10 Start Time: 09:50 End Time: 1730 Raw Data Logging ☑

Base Coords - N: ____________m E: ____________m Z: ________m

Is the base position: Known-☐ Unknown-☑

| Point # | Rod Height | Description |
|---|---|---|
| 100 | 2.000 | |
| 200 | 2.000 | |
| 101 | 2.000 | |
| 201 | 2.000 | |
| 102 | 2.000 | |
| 202 | 2.000 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

*enter Δ horizontal and Δ vertical values in description for check shots*

*Figure 2 – RME Geomatics base station setup sheet for BASE control monument.*

## CSRS-PPP 2.18.0 (2018-10-09)

LEIC305m59-07000.18o
**BASE1**

| Data Start | Data End | Duration of Observations |
|---|---|---|
| 2018-11-01 12:59:08.00 | 2018-11-01 21:30:33.00 | 8:31:25 |
| **Processing Time** | | **Product Type** |
| 19:51:42 UTC 2018/11/06 | | NRCan Rapid |
| **Observations** | **Frequency** | **Mode** |
| Phase and Code | Double | Static |
| **Elevation Cut-Off** | **Rejected Epochs** | **Estimation Steps** |
| 7.5 degrees | 0.00 % | 1.00 sec |
| **Antenna Model** | **APC to ARP** | **ARP to Marker** |
| LEICG60 NONE | L1 = 0.130 m L2 = 0.134 m | H:1.460m / E:0.000m / N:0.000m |

(APC = antenna phase center; ARP = antenna reference point)

## Estimated Position for LEIC305m59-07000.18o

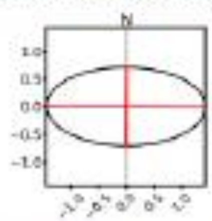
| | Latitude (+n) | Longitude (+e) | Ell. Height |
|---|---|---|---|
| **NAD83(CSRS) (2010)** | 49° 18' 0.39320" | -87° 56' 10.75192" | 408.666 m |
| **Sigmas**(95%) | 0.006 m | 0.011 m | 0.025 m |
| **A priori*** | 49° 18' 0.46138" | -87° 56' 10.83566" | 406.385 m |
| Estimated – A priori | -2.106 m | 1.692 m | 2.281 m |

Orthometric Height CGVD28 (HTv2.0)

445.419 m

(click for height reference information)

95% Error Ellipse (cm)
semi-major: 1.436 cm
semi-minor: 0.712 cm
semi-major azimuth: 90° 22' 19.19"




UTM (North) Zone 16

5461240.072 m (N)
431928.050 m (E)

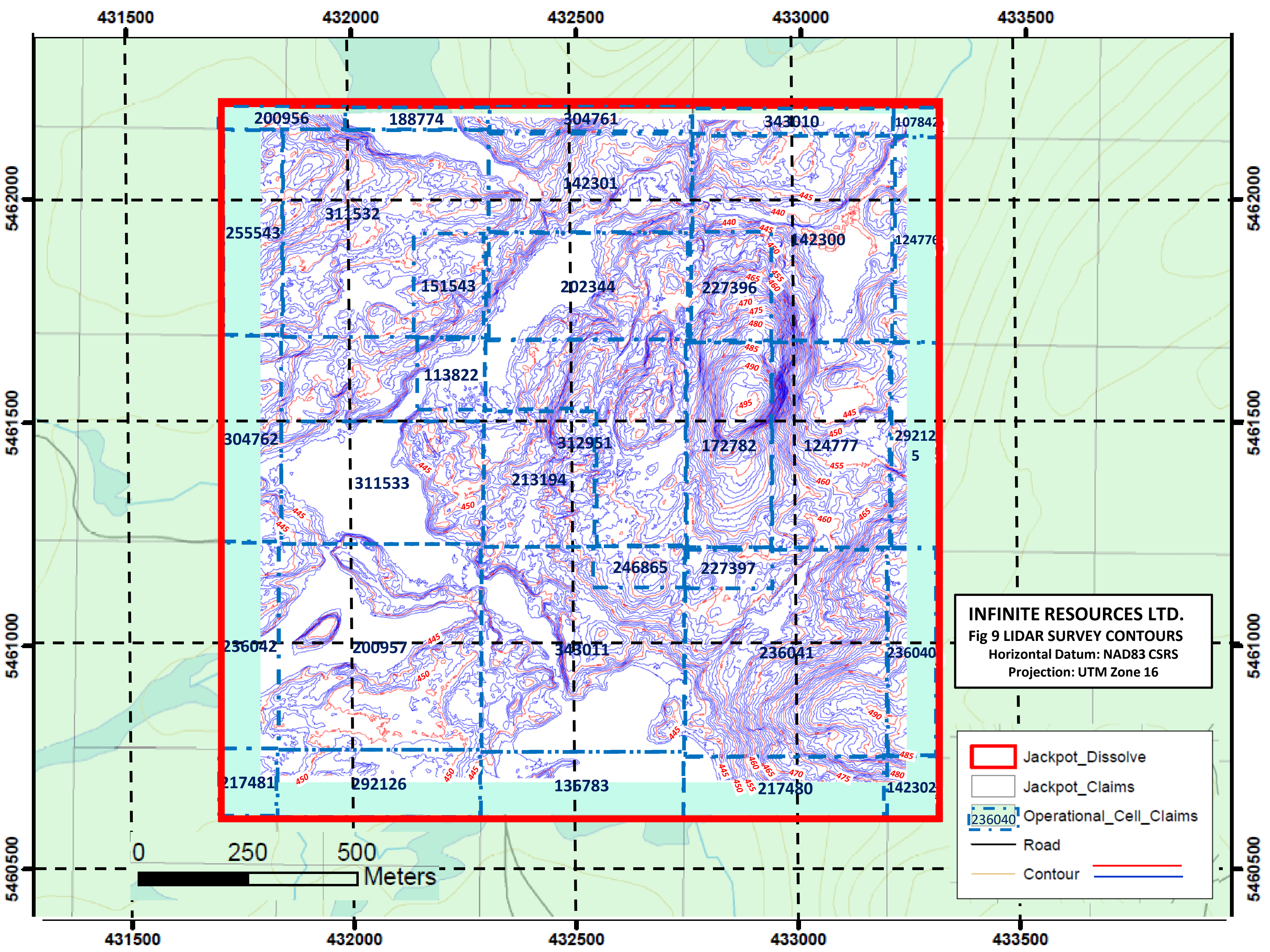
Scale Factors
0.999657 (point)
0.999593 (combined)

*(Coordinates from RINEX header used as a priori position)

*Figure 3 – NRCAN PPP Report for BASE control monument.*

rmegeomatics.com | 8

*Figure 4 – RME Geomatics BASE station deployed during the Jackpot Mine survey.*


INFINITE RESOURCES LTD.
Fig 9 LIDAR SURVEY CONTOURS
Horizontal Datum: NAD83 CSRS
Projection: UTM Zone 16
Jackpot_Dissolve
Jackpot_Claims
236040
Operational_Cell_Claims
Road
Contour
0
250
500
Meters
431500
432000
432500
433000
433500
5462000
5461500
5461000
5460500
200956
188774
304761
343010
107842
142301
311532
255543
142300
124776
151543
202344
227396
113822
304762
312951
172782
124777
29212
5
311533
213194
246865
227397
236042
200957
343011
236041
236040
217481
292126
136783
217480
142302