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.

CANADIAN EXPLORATION SERVICES LTD

2205730 ONTARIO INC.

Q2282 – Coleman Property
Magnetometer and VLF EM Surveys

C Jason Ploeger, P.Geo – December 6, 2016

2205730 ONTARIO INC.

Abstract

CXS was contracted by 2205730 Ontario Inc. to perform approximately three kilometres of magnetometer and VLF EM surveys over the two claim groups within Coleman Township. Tests are done at the beginning of the survey day on VLF EM stations available, unfortunately no VLF stations were available at the time of the survey. This resulted in 1 kilometre of magnetometer being performed over the northern block with an additional 2.175 kilometres of magnetometer survey performed over the southern block.

Both survey blocks indicate anomalous east-west striking magnetic low features that may represent zones of alteration.

2205730 ONTARIO INC.

Q2282 – Coleman Property
Magnetometer and VLF EM Surveys

C Jason Ploeger, P.Geo – December 6, 2016

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES AND FIGURES

1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Coleman Property**.

1.2 CLIENT

2205730 Ontario Inc.

689 Corsi Hill
Sudbury, ON
P3E 6H7

1.3 LOCATION

The Coleman Property is located in Coleman Township approximately 3 km south-east of Cobalt, Ontario. The survey area covers a portion of mining claims 4283634 and 4283636 located in Coleman Township, within the Larder Lake Mining Division.

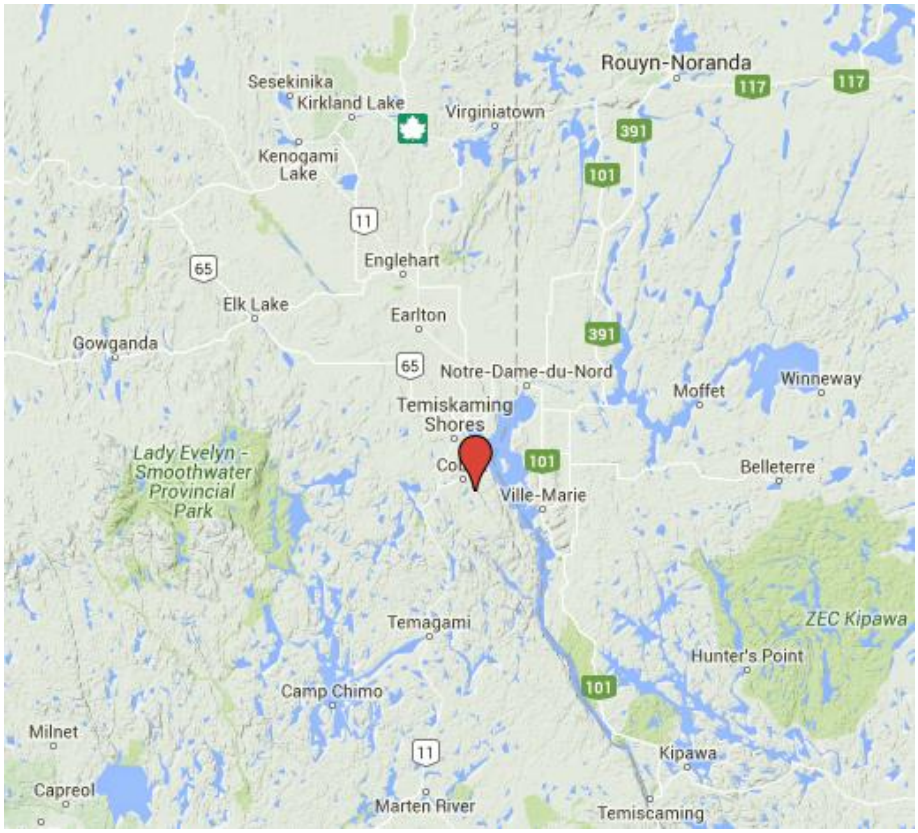


Figure 1: Location of the Coleman Property

1.4 ACCESS

Access to the southern property was attained with a 4x4 truck on the Kerr Lake Road. The Kerr Lake Road heads south from the village of Cobalt, Ontario. Approximately 5 kilometers down the Kerr Lake Road, an ATV was required for the remaining 600 meters to the survey area.

The northern group was accessed directly from Quebec Ave in North Cobalt, Ontario.

1.5 SURVEY GRID

The traversed lines were established using a GPS in conjunction with the execution of the survey. The GPS operator would establish sample locations while remaining approximately 25m in front of the magnetometer/VLF EM operator. GPS waypoints, magnetic and VLF EM samples were taken every 25m along these controlled traverses. The GPS used was a Garmin GPSMAP 62s with an external antenna for added accuracy.

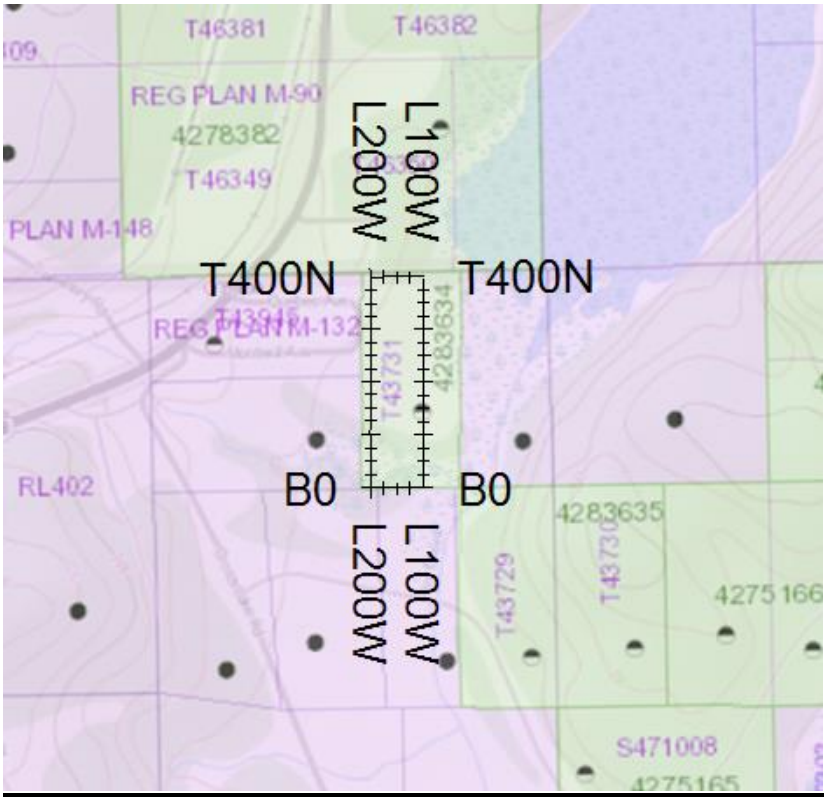


Figure 2: Claim Map with Coleman North Traverses

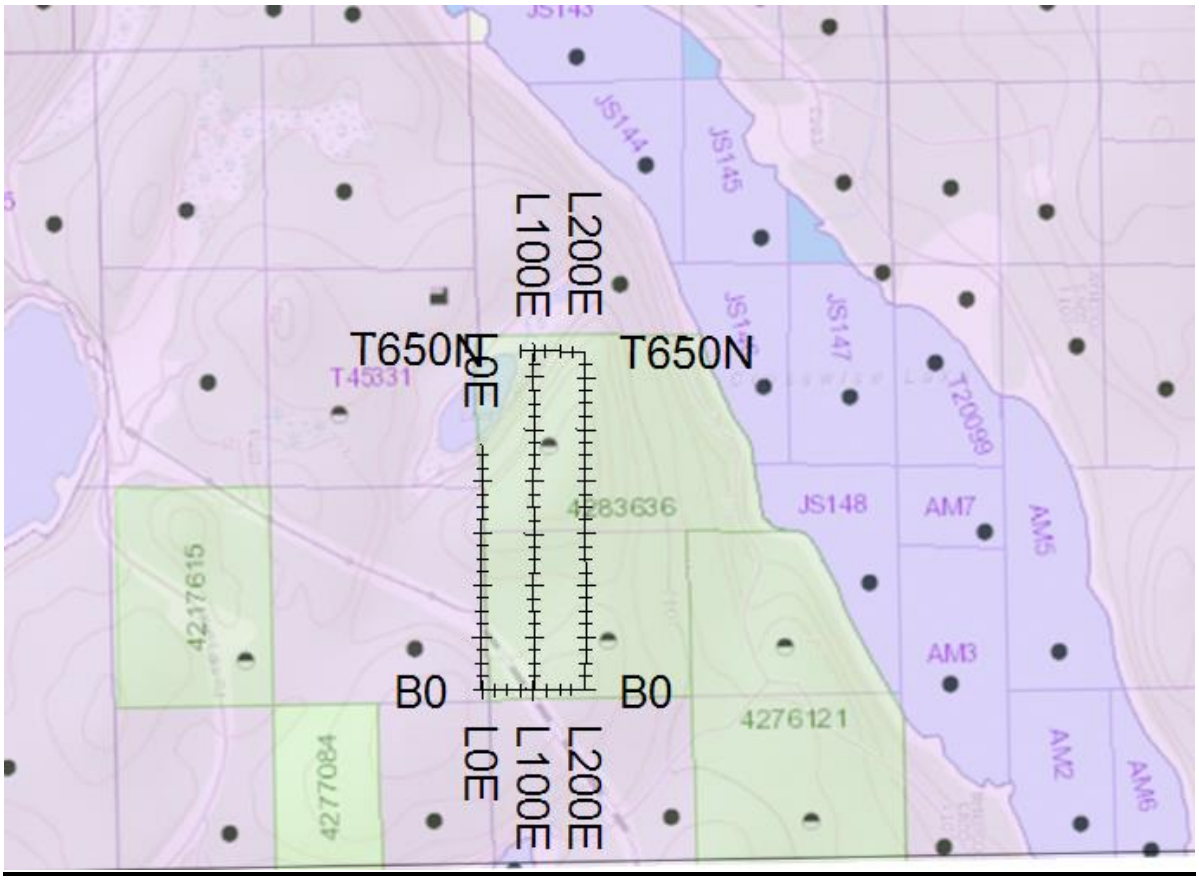


Figure 3: Claim Map with Coleman South Traverses

2. SURVEY WORK UNDERTAKEN

2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
December 5, 2016	Locate north survey area and perform magnetic/VLF survey.	100W	0	400N	400
		200W	0	400N	400
		0N	200W	100W	100
		400N	200W	100W	100
	Locate south survey area and perform magnetic survey.	0E	0	475N	475
		100E	0	650N	650
		200E	0	650N	650
		0N	0	200E	200
		650N	0	200E	200

Table 1: Survey Log

2.2 PERSONNEL

Bruce Lavalley of Britt, Ontario conducted all the magnetic data collection while Ryan Lavalley of Sudbury, Ontario was responsible for the GPS control and GPS waypoint collection.

2.3 SURVEY SPECIFICATIONS

The survey was conducted with a GSM-19 v7 Overhauser magnetometer with a second GSM-19 magnetometer for a base station mode for diurnal correction.

A test of available VLF EM stations was conducted on site and returned no VLF stations available at the time of the survey, resulting in magnetic traverses being conducted.

A total of 3.175 line kilometers of magnetometer was read over the Coleman Property on December 5, 2016. This consisted of 127 magnetometer samples taken at a 25m sample interval.

3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY

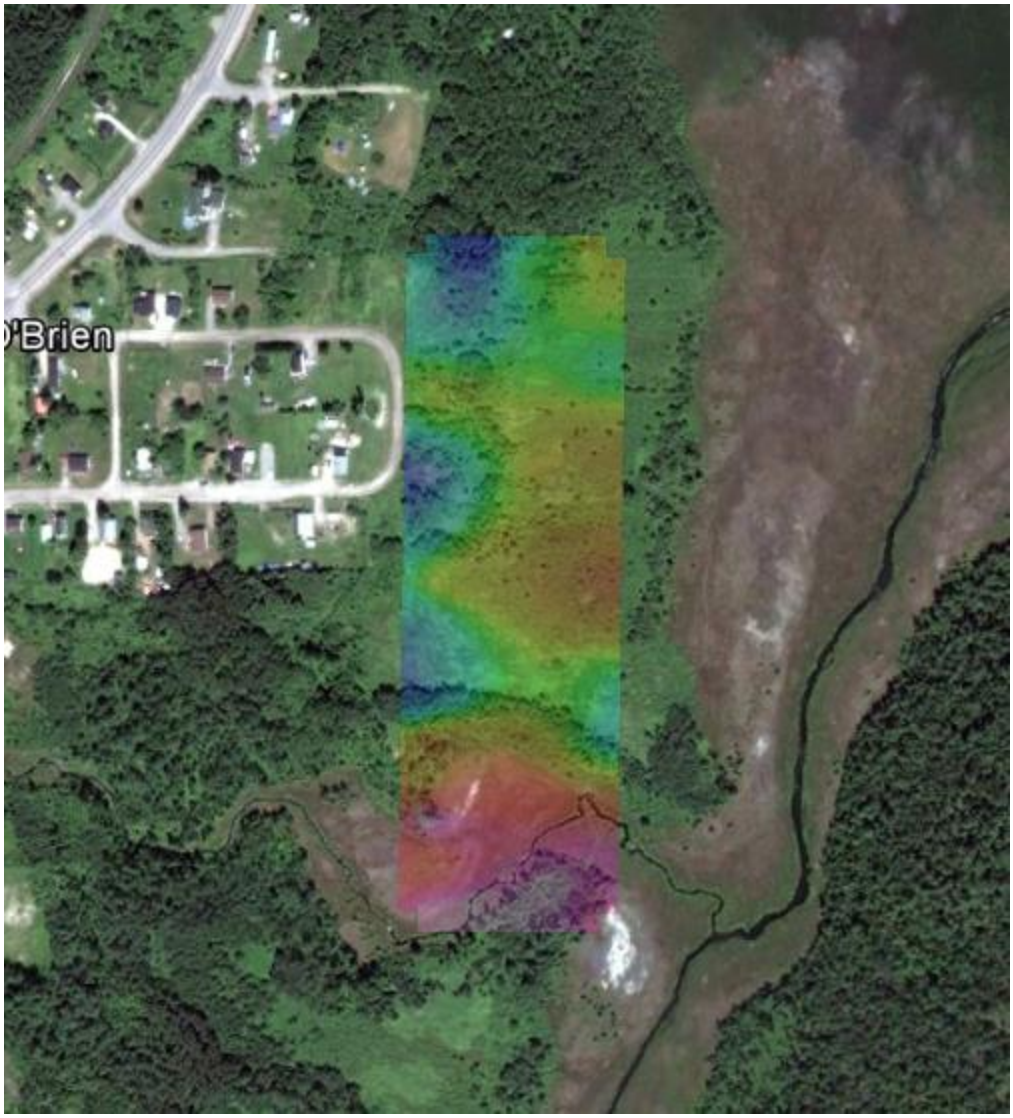


Figure 4: Magnetometer Plan of North Block on Google Earth

The survey over the north group generally indicates two magnetic units.

The southern part exhibits a magnetic high region. This most likely represents a nipissing diabase unit. This appears to overprint a more uniform magnetic signature, which most likely indicate a sedimentary unit. The overprinting most likely indicates the existence of the bottom of the nipissing diabase sill.

Within the probable sedimentary unit exists two low magnetic features. These occur at 150N and 350N. These may indicate alteration zones within the geologic unit.

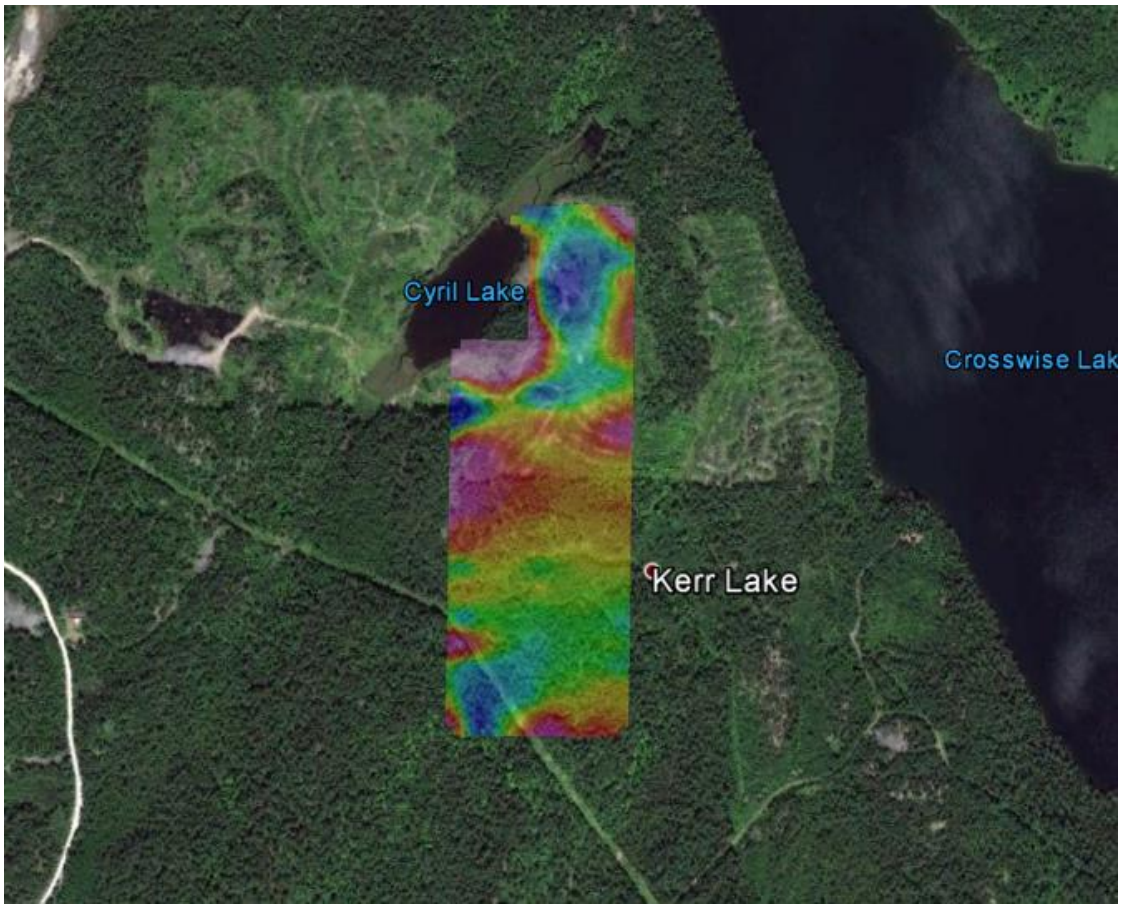


Figure 5: Magnetometer Plan of South Block on Google Earth

The survey over the southern block indicates the probable existence different phases within a similar magnetic unit. The signature appears to be that expected from the mid region between the top and bottom of a nipissing diabase sill.

This magnetic unit appears to exhibit a magnetic low east-west striking linear feature between 400N and 450N. This magnetic low may indicate an alteration zone crossing the property.

I would recommend prospecting the magnetically low features identified over the north and south blocks. I would also recommend additional magnetometer surveys at 50m line spacing in both the east and west directions.

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Inc. of Larder Lake, Ontario.

2. I am a Practicing Member of the Association of Professional Geoscientists, with membership number 2172.

3. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.

4. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.

5. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.

6. I do not have nor expect an interest in the properties and securities of **2205730 Ontario Inc.**

7. I am responsible for the final processing and validation of the survey results and the compilation of the presentation of this report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

C. Jason Ploeger, P.Geo., B.Sc.
Geophysical Manager
Canadian Exploration Services Inc.

Larder Lake, ON
December 6, 2016

APPENDIX B

THEORETICAL BASIS AND SURVEY PROCEDURES

TOTAL FIELD MAGNETIC SURVEY

Base station corrected Total Field Magnetic surveying is conducted using at least two synchronized magnetometers of identical type. One magnetometer unit is set in a fixed position in a region of stable geomagnetic gradient, and away from possible cultural effects (i.e. moving vehicles) to monitor and correct for daily diurnal drift. This magnetometer, given the term 'base station', stores the time, date and total field measurement at fixed time intervals over the survey day. The second, remote mobile unit stores the coordinates, time, date, and the total field measurements simultaneously. The procedure consists of taking total magnetic measurements of the Earth's field at stations, along individual profiles, including Tie and Base lines. A 2 meter staff is used to mount the sensor, in order to optimally minimize localized near-surface geologic noise. At the end of a survey day, the mobile and base-station units are linked, via RS-232 ports, for diurnal drift and other magnetic activity (ionospheric and sferic) corrections using internal software.

For the gradiometer application, two identical sensors are mounted vertically at the ends of a rigid fiberglass tube. The centers of the coils are spaced a fixed distance apart (0.5 to 1.0m). The two coils are then read simultaneously, which alleviates the need to correct the gradient readings for diurnal variations, to measure the gradient of the total magnetic field.

VLF EM SURVEY

The frequency domain VLF electromagnetic survey is designed to measure both the vertical and horizontal in-phase (IP) and Quadrature (OP) components of the anomalous field from electrically conductive zones. The sources for VLF EM surveys are several powerful radio transmitters located around the world which generate EM radiation in the low frequency band of 15-25kHZ. The signals created by these long-range communications and navigational systems may be used for surveying up to several thousand kilometers away from the transmitter. The quality of the incoming VLF signal can be monitored using the field strength. A field strength above 5pT will produce excellent quality results. Anything lower indicates a weak signal strength, and possibly lower data quality. A very low signal strength (<1pT) may indicate the radio station is down.

The EM field is planar and horizontal at large distances from the EM source. The two components, electric (E) and magnetic (H), created by the source field are orthogonal to each other. E lies in a vertical plane while H lies at right angles to the direction of propagation in a horizontal plane. In order to ensure good coupling, the strike of possible conductors should lie in the direction of the transmitter to allow the H vector to pass through the anomaly, in turn, creating a secondary EM field.

The VLF EM receiver has two orthogonal aerials which are tuned to the frequency of

the transmitting station. The direction of the source station is located by rotating the sensor around a vertical axis until a null position is found. The VLF EM survey procedure consists of taking measurements at stations along each line on the grid. The receiver is rotated about a horizontal axis, right angles to the traverse and the tilt recorded at the null position.

APPENDIX C

GSM 19

Specifications

Overhauser Performance

Resolution: 0.01 nT
Relative Sensitivity: 0.02 nT
Absolute Accuracy: 0.2nT
Range: 20,000 to 120,000 nT
Gradient Tolerance: Over 10,000nT/m
Operating Temperature: -40°C to +60°C

Operation Modes

Manual: Coordinates, time, date and reading stored automatically at min. 3 second interval.
Base Station: Time, date and reading stored at 3 to 60 second intervals.
Walking Mag: Time, date and reading stored at coordinates of fiducial.
Remote Control: Optional remote control using RS-232 interface.
Input/Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Operating Parameters

Power Consumption: Only 2Ws per reading. Operates continuously for 45 hours on standby.
Power Source: 12V 2.6Ah sealed lead acid battery standard, other batteries available
Operating Temperature: -50°C to +60°C

Storage Capacity

Manual Operation: 29,000 readings standard, with up to 116,000 optional. With 3 VLF stations: 12,000 standard and up to 48,000 optional.

Base Station: 105,000 readings standard, with up to 419,000 optional (88 hours or 14 days uninterrupted operation with 3 sec. intervals)

Gradiometer: 25,000 readings standard, with up to 100,000 optional. With 3 VLF stations: 12,000, with up to 45,000 optional.

Omnidirectional VLF

Performance Parameters: Resolution 0.5% and range to ±200% of total field. Frequency 15 to 30 kHz.

Measured Parameters: Vertical in-phase & out-of-phase, 2 horizontal components, total field coordinates, date, and time.

Features: Up to 3 stations measured automatically, in-field data review, displays station field strength continuously, and tilt correction for up to ±10° tilts.

Dimensions and Weights: 93 x 143 x 150mm and weighs only 1.0kg.

Dimensions and Weights

Dimensions:
Console: 223 x 69 x 240mm
Sensor: 170 x 71mm diameter cylinder
Weight:
Console: 2.1kg
Sensor and Staff Assembly: 2.0kg

Standard Components

GSM-19 magnetometer console, harness, battery charger, shipping case, sensor with cable, staff, instruction manual, data transfer cable and software.

Taking Advantage of a "Quirk" of Physics

Overhauser effect magnetometers are essentially proton precession devices except that they produce an order-of magnitude greater sensitivity. These "supercharged" quantum magnetometers also deliver high absolute accuracy, rapid cycling (up to 5 readings / second), and exceptionally low power consumption.

The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms and then exposed to secondary polarization from a radio frequency (RF) magnetic field. The unpaired electrons transfer their stronger polarization to hydrogen atoms, thereby generating a strong precession signal-- that is ideal for very high-sensitivity total field measurement. In comparison with proton precession methods, RF signal generation also keeps power consumption to an absolute minimum and reduces noise (i.e. generating RF frequencies are well out of the bandwidth of the precession signal).

In addition, polarization and signal measurement can occur simultaneously - which enables faster, sequential measurements. This, in turn, facilitates advanced statistical averaging over the sampling period and/or increased cycling rates (i.e. sampling speeds).

- The unique Overhauser unit blends physics, data quality, operational efficiency, system design and options into an instrumentation package that ... exceeds proton precession and matches costlier optically pumped cesium capabilities

APPENDIX C

GARMIN GPS MAP 62S

Physical & Performance:	
Unit dimensions, WxHxD:	2.4" x 6.3" x 1.4" (6.1 x 16.0 x 3.6 cm)
Display size, WxH:	1.43" x 2.15" (3.6 x 5.5 cm); 2.6" diag (6.6 cm)
Display resolution, WxH:	160 x 240 pixels
Display type:	transflective, 65-K color TFT
Weight:	9.2 oz (260.1 g) with batteries
Battery:	2 AA batteries (not included); NiMH or Lithium recommended
Battery life:	20 hours
Waterproof:	yes (IPX7)
Floats:	no
High-sensitivity receiver:	yes

Interface:	high-speed USB and NMEA 0183 compatible
Maps & Memory:	
Basemap:	yes
Preloaded maps:	no
Ability to add maps:	yes
Built-in memory:	1.7 GB
Accepts data cards:	microSD™ card (not included)
Waypoints/favorites/locations:	2000
Routes:	200
Track log:	10,000 points, 200 saved tracks
Features & Benefits:	
Automatic routing (turn by turn routing on roads):	yes (with optional mapping for detailed roads)
Electronic compass:	yes (tilt-compensated, 3-axis)
Touchscreen:	no
Barometric altimeter:	yes
Camera:	no
Geocaching-friendly:	yes (paperless)
Custom maps compatible:	yes
Photo navigation (navigate to ge-otagged photos):	yes
Outdoor GPS games:	no
Hunt/fish calendar:	yes
Sun and moon information:	yes

Tide tables:	yes
Area calculation:	yes
Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wirelessly with similar units):	yes
Picture viewer:	yes
Garmin Connect™ compatible (online community where you analyze, categorize and share data):	yes

- *Specifications obtained from www.garmin.com*

APPENDIX D

LIST OF MAPS (IN MAP POCKET)

VLF EM Plan Map (1:2500)

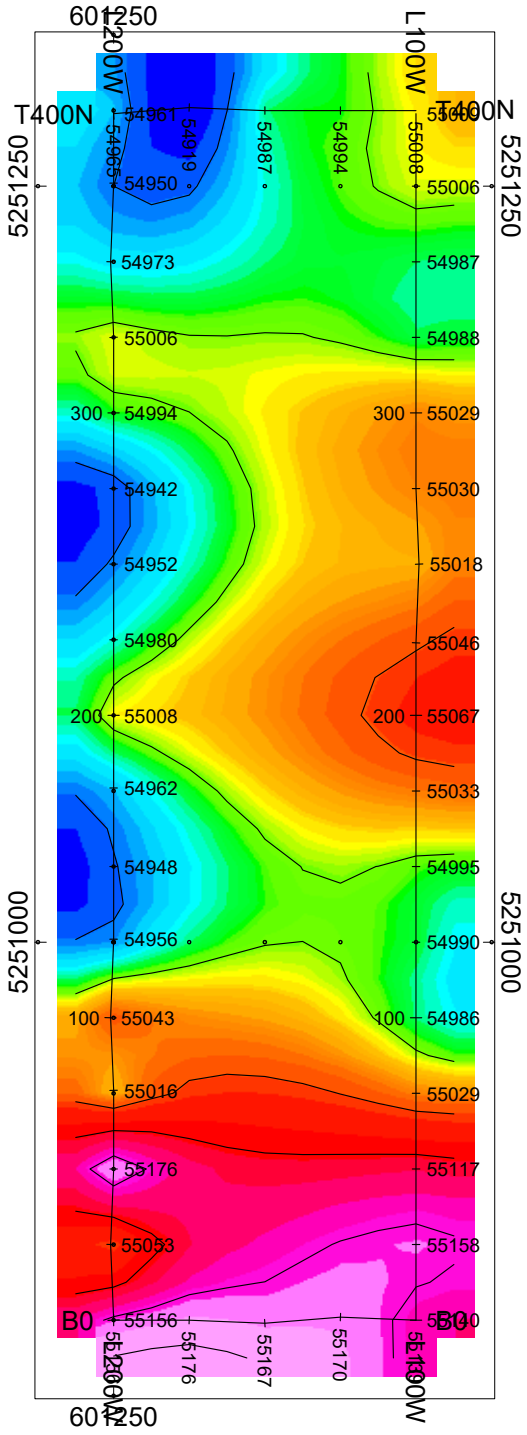
1) Q2282-2205730-Coleman North-Mag-Cont
2) Q2282-2205730-Coleman South-Mag-Cont

Claim Map with Magnetic Traverses (1:25000)

3) Q Q2282-2205730-Coleman-Traverses

TOTAL MAPS = 3

877.504.2345 | info@cxsltd.com | www.cxsltd.com



Scale 1:2500

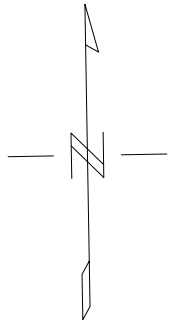
25 0 25 50 75

(meters)

NAD83(CSRS) / UTM zone 17N

55156
55134
55105
55060
55040
55029
55023
55016
55011
55006
55002
54998
54994
54991
54987
54980
54968
54956
54938

Magnetometer
nanoTesla (nT)



2205730 ONTARIO INC.

COLEMAN PROPERTY - NORTH BLOCK
ColemanTownship, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

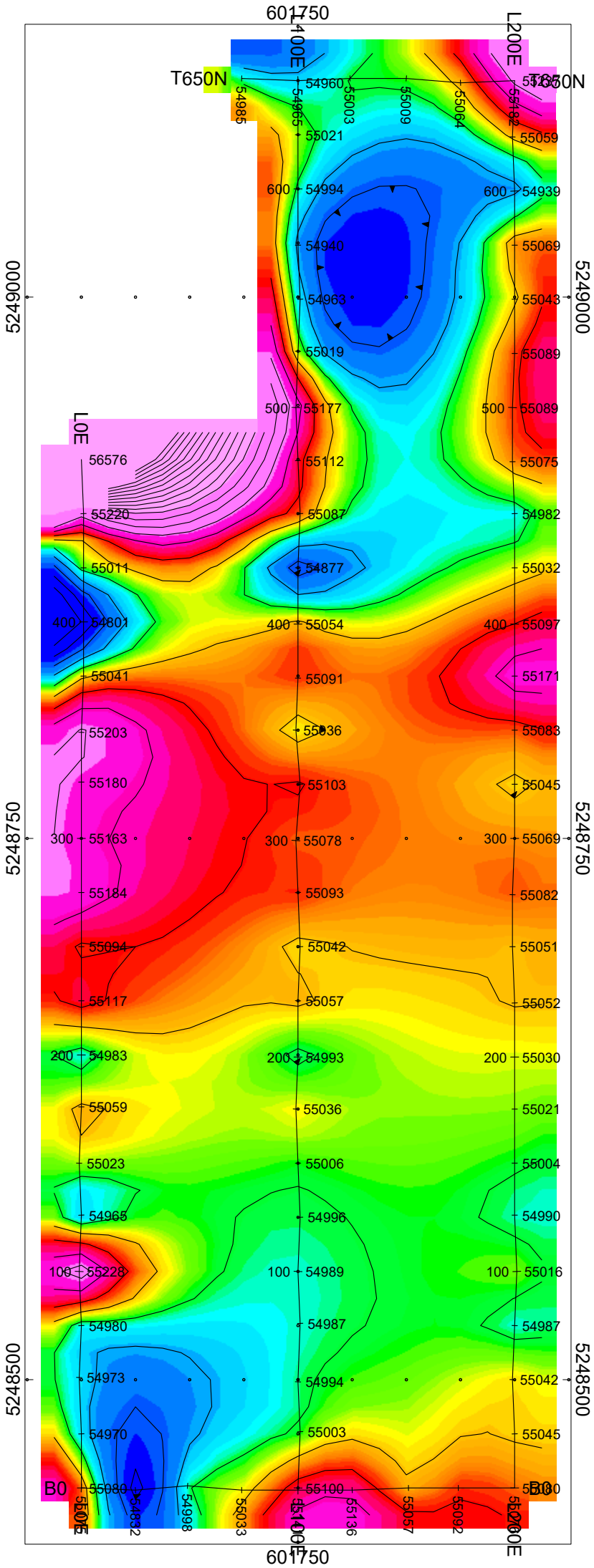
Posting Level: 0nT
Field Inclination/Declination: 74degN/12degW
Station Seperation: 25 meters
Total Field Magnetic Contours: 50 nT

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Bruce Lavalley
GPS Operated By: Ryan Lavalley
Processed by: Jason Ploeger
Map Drawn By: C Jason Ploeger, B.Sc.
December 2016

CANADIAN EXPLORATION SERVICES LTD

Drawing: Q2282-2205730-COLEMAN-NORTH-MAG-CONT



2205730 ONTARIO INC.

COLEMAN PROPERTY - SOUTH BLOCK
ColemanTownship, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

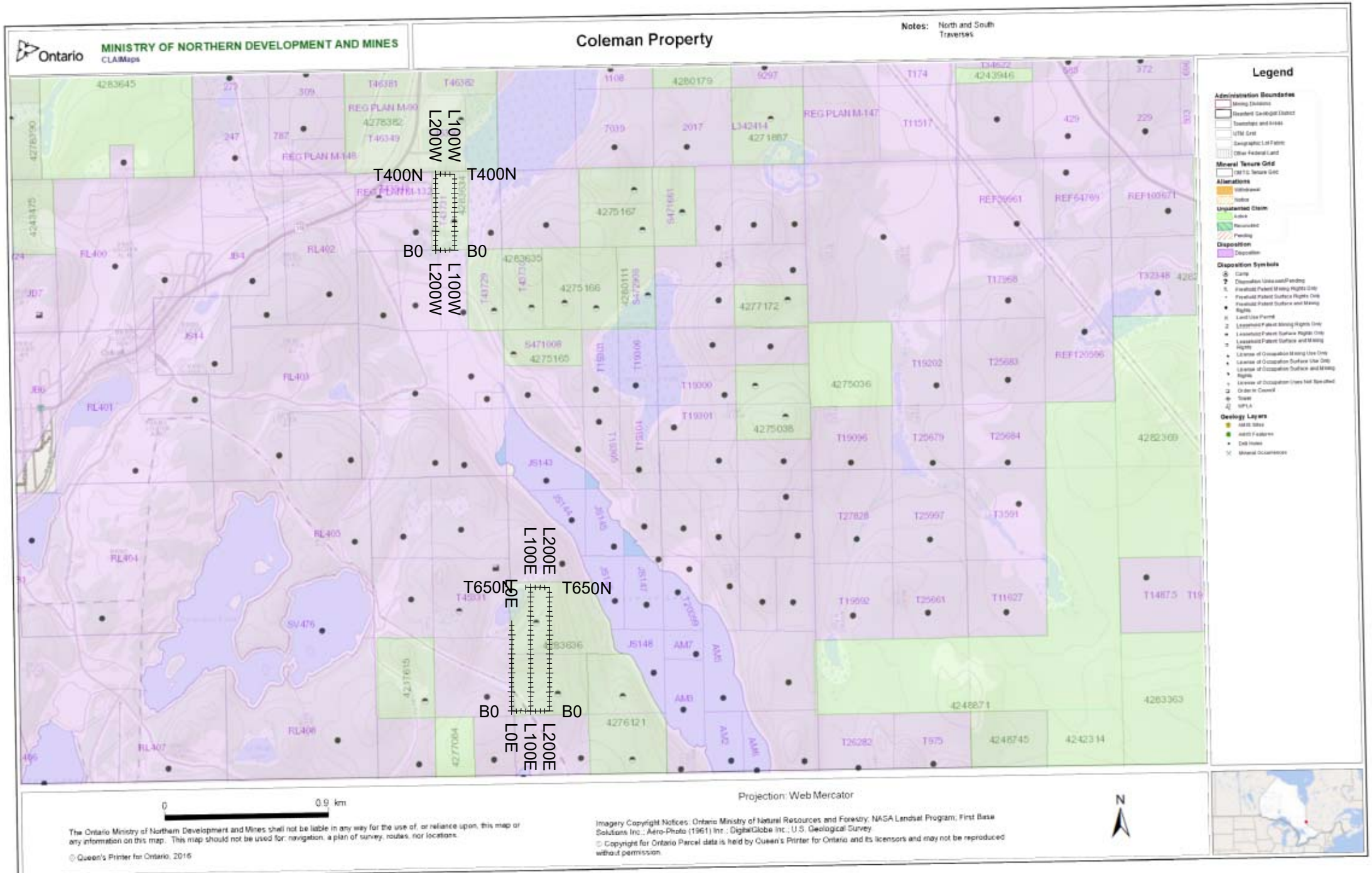
Posting Level: 0nT
Field Inclination/Declination: 74degN/12degW
Station Seperation: 25 meters
Total Field Magnetic Contours: 50 nT

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Bruce Lavalley
GPS Operated By: Ryan Lavalley
Processed by: Jason Ploeger
Map Drawn By: C Jason Ploeger, B.Sc.
December 2016

CANADIAN EXPLORATION SERVICES LTD

Drawing: Q2282-2205730-COLEMAN-SOUTH-MAG-CONT


Ontario
MINISTRY OF NORTHERN DEVELOPMENT AND MINES
CLAIMaps
Coleman Property
Notes: North and South Traverses
Legend
L100W
L200W
T400N
T400N
B0
B0
L100W
L200W
L200E
L100E
L0E
T650N
T650N
B0
B0
L0E
L100E
L200E
0
0.9 km
Projection: Web Mercator
N
The Ontario Ministry of Northern Development and Mines shall not be liable in any way for the use of, or reliance upon, this map or any information on this map. This map should not be used for: navigation, a plan of survey, routes, nor locations.
© Queen's Printer for Ontario, 2016
Imagery Copyright Notices: Ontario Ministry of Natural Resources and Forestry; NASA Landsat Program; First Base Solutions Inc.; Aero-Photo (1961) Inc.; DigitalGlobe Inc.; U.S. Geological Survey
© Copyright for Ontario Parcel data is held by Queen's Printer for Ontario and its licensors and may not be reproduced without permission.