

ASSESSMENT REPORT ON THE
JOY AND MT. MERVYN PROPERTIES 2011 EXPLORATION PROGRAM
MAYO MINING DISTRICT

Located in the Rackla Gold Belt, Yukon Territory
NTS Map Sheet 106 C 03/04 & 106 D/01
Latitude 64° 09' N; Longitude 133° 35' W (Joy Property)
Latitude 64°07' N; Longitude 134°01' W (Mt. Mervyn Property)

– Prepared for –
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Work performed on Claims
Joy 1 (YD114185) to Joy 128 (YD114312) inclusive
MRV 1 (YE15701) to MRV 178 (YE15878) inclusive
MRV 179 (YE15899) to MRV 280 (YE16000) inclusive
MRV 281 (YE28701) to MRV 314 (YE28734) inclusive

Between May 15 and June 1, 2011

Report dated April 15, 2012

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1.0 Introduction

This assessment report covers the 2011 airborne geophysical surveys conducted on JOY and MRV claims owned by Expedition Mining Inc. The Joy and MRV (Mt. Mervyn) claim blocks are located in the Mayo Mining District, Yukon Territory, an overview of their location is shown below in Figure 1. The Joy block consists of 128 claims and the Mt. Mervyn block consists of 314 claims. The Joy claims (Figure 2) were staked in October 2010 and are active until October 20, 2016. The Mt. Mervyn claims (Figure 3) were staked in March 2011 and are active until March 15, 2017. Access to the Joy and Mt. Mervyn blocks is by helicopter from the town of Mayo, Yukon Territory.

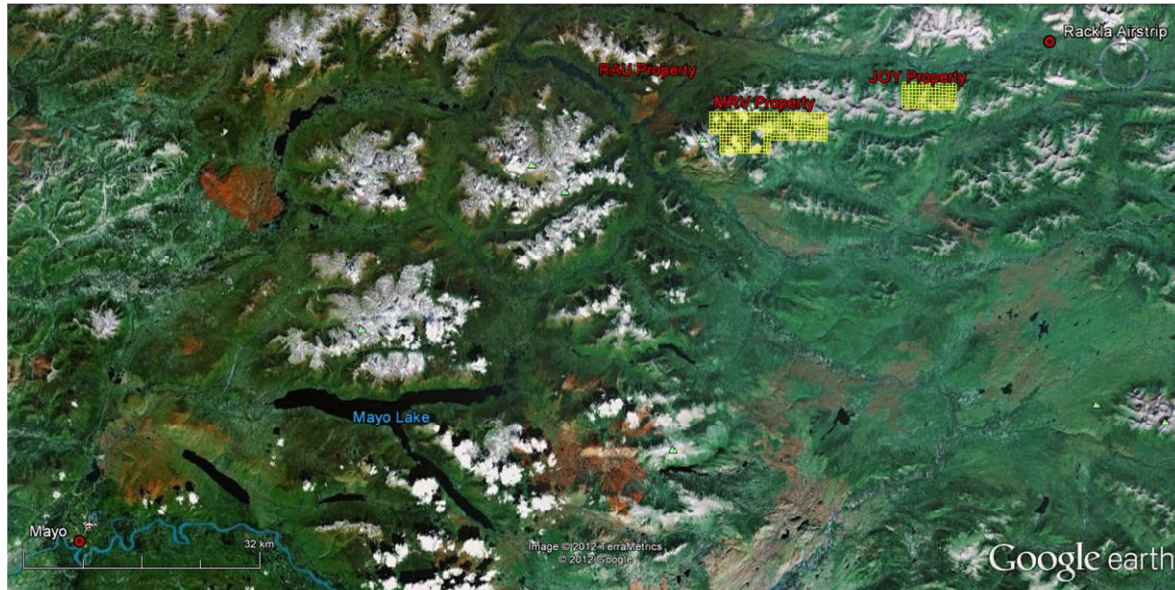


Figure 1 - Joy and Mt. Mervyn Property Location Map

2.0 Regional Geology

Joy Block

Regional mapping of the Mount Mt. Mervyn Map Sheet (106C/04) was completed in 2010 by Joyia Chakungal and Venessa Bennett with the Yukon Geological Survey at 1:50K scale (2011). The Joy claims are located mainly in the Nadaleen Domain. North of the Dawson Thrust are Permian aged limestone, phyllite and ultramafic rocks and Earn Group mudstone and chert. South of the Dawson Thrust are Hyland Group slates and conglomerates and calcareous sandstones (Chakungal *et al.* 2011).

Mt. Mervyn Block

The Mt. Mervyn block claims, located on NTS Map Sheet 106D/ 01 have only been mapped at the 1:250K scale by the Yukon Geological Survey. Regional geology indicates that the Mt. Mervyn block is located south of the Dawson Thrust and is mainly comprised of Devonian-Mississippian limestones.

3.0 Exploration

In 2011 Expedition Mining Inc. contracted SkyTEM Surveys ApS to complete a 1143.2 line kilometer Airborne Time Domain electromagnetic (TEM) and magnetic (Mag) survey over both the Joy and Mt. Mervyn claims. The survey was flown between May 15 and June 1, 2011 using a Eurocopter AS350FX2, operated by Abitibi Helicopters Ltd.

Flight lines for both Joy and Mt. Mervyn grids were oriented North-South with 100m line spacing and tie-lines were oriented East-West with 1000m line spacing. Map 4 shows locations of flight lines with respect to the JOY claims and Map 5 shows locations of flight lines on the Mt. Mervyn block.

Base stations for both the differential global positioning system (DGPS) and magnetometer were located at the Rackla Airstrip as it was the closest accessible place to the survey areas. Survey specifications included an average flight speed of 60km/h with nominal terrain clearance of 30-40 m.

SkyTEM Surveys ApS uses a time domain electromagnetic system that includes a data acquisition system, two DGPS', a magnetometer, two inclinometers and two altimeters. Complete set up is shown in Appendix III -Page 6. All data was processed by SkyTEM using proprietary software called SkyPRO as well as Geosoft's Oasis Montaj, complete details of which are included in Appendix III. The TEM data corrections include tilt processing, height processing and DGPS processing. The Mag data were corrected for diurnal variations, International Geomagnetic Reference Field (IGRF), heading corrections and leveling between survey and tie-lines.

Complete TEM and Mag data sets for both the Joy and Mt. Mervyn properties are included in Appendix III as Geosoft's Oasis Montaj database files. Page 20 of the report contains a table describing the channels of the TEM databases and Page 26 contains a table describing the channels of the Mag databases (Appendix III).

SkyTEM Surveys ApS also performed inversion and modeling of the TEM data for the Joy and Mt. Mervyn properties using an inversion code named SELMA. The details of initial models, optimization norms, layer thicknesses, regularization and noise models used in the inversion are described in Appendix III pages 29 – 30. The inversion results are presented in Geosoft database format and a table of channel descriptions is on Page 32 of the report (Appendix III). SkyTEM also produced model sections and profile grids which are located within the Inversion folder of Appendix III for each block.

4.0 Interpretation and Conclusions

Interpretations of the TEM and Mag data were performed by Aurora Geosciences Ltd. Both TEM and Mag data were used along with known bedrock geology. Both the Joy and Mt. Mervyn properties have permissive carbonate geology for Carlin-style gold mineralization as observed at the Osiris Zone on the adjacent ATAC Rau property (ATAC Resources Ltd., 2011).

Joy Block

The Mag data used for interpretation was the Total Magnetic Field as shown in Map 6– JOY MAG. Map 6 shows all North-South data and magnetic trends are indicated in orange. Line A follows the most prominent magnetic high and nearly corresponds to the ultramafic bedrock unit as mapped by Chakungal. Line B may be another piece of ultramafic bedrock. Line C is a much more subtle feature of interest due to correlation with the TEM results. The assumed ultramafic unit(s) indicated in the magnetic data are likely major structural boundaries, and possibly suture zones and define a zone of interest. The magnetic signature of the main unit with its northern extent defined by Line A indicates a southward dip which is consistent with Chakungal’s observations (2011). The ultramafic unit has potential to host lithwanite-hosted gold.

The TEM data from the x20 channel of the Joy Block indicates broad East-West trending structural zones, indicated by shading in Map 7– JOY TEM x20 Fraser filter. Using both earlier and later channels as well as Z-component data allows for a more thorough understanding of the regions of interest. Later channels, such as z25, indicate that while East-West trends continue to north of the shaded area these rocks belong to a different domain. The two shaded zones are the primary areas of interest because of increased continuity of the early-time features in these areas. Carlin-style gold mineralization at ATAC’s Osiris zone occurs on late north-south structures adjacent to large-scale east-west structures. Therefore, specific targets at the Joy can be chosen based on North-South trending disruptions to the major east-west trending structures which are visible in early time channels (such as x7 and x10 Fraser filtered data).

Mt. Mervyn Block

The magnetic signature of the Mt. Mervyn block is very subtle in comparison to the Joy Block (Map 8 – Mt. Mervyn MAG). The magnetic data did not indicate any structure and as the magnetic data was not used for the interpretation on this block.

The TEM data as shown with the x20 Fraser filter in Map 9 indicates several major East-West trending units. The primary area of interest is thought to be between the two major structural features on the property and on the more distinct structural trends on the northern part of the property, indicated by shaded areas. Specific target zones can be once again chosen based Carlin-style gold mineralization at ATAC’s Osiris zone and therefore on breaks in the East-West trending zones as defined by mid time channels of the TEM data.

5.0 Recommendations

To further understand the Joy and Mt. Mervyn properties and the potential to host gold mineralization, prospecting and soil sampling programs should be conducted around the areas of interest.

6.0 References

ATAC Resources Ltd., 2011. Personal communication between Aurora Geosciences Ltd. personnel and ATAC Resources Ltd. personnel. Summer 2011.

Chakungal, J. and Bennett, V., 2011. New bedrock geology of Mount Mervyn map sheet (106C/04) and mineral potential for the South Wernecke mapping project. *In*: Yukon Exploration and Geology 2010, K.E. MacFarlane, L.H. Weston and C. Relf (eds.), Yukon Geological Survey, p. 55-87.

APPENDIX I
STATEMENT OF QUALIFICATIONS

I, Dave Hildes, P. Geo., certify that:

- 1) I reside at 125 War Eagle Way, Whitehorse, Yukon Territory, Y1A 5W5
- 2) I am a geophysicist employed by Aurora Geosciences Ltd. of Whitehorse, Yukon Territory.
- 3) I graduated from the University of British Columbia with a Ph. D. in geophysics in 2001 and have worked as a geophysicist since that time.
- 4) I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, Registration No 29887.
- 5) I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, in Expedition Mining Inc. or any of its properties

Dave Hildes, Ph. D., P. Geo.

APPENDIX II
STATEMENT OF EXPENDITURES

			Total	Total Joy	Total Merv
Total airborne for NS lines, invoices 1004, 1013 & 1025					
line kilometers	1056	150	158400		
extra heli			7500		
report			10000		
HST			21108		
			Total	197008	57052.09
					139955.9
Invoice 10217 from Aurora					
project management (hr)	37	90	3330		
geophysicist & truck (days)	2	1050	2100		
expediting (hrs)	2	75	150		
expedition (days)	2	635	1270		
GST			342.5		
			Total	7192.5	2082.896
					5109.604
Invoice 10237 from Aurora					
Fixed wing air charter			14250		
Bulk fuel			8555.7		
Admin fee			2280.57		
GST			1254.314		
			Total	26340.58	7628.042
					18712.54
Invoice 10238 from Aurora					
project management (hr)	27	90	2430		
expediting (hrs)	1.25	75	93.75		
data processing	10	75	750		
GST			163.6875		
			Total	3437.438	995.457
					2441.98
Invoice 10391 from Aurora					
project management (hr)	8.25	90	742.5		
expediting (hrs)	1.25	45	56.25		
expedition (days)	1.5	635	952.5		
GST			87.5625		
			Total	1838.813	532.5068
					1306.306
				Total	68290.99
					167526.3