

ASX announcement

19 December 2016

Crescent Lake Lithium Project Update

Argonaut Resources NL (ASX: ARE) (*Argonaut* or the *Company*) is pleased to provide the following update on progress at the Crescent Lake lithium project in Ontario, Canada.

Argonaut is targeting hard-rock lithium deposits at Crescent Lake with a view to defining a lithium reserve for mining. The demand for lithium has been particularly strong in the past 12 months mainly due to increased production of lithium batteries for electric vehicles.

Hard-rock lithium deposits generally involve the mineral spodumene which is hosted within thick, coarse-grained veins called pegmatites. This is the case at Crescent Lake.

Highlights

- A program of detailed mapping identified 39 possible pegmatite occurrences. Of these occurrences:
 - three are positively identified as spodumene bearing; and
 - 24 have a coarse-grained texture diagnostic of pegmatites.
- Argonaut and Canadian Orebodies Inc concluded an extension and variation to the option agreement for the acquisition of the Crescent Lake claims.
- Argonaut now has until 28 February 2017 to complete its assessment.

Crescent Lake

Mapping Program

Crescent Lake is located 250km NNE of Thunder Bay in Ontario, Canada (Figure 3).

In November, Argonaut completed a detailed mapping program across areas previously identified as prospective for pegmatite occurrences. The mapping program involved 50 or 100m spaced traverses which were systematically walked by geologists over the target areas shown in Figure 1.

The survey team identified 39 possible pegmatites. The newly mapped occurrences were predominantly located in the areas of known occurrences. Of the 39 occurrences:

- three are positively identified as spodumene bearing;
- 24 have a coarse-grained texture diagnostic of pegmatites;
- four are not in-situ;
- sizes ranged from:
 - 20m outcrop of unknown thickness; to
 - 10cm thick vein.
- 34 occurrences are located on optioned claims and five occurrences are on claims held 100% by Argonaut's subsidiary, Sunrise Canada Inc.

The most promising occurrence mapped is exposed over 20m. This occurrence is located in the Falcon Lake area (see Figure 1: Target Area 1) and is a newly discovered pegmatite. This pegmatite may contain spodumene and may have a significant strike length and thickness.

Samples collected during the program have been submitted for assay.

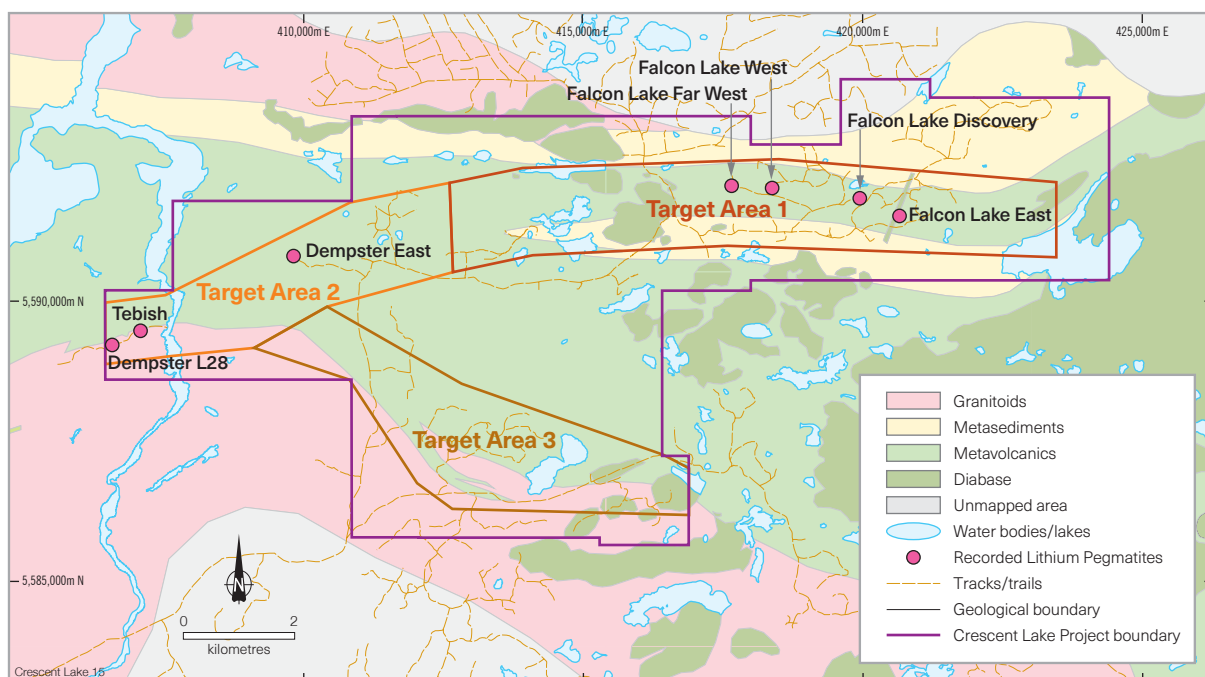


Figure 1 Exploration target zones at Crescent Lake.

Amendment to Option Agreement

On 4 March 2016, Argonaut announced it had entered into an option agreement with Canadian Orebodies Inc, a TSX listed company, to acquire claims within the Crescent Lake pegmatite swarm.

The option agreement required Argonaut to complete its assessment of the project by 30 November 2016 at which time Argonaut could elect to purchase 100% of the claims for CAD200,000.

A variation and extension to the option agreement has now been executed which provided for the following amended terms:

- Canadian Orebodies granted Argonaut an extension to the assessment period under the option agreement from 30 November 2016 to 28 February 2017.
- In exchange for the grant of this extension, Argonaut:
 - made a cash payment to Canadian Orebodies of CAD50,000;
 - issued AUD70,000 worth of ordinary shares, calculated on the 2 week volume weighted average price, to Canadian Orebodies; and
 - may make a final purchase payment of CAD150,000 on or before 28 February 2017, at the conclusion of the assessment.

2016 Drilling Program

In July, Argonaut completed a six-hole program of diamond core drilling at the Falcon Lake West deposit. The program targeted two pegmatite units, one of which outcrops boldly.

Highlights from analysis of the 2016 drilling program include:

- 24.4m at 1.48% Li₂O from 10.9m; including 9.0m at 1.95% Li₂O from 20.4m in drill hole FLDD006.
- 11m at 1.05% Li₂O from 40.2m; including 6m at 1.26% Li₂O from 43.8m in drill hole FLDD002.
- 21.7m at 1.09% Li₂O from 48.0m; including 7.9m at 1.31% Li₂O from 49.8m in drill hole FLDD001.

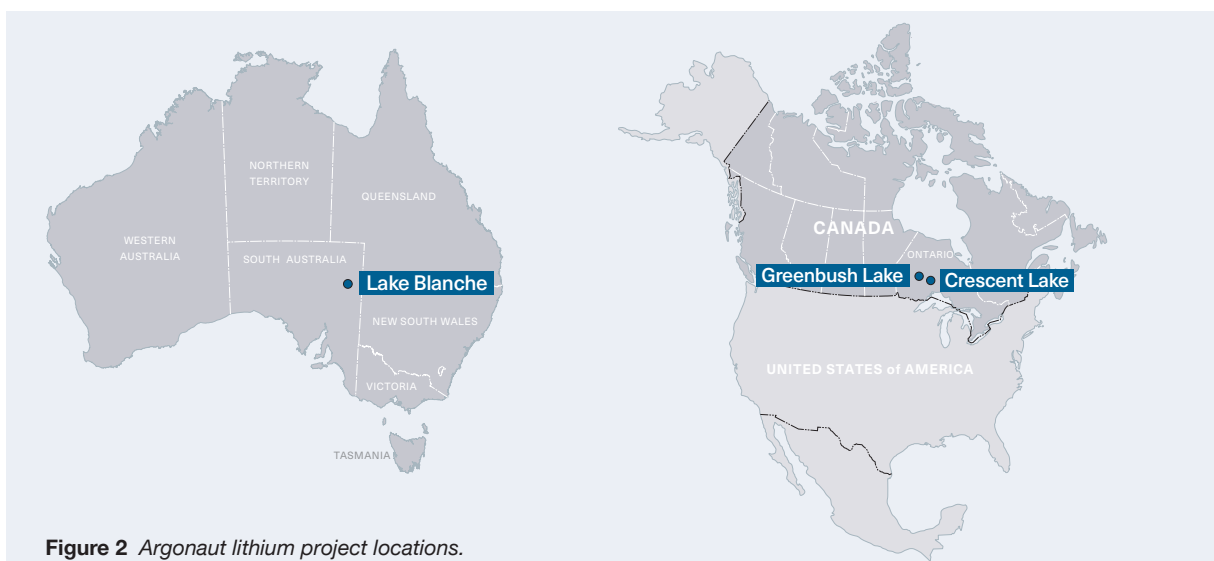
This program confirmed that grades and thicknesses in the Falcon Lake area are potentially economic.

Next Steps

Argonaut will assess assay results from samples taken during the detailed mapping program and on the basis of these results will conclude its assessment of the project by 28 February 2017.

Background

Argonaut now has rights to two Canadian projects and one South Australian lithium exploration target.



Crescent Lake Project, Canada

(Argonaut acquiring 100%)

On 4 March 2016, Argonaut released details of the acquisition of the Falcon Lake and Zigzag blocks within the Crescent Lake Lithium Project area in Ontario, Canada (Figure 4).

Argonaut later announced that it had pegged additional claims in the area between Falcon Lake and Zigzag (Figure 4). These 100% held claims cover prospective, underexplored areas.

Crescent Lake Lithium Project highlights include:

- Adjacent 23m and 10m thick pegmatites at Falcon Lake West deposit.
- Three to four stacked spodumene bearing pegmatites over 670m at the Tebish occurrence.
- The deposits are hard-rock pegmatite deposits containing the mineral spodumene.
- The areas surrounding these known deposits are undergoing initial systematic exploration.
- There is excellent potential to define deposit extensions and additional deposits.
- The deposits are well located close to the North American rail network and a major port.

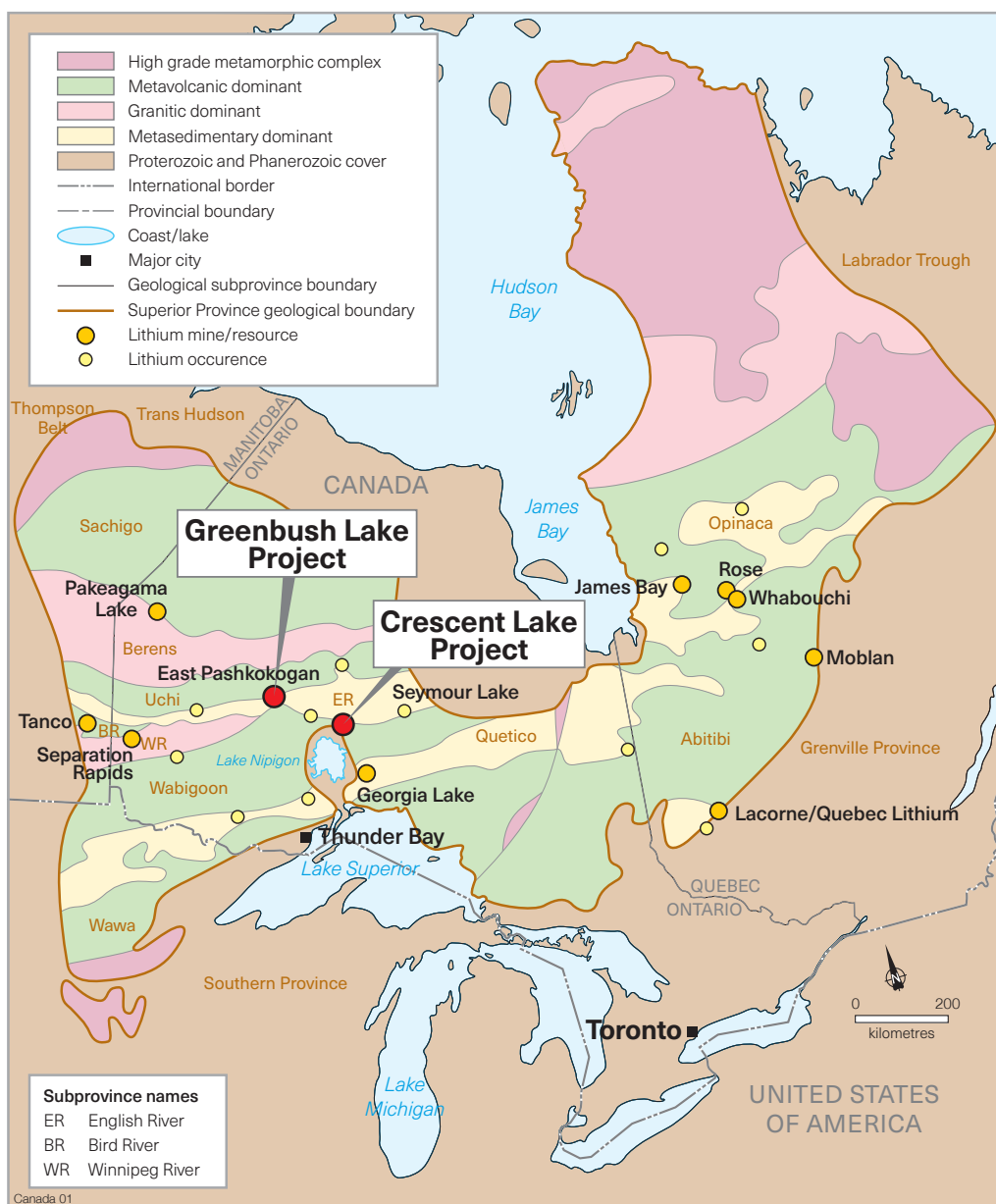


Figure 3 Geology of the Superior Province, Canada, showing Greenbush Lake, Crescent Lake and regional lithium occurrences.

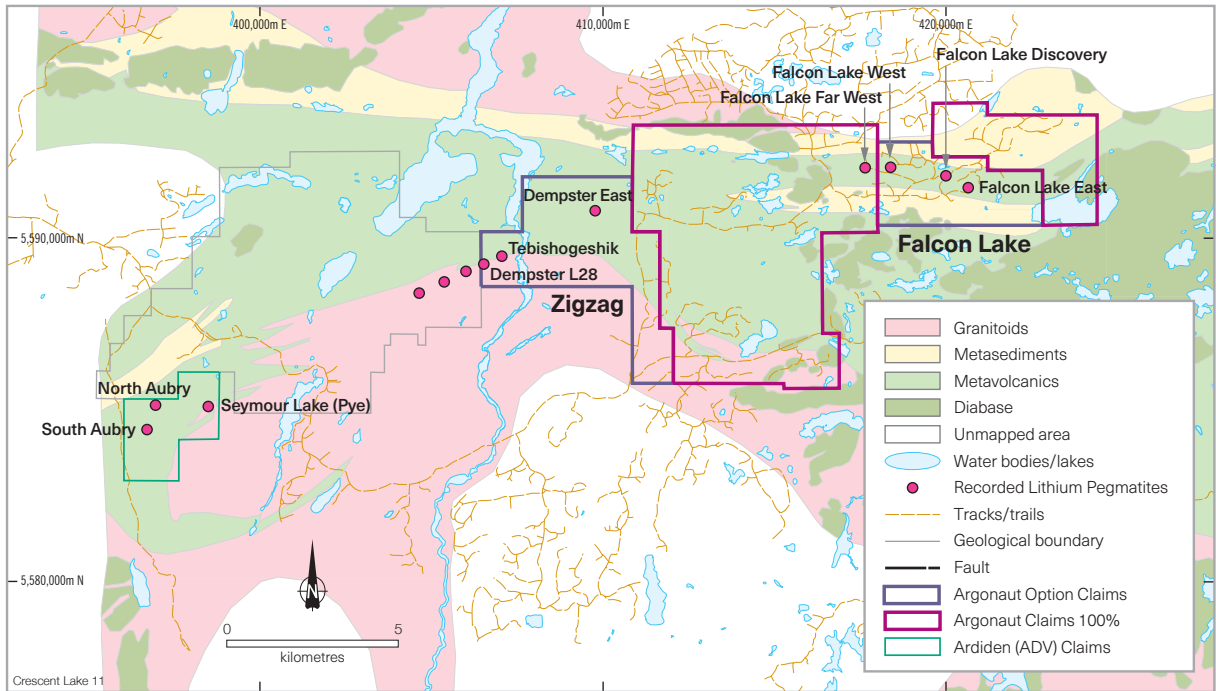


Figure 4 Crescent Lake claim locations, spodumene pegmatite occurrences and geology.

Greenbush Lake, Canada

(Argonaut 100%)

The Greenbush Lake Project is located approximately 150km north-west of Argonaut's Crescent Lake Lithium Project in Ontario, Canada (Figure 3) and features a large, outcropping spodumene pegmatite with grades of up to 2.46% Li_2O within an area confirmed as having the requisite geological components for lithium pegmatite emplacement.

The known lithium pegmatite occurrence is 15m wide by 30m in exposed strike length. The actual strike length of the known pegmatite has not yet been determined as the exposure continues under thin sedimentary cover to the north and under lake waters to the south. The pegmatite has not been drilled.

Argonaut purchased a 100% interest in three mineral claims for CAD100,000. The claims are subject to a 2% net smelter royalty.

Three phases of exploration have been undertaken in the area of the lithium occurrence.

1. The Ontario Department of Mines discovered the pegmatite around 1965 and took a chip sample across the full width (50 feet) of the outcrop. Analysis of the chip sample returned 1.25% Li_2O .
2. Placer Development Ltd explored the area for tantalum in 1980. A magnetic survey attempting to define the extent of the pegmatite was unsuccessful, however an assay of the outcrop returned 2.46% Li_2O .
3. Canadian Orebodies Inc. undertook an exploration program in 2009. Highlights of a rock-chip sampling program are shown in Table 1.

Table 1: 2009 Rock-Chip sample highlights, Greenbush Lake Project.

Description	Li_2O (%)
Outcrop	1.19
Float	1.96
Float	0.85
Float	0.95
Outcrop	1.58

Lake Blanche, South Australia (Argonaut 100%)

On 4 April 2016, Argonaut announced it has secured two exploration licences covering Lake Blanche, a salt lake with the potential to host lithium brines and potash in the north of South Australia.

Argonaut also pegged the majority of Lake Callabonna to the southeast of Lake Blanche (Figure 5). This tenement is a strategic holding in the event of exploration success at Lake Blanche.

Lake Blanche is a closed-to-restricted basin covering an area of 1,700 square kilometres. It has a broad catchment that includes the Mt Babbage and Mt Painter Inliers which are recorded as containing elevated rare elements including lithium and tantalum (Figure 5).

Economic concentrations of lithium in brine generally occur in circumstances where ground waters percolate through neighbouring lithium bearing rocks into a closed, continental basin that has not been subject to marine flooding throughout its geological history. Lake Blanche appears to fit these requirements.

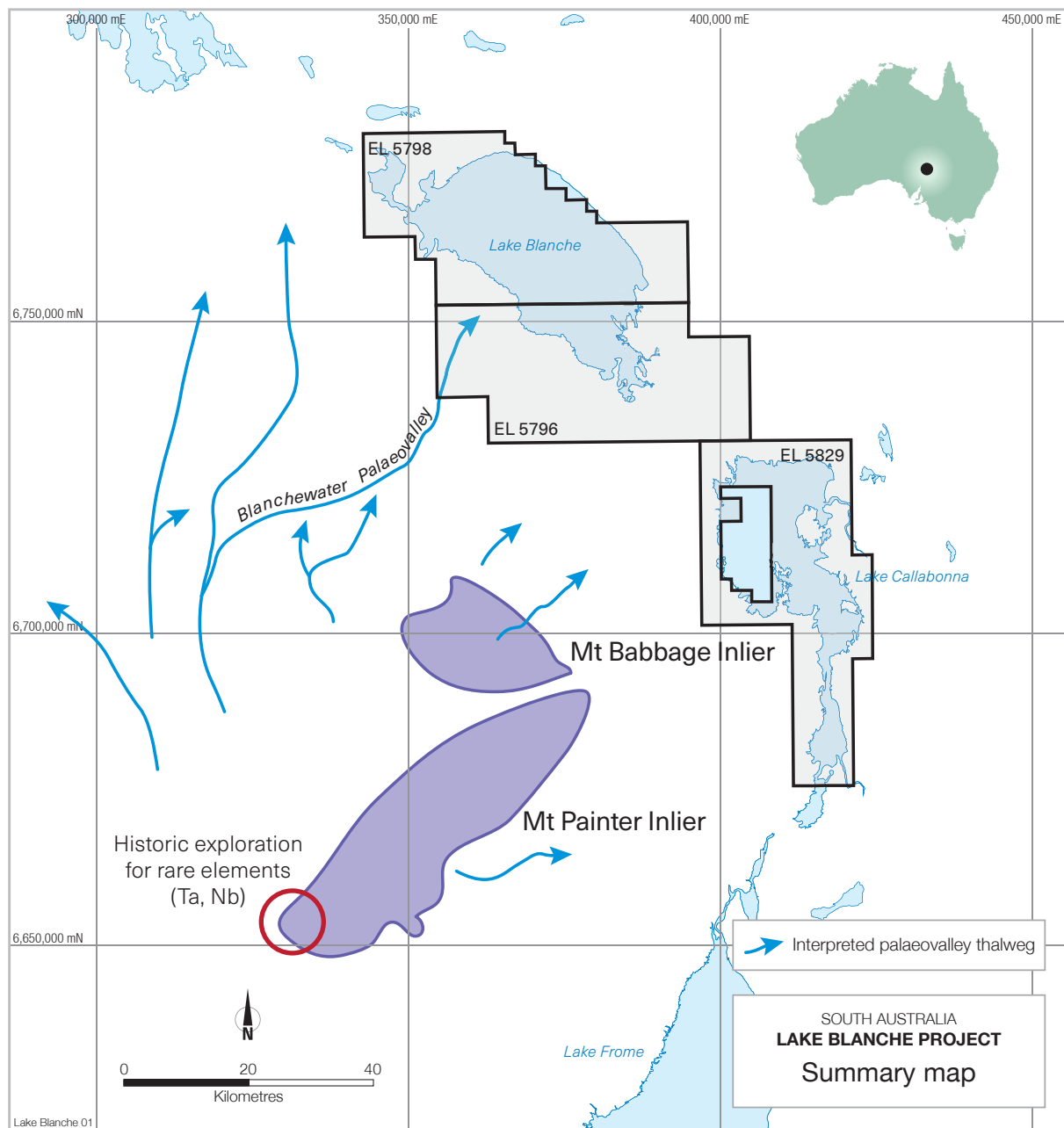


Figure 5 Lake Blanche and exploration licence locations with relevant geological/hydrological features.

An arc of lakes, including Lake Blanche, to the north of the Flinders Ranges has been independently defined as prospective by Geoscience Australia in a 2013 report titled 'A Review of Australian Salt Lakes and Assessment of their Potential for Strategic Resources'. Argonaut, having assessed the potential of each lake on merit, determined that Lake Blanche has the best potential for economic lithium grades.

In the event economic concentrations of lithium are contained in Lake Blanche's brines, the lake has the potential to be an internationally significant source.

No previous lithium brine exploration has been recorded in the Lake Blanche area although historic brine exploration has been undertaken at Lake Frome, to the southeast.

Lindsay Owler

Director and CEO

Argonaut Resources NL

Sections of information contained in this report that relate to Exploration Results were compiled or supervised by Mr Lindsay Owler BSc, MAusIMM who is a Member of the Australasian Institute of Mining and Metallurgy and is a full time employee of Argonaut Resources NL. Mr Owler holds shares and options in Argonaut Resources NL, details of which are disclosed in the Company's 2015 Annual Report and an announcement to the ASX dated 23 May 2016. Mr Owler has sufficient experience which is relevant to the style of mineral deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Mr Owler consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.