

## **EXPLORATION UPDATE NICHOLSON PROJECT (ZINC-LEAD)**

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- **Encouraging results received from Teck's 2016 exploration program**
  - **Permissive sub-basins identified for the targeting of Mt Isa-style zinc-lead mineralisation.**
  - **AMT conductivity anomaly identified in AMT survey.**
  - **2017 field work will follow up identified anomalies and expand on AMT survey areas.**
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Superior Resources Limited (ASX Code: **SPQ**) (**Superior** or **Company**) is pleased to provide the following update on the results of the 2016 exploration work conducted by earn-in partner, Teck Australia Pty Ltd (**Teck**), at Superior's 100%-owned Nicholson Project (Mt Isa-style zinc-lead).

The focus of the exploration work was on two key objectives:

1. refine and confirm the architecture of permissive sub-basins and key interpreted growth faults, such as the Nicholson River Fault (Figure 1), favourable for Mt Isa-style zinc-lead mineralisation; and
2. conduct an Audio-frequency Magneto-Telluric (**AMT**) geophysical survey to identify and characterize the structures and prospective rock packages at greater depths than conventional electromagnetic (EM) geophysical methods.

### **Favourable Setting**

Teck's targeting has identified potential sub-basin development along the Nicholson River Fault (Figure 1), a major regional structure associated with rock packages that host both the McArthur River Zinc-Lead Mine (Northern Territory) and the Century Zinc Mine (Queensland).

These interpreted sub-basins remain untested by drilling.

### **AMT Results**

Three lines of AMT were completed during the 2016 field season.

Permissive rock packages were believed to be detected to a depth of 1000m and occurring in the hanging-wall of the major Nicholson River (growth) Fault. Survey line #1 (Figure 1) identified a conductive anomaly at a depth of between 200 and 500 metres, which is interpreted to be hosted by the same geological package which hosts the Century Zinc Mine.

Follow-up and infill lines will be conducted during the coming 2017 field season.

### **2017 Field Program**

Exploration work to progress the project during the 2017 year will include:

1. conducting follow-up and infill AMT lines to further define the currently identified AMT features; and

2. subject to results and budgetary and timing constraints, possibly drill the highest priority AMT target.

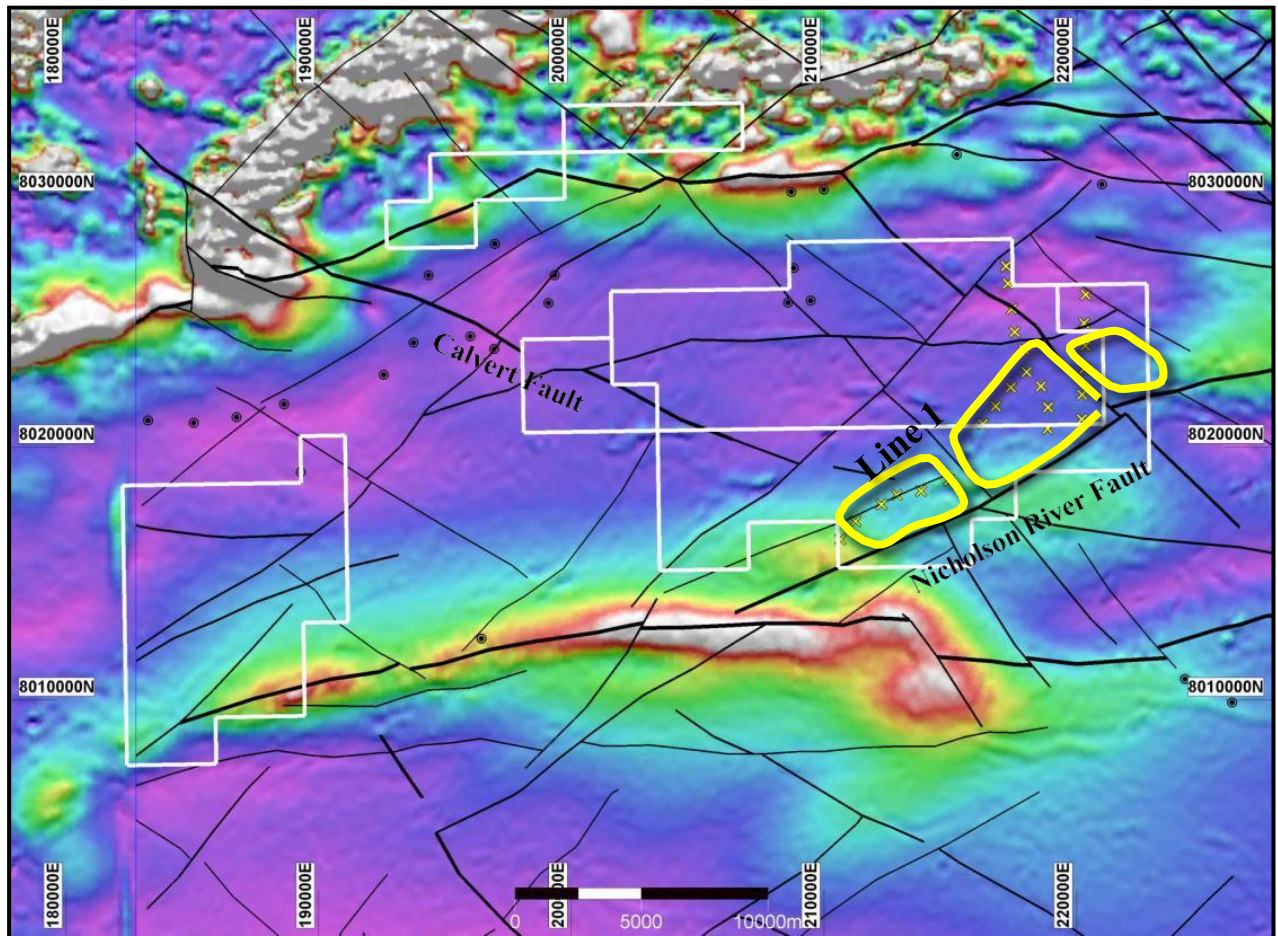


Figure 1. Interpreted sub-basins (outlined in yellow) and AMT survey lines (yellow crosses) superimposed on RTP magnetics and major structural features. AMT survey line #1, which traverses the two central sub-basins is labelled (2016 Nicholson Annual Report, Teck Australia Pty Ltd).

Managing Director, Peter Hwang, said:

*"We are very encouraged by the identification of AMT anomalies at this early stage of the Nicholson exploration program.*

*The anomalies are located within a geological and structural corridor that we hope will host a Mt Isa-style Sediment Hosted Massive Sulphide deposit.*

*The follow-up work on the AMT features that have been identified may enable the targeting of a drill hole to test the corridor by the end of the year, subject to results and budgetary and timing constraints.*

*We are excited about the results so far at the Nicholson Project and are looking forward to the forthcoming 2017 field season."*

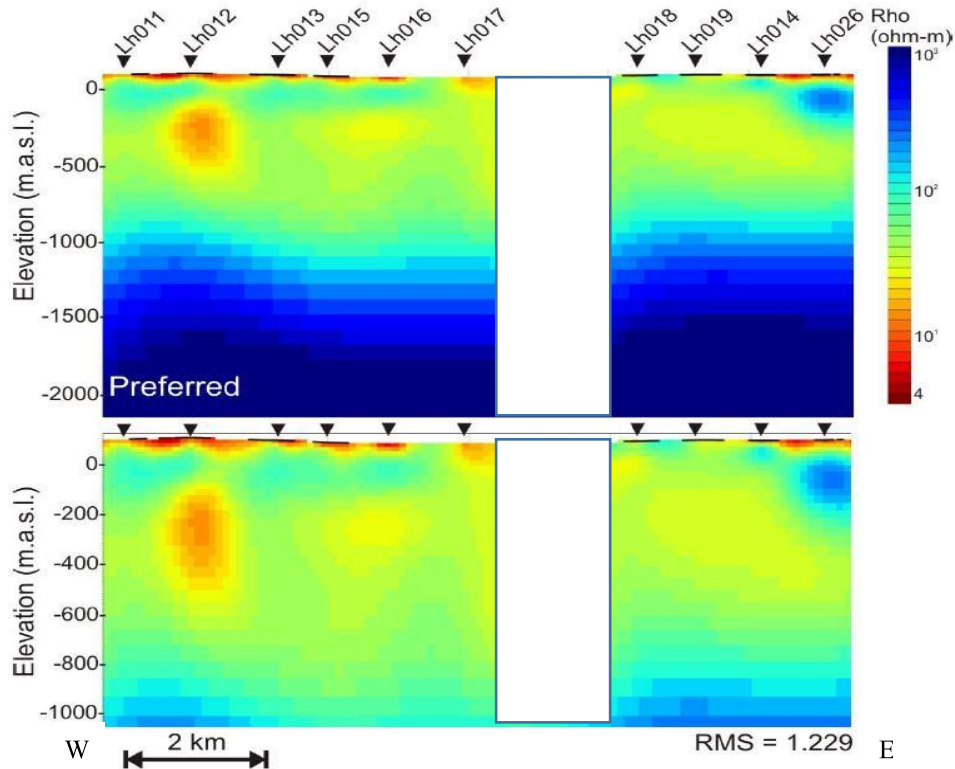


Figure 2. AMT survey line #1 – 2D inversion modelling of AMT data presented in section showing the variation of interpreted conductivity with depth. The top image is modelled to 2km and the bottom image modelled to 1km. AMT anomaly clearly present at station Lh012 (2016 Nicholson Annual Report, Teck Australia Pty Ltd).

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## Background

Teck Australia Pty Ltd is a wholly-owned subsidiary of Canada's largest diversified resource company, Teck Resources Limited.

The Nicholson Project (EPM15670 and EPM18203), located near the Walford Creek lead-zinc-silver-copper deposit, is considered to have the potential to contain Sediment-Hosted lead-zinc-silver Massive Sulphide deposits (SHMS), similar to the Mount Isa Mine and the McArthur River Mine (refer to Figures 4 and 5).

The Nicholson Project Earn-in and Joint Venture Agreement (**Agreement**) was entered into with Teck on 9 October 2015 (refer ASX announcement 3 November 2015).

Under the terms of the Agreement, Teck has an exclusive right to earn a 70% interest in the Nicholson Project by spending \$2,500,000 in accordance with the following structure:

- (Initial Period) – incurring \$250,000 Minimum Expenditure: to be spent on exploration by 31 December 2016; and
- (Earn-In Period) – incurring \$2,250,000 in further expenditures on or before the 31 December 2018.

On 14 November 2016 Superior announced that Teck had completed the Initial Period Minimum Expenditure and that Teck had confirmed its intention to progress to the Earn-in Period.

As at 31 December 2016, Teck had spent a total of \$385,240 under the Agreement.



Figure 3. Nicholson Project – project location relative to major lead-zinc mines and Superior's projects.

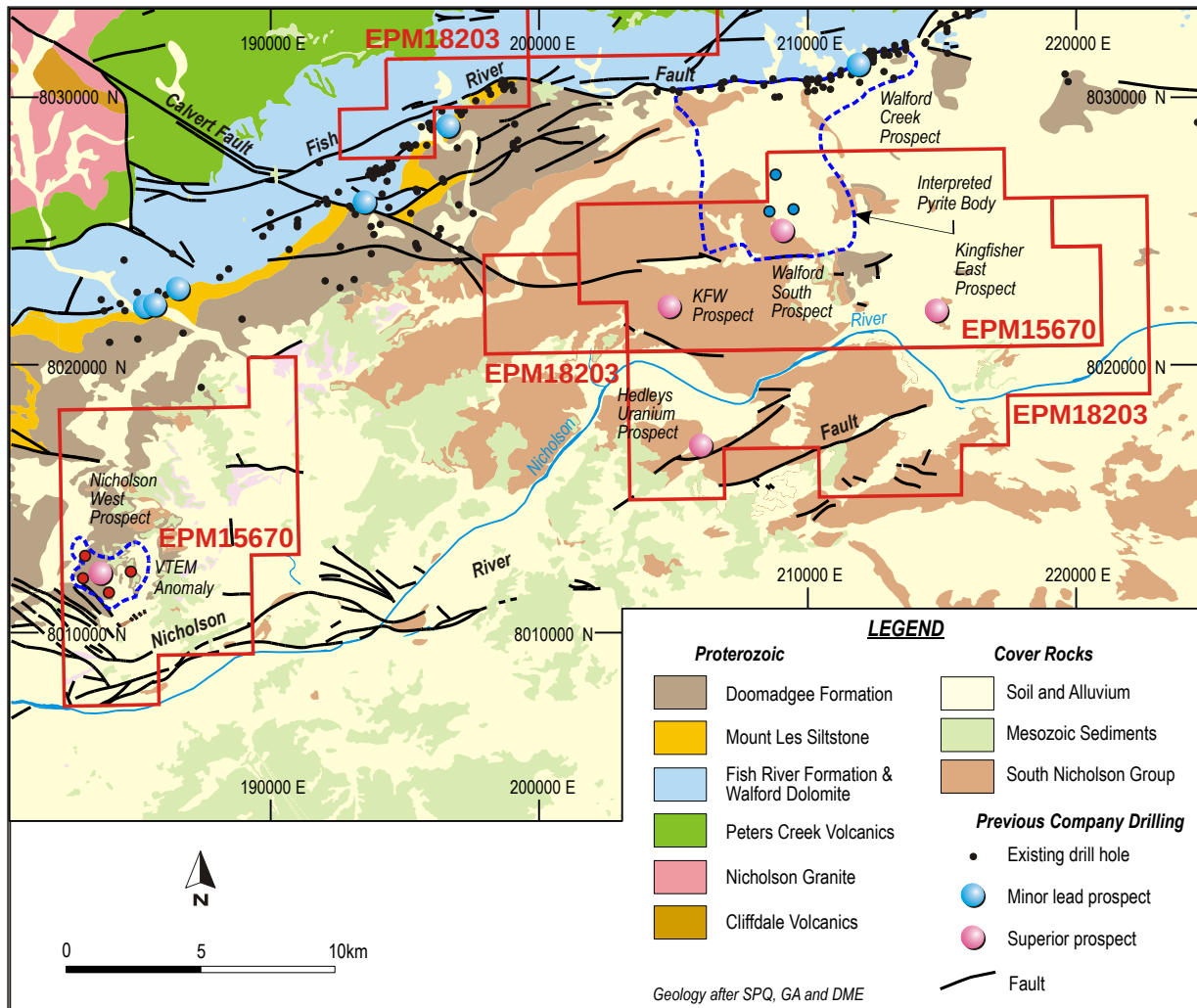


Figure 4. Nicholson Project tenements and prospect locations overlaid on background regional geology.