



Cassini Resources (ASX: CZI)

Cassini embraces that 'Zincing' feeling

Cassini Resources (ASX: CZI) has claimed discovery of a potential new zinc-lead province at the company's West Arunta project (X17) in Western Australia.

THE X17 PROJECT IS LOCATED NEAR LAKE MCKAY, 20 kilometres from the community of Kiwirrkurra near the Western Australia – Northern Territory border.

Cassini acquired 75 per cent of the project in 2013, increasing that to 100 per cent in July 2015.

The X17 discovery was based on analysis of soil and lag geochemical data and the subsequent identification of gossan outcrops during field reconnaissance the company carried out in late October 2015.

The discovery provides Cassini with a well-earned 'multi-commodity' merit badge as it is a respectable companion to the company's West Musgrave project, where it has established a Mineral Resource estimate for the Nebo-Babel deposit of 203 million tonnes at 0.41 per cent nickel and 0.42 per cent copper ((0.3% nickel cut-off grade) containing 832,000 tonnes of nickel and 853,000 tonnes of copper, with a healthy portion of the in-pit Resource sitting in the Indicated category.

Cassini believes its new zinc-lead discovery has the right to be categorised as 'significant' based on the outcomes of work it has completed so far, including:

The X17 project was generated as part of a continental-scale targeting

study by the company, focused on frontier terranes in Western Australia;

X17 is considered to be a highly-prospective, large-scale conceptual target within the Centralian Superbasin, an area considered to be greatly under explored;

It occurs at the intersection of several fundamental lithosphere-scale structures;

Confirmation of X17's prospectivity was demonstrated by a broad-spaced soil sampling program identifying discrete zinc soil anomalism of up to 10 times background, with supporting anomalism in lead, copper and silver;

Coincident lag samples show highly anomalous zinc of up to 0.2 per cent;

Importantly, coincident cadmium anomalism present in the lag is recognised as a signature of sphalerite, the primary source of zinc mineralisation;

Recent field reconnaissance identified several outcropping gossans as the likely source of each soil and lag anomaly;

Lag and gossan anomalism was verified in the field with portable XRF results of up to 0.6 per cent zinc, 0.2 per cent lead, 0.4 per cent nickel and 0.05 per cent copper.

"The results from X17 have given us something else, along with the

Nebo-Babel prospect, to be extremely excited about," Cassini Resources managing director Richard Bevan told *The Resources Roadhouse*.

"We have been slowly progressing this project in the background for the past 12 months, making sure we gave it the benefit of our usual strategies and specifics, while we focussed on our West Musgrave project.

"But the turning point has been the identification of the gossans which we believe is direct evidence of primary zinc mineralisation beneath the weathered zone.

"These zinc and lead concentrations are highly anomalous for the weathered rock due to zinc mineralisation usually being leached away.

"We truly believe we have potentially found a new zinc-lead province, which we feel we will be able to progress through to discovery in a cost effective and timely manner without requiring additional funding."

The backbone of the discovery is the identification of three new zinc - lead prospects at X17, which have been called Enceladus, Iapetus and Rhea.

All three anomalies are interpreted to lie on a single continuous stratigraphic horizon, referred to as the Dione Horizon.



The Dione Horizon came to Cassini's attention as a possible distinctive stratigraphic horizon from re-processing of public aeromagnetic data.

It was identified within a lower section of the Bitter Springs Formation and is characterised at least partly by a subtle magnetic anomaly, which stood out in contrast to the rest of the Amadeus sediments in the area which are essentially non-magnetic.

Cassini interpreted this to suggest this magnetic anomaly may represent a concentration of pyrite positioned in an outer halo around the zinc mineralisation.

The Enceladus prospect has the highest zinc and cadmium in soil and lag results but it is under a healthy coverage of sand, presenting only minor gossanous sub-crop.

What is worth taking note of is that although Enceladus' surface mineralisation is limited, the soil anomaly extends over an impressive 3.5 kilometres.

The Iapetus prospect lies immediately east of Enceladus and is considered by Cassini to possibly be part of the same system but dislocated by a cross-cutting fault.

This prospect has a soil anomaly striking over 1.6km, associated with a prominent gossanous outcrop that stretches over 700m strike.

The Rhea prospect presents as a strong coincident lead and copper anomaly, which measures in as the largest soil anomaly of the three at over 5km of strike.

Rhea also features a discontinuous gossan striking over 500m with highly elevated nickel (up to 0.4% in oxidised shale) as well as zinc and lead showing up in the pXRF data.

"The three highly-zinc anomalous lag samples, which subsequently became the prospects already mentioned, clearly represented a

different population to the remainder of the data," Bevan said

"More importantly, these three also emerged as the strongest cadmium anomalous samples in the data set, demonstrating a ranking of cadmium enrichment exactly the same as the rank order of zinc enrichment.

"The technical significance is that cadmium is typically concentrated in sphalerite, the primary ore mineral for zinc and therefore these three zinc-cadmium lag samples are considered to have the direct geochemical signature of sphalerite mineralisation."

With the success it has already achieved at its West Musgrave project, Cassini has established itself as an exploration play with a wealth of considerable experience and knowledge within the company's Board and management team.

This is why the company has already established a forward-looking program to evaluate several exploration fronts.

The Iapetus, Enceladus and Rhea targets have already been well defined by current sampling and mapping.

These targets are now drill ready and are set to be tested by a reconnaissance-style drill program designed to test for economic primary mineralisation beneath the gossans.

To clear the way for the drilling program, Cassini is busy preparing all necessary heritage and environmental approvals as soon as possible.

"Because the current geochemical sample spacing is too broad to identify more subtle exposures of mineralisation or any specific drill targets not associated with subcropping gossan, we will need to carry out an infill geochemical sampling program along the prospective target horizon," Bevan explained.

"To ensure we have a smooth transition into that drill program, a works program for heritage approval is currently being prepared."

Cassini is also casting a glance over a magnetic anomaly that has been identified north of Enceladus in the interpreted syncline position of the Dione horizon, which the company believes to be an ideal setting for sedimentary zinc mineralisation.

This conceptual target is known as Mimas and has been earmarked by Cassini as an exploration priority.

Like the Enceladus prospect, Mimas too is extensively sand covered with no bedrock exposure therefore it requires high-resolution geophysics to assist reconnaissance drill targeting.

"It is a similar geological setting to the Teena deposit, which was recently discovered by Teck in the Northern Territory," Bevan said.

"Our thoughts are that the magnetic anomaly could represent pyritic horizons that typically surround sedimentary zinc mineralisation." 🏠

The Short Story

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