



Cassini Resources (ASX: CZI)

Cassini Resources Progressing Wide-Ranging Portfolio

Base and precious metals developer and explorer Cassini Resources (ASX: CZI) has a project portfolio boasting an advanced Joint Venture with a major partner and its own prospective exploration plays.

CASSINI RESOURCES' MAIN PROJECT IS THE West Musgrave Joint Venture with OZ Minerals (ASX: OZL) where the JV is working together to develop the West Musgrave nickel-copper project (WMP) in Western Australia.

The latest activities at the WMP have advanced the Nebo-Babel Pre-Feasibility Study (PFS) where OZ Minerals recently progressed through the Stage 1 Earn-in requirement by contributing \$22 million to acquire a 51 per cent interest in the project.

The PFS is on-track for completion in the second quarter of 2019.

The PFS resource infill drill program was completed late last year comprising approximately 40,000m of RC drilling.

Cassini anticipates the results will improve resource confidence and allow a maiden Ore Reserve estimate being published to coincide with completion of the PFS.

A further 4,000m of RC drilling was completed as part of an additional 23,000m drilling brought forward from the planned Stage 2 Feasibility Study program.

Resource definition drilling is due to re-commence during the March Quarter 2019 and in the meantime a new resource model for Nebo-Babel is being progressed utilising the new infill assay and geological data.

The WMP is the largest undeveloped nickel-copper project in Australia in a new mining camp with three existing nickel and copper sulphide deposits and several other significant regional exploration targets already identified that currently has over one million tonnes of contained nickel and two million tonnes of contained copper in Resource.

The recent PFS work included continued metallurgical testing, focusing on a variability program as well as flowsheet improvement opportunities.

Other work involved process plant and infrastructure engineering and market testing of power solutions.

The objectives of the metallurgy program are to improve concentrate recovery and grades across a representative range of nickel and copper ore-types to be mined from the WMP, particularly focussing on lower grades close to the economic cut-off grade.

Elsewhere on the WMP, 15 kilometres south of Nebo-Babel the JV partners made further progress on the One Tree Hill prospect, an early stage exploration target that was identified as part of a regional exploration strategy.

Although activity at One Tree Hill is relatively new, the prospect has already demonstrated potential to host ore-grade mineralisation with the extent of anomalous copper and PGE mineralisation indicating the possibility of it emerging as a very large mineralised system.

Drilling has encountered extensive and, compared to the rest of the WMP, unusually strong platinum and palladium anomalism throughout the host sequence that the JV has interpreted to possibly represent the halo to a much larger ore-system.

Two recent diamond drill holes targeting moving loop electromagnetic (MLEM) anomalies and extensions to mineralisation encountered by previous drilling (CZD0017) returned:

» **CZD0083A**

24.65 metres at 0.69 per cent copper and 0.44 grams per

tonne PGE from 337m with a higher-grade core of 9m at 1.15 per cent copper and 0.64g/t PGE.

The intersection also included a massive sulphide zone of 2.6m at 0.96 per cent copper, 0.48 per cent nickel, 0.1 per cent cobalt and 1g/t PGE.

The results are generally consistent with earlier results that intersected a massive sulphide zone within a broader disseminated zone.

A second diamond drill hole, CZD0087A, sited approximately 100m south of CZD0017, missed the target intrusion because of an apparent fault offset, but did, however, intersect a 40m zone of PGE anomalism towards the bottom of hole, possibly representing the halo of magmatic mineralisation

A down hole electromagnetic survey (DHEM) identified a large off-hole conductor consistent with copper sulphide conductivity that may represent the extension of mineralisation observed in CZD0017, but on a much larger scale.

The JV has identified this new DHEM conductor as a priority target for drill testing when exploration operations resume in 2019.

"The West Musgrave Joint Venture has had several recent successes with new discoveries at Nebo, Babel and Yappsu," Cassini Resources managing director Richard Bevan told *The Resources Roadhouse*.

"The Pre-Feasibility Study is well on track and we look at being able to provide further updates on this shortly.

"We are also awaiting drilling results from a program we completed at our 100 per cent-owned West Arunta zinc project, which we think

could become a new zinc province in one of the last mineral frontiers in Australia.”

Cassini’s drilling at the West Arunta project followed on from an Airborne Electromagnetic (AEM) survey that delivered a new geological interpretation to assist targeting for the drill program.

The AEM survey mapped stratigraphic horizons within the sedimentary basin and the ‘Dione Horizon’, which the company considers to be a discrete stratigraphic unit that is sulphide or graphite-rich, and perhaps locally mineralised, that sits within the broader Bitter Springs Formation.

These types of horizons are generally favourable targets for base metal mineralisation.

With the addition of the AEM data, the conceptual targets Cassini has previously identified at Mimas and Janus are supported by several anomalous features drawn from independent datasets making them the highest priority targets for the drill program.

The Mimas prospect is a discrete AEM anomaly and the most conductive along the Dione Horizon implying an anomalous local process.

It has given up the strongest magnetic response in the basin coincident with the AEM anomaly and is situated in a favourable position in the axis of the Dione Horizon.

The Janus prospect sits at the peak of a residual gravity anomaly that appears to be structurally controlled, potentially representing a dense sulphide body.

A discrete, isolated AEM anomaly, coincident with a small geochemical anomaly, Janus is within a structurally favourable position of the type often associated with sedimentary mineralisation.

Although the drilling was conducted last year, a laboratory backlog has prevented Cassini from completing evaluation and interpretation of

results and geological data, however, results will be released when complete.

On the corporate front Cassini has entered an option agreement to acquire 80 per cent of the Yarawindah Brook project, located 130km northeast of Perth, near the township of New Norcia.

The project has had only limited nickel, copper and cobalt exploration despite a favourable regional setting, prospective geology and near-surface occurrences of nickel and copper.

Historic exploration focussed on a PGE resource, which Cassini views as a ‘path-finder’ anomaly for massive nickel-copper-cobalt sulphides.

Drilling in 2007 targeting surface EM anomalies, returned encouraging results, yet no further follow-up drilling was conducted.

Cassini is seeking an access agreement with local landholders and environmental approvals in preparation for drill testing two electromagnetic anomalies.

Any explorer worth its salt seeks gold at some stage and Cassini is doing so at the 100 per cent-owned Mount Squires project, adjacent to the WMP.



Cassini has been developing the project over the past two years through consolidation of tenements with several prospective gold targets, which includes a range of conceptual to advanced prospects.

Having completed drilling at West Arunta, Cassini has now turned its attention to accelerating exploration at Mount Squires where gold prospects are already defined, and further work is hoped to enhance some of these targets prior to drill testing.

Targeting work is expected to continue through the March Quarter in preparation for drill testing during the upcoming field season. 📍

The Short Story

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