



## DRILLING UPDATE

### HIGHLIGHTS

- Drill hole at Succoth now complete (CZD0007)
- Encouraging broad zones of matrix & disseminated chalcopryite mineralisation
- Samples dispatched to laboratory, results due in approximately 2 weeks
- Another drill hole (CZD0008) in progress at the One Tree Hill Prospect

Cassini Resources Limited (ASX:CZI) (“Cassini” or the “Company”) is pleased to provide an update on exploration activities at its 100% owned West Musgrave Project (“Project”) in Western Australia.

### Succoth Hole Completed, Samples Prioritised

Drill hole CZD0007 at the Succoth Prospect has now been completed at a depth of 726.50m. As previously advised on 4 August 2015, the hole intersected a broad envelope of disseminated chalcopryite (copper sulphide mineral) and pyrrhotite (barren sulphide) starting at 535m and extending to approximately 615m. Within this zone is a 10m wide, visually higher grade zone of heavily disseminated to matrix sulphide with local mineralisation up to 10% chalcopryite near the basal contact. Minor pentlandite (nickel sulphide) has also been observed. The sulphides appear inter-connected and are likely to have generated the DHEM conductor which formed the drill target. Photographs of core are presented in Figures 1 to 4.

Samples have been dispatched to the laboratory in Perth and the Company anticipates assay results to be returned within 2 weeks. The hole has been cased with PVC to enable down-hole EM surveying at completion of the program to confirm the target has been hit and identify any potential new off-hole conductors. Please refer to ASX announcement dated 21 July 2015 for additional details.



Figure 1. Disseminated mineralisation at 577m.

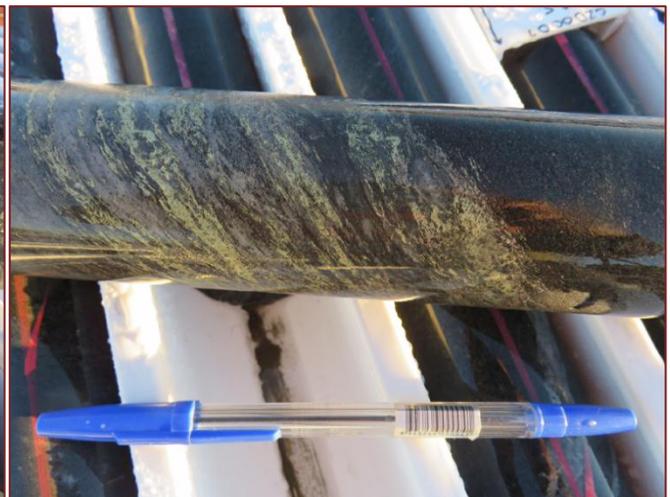


Figure 2. High grade matrix sulphide at 614m.



Figure 3. Disseminated mineralisation at 608m.



Figure 4. Chalcopyrite-rich stringer at 599m.

### One Tree Hill Drilling Underway

The drill rig has been mobilised to the One Tree Hill Prospect and drilling is underway.

The One Tree Hill prospect is located at the south western end of the project, about 13 km SW of Babel, and is associated with a major regional structural intersection (Figure 5). Only two holes have tested a surface EM anomaly identified by previous explorers with encouraging results of 0.4m @ 2.62% Cu from 152.6m. Importantly, significant PGE anomalism (up to 0.81 g/t Pt+Pd) has also been intersected. Cassini intends to step out from the previous holes to test if mineralisation extends into potentially prospective mafic rocks similar to those that host mineralisation at Succoth.

The strategic significance of the One Tree Hill prospect to the Company is that it potentially represents the discovery of a second mineralised centre, distinct from the one that hosts Babel, Nebo and Succoth. This would extend the strike of known mineralisation in the project to at least 40km.

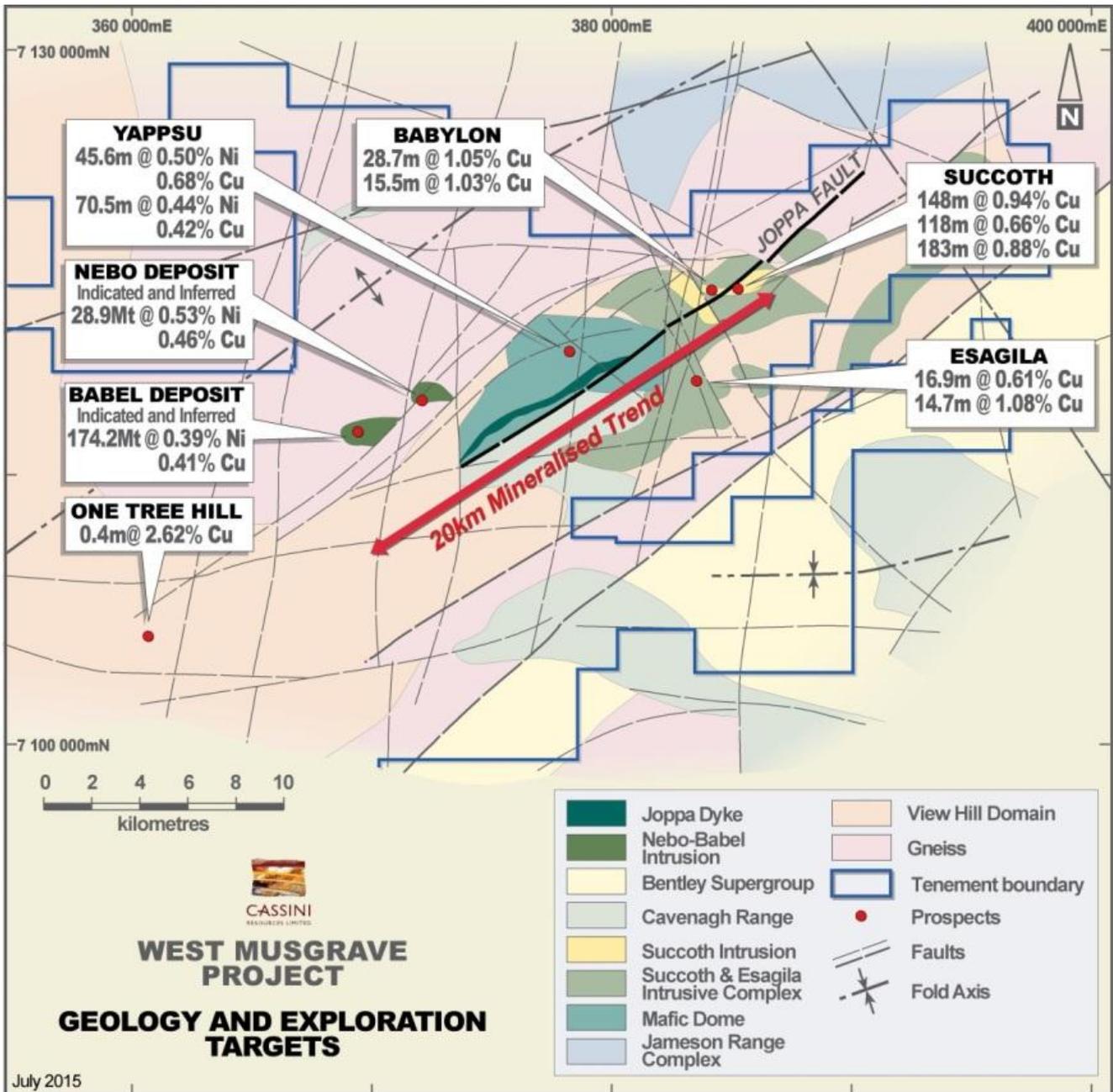


Figure 5. Regional targets and exploration highlights.

The Company will provide further updates as drilling progresses.

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## **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled or reviewed by Mr Greg Miles, who is an employee of the company. Mr Miles is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Miles consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The Company is not aware of any new information or data, other than that disclosed in this report, that materially affects the information included in this report and that all material assumptions and parameters underpinning Mineral Resource Estimates and Exploration Results as reported in the market announcements dated 13 and 15 April 2015, continue to apply and have not materially changed.

## ANNEXURE 1:

The following Tables are provided to ensure compliance with the JORC Code (2012) edition requirements for the reporting of a Drilling Update at the West Musgrave Project.

### Section 1: Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	The diamond drill hole will be sampled on nominal 1m intervals. The hole was angled towards grid southwest (289 mag) at 70 degrees to optimally intersect the mineralised zones.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	The drill hole location will be picked up by survey contractors at the completion of the drilling, they are currently surveyed by handheld GPS units. . Sampling will be carried out under Cassini protocols and QAQC procedures as per industry best practice.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	Diamond drilling was used to obtain approximately 1m samples from which 3 kg will be pulverised (total prep) to produce a sub sample for analysis by four acid digest with an ICP/AES or ICP/MS finish (0.25 gram) for base metals or a FA/AAS finish (40 gram) for Au, Pt and Pd.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc) and details (e.g. core diameter, triple of standard tube, depth of diamond tails, face-sampling bit or other type, whether core is orientated and if so, by what method, etc).</i>	Diamond drilling accounts for 100% of the drilling completed by Cassini and comprises NQ to PQ diameter core sample. Hole depth is approximately 700m.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Overall recoveries are >95% and there has been no significant sample recovery problems.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Samples are routinely checked for recovery,.
	<i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	No assay data available to determine if a relationship exists.
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	All core will be geologically logged and the level of understanding of these variables increases with the maturity of the prospect.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Logging at Succoth recorded lithology, mineralogy, mineralisation, weathering, colour and other relevant features of the samples. Logging of core is both qualitative (eg. colour) and quantitative (eg. mineral percentages).
	<i>The total length and percentage of the relevant intersections logged.</i>	All drilling will be logged in full.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Half core will be sampled. .
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Not applicable as samples will be half-core.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation</i>	The sample preparation of diamond samples at Succoth follows industry best practice in sample preparation involving oven drying, followed by

Criteria	JORC Code explanation	Commentary
	<i>technique.</i>	pulverisation of the entire sample (total prep) using Essa LM5 grinding mills to a grind size of 90% passing 75 micron.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Field QC procedures involves the use of certified reference material (CRM) as assay standards, along with blanks and duplicates. The insertion rate of these averaged 1:15 with an increased rate in mineralised zones.
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	Quarter core duplicate sampling will be 1-2% of total sampling.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered appropriate for the rock type, style of mineralisation (massive sulphides), the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements at Succoth.
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The analytical techniques used a four acid digest multi element suite with ICP/AES or ICP/MS finish (25 gram) for base metals and a FA/AAS for previous metals. The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica based samples. Total sulphur is assayed by combustion furnace. These methods approach total dissolution of most minerals.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	Hand held assay devices have not been reported.
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	Sample preparation for fineness were carried by the laboratory as part of their internal procedures to ensure the grind size of 90% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in-house procedures.  Certified reference materials, having a good range of values, were inserted blindly and randomly. Results highlight that sample assay values are accurate and that contamination has been contained.  Repeat or duplicate analysis for samples reveals that precision of samples is within acceptable limits.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Both the Exploration Manager and the Technical Director of Cassini have viewed photographs of core samples.
	<i>The use of twinned holes.</i>	To date Cassini has not twinned any drill holes.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Primary data was collected for Succoth using a set of standard Field Marshal templates on laptop computers using lookup codes. The information was sent to Geobase Australia for validation and compilation into a SQL database server.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations were made to any assay data
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Holes drilled to date by Cassini have been located with a Garmin hand-held GPS and are assumed to be accurate to $\pm 5m$ . This is considered appropriate for the drill hole spacing. At the completion of the drill program, survey contractors will be employed to complete differential GPS surveying.  Downhole surveys were completed every 5m using north-seeking gyroscopes after hole completion. Stated accuracy is $\pm 0.25^\circ$ in azimuth and $\pm 0.05^\circ$

Criteria	JORC Code explanation	Commentary
		in inclination.
	<i>Specification of the grid system used.</i>	The grid system for West Musgrave Project is MGA_GDA95, Zone 52.
	<i>Quality and adequacy of topographic control.</i>	The tenement package exhibits subdued relief with undulating hills and topographic representation is sufficiently controlled.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	The nominal drill hole spacing is 200mm (northing) by 100m (easting) in the core of the deposit.
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	Not applicable as no Mineral Resource nor Ore Reserve estimates are provided.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied.
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The drill hole is drilled towards local grid southwest at 70° to intersect the mineralised zones at a close to perpendicular relationship for the bulk of the conductor.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	To date, mineralisation orientation has been favourable for perpendicular drilling and sample widths are not considered to have added a sampling bias.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Sample chain of custody is managed by Cassini. Samples for the West Musgrave Project are stored on site and delivered to Perth by recognised freight service and then to the assay laboratory by a Perth-based courier service. Whilst in storage the samples are kept in a locked yard. Tracking sheets tracks the progress of batches of samples.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No reviews to date.

## Section 2: Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	Succoth is located wholly within Exploration Lease E69/2201. Cassini entered into an agreement to acquire 100% of the leases comprising the West Musgrave Project (M69/0072, M69/0073, M69/0074, M69/0075, E69/1505, E69/1530, E69/2201, E69/2069, E69/2070, E69/2313, E69/2338), over which the previous operator retains a 2% NSR. The tenement sits within Crown Reserve 17614.
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	All tenements are in good standing and have existing Aboriginal Heritage Access Agreements in place. No mining Agreement has been negotiated.
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Previous exploration has been conducted by BHP Billiton, WMC and Cassini. The work completed by BHP Billiton and WMC is considered by Cassini to be of a high standard.
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	The project lies within the West Musgrave Province of Western Australia, which is part of an extensive Mesoproterozoic orogenic belt. The Nebo-Babel and Succoth deposits lie within mafic intrusions of the Giles Complex (1068Ma) that has intruded into amphibolite facies orthogneiss country rock. Mineralisation is hosted within tubular chonolithic gabbro-norite bodies and are expressed primarily as a Type 2 deposit with broad zones of disseminated sulphide and comagmatic or potentially remobilised accumulations of more rich, matrix to massive sulphides.

<b>Drill hole Information</b>	<p>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</p> <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul>	<p>Full information regarding hole details will be disclosed on release of assay results. Preliminary hole details were previously reported in ASX release dated 21 July 2015. A summary of this information is not material to this announcement nor the announcement titled “Mineralisation Intersected at Succoth”, and does not detract from the understanding of the announcement due to information previously provided and the early stage nature of the exploration results reported.</p>
	<p>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</p>	<p>The exclusion of this information is justified above.</p>
<b>Data aggregation methods</b>	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p>	<p>Not applicable as no assay results are currently available nor being reported</p>
	<p>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</p>	<p>Not applicable as no assay results are being reported.</p>
	<p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>Not applicable a no metal equivalent values are being stated.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg ‘down hole length, true width not known’).</p>	<p>Mineralisation at Succoth is sub-vertical to steeply dipping to the south west in highly altered mafic rock. Mineralisation is generally intersected obliquely to true-width and approximations have been made based on geological interpretations..</p> <p>Refer to Annexure 1 and Figures in body of text.</p>
<b>Diagrams</b>	<p>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</p>	<p>Refer to Figure 5 in the attached, and also figures in body of announcement titled “Mineralisation Intersected at Succoth” and ASX announcement previously released on 21 July 2015.</p>
<b>Balanced reporting</b>	<p>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</p>	<p>Not applicable as no assays have been reported.</p>
<b>Other substantive exploration data</b>	<p>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</p>	<p>Only preliminary exploration data is currently available and other exploration data is not meaningful nor material. More comprehensive data will be released with assay results as they become available.</p>
<b>Further work</b>	<p>The nature and scale of planned further work (eg. tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	<p>Cassini aims to test the continuity of known higher grade zones of mineralisation at Succoth with the aim of finding new mineralised lodes and to define a JORC compliant Indicated Resource. Please refer figure 5 and figures have been included in body of announcement titled “Mineralisation Intersected at Succoth” and previous ASX announcement dated 21 July 2015.</p> <p>At One Tree Hill Cassini intends to step out from the previous drill-holes to test if mineralisation extends into potentially prospective mafic rocks similar to those that host mineralisation at Succoth.</p>