



## Advancing the Mount Squires Gold Project

### HIGHLIGHTS

- **Successful maiden drill program demonstrates a unique, early-stage gold opportunity at Mount Squires**
- **Geological advances provide new targets:**
  - **Plunge extensions in both directions at Handpump Prospect**
  - **New target areas along lithological/structural trends**
  - **Nickel and copper sulphide potential recognised**
- **Advanced planning for follow-up exploration programs**

Cassini Resources Limited (ASX:CZI) (“**Cassini**” or the “**Company**”) is pleased to announce final results of the recent RC drilling program and future work plans at Cassini’s 100%-owned Mount Squires Project (“**Mt Squires**” or the “**Project**”) in the West Musgrave Province of Western Australia. The Project is at an early stage and is proving to be highly prospective for gold and base metals. It is located adjacent to the western border of the Company’s West Musgrave JV Project with OZ Minerals Ltd. Earlier results from the drill program were released to the ASX on 24 September 2019 and 2 October 2019.

Cassini’s Managing Director Mr Richard Bevan commented “We’re delighted with the results from our maiden drill program at Mount Squires. The program, in tandem with our new aeromagnetic data, has demonstrated economic gold prospectivity, improved our geological understanding and generated new targets for future work programs. More broadly, it’s highlighted the potential strategic value of a new greenfield, belt-scale project in a new gold frontier.

“Mt Squires is the most advanced gold project in the Musgrave Province, with the nearest gold mine, Gruyere, being over 400km away, itself a fairly recent “new frontier” discovery. New frontiers are where some of the most recent and significant gold discoveries have been made in Australia.

“We see Mount Squires as a natural fit with activities at our West Musgrave Project. Strategically, we believe gold is a good complement to our base metal assets. Our extensive geological knowledge, operational capability and established community relationships provide us with a significant competitive advantage in the region.

“Whilst the West Musgrave Project continues to be our primary focus and long-term value-driver, our exploration strategy at Mount Squires and Yarawindah Brook is geared to provide opportunities for additional new discoveries in the near term. Our goal is to add value and be exposed to these opportunities through relatively inexpensive exploration programs, that do not compromise our funding capacity during the ongoing study phase of the West Musgrave Project.”

“With prices near all-time highs, it’s also a great time to exploring for gold.”

## Excellent Start to Mount Squires Exploration

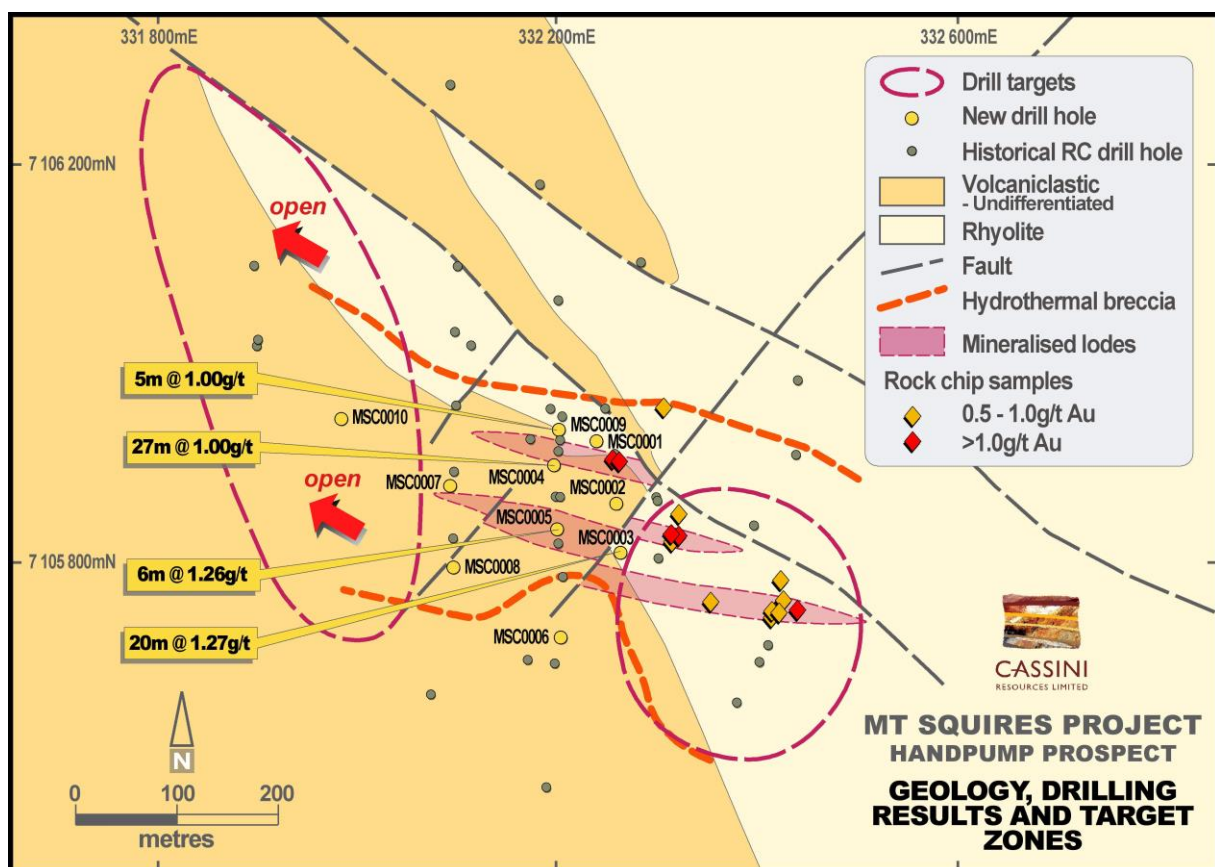
All assay results from the RC drilling program at the Handpump Prospect, comprising 10 holes for 1,134m, have now been received. Best results are from holes previously released including **20m @ 1.27g/t Au**, including **7m @ 2.54g/t Au** from 23m in MSC0003, **27m @ 1.00g/t Au** from 31m, including **3m @ 2.59g/t Au** from 38m in MSC0004 and 19m @ 0.68g/t Au including 6m @ 1.26g/t Au from 38m in MSC0005.

The remaining 4 holes (MSC0007-0010) returned lower grade results, but have successfully identified additional mineralised breccia halos (>0.1g/t Au), suggesting the mineralisation remains open. The lower grade holes are mostly from the western-most sections and broadly spaced. Using the recently flown high resolution aeromagnetic data, a revised geological interpretation suggests the siting of these holes was not optimal to identify the extensions of mineralised zones described above. See Table 1 for all results of the program to date.

Mineralisation is hosted within a hydrothermal breccia at the stratiform contact between a footwall rhyolite and hanging wall (predominantly barren) volcanoclastic unit. Mineralised lodes, defined as >0.1g/t Au, strike E-W to ESE-WNW and are steeply south-dipping. Mineralisation is possibly controlled by the intersection of NW-SE and SW-NE trending structures. Mineralisation is outcropping at the eastern margin of the prospect, with an abundance of rock chip samples >0.5g/t Au. The hydrothermal breccia host plunges beneath the volcanoclastic unit (and thickening sand cover) to the west (and potentially north west). Extrapolation of recent and historical drill results indicates a potential mineralised strike of at least 600m, which remains open.

A selection of samples have been dispatched for further detailed geochemical analysis to identify potential path-finder elements to assist future regional exploration.

Results from this program indicate that a large portion of previous drilling by other companies has been ineffective, due to either the drilling angle being sub-parallel to mineralised lodes or it not penetrating the prospective rhyolite unit beneath the volcanoclastic (the case for most of the previous shallow aircore drilling).



**Figure 1.** Drill hole plan showing geology, drilling and significant results >1.0g/t. The hydrothermal breccia and mineralised lodes have been projected vertically to surface.

## Gold Trend Emerging

The initial discovery of gold at Handpump occurred because mineralised bedrock is exposed at surface, a relatively rare occurrence in a landscape dominated by desert sands. The transported cover has likely inhibited exploration in other parts of the project and this is why the Company is re-processing the legacy geochemistry results to remove the biases of the regolith (in simple terms, bedrock vs transported sampling mediums). In some instances the previous geochemical sampling has probably been completely ineffective.

Key learning outcomes of the program are summarised below:

- The initial Handpump discovery was enabled by locally favourable regolith (outcropping mineralisation) and does not necessarily represent the best mineralisation at the project.
- Previous companies' exploration post-discovery has been hampered by drilling that has failed to test the most prospective rocks at an appropriate orientation.

The recently completed high-resolution aeromagnetic survey has assisted the geological interpretation of Handpump as well as the surrounding region. The Company has now refined the target areas along the prospective trend. Only 3 RC holes have been drilled outside the immediate Handpump Prospect area to test for additional mineralised bodies and therefore the prospective trend is largely unexplored (Figure 2).

Permitting to clear these targets with a reconnaissance-style drill program is underway.

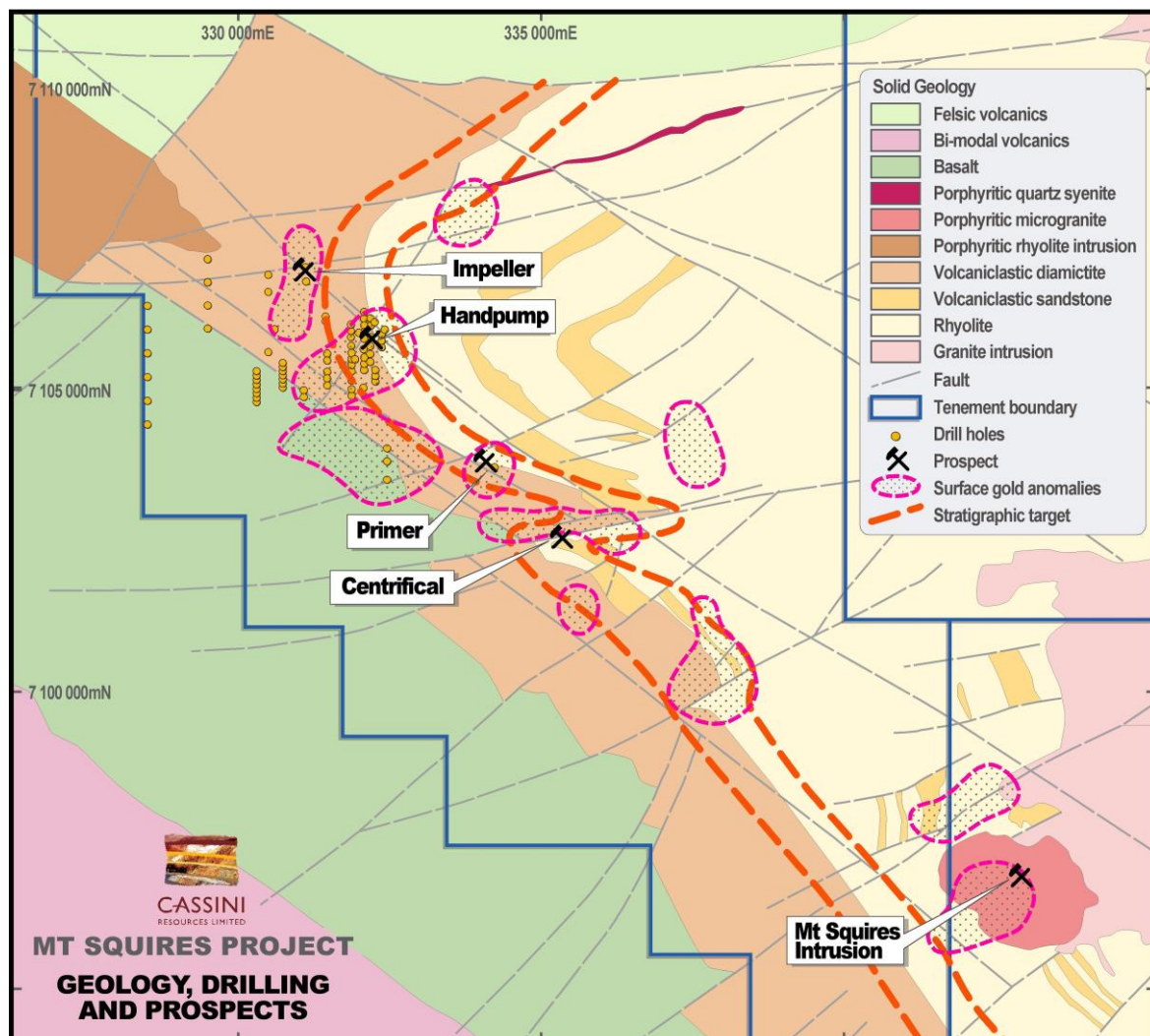


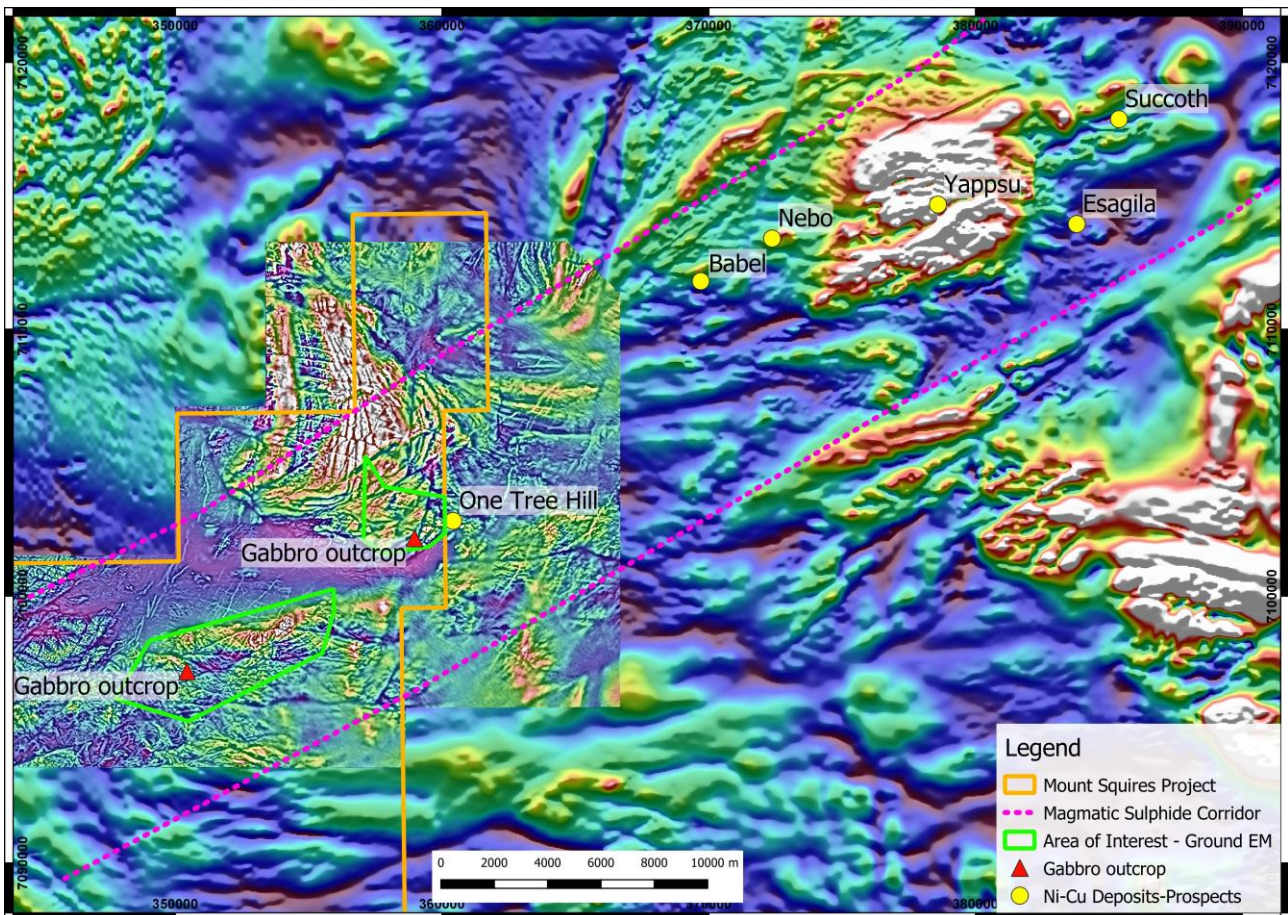
Figure 2. The prospective gold trend showing the stratigraphic target horizon, surface geochemical anomalies and lack of drilling in these areas.

## Nickel and Copper Potential to be Evaluated

Whilst the current exploration focus at the Mount Squires Project is primarily for gold, recent surveying and mapping by Cassini has recognised a potential extension of the magmatic nickel-copper mineralised trend from the West Musgrave Project into the eastern half of the project area (Figure 3). This is supported by:

- The emergence of the One Tree Hill Prospect within the West Musgrave Project, but only 200m outside the Mount Squires tenement boundary (See ASX release of 18 June 2019).
- New aeromagnetic data confirming the continuity of broad geological domains and structure into the Mount Squires Project.
- Field mapping identifying gabbro intrusions along strike of the mineralised trend which had been previously mapped as granites and gneisses.

This area has been lightly explored for magmatic nickel-copper sulphides by previous explorers, primarily by broad-spaced soil geochemistry and large fixed loop electromagnetic surveys (FLEM). The Company has reviewed these surveys and identified a number of areas that would benefit from new electromagnetic surveys given the significant advancement in technology over the past 10-20 years. The re-processed geochemistry data will also support the targeting of these surveys.



**Figure 3.** Potential extension of magmatic nickel-copper mineralisation trend into the eastern half of Mount Squires (1VD aeromagnetics as background).

## Next Steps

The Company now has multiple fronts on which to progress.

1. **A second RC infill and extension program at Handpump** targeting the eastern margin where gold mineralisation projects to surface as well as the down plunge extension to the west and northwest where current drilling is too broad. A drill rig is currently being sourced to complete the program as soon as possible.
2. **A reconnaissance-style drill program to test the trend between Handpump and Centrifical Prospects** in light of the new geological and structural interpretation. This program requires additional heritage and environmental clearances. This work is already underway and drilling is anticipated to commence in early 2020.
3. **Investigate the nickel-copper potential** extension of One Tree Hill near the eastern boundary of the Project. A geophysical crew will be mobilised to site early next month to complete a moving loop electromagnetic survey which is expected to take approximately two weeks.
4. **Improve the geochemical dataset** by infilling and extending the sampling coverage particularly in areas along the prospective gold and Ni-Cu magmatic corridors. An orientation survey, including a trial of Ultra Fine Fraction sampling, will determine the most effective sampling technique in the Mount Squires environment. Sampling will commence later this month.

Activities will continue at the Mount Squires Project until approximately the end of November when attention will turn to the Yarawindah Brook Ni-Cu Project, where a number of new EM conductors are ready to be drilled. The Company also looks forward to delivering the Nebo-Babel Pre-Feasibility Study in early 2020.

The Company remains well funded to meet its exploration objectives at both Mount Squires and Yarawindah.

## Project Background

Gold prospectivity was first identified at Mount Squires by Western Mining Corporation (WMC) during geochemical surveying in the late 1990's. WMC's primary target was nickel and copper sulphide mineralisation, which returned poor results, however several gold anomalies were identified but were never followed-up and the tenements were later surrendered.

Later exploration by Beadell Resources Ltd in the mid 2000's identified a number of gold prospects with further soil geochemistry, rock chip sampling and mapping. Drilling of these anomalies mineralisation at the Handpump Prospect with significant intercepts of 43m @ 1.18g/t from 14m including 9m @ 3.25g/t from 34m (re-cut using a 0.5g/t lower cut-off). Mineralisation is described as being hosted in rhyolite breccias and having epithermal style characteristics.

Beadell's exploration after the initial discovery was limited due to a change in corporate strategy and the project was later surrendered.

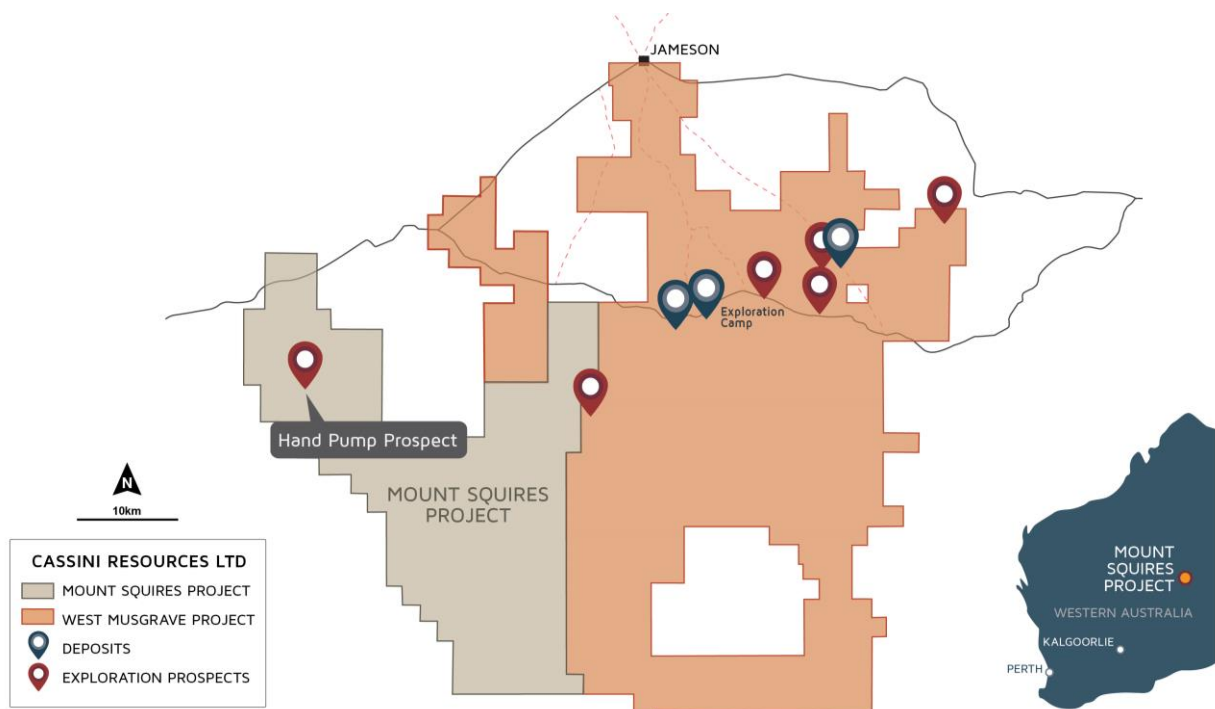
Anglo American PLC has also explored the region, primarily for nickel and copper sulphide mineralisation, but their soil geochemical programs included a large multi-element analytical suite which provides critical data for targeting gold mineralisation. Anglo American surrendered their tenements following a decision to reduce global exploration expenditure.

Cassini considers that the geological setting may have some affinity with intracontinental "hot-spot" epithermal gold mineralisation, rather than the more common island arc setting found elsewhere along the Pacific Rim. Examples of this style are deposits in the northern Nevada region, including the Sleeper Deposit, with high, or "bonanza", gold grades from shallow crustal emplacement.

**Table 1.** Significant Drill Intersections (>0.5g/t Au) at the Handpump Prospect.

Hole ID	East	North	RL	Dip	Azi	EOH (m)	Intersection			
							From (m)	Width (m)	Au g/t	
MSC0001	332240	7105919	498	-60	0	84	57	2	0.66	
MSC0002	332260	7105860	496	-60	0	90	51	1	0.61	
MSC0003	332265	7105811	490	-60	0	138	23	20	1.27	
							Incl	23	7	2.54
							And	40	3	1.67
								96	1	0.54
MSC0004	332197	7105899	494	-60	0	78	31	27	1.00	
							Incl	33	1	3.22
							And	38	3	2.59
								68	1	0.73
							71	1	0.69	
MSC0005	332202	7105833	491	-70	0	120	38	19	0.68	
							Incl	38	6	1.26
MSC0006	332206	7105726	495	-70	0	132			NSI	
MSC0007	332095	7105876	490	-60	0	150	83	1	0.53	
MSC0008	332098	7105796	487	-60	0	150			NSI	
MSC0009	332202	7105930	491	-60	189	72	13	2	0.57	
								21	2	0.75
								35	1	0.88
								41	12	0.69
							Incl	41	5	1.00
MSC0010	331985	7105944	485	-60	20	120			NSI	

NSI = No Significant Intersection.



For further information, please contact:

**Richard Bevan**  
Managing Director

Cassini Resources Limited  
Telephone: +61 8 6164 8900  
E-mail: [admin@cassiniresources.com.au](mailto:admin@cassiniresources.com.au)

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### **About the Company**

Cassini Resources Limited (ASX: CZI) is a base and precious metals developer and explorer based in Perth. In April 2014, Cassini acquired its flagship West Musgrave Project (WMP), located in Western Australia. The Project is a new mining camp with three existing nickel and copper sulphide deposits and a number of other significant regional exploration targets already identified. The WMP is the largest undeveloped nickel - copper project in Australia.

In August 2016, Cassini entered into a three-stage \$36M Farm-in/Joint Venture Agreement with prominent Australian mining company OZ Minerals Ltd (ASX: OZL). The Joint Venture provides a clear pathway to a decision to mine and potential cash flow for Cassini.

Cassini is also progressing its Mt Squires Gold Project, and the Yarawindah Nickel - Copper - Cobalt Project (CZI 80%), both located in Western Australia.

### **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 Exploration Results, Mineral Resource Estimates and Production Targets as reported in the market announcements dated 14 July 2016, 19 February 2018, 16 July 2019, 24 September 2019 and 2 October 2019 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 the Exploration Results at the Succoth deposit.

### 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>	<p><u>Cassini Work</u></p> <p>Sampling methods undertaken by Cassini at the Handpump Prospect include Reverse Circulation (RC) drill holes and selective rock chip sampling.</p> <p>Drill holes were completed on a range of spacings to test different targets within the Handpump Prospect. A total of 10 RC drill holes for 1,134m was completed.</p> <p>Five selective rock chips were collected targeting different rock types and were not completed on a grid.</p> <p><u>Other Operators Work</u></p> <p>Historical work at the Handpump Prospect has been completed by WMC Resources Ltd (WMC) and Beadell Resources Ltd (Beadell).</p> <p>Main exploration activities included a combination of surface geochemical sampling (lag and soil) and several drilling methods.</p> <p>Drilling methods included Reverse Circulation (RC), Aircore (AC) and Rotary Air Blast (RAB).</p> <p><u>SURFACE GEOCHEMICAL SAMPLING</u></p> <p><u>WMC Geochemical Sampling Program</u></p> <p>A geochemical survey was completed by WMC between 1997 to 1999. Samples were collected at 200m intervals along 400m to 800m spaced, E-W oriented lines.</p> <p>At each site a 100g of coarse (-6mm + 2mm) material and a 3kg bulk sample of fine material were collected. A total of 1,379 lag and 162 soil samples were collected.</p> <p><u>Beadell Geochemical Sampling Program</u></p> <p>Sieve soil samples were collected to the south of Handpump every 50m along 250m spaced E-W lines. At each site -10mm +2mm material was collected from an average depth of 30cm.</p> <p>Magnetic lag samples were collected to the south of Handpump every 50m along 250m spaced E-W lines.</p> <p>Rock chip costean samples were initially taken on 10m composite intervals with follow-up 1 and 2m composite intervals. Randomly spaced samples were also collected over prospective rock units.</p> <p><u>DRILLING PROGRAMS</u></p> <p>Beadell completed a total of 45 RC drill holes for 6,456m, 66 AC drill holes for 3,552m and 12 RAB drill holes for 536m at the Handpump Prospect and surrounding area in three separate drilling campaigns.</p>



Criteria	JORC Code explanation	Commentary
	<p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p>	<p><u>Cassini Work</u></p> <p>Drill hole locations were surveyed by handheld GPS units.</p> <p>The RC samples have been obtained by a cone splitter. Sampling has been carried out under Cassini protocols and QAQC procedures as per industry best practice. RC chips provide high quality representative sample for analysis.</p> <p>Selective rock chip sampling is inherently bias and does not represent a representative sample.</p> <p><u>Other Operators Work</u></p> <p>Drill hole locations were picked up either by a handheld GPS unit or by a Differential GPS.</p> <p>Soil samples locations were picked up by handheld GPS unit. Samples were logged for landform and sample contamination.</p> <p>Soil samples were sieved through to -6mm and -2mm (Beadell) sieves which were stacked together (the material passing through 6mm sieve and retained on the 2mm sieve is sampled) to replicate the WMC lag sample size fraction.</p> <p>Lag samples were sieved through -6mm and -2mm (WMC) or through -10mm and -2mm (Beadell) sieves which were stacked together (the material passing through 6mm or 10mm sieve and retained on the 2mm sieve is sampled).</p> <p>The frequency of sample standards (CRMs), blanks and field duplicates is unknown. Standards, blanks and field duplicates were used and it appears that industry standard sampling practises were adhered to.</p>
	<p>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.</p>	<p><u>Cassini Work</u></p> <p>RC samples were collected as 1m intervals using a rig-mounted static cone splitter with dual sample chutes. Two samples were collected from each sample interval with duplicates analysed every 20<sup>th</sup> sample. The sample method is designed to collect a representative sample of less than 3kg to ensure the total sample is included in the pulverisation stage so &lt;3kg was pulverised (total prep) to produce a sub sample for analysis by fused bead XRF for base metals and all other major and trace elements of interest. Gold, Pt and Pd were determined by FA/AAS finish (40 gram).</p> <p>Selective rock chips samples are only used to indicate outcropping mineralisation for exploration purposes and undergo the same sample analysis as described above for RC samples.</p> <p><u>Other Operators Work</u></p> <p>RC samples were collected as 1m intervals using riffle splitters. Samples were analysed either as original 1m intervals or as 5m composite samples. Mineralised and/or anomalous composite samples were re-assayed as 1m intervals.</p> <p>Aircore samples were collected as 1m intervals. Samples were analysed as original 1m intervals or as 2m, 3m, 4m and 5m composites. Mineralised and/or anomalous composite samples were subsequently re-analysed as 1m original samples.</p> <p>All of the drill samples were sent to a contract</p>

Criteria	JORC Code explanation	Commentary
		laboratory for crushing, pulverising and chemical analysis by industry standard practises.
<b>Drilling techniques</b>	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).	<p><u>Cassini Work</u></p> <p>A total of 10 RC holes for 1,134m was drilled utilising a face-sampling bit. Hole depths range from 72m to 150m.</p> <p><u>Other Operators Work</u></p> <p>A total of 45 RC holes for 6,456m have been drilled. Hole depths range from 26m to 250m.</p> <p>A total of 66 AC holes for 3,552m have been drilled. Hole depths range from 2m to 122m.</p> <p>A total of 12 RAB holes for 536m have been drilled. Hole depths range from 3m to 76m.</p>
<b>Drill sample recovery</b>	Method of recording and assessing core and chip sample recoveries and results assessed.	<p><u>Cassini Work</u></p> <p>RC recoveries are visually logged and recorded in the database. Overall recoveries are &gt;95% and there has been no significant sample recovery problems.</p> <p><u>Other Operators Work</u></p> <p>Drill chip recovery records are not available.</p>
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	<p><u>Cassini Work</u></p> <p>RC samples are routinely checked for recovery, moisture and contamination.</p> <p><u>Other Operators Work</u></p> <p>Cassini is not aware of the historical drilling practices that were employed to maximise recoveries.</p>
	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.	<p><u>Cassini Work</u></p> <p>The breccia-hosted style of the mineralisation and the relative consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.</p> <p><u>Other Operators Work</u></p> <p>Cassini is not aware of any sample bias and it appears that inferences made from drilling observation and analysis are representative of the nature of the gold mineralisation.</p>
<b>Logging</b>	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.	Drill chip samples have been geologically logged and the level of geological understanding increases with the maturity of the prospects.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of RC samples at the Handpump Prospect recorded lithology, mineralogy, mineralisation, weathering, colour and other relevant features of the samples. Logging of chips is both qualitative (eg. colour) and quantitative (eg. mineral percentages).
	The total length and percentage of the relevant intersections logged.	All drillholes were logged in full.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable as samples are non-core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	<p><u>Cassini Work</u></p> <p>RC samples were collected on the rig using cone splitters. All samples in mineralised zones were dry.</p> <p><u>Other Operators Work</u></p> <p>RC sample methodologies are unknown; however, it appears that industry best practices were followed and that the samples obtained are considered both representative and appropriate.</p>
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<p><u>Cassini Work</u></p> <p>The sample preparation of RC and rock chips samples at the Handpump Prospect follows industry best practice in sample preparation involving oven drying, followed by pulverisation of the entire sample (total prep) using Essa LM5 grinding mills to a grind size of 90% passing 75 micron.</p> <p><u>Other Operators Work</u></p> <p>The preparation methods of the drill samples are unknown. However, given that reputable commercial laboratories were used it is reasonable to assume that industry best practises in sample preparation methods would have been followed.</p>
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	<p><u>Cassini Work</u></p> <p>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 1:20.</p> <p>Rock chips were not sub-sampled.</p> <p><u>Other Operators Work</u></p> <p>Detailed QAQC procedures and data for the historical drilling and geochemical sampling is not available. However; it appears that most assay batches included at least some duplicates and CRM samples. The insertion rate of these is unknown but most likely standard industry practises and respective companies standard operating procedures would have been followed.</p>
	Measures taken to ensure that the sampling is representative of the <i>in situ</i> material collected, including for instance results for field duplicate/second-half sampling.	<p><u>Cassini Work</u></p> <p>Field duplicates were taken on 1m intervals directly from the cone splitter on the drill rig.</p> <p>No duplicate samples were taken of rock chips.</p> <p><u>Other Operators Work</u></p> <p>QAQC appears to have been routinely conducted throughout historical drilling and geochemical sampling; however, methodologies changed over time. A combination of CRM, blanks and field duplicates were submitted.</p>
	Whether sample sizes are appropriate to the grain size of the material being sampled.	<p><u>Cassini Work</u></p> <p>Sample sizes are considered appropriate for the rock type, style of mineralisation (breccia-hosted Au), the thickness and consistency of the intersections, the sampling methodology and assay ranges for the primary elements of interest at Handpump.</p>

Criteria	JORC Code explanation	Commentary
		<p><u>Other Operators Work</u></p> <p>Sample sizes are considered appropriate for the rock type and style of mineralisation.</p>
<p><b>Quality of assay data and laboratory tests</b></p>	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p>	<p><u>Cassini Work</u></p> <p>All samples were submitted to Bureau Veritas laboratories in Perth.</p> <p>The analytical techniques used fused bead XRF for base metals and all other major and trace elements of interest.</p> <p>Gold, Pt and Pd were determined by FA/AAS finish (40 gram) which is considered a total digest for gold.</p> <p>Rock chips assay also included mixed acid digest, which approximates a near 'total' digest, with ICP-MS finish.</p> <p><u>Other Operators Work</u></p> <p>Samples were taken in the field and analysed in the laboratory in accordance with best practise industry standards for the medium sampled in the particular environment and is considered appropriate geochemical test work for the mineralisation style.</p> <p><u>GEOCHEMISTRY</u></p> <p><u>WMC Geochemical Sampling Program</u></p> <p>The lag samples were prepared by Amdel in Adelaide to pulps of &gt;90% to pass 75µm. A 20g aliquot was analysed by Acme Analytical Laboratories in Vancouver using an aqua regia digest for their 1G element suite: Ag, Al, As, Au, Ba, Bi, B, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, Pb, P, Sb, Se, Sr, Te, Th, Ti, Tl, U, V, W, Zn.</p> <p>The fine fractions were sieved to &lt;75µm either by Amdel in Adelaide or Dune Labs in Kalgoorlie. The prepared samples were analysed by Ultratrace in Perth using aqua regia digest for: Au, Hg, Te, As, Cu, Mo, Ni, Pb, W.</p> <p><u>Beadell Geochemical Sampling Program</u></p> <p>All of the samples collected by Beadell were sent to ALS laboratory in Perth for ultra-low level, aqua regia Au analysis and for multielement analysis using the four acid digest (MEMS61 Suite) and ICP-MS determination for the following elements: Ag, Al, As, Au, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.</p> <p><u>DRILLING PROGRAMS</u></p> <p><u>Beadell Drill Samples</u></p> <p>All of the historical Beadell drill samples were analysed at the ALS laboratory in Perth by a combination of a fire assay fusion for Au and multielement analysis using the four acid digest (MEMS61 Suite) and ICP-MS determination for the following elements: Ag, Al, As, Au, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.</p>

Criteria	JORC Code explanation	Commentary
	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.	Hand held assay devices have not been reported.
	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.	<p><u>Cassini Work</u></p> <p>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.</p> <p>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.</p> <p>Repeat or duplicate analysis for samples reveals that precision of samples is within acceptable limits.</p> <p><u>Other Operators Work</u></p> <p>Detailed information on QAQC practises for the historical surface geochemistry and drill samples is not available. Industry standard QAQC practises are believed to have been adhered to.</p>
<b>Verification of sampling and assaying</b>	The verification of significant intersections by either independent or alternative company personnel.	<p><u>Cassini Work</u></p> <p>Significant intersections were verified by multiple company personnel.</p> <p><u>Other Operators Work</u></p> <p>Unknown for the historical data.</p>
	The use of twinned holes.	<p><u>Cassini Work</u></p> <p>The reported drill holes have not been twinned.</p> <p><u>Other Operators Work</u></p> <p>Based on the available records no drill holes were twinned.</p>
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<p><u>Cassini Work</u></p> <p>Primary data was collected for the Handpump Prospect 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.</p> <p><u>Other Operators Work</u></p> <p>Unknown for the historical data.</p>
	Discuss any adjustment to assay data.	<p><u>Cassini Work</u></p> <p>No adjustments or calibrations were made to any assay data.</p> <p><u>Other Operators Work</u></p> <p>Unknown for the historical data.</p>
<b>Location of data points</b>	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys),	<p><u>Cassini Work</u></p> <p>Reported holes and rock chip samples have been located with a Garmin hand-held GPS and are</p>

Criteria	JORC Code explanation	Commentary
	trenches, mine workings and other locations used in Mineral Resource estimation.	<p>assumed to be accurate to <math>\pm 5\text{m}</math>. This is considered appropriate for exploration drill holes.</p> <p>Downhole surveys were completed at 30 m down hole; however, only dips were able to be measured.</p> <p><u>Other Operators Work</u></p> <p>Holes drilled by Beadell have been located with either a Garmin handheld GPS (<math>\pm 5\text{m}</math> accuracy) or a differential GPS (<math>\pm 0.1\text{m}</math> accuracy). This is considered appropriate for the drillhole spacing.</p> <p>Downhole surveys were completed every 50m with a single shot surveying instrument for the RC drilling.</p> <p>Location data for soil sampling points was recorded by handheld GPS (<math>\pm 5\text{m}</math> accuracy).</p>
	Specification of the grid system used.	The grid system for the Mt Squires Project is GDA94 MGA Zone 52.
	Quality and adequacy of topographic control.	<p>Topographic data was obtained from public download of the relevant 1:250,000 scale map sheets.</p> <p>The area exhibits subdued, low relief with undulating sand dunes and topographic representation is considered sufficiently controlled.</p>
<b>Data spacing and distribution</b>	Data spacing for reporting of Exploration Results.	<p><u>Cassini Work</u></p> <p>The holes drilled were drilled on a nominal spacing of 50 or 80m on 50 or 100m spaced drill lines. A number of holes were designed to scissor historical drill holes drilled by Beadell at various spacing.</p> <p>Selective rock chips were not collected on a grid pattern.</p> <p><u>Other Operators Work</u></p> <p>The nominal RC drill hole spacing over the Handpump Prospect was 25m or 50m on 100m spaced drill sections.</p> <p>Soil samples were collected predominately at 200m intervals on 200m or 400m spaced lines (WMC) and 50m intervals on 250m spaced line (Beadell).</p>
	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.	<p>The geological and mineralised domains at the Handpump Prospect have demonstrated sufficient continuity to support interpretation of the relevant geological plans and cross-sections.</p> <p>Soil sample spacing was deemed appropriate for identifying geochemical anomalies but could not be used to establish geological and grade continuity.</p> <p>Rock chip samples are inherently biased and are only used for exploration purposes.</p> <p>At this stage it would not be appropriate to use the above information in a Mineral Resource or Ore Reserve estimation capacity.</p>
	Whether sample compositing has been applied.	<p><u>Cassini Work</u></p> <p>No compositing was applied.</p> <p><u>Other Operators Work</u></p> <p>Aircore and RC samples were composited as either 2m, 3m, 4m or 5m composite samples.</p> <p>Anomalous composite samples were re-split on 1m intervals.</p>

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<b>Orientation of data in relation to geological structure</b>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<p>Based on the historical geological interpretation Au mineralisation at Handpump prospect is hosted within E-W trending hydrothermal breccias which occur within the regional NW-SE trending structural corridor. Both recent and historical drilling is predominantly oriented to the N or S, which is perpendicular to the interpreted orientation of the mineralised breccia zone.</p> <p>Although unlikely based on the existing data, if however, the mineralised zone at the Handpump Prospect is striking NW-SE, historical drilling is oblique to structure and sampling bias is possible.</p> <p>The soil sample grids were mostly oriented E-W or N-S, which is considered appropriate given the regional and local geological fabric and structures.</p>
	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.	To date, orientation of the mineralised domain has been favourable for perpendicular drilling and sample widths are not considered to have added a significant sampling bias.
<b>Sample security</b>	The measures taken to ensure sample security.	<p><u>Cassini Work</u></p> <p>Sample chain of custody is managed by Cassini. Samples for the Handpump Prospect 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.</p> <p><u>Other Operators Work</u></p> <p>Unknown for historical samples.</p>
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	<p><u>Cassini Work</u></p> <p>Several internal reviews of the historical drill hole and surface geochemical data have been completed by Cassini geologists. All sampling techniques and data were found to be appropriate and sufficiently accurate for exploration purposes.</p> <p><u>Other Operators Work</u></p> <p>Unknown for historical data.</p>

## 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>	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.	<p>The Handpump Prospect occurs within the broader Mt Squires Project. The project area comprises two contiguous Exploration Licences, E69/3424 and E69/3425. Both Licences are held by Opis Resources Pty Ltd, a wholly owned subsidiary of Cassini Resources Limited.</p> <p>The tenements are located within Crown Reserve 17614, which is within the jurisdiction of the Ngaanyatjarra Land Council within Reserve 40783 for the Use and Benefit of Aboriginal Inhabitants.</p>
	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.	Both tenements are currently live and in good standing. A Mineral Exploration and Land Access Agreement was signed with the Ngaanyatjarra Land Council in Feb 2017. No Mining Agreement has been negotiated.
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	<p>The Handpump Au anomaly was first identified by WMC in 1999 through the initial regional lag sampling in the West Musgraves, which also resulted in the discovery of the Nebo and Babel Deposits. The anomaly covered an area over 1.2km long and 400m wide with a maximum Au of 250ppb. WMC did not prioritise this target and there was no follow up work completed.</p> <p>In 2009, Beadell Resources drilled the Handpump anomaly with the best intersection being 15m @ 2.3 g/t Au from 31m. Two phases of follow-up RC drilling, both at the original Handpump Prospect and some of the newer prospects, were completed between 2009 and 2011, but no better results than the original intersection were obtained.</p> <p>Additional work at the Mt Squires project included mostly surface geochemical sampling, which defined some additional prospects. Regional geochemical analysis by consultant Scott Halley defined an additional prospective target, Centrifical, which has not yet been drill tested. Beadell withdrew from the project in 2013 and the ground was subsequently applied for by Cassini.</p> <p>Cassini reviewed all existing historical exploration data and has defined several additional targets which have been previously reported.</p> <p>Some of the areas presently covered by Mt Squires project were also explored by Anglo American and Traka Resources. The work mostly included geochemical sampling and auger and vacuum drilling, but no significant Au anomalies were identified.</p>
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	<p>The Mt Squires Project is located in the West Musgrave Province of Western Australia, which is part of an extensive Mesoproterozoic orogenic belt.</p> <p>The Giles Event in the West Musgrave Province included emplacement and eruption of mafic to felsic magmas, all of which are grouped into Warakurna Supersuite. Bimodal volcanic rocks form the main component of the Bentley Supergroup.</p> <p>The Mt Squires Project area is south and southeast of the Mt Palgrave Intrusive Complex. The project is dominated by the bimodal Bentley Supergroup rhyolites, basalts and siliciclastic and volcanoclastic rocks, all of which were unconformably deposited on</p>



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		<p>the amphibolite to granulite facies pre-Giles basement rocks. The Mt Palgrave Group is stratigraphically the lowest preserved unit of the Bentley Supergroup.</p> <p>The style of mineralisation is interpreted to be either epithermal or intrusion-related Au hosted within Bentley Supergroup.</p>
<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>	A table listing this information is provided in the body of this report.
	<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>	Not applicable, all information is included.
<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>Reported intersections are RC, downhole, length-weighted averages that were calculated using a nominal &gt;0.5g/t Au lower cut-off, 1m minimum reported length and no limit to internal waste with the end grade greater than or equal to 0.5g/t Au.</p> <p>Geochemical sampling results presented are single point data.</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>High grade Au intervals are reported as <i>included intervals</i>. Short lengths of high grade results use a nominal &gt; 1g/t Au cut-off, 1m minimum reporting length and maximum length of 2m internal waste.</p>
	<p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>No metal equivalent values are currently being used for reporting exploration results.</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>All intersections are reported as downhole lengths. Drill holes at the Handpump Prospect were drilled perpendicular to the interpreted strike of the mineralised zone so that downhole lengths approximate true widths as close as possible. Additional drill holes are required to confirm the relationship between downhole lengths and true widths.</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>	Refer to Figures in body of text.
<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</p>	All Au results from the first 6 of 10 holes are reported.

Criteria	JORC Code explanation	Commentary
	avoid misleading reporting of Exploration Results.	
<b>Other substantive exploration data</b>	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.	All relevant exploration data is shown on figures, in text and Annexure 1.
<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>An exploration work program is currently being planned and will include additional surface geochemical sampling and RC, AC or RAB drilling.</p> <p>All relevant diagrams and inferences have been illustrated in this report.</p>