CASSINI
RESOURCES LIMITED

ASX Release (CZI)
7 April 2016

X17 Zinc Exploration Program Underway

HIGHLIGHTS

- **Heritage survey completed over Enceladus and Iapetus Zn Prospects**
- **Environmental approvals received**
- **Rig mobilising early May to test first 2 of multiple prospects**
- **Concurrent infill and extension soil geochemistry program**
- **Targeting Mt Isa-style, large-scale sedimentary Zn-Pb mineralisation**

Cassini Resources Limited (ASX:CZI) ("Cassini" or the "Company") is pleased to provide an update on exploration activities at its 100%-owned X17 Project in the West Arunta region of Western Australia. Cassini announced the discovery of zinc-lead (Zn-Pb) soil anomalies and associated gossan outcrops on 4 November 2015, heralding the potential discovery of an new, unexplored zinc-lead province.

Cassini is targeting large-scale, sedimentary Zn-Pb mineralisation, similar to those deposits found in the Mt Isa region in Queensland. A modern day analogue is the Century Deposit mined by MMG, with a pre-production resource of 167mt @ 8.1% Zn, 1.2% Pb and 33g/t Ag. Century produced a prominent Zn-Pb soil anomaly centred on a siltstone outcrop. Rock chip samples from this outcrop returned only 1-2% Pb & Zn and was later recognised as part of the orebody, but due to strong leaching and a lack of iron oxides, produced a very subtle geochemical and visual expression of the mineralisation.

Drilling to commence at Enceladus and Iapetus Prospects in early May

Field teams have recently completed heritage surveys at the two initial targets of Enceladus and Iapetus. The Company expects formal heritage approval in late April with drilling planned to commence following receipt of these approvals. Environmental approvals have already been received from the Department of Mines and Petroleum.

The Enceladus and Iapetus Prospects are the first targets to be tested in the 2016 exploration program at X17. This program will be conducted over several campaigns throughout 2016. The Enceladus and Iapetus prospects have been prioritised due to observable outcropping mineralisation (gossans) occurring in-situ over a significant strike length as reported on 23 November 2015.

Rock chip samples returned Zn assays up to 4700ppm with elevated values of Pb, cadmium (Cd), nickel (Ni), copper (Cu), arsenic (As) and thallium (Tl). These Zn values are considered to be highly anomalous in strongly weathered rocks and consistent with gossan outcrops in

similar terranes (Table 1). Importantly, coincident Cadmium (Cd) anomalism present in the lag is recognised as a signature of sphalerite, the primary source of Zn mineralisation.

The RC drilling program is planned to consist of approximately 16 holes for 1,600m. A drill contractor has been secured and is set to mobilise in early May. Initial holes will target the primary (unweathered) rock underneath the gossans to determine the extent and grade of the mineralisation (Figure 1). Due to the significant leaching of Zn that occurs in the weathered rock, the expectation is that the primary mineralisation is of a significantly higher grade.

It is anticipated that the depth to the primary mineralisation will be relatively shallow when compared to other Zinc projects, due to the presence of mineralisation at surface. The average drill hole depth is initially planned to be approximately 100m.

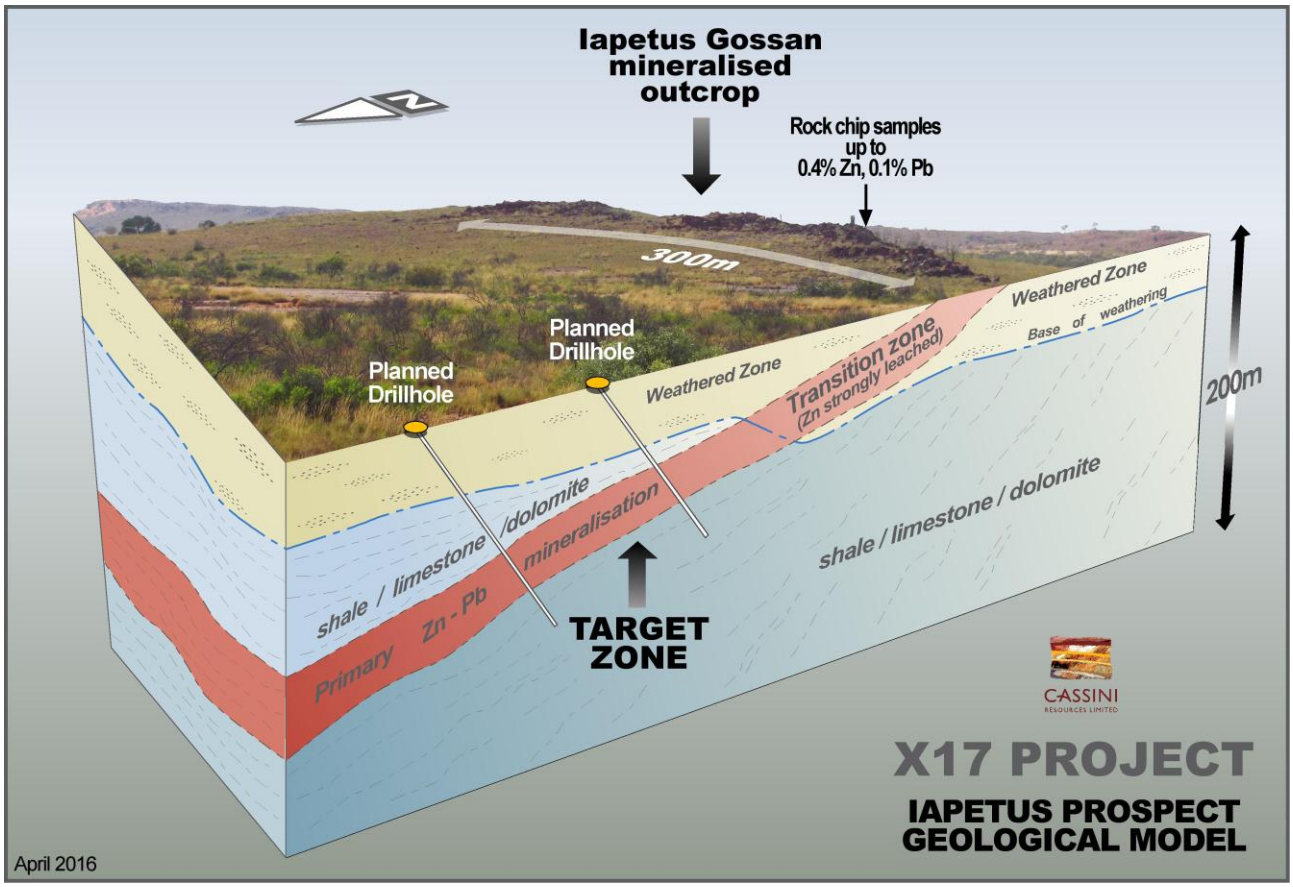

Figure 1 – Conceptual geological model and aim of drilling program at X17

Follow-up programs will target Mimas and Rhea Prospects

In addition to the Enceladus and Iapetus Prospects, previous exploration work has identified the Mimas and Rhea Prospects. There remains enormous potential for the identification of further zinc targets (see Figure 2) due to the lack of previous exploration and shallow sand cover obscuring the bedrock geology. The prospective “Dione Horizon” has been interpreted from magnetics geophysical data to strike at least 35km and the Company expects to identify additional prospects along this stratigraphic horizon.

The Mimas Prospect is a magnetic anomaly in the interpreted syncline position of the prospective Dione horizon. These have historically been shown to be ideal settings for sedimentary Zn mineralisation, as exemplified by the Teena deposit, recently discovered by Teck in the Northern Territory. The magnetic anomaly could represent pyritic horizons that typically surround sedimentary Zn mineralisation. Mimas has extensive, shallow, sand coverage with no bedrock exposure and therefore requires further geological interpretation to assist targeting during a second round of drilling.

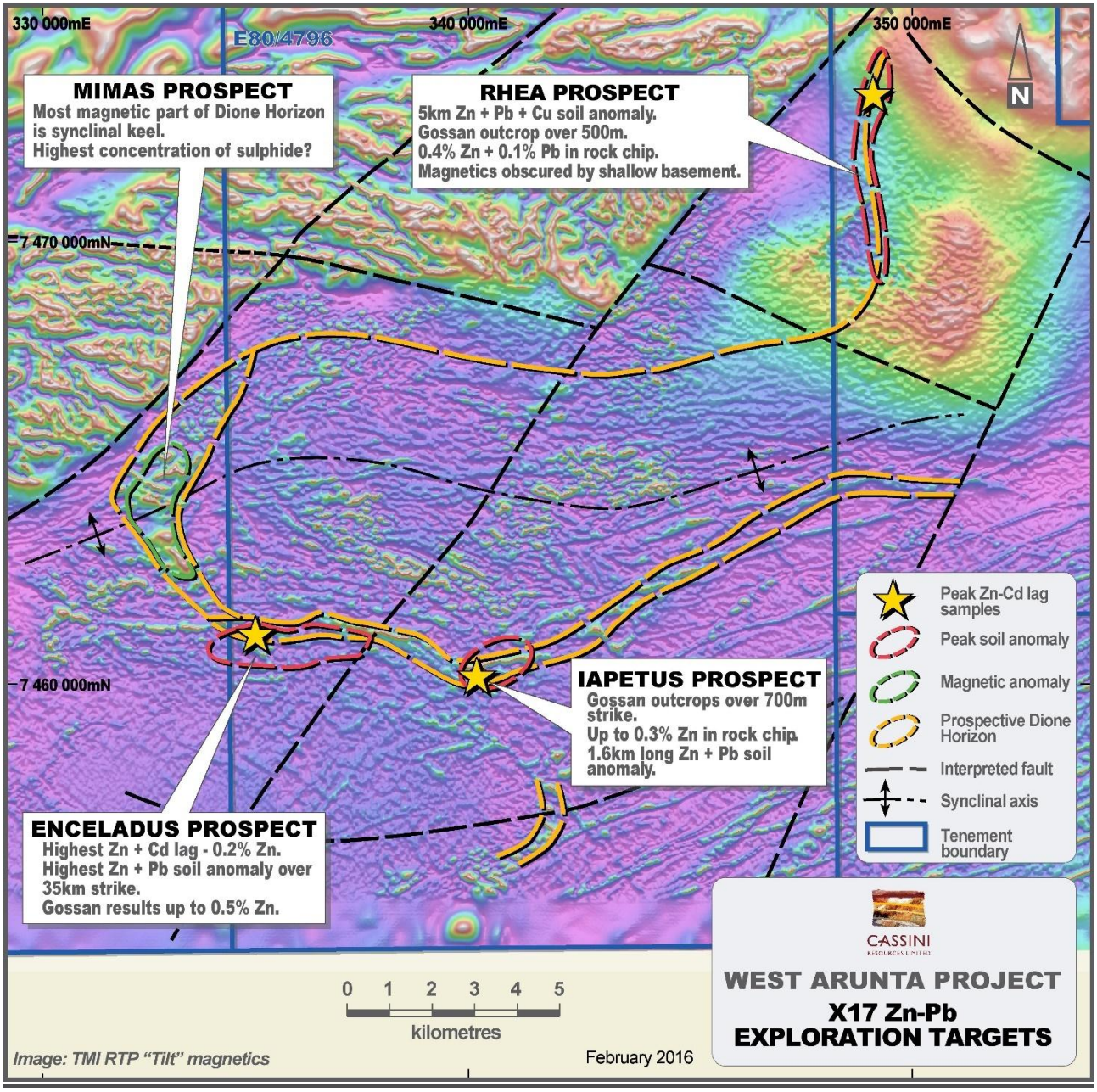

Figure 2 – X17 Project Exploration Targets

The Rhea Prospect is defined by a very long soil anomaly stretching over 5km with minor gossanous outcrops. With such an extensive soil anomaly, further field mapping is required to appropriately position drill holes in the most prospective part of the horizon. This work will be undertaken during the Enceladus and Iapetus drilling campaign and provide follow-up targets for the second round campaign.

The Company has applied for next round of WA government EIS funding to assist with drill costs for a drill campaign at the Mimas and Rhea Prospects.

Regional geochemistry program to continue

The primary exploration work completed by Cassini to date has been a 1,000m x 500m spaced, surface geochemical survey over parts of the project considered to have suitable regolith conditions. A fine soil fraction and a lag sample, if available, were collected at each location. This program was modelled on the geochemical survey that successfully resulted in the discovery of the Babel-Nebo Ni-Cu deposits in the West Musgrave region in 2000.

Whilst this initial program has been successful in locating prominent gossans such as Iapetus, more subtle exposures are likely to have been missed. The Company is undertaking an infill and extension program reducing the sample spacing to approximately 500m x 250m, concentrated on the prospective Dione Horizon. This geochemistry program will run concurrently with the drill program and collect approximately 1,200 samples.

The Company has also applied for new tenure in the region which it believes covers more prospective horizons in the Amadeus Basin.

Table 1. Average composition of gossans from X17 compared to gossans from mines in the Mt Isa District (major elements in wt%, traces in ppm).

	X17			Mount Isa		Hilton		Lady Loretta		Dugald River	
	Iapetus	Enceladus	Rhea	Black Star	Bernborough	13 Mile Hill	Tombstone Hill	Small Syncline	Big Syncline	I3935N	Hanging Wall
Fe_2O_3	68.3	27.0	65.4	63.8	43.5	25.7	64.1	23.9	27.4	35.3	50.6
K_2O	0.12	0.09	0.12	0.01	2.85	0.05	0.01	0.02	0.11	0.81	0.69
P_2O_5	0.82	0.19	0.11	0.17	0.43	<0.01	0.08	0.06	0.11	0.65	0.47
MnO	0.11	0.18	2.17	0.05	0.05	0.03	0.12	0.04	0.06	0.6	0.05
SO_3	0.18	0.11	0.27	0.42	0.65	0.2	0.29	0.15	0.42	6.32	-
Ag	<0.5	<0.5	<0.5	5	4	4	1	26	40	80	80
As	26	107	13	1010	910	240	450	280	470	1340	1950
Ba	20	215	1220	35	490	180	110	850	2470	1.46%	2.32%
Bi	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Cd	<1	2	1	13	<3	<3	<3	<1	<1	10	3
Co	39	111	182	19	10	<10	10	<10	<10	19	13
Cr	<10	<10	<10	36	60	29	10	<10	<10	-	-
Cu	110	140	75	1260	940	120	800	9	26	415	540
Ga	3	3	8	4	8	6	<1	5	7	20	10
Ge	-	-	-	8	9	33	7	30	44	10	10
In	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Mo	1.5	2.9	<1	33	11	7	27	3	6	33	20
Ni	100	112	176	30	80	4	27	<5	<5	16	40
Pb	97	260	610	5200	480	880	3500	890	2140	5.00%	1.45%
Sb	0.4	1	0.4	140	40	30	<30	530	95	110	160
Sn	<1	<1	<1	<1	<1	2	<1	2	2	<4	20
Sr	14	18	45	5	210	35	6	370	290	-	-
Tl	<1	<1	4	<1	<1	4	<1	<1	<1	2	13
Zn	2020	3340	1870	2890	2650	300	3680	123	60	2.35%	510

* Mt Isa gossan data sourced from Taylor & Scott (1982): Evaluation of gossans in relation to lead-zinc mineralisation in the Mt Isa Inlier, Qld.

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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 4 November 2015 and 23 November 2015, continue to apply and have not materially changed.

Century Mine information sourced from Agnew, P. D., Century Zn-Pb-Ag Deposit, Northwest Queensland. CRC Leme.