5 September 2016 ASX: AOH, FSE: A2O

REAPER: THIRD NEW DRILL TARGET IDENTIFIED SO FAR AT ROSEBY SOUTH

- **Third new Roseby South soil anomaly is the largest to date**
- **2.5 kilometre long copper-in soil anomaly with anomalism up to 0.54% copper**
- **Comparable to the anomaly at Altona's Little Eva deposit**
- **Rockchip samples up to 0.8% copper and 1.54g/t gold**
- **Drilling planned to commence in October at Reaper, Hobby and Harvest**

Altona Mining Limited ("Altona" or the "Company") has defined a third, high-tenor copper-in-soil anomaly, the largest identified so far (Figure 1) at its 100% owned Roseby South Project ("Roseby South") near Mt Isa in Queensland.

Roseby South immediately adjoins the southern boundary of the Company's Cloncurry Project and MMG's major underground zinc mine development at Dugald River (Figures 2 and 3). The Cloncurry Project is the subject of a US$235.5 million proposed joint venture ("JV") with Sichuan Railway Investment Group ("SRIG"). Please refer to ASX release dated 2 June 2016 for further information regarding the SRIG JV.

Altona has expanded its exploration activities in the Mt Isa inlier. Field work this year has focussed on high resolution soil sampling, prospecting and geological mapping. The large Harvest and Hobby anomalies were identified and were reported in ASX release dated 1 August 2016. Altona has also increased its tenement holdings and applications in the Mt Isa inlier to 3,231 square kilometres (ASX release dated 15 August 2016).

The new Reaper anomaly (Figure 1) is the largest of the targets defined so far and is located 6.5 kilometres north of the Hobby anomaly. It sits on a major north-south structure which extends through Hobby in the south and through the Companion copper-gold prospect in the north. Reaper was missed by previous exploration having a different surface visual expression to 'typical' copper anomalies of similar tenor in the region.

At Reaper, multiple copper-in-soil anomalies greater than 1,000ppm (0.1% copper) have been defined within broader anomalism over a strike extent of 2.5 kilometres (Figure 1). Peak values range up to 5,426ppm (0.54%) copper. The anomalism is of similar size and tenor to that at the Cloncurry Project's Little Eva deposit (546,000 tonnes contained copper and 295,000 ounces of gold, Appendix 3).

Two very small old workings are located within the southern part of the anomaly. Overall the copper mineralisation has a subtle surface expression and is finely disseminated within the rocks. Outcrop rockchip samples in the south of the target returned up to 0.8% copper and up to 1.54g/t gold. (Appendix 1, Table 1).

Gold-in-soil was not routinely assayed, however gold was assayed from one line in the south and values up to 0.1g/t in soil were obtained coincident with peak copper values.

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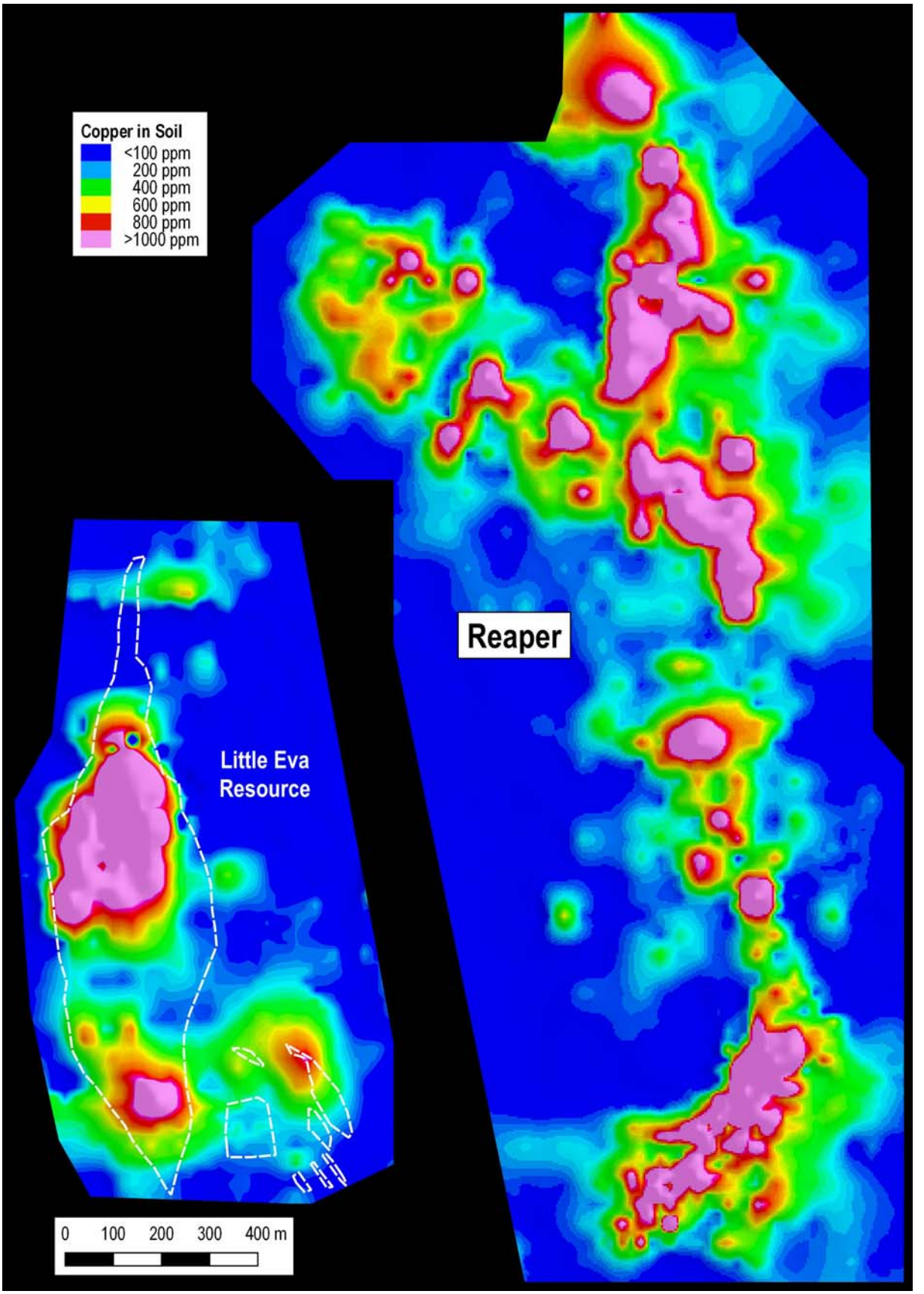

Figure 1: Reaper Prospect - Image of copper-in-soil anomalism compared to the Little Eva deposit. Note images are projected at matching scale and colour ranges.

The anomaly occurs within a range of hills with relief up to 70 metres. The broader anomaly trends north-south while the internal high tenor zones trend northeast and northwest cutting across steeply dipping, north-striking ridges of metasedimentary rocks (pink feldspar and amphibole).

No drilling has been undertaken at the prospect to date. An RC drilling programme at Reaper, Hobby and Harvest will commence in 3-4 weeks. Third party agreements and Aboriginal heritage clearances required prior to any drilling have been secured.

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About Altona

Altona Mining Limited is an ASX listed company focussed on the Cloncurry Project in Queensland, Australia. The Project has Mineral Resources containing some 1.65 million tonnes of copper and 0.41 million ounces of gold. The first development envisaged is the 7 million tonnes per annum Little Eva open pit copper-gold mine and concentrator. Altona has completed a Framework Agreement with Sichuan Railway Investment Group to fully fund and develop Little Eva. Little Eva is permitted with proposed annual production[(1)] of 38,800 tonnes of copper and 17,200 ounces of gold for a minimum of 11 years. A Definitive Feasibility Study was published in March 2014.

[1]*Refer to the ASX release 'Cost Review Delivers Major Upgrade to Little Eva' dated 13 March 2014 which outlines information in relation to this production target and forecast financial information derived from this production target. The release is available to be viewed at www.altonamining.com or www.asx.com.au. The Company confirms that all the material assumptions underpinning the production target and the forecast financial information derived from the production target referred to in the above-mentioned release continue to apply and have not materially changed.*

Competent Persons Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Roland Bartsch, BSc (Hons), MSc, MAusIMM, and Mr George Ross, MSc, MAIG. Mr Bartsch and Mr Ross are full time employees of the Company and have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Bartsch and Mr Ross consent to the inclusion in the report of the matters based on his information in the form and context in which it appears.

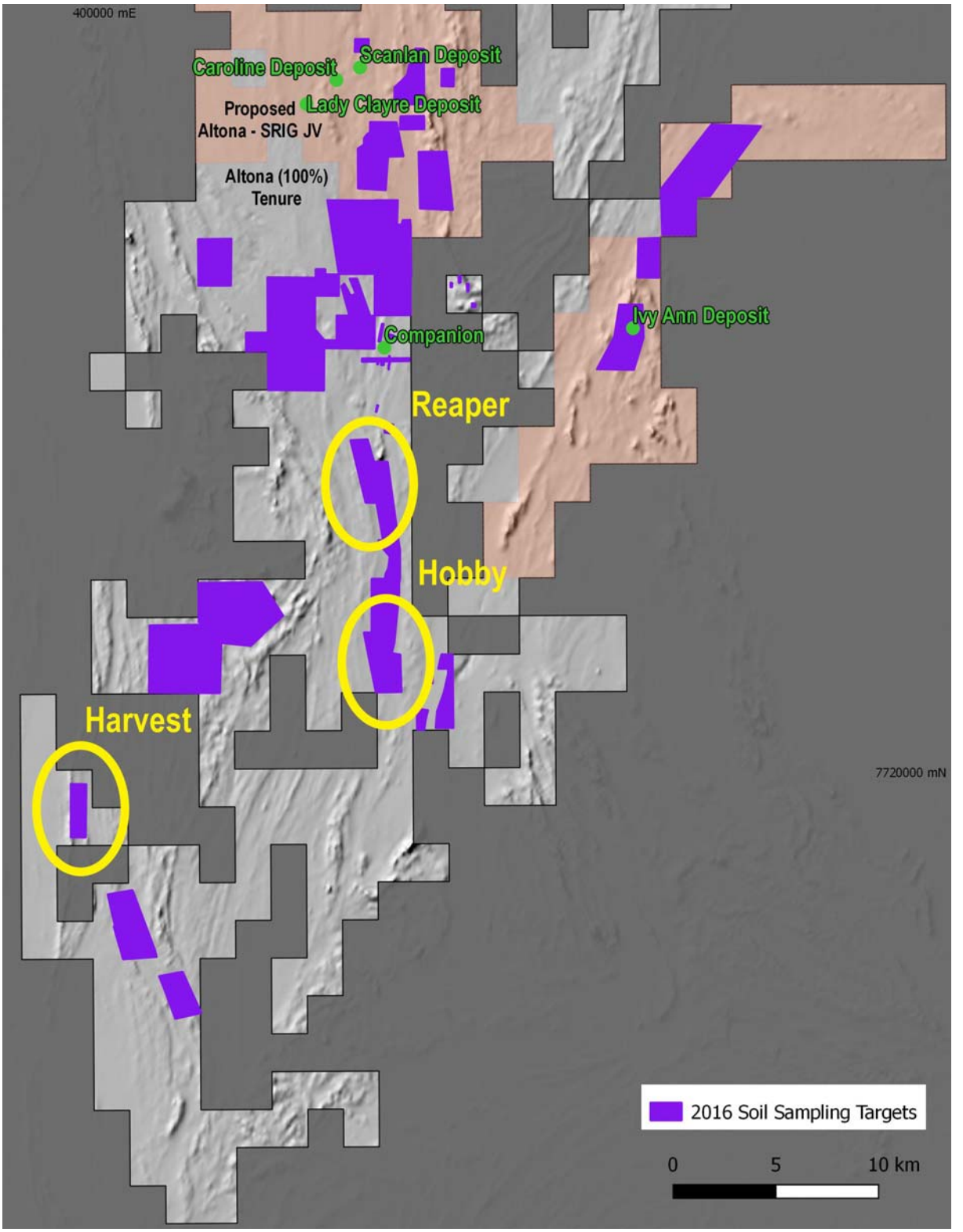

Figure 2: Roseby South Project tenure overlaid on a magnetic image. Deposits within the Cloncurry Project and new targets from the 2016 field campaign are highlighted.

APPENDIX 1: ROCKCHIP SAMPLES

Table 1: Reaper outcrop rockchip sample summary - Altona

Sample ID	Location (MGA54)		Analyses	
	Easting (m)	Northing (m)	Copper %	Gold g/t
AL0023019	7732194	413998	0.69	0.04
AL0023020	7732133	413957	0.38	1.54
AL0023021	7732113	413935	0.47	1.14
AL0023022	7732116	413983	0.50	1.23
AL0023023	7732136	413979	0.52	0.53
AL0023024	7731980	413816	0.78	0.05
AL0023025	7732015	413856	0.76	0.21
AL0023026	7732168	413969	0.61	0.02
AL0023027	7732071	413982	0.71	0.03
AL0023028	7732041	413992	0.31	0.04

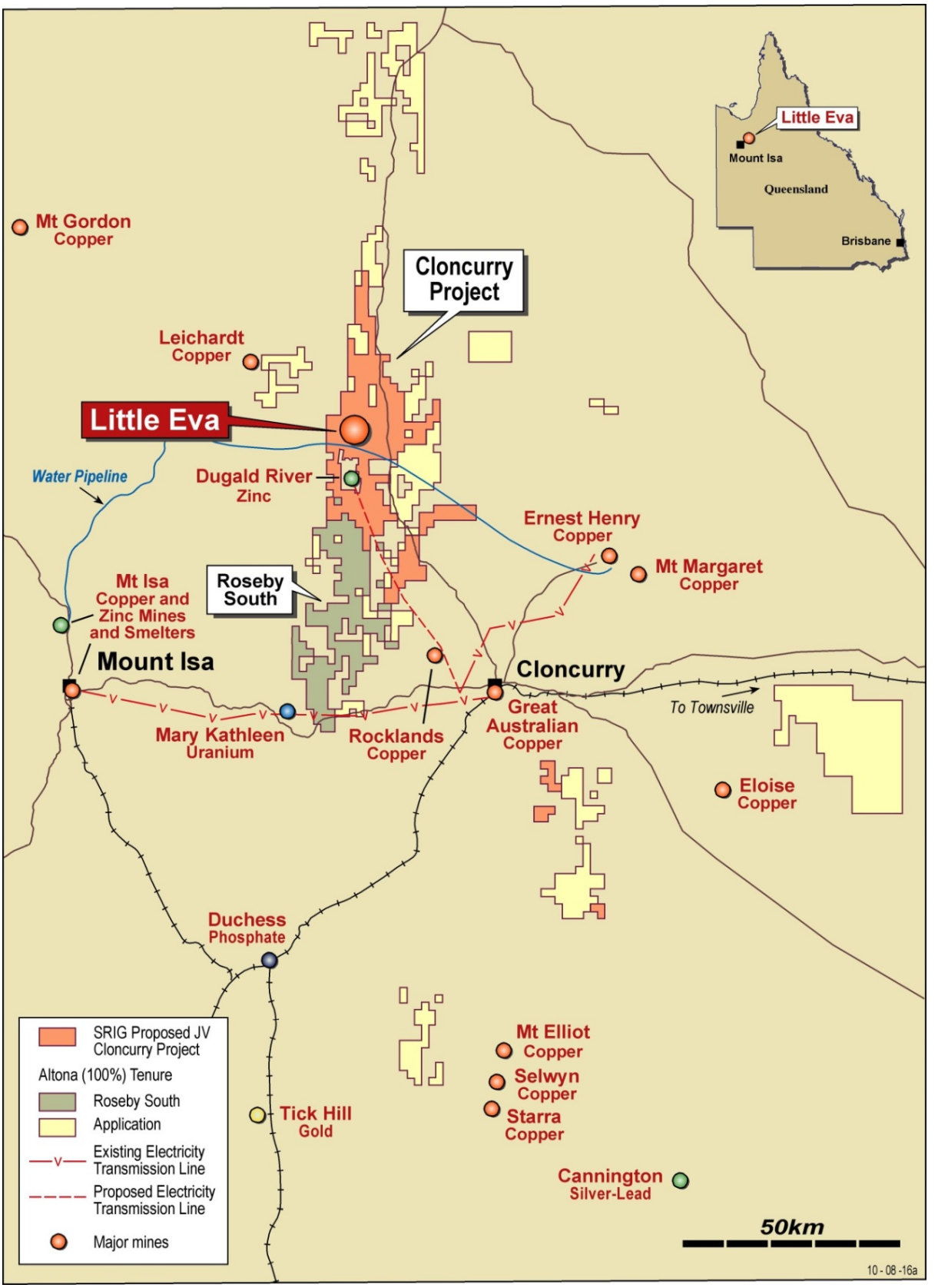

Figure 3: Roseby South Project location map

APPENDIX 2: TABLE 1 OF THE 2012 EDITION JORC CODE

The table below is a description of the assessment and reporting criteria used in reporting the Exploration Results that reflects those presented in Table 1 of The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Soil samples are surface samples (top 20cm) sieved to -2mm to obtain a ~100g sample size. Sampling is conducted only when dry. Rockchip samples were collected from patchy surface rock subcrop or outcrops and are typically chip samples across exposed rock faces over an area <1m^2 and are commonly selective targeting mineralised or altered rock exposures. All rockchip and duplicate (referee) soil analyses were analysed at ALS laboratories in Townsville.
Drilling techniques	Not applicable, no new data reported.
Drill sample recovery	Not applicable, no new data reported.
Logging	Not applicable, no new data reported.
Sub-sampling techniques and sample preparation	Not applicable, no new sub-sampled data reported.
Quality of assay data and laboratory tests	*Soil Samples* Soil samples were routinely analysed for copper (and a suite of other elements) using a Niton XL3tGOLDD+ hand-held XRF instrument. Analyses are conducted routinely under controlled conditions in the site office. Quality Control included: standards (certified reference materials) from Geostats Ltd. Standards were inserted into the sampling sequence at 1:20 ratio and included representative material for copper. Whenever a bias has been detected it has been found to be consistent against the reference data and therefore no corrections have been made. Umpire soil samples were submitted to ALS laboratories in Townsville for analysis using Trace Level method by four acid "near total" digest (method code ME-ICP61; copper range 1 -10,000ppm) for 33 elements; and; gold using Super Trace Level method by aqua regia digestion with 50g sample weight (method code: Au-ST44; gold range 0.1ppb – 1ppm). The umpire samples were selected from traverses across each anomaly; these displayed no bias and an acceptable level of precision for the purpose. *Rock Samples* All rock samples were analysed at ALS laboratories in Townsville for a standard suite of elements. Samples were analysed by Aqua Regia or a four acid digest (HF-HNO3 -HClO4

Criteria	Commentary
	acid digestion, HCl leach) digest using ICP-AES and ICP-MS (method code: ME-MS41 or ME-MS61; copper range 0.2 – 10,000ppm)) for 51 elements. This included copper, with a detection limit of 0.2ppm. Data reported from Aqua Regia digestion should be considered as representing only the leachable portion of a particular analyte while the four acid digestion is a "near-total" digestion. On return of copper values of greater than 1% a second series of analyses were undertaken. This involved an ore grade Aqua Regia digestion (method code: ASY-AR01) followed by ICP-AES analysis optimised for accuracy and precision at high concentrations (method code: ME-OG46). Gold was analysed via a fire assay (30g) with an AAS finish, with a lower detection limit of 0.01ppm and upper detection limit of 100ppm.
Verification of sampling and assaying	Results were checked by several Altona personnel. All field logging or field sampling data was done using a laptop and uploaded into the company Datashed database and validated by company database personnel. All assay files were received in digital format from ALS Laboratories. All Niton handheld XRF soil data was downloaded from the instrument in digital format. Data was uploaded into the Altona Datashed database and validated by company database personnel. No manual data inserts took place. No adjustments have been applied to the results.
Location of data points	Soil sample locations are surveyed using handheld GPS's (Garmin GSMAP78s) with an approximate 5 metre horizontal accuracy. No drilling. The Grid is GDA94 MGA Zone 54.
Data spacing and distribution	The soil sample grid spacings are 20 x 20. In the areas surrounding the anomalies spacing steps out typically to 40 x 80 metres and 20 x 200 metres.
Orientation of data in relation to geological structure	Not applicable, no new drill data reported.
Sample security	Soil samples are collected and bagged into pre-numbered plastic clip-lock bags. Unique sample numbers were retained during the whole process. Samples were collected and delivered to the Altona field office daily as they were collected. Soil samples were retained for reference and stored in Altona facilities in Cloncurry. All rock and umpire soil samples were then catalogued and sealed prior to dispatch to the laboratory by Altona staff.
Audits or reviews	Internal audits and reviews of key datasets collected by Altona have been undertaken. Past exploration data by other explorers has only been validated against the source references. Analysis of the results from the QA/QC samples are routinely analysed by the

Criteria	Commentary
	database manager and geologist on a batch and campaign basis. For laboratory analyses, the accuracy of key elements such copper and gold, was acceptable and the field duplicate assay data was unbiased and shows an acceptable level of precision. For handheld Niton XRF analyses the data may display a consistent bias against the reference data. In contrast laboratory umpire samples from the reported soil anomalies displayed no bias and an acceptable level of precision for the purpose. No external audits or reviews have been undertaken.

Section 2: Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	Reaper sits within EPM 25761, 100% owned by Altona Mining Ltd. No joint ventures apply. There are agreements in place with the native title holders, the Kalkadoon people and with landholders. No significant historic sites or national parks are located within the reported exploration sites. The EPM was granted in late 2015 and is in good standing.
Exploration done by other parties	Very small historical surface workings on narrow high grade copper oxide veins/gossans exist at Reaper. At the Reaper anomaly a small number of rockchip samples had been collected by pervious explorers; the tenor of copper assays from these samples are similar to those collected by Altona no gold assays are available; these are not reported as their locations could not be verified and may be incorrect with assays anomalous in copper from rocks outside the strongly anomalous areas. No systematic soil sampling, ground geophysics or drilling has been undertaken.
Geology	Mineralisation is considered to be similar to other IOCG deposits in the area and exhibits feldspar-quartz-amphibole alteration.
Drill hole Information	Not applicable, no new drill data reported. Exploration results are not being reported for the Mineral Resource area.
Data aggregation methods	Exploration results are not being reported for the Mineral Resource area.
Relationship between mineralisation widths and intercept lengths	Exploration results are not being reported for the Mineral Resource area.
Diagrams	Figures 1 to 5.
Balanced reporting	Exploration results are not being reported for the Mineral Resource area. A full compilation of available soil and rockchip data collected by Altona from the

Criteria	Commentary
	Reaper prospect has been included. Whilst the soil anomalies are attractive and similar in size and tenor to response over the Little Eva deposit, the main text of the release notes that the tenor of surface anomalism is not a reliable guide to the nature of any potential underlying mineralisation. A single line of shallow geochemical drilling by Altona in 2013 transected the Reaper area completely missing the anomalies.
Other substantive exploration data	Exploration results are not being reported for the Mineral Resource area.
Further work	Additional work in the future will consist of RC exploration drilling, prospect scale mapping and further soil sampling. Heritage clearance surveys having been completed ahead of drilling and are planned.

APPENDIX 3: SUMMARY OF MINERAL RESOURCE ESTIMATES FOR THE CLONCURRY PROJECT

DEPOSIT	TOTAL			CONTAINED METAL		MEASURED			INDICATED			INFERRED		
	Tonnes	Grade		Copper	Gold	Tonnes	Grade		Tonne	Grade		Tonnes	Grade	
	million	Cu %	Au g/t	tonnes	ounces	million	Cu %	Au g/t	million	Cu %	Au g/t	million	Cu %	Au g/t
LITTLE EVA PROJECT														
Little Eva	105.9	0.52	0.09	546,000	295,000	37.1	0.60	0.09	45.0	0.46	0.08	23.9	0.50	0.10
Turkey Creek	21.0	0.59		123,000	-	-	-		17.7	0.59		3.4	0.58	-
Ivy Ann[A]	7.5	0.57	0.07	43,000	17,000	-	-	-	5.4	0.60	0.08	2.1	0.49	0.06
Lady Clayre[A]	14.0	0.56	0.20	78,000	85,000	-	-	-	3.6	0.60	0.24	10.4	0.54	0.18
Bedford[A]	1.7	0.99	0.20	17,000	11,000	-	-	-	1.3	1.04	0.21	0.4	0.83	0.16
Sub-total	150.2	0.54	0.09	807,000	409,000	37.1	0.60	0.09	73.0	0.52	0.07	40.1	0.52	0.11
OTHER DEPOSITS														
Blackard[A]	76.4	0.62	-	475,000	-	27.0	0.68	-	6.6	0.60	-	42.7	0.59	-
Scanlan[A]	22.2	0.65	-	143,000	-	-	-	-	18.4	0.65	-	3.8	0.60	-
Longamundi[A]	10.4	0.66	-	69,000	-	-	-	-	-	-	-	10.4	0.66	-
Legend[A]	17.4	0.54	-	94,000	-	-	-	-	-	-	-	17.4	0.54	-
Great Southern[A]	6.0	0.61	-	37,000	-	-	-	-	-	-	-	6.0	0.61	-
Caroline[A]	3.6	0.53	-	19,000	-	-	-	-	-	-	-	3.6	0.53	-
Charlie Brown[A]	0.7	0.40	-	3,000	-	-	-	-	-	-	-	0.7	0.40	-
Sub-total	136.7	0.61	-	840,000	-	27.0	0.68	-	25.0	0.64		84.7	0.59	-
TOTAL	286.8	0.57	0.04	1,647,000	409,000	64.1	0.63	0.05	98.0	0.55	0.05	124.8	0.57	0.04

[A] This information was prepared and first disclosed under the JORC Code 2004 Edition. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. All other resources classified and reported in accordance with JORC Code 2012 edition.

Note:Tonnages are dry metric tonnes and have been rounded, hence small differences may be present in the totals.

See ASX release of 23 October 2007 and 26 July 2011 (Longamundi, Great Southern, Caroline and Charlie Brown), 23 April 2012 (Bedford, Ivy Ann and Lady Clayre), 03 July 2012 (Blackard and Scanlan) and 22 August 2012 (Legend) for full details of resource estimation methodology and attributions.

Little Eva is reported above a 0.2% copper lower cut-off grade, all other deposits are above 0.3% lower copper cut-off.