

ASX ANNOUNCEMENT ACN 123 567 073 30 October 2015

### **DOOLGUNNA PROJECT – BORG EXPLORATION UPDATE**

#### **SUMMARY**

Enterprise Metals Limited ("Enterprise" or "the Company") (ASX: ENT) advises that preliminary assays from 4m composite samples of the recently completed Borg Prospect scout RC drilling program have now been received. Assay results from one metre resplit samples are still awaited.

The scout nine hole RC drill program was designed to test the coincident geochemical/EM anomaly at Borg. The planned holes had target depths of +300m, but due to high water inflows and collapsing holes, all holes fell well short of target depth.

Nonetheless, a number of the drill holes did intersect long intervals of massive and semi-massive sulphides in carbonaceous shales, believed to be Johnson Cairn Formation. While the sulphides were predominantly pyritic in nature, traces of sphalerite and secondary copper minerals were also encountered, and subsequently confirmed by preliminary assaying of 4 metre composite samples.

The maximum zinc assays in 4 metre composite samples are shown in Table 1 below. Note the high iron content of samples is consistent with the large volumes of pyrite encountered. Gold values were consistently less than 0.01ppm.

Hole ID	From (m)	To (m)	Interval (m)	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Fe %	Mn ppm
BNRC005	60	64	4	195	31	1,210	<0.5	42	18.05	1,767
BNRC006	144	148	4	122	106	1,734	5.5	75	17.3	>10000
BNRC008	132	136	4	100	20	1,198	2.6	16	14.52	>10000
BNRC008	180	184	4	264	35	1,452	2.2	83	25.97	>10000
BNRC009	164	168	4	148	128	1,300	3.7	104	16.13	>10000

Table 1. Borg RC Drill Holes, 4m Composite Samples, Maximum Zn Assays

Table 2 below illustrates the broad intervals of elevated Zn (+200ppm) associated with the massive pyrite zones within the carbonaceous shale unit.

Hole ID	From (m)	To (m)	Interval (m)	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Fe %
BNRC001	96	132	36	137	52	388	2	48	11.8
BNRC002	100	116	16	136	36	371	1	37	8.0
BNRC003	108	124	16	164	32	419	1	27	10.9
BNRC004	44	68	24	107	17	323	0	27	5.5
BNRC004	104	120	16	103	16	337	0	29	4.7
BNRC005	44	72	28	145	20	689	0	27	11.3
BNRC006	136	152	16	154	68	908	4	76	14.1
BNRC006	168	184	16	136	79	445	2	141	10.1
BNRC008	120	140	20	117	19	710	2	36	13.2
BNRC008	172	190	18	206	34	676	1	118	18.3
BNRC009	160	180	20	192	86	653	2	109	11.1

Table 2. Borg RC Drill Holes, 4m Composite Samples, Continuous Intervals of +200ppm Zn

The Borg Prospect was initially identified as an airborne EM ("Spectrem") anomaly in a CSIRO fixed wing survey, co-incident with one of Enterprise's regional Maglag base metal geochemical anomalies. Infill Maglag sampling and assaying subsequently defined a large 2.5km long polymetallic anomaly, semi-coincident with a helicopter (VTEM) electromagnetic anomaly, a ground (MLEM) electromagnetic anomaly and a gravity anomaly. Enterprise considered that the soil anomaly at Borg could represent the weathered and leached surface expression of a sediment hosted polymetallic massive sulphide body at depth. (Refer Figure 1 below)

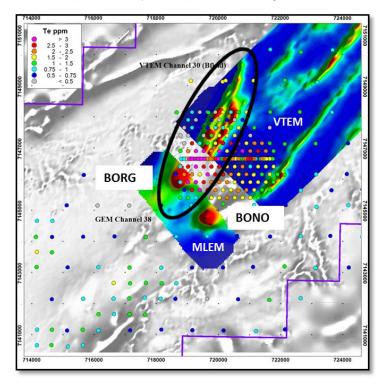


Figure 1. Maglag Tellurium Geochemistry over VTEM/MLEM/Grey Scale Magnetic Image.

The EM feature of interest is shown as a black outline

The locations of the 2015 RC drill holes with respect to the Borg Maglag Tellurium anomaly, VTEM and MLEM anomalies are shown below in Figure 2.

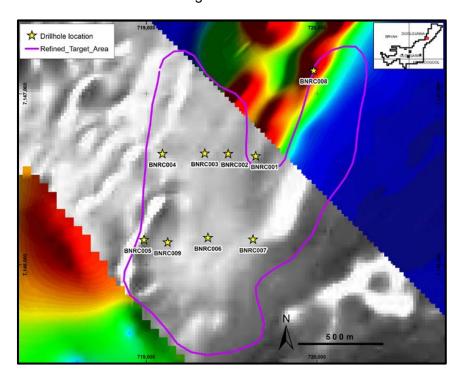


Figure 2. Borg Prospect, RC drill hole collars, over greyscale Mag image, coloured EM anomalies

RC holes BNRC006 and BNRC009 encountered the most sulphides, and Figure 3 below is a cross section showing hole traces and histograms of estimated pyrite content. The modelled gravity anomaly is shown in pink, and the projected position of the target EM plate from the MLEM data to the SW is shown as a red line.

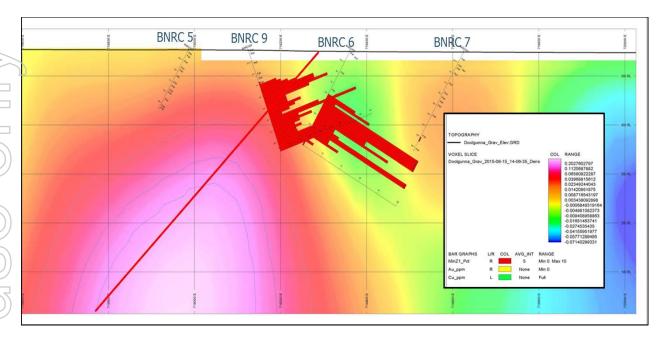


Figure 3. Borg Drill Section 7,146,150N, Showing BNRC Holes, Pyrite Estimate in Histograms.

### **Interpretation of EM Anomalies**

The mineralised carbonaceous shale sequence intersected at Borg is interpreted to belong to the Johnson Cairn Formation. The gravity and EM target zone is also interpreted to lie within the Johnson Cairn Formation at depth.

The Bono conductor which lies immediately to the south of Borg, is significantly more conductive than Borg and also believed to lie within the Johnson Cairn Formation, but has no surface geochemical expression due to transported overburden.

Decay curve analysis suggests this anomaly has a well-defined exponential decay fit in late channel data (+880 msec), with a time constant (tau) estimate of 669 msec. Modelling suggests the depth to the top of the conductor is approximately 130m with a strike of 737m. The conductance is estimated to be +8350S which is extremely high.

The Bono conductor is not closed off to the NE and a further line of MLEM is proposed. In light of the drilling results from Borg, a deep drill test of the Bono conductor is warranted. Refer Figures 4 and 5 overleaf for the 2-D plate models of the Borg and Bono conductors, and the stacked Z-component profiles from the 2013 MLEM survey at Borg-Bono.

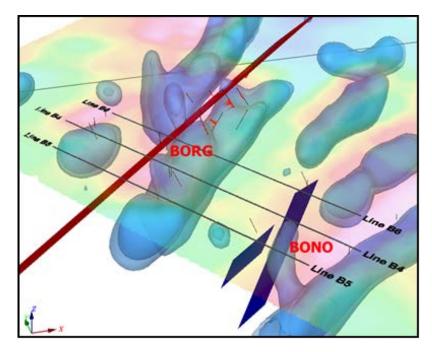


Figure 4. Borg EM Plate (red) projected into target area to the NE & Bono EM Plates (blue) over 3-D Gravity Model

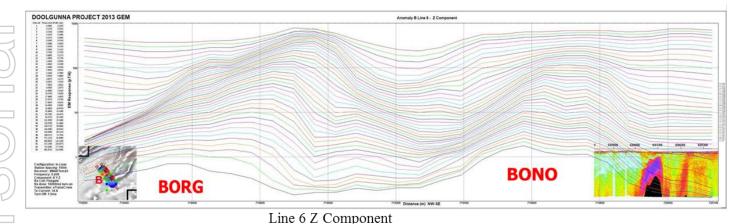


Figure 5. Borg –Bono MLEM Anomaly, Line 6B Z component data (Last channel in MLEM 881msec after turnoff)

#### **Discussion**

The 2015 Borg RC drilling program was planned to test for primary base metal sulphide mineralisation at depths down to 350 metres. Due to drilling technical difficulties in combination with excessive groundwater, the maximum depth achieved was 262 metres with all other holes drilled to less than planned depth. Following the receipt of assays, a number of these holes may be deepened with diamond drill core "tails".

The pyrite seen in the RC drill chips is hosted in carbonaceous shale and varies in mode of occurrence from finely disseminated to laminated and massive. All the drill holes except for BNRC004, BNRC005 and BNRC007 encountered carbonaceous-pyritic shale over repeated wide multimeter thicknesses and pyrite constituted up to 80% in many of the one metre intervals.

The unoxidized shale is dark grey to black depending on the carbonaceous content. Pervasive hematite alteration and/or fine to dominant "stockwork" quartz-carbonate veining-alteration was seen in many holes. Rare chalcopyrite "grains" (1.0-1.5mm) were seen within quartz-carbonate veins in BNRC006 and also in BNRC009. Chalcopyrite grains (1.0-1.5mm) in pyrite were also seen within a strongly pyritic interval in drillhole BNRC008.

The Company believes that the abundant sulphides found in the Johnson Cairn Formation may provide the evidence for a large sediment hosted sulphide system at depth.

Selected pyrite samples will be sent to the Centre for Excellence in Ore Deposits (CODES, University of Tasmania) for Laser Ablation and ICP-MS analysis for the content of base metal pathfinder elements. This work may help vector future exploration drilling towards massive zinc sulphides.

Dermot Ryan Managing Director

Appendix 1. Borg Prospect, 2015 RC Drill Hole Collar Information

Hole Number	East	North	Dip	Azimuth	Depth	Tenement
			(deg)	(deg)	(m)	
BNRC001	719641	7146637	-60	90	250	E51/1304
BNRC002	719480	7146650	-60	90	262	E51/1304
BNRC003	719343	7146653	-60	90	131	E51/1304
BNRC004	719095	7146650	-60	90	127	E51/1304
BNRC005	718986	7146147	-60	270	138	E51/1304
BNRC006	719361	7146159	-60	270	220	E51/1304
BNRC007	719625	7146150	-60	270	232	E51/1304
BNRC008	719981	7147137	-60	270	190	E51/1304
BNRC009	719125	7146133	-70	90	220	E51/1304

#### **Competent Persons statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Dermot Ryan, who is an employee of Xserv Pty Ltd and a Director and security holder of the Company. Mr Ryan is a Fellow of the Australasian Institute of Mining and Metallurgy and 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 Ryan consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this report that relates to 2015 Geophysical Exploration Results is based on information compiled by Mr Barry Bourne, who is employed as a Consultant to the Company through geophysical consultancy Terra Resources Pty Ltd. Mr Bourne is a fellow of the Australian Institute of Geoscientists and a member of the Australian Society of Exploration Geophysicists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and 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 Bourne consents to the inclusion in the report of matters based on information in the form and context in which it appears.

Historical exploration results shown in Figure 1 of this report were previously reported to the ASX by the Company and Mr Ryan as the Competent Person under the respective 2004 and 2012 Editions of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ryan and Enterprise Metals Limited confirm that they are not aware of any new information or data that materially affects the information included in the relevant previous Enterprise Metals Limited market announcements.

# JORC Code, 2012 Edition - Table 1 report

# 30<sup>th</sup> October 2015 – Doolgunna Project- Borg Prospect

# **Section 1 Sampling Techniques and Data**

	ction apply to all succeeding sections.)
Criteria	Commentary
Sampling techniques	Drilling at Doolgunna in September/October 2015 consisted of 9 angled Reverse Circulation (RC) drill holes.  The data to the second of 2015 consisted of 9 angled Reverse  Circulation (RC) drill holes.
1	<ul> <li>The holes were planned to test a number of Maglag geochemical and EM (MLEM) and associated gravity targets.</li> </ul>
	<ul> <li>Representative 3kg 1 metre samples were produced by a cyclone and splitter system fitted to side of the drill rig.</li> </ul>
	<ul> <li>Representative 4m composite samples were collected using a constant volume PVC scoop. These 4m composite samples (~3kg) were pulverised to give a 25g sample for aqua regia digest and ICP-MS and OES analysis of 31 elements: Ag, Al, As, Ba,Be,Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sc, Sr, Te, Ti, Tl, V, W, Zn.</li> </ul>
	<ul> <li>And by 25g samples analysed by MS for gold (after aqua regia digest).</li> <li>Based on results of 4m composite samples, some selected original 1m samples have been sent for analysis.</li> </ul>
Drilling techniques	Drilling to date has been angled Reverse Circulation
Drill sample recovery	<ul> <li>Sample recoveries not measured, poor samples commented on in logs.</li> <li>RC samples are collected in polythene bags.</li> <li>Recovery was not measured. All wet samples have been logged and recorded in the database accordingly.</li> </ul>
Logging	<ul> <li>Geological logging of drill chip samples has been recorded for each drillhole including lithology, mineralisation, grainsize, texture, oxidation, weathering, colour and wetness.</li> <li>Logging is qualitative. For RC drilling every 1m interval was collected, sieved and a sample retained in a plastic chip tray.</li> </ul>
Sub-sampling techniques and	<ul> <li>All drillholes were logged for the full extent of each hole.</li> <li>No drill core was collected.</li> <li>4m composite RC samples were collected using a spear when dry and a PVC scoop if</li> </ul>
sample preparation	<ul> <li>4m composite RC samples were collected using a spear when dry and a PVC scoop if wet from bulk drill samples.</li> <li>The sample preparation of drill chip samples for analysis follows industry best practice involving oven drying, coarse crush, sieve -80# sufficient for a 50g aqua regia</li> </ul>
	<ul> <li>digestion.</li> <li>QC procedures involve the review of laboratory supplied certified reference materials and field duplicates. These quality control results are reported along with sample values in the final analysis report. Selected intervals are assayed at other laboratories</li> </ul>
	for comparison at times.  • Sample sizes are considered to be appropriate to correctly represent the sought after mineralisation style.
Quality of assay data and laboratory tests	<ul> <li>The analytical techniques for 4m composite samples are aqua regia digest multi element suite with ICP-MS finish suitable for reconnaissance as a first pass. Re-split or original 1m samples are to be dissolved with a four acid digest for the same elements and gold assayed by fire assay in these samples this method is a full digest.</li> <li>No geophysical tools were used to determine any element concentrations at this stage.</li> </ul>

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Criteria	Commentary
	<ul> <li>Laboratory QC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house process.</li> </ul>
Verification of sampling and assaying	<ul> <li>Primary data was collected using a set of standard Excel templates and re-entered into laptop computers. The information was sent to Enterprises' in-house database manager for validation and loading into a SQL database server.</li> <li>No adjustments or calibrations were made to any data used in this report.</li> </ul>
Location of data points	<ul> <li>Drill hole collar locations were surveyed by a modern hand held GPS unit with an accuracy of 5m which is sufficient accuracy for the purpose of compiling and interpreting the results.</li> <li>Topographic control is by NASA Shuttle Radar Topography Mission (SRTM).</li> <li>The grid system is MGA GDA94 Zone 50.</li> </ul>
Data spacing and distribution	<ul> <li>RC hole spacing was chosen to test a number of Ground EM, surface geochemistry and gravity anomalies. Spacing between holes was nominally 150m, with line spacing of 500m.</li> <li>This is a maiden/scout exploration drilling program and no resource estimation is planned.</li> <li>No additional sample compositing was used apart from the standard 4m composite sampling.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>The drilling was conducted orthogonal to strike of the sedimentary sequence interpreted from aeromagnetic data and geological mapping.</li> </ul>
Sample security	<ul> <li>Samples were secured in bulka bags and delivered to the Laboratory by a reputable carrier.</li> </ul>
Audits or reviews	<ul> <li>Regular internal reviews are occurring, but no external reviews have been undertaken.</li> </ul>

### **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

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	Criteria	Commentary						
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)	Mineral tenement and land tenure	<ul> <li>The Doolgunna Project consists of multiple contiguous exploration licences and is located 110km northeast of Meekatharra and some 10km southwest of Sandfire</li> </ul>						
	status	Resources NL's (Sandfire) 2009 DeGrussa copper-gold discovery. The Borg Prospect lies on E51/1304.						
)		<ul> <li>The GEM, HeliTEM and gravity prospects referred to are all on granted tenements held 100% by either Enterprise Metals Limited or one its wholly owned</li> </ul>						
		subsidiaries. The tenements are all in good standing.						
		<ul> <li>The prospects are either on former Doolgunna or Mooloogool pastoral leases, now administered by the WA Government Department of Parks and Wildlife (DPaW), Mt Padbury or Killara pastoral leases, or Vacant Crown Land.</li> </ul>						
		<ul> <li>There are no royalties attached to any of these tenements.</li> </ul>						
		<ul> <li>The prospects are covered by the Yugunga-Nya [WAD6132/98] Native Title Claim Group. Native Title Agreements, administered by the Yamatji Marlpa Aboriginal</li> </ul>						
		Corporation are in place for the relevant tenements.						
=	Exploration done by other parties	<ul> <li>A summary of previous exploration activities at Borg by the Company and others was provided in the Company's 2014 Annual Report and ASX release dated 21 July</li> </ul>						
		2014.						
		<ul> <li>There has been no exploration conducted by competitors in the area of the Borg</li> </ul>						
		anomaly. The Borg target has previously had several shallow scout aircore holes						

Criteria	
	Commentary
Geology	<ul> <li>The Company considers the Yerrida Basin sediments to be prospective for sediment hosted (SEDEX style) copper deposits similar to those in the Central African Copperbelt.</li> <li>The Southern Boundary Fault (SBF) and associated cross structures are potential conduits for mineralising fluids into the sediments of the "Doolgunna Graben' The Yerrida Basin sediments are also host to the Thaduna massive sulphide copper deposit and Sipa Resources' Enigma Deposit to the northeast along strike of the SBF.</li> <li>Although the area is covered by regolith, it is expected that the potential mineralised zones would manifest themselves as electromagnetic conductor and/or gravity anomalies.</li> </ul>
Drill hole Information	Refer to Appendix, table of drill collars information.
Data aggregation	4 metre composite samples assayed.
methods	Continuous intervals of +200ppm Zn averaged.
Relationship between mineralisation widths and intercept lengths	Only down hole lengths are reported as true width of mineralized intervals is no known.
Diagrams	Plan showing RC drill collars in ASX Release 6 October 2015.
	Geological cross sections being prepared.
Balanced reporting	All significant results are reported.
Other substantive exploration data	No other substantive exploration data available at the present time.
Further work	<ul> <li>Assaying of selected 1m original samples.</li> <li>Selected pyrite samples will be sent to the Centre for Excellence in Ore Deposit (CODES, University of Tasmania) for Laser Ablation and ICP-MS analysis for the content of base metal pathfinder elements.</li> <li>This work may help vector future exploration drilling towards massive zin sulphides.</li> <li>Possible diamond core tails to deepen existing Borg RC drill holes following receip of CODES results.</li> </ul>