New high grade copper intersections at the Champion prospect on 100% owned West Melton – Yorke Peninsula, South Australia

- New high grade copper mineralisation intercepted at shallow depths in drill holes at the Champion prospect, with grades ranging up to 2.92% copper.
- Significant scope for further mineralisation at the Champion prospect.
- Planning for Phase 2 drilling underway to follow-up this strong exploration result.

Champion copper-gold prospect

(Marmota Energy Limited 100%)

Marmota Energy Limited is pleased to report new high grade copper assay results from Phase 1 holes drilled on the Company's 'Champion' prospect, on the wholly owned West Melton Copper-Gold Project on SA's Yorke Peninsula. The Phase 1 program was designed to test the significant copper and gold geochemical anomalies defined on the project earlier this year (see ASX announcement dated March 4). The target is also strongly coincident with shallow geophysical anomalies.

Assay results have been received from the remaining 25 holes containing high grades of copper which complement the previously announced high grade copper results from the first four drill holes (see ASX announcement dated April 1). These results show that a strong zone of high grade copper mineralisation **extends for approximately 1 km trending in a northeast - southwest orientation and is approximately 750 metres wide (Figure 1)**. The mineralisation is open in all directions. These results reinforce the significance of the new copper discovery at the Champion prospect.

Outstanding assay grades received for multiple holes include (Table1): WMAC003

10 metres at 1.12% copper from 15 metres and

15 metres at 1.29% copper from 29 metres and 0.19 g/t gold from 42 metres. Combined 29 metres at 1.05% copper.

WMAC007

30 metres at 1.12% copper from just below surface, inc 12 metres at 1.5% copper from 9 metres and 3 metres at 2.1% copper and 0.11 g/t gold from 24 metres

WMAC024

19 metres at 1.16% copper from 48 metres to end of hole

WMAC025

36 metres at 1.29% copper from 21 metres, inc 18 metres at 1.76% copper from 24 metres and 6 metres at 2.56% copper from 27 metres, ranging up to 2.92% copper

WMAC026

18 metres at 1.31% copper from 15 metres

WMAC028

30 metres at 0.84% copper from 3 metres, inc 3 metres at 1.65% copper from 9 metres, inc 9 metres at 0.26 g/t gold from 27 metres and

34 metres at 0.74% copper from 42 metres to end of hole, inc 15 metres at 1.52% copper from 42 metres

MARMOTA

The Phase 1 aircore drilling program at West Melton was designed to give initial broad spaced coverage of this untested area. Drill holes tested a variety of anomaly characteristics based on geophysical and calcrete geochemical results. Holes drilled at broad spacings over significant strike have intercepted significant copper and anomalous gold mineralisation.

Since the drilling, detailed logging of drill hole samples has been undertaken, and mineralisation now logged in a number of the holes drilled in this Phase 1 program. Malachite (Figure 3) and the primary sulphides pyrite and chalcopyrite have been observed in these drill holes. Up to 43 metres of sulphides are logged in drill hole WMAC011 with the hole ending in sulphides.



drillholes Nineteen intercepted copper mineralisation grading greater than 0.1% Cu (Figure 1). Eight holes intercepted significant grades of copper from just below the surface, and four drill holes ended in copper mineralisation (Table 1). Intercepts of anomalous gold along with other vectoring elements (As, Ag, Fe) have also been confirmed within the mineralised system at Champion. Initial assessment of the lithologies encountered, appear to be broadly metasediments of the Wandearah Formation, with minor occurrences of felsic and mafic intrusives. The Wandhearah Formation hosts copper and gold mineralisation at the Wallaroo mines. Weathered basement was encountered in all drillholes from depths as shallow as 2m.



Figure 2: Champion prospect Section 2 looking northeast. High grade subzones of copper intercepted highlighted by green zones. Remaining zones contain copper < 0.1 %.

Although deeply weathered rocks (saprolite) are encountered elsewhere on Yorke Peninsula, they are not common at the Champion prospect, with relatively fresh basement lithologies as shallow as 5m. The copper mineralisation, predominantly malachite, occurs within the weakly oxidised metasediments, but is not found within the saprolite (weathered basement) units as is common elsewhere. Chalcopyrite was also identified within seven of the holes drilled.



Figure 3: Champion prospect Section 1 looking east. High grade subzones of copper intercepted highlighted by green zones. Remaining zones contain copper < 0.1 %. (Right) Example of malachite logged in Phase 1 drill hole **WMAC007**

Next Phase of Exploration

Analysis of the Phase 1 results is continuing and will be used to plan a follow up drilling program at the Champion prospect, along with exploration at other copper in-calcrete targets identified on the West Melton tenement. The significant distances between holes that have intercepted mineralisation **offer excellent scope to grow the Champion discovery and find additional high grade zones**. Infill and step out holes are being planned to establish the extent and disposition of mineralisation at the Champion prospect and test other undrilled coincident geochemical and geophysical targets.

Holes WMAC011, 12, 14, 24, 27, 28 and 29 intercepted primary sulphides, with the aircore rig drilling to relatively shallow refusal. **Four holes ended in copper mineralisation.** These holes are being considered for extension utilising diamond drilling to test for further mineralisation extension potential at depth. This will complement the copper mineralisation intercepted at shallower depths open laterally in all directions.

Additional target areas

High quality calcrete samples collected for laboratory assay were critical in targeting of Phase 1 drill holes at the Champion prospect. Re-examination of the regional scale calcrete data that Marmota has acquired over the West Melton (MEU: 100% of all minerals) and adjoining Melton tenement (MEU: 75% of all minerals) holdings has identified additional target areas worthy of low impact follow up.

The same exploration method that has provided success at the Champion prospect is planned across other priority target areas on West Melton. Additional infill exploration is also being considered for the eastern side of the Pine Point Fault on the Melton tenement, which hosts copper-gold mineralisation elsewhere along the fault. This will include low cost infill calcrete sampling along with ground magnetic surveys to help define drill targets.

Dom Calandro MANAGING DIRECTOR

Table 1. Table of significant copper and gold assays from Phase 1 drill holes at the Champion Prospect

Hole ID	Easting GDA94 Z53	Northing GDA94 Z53	Dip	Azimuth	Depth (m)		From (m)	To (m)	Interval (m)	Cu %	Au g/t
WMAC001	768717	6222506	-90	~	91		3	15	12	0.45	
							21	24	3		0.16
WMAC002	768736	6222454	-90	~	103		3	15	12	0.55	
WMAC003	768654	6222407	-90	~	100		0	12	12	0.27	
							15	44	29	1.05	
						incl	15	25	10	1.12	
						and	20	21	1	1.51	
						and	21	22	1	1.59	
						and	22	23	1	1.69	
						and	23	24	1	1.47	0.1
						and	29	44	15	1.29	
						and	34	35	1	1.47	0.13
							42	43	1	1.38	0.19
WMAC004	768723	6222335	-90	~	76		0	18	18	0.61	
WMAC005	768636	6222318	-90	~	76		12	18	6	0.21	
							27	33	6	0.19	
WMAC007	768707	6222248	-90	~	60		0	30	30	1.1	
						incl	9	21	12	1.5	
						and	24	27	3	2.1	0.11
WMAC011	768129	6222011	-60	135	88		6	42	36	0.14	
							72	75	3	0.21	
							81	84	3	0.15	
WMAC012	768088	6222051	-60	135	76		18	30	12	0.18	
							42	45	3	0.1	
							57	60	3	0.31	
							66	75	9	0.23	
WMAC014	768159	6221980	-60	135	74		24	27	3	0.13	
							54	57	3	0.15	
							60	63	3	0.23	
WMAC020	768051	6221445	-60	135	50		12	15	3	0.11	
							18	30	12	0.14	
WMAC021	768015	6221482	-60	135	50		9	12	3	0.15	
							30	33	3	0.13	
WMAC022	767982	6221519	-60	135	63		33	63 eoh	30	0.19	
WMAC023	768633	6222250	-90		60		3	21	18	0.22	
WMAC024	768337	6222226	-60	135	67		48	67 eoh	19	1.16	
WMAC025	768301	6222262	-60	135	70		21	57	36	1.29	
						incl	24	42	18	1.76	
						and	27	33	6	2.56	
WMAC026	768267	6222299	-60	135	60		15	33	18	1.31	
							54	57	3	0.3	

Hole ID	Easting GDA94 Z53	Northing GDA94 Z53	Dip	Azimuth	Depth (m)		From (m)	To (m)	Interval (m)	Cu %	Au g/t
WMAC028	768052	6222017	-60	135	76		3	33	30	0.84	
						incl	9	12	3	1.6	
							27	36	9		0.26
							42	76 eoh	34	0.74	
						incl	42	57	15	1.52	
WMAC029	768077	6221977	-60	135	80		3	21	18	0.56	
							30	33	3	0.3	

Assay results in the above table are for intersections > 0.1% copper and >0.1 g/t gold. Intersections are calculated by averaging 1-metre samples and 3-metre composite samples. Copper determined from 1m and 3m grab samples of an average weight of 1.0 kg which were pulverised to produce sub samples for lab assay (samples pulverised to produce a 25 g sample for Aqua Regia Digest and analysed by Inductively Coupled Mass Spectrometry and Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry). In addition all samples recording copper >1% Cu were subjected to four acid ore grade analysis (analysed by Inductively Coupled Mass Spectrometry and Inductively Clasma Optical (Atomic) Emission Spectrometry). Introduced QA/QC samples indicate acceptable analytical quality. Intersections are downhole lengths. True widths are not known.

About the project

The West Melton copper-gold project is located on northern Yorke Peninsula in South Australia adjacent to recent copper-gold discoveries. The project also lies within the world class, Olympic Copper Gold Province. The province is highly prospective for Iron Oxide Copper Gold (IOCG) deposits, with Olympic Dam, Prominent Hill mines, Carrapateena, Hillside projects and the historic Moonta-Wallaroo mines.

The Olympic Province hosts the three most significant copper discoveries in the past 10 years in Australia including Prominent Hill, Carrapateena and Hillside (in terms of total contained resource).

In addition to these discoveries, the Olympic Dam resource has grown significantly by 48 Mt of contained copper in the past ten years - more than the aggregate of all significant Australian copper discoveries in that time. The Melton projects are strategically located on Yorke Peninsula in South Australia, less than 200 km from Adelaide, with good access to infrastructure which includes road and ports. The Melton projects also cover the northern extension of the Pine Point Fault and contain a number of discrete magnetic and gravity features consistent with copper-gold mineralisation elsewhere along the fault.



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Competent Persons Statement:

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Dom Calandro as Managing Director of Marmota Energy Limited who is a member of the Australasian Institute of Geoscientists. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken 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. Calandro consents to the inclusion in the report of the matters based on his information in the form and context in which it appears

Appendix 1

Table 1: Jorc Code 2012 Edition

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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. 	 Aircore drilling was used to obtain 1m and 3m grab samples of an average weight of 1.0 kg which were pulverised to produce sub samples for lab assay (samples pulverised to produce a 25 g sample for Aqua Regia Digest and analysed by Inductively Coupled Mass Spectrometry and Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry). Additional over range samples of copper were subjected to Four Acid Ore Grade Analysis. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission. 3 metre composite samples were predominantly undertaken, with 1 metre samples undertaken on selected intervals. Only laboratory assay results were used to compile the table of intersections that appears in the report.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	 Drill method includes aircore blade in unconsolidated regolith, and aircore hammer (slimline RC) in hard rock. Hole diameters are 90mm.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 Qualitative assessment of sample recovery and moisture content of drill samples is recorded. Sample system cyclone cleaned at the end of each hole and as required to minimise up-hole and cross-hole contamination. No relationship is known to exist between sample recovery and grade.
Logging	 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. 	 All samples have had preliminary geological logging completed by the on-site geologist. The holes have not been geotechnically logged.

Criteria	JORC Code explanation	Commentary
	 Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 Geological logging is qualitative. Chip trays containing 1m geological subsamples will be photographed at the completion of the exploration program. 100% of any reported intersections in this announcement have had preliminary geological logging completed. Further detailed geological logging will be completed.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 Samples averaging 1kg were collected for laboratory assay using a trowel. Dry samples were homogenised by mixing prior to sampling. Laboratory sample preparation includes drying and pulverising of submitted sample to target of p80 at 75 um. No samples checked for size after pulverising failed to meet sizing target in the sample batches relevant to the report. Duplicate samples were introduced into the sample stream by the Company, while the laboratory completed double assays on various samples. Standard samples were introduced into the sample stream by the Company, while the laboratory completed standard assays also. Both Company and laboratory introduced duplicate samples indicate acceptable analytical accuracy. Laboratory analytical charge sizes are standard sizes and considered adequate for the material being assayed.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	 Standard laboratory analysis completed with sample submitted for chemical assay were analysed in the following manner: Select metals AR25/OE Aqua Regia Digest. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry. Select metals AR25/MS Aqua Regia Digest. Analysed by Inductively Coupled Plasma Mass Spectrometry. Select metals AR25/MS Aqua Regia Digest. Analysed by Inductively Coupled Plasma Mass Spectrometry. Samples recording over 1%Cu, were subjected to Four Acid Ore Grade Analysis. Analysed by Inductively Coupled Plasma Optical (Atomic) Emission. For laboratory samples the Company introduced QA/QC samples at a ratio of one QA/QC sample for every 30 drill

Criteria	JORC Code explanation	Commentary
		 samples. The laboratory introduced additional QA/QC samples (blanks, standards, checks) at a ratio of greater than 1 QA/QC sample for every 10 drill samples. Both the Company introduced and laboratory introduced QA/QC samples indicate acceptable levels of accuracy and precision have been established. Spot FPXRF readings undertaken with handheld Niton XRFXL3t instrument of sample on-site only to confirm individual mineral species present, no calibration factors applied to the results observed. No Niton XRF results recorded.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 A Company geologist has checked the calculation of the quoted intersections in addition to the Competent Person. No twinned holes were drilled in the program the subject of the report. No adjustments have been made to the assay data.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 Drill hole coordinate information was collected using hand held GPS with an autonomous accuracy of +/- 4 metres utilising GDA 94, Zone 53.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 Drillholes either targeted a geophysical anomaly or were advanced along traverses set up perpendicular to the orientation of the geochemical anomaly. Drillhole spacing along traverses was generally 50m. Receipt of further analytical data is required before it will be possible to assess whether the drill spacings are adequate to establish geological grade and continuity.
Orientation of data in relation to geological	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation 	 Drill lines were orientated to cover a NE-SW trending auger geochemical target and traverses crossed the width of the geochemical anomaly, therefore a sampling bias should not

Criteria	JORC Code explanation	Commentary
structure	of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	have occurred.
Sample security	The measures taken to ensure sample security.	 Company staff collected all laboratory samples. Samples submitted to the laboratory were transported and delivered by Company staff.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	 FPXRF analytical performance is reviewed by comparison against laboratory assays on an on-going basis.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 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. 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. 	 West Melton (EL 4648) is 100% owned by Marmota Energy Limited. EL 4648 is located northern Yorke Peninsula in South Australia. There are no third party agreements, no govt royalties, historical sites or environmental issues. Underlying land title is Freehold land. EL 4648 is in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 Marmota has reviewed past exploration data over the region. The region in which EL 4648 is located has been the subject of mineral exploration in the past by various companies including Western Mining Corporation, North Broken Hill, MIM Exploration, BHP Minerals, and Phelps Dodge Corporation. The project also has a listed historic copper working (Areena) which was undertaken in 1863.
Geology	Deposit type, geological setting and style of mineralisation.	• Style of mineralisation in the region is considered to be either of Iron Oxide Copper Gold (IOCG) affinity, related to the

Criteria	JORC Code explanation	Commentary
		1590Ma Hiltaba/GRV tectonothermal event, or Moonta Style where Cu-Au mineralisation is structurally controlled and maybe associated with significant metasomatic alteration of host rocks.
Drill hole Information	 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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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. 	 The required information on drill holes is incorporated into Table 1 of the report.
Data aggregation methods	 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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 Intersections are calculated by simple averaging of 1m and 3m assays. Where aggregated intercepts presented in the report include shorter lengths of high grade mineralisation, these shorter lengths are also tabulated. No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	 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'). 	 Drill coverage is not currently considered sufficient to establish true widths due to uncertainty regarding mineralisation dip and strike. The footnote to Table 1 of the report states that intersections are downhole lengths and that true width is unknown.
Diagrams	 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. 	See figures in report attached.
Balanced	Where comprehensive reporting of all Exploration Results is not	The table 1 footnote indicates the criteria used to establish the

Criteria	JORC Code explanation	Commentary
reporting	practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	drill intersection.
Other substantive exploration data	 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. 	 See attached report. Geological observations are included in the report.
Further work	 The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 See attached release. The Company is fully assessing these results which will warrant a second Phase follow up drilling program.