

## Teutonic (Mustang) Drilling Update

ASX ANNOUNCEMENT

7 January 2016

### HIGHLIGHTS

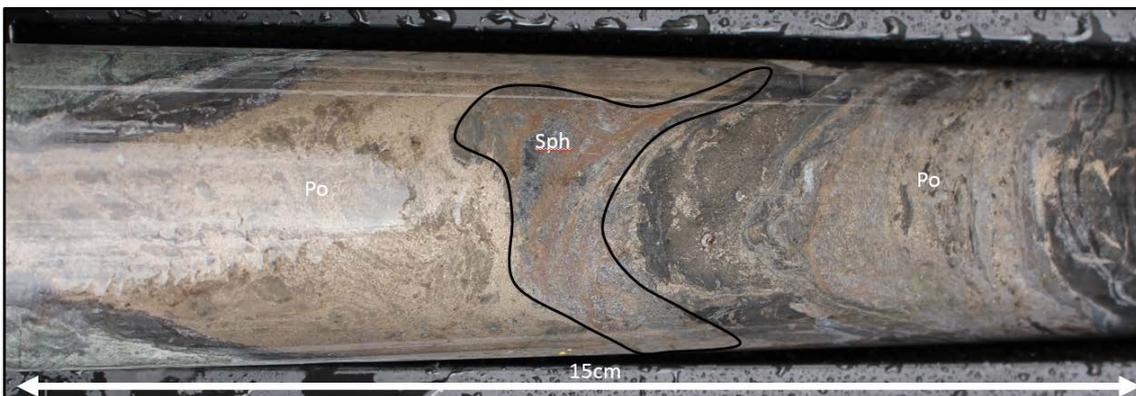
- Two diamond drill holes completed as part of DMP Co-funded EIS programme at Mustang for a total of 780.1m and all assays received

Massive to semi massive banded sulphide intercepted in both holes; dominated by pyrrhotite, with lesser sphalerite and minor chalcopyrite mineralisation. Sulphide horizons coincident with interpreted position of the Mustang EM conductor and is highly anomalous in VMS pathfinder elements

- Downhole EM survey completed and modelling suggests that hole MCPDH0002 intersected the margins of the strongest part of the conductor

Perth-based exploration Company **Metallum Ltd (ASX: MNE)** is pleased to announce that drilling to test the Mustang electromagnetic (EM) conductor (“Mustang Conductor”) at its Teutonic Project (MNE earning 70%) in the Eastern Goldfields region of Western Australia has been successfully completed and all assays received.

A two drill-hole program was completed during late November and early December 2015 with assay results being received in late December 2015. Two holes, MCPDH00001 and 00002 were completed for a total of 780.1m. Zones of massive to semi-massive, banded sulphide consisting of pyrrhotite, lesser sphalerite and minor chalcopyrite (Figures 1 and 2) were intercepted at the modelled position of the Mustang EM conductor.



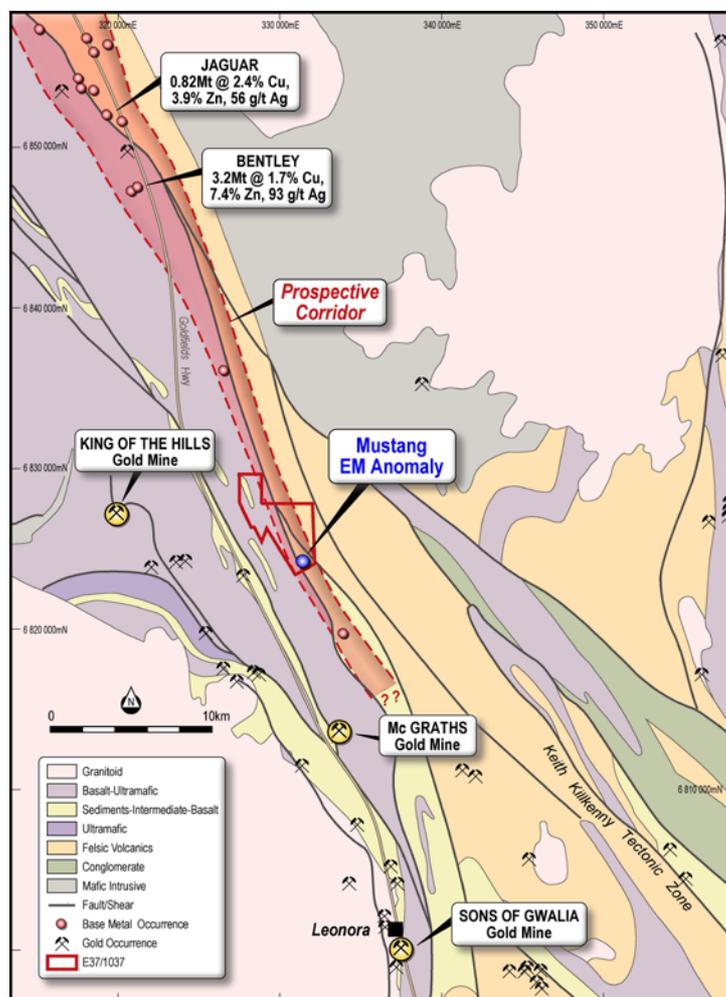
**Figure 1 – core from hole MCPDH0002 – 309.55m- massive pyrrhotite and sphalerite band in brecciated volcaniclastic and shales. Po=pyrrhotite, Sph=sphalerite, downhole direction to the left.**



**Figure 2 – core from hole MCPDH002 – 307.00m – semi massive pyrrhotite and minor sphalerite within shale and interpreted volcanoclastic sediments.**

### Drilling Summary

Two holes were drilled to target the modelled position of the Mustang EM conductor discovered by the Company in 2014 after regional geological targeting suggested that the Jaguar-Bentley VMS trend extended into the project area (see Figure 3).



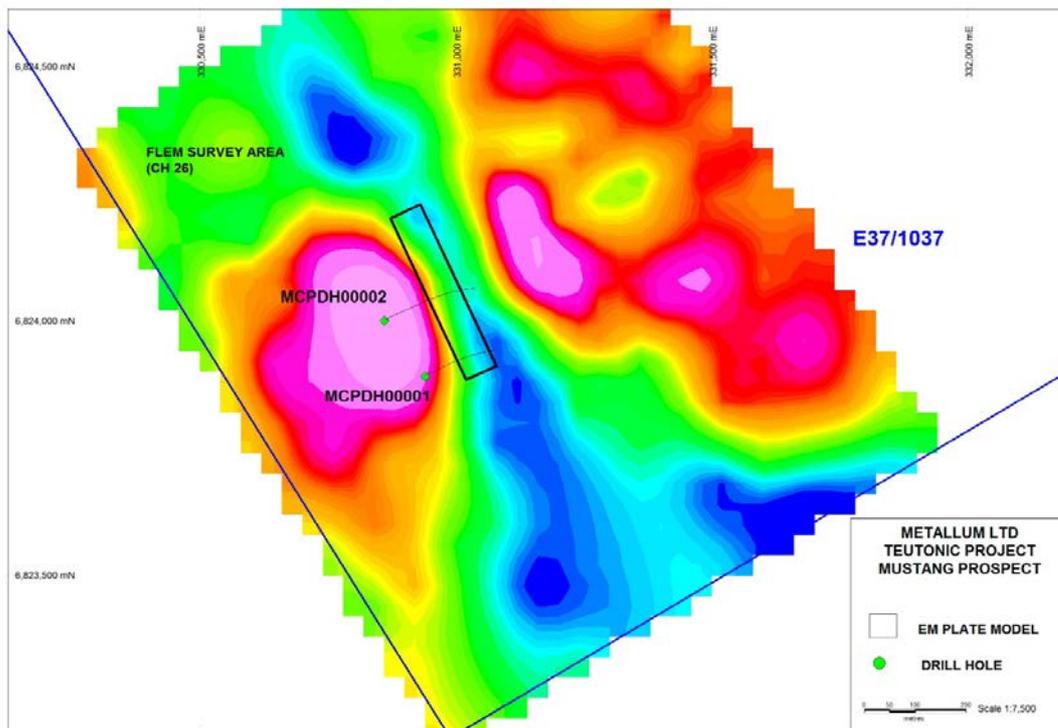
**Figure 3– Regional geology and location of the Teutonic Project and Mustang Conductor showing proximity to the Jaguar and Bentley VMS deposits. Resource figures for Bentley and Jaguar sourced from Independence Group’s website.**

Both holes consisted of reverse circulation (RC) pre-collars with NQ size, diamond core tails completed to target depth. Holes were surveyed and core orientated at regular intervals as per standard Company protocols.

Details of drillhole locations are presented in Table 1.

HOLE_ID	NORTHING	EASTING	RL	RC m's	DD m's	Total Depth	Azimuth	Dip
MCPDH0001	6823890.00	330940.00	409.00	108.60	235.60	344.20	065	-60
MCPDH0002	6824000.00	330860.00	409.00	124.70	311.20	435.90	065	-60

**Table 1 – Mustang drill hole location and orientation information. Co-ordinates are GDA94/Zone51J.**



**Figure 4- Location of Diamond Drill Hole MCPDH0001 and MCPDH0002 relative to the modelled position Mustang EM conductor. Coloured image is of the 2014 EM survey, channel 25.**

Drilling intersected a sequence of variably altered, interpreted seafloor lithologies consisting of intermediate to mafic volcanics, mafic intrusives, shales, cherty exhalatives, volcanoclastics, conglomerates and greywackes. Alteration assemblages are dominated by chlorite and calcite. The stratigraphy strikes north-west and dips steeply to the west as measured on foliations and geological contacts.

A brecciated, highly altered massive to semi-massive sulphide, cherty exhalative and black shale package was intersected at the interpreted downhole position of the EM conductor. This package contained abundant pyrrhotite, some sphalerite and minor chalcopyrite in thin bands (to 0.20m) and disseminations within the 15-20m thick 'host stratigraphy'.

The stratigraphic position, alteration and mineral associations suggests that the mineralised unit is potentially the distal part of a larger volcanogenic massive sulphide (VMS) mineralising system. This is supported by the presence of elevated values in VMS pathfinder elements including As, Sb, Bi, Sn, Mo, Se, Ag, Au and Ba. The footwall lithologies have been enriched in Ba relative to the hangingwall which is often associated with VMS mineralisation.

A total of 14 samples considered representative of the geological sequence has been sent for petrological description with results awaited. It is hoped that this work will provide additional positive observations as to the interpreted geological setting as well as providing vectors to target further potential sulphide accumulations within the project area.

Hole MCPDH0002 was designed to intersect the strongest part of the conductor and intersected semi-massive to massive sulphide and strongly brecciated black shales and cherty exhalative lithologies between 306.60m and 317.80m downhole. Sulphide minerals present as semi-massive to massive bands and disseminations include dominant pyrrhotite, lesser sphalerite and minor chalcopyrite. This downhole location coincides with the approximate predicted depth of the EM conductor.

Hole MCDH0001 was designed to test the strike extent of the conductor 100m south of hole MCPDH0002. MCPDH0001 intersected pyrrhotite bearing brecciated black shale between 246.15m and 252.95m and at 280.60m and 281.30m.

RC pre-collars were sampled as 5m downhole composite samples. A total of 52 RC samples were submitted for assay.

Diamond drill core was sampled over selected intervals (not exceeding 1m) and was sampled as half core, to geological boundaries. A total of 211 core samples were submitted for assay. Standard Company QA-QC protocols were implemented during the sampling process including the anonymous insertion of blanks and standards.

All RC samples and a total of 204 diamond core samples were dispatched to Bureau Veritas in Perth and analysed for the following elements:

- Au, Pt, Pd by 40g fire assay
- Ag, Al, As, Ba, Ca, Cd, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Ti, V, Zn by ICP-AES and multi acid digest
- Be, Bi, Co, Ga, La, Sb, Sc, Sr, Th, Tl, U, W by ICP-MS and multi acid digest

Best results in hole MCPDH0001 was 1.40m @ 0.19% Zn

Best results in hole MCPDH0002 were 2.50m @ 0.20% Zn from 309.00m which included 0.50m @ 0.47% Zn from 309.55m.

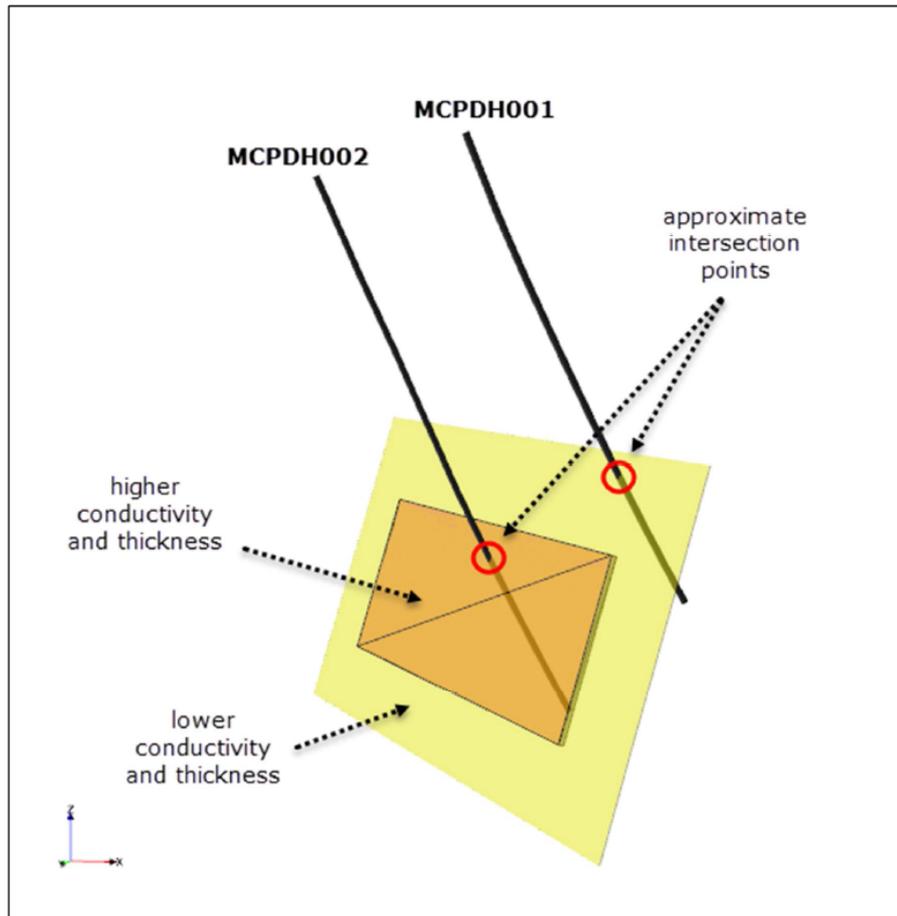
Both holes also returned anomalous values for Cu, Ag, Au, and Pb within the mineralised sequence. Full assay results are presented in Appendix 2.

### **Down Hole Electromagnetics (DHEM) and Fixed Loop Electromagnetics (FLEM)**

Immediately following completion of drilling, a DHEM and FLEM survey was completed to clarify the dimensions and orientation of the conductors intersected and to determine if there were any off-hole conductors which had not been tested by the drilling.

The results of these surveys were integrated with the original survey data and then modelled in three dimensions with the new model providing detailed information of on the orientation of the Mustang conductor and also delineating a highly conductive core to the conductor.

Drillhole MCPDH0002 appears to have intersected the edge of the modelled high conductance portion of the conductor as shown in Figure 5. As such, the Company believes it may have intersected a distal portion of the potential VMS mineralised system.



**Figure 5- Location of Diamond drillholes MCPDH0001 and MCPDH0002 relative to new EM conductor plate modelling following DHEM and infill FLEM surveys. Note only MCPDH0002 intersected the edge of the high conductivity part of the Mustang EM conductor.**

It should be noted that EM surveys can detect conductive sulphide minerals, such as pyrrhotite and chalcopyrite, and carbonaceous black shales and sediments, but sphalerite typically has a very low conductivity and may not be detected by the EM surveys. Other target positions outside of the modelled conductor, such as up-dip and along strike extensions of the conductor, represent valid targets for nonconductive sphalerite mineralisation. This is particularly valid given the associated alteration and pathfinder element geochemistry associated with the massive sulphide mineralisation encountered in the drilling.

It must also be noted that the potential for additional accumulations of sulphides along strike to the north west within the interpreted target geological sequence (Prospective Corridor- see Figure 3) also remain a valid target within the project area.

#### **Further Work**

The Company is encouraged by the results of the first drilling programme completed at the Mustang Prospect however no decision has yet been made when further work will be undertaken at the project.

For more information visit the Metallum website at [www.metallum.com.au](http://www.metallum.com.au) or contact:

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**About Metallum Limited**

Metallum Limited (ASX: MNE) is an Australian-based company that acquires and develops copper and gold projects around the world. The Company currently has interests in the El Roble region in Chile, as well as the Comval Copper Project in the Philippines, and its Australian-based project, Teutonic Project.

**Competent Person's Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Zeffron Reeves (B App Sc (Hons) (Applied Geology) MBA, MAIG), a member of the Australian Institute of Geoscientists and is a consultant of the Company. Mr Reeves has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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 Reeves consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

**APPENDIX 1 – ASSAY DATA**
*RC= reverse circulation sample, DC = Drillcore sample, Negative values indicate below detection limit of assay method*

Sample	HOLE_ID	Type	m From	m To	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au1 ppb
M00001	MCPDH00001	RC	0.00	5.00	35	14	65	-0.5	2
M00002	MCPDH00001	RC	5.00	10.00	100	12	85	-0.5	4
M00003	MCPDH00001	RC	10.00	15.00	70	9	50	-0.5	4
M00004	MCPDH00001	RC	15.00	20.00	45	4	45	-0.5	1
M00005	MCPDH00001	RC	20.00	25.00	70	6	60	-0.5	1
M00006	MCPDH00001	RC	25.00	30.00	95	8	105	-0.5	-1
M00007	MCPDH00001	RC	30.00	35.00	40	4	55	-0.5	-1
M00008	MCPDH00001	RC	35.00	40.00	80	10	130	-0.5	-1
M00009	MCPDH00001	RC	40.00	45.00	80	9	210	-0.5	-1
M00011	MCPDH00001	RC	45.00	50.00	130	23	550	-0.5	10
M00012	MCPDH00001	RC	50.00	55.00	45	11	295	-0.5	16
M00013	MCPDH00001	RC	55.00	60.00	20	9	90	-0.5	2
M00014	MCPDH00001	RC	60.00	65.00	45	6	160	-0.5	13
M00015	MCPDH00001	RC	65.00	70.00	60	7	250	-0.5	9
M00016	MCPDH00001	RC	70.00	75.00	20	14	80	-0.5	8
M00017	MCPDH00001	RC	75.00	80.00	30	7	95	-0.5	4
M00018	MCPDH00001	RC	80.00	85.00	50	5	190	-0.5	3
M00019	MCPDH00001	RC	85.00	90.00	50	4	90	-0.5	-1
M00020	MCPDH00001	RC	90.00	95.00	405	3	75	-0.5	12
M00022	MCPDH00001	RC	95.00	100.00	95	5	170	-0.5	4
M00023	MCPDH00001	RC	100.00	105.00	90	2	130	-0.5	2
M00024	MCPDH00001	RC	105.00	109.00	85	-1	85	-0.5	1
M00109	MCPDH00001	DC	145.50	146.00	55	-1	80	-0.5	1
M00110	MCPDH00001	DC	176.00	177.00	140	-1	85	-0.5	1
M00111	MCPDH00001	DC	177.00	178.00	80	-1	75	-0.5	2
M00112	MCPDH00001	DC	187.00	187.50	15	-1	60	-0.5	1
M00113	MCPDH00001	DC	242.50	243.20	75	-1	95	-0.5	1
M00114	MCPDH00001	DC	243.20	244.00	80	-1	85	-0.5	-1
M00115	MCPDH00001	DC	244.00	245.00	80	-1	70	-0.5	2
M00116	MCPDH00001	DC	245.00	245.60	75	2	80	-0.5	-1
M00117	MCPDH00001	DC	245.60	246.15	115	2	220	-0.5	1
M00118	MCPDH00001	DC	246.15	247.00	150	10	435	-0.5	8
M00119	MCPDH00001	DC	247.00	247.65	125	5	370	-0.5	5
M00121	MCPDH00001	DC	247.65	248.00	320	38	1260	0.5	14
M00122	MCPDH00001	DC	248.00	249.05	435	56	1390	0.5	9
M00123	MCPDH00001	DC	249.05	250.00	35	2	75	-0.5	1
M00124	MCPDH00001	DC	250.00	251.00	30	2	85	-0.5	-1
M00125	MCPDH00001	DC	251.00	252.00	30	3	90	-0.5	1
M00126	MCPDH00001	DC	252.00	252.30	30	2	140	-0.5	-1
M00128	MCPDH00001	DC	252.40	252.95	105	17	485	-0.5	4
M00129	MCPDH00001	DC	252.95	253.55	35	2	85	-0.5	4
M00130	MCPDH00001	DC	253.55	254.55	110	4	160	-0.5	1
M00131	MCPDH00001	DC	254.55	255.00	40	3	110	-0.5	2
M00132	MCPDH00001	DC	255.00	255.50	170	65	985	-0.5	4
M00133	MCPDH00001	DC	255.50	256.00	25	7	105	-0.5	-1
M00134	MCPDH00001	DC	256.00	257.00	35	4	70	-0.5	1
M00135	MCPDH00001	DC	263.00	265.65	35	7	120	-0.5	1
M00137	MCPDH00001	DC	263.65	264.20	150	17	510	-0.5	6
M00138	MCPDH00001	DC	264.20	265.00	95	5	150	-0.5	-1

Sample	HOLE_ID	Type	m From	m To	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au1 ppb
M00138	MCPDH00001	DC	264.20	265.00	95	5	150	-0.5	-1
M00139	MCPDH00001	DC	265.00	265.50	85	5	90	-0.5	-1
M00140	MCPDH00001	DC	265.60	266.10	120	5	175	-0.5	1
M00141	MCPDH00001	DC	266.10	262.00	75	5	85	-0.5	2
M00142	MCPDH00001	DC	270.00	271.00	85	2	100	-0.5	-1
M00143	MCPDH00001	DC	272.50	273.25	80	5	85	-0.5	3
M00144	MCPDH00001	DC	273.25	274.00	35	8	90	-0.5	-1
M00145	MCPDH00001	DC	274.00	275.00	20	8	90	-0.5	-1
M00146	MCPDH00001	DC	275.00	275.55	25	5	90	-0.5	-1
M00147	MCPDH00001	DC	275.55	276.00	65	6	140	-0.5	1
M00148	MCPDH00001	DC	276.00	277.00	60	5	95	-0.5	3
M00149	MCPDH00001	DC	277.00	278.00	60	2	85	-0.5	-1
M00150	MCPDH00001	DC	278.00	279.00	60	3	90	-0.5	3
M00151	MCPDH00001	DC	279.00	279.80	65	1	95	-0.5	-1
M00152	MCPDH00001	DC	279.80	280.60	125	12	305	-0.5	2
M00153	MCPDH00001	DC	280.60	281.10	65	3	95	-0.5	2
M00154	MCPDH00001	DC	281.10	281.30	70	2	90	-0.5	2
M00155	MCPDH00001	DC	281.30	282.00	55	4	85	-0.5	2
M00157	MCPDH00001	DC	286.00	287.00	65	1	95	-0.5	-1
M00158	MCPDH00001	DC	287.00	288.00	80	1	105	-0.5	1
M00159	MCPDH00001	DC	288.00	289.00	75	1	105	-0.5	1
M00160	MCPDH00001	DC	289.00	289.30	75	7	85	-0.5	-1
M00217	MCPDH00001	DC	289.30	290.00	70	16	235	-0.5	-1
M00218	MCPDH00001	DC	290.00	290.60	70	17	400	-0.5	5
M00219	MCPDH00001	DC	290.60	291.00	25	13	115	-0.5	-1
M00220	MCPDH00001	DC	291.00	292.00	20	14	105	-0.5	1
M00221	MCPDH00001	DC	292.00	293.00	20	15	105	-0.5	1
M00222	MCPDH00001	DC	293.00	294.00	30	19	380	-0.5	2
M00161	MCPDH00001	DC	294.00	295.00	20	22	300	-0.5	-1
M00163	MCPDH00001	DC	295.00	296.00	25	16	95	-0.5	-1
M00164	MCPDH00001	DC	296.00	297.00	25	14	95	-0.5	-1
M00223	MCPDH00001	DC	302.50	302.85	25	17	140	-0.5	2
M00224	MCPDH00001	DC	302.85	303.50	65	14	75	-0.5	2
M00225	MCPDH00001	DC	303.50	304.50	15	14	85	-0.5	1
M00226	MCPDH00001	DC	304.50	305.50	10	13	75	-0.5	3
M00227	MCPDH00001	DC	305.50	306.50	10	13	80	-0.5	1
M00228	MCPDH00001	DC	306.50	307.30	15	11	80	-0.5	1
M00229	MCPDH00001	DC	307.30	308.00	30	21	130	-0.5	1
M00230	MCPDH00001	DC	308.00	309.00	15	20	100	-0.5	-1
M00231	MCPDH00001	DC	309.00	309.90	15	24	120	-0.5	1
M00232	MCPDH00001	DC	309.90	310.50	15	8	85	-0.5	-1
M00233	MCPDH00001	DC	312.30	313.00	10	15	85	-0.5	1
M00234	MCPDH00001	DC	313.00	314.00	20	15	90	-0.5	3
M00235	MCPDH00001	DC	314.00	315.00	15	14	85	-0.5	1
M00236	MCPDH00001	DC	315.00	316.00	20	16	85	-0.5	1
M00237	MCPDH00001	DC	316.00	316.50	15	18	90	-0.5	2
M00239	MCPDH00001	DC	316.50	317.20	15	16	95	-0.5	2
M00240	MCPDH00001	DC	317.20	318.30	15	14	85	-0.5	1
M00241	MCPDH00001	DC	318.30	319.00	40	24	180	-0.5	4
M00242	MCPDH00001	DC	319.00	319.85	35	19	180	-0.5	5

Sample	HOLE_ID	Type	m From	m To	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au1 ppb
M00243	MCPDH00001	DC	319.85	320.75	55	19	155	-0.5	98
M00244	MCPDH00001	DC	320.75	321.25	15	3	80	-0.5	5
M00245	MCPDH00001	DC	329.25	330.00	70	9	55	-0.5	2
M00246	MCPDH00001	DC	330.00	331.00	50	14	65	0.5	-1
M00247	MCPDH00001	DC	331.00	332.00	30	14	90	0.5	6
M00249	MCPDH00001	DC	332.00	333.00	25	12	65	-0.5	1
M00250	MCPDH00001	DC	333.00	334.00	20	13	70	1	-1
M00251	MCPDH00001	DC	334.00	335.00	20	14	85	-0.5	-1
M00252	MCPDH00001	DC	335.00	336.00	25	11	80	0.5	1
M00253	MCPDH00001	DC	336.00	337.00	25	13	95	-0.5	1
M00254	MCPDH00001	DC	337.00	338.00	20	13	90	-0.5	-1
M00255	MCPDH00001	DC	338.00	339.00	20	12	85	-0.5	1
M00256	MCPDH00001	DC	339.00	339.90	15	13	90	-0.5	1
M00257	MCPDH00001	DC	342.50	343.00	200	76	1750	0.5	6
M00216	MCPDH00001	DC	343.00	343.30	205	71	2200	1	1
M00214	MCPDH00001	DC	343.30	344.20	45	19	230	-0.5	-1
M00025	MCPDH00002	RC	0.00	5.00	35	12	60	-0.5	3
M00026	MCPDH00002	RC	5.00	10.00	55	8	80	-0.5	4
M00027	MCPDH00002	RC	10.00	15.00	65	5	125	-0.5	2
M00028	MCPDH00002	RC	15.00	20.00	50	4	130	-0.5	2
M00029	MCPDH00002	RC	20.00	25.00	55	3	105	-0.5	2
M00031	MCPDH00002	RC	25.00	30.00	55	3	150	-0.5	-1
M00032	MCPDH00002	RC	30.00	35.00	75	3	305	-0.5	-1
M00033	MCPDH00002	RC	35.00	40.00	80	23	220	-0.5	2
M00034	MCPDH00002	RC	40.00	45.00	110	12	485	-0.5	3
M00035	MCPDH00002	RC	45.00	50.00	95	5	575	-0.5	4
M00036	MCPDH00002	RC	50.00	55.00	90	18	455	-0.5	2
M00037	MCPDH00002	RC	55.00	60.00	75	12	350	-0.5	3
M00038	MCPDH00002	RC	60.00	65.00	70	7	190	-0.5	3
M00039	MCPDH00002	RC	65.00	70.00	20	14	170	-0.5	4
M00041	MCPDH00002	RC	70.00	75.00	35	11	110	-0.5	1
M00042	MCPDH00002	RC	75.00	80.00	30	9	170	-0.5	1
M00043	MCPDH00002	RC	80.00	85.00	45	6	160	-0.5	-1
M00044	MCPDH00002	RC	85.00	90.00	25	11	115	-0.5	-1
M00045	MCPDH00002	RC	90.00	95.00	60	9	325	-0.5	1
M00046	MCPDH00002	RC	95.00	100.00	175	18	450	-0.5	4
M00047	MCPDH00002	RC	100.00	105.00	100	3	125	-0.5	-1
M00048	MCPDH00002	RC	105.00	110.00	95	-1	140	-0.5	6
M00049	MCPDH00002	RC	110.00	115.00	95	-1	105	-0.5	18
M00051	MCPDH00002	RC	115.00	120.00	100	-1	105	-0.5	99
M00052	MCPDH00002	RC	115.00	125.00	60	-1	100	-0.5	-1
M00053	MCPDH00002	DC	144.00	144.40	95	-1	90	-0.5	
M00055	MCPDH00002	DC	200.00	201.00	85	2	85	-0.5	2
M00056	MCPDH00002	DC	201.00	202.00	105	2	155	-0.5	1
M00057	MCPDH00002	DC	202.00	203.00	100	3	140	-0.5	2
M00058	MCPDH00002	DC	203.00	204.00	110	5	160	-0.5	-1
M00059	MCPDH00002	DC	204.00	205.00	80	-1	90	-0.5	-1
M00054	MCPDH00002	DC	215.00	215.40	60	-1	85	-0.5	
M00060	MCPDH00002	DC	248.00	249.00	45	-1	105	-0.5	2

Sample	HOLE_ID	Type	m From	m To	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au1 ppb
M00061	MCPDH00002	DC	249.00	250.00	45	-1	105	-0.5	6
M00062	MCPDH00002	DC	250.00	251.00	45	-1	105	-0.5	10
M00063	MCPDH00002	DC	251.00	252.00	80	-1	95	-0.5	14
M00064	MCPDH00002	DC	252.00	253.00	100	-1	100	-0.5	5
M00065	MCPDH00002	DC	253.00	254.00	40	-1	95	-0.5	1
M00066	MCPDH00002	DC	254.00	255.00	80	-1	105	-0.5	-1
M00067	MCPDH00002	DC	255.00	256.00	95	-1	100	-0.5	-1
M00068	MCPDH00002	DC	305.00	306.00	95	2	85	-0.5	-1
M00069	MCPDH00002	DC	306.00	306.60	95	4	130	-0.5	1
M00070	MCPDH00002	DC	306.60	307.20	275	14	1220	-0.5	61
M00071	MCPDH00002	DC	307.20	308.00	180	5	115	-0.5	-1
M00072	MCPDH00002	DC	308.00	309.00	200	2	135	-0.5	3
M00073	MCPDH00002	DC	309.00	309.55	230	92	1570	0.5	14
M00074	MCPDH00002	DC	309.55	310.05	395	97	4660	1.5	37
M00075	MCPDH00002	DC	310.05	311.00	375	57	1530	1	21
M00076	MCPDH00002	DC	311.00	311.50	220	39	905	-0.5	21
M00077	MCPDH00002	DC	311.50	312.00	75	3	100	-0.5	-1
M00079	MCPDH00002	DC	312.00	313.00	65	4	90	-0.5	-1
M00080	MCPDH00002	DC	313.00	314.00	55	3	90	-0.5	-1
M00081	MCPDH00002	DC	314.00	315.00	40	2	70	-0.5	-1
M00082	MCPDH00002	DC	315.00	315.50	40	2	75	-0.5	1
M00083	MCPDH00002	DC	315.50	316.10	60	4	80	-0.5	-1
M00084	MCPDH00002	DC	316.10	317.00	45	12	110	-0.5	67
M00085	MCPDH00002	DC	317.00	317.80	55	14	140	-0.5	2
M00086	MCPDH00002	DC	317.80	318.50	40	2	105	-0.5	-1
M00087	MCPDH00002	DC	318.50	319.00	40	3	125	-0.5	-1
M00089	MCPDH00002	DC	319.00	320.00	30	4	115	-0.5	2
M00090	MCPDH00002	DC	320.00	320.90	25	6	100	-0.5	2
M00091	MCPDH00002	DC	320.90	321.50	90	17	135	-0.5	9
M00092	MCPDH00002	DC	321.50	322.10	40	10	70	-0.5	4
M00093	MCPDH00002	DC	322.10	323.00	15	3	50	-0.5	2
M00094	MCPDH00002	DC	325.50	326.00	55	12	165	-0.5	5
M00095	MCPDH00002	DC	326.00	327.00	25	5	85	-0.5	2
M00096	MCPDH00002	DC	327.00	327.85	45	14	175	-0.5	3
M00098	MCPDH00002	DC	327.85	328.50	70	7	75	-0.5	3
M00099	MCPDH00002	DC	332.50	333.10	65	5	70	-0.5	4
M00100	MCPDH00002	DC	333.10	333.90	25	5	80	-0.5	8
M00101	MCPDH00002	DC	333.90	334.50	55	4	90	-0.5	-1
M00102	MCPDH00002	DC	335.50	336.15	70	2	100	-0.5	-1
M00103	MCPDH00002	DC	336.15	336.37	20	10	55	-0.5	2
M00104	MCPDH00002	DC	336.37	337.00	70	3	100	-0.5	1
M00105	MCPDH00002	DC	345.50	346.00	70	3	100	-0.5	
M00106	MCPDH00002	DC	347.75	348.45	25	10	85	-0.5	2
M00107	MCPDH00002	DC	361.70	362.00	10	12	35	-0.5	
M00200	MCPDH00002	DC	372.00	372.40	20	13	65	-0.5	1
M00201	MCPDH00002	DC	372.40	373.00	15	12	95	-0.5	2
M00202	MCPDH00002	DC	373.00	374.00	20	14	75	-0.5	1
M00203	MCPDH00002	DC	374.00	375.00	15	13	75	-0.5	1
M00204	MCPDH00002	DC	375.00	376.00	20	14	85	-0.5	-1

Sample	HOLE_ID	Type	m From	m To	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au1 ppb
M00205	MCPDH00002	DC	376.00	377.00	15	15	95	-0.5	1
M00206	MCPDH00002	DC	377.00	378.00	20	16	95	-0.5	-1
M00208	MCPDH00002	DC	378.00	379.00	20	14	80	-0.5	-1
M00209	MCPDH00002	DC	379.00	279.20	15	12	95	-0.5	1
M00210	MCPDH00002	DC	379.20	380.00	10	15	90	-0.5	-1
M00211	MCPDH00002	DC	380.00	381.00	10	12	85	-0.5	1
M00195	MCPDH00002	DC	384.50	384.70	20	23	145	-0.5	1
M00196	MCPDH00002	DC	384.70	385.00	20	15	100	-0.5	-1
M00197	MCPDH00002	DC	385.00	386.00	15	14	90	-0.5	-1
M00198	MCPDH00002	DC	386.00	387.00	15	13	90	-0.5	1
M00199	MCPDH00002	DC	387.00	387.50	5	16	90	-0.5	1
M00212	MCPDH00002	DC	387.50	388.15	5	14	85	-0.5	1
M00213	MCPDH00002	DC	388.15	389.00	30	16	80	-0.5	1
M00165	MCPDH00002	DC	392.00	392.90	10	13	90	-0.5	1
M00166	MCPDH00002	DC	392.90	393.25	40	15	360	-0.5	2
M00168	MCPDH00002	DC	393.25	394.10	160	44	1040	-0.5	9
M00169	MCPDH00002	DC	394.10	395.00	280	42	1430	1	16
M00170	MCPDH00002	DC	395.00	396.00	450	74	2060	1	24
M00171	MCPDH00002	DC	396.00	397.00	190	42	860	-0.5	9
M00172	MCPDH00002	DC	397.00	398.00	185	55	1290	-0.5	8
M00173	MCPDH00002	DC	398.00	399.00	110	25	825	-0.5	7
M00174	MCPDH00002	DC	399.00	400.00	115	25	460	-0.5	3
M00175	MCPDH00002	DC	400.00	401.00	50	19	290	-0.5	2
M00176	MCPDH00002	DC	401.00	402.00	95	28	500	-0.5	3
M00177	MCPDH00002	DC	402.00	402.40	115	38	875	-0.5	6
M00178	MCPDH00002	DC	402.40	403.00	40	7	90	-0.5	2
M00180	MCPDH00002	DC	403.00	404.00	25	9	85	-0.5	5
M00181	MCPDH00002	DC	404.00	405.00	40	12	80	-0.5	-1
M00182	MCPDH00002	DC	405.00	406.00	45	11	85	-0.5	-1
M00183	MCPDH00002	DC	406.00	407.00	15	12	95	-0.5	2
M00258	MCPDH00002	DC	413.00	413.40	20	14	70	-0.5	1
M00259	MCPDH00002	DC	413.40	414.00	10	15	75	-0.5	2
M00260	MCPDH00002	DC	414.00	415.00	10	14	80	-0.5	-1
M00261	MCPDH00002	DC	415.00	415.65	20	16	90	-0.5	1
M00263	MCPDH00002	DC	415.65	416.00	130	38	1720	0.5	11
M00264	MCPDH00002	DC	416.00	417.00	140	51	955	-0.5	9
M00265	MCPDH00002	DC	417.00	417.60	105	6	260	-0.5	1
M00266	MCPDH00002	DC	417.60	418.00	45	19	250	-0.5	-1
M00267	MCPDH00002	DC	418.00	419.00	45	21	310	-0.5	6
M00268	MCPDH00002	DC	419.00	420.00	65	3	160	-0.5	1
M00269	MCPDH00002	DC	420.00	420.50	60	15	190	-0.5	2
M00184	MCPDH00002	DC	422.50	423.10	65	15	205	-0.5	1
M00185	MCPDH00002	DC	423.10	423.70	140	33	1500	-0.5	5
M00186	MCPDH00002	DC	423.70	424.00	100	10	200	-0.5	5
M00187	MCPDH00002	DC	424.00	425.00	100	2	185	-0.5	2
M00189	MCPDH00002	DC	425.00	426.00	120	2	165	-0.5	4
M00190	MCPDH00002	DC	426.00	427.00	65	2	140	-0.5	-1
M00191	MCPDH00002	DC	427.00	428.00	50	5	115	-0.5	-1
M00192	MCPDH00002	DC	428.00	429.00	45	2	115	-0.5	1
M00193	MCPDH00002	DC	429.00	430.00	30	2	130	-0.5	1
M00194	MCPDH00002	DC	430.00	430.50	60	2	130	-0.5	-1

**APPENDIX 2: JORC Table 1, Section 1 Sampling Techniques and Data**

Criteria	Explanation
Sampling techniques	<ul style="list-style-type: none"> <li>RC samples were split at the drill rig using a cyclone splitter and composited for 5m downhole interval samples.</li> <li>Drill core samples are half core samples cut longitudinally down core axis</li> <li>Minimum sample interval was 0.25m and maximum of 1.00m are collected from core, sampled to geological boundaries.</li> <li>Samples sent to Bureau Veritas Laboratories, Kalgoorlie.</li> <li>Samples were pulverised to obtain a 40g charge for fire assay for Au, Pt,Pd</li> <li>Al,Ca,Cr,Cu,Fe,K,Mg,Mn,Na,Ni,P,S,Ti,V,Zn have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry</li> <li>Ag,As,Ba,Be,Bi,Cd,Co,Ga,La,Mo,Pb,Sb,Sc,Sr,Th,Tl,U,W have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>All holes were precollared using RC drilling and completed with diamond drill core tails.</li> <li>Diamond Drilling method has been used recovering NQ diameter drill core</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Drill sample recovery is generally 100% and is recorded for every meter of core recovered.</li> <li>Minor core loss was encountered but is not deemed material</li> </ul>
Logging	<ul style="list-style-type: none"> <li>All drill holes are geologically logged by qualified geologists.</li> <li>Geological data is recorded in the Company's geological database.</li> <li>Logging is qualitative in nature and describes lithology, alteration, structure and mineralisation visually observed by the logging geologist.</li> <li>Total length of each sample interval has been logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>The sample collection and preparation technique is deemed suitable and industry standard for drill core sampling.</li> <li>Samples are coarse crushed to 3mm and then split produce a sub-fraction which has been pulverised to 90% passing 75 micron</li> <li>No duplicate samples have been carried out.</li> <li>Sample size is deemed appropriate.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>Assay techniques are deemed suitable and accurate for the elements being tested.</li> <li>Standard reference materials have been submitted in each sample run every 20 samples.</li> <li>Blank reference materials are submitted in each sample run every 20 samples.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>All significant intersections have been calculated using weighted averaging to sample length.</li> <li>All significant intersections have been checked by alternative company geological personnel.</li> <li>No duplicate sampling or twinned holes have been completed</li> <li>All data collected is done so in accordance with the Company's written data collection procedures and is kept within the Company's electronic database. Original sample logs and written data collection forms are also retained in the Company's data library.</li> <li>No adjustment to data has been done.</li> </ul>
Locations of data points	<ul style="list-style-type: none"> <li>All drill holes have been surveyed using a handheld GPS instrument with appropriate control points used and referenced to ensure accuracy of survey information.</li> <li>Co-ordinates have an error of +/-5m..</li> <li>Co-ordinates are recorded in GDA94 co-ordinate system</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>The current drill spacing is deemed appropriate for the current early stage of exploration</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Wherever possible drill holes have been planned to intersect mineralised structures perpendicular to the structure.</li> <li>Drill Hole intercepts are downhole widths and do not indicate true widths of any mineralised structure.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>All sampling was conducted under the supervision of the Company's geological consultant who conducted sample collection and the chain of custody from the drill to the sample preparation and logging facility is continually monitored by the consultant. Samples are shipped to the lab by qualified couriers or Company personnel under sealed bags.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>No audit or review has been conducted due to the early stage exploration nature of the work.</li> </ul>

**JORC Table 7: Section 2 Reporting of Exploration Results**

Criteria	Explanation
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Metallum does not own any of the properties surveyed but is the appointed manager of the project</li> <li>Metallum has an exclusive option agreement to acquire up to 70% of the mineral tenement E37/1037 (refer to Company Prospectus released to the ASX on 13th May 2011).</li> </ul>
Exploration by other parties	<ul style="list-style-type: none"> <li>Historic drilling information has been utilised accessed through the Department of Minerals and Petroleum databases.</li> <li>Drilling was conducted by Sons of Gwalia Ltd between 1995 and 1997.</li> </ul>
Drill hole information	<ul style="list-style-type: none"> <li>Details of hole locations, depth and intercept depths are contained within this announcement.</li> <li>All down hole assay data is presented in Appendix 1.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>The Teutonic Project occurs within the Norseman-Wiluna greenstone belt. Within the north-west trending Keith-Kilkenny tectonic Zone</li> <li>Rock types observed include metasedimentary rocks and felsic-intermediate volcanic rocks and high Mg basalt and ultramafic intrusive rocks</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>Intercept widths are downhole widths, intercept calculated by length weighted average for all samples where length is the downhole length for each sample interval</li> <li>Length weighted averages have been calculated using the following formula assuming 3 samples were taken from the channel, where: A=sample interval, B=sample assay value               <ol style="list-style-type: none"> <li><math>A1 \times B1 = C1, A2 \times B2 = C2, A3 \times B3 = C3</math></li> <li><math>A1 + A2 + B2 = \text{total interval}</math></li> <li><math>(C1 + C2 + C3) / \text{total interval} = \text{length weighted grade average}</math></li> </ol> </li> <li>No metal equivalent values have been used..</li> </ul>
Relationship between mineralization widths and intercept lengths	<ul style="list-style-type: none"> <li>Drill holes were designed to be installed perpendicular to the interpreted strike of the mineralized structures unless stated.</li> <li>Intercept widths are downhole widths and are not true geological widths.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Pertinent maps, plans and sections are within this announcement</li> </ul>
Balanced Reporting	<p>All new exploration results relating to the announcement are reported.</p> <ul style="list-style-type: none"> <li>Terms like “best”, “strongest” or “significant” are used to highlight those results considered most important in the context of the announcement.</li> <li>Some statements in this report regarding estimates or future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include, but are not limited to, statements concerning the Company’s exploration programme outlook, target sizes and mineralised material estimates. They include statements preceded by words such as “anticipated”, “expected”, “target”, “scheduled”, “intends”, “potential”, “prospective” and similar expressions.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>The announcement contains results of downhole geophysical surveys as follows:</li> </ul> <p>Downhole Electromagnetics (DHEM)</p> <ul style="list-style-type: none"> <li>Transmitter: Zonge ZT30</li> <li>Transmitter loop 600m x 400m, single turn</li> <li>Current: 45A</li> <li>Downhole Receiver: Digi Atlantis</li> <li>Base Frequency: 0.5Hz</li> <li>Sensor: Fluxgate B-Field</li> <li>Components: A, U and V</li> </ul>

	<p>Location of Data Points</p> <ul style="list-style-type: none"> <li>• Handheld GPS used for receiver/transmitter locations, co-ordinates GDA94/ MGA Zone 51</li> </ul> <p>Data spacing and distribution</p> <ul style="list-style-type: none"> <li>• Station Spacing 10m with 2m and 5m infill where deemed appropriate</li> </ul> <p>Audits and reviews</p> <ul style="list-style-type: none"> <li>• All geophysical data was collected and reviewed by an independent consultant.</li> <li>• Several sources of conductors in the bedrock are possible, including but not limited to concentrations massive sulphide and graphitic black shales.</li> <li>• A model of a conductive source is made from a combination of the measured data and assumptions made according to industry best practice. The resultant model should therefore be considered a “best estimate” of the conductive source, and not a definitive characterisation.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>• Further exploration work including further data processing and drilling is required to further test the EM bedrock conductor</li> <li>• Diagrams cannot be provided until final geophysical and geological models have been completed, other than what is presented within this notice.</li> </ul>