

**ASX Announcement** 

18 January 2017

# New Western Contact Mineralisation Identified High-Grade Aircore Drill Results up to 16 g/t gold

Newly identified Boorara Western Contact adjacent to the Northern Stockwork Deposit reported reverse circulation (RC) results including:

```
- BORC 144 - 44-46m 2 metres @ 4.26 g/t (previously reported)
50-53m 3 metres @ 3.26 g/t (previously reported)
56-75m 19 metres @ 1.9 g/t Au (previously reported)
- BORC 163 - 39-45m 6 metres @ 1.48 g/t Au
- BORC 164 - 31-37m 6 metres @ 1.48 g/t Au
42 metres @ 0.86 g/t Au
```

The 5,488 metre Air Core (AC) wide spread drill program testing some 500 metres north of the Northern Stockwork deposit at Boorara reported significant intercepts with amongst others:

```
BOAC 149 - 66-68m
                       2 metres @ 16.03 g/t Au EOH
BOAC 063 - 53-69m
                       16 metres @ 0.71g/t Au (western contact)
BOAC 064 - 54-58m
                       4 metres
                                 @ 3.39g/t Au (western contact)
BOAC 086 - 7-14m
                       7 metres
                                 @ 0.53 g/t Au (western contact)
           47-48m
                       1 metre
                                 @ 5.46 g/t Au (western contact)
BOAC 111 - 33-34m
                       1 metre
                                 @ 3.69 g/t Au
BOAC 115 – 32-33m
                       1 metre
                                 @ 9.62g/t Au
BOAC 120 - 29-41m
                       12 metres @ 0.52 g/t Au
```



#### Introduction

MacPhersons Resources Ltd (ASX:MRP) is pleased to report assay results from reverse circulation (RC) and aircore drilling (AC) recently completed at the Boorara Gold Project, 15km east of Kalgoorlie. The objective of the RC drilling was to confirm newly identified western contact mineralisation intersected in previously drilled BORC 144 in October 2016 (ASX announcement 31st October 2016). A 5488 metre aircore drilling program was undertaken to test significant gold geochemistry anomalies >200 ppb gold west and north of the Northern Stockwork gold deposit.

MacPhersons Resources is encouraged by these drilling results with further drilling planned as part of the company strategy of discovering additional ounces with a view to establishing a mining reserve base that can be part of a potentially profitable future gold mining operation.

#### **Western Contact**

Two RC drill holes (BORC 163-164) were drilled for 204 metres into the newly identified western contact confirming this trend as being gold mineralised with now three reverse circulation holes and three aircore holes intercepting significant gold mineralisation.

The western contact is a lithological contact of the Boorara dolerite and sediments that has a potential strike length of 750 metres. Initial observations of mineralised drill intervals indicate that gold mineralisation is shear zone hosted with associated quartz veining, the true width of mineralisation is unclear at this stage.

## **Aircore Drilling**

The recently completed first pass air core drilling program targeting significant gold auger geochemical anomalism (>200 ppb Au) to the north and on the western flank of Boorara has resulted in significant drill hole intercepts (figure 1). The drill program was a broad spaced program (140 metre line spacing by 40 metre hole spacing) with holes drilled to blade refusal.

Five drill holes ended in significant gold mineralisation including BCAC 149, intercepted 1m @ 18.45 g/t at end of hole (EOH) from 67-68 metres.

#### **Structural Study**

A structural study and geological mapping at the Boorara trial pit and surrounding Boorara area has confirmed the gold mineralisation at Boorara is hosted by quartz-dolerite and basalt in moderately NW-dipping quartz-carbonate-sulphide veinlet arrays with iron-carbonate alteration halos controlled by bounding shear zones and late cross faults identical to the 6 million ounce Mount Charlotte gold deposit part of the nearby Kalgoorlie Golden Mile.

#### **Future Drilling**

A six hole 870 metre RC drilling program has commenced to further test the strike extent and continuity of gold mineralisation associated with the western contact. Diamond drilling is planned to commence at Boorara in late January drilling three holes to test down dip extensions of existing mineralisation. This drilling will specifically target the Mt Charlotte style North West-dipping quartz-carbonate- sulphide veinlet arrays.



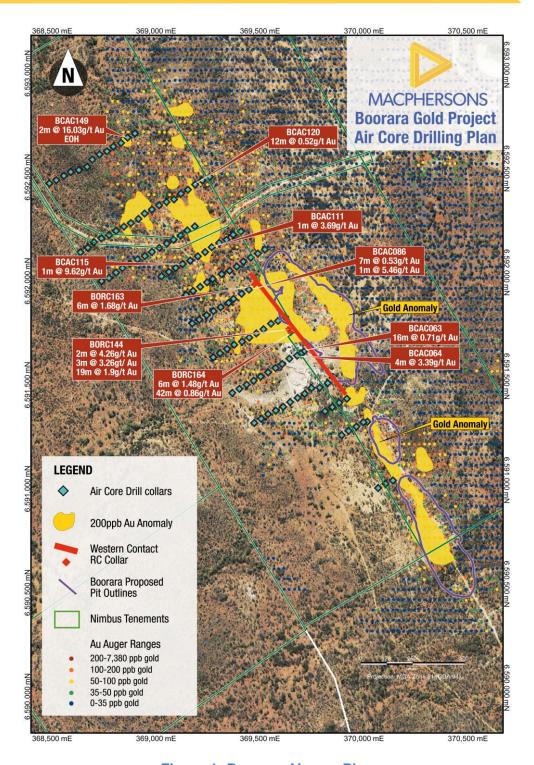


Figure 1: Boorara Aircore Plan



## For further information please contact:

Jeff Williams
Managing Director
+61 418 594 324

OR

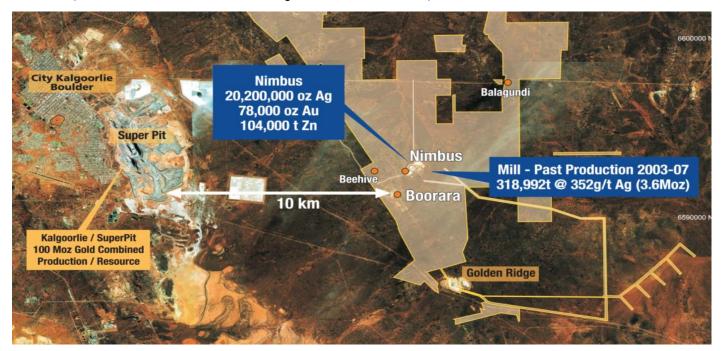
Andrew Pumphrey General Manager +61 419 965 976

#### **About MacPhersons**

MacPhersons Resources Ltd (MRP) is a Western Australian resource company with a number of advanced gold, silver and zinc projects.

The company's long term objective is the development of its existing assets and unlocking the full potential of its 100% owned highly prospective Boorara/Nimbus and Coolgardie projects.

For more information on MacPhersons Resources Limited and to subscribe for regular updates, please visit our website at: <a href="mailto:www.mrpresources.com.au">www.mrpresources.com.au</a> or contact our Kalgoorlie office on <a href="mailto:info@mrpresources.com.au">info@mrpresources.com.au</a> or - 08 9068 1300



## **Competent Person's Statement**

The information is this report that relates to exploration results is based on information compiled by Andrew Pumphrey who is a Member of the Australian Institute of Geoscientists and is a Member of the Australasian Institute of Mining and Metallurgy. Andrew Pumphrey is a full time employee of Macphersons Resources Ltd and has sufficient experience which 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 Pumphrey has given his consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.



# **JORC Code, 2012 Edition – Table 1 Report**

# **Section 1 Sampling Techniques and Data**

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

CRITERIA	JORC CODE EXPLANATION	COMMENTARY		
Sampling techniques	1. Nature and quality of sampling (e.g. 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	The Boorara Deposit was recently sampled using air core (AC) drilling (126 holes-5488m) and reverse circulation (RC) drilling (2 holes – 204m) with a total of 2,084 samples (which includes QAQC samples).  The RC samples are collected from the drill rig cyclone in a green plastic bag in 1m intervals are laid out in rows of either 20 or 40 samples. A 2-4kg representative		
	broad meaning of sampling.	sample is split via the rig mounted cone splitter and placed on top of the green plastic for that metre interval.  The AC samples are collected from the rig cyclone using a bucket and placed on the ground as 1m intervals laid out in rows of either 10, 20 or 40 samples.		
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	All sampling is undertaken using MacPhersons Resources sampling procedures and QAQC in line with industry best practise which includes standard and duplicate samples on average every 30 samples.		
		The AC drill rig provides a sample at the end of each metre of drilling. A 2-4 kg sample is collected from the sample laid out on the ground which is representative of that metre.		
		The RC drill rig provides a sample at the end of each metre of drilling. A 2-4 kg sample is collected from the drill rig via a cone splitter which is representative of that metre.		
	Aspects of the determination of mineralisation that are Material to the Public Report.	The 126 hole aircore program has systematically drilled an area that has been subject to historical RAB and RC drilling and the majority of this historical drilling is on a 240° drill azimuth.		
	4. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from	The RC one metre sample intervals were collected with a 2-4 kg representative sample despatched to the laboratory for gold analysis.		
	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	AC samples were composited at four metres to produce a 2-4 kg representative sample that was despatched to the laboratory for gold analysis.  All analysis was by 50g fire assay with AAS finish.		
	problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	All arialysis was by oog life assay with AAS liftisti.		



CRITERIA	JORC CODE EXPLANATION	COMMENTARY		
Drilling techniques	5. Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	Drilling was by AC & RC Methods.  The RC drilling was undertaken using a face sampling percussion hammer using 137mm drill bits.  The AC holes were drilled using a 75mm blade bit.		
Drill sample recovery	<ol> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ol>	Each metre of sample is checked and an estimate of sample recovery is made. For this program, greater than 80% of samples had a recovery of 70% or higher		
	7. Measures taken to maximise sample recovery and ensure representative nature of the samples.	Drillers experience is important. Steady drilling, good equipment, regular cleaning of cyclone and splitter, pausing the drilling at each metre to allow sample to pass through drill string and reducing sample loss.		
	8. 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.	Sample recoveries from the mineralised zones are generally high although some of the weathered material is lost in drilling (dust) and some natural voids do exist.  Although no exhaustive studies have been undertaken, no significant bias is expected, and any potential bias is not considered material at this stage of resource development.		
Logging	9. 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.	Each RC metre drilled underwent detailed logging through the entire hole with record kept of colour, lithology, degree of oxidation, structure, alteration, veining and sulphide content.  Although the AC metres were logged for colour, lithology, degree of oxidation, structure, veining, alteration and sulphide it is not logged to the same detail as RC metres.		
	10.Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	AC and RC logging is more qualitative in nature and included records of lithology, oxidation state and colour with estimates of intensity of mineralisation, alteration and veining.		
	11.The total length and percentage of the relevant intersections logged.	All drill holes were geologically logged in full (100%).		
Sub- sampling techniques	12.If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable. Drilling was RC and AC only.		



CRITERIA	JORC CODE EXPLANATION	COMMENTARY
and sample preparation	13.If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All RC sub-samples are collected via a cone splitter system mounted on the drill rig. Virtually all samples are dry to moist in nature and pass through the cyclone – splitter system as required.
		The AC samples pass through a cyclone and are laid out in rows on the ground. A sample scoop was passed through the sample pile to obtain a representative sample.
	14.For all sample types, the nature, quality and appropriateness of the sample	Samples were analysed via a 50 gram fire assay.
	preparation technique.	Sample preparation and analysis were completed by ALS in Kalgoorlie. When received processed by code PREP-31 - logged in tracking system and bar code attached, wet samples dried through ovens, fine crushing to better than 70% passing 2mm, split sample using riffle splitter, split of up to 1000g pulverised to >85% sample passing 75um.
	15. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The RC drill rig mounted cone splitter is adjusted to ensure that the 1m split sample weighs on average between 2-4kg. The cone splitter is cleaned using a air nozzle after every drill rod – 6m.
		All sampling equipment and sample bags are kept clean at all times.
		MacPhersons Resources sampling procedures and QAQC is used to maximise representivity of samples.
	16. 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.	MRP has undertaken an analysis of the QAQC of the recent Boorara drilling which has included the use of certified reference materials (standards) and unmineralised samples (blanks). Some duplicate sampling has also been undertaken.
	17.Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate for the style of mineralisation at Boorara.
Quality of assay data and laboratory tests	18. The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The nature, quality and appropriateness of the assaying and laboratory procedures are industry standard for Archaean mesothermal lode gold deposits. The fire assay technique will result in a total assay result.
	19. 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.	No geophysical tools were used to determine any reported element concentrations.



CRITERIA	JORC CODE EXPLANATION	COMMENTARY			
	20. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Certified Reference Materials (standards) are purchased from an independent supplier of such materials. Blanks are made up from samples previously collected from other drill programs that have analysed as less than detection Au values.			
Verification of sampling and assaying	21.The verification of significant intersections by either independent or alternative company personnel.	At least three different company personnel visually verified intersections in the collected drill chips. A representative sample of each metre is collected and stored for further verification if needed.			
	22.The use of twinned holes.	The drilling is not 'twinning' any existing holes although there are adjacent holes in some cases within 10m. Grade and geology is comparable with nearby holes in most instances.			
	23.Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data collected in the form of spread sheets, for drill hole collars, surveys, lithology and assay.  All data verified and validated by MRP geologists is currently stored in a Microsoft Access Database			
	24.Discuss any adjustment to assay data.	No adjustments are made to the primary assay data imported into the database.			
Location of data points	25.Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Initial hole collars surveyed by licenced surveyor DGPS (0.01m). RC drill line by surveyed back sight and foresight pegs. Dip was checked with clinometer on drill mast at set up on hole. RC holes are surveyed by down hole surveys at 30m intervals using single shot "Reflex Camera +/- 0.10 by drill contractor.			
		Post drilling RC holes where possible are surveyed for deviation by gyroscope method by local contractor ABIMS Ltd.			
		Final hole collar locations surveyed by licenced surveyor (Minecomp Pty Ltd) DGPS (0.01m).			
	26. Specification of the grid system used.	The grid system used is Geocentric Datum of Australia 1994 (GDA94).			
	27. Quality and adequacy of topographic control.	Historical – Aerial photography used to produce digital surface topographic maps at 1:2500 1m contours.			
		2011 - Fugro Spatial Solutions Pty Ltd detailed aerial photographic survey. Orthorectification and mosaicking performed using Inpho Digital Photogrammetric Systems. Expected accuracy of detail within 0.8mm at the ortho-image map scale.			



CRITERIA	JORC CODE EXPLANATION	COMMENTARY			
		Topographic control is from an aerial photographic survey completed during 2012 with accuracy within 0.01m.			
Data spacing and	28.Data spacing for reporting of Exploration Results.	The AC drill line spacing was typically 140m and hole spacing 40m with 2 holes at 10m hole spacing.			
distribution		The RC holes have been drilled on the newly defined western contact where there has been limited RC drilling undertaken previously. Hole BORC 164 is located 20m grid south of previously drilled BORC 144.			
	29. 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.	The current MRE classified as Measured, Indicated and Inferred according to JORC (2012 Edition) reporting criteria. The drill holes reported will not upgrade the resource category currently in place.			
	30.Whether sample compositing has been applied.	There was one instance of a 2m sample being collected which was caused by human error when a sample bag was missed otherwise all other samples are collected from each one metre interval.			
Orientation of data in relation to geological structure	31. Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Drill holes were orientated 060°/-60° or 240°/-60°. Which is considered to be perpendicular to the overall geological orientation. Various other orientations have been tried historically to try and capture the best orientation to drill various different structures and vein orientations.			
	32.If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No bias is expected from this drill orientation in this current drill program			
Sample security	33.The measures taken to ensure sample security.	Chain of custody is managed by MRP. Field samples are delivered to the assay laboratory in Kalgoorlie by MRP personnel. Whilst in storage, they are kept in a locked yard. Tracking sheets have been set up online to track the progress of batches of samples through the laboratory.			
		Sample pulps and coarse rejects are stored at ALS for a period of time and then returned to MRP.			
Audits or reviews	34.The results of any audits or reviews of sampling techniques and data	CSA completed a review in early 2015 of the MRP sampling protocols as part of their Resource estimation work and were satisfied that the adequacy of sample preparation, sample security and analytical procedures support the Mineral Resource classification discussed and are of industry standard.			
	MAZIN WALLES	MRP have maintained those sampling protocols from that time.			



# **JORC Code, 2012 Edition – Section 2 Report**

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

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

CRITERIA	JORC CODE EXPLANATION	COMMENTARY			
Mineral tenement and land tenure status	1. 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 Boorara Project is located approximately 17km east-southeast of Kalgoorlie, 2km west of Nimbus and 6km north-northwest of Golden Ridge' The Boorara project is situated within mining leases M26/29, M26/277 and M26/318 accessed from the Kalgoorlie-Bulong Road via an unsealed haul road. The tenements are located within the Hampton Hill Pastoral Station.			
		Situated within the Boorara Project area are the reserves associated with the Boorara townsite. Proposed open pit operations will not impact on the reserves.			
		The location of waste dumps will be sited so as to avoid mineral resources, exploration targets and to work with other mining infrastructure associated with the Nimbus operations located within 2km of the proposed Boorara open pits.			
		MRP purchased the Nimbus property on 8 <sup>th</sup> September 2011 from Kalgoorlie Ore Treatment Company Pty Ltd (KOTC). The tenements are held by KOTC, a wholly owned subsidiary of MacPhersons Resources Ltd.			
	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.	The tenements are in good standing and no known impediments exist.			
Exploration done by other parties	3. Acknowledgment and appraisal of exploration by other parties.	Historic gold production at Boorara produced 30,673 oz's from the treatment of 54,731 tonnes of ore. This production was from underground mining at the Cataract shaft, East Lode shaft and the Crown Jewel shaft. Historic mine plans and sections show two orientations of mine stopes, one at 040°/25° NW and another at 315°/65°W.			
		Dampier Mining Pty Ltd and Texas Gulf Australia Ltd in 1980 drilled 20 RC holes for 1038m and 10 diamond holes for 1695m.			



CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		Western Reefs NL in 1985 undertook soil sampling on a 40m x 20m grid. They also completed 180 RAB holes for 9892m, 268 RC holes for 20,831m and 26 diamond holes for 2609m. Geological mapping was undertaken by Western Reefs including costean mapping and sampling. The Cataract shaft was refurbished and geologically mapped and surveyed. The Crown Jewel shaft was mapped and surveyed also.
		Windsor Resources in 1988 drilled 174 RC holes for 11274m.
		Newmont in 1990 drilled 338 RAB holes for 15446m, 39 RC holes for 4319m and 4 diamond holes for 718m. Geological mapping and soil sampling was also undertaken.
		Mt Monger Gold Project in 1993 drilled 116 RC holes for 6222m.
		Fimiston Mining NL in 1995 drilled 110 RC holes for 7257m and 1 diamond hole for 195m. The data relating to the Boorara gold deposits comprising the Southern Stockwork Zone, Northern Stockwork Zone, Cataract Area, East Lode and Digger Dam was reviewed. The database was updated to incorporate the drilling completed by Fimiston and cross sections and interpretations made. A global polygonal based resource estimate was made which estimated resources of 2.25 million tonnes @ 1.40g/t Au at a cut-off grade of 0.5g/t or 1.42 million tonnes @ 1.72 g/t Au at a cut off of 1.0 g/t to be estimated. Block modelling of this polygonal data was then completed which returned a total oxide resource of 1,293,000 tonnes @ 1.49 g/t, and a total fresh resource of 1,095,000 tonnes @ 1.86g/t.
		New Hampton Goldfields Ltd in 2001 undertook a resource estimate at Boorara which resulted in a JORC compliant undiluted mineral resource of 1,506,000t @ 1.85 g/t Au. Open pit design of the Southern Stockwork, Cataract and the Northern Stockwork resulted in a Probable Reserve of 179,000t @ 3.0 g/t Au. The New Hampton Goldfields Ltd — Jubilee Gold Operations report, "Mineral Resource Estimate Report, Boorara M26/29 M26/318 and M26/161, June 2001 G Job" outlines the methodology and an explanation of the resource calculation.



CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		Polymetals (WA) Pty Ltd in 2006 estimated a NON JORC complaint total resource summary of 1,904,800t @1.38g/t Au using a cutoff grade of 0.5 g/t Au.
		Polymetals (WA) Pty Ltd in 2009 completed 18 RC holes for 1770m. From this program 126 samples with >1.0g/t Au were screen fire assayed, with another 34 duplicates taking the total samples assayed via screen fire assay to 160.
Geology	Deposit type, geological setting and style of mineralisation.	The Boorara Au deposit is an Archaean mesothermal Au deposit.
		The Boorara local geology consists of a sequence of ultramafic, mafic and felsic volcanic and volcaniclastic rocks, with interflow carbonaceous sediments found on the lithological boundaries. Dolerite intrusions are conformable within the sequence. The metamorphic grade of rocks at Boorara is lower greenschist facies. The alteration assemblage associated with better Au grades consists of quartz carbonate and sericite. Pyrite and arsenopyrite are associated with the better Au grades at Boorara.
		At Boorara gold mineralisation has been described by Verbeek (1987) to occur :
		<ul> <li>Near dolerite contacts associated with quartz stockwork or vein arrays. Pervasive carbonate-sericite alteration is present.</li> <li>Sulphides occur in the vein selvedge with proximal arsenopyrite and distal pyrite.</li> <li>Veins are usually less than 20 mm wide whilst the selvedge may be 1 to 4 times the width of the vein.</li> <li>Associated with quartz veins in shallow (20 to 45 degrees) north-dipping shear zones.</li> <li>Associated with steep (50 to 70 degrees) east-dipping shear zones on dolerite contacts.</li> </ul>
		Mineralisation envelopes at Boorara consist of three dominant orientations:
		NW trend of sub-vertical mineralisation which is typified by the East Lode workings, and interpreted SSW mineralisation, and



CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		interpreted as sub parallel to lithology contacts  2. NW moderate NE dipping structure at Crown Jewel, sub parallel to lithology contacts  3. NE striking, shallow to moderate NW dipping structures typified by Cataract workings. This orientation is interpreted to gradually change to a north strike, moderate West dip as the series progresses to the northern extent of the modelled area.
Drill hole Information	<ol> <li>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:         <ol> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ol> </li> </ol>	A drill hole collar and intercepts table with this information is attached in Appendix 1 & 2.
	6. 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.	All data included in Appendix 1 & 2
Data aggregation methods	7. In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	A full set of significant intersections are included in the table in Appendix 1 & 2.  The intercepts reported are averages as all samples being 1m RC samples are considered to have the same sample support.  No top cutting of grades has been done prior to reporting of these intersections. Any high grade samples that may be influencing the reported grade of the combined intercept are reported out as an included interval.
	8. 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.	Arithmetic length weighting used. Up to 2m of internal dilution at zero grade has been included in some aggregate intercept lengths.



CRITERIA	JORC CODE EXPLANATION	COMMENTARY		
	9. The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents reported.		
Relationship between mineralisation widths and intercept lengths	10. These relationships are particularly important in the reporting of Exploration Results.	These drill holes are designed to drill perpendicular to the geological rock units at Boorara which gives MRP Geologists a good understanding of mineralisation widths encountered.  The geometry and true width of mineralisation intercepted in AC is unknown until further drilling can completed.		
	<ul> <li>11. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>12. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	The geometry of the western contact mineralisation is unknown until further drilling can be completed.  The dominant mineralisation geometries seen at the Boorara gold project are;  1. Shear zone hosted mineralisation on the dolerite east contact which strikes 320° and is steeply dipping to the west.  2. Quartz vein hosted mineralisation that is orientated 040°/30°NW, 020°/35°NW  The true width of the ore at the Boorara gold resource is reasonably well known from the earlier deeper resource drilling, but at Boorara does not appear to be consistent in width due to the structura setting of the mineralisation. Greater than 90% of all drill holes would define both boundaries to mineralisation from which a true width can be reasonably determined.		
Diagrams	13. 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. (NOTE: Any map, section, diagram, or other graphic or photo must be of high enough resolution to clearly be viewed, copied and read without distortion or loss of focus).	Drill hole location plan is attached in Appendix 3.		
Balanced reporting	14. Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All significant results above a 0.2g/t lower cut-off are reported.		



CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Other substantive exploration data	15. 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.	There is no other substantive exploration data.
Further work	16. The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	More drilling will be completed on testing significant AC drill results.  The western contact mineralisation will be tested with more RC drilling.  The western contact is shown on appendix 3 plan.
	17. Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.  (NOTE: Any map, section, diagram, or other graphic or photo must be of high enough resolution to clearly be viewed, copied and read without distortion or loss of focus).	



# **JORC Code, 2012 Edition – Table 1**

## **Section 2 Report**

Appendix 1 Significant Air Core Intercepts >0.3 g/t (includes up to 2m of internal dilution)

Hole Number	Easting (GDA 94)	Northing (GDA 94)	mRL	Azimuth (°)	Dip (°)	Depth From (m)	Depth To (m)	Length (m)	Au Grade (ppm)
BCAC063	369695	6591639	398.148	60	-60	53	69	16	0.71
BCAC064	369681	6591631	397.480	60	-60	54	58	4	3.39
BCAC075	369605	6591807	398.515	60	-60	35	38	3	0.88
BCAC079	369467	6591728	392.63	60	-60	22	25	3	0.57
BCAC086	369432	6591939	394.30	60	-60	7	14	7	0.53
						36	37	1	0.61
						40	41	1	0.95
						47	48	1	5.46
						52	53	1	0.49
						58	62 (eoh)	4	0.26
BCAC100	369338	6592030	393.45	60	-60	18	21	3	0.28
						24	25 (eoh)	1	0.76
BCAC101	369300	6592013	392.71	60	-60	26	28	2	1.31
						31	33	2	0.84
						38	41	3	0.67
						44	46	2	0.79
						57	60	3	1.21
						82	85	3	0.29
						97	98 (eoh)	1	0.71
BCAC103	369230	6591974	392.71	60	-60	44	45 (eoh)	1	0.73
			The state of the s						Park No. of the



Hole Number	Easting (GDA 94)	Northing (GDA 94)	mRL	Azimuth (°)	Dip (°)	Depth From (m)	Depth To (m)	Length (m)	Au Grade (ppm)
BCAC107	369393	6592219	395.96	60	-60	16	19	3	0.7
BCAC111	369252	6592142	394.37	60	-60	33	34	1	3.69
BCAC115	369112	6592062	395.28	60	-60	28	30	2	0.36
						32	33	1	9.62
						52	54	2	0.62
BCAC119	369171	6592243	395.97	60	-60	46	48	2	0.5
BCAC120	369135	6592224	395.84	60	-60	7	18	11	0.41
						21	22	1	1.82
						29	41	12	0.52
						44	48	4	0.86
BCAC121	369103	6592199	395.64	60	-60	31	32	1	0.41
						35	36	1	0.67
						39	40	1	0.97
						50	52	2	0.74
						55	56	1	0.64
						63	64	1	3.22
BCAC149	368779	6592628	398.22	60	-60	66		1	13.6
						67	68 (eoh)		18.45
BCAC164	369070	6592374	396.43	60	-60	59	61	2	0.41



# Appendix 2 Reverse Circulation Intercepts >0.3 g/t (includes up to 2m of internal dilution)

Hole Number	Easting (GDA 94)	Northing (GDA 94)	RL	Azimuth (°)	Dip (°)	Depth From (m)	Depth To (m)	Length (m)	Au Grade (g/t)
BORC163	6591980.369	369470.272	394.839	60	-60	39	45	6	1.48
						49	55	6	0.75
BORC164	6591734.614	369627.597	398.550	60	-60	31	37	6	1.48
						53	95	42	0.86
						103	112	8	0.83
						124	128	4	0.77



## **Appendix 3 Boorara Gold Project Air Core drilling plan**

