

# Fifield Exploration Drilling Update

# **Highlights**

- ✓ Results from the Southern Area Phase 2 aircore drilling and bedrock sampling support the interpretation that
  the bedrock has an Ordovician Macquarie Arc geochemical signature. However, testing indicates that it is likely
  to be from Stage II volcanism rather than the Stage III and IV volcanism associated with mineralisation at Cowal
  (gold) and Northparkes (copper / gold).
- ✓ Northern Area Phase 1 aircore drilling indicates a peak copper anomaly value of 703ppm copper.
- ✓ The focus of Phase 3 Drilling Program will be the
  - a) Northern Gold prospect which is an area with a surface footprint of 400m x 100m of historical gold workings that was partially tested with the Phase 1 drilling program, and
  - b) Transit prospect where in 2017 Rimfire obtained promising intersections from RC hole Fi0808 (60 degrees inclined hole) of 20m @ 1.11g/t Au from 48m depth.

Rimfire Pacific Mining NL ("Rimfire", "Company"; ASX Code "RIM") advises that assays for the second phase of the drilling program for Southern Area have been received. These results provide further support that the Rimfire interpretation of these rocks as part of the Ordovician Macquarie Arc rather than younger Silurian or Devonian rocks is valid. However, based on scandium (Sc) versus zirconium (Zr) ratios, the area appears to be associated with Phase II volcanism rather than the Phase III and IV volcanism that is interpreted as being responsible for the nearby significant gold, and copper / gold mineralised systems of Cowal (Evolution Mining) and Northparkes (CMOC) respectively.

Phase 3 operational planning is in progress for the Northern Gold and Transit prospects including work to obtain the necessary NSW Government drilling approvals and local landholder access agreements. The Coronavirus will influence the scheduling of company activities in the short term.

#### Northern Gold

The Northern Gold prospect is 2km north of Sorpresa and drilling was designed to test the bedrock beneath a +400m long x 80m wide zone of historical mine pits (Figure 1). The Phase 1 RC drilling at the Northern Gold prospect consisted of 2 holes totaling 165.5m. The drilling generated anomalous gold (0.15 ppm), copper (0.17 %), lead (120 ppm) and zinc (0.13%) (ASX Announcement: Fifield Exploration Update 5Nov2019) although it did not intersect high copper or gold grades. These results are supportive of the IRGS model for mineralisation in the area (ASX Announcement: Sorpresa Basin IRGS Model 15July2019). The surface gold remains unexplained by the limited drilling to date and an aircore drilling program is the next step in understanding and locating the source of historical gold from this prospect. The size of the known footprint of Northern Gold historical gold workings supports the potential for a significant mineralised system, which could be either an independent mining operation or an incremental additional source of supply feed to any Sorpresa development.

#### **Transit Prospect**

The Transit prospect is located 3km to the east of Sorpresa and sits at the interpreted intersection of a north-northeast trending low angle thrust and a northwest trending structural corridor thought to be representative of the Lachlan Transverse Zone (Figure 2). The geology of the area consists of a series of highly deformed, quartz veined carbonaceous sediments and minor andesitic composition volcanics and volcanoclastics. In 2017 Rimfire obtained an



intersection at Transit of 20m @ 1.11g/t Au from 48m depth (<u>ASX Announcement: Transit Area 44m at 0.61g/t Gold and Potential for Porphyry 19Sept2017</u>). The focus of the next phase of work at Transit will be to better understand the geological structural setting that is thought to control zones of mineralisation and to test initially for further zones of shallow higher grade mineralisation that may support Rimfire's Dual Strategy (<u>ASX Announcement: Dual Strategy - Sorpresa Appraisal and Regional Discovery 25Sept2018</u>) of monetisation of Sorpresa.

# Ordovician Macquarie Arc Characterisation Study

A component of the Phase 1 and Phase 2 drilling programs in the Southern Area was to obtain bedrock samples for geochemical analysis to determine if the rocks have a similar geochemistry to the Ordovician Macquarie Arc volcanism. This is significant as historically the rocks in the Southern and Northern Areas have been considered younger Silurian / Devonian age rocks and consequently considered less prospective terrane for discovery of major copper / gold or gold mineralised systems. The older Ordovician Macquarie Arc age rocks host nearby major copper / gold and gold mineralised systems including Northparkes (CMOC) and Cowal (Evolution Mining) respectively.

Eight aircore or grab samples of either andesite lavas, associated volcaniclastic rocks or diorite from the Southern Area have been assayed for a suite of 48 elements by ALS (Australian Laboratory Services) (Figure 3).

A preliminary study of the data supports Rimfire's interpretation that the rocks are primarily intermediate in composition and are part of the Ordovician Macquarie Arc. All but one sample plots within or near the Mid to Late Ordovician Goonumbla Volcanic field on a Zirconium (Zr) versus Scandium (Sc) diagram (Figure 4). There are four identified volcanic events recognized within the Macquarie Arc volcanic sequence and they are defined as Phases I to IV. The most significant phases are the Stage III and IV events that are associated with mineralisation events at the Northparkes and Cowal mines respectively. The Stage II (Goonumbla) is not considered to be associated with significant large scale Northparkes or Cowal style mineralisation. The outlier is a quartz diorite (Fi1980) from within a geological feature referred to as the Murrambogie Dome that may be part of the same Ordovician ultramafic event which hosts the Syerston cobalt nickel deposit.

#### Southern Area

A total of 36 reconnaissance aircore holes totaling 1,423 metres were drilled in the Phase 1 (<u>ASX Announcement: Fifield Exploration Update</u>) and Phase 2 programs in the Southern Area (Figure 5, Table 1 and 2). The broad spaced drilling program was aimed at evaluating the Southern Area's potential to host large tonnage Lake Cowal or Northparkes style deposits. As expected, interpreted Ordovician intermediate lithologies were intersected in all holes with more proximal lavas located in the eastern third of the area.

The copper geochemistry for the region is generally subdued with all three metre samples assaying < 254ppm. Gold is also subdued assaying <0.3ppm. The only exception is a three metre interval of quartz diorite from the centre of the Murrambogie Dome, which assayed 0.29 ppm gold.

The optimal strategy for further work in this area is in development.

# Northern Area

During the Phase 1 drilling program eleven aircore holes, totaling 408 metres, were drilled in September 2019 (<u>ASX Announcement: Fifield Exploration Update</u>). Three holes were intended to confirm the presence and obtain samples from the northern end of a 2.5km long by 800m maximum width anomaly defined by greater than 400ppm copper geochemistry identified by previous explorers. Six holes tested possible extensions to the north and east. While two holes were designed to locate the source of a 2.72% Copper assay from a grab sample located 900metres to the east of the main anomaly (Figure 6 and Table 3).



Diorite assaying up to 703ppm copper was intersected within the copper anomaly identified by previous explorers. This feature is interpreted as being marginal to a zone of anomalous copper in volcaniclastic rocks which are sometimes intruded by diorite dykes assaying less than 400ppm copper.

Rimfire and previous explorers drill holes were terminated at refusal immediately above the base of oxidation. Rimfire's drilling indicates that the 2.5km long copper anomaly is related to a line of discrete moderately copper anomalous (400 to 700ppm copper) diorite plugs. Minor secondary enrichment has resulted in occasional assays exceeding 1000ppm copper at several locations.

The two holes designed to locate the source of the 2.72% copper grab sample intersected un-mineralised Devonian sandstone.

The optimal strategy for further work in this area is in development.

# Rimfire Managing Director Craig Riley states:

The results from the Phase 1 and Phase 2 drilling programs over the Northern and Southern Areas support the Rimfire interpretation that the basement rocks are older Ordovician rocks that also host the nearby significant Northparkes (copper / gold) and Cowal (gold) mines.

The focus of work for Phase 3 drilling will now transition to the Northern Gold and Transit prospects which both retain strong potential for economic gold mineralisation that could be independent significant discoveries or be accretive projects to any development of the Sorpresa Resource

This announcement is authorised for release to the market by the Board of Directors of Rimfire Pacific Mining NL.

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Figure 1: Location Plan of Northern Gold

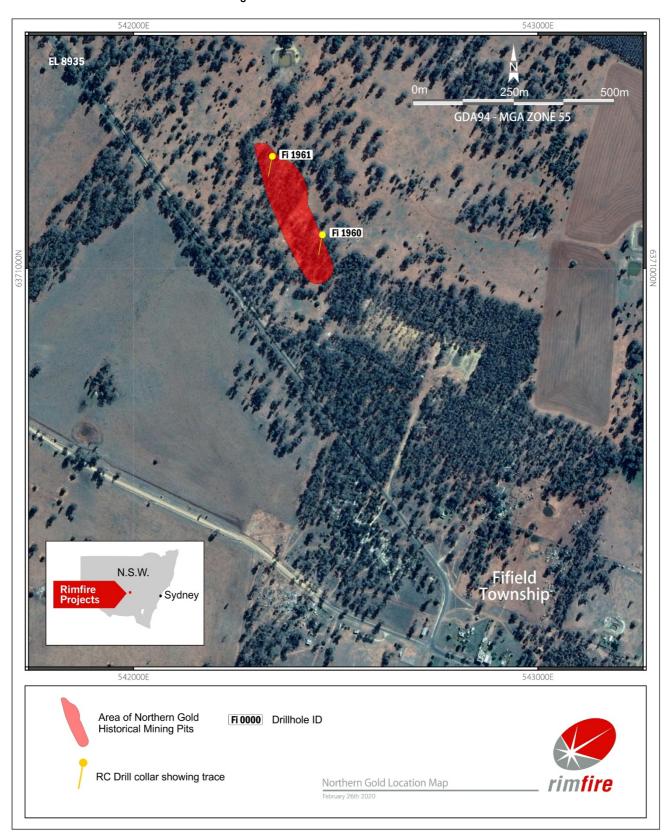




Figure 2: Location Plan of Transit in relation to Sorpresa and Various Local Prospects

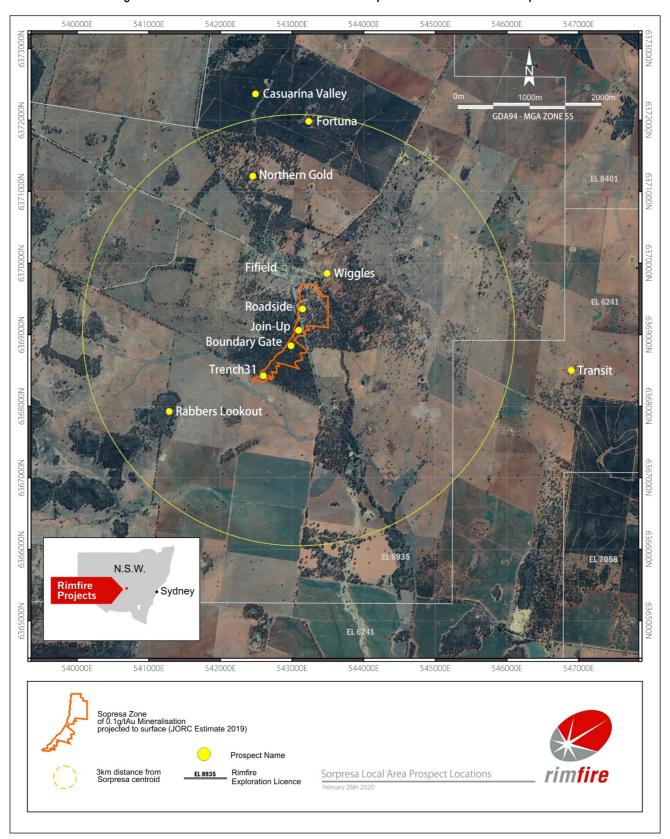




Figure 3: Southern Area Sample Locations for Macquarie Arc Characterisation Study

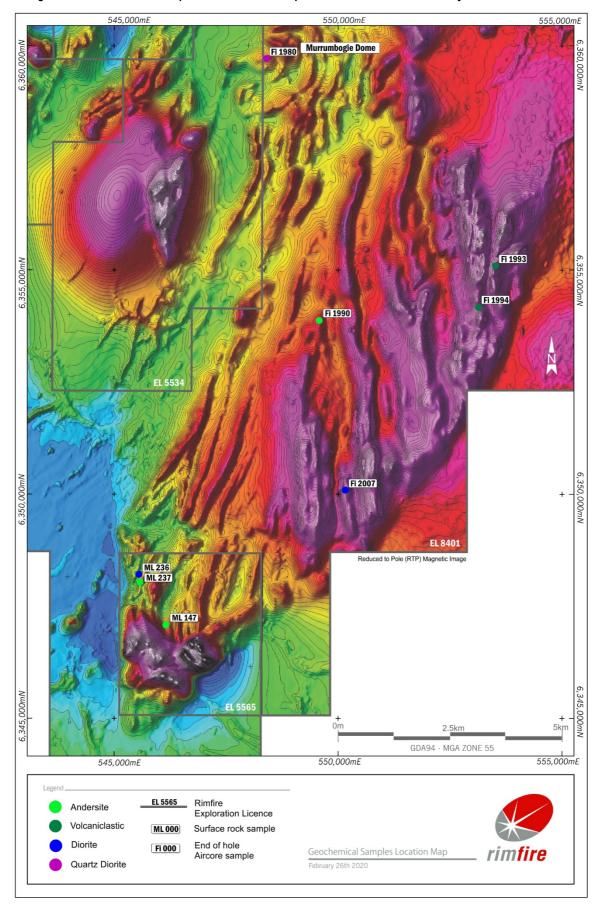
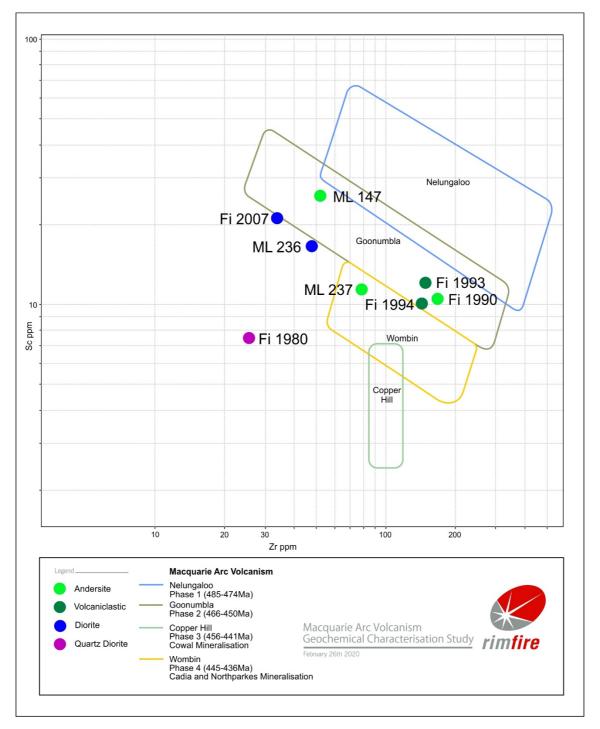




Figure 4: Zirconium versus Scandium Plot to Assess Similarities with other Macquarie Arc Volcanism



#### References:

- Australian Journal of Earth Sciences; An International Geoscience Journal of the Geological Society of Australia, Volume 54, 2007 Issue 2-3: Geological evolution and metallogenesis of the Ordovician Macquarie Arc, Lachlan Orogen, New South Wales by A. J. Crawford, D. R. Cooke &C. M. Fanning
- 2. Episodes Vol. 35, no. 1 p177 to 186: The Macquarie Arc, Lachlan Orogen, New South Wales: its evolution, tectonic setting and mineral deposits by Richard A. Glen, C.D. Quinn and David R. Cooke
- 3. Quarterly Notes August 2015 No 144 © State of New South Wales through Department of Industry, Skills and Regional Development, Geological Survey of New South Wales 2015. New lead isotopic and geochronologic constraints on mineralisation in the Macquarie Arc insights from the Lake Cowal district, New South Wales, by David B. Forster, Paul McInnes, Peter M. Downes, Roland Maas, Marc Norman and Phillip L. Blevin.
- Myall confirmed as a large mineralised system: analogous to Northparkes. Additional drill-ready porphyry Copper Gold targets identified. ASX Media Release, Magmatic Resources, 31 January 2019 p8.



Figure 5: Southern Area Phase 1 and 2 Aircore Drill Hole Locations and Geology

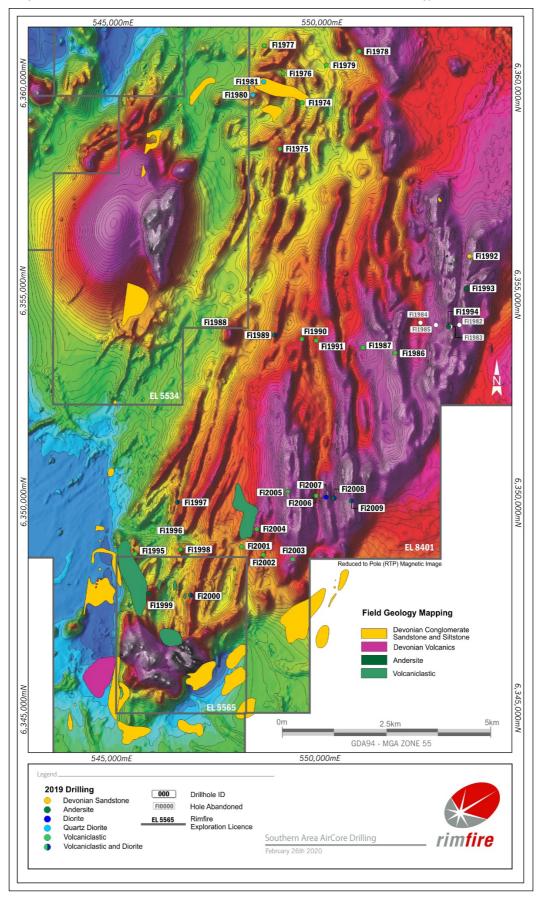




Figure 6: Northern Area Phase 1 Aircore drill hole locations and Geology

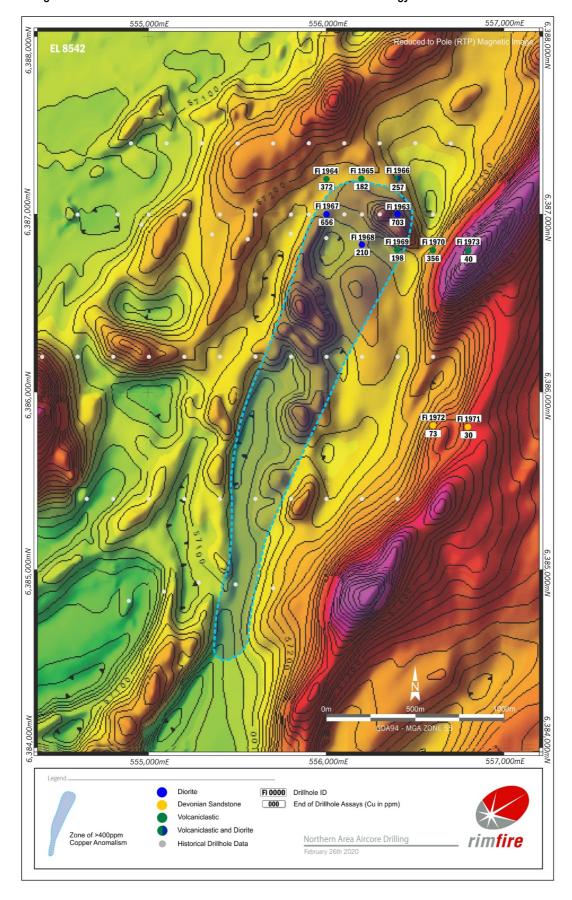




Table 1: Phase 1 Southern Area Aircore Assay Results for gold (Au) and copper (Cu)

Filips	Hole ID	mE	mN	From (m)	To (m)	EOH (m)	Azimuth	Dip (deg)	Au (ppm)	Cu (ppm)
First	Fl1974	549585	6359543	33	36		360	-90	0.01	na
First   Firs	FI1974			36	39		360	-90	<0.01	na
First	Fl1974			39	42		360	-90	<0.01	na
First	FI1974			42	45		360	-90	<0.01	189
First	Fl1974			45	48	48	360	-90	<0.01	175
Filip75	Fl1975	549049	6358429	33	36		360	-90	0.02	na
Filip75	Fl1975			36	39		360	-90	0.02	na
Fig.	Fl1975			39	42		360	-90	0.03	na
Filips	FI1975			42	45		360	-90	0.01	118
Filiping   Filiping	FI1975			45	48	48	360	-90	0.01	154
Filippic   Signature   Signa	FI1976	549132	6360246	24	27		360	-90	<0.01	na
Filip76	FI1976			27	30		360	-90	<0.01	na
Filip77	FI1976			30	33		360	-90	0.01	na
Figs	FI1976			33	36		360	-90	0.01	147
Filip77	FI1976			36	39	39	360	-90	0.01	145
Figs	Fl1977	548681	6360906	30	33		360	-90	<0.01	na
Fig97	Fl1977			33	36		360	-90	<0.01	na
Filip77	Fl1977			36			360	-90	0.01	na
Filipi28   551004   6360775   27   30   44.5   360   90   0.01   na   na   ni   na   na	Fl1977			39	42		360	-90	0.01	88
Filip78									0.01	87
Filip78		551004	6360775			44.5			0.01	na
Fi1978	FI1978			30	33		360	-90	<0.01	na
Fi1978   Fi1979   F50170   G380440   18	FI1978						360	-90	<0.01	na
F11979   F50170   G360440   18										
Fi1979	Fl1978			39	42	42	360	-90	<0.01	40
F11979		550170	6360440				360	-90	<0.01	na
Fi1979										na
F11979	Fl1979			24	27		360	-90	<0.01	na
Fi1980   548410   6359721   27   30   360   360   390   4001   na	Fl1979			27	30		360	-90	⊲0.01	182
Fi1980	Fl1979			30	33	33	360	-90	<0.01	146
Fi1980	Fl1980	548410	6359721	27	30		360	-90	<0.01	na
Fi1980	Fl1980			30	33		360	-90	<0.01	na
Fi1980   S48671   6360034   39	Fl1980			33	36		360	-90	<0.01	na
Fi1981   548671   6360034   39   42   360   -90   -001   na	Fl1980			36	39		360	-90	<0.01	4
Fi1981	FI1980			39	41	41	360	-90	<0.01	6
Fi1981	Fl1981	548671	6360034	39	42		360	-90	<0.01	na
Fi1981	Fl1981			42	45		360	-90	0.29	na
Fi1981	Fl1981			45	48		360	-90	<0.01	na
Fi1982   553357   6354219   51	Fl1981			48	51		360	-90	<0.01	3
Fi1982	Fl1981			51	52.5	52.5	360	-90	<0.01	2
Fi1982	Fl1982	553357	6354219	51	54		360	-90	<0.01	na
Fi1982	Fl1982			54	57		360	-90	<0.01	na
Fi1982   63   63   66   66   360   -90   0.01   42     Fi1983   553124   6354175   18   21   360   -90   -0.01   na     Fi1983   21   24   360   -90   -0.01   na     Fi1983   24   27   360   -90   -0.01   na     Fi1983   27   30   360   -90   -0.01   38     Fi1983   30   33   33   360   -90   -0.01   29     Fi1984   552799   6354222   21   24   360   -90   -0.01   na     Fi1984   27   30   360   -90   -0.01   na     Fi1984   30   33   360   -90   -0.01   na     Fi1984   33   36   36   360   -90   -0.01   20     Fi1985   552433   6354276   36   39   360   -90   0.01   na     Fi1985   42   45   360   -90   0.01   na     Fi1986   42   45   360   -90   0.01   na     Fi1986   551822   6353543   60   63   360   -90   0.01   na     Fi1986   66   69   360   -90   0.01   na     Fi1986   66   69   360   -90   0.01   na     Fi1987   551047   6353667   12   15   360   -90   0.01   na     Fi1987   78   78   78   78   78   78   78	Fl1982			57	60		360	-90	<0.01	na
Fi1983   553124   6354175   18   21   360   -90   <0.01   na	Fl1982			60	63		360	-90	0.01	18
Fi1983	Fl1982			63	66	66	360	-90	0.01	42
Fi1983	Fl1983	553124	6354175	18	21		360	-90	<0.01	na
Fi1983	FI1983			21	24		360	-90	<0.01	na
F11983	FI1983			24	27		360	-90	<0.01	na
Fi1984   552799   6354222   21   24   360   -90   -0.01   na	Fl1983			27	30		360	-90	<0.01	38
Fi1984	FI1983			30	33	33	360	-90	<0.01	29
Fi1984	FI1984	552799	6354222	21	24		360	-90	<0.01	na
Fi1984	Fl1984			24	27		360	-90	0.01	na
Fi1984   33   36   36   360   -90   0.01   20     Fi1985   552433   6354276   36   39   360   -90   0.01   na     Fi1985   39   42   360   -90   0.01   na     Fi1985   42   45   360   -90   0.01   na     Fi1985   46   48   360   -90   0.01   40     Fi1986   48   51   51   360   -90   0.01   40     Fi1986   551822   6353543   60   63   360   -90   0.03   na     Fi1986   66   69   360   -90   0.01   na     Fi1986   66   69   360   -90   0.01   na     Fi1986   72   74   74   360   -90   0.01   na     Fi1987   551047   6363667   12   15   360   -90   0.01   na     Fi1987   751047   6363667   12   15   360   -90   0.01   na     Fi1987   751047	FI1984			27	30		360	-90	0.01	na
Fi1985   552433   6354276   36   39   360   -90   0.01   na	FI1984			30	33		360	-90	<0.01	21
Fi1985   39	Fl1984			33	36	36	360	-90	0.01	20
Fi1985	FI1985	552433	6354276	36	39		360	-90	0.01	na
Fi1985	Fl1985			39	42		360	-90	0.01	na
Fi1985	Fl1985			42	45		360	-90	0.01	na
Fi1986   551822   6353543   60   63   360   -90   0.03   na   Fi1986   63   66   360   -90   0.01   na   Fi1986   66   69   360   -90   0.01   na   Fi1986   69   72   360   -90   0.01   81   Fi1986   72   74   74   360   -90   0.01   82   Fi1987   551047   6353667   12   15   360   -90   0.01   na   Fi1987   15   18   360   -90   0.01   na   Fi1987   18   21   360   -90   0.01   na   Fi1987   18   21   360   -90   0.02   180   Fi1987   21   24   360   -90   0.02   180   180   Fi1987   18   21   360   -90   0.02   180   Fi1987   21   24   360   -90   0.02   180   Fi1987   21   24   24   360   -90   0.02   180   Fi1987   21   24   24   360   -90   0.02   180   20   20   20   20   20   20   20	Fl1985			45	48		360	-90	0.01	40
Fi1986   63   66   360   -90   0.01   na     Fi1986   66   69   360   -90   0.01   na     Fi1986   69   72   360   -90   0.01   81     Fi1986   72   74   74   360   -90   0.01   82     Fi1987   551047   6353667   12   15   360   -90   0.01   na     Fi1987   15   18   360   -90   0.01   na     Fi1987   18   21   360   -90   0.01   na     Fi1987   21   24   360   -90   0.02   180	Fl1985			48	51	51	360	-90	<0.01	40
Fi1986   66   69   360   -90   0.01   na     Fi1986   69   72   360   -90   0.01   81     Fi1986   72   74   74   360   -90   0.01   82     Fi1987   551047   6353667   12   15   360   -90   0.01   na     Fi1987   15   18   360   -90   0.01   na     Fi1987   18   21   360   -90   0.01   na     Fi1987   21   24   360   -90   0.02   180	Fl1986	551822	6353543	60	63		360	-90	0.03	na
Fi1986   69   72   360   -90   0.01   81     Fi1986   72   74   74   360   -90   0.01   82     Fi1987   551047   6353667   12   15   360   -90   0.01   na     Fi1987   15   18   360   -90   0.01   na     Fi1987   18   21   360   -90   0.01   na     Fi1987   21   24   360   -90   0.02   180	Fl1986			63	66		360	-90	0.01	na
Fi1986   72 74 74 360 -90 0.01 82   Fi1987 551047 6353667 12 15 360 -90 0.01 na   Fi1987   15 18 360 -90 0.01 na   Fi1987   18 21 360 -90 0.01 na   Fi1987   21 24 360 -90 0.02 180   Fi1987   18 21 360 -90 0.02 180   Fi1987   Fi1987   18 21 360 -90 0.02 180   Fi1987   18 21 360 -90 0.02   Fi1987   18	Fl1986			66	69		360	-90	0.01	na
Fi1987   551047   6363667   12   15   360   -90   0.01   na   Fi1987   15   18   360   -90   0.01   na   Fi1987   18   21   360   -90   0.01   na   Fi1987   21   24   360   -90   0.02   180	Fl1986			69	72		360	-90	0.01	81
FI1967         15         18         360         -90         0.01         na           FI1967         18         21         360         -90         0.01         na           FI1967         21         24         360         -90         0.02         180	Fl1986			72	74	74	360	-90	0.01	82
Fi1987         18         21         360         -90         0.01         na           Fi1987         21         24         360         -90         0.02         180	FI1987	551047	6353667	12	15		360	-90	0.01	na
F11987 21 24 380 -90 0.02 180	Fl1987			15	18		360	-90	0.01	na
	Fl1987			18	21		360	-90	0.01	na
F11987 24 26 26 360 -90 0.02 195	Fl1987			21	24		360	-90	0.02	180
	Fl1987			24	26	26	360	-90	0.02	195

Analysis by Australian Laboratory Services (ALS) Gold (Au) by method Au-AA26 and Copper (Cu) by ME-ICP61 na = no sample submitted for base metal assay analysis



Table 2: Phase 2 Southern Area Aircore Assay Results for gold (Au) and copper (Cu)

Hole ID	тE	mN	From (m)	To (m)	EOH (m)	Azimuth	Dip (deg)	Au (ppm)	Cu (ppm)
F11988	547082	6354240	33	36		360	-90	0.01	54
Fl1988			36	39.5	39.5	360	-90	0.01	56
Fl1989	548931	6353973	51	54		360	-90	0.01	55
Fl1989			54	57	57	360	-90	0.01	109
Fl1990	549584	6353881	60	63		360	-90	0.01	202
Fl1990			63	65	65	360	-90	0.01	165
Fl1991	549926	6353840	63	66		360	-90	0.01	109
Fl1991			66	67	67	360	-90	0.01	55
Fl1992	553600	6355861	0	2		360	-90	0.01	26
F11992			2	5	5	360	-90	0.01	30
F11993	553516	6355096	15	18		360	-90	0.01	84
F11993			18	20	20	360	-90	0.01	154
Fl1994	553138	6354175	69	72		360	-90	0.01	85
Fl1994			72	74	74	360	-90	0.02	90
Fl1995	545583	6348730	24	27		360	-90	0.01	88
Fl1995			27	29	29	360	-90	0.02	248
Fl1996	546011	6349302	0	2	2	360	-90	0.01	76
Fl1997	546596	6349974	39	42		360	-90	0.01	76
Fl1997			42	43	43	360	-90	0.01	49
Fl1998	546670	6348842	9	12		360	-90	0.01	143
Fl1998			12	14	14	360	-90	0.01	177
Fl1999	545907	6347782	0	3	3	360	-90	0.01	107
Fl2000	546918	6347741	3	6		360	-90	0.01	72
Fl2000			6	7	7	360	-90	0.01	117
FI2001	548136	6348902	63	66		360	-90	0.01	84
FI2001			66	69	69	360	-90	0.01	92
Fl2002	548655	6348711	39	42		360	-90	0.02	82
Fl2002			42	44	44	360	-90	0.01	37
Fl2003	549364	6348604	39	42		360	-90	0.01	64
Fl2003			42	45	45	360	-90	0.01	73
Fl2004	548470	6349310	1	2	2	360	-90	0.01	115
Fl2005	549252	6350221	33	36		360	-90	0.01	182
Fl2005			36	39	39	360	-90	0.01	198
Fl2006	549930	6350124	6	9		360	-90	<0.01	41
Fl2006			9	12	12	360	-90	<b>√</b> 0.01	254
Fl2007	550164	6350092	15	18		360	-90	<b>⊲</b> 0.01	87
Fl2007			18	21	21	360	-90	0.01	79
Fl2008	550356	6350063	39	42		360	-90	<0.01	40
Fl2008			42	43	43	360	-90	<b>⊲</b> 0.01	36
Fl2009	550771	6350005	78	81		360	-90	0.01	121
Fl2009			81	83	83	360	-90	0.01	65

Analysis by Australian Laboratory Services (ALS) Gold (Au) by method Au-AA26 and Copper (Cu) by ME-ICP61



Table 3: Phase 1 Northern Area Aircore Assay Results for gold (Au) and copper (Cu)

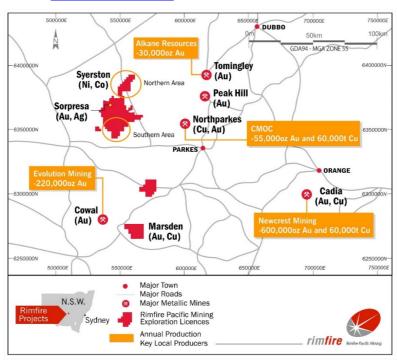
Hole ID	мE	mN	From (m)	To (m)	EOH (m)	Azimuth	Dip (deg)	Au (ppm)	Cu (ppm)
Fl1963	556400	6387000	51	54		360	-90	0.02	na
Fl1963			54	57		360	-90	0.02	na
Fl1963			57	60		360	-90	0.01	na
Fl1963			60	63		360	-90	0.01	687
Fl1963			63	64	64	360	-90	0.01	703
Fl1964	556000	6387200	30	33		360	-90	0.02	na
Fl1964			33	36		360	-90	0.02	na
F11964			36	39		360	-90	0.01	na
Fl1964			39	42		360	-90	0.01	372
Fl1964			42	45	45	360	-90	0.02	247
Fl1965	556200	6387200	33	36		360	-90	0.01	na
Fl1965			36	39		360	-90	0.02	na
Fl1965			39	42		360	-90	0.01	na na
Fl1965			42	45		360	-90	0.02	147
Fl1965			45	47	47	360	-90	0.01	182
Fl1966	556400	6387200	30	33		360	-90	0.01	na
FI1966		0001200	33	36		360	-90	0.01	na
FI1966			36	39		360	-90	0.01	na
Fl1966			39	42		360	-90	0.01	193
Fl1966			42	45	45	360	-90	0.01	257
Fl1967	556000	6387000	33	36	40	360	-90	0.03	
Fl1967	33000	000/000	36	39		360	- <del>9</del> 0	0.03	na na
Fl1967			39	42			- <del>9</del> 0	0.02	na na
			42			360			na
Fl1967 Fl1967			42 45	45 47	47	360	-90 -90	0.02	561
		~~~~			4/	360		0.03	656
F11968	556200	6386800	15	18		360	-90	0.02	na
F11968			18	21		360	-90	0.01	na
F11968			21	24		360	-90	0.01	na
F11968			24	27		360	-90	0.01	210
Fl1968	FF0400	~~~~~	27	28	28	360	-90	0.02	69
Fl1969	556400	6386800	18	21		360	-90	0.01	na
Fl1969			21	24		360	-90	0.01	na
Fl1969			24	27		360	-90	0.01	na
FI1969			27	30		360	-90	0.01	198
F11969	FF0000	0000000	30	33	33	360	-90	0.02	142
F11970	556600	6386800	39	42		360	-90	0.02	na
Fl1970			42	45		360	-90	0.01	na
F11970			45	48		360	-90	0.01	na
F11970			48	51		360	-90	0.01	356
F11970	FFCCCC	0005005	51	52	52	360	-90	0.01	259
Fl1971	556800	6385800	6	9		360	-90	<0.01	na
F11971			9	12		360	-90	0.01	na
Fl1971			12	15		360	-90	<0.01	na
F11971			15	18		360	-90	0.01	30
F11971			18	21	21	360	-90	<0.01	17
Fl1972	556600	6385800	0	3		360	-90	<0.01	59
Fl1972			3	6	6	360	-90	0.01	73
Fl1973	556800	6386800	6	9		360	-90	0.01	na
Fl1973			9	12		360	-90	<0.01	na
Fl1973			12	15		360	-90	<0.01	na
Fl1973			15	18		360	-90	<0.01	40
F11973			18	20	20	360	-90	<0.01	19

Analysis by Australian Laboratory Services (ALS) Gold (Au) by method Au-AA26 and Copper (Cu) by ME-ICP61 na = no sample submitted for base metal assay analysis



#### **ABOUT RIMFIRE**

Rimfire Pacific Mining (RIM) is an ASX listed resources exploration company with its major focus at Fifield in central NSW, located within the Lachlan Transverse Zone (LTZ). In 2011 the Company made a greenfields discovery, named "Sorpresa", announcing a JORC Inferred and Indicated Maiden resource in 2014. The information provided in "About Rimfire" is available to view on the company's website: ASX Announcements.



Rimfire is exploring for a major copper / gold or gold mineralised system such as at Northparkes (Cu/Au) or Cowal (Au) on 915km² of Exploration Licences 100km west of Parkes in central NSW. Multiple prospects with potential for further gold discoveries exist in the area around Sorpresa which are part of Rimfire's 681km² contiguous tenements. Rimfire also holds two exploration licences covering 234km²; located 40 to 60kms south of the Fifield Project, in a prospective area now part of a moratorium associated with the MinEx Cooperative Research Centre program (minexcrc.com.au)

#### **Competent Persons Declaration**

The information in the report to which this statement is attached that relates to Exploration and Resource Results is based on information reviewed and/or compiled by Craig Riley who is deemed to be a Competent Person and is a Member of The Australasian Institute of Mining and Metallurgy.

Mr Riley has over 25 years' experience in the mineral and mining industry. Mr Riley is employed by Rimfire Pacific Mining (RIM) and is an employee of the Company. Craig Riley has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity 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'. Craig Riley consents to the inclusion of the matters based on the information in the form and context in which it appears.

#### Forward looking statements Disclaimer:

This document contains "forward looking statements" as defined or implied in common law and within the meaning of the Corporations Law. Such forward looking statements may include, without limitation, (1) estimates of future capital expenditure; (2) estimates of future cash costs; (3) statements regarding future exploration results and goals. Where the Company or any of its officers or Directors or representatives expresses an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and the Company or its officers or Directors or representatives as the case may be, believe to have a reasonable basis for implying such an expectation or belief. However, forward looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward looking statements. Such risks include, but are not limited to, commodity price fluctuation, currency fluctuation, political and operational risks, governmental regulations and judicial outcomes, financial markets and availability of key personnel. The Company does not undertake any obligation to publicly release revisions to any "forward looking statement", or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.



# Table 4: JORC Code Reporting Criteria Section 1 Sampling Techniques and Data – Surface Rock Samples, Auger and Aircore Drilling

Criteria	JORC Code explanation	Commentary
Sampling techniques	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 broad meaning of sampling.	Aircore sampling Each sample represents a scooped composite sample of cuttings generated via aircore drilling. Cuttings are collected in buckets from the cyclone for each metre drilled then tipped on a plastic sheet. A PVC spear is used to collect a sample from each pile of cuttings with three consecutive metres combined in a single calico sample bag. The nature of the sample generation and collection process means the samples should be considered as indicative of grade rather than representative of a precise grade.
	Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.	Blank sample and reference standards were inserted into the sample sequence.
	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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.	Industry standard preparation, including full sample pulverising prior to subsampling for assay, was undertaken for samples up to 3.6kg. For samples over 3.6kg the sample was split in the laboratory to generate as sample prior to pulverising. The field collected samples were typically in the order of 2 to 4kg, average 2.8kg.  50 g of pulverized sample was utilized for gold determination via Fire assay, and a smaller sub-sample utilised for multi-element assay via Four Acid Digestion with ICP-MS Finish.
Drilling techniques	Drill type (e.g. core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).	Aircore drilling was completed utilising a small 4WD mounted aircore drill rig utilising an aircore drill bit with an auxiliary trailer mounted air compressor.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	A visual comparison of sample size was made as drilling progressed. Observations were recorded by the sampler.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Any noted variability was discussed with the driller with an aim to ensure consistency.
	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.	No relationship evident in current data.



Criteria	JORC Code explanation	Commentary
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.	Geological logging was completed on all holes drilled and is considered of appropriate detail to be utilised in future studies.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Geological logging of chips/rock samples is qualitative by nature.
	The total length and percentage of the relevant intersections logged.	Not applicable
	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable
Sub-sampling techniques	If non-core, whether riffled, tube sampled, rotary split, etc. and if sampled wet or dry.	Sample was scooped from cuttings piles and there were no wet samples.
and sample preparation	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation followed industry standard practice and is considered appropriate (refer to sampling techniques section above).
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	All sampling equipment was cleaned between 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.	Field duplicates, blanks and standards were inserted in the sample stream submitted to the commercial laboratory. No issues have been identified.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered suitable for a qualitative assessment for indications of mineralisation.
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.	Reported Gold was assayed via Fire Assay, which is considered a complete method.  Reported multi-elements were assayed Four Acid Digestion with ICP-MS Finish, which is considered a complete method.
	For geophysical tools, spectrometers, handheld XRF instruments (fpXRF), etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable
	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.	Field duplicates, blanks and standards were inserted in the sample stream submitted to the commercial laboratory. No issues have been identified.



Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	All reported mineralised results have been reviewed by 2 company personnel.
	The use of twinned holes.	Not applicable
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data was recorded on field sheets at the sample site. Field data was digitized and loaded via Datashed into the site database.  Assay results were reported in a digital format suitable for direct loading into the database via Datashed.
	Discuss any adjustment to assay data.	No adjustments have been made.
	Specification of the grid system used.	GDA94 zone55.
	Quality and adequacy of topographic control.	Handheld GPS, which is suitable for the early stage and broad spacing of this exploration.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Data spacing is controlled by the interpretation of the prospect and potential orientation of mineralisation. For data discussed in this report spacing varies from 50 to 500+ metres.
	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.	Sampling is considered appropriate to identify 'broad' anomalous areas of potential mineralisation.
	Whether sample compositing has been applied.	Aircore holes samples were composited from one metre to three metre intervals for assay.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Given the early stage of exploration it is not yet known if sample spacing and orientation achieves unbiased results.
	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.	Not known at this early stage.
Sample security	The measures taken to ensure sample security.	Samples double bagged and delivered directly to the laboratory by company personnel.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews completed.



# Section 2 Reporting of Exploration Results

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.	Reported results all from 100% Rimfire Pacific Mining NL Exploration Licences (EL's) at Fifield NSW, which include EL8935, EL8565, EL8401 and EL8542.  All samples were taken on Private Freehold and / or Common Land (prescribed for mining).  No native title exists. The land is used primarily for grazing and cropping.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	The EL's are in good standing, and all work is conducted under specific approvals from NSW Department of Planning Environment and Infrastructure - Regions, Industry, Agriculture and Resources.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No results are relied on from other parties in this report.
Geology	Deposit type, geological setting and style of mineralisation.	The prospect areas lack geological exposure, available information indicates the bedrock geology across the project is a package of interbedded volcaniclastic and sedimentary rocks, with local intrusives. Remnant surface rock in the sample areas is often resistive, highly silicified and variably gossanous and brecciated.  The deposit type/style of mineralisation is not known at this early stage.
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:	The data for the drilling discussed is included in figures and tables within the report.
	easting and northing of the drill hole collar	
	elevation or RL (Reduced Level – elevation above sea level in metres) of drill hole collar	
	dip and azimuth of the hole	This data is included within the tables in the report.
	down hole length and interception depth	
	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.	Not applicable



Criteria	JORC Code explanation	Commentary
Data aggregation methods	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.	No data aggregation
	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.	Not applicable
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Metal equivalents are not reported
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	Not applicable
mineralisation widths and intercept lengths	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 (e.g. 'down hole length, true width not known').	Not applicable
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.	Included within the ASX Announcement
Balanced reporting	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 are included on the plans and cross-section.  Were results are not specifically documented they are insignificant in terms of being below grades considered of value.
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.	There is currently no other substantive exploration data that is meaningful and material to report.



Criteria	JORC Code explanation	Commentary
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further work is discussed in the document in relation to the exploration results.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Not applicable at this stage