



**ASX ANNOUNCEMENT**  
Wednesday 20<sup>th</sup> November 2019

## **SIGNIFICANT IRON EXPLORATION TARGET DEFINED AT MT RICHARDSON**

- Significant Exploration Target has been defined within the Mt Richardson tenement E29/571-I.
- The Exploration Target forms the basis for a planned resource definition drilling program with the aim of defining a Maiden JORC Resource estimate. Timing around the commencement of the planned drill program is subject to the completion of current Environmental and Heritage studies.

**Mineral Resources Limited (ASX: MIN) (“MINRES” or “The Company”)** is pleased to announce the definition of an iron mineralisation Exploration Target<sup>1</sup> defined over the Mt Richardson tenement including the following tonnage and grade range:

Commodity: Iron (Fe)						
Deposit	Method	Tenement	Type	Cut-off (Fe%)	Tonnage Range (Mt)	Grade Range (Fe%)
Mt Richardson	Drill tested	E 29/571-I	BID	50	30 - 83	55 - 60

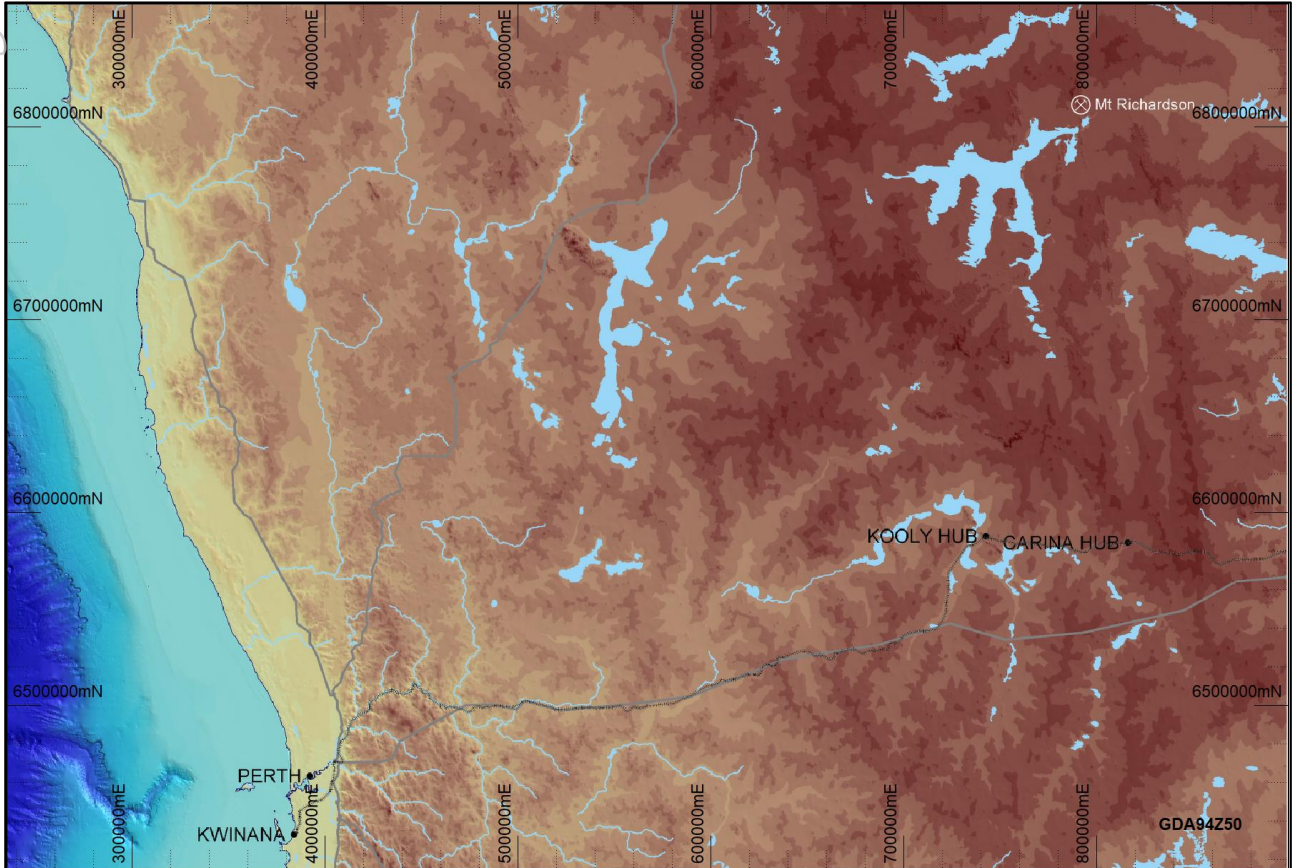
**Table 1** Mt Richardson Iron Mineralisation Exploration Target

<sup>1</sup>The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code.

The Exploration Target is based on the current geological understanding of the geometry of the mineralised Banded Iron Formation (BIF) zones. This understanding has been developed through exploration drilling completed to date and regional geological mapping.

This Exploration Target has utilised data from historic drilling completed by Cliffs APIO between years 2011 and 2017. Cliffs completed a total of 434 holes for 31,936m of combined reverse circulation, RAB and diamond drilling across the prospect.

The Exploration Target being conceptual in nature, takes no account of geological complexity, possible mining methods, or metallurgical characteristics. The Exploration Target has been estimated in order to provide an assessment of the possible scale of additional exploration required across the prospect area.



**Figure 1** Regional Location of Mt Richardson

### ***Geology and Geological Interpretation***

Mt Richardson is located approximately 120km NW of Menzies and 230km north of the Koolyanobbing processing hub in Western Australia. The area is located in the Illaara belt that lies within the Southern Cross Domain of the Youanmi Terrane as defined by the GSWA. Regionally, the area consists of narrow infolded synclinorium of intensely folded and thrust Archaean greenstone volcano-sedimentary successions and smaller intrusions separated by moderate to large sized granitic to granodioritic batholiths or domes.

The Fe mineralisation at Mt Richardson is hosted by numerous sub-parallel BIF units that strike over a distance of 3km, generally dip steeply to the west, and range from 5m to 50m in thickness.

Current drilling data suggests that the mineralised portion of the BIF represents approximately 30% of the entire BIF volume, and generally extends to about 100m below topographic surface (rarely below 150m).

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### ***Sampling and Sub-sampling***

The vast majority of samples were collected via reverse circulation drilling. Drill holes were down-hole sampled at 1m intervals. The RC sub-samples were generated using a cone-splitter.

RAB drilling was used for waste rock landform sterilisation. Sub-samples were collected using a spear for 1m composite lengths.

Diamond drilling was run in the form of NQ3, HQ3 & PQ3 diamond core from surface and as tails on the end of RC drill holes to reach the deeper parts of the orebody beyond RC drill rig capabilities. Core was half sampled at 1m downhole intervals for analytical test work.

### ***Sample Analysis Method***

Analytical test work was completed by SGS and Ultratrace commercial laboratories in Perth. Analysis was via XRF for the standard Fe suite of analytes and TGA for LOI measurements.

### ***Drilling Techniques***

RC drilling was completed using face sampling hammers with bit sizes ranging in diameter from 4.25 to 6 inches. Diamond drilling was completed using PQ3, HQ3 and NQ3 sized core. Half core was sent for analytical test work.

### ***Significant Intercepts***

A table of significant Fe intercepts has been compiled from the Cliffs drilling data which was assayed at 1m intervals. See Table 2 for results and Figures 2 to 4 for location of Intercepts relative to the BIF. Controls on generating the table of significant intercepts included drilling data exceeding an Fe threshold value of 50%, a minimum down hole intercept length of 10m, a maximum inclusion of 2m below the Fe threshold, and a final requirement that the drilling be sub-perpendicular to the BIF units.

### ***Estimation Methodology***

The Exploration Target range attempts to be balanced by predicting a tonnage range based on a lower and upper proportion of the BIF units that may be potentially mineralised.

The minimum tonnage value was calculated by multiplying the drill tested outcropping BIF volumes with a bulk density value of 3.0t/m<sup>3</sup> and applying a recovery factor of 30%.

The maximum tonnage value was calculated by starting with the minimum tonnage value and allowing for additional mineralisation within the geophysics BIF targets as well as down dip extensions of the drill tested outcropping BIF volumes.

The grade range was guided by the table of significant intercept values in Table 2.



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***Proposed Exploration Activities***

An infill drill program is planned to close the drill hole spacing from 80m by 40m to 40m by 20m. Drilling will test grade continuity of individual mineralised BIF units both along strike and down dip, essentially improving the confidence in the grade and spatial interpretation of the mineralisation. The drill program will also test lateral extensions and previously untested BIF units for additional mineralisation.

The drill program design is currently awaiting input from ongoing Environmental and Heritage studies.

MRL is aiming to commence drilling in Q4 2020, however, timing around the commencement of the planned drill program is subject to the completion of current Environmental and Heritage studies, which will inform the application for a Programme of Work.

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Hole ID	Easting MGA94Z50	Northing MGA94Z50	RL AHD	Azi	Dip	From m	To m	Interval m	Fe %
MR12RC001	791686.3	6811999.3	528.4	81	-60	26	39	13	53.6
MR12RC003	791885.3	6812721.1	527.9	91	-60	6	19	13	57.3
MR12RC005	791907.5	6812581.1	517.2	90	-61	16	33	17	58.1
MR12RC006	791855.5	6812572.2	503.8	92	-61	51	76	25	65.8
MR12RC007	791822.8	6812573.4	497.2	89	-61	63 100	78 124	15 24	65.6 67.8
MR12RC011	791922.9	6811770.3	518.1	91	-60	24	48	24	60.5
MR12RC012	791867.6	6811770.1	521.7	91	-60	24 57	42 93	18 36	64.6 66.5
MR12RC013	791825.2	6811767.8	518.7	84	-60	123	137	14	66.8
MR12RC015	791773.1	6811775.5	512.9	85	-59	0	28	28	61.3
MR12RC016	791828.7	6812003.7	550.6	93	-61	37	51	14	56.4
MR12RC018	791881.3	6812004.5	540.8	91	-61	23	42	19	64.4
MR12RC020	791867.3	6810805.7	495.9	82	-61	15	64	49	60.6
MR12RC021	791777.1	6812003.8	545.9	92	-61	0 28 59	23 39 69	23 11 10	63.3 57.7 56.7
MR12RC022	791808.4	6810825.6	479.6	84	-62	19 79	33 98	14 19	56.1 61.0
MR12RC023	791729.8	6812006.0	536.9	90	-60	68	112	44	61.1
MR12RC025	791818.6	6811496.6	534.3	83	-60	47	70	23	64.9
MR12RC026	791831.9	6810996.3	476.3	91	-61	41	58	17	59.4
MR12RC027	791776.3	6811512.8	524.2	84	-60	38	71	33	61.4
MR12RC029	791735.3	6811519.4	519.6	87	-60	101	116	15	56.4
MR12RC030	791902.3	6811282.3	535.2	91	-61	24	35	11	62.4
MR12RC033	791812.4	6811279.2	517.6	80	-59	29 43	39 68	10 25	57.0 59.1
MR12RC036	791950.9	6811525.3	518.8	80	-61	4	17	13	62.4
MR12RC040	791955.3	6811276.5	520.9	84	-60	26	51	25	64.8
MR12RC042	791975.6	6810909.7	510.4	82	-60	6 52	30 66	24 14	60.3 61.9
MR12RC043	791954.7	6811215.5	512.0	84	-61	27	42	15	55.1
MR12RC047	791921.4	6811044.8	486.6	83	-60	108	121	13	53.8
PI11DD001	791725.8	6812073.5	536.1	85	-60	65 27	84 76	19 49	62.0 61.7
PI11RC004	791794.2	6812081.2	548.6	81	-60	32 187	50 197	18 10	57.8 50.8

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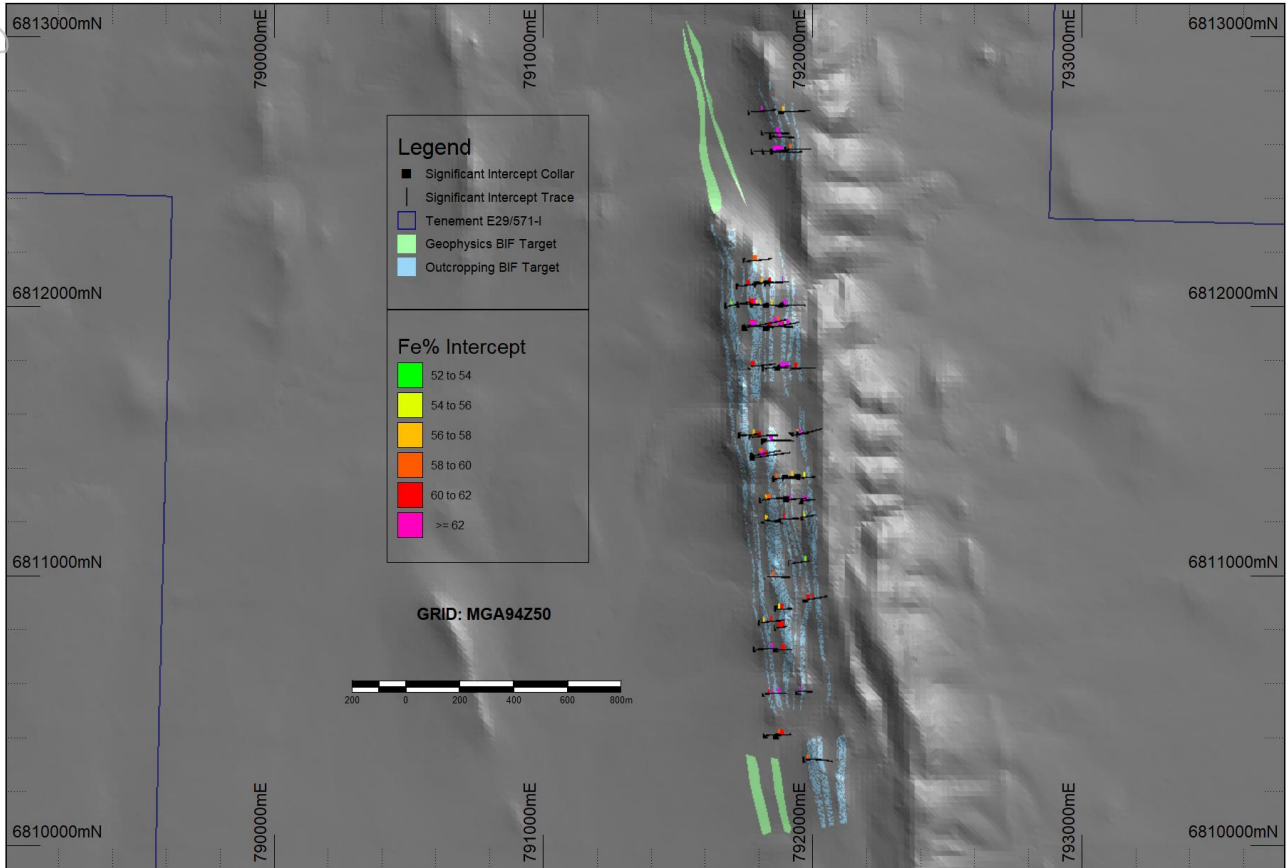
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Hole ID	Easting MGA94Z50	Northing MGA94Z50	RL AHD	Azi	Dip	From m	To m	Interval m	Fe %
PI11RC005	791830.9	6812083.4	550.2	83	-60	13 115	35 126	22 11	61.7 65.3
PI11RC008	791832.1	6811923.6	538.2	91	-60	11 80 112 133	38 96 132 143	27 16 20 10	62.2 62.4 61.4 53.5
PI12DD001	791828.7	6811917.4	538.5	80	-34	9.3 54.7 92.5	26 76.5 107	16.7 21.8 14.5	61.0 66.0 64.6
PI12DD002	791749.3	6811919.7	533.9	81	-45	32.3 158.9 178.7	61.8 172.3 189	29.5 13.4 10.3	65.5 65.0 58.1
PI12DD003	791751.7	6812165.2	533.6	85	-35	35	54	19	58.1
PK11RC001	791861.6	6811357.4	527.0	80	-60	8 121	25 138	17 17	59.3 57.5
PK11RC002	791922.5	6811519.2	517.3	83	-60	44	55	11	57.8
PK11RC004	791779.3	6811443.7	527.0	77	-60	54	85	31	59.7
PK11RC006	791897.8	6811360.8	530.8	88	-60	81	91	10	53.7
PK11RC009	791872.0	6811207.3	519.1	84	-60	40	55	15	60.9
PK11RC010	791821.1	6811205.3	503.7	96	-60	5	23	18	56.2
PK11RC019	791943.6	6811364.9	529.7	92	-59	45	57	12	56.0
PK12DD001	791779.2	6811436.9	527.0	82	-36	36.8 61	56.4 71.9	19.6 10.9	62.9 60.2
PN11RC006	791851.1	6812628.5	507.3	90	-60	43	70	27	67.1
PN11RC007	791819.3	6812642.2	500.9	91	-61	93	113	20	66.2
PN12RC001	791781.8	6812573.6	490.7	91	-60	142	160	18	68.1
PN12RC002	791769.6	6812719.6	498.9	85	-60	82	94	12	66.7
PT11RC006	791828.9	6810406.5	454.2	81	-60	94	118	24	59.0
PT11RC008	791866.5	6810404.4	456.0	80	-60	34	58	24	61.9
PT11RC011	791825.2	6810561.2	461.5	87	-60	21 51 102	33 62 115	12 11 13	60.3 62.2 63.2
PT11RC015	791870.5	6810875.4	494.3	89	-59	5 21	19 46	14 25	56.0 61.8
PT11RC017	791865.1	6810725.0	484.9	90	-60	33	64	31	61.6
PT11RC021	791946.1	6810570.2	478.2	88	-60	9	21	12	64.0
PT11RC022	791973.2	6810317.6	464.4	91	-60	11	23	12	58.6
PT12RD003	791791.3	6810725.9	468.5	88	-60	110.9	125	14.1	66.2

**Table 2** Significant Intercepts

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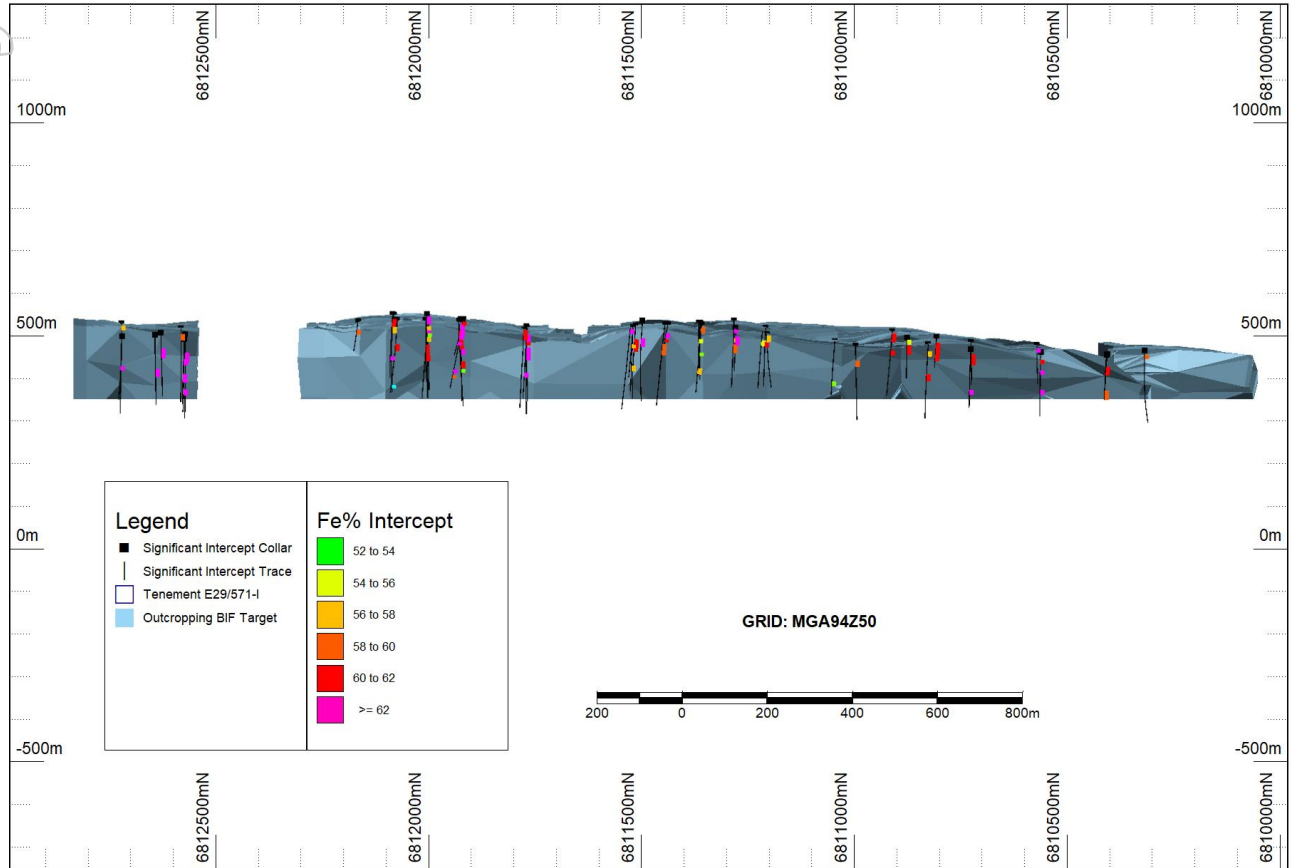
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**Figure 2** Plan view of significant intercepts and BIF targets

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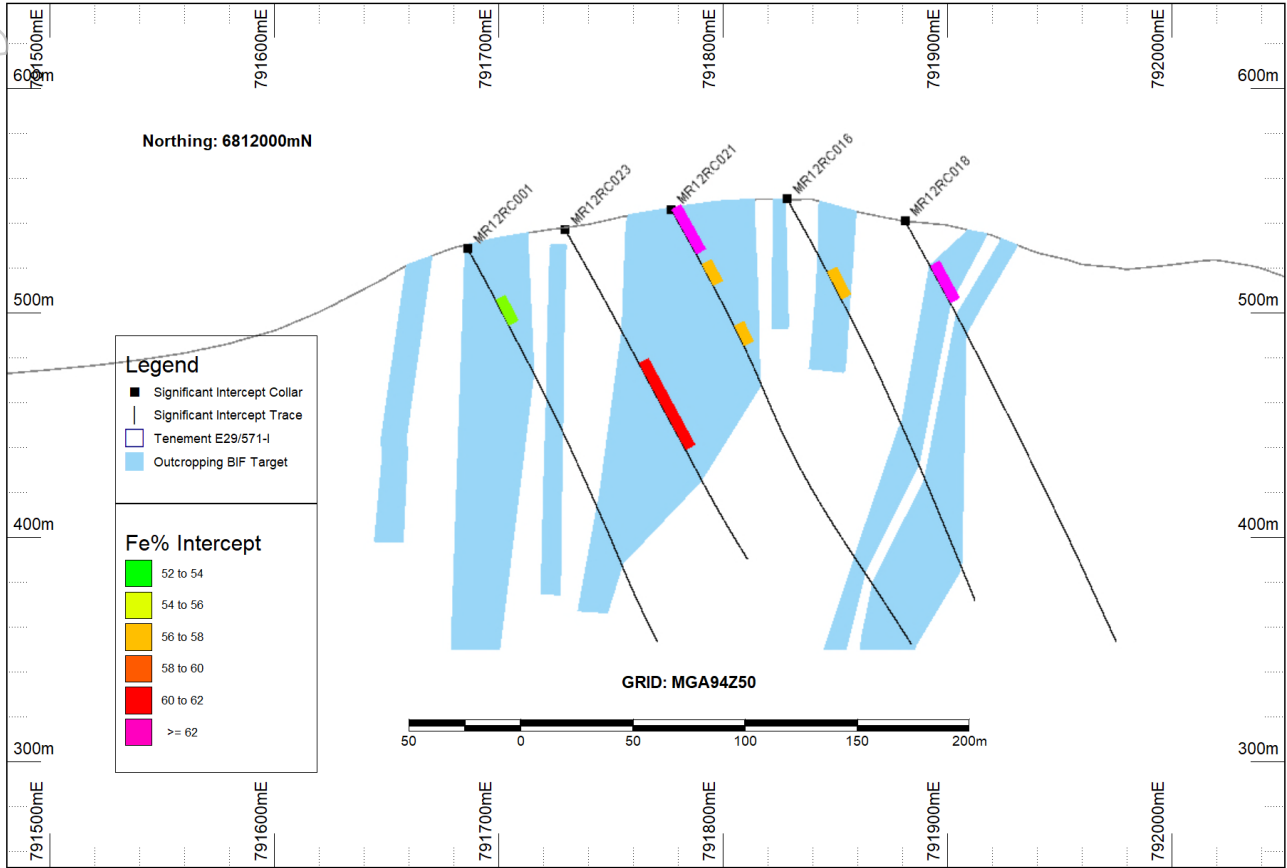


**Figure 3** Long section of significant intercepts and BIF targets

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**Figure 4** Cross section of significant intercepts and BIF targets

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### **Competent Person's Statement**

The information in this report that relates to the Exploration Target listed in Table 1 is based on work compiled by Mr Matthew Watson is a full-time employee of Mineral Resources Limited. Mr Watson is a Member of The Australian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012. Mr Watson consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

### **Forward Looking Statement**

This ASX announcement may contain forward looking statements that are subject to risk factors associated with iron ore exploration, mining and production businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and production results, Reserve estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

Forward-looking statements, including projections, forecasts and estimates, are provided as a general guide only and should not be relied on as an indication or guarantee of future performance and involve known and unknown risks, uncertainties and other factors, many of which are outside the control of Mineral Resource Ltd. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward looking statements or other forecast.

**ASX ANNOUNCEMENT**Wednesday 20<sup>th</sup> November 2019**APPENDIX 1: JORC COMPLIANT IRON MINERALISATION EXPLORATION TARGET**

The following information is provided in accordance with Table 1 of Appendix 5A of the JORC Code 2012 – Section 1 (Sampling Techniques and Data) and Section 2 (Reporting of Exploration Results).

Section 3 (Estimation and Reporting) and Section 4 (Estimation and Reporting of Ore Reserves) are not being reported in this document.

**MT RICHARDSON PROSPECT****JORC Code 2012 Edition – Table 1**

## Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	176 reverse circulation (RC), 15 diamond drill holes (DD), 6 diamond tails (RCD) and 243 RAB holes were drilled by Cliffs Asia Pacific Iron Ore (CLF) between 2011 and 2017 for a total of 31,936m
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	All sampling was conducted using CLF protocols including industry best practice and QAQC procedures including duplicates and standards. No measurement tools were used by the geology team at the drill rig.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>  <i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m</i>	DD and RCD core was split and 1m half core mineralised intervals were submitted for analysis.

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Criteria	JORC Code explanation	Commentary
	<i>samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i>	RC samples were collected in 1 metre intervals from a rig mounted cyclone with attached cone splitter. Split samples were collected into numbered calico bags.  RAB samples were collected in 1 metre intervals using a sample spear.
<i>Drilling techniques</i>	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	RC drilling used face sampling hammers and drill bit sizes of 4.25 – 6 inch diameters.  DD and RCD core was collected via PQ3, HQ3 and NQ3 drilling methods. Core was orientated, the orientation tool type was not recorded. Measurements are mainly alpha with some beta measurements.  RAB drilling bit diameter was not recorded.
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	DD, RCD and RC drill recoveries are recorded/logged in the data sets. RC and DD drilling had good recovery with minimal sample loss.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Triple tube diamond drilling was used to maximise core recovery, A face sampling hammer was used to ensure representative RC samples.
	<i>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.</i>	No relationship was found between sample recovery and grade. No sample bias is seen in relation to core/sample loss and grade.
<i>Logging</i>	<i>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.</i>	All core and chip samples have been geologically logged to a level of detail to support the current Exploration Target statement.  Cliffs logging codes were used to record lithology, colour, regolith, weathering, texture, structure, magnetic susceptibility and mineralisation type.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	All logging is qualitative and some observations are quantitative such as core loss and magnetic susceptibility measurements.

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Criteria	JORC Code explanation	Commentary
		Core photography was carried out as part of the logging procedure.
	<i>The total length and percentage of the relevant intersections logged.</i>	All drill holes are logged in full.
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Half core was sent for metallurgical evaluation.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Both dry and wet RC samples were cone split. A proportion of the drilling intercepts are below the standing water table (420mRL).
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Appropriate sampling protocols were used during DD, RCD and RC sampling to maximize representivity.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Appropriate QAQC measures were used and documented during sampling as per industry standards.
	<i>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.</i>	Duplicate field samples were collected from RC, RAB and from a single DD hole. Duplicates were collected at regular intervals as appropriate.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample collection, intervals and size are appropriate for the material being sampled.
	<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>
<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument</i>		Samples were analyzed using X-Ray (XRF) Spectrometers and thermogravimetric analysis (TGA).

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Criteria	JORC Code explanation	Commentary
	<i>make and model, reading times, calibrations factors applied and their derivation, etc.</i>	LOI was determined Gravimetrically at 950°C via thermos-gravimetric analysis (TGA).  XRF analysis is industry standard for iron mineralization and considered appropriate. As such, the competent person considers XRF and TGA analysis suitable for Resource estimation studies.
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	An appropriate level of field duplicate samples, laboratory inserted standards, blanks, repeats, checks and laboratory duplicate samples were included in batch reports. Results were within tolerable limits.  QAQC sampling results are considered to be within acceptable limits for both accuracy and precision.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	No independent personnel have visually inspected the significant intersections in RC chips.
	<i>The use of twinned holes.</i>	There are no twin holes.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Logging was completed electronically using Tough Books directly at the drill rig. Code validation was set-up to ensure that only valid codes could be entered. Drill hole detail along with sampling information was entered and validated into Micromine software on a weekly basis and then sent to Cliffs database.
	<i>Discuss any adjustment to assay data.</i>	Any samples not assayed (i.e. destroyed in processing, listed not received) have had the assay value converted to a -996.99 in the database. Any samples assayed below detection limit i.e. 0.01% SiO <sub>2</sub> have been converted to 0.005% (half detection limit) in the database.



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Criteria	JORC Code explanation	Commentary
<i>Location of data points</i>	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	413 drill hole collars were picked up by the mine site surveyors using a Leica System Real Time Kinematics system. 21 drill holes were picked up using a handheld GPS system.  164 drill holes were gyro surveyed at 10m intervals. Gyro surveys were carried out by either ABIM or Surtron surveyors. Residual drill holes were orientated using a handheld compass, with the majority of these holes being vertical (99%) and the remainder inclined at -60 degrees (1%). Removal of the RAB drilling reduces the number of un-surveyed holes to four.
	<i>Specification of the grid system used.</i>	The grid system used is MGA Zone 50 (GDA 94) for surveying pickups.
	<i>Quality and adequacy of topographic control.</i>	The topographic surface was supplied as a detailed and accurate (+/-8cm) surface wireframe from an aerial survey flown in 2010.
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	Drill hole spacing over the deposit is nominally 80m along strike by 80m to 40m across strike.
	<i>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.</i>	The data spacing and distribution is considered insufficient to demonstrate the required spatial and grade continuity of the mineralised portions of the BIF required to support the definition of a Mineral Resource under the 2012 JORC code once all other modifying factors have been addressed.
	<i>Whether sample compositing has been applied.</i>	No sample compositing has been applied at the raw data stage.
<i>Orientation of data in relation to geological structure</i>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	DD, RCD and RC drilling is generally at -60 degrees to grid east. There are a few vertical and high angle dipping holes as well as some scissor holes which have been drilled to grid west. Overall the drilling is roughly perpendicular to the strike and dip of the mineralisation, ensuring intercepts are close to true-width.

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	<i>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.</i>	No sampling bias is identified in the DD, RCD or RC drill data.
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	Samples were securely sealed in string drawn calico bags and stored on site until delivery to a Perth based laboratory via contract freight transport. Sample submission forms were sent with the samples as well as emailed to the laboratory, and were used to keep track of the sample batches.
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits on sampling techniques and data have been completed.

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>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.</i>	<p>The Mt Richardson prospect is located on tenement E29/571-I, located approximately 230km north of Koolyanobbing.</p> <p>The current registered holder of the tenement is Cliffs Asia Pacific Iron Ore Pty Ltd, however the tenement is beneficially held by Yilgarn Iron Pty Ltd, a wholly owned subsidiary of MRL. The tenement will be registered in the name of Yilgarn Iron Pty Ltd following assessment and payment of transfer duty.</p> <p>Normal Western Australian State royalties apply. A royalty of 2% on average/tonne FOB sales value of iron ore product that departs the tenement as well as a one off payment of AUD 0.50 per dry metric tonne on tonnages in excess of independently evaluated Indicated or Measured resources of 10,00,000 tonnes exists to a separate third party.</p>

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		The tenement is located on the Priority 1 Ecological Community of the Mount Forrest – Mt Richardson (Bulga Downs) vegetation complex (banded iron formation).
	<i>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.</i>	The tenement is in good standing with no known impediments.
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>Exploration has previously been carried Cliffs Asia Pacific Iron Ore, and Iron Mountain Limited.</p> <p>Drilling information collected by Iron Mountain Limited has not been used or cited for the Exploration Target. Issues with the spatial location of the data were identified by CLF personnel. The competent person Mr Matthew Watson has independently analysed the Iron Mountain Limited data and come to a similar conclusion.</p>
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>Mt Richardson is located approximately 120km NW of Menzies and 230km north of the Koolyanobbing processing hub in Western Australia. The area is located in the Illaara belt that lies within the Southern Cross Domain of the Youanmi Terrane as defined by the GSWA. Regionally, the area consists of narrow infolded synclinorium of intensely folded and thrustured Archaean greenstone volcano-sedimentary successions and smaller intrusions separated by moderate to large sized granitic to granodioritic batholiths or domes.</p> <p>The Fe mineralisation at Mt Richardson is hosted by numerous sub-parallel BIF units that strike over a distance of 3km, generally dip steeply to the west, and range from 5m to 50m in thickness.</p> <p>Current drilling data suggests that the mineralised portion of the BIF represents approximately 30% of the entire BIF volume, and generally extends to about 100m below topographic surface (rarely below 150m).</p>

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Criteria	JORC Code explanation	Commentary
Drill hole Information	<p>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:</p> <ul style="list-style-type: none"> <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> </ul>	All DD, RCD and RC results reported as significant Fe intercepts are listed in Table 2.
	<p>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.</p>	All meaningful and material information is reported in the body of this statement.
Data aggregation methods	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p>	<p>The following technique was used to generate the table of significant intercepts:</p> <p>Grades were truncated into significant or insignificant values relative to a Fe grade cut-off of 50%. Grades above 50% Fe were considered significant if the intersection length was equal to or exceeded a total length of ten metres and overall grade above 50% Fe with an internal allowance of up to two metres of values below 50% Fe.</p> <p>A final requirement on the reported significant intercepts required that the drilling orientation be sub-perpendicular to the bedding plane of the BIF units. This was carried out by eliminating significant intercepts where the drill hole azimuth was between 180-360 degrees or the dip exceeded -75 degrees in any direction.</p> <p>Values were weighted by interval length.</p>

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	<p><i>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.</i></p>	Aggregate intercepts were calculated based on 1m sample intervals. Sample intervals were length weighted to calculate aggregate average grades, and summed to calculate aggregate lengths.
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	No metal equivalent values are reported.
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></p>	<p>The dominant drilling direction dips 60° to the east (approximately UTM grid 090°, although there are a few vertical and high angle dipping holes. Overall the drilling is roughly perpendicular to the strike and dip of the mineralisation, ensuring intercepts are close to true-width.</p> <p>Reported aggregate intercepts and grades are reported as down hole length weighted average grades and intercept lengths. The drilling data has been filtered to only include significant intercepts from drilling that is approximately perpendicular to the BIF bedding and therefore a better approximation of the true width intersection.</p>
<p><i>Diagrams</i></p>	<p><i>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.</i></p>	All DD, RCD and RC results reported as significant Fe intercepts are listed in Figures 2, 3 and 4.
<p><i>Balanced reporting</i></p>	<p><i>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.</i></p>	The location of significant intercepts along with the associated drill hole traces are displayed in Figures 2, 3 and 4. These figures show where the significant intercepts occur within the displayed BIF units, and also where the BIF units do not satisfy the requirement of a significant intercept i.e. devoid of significant mineralisation.

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		The Exploration Target range attempts to be balanced by predicting a tonnage range based on a lower and upper proportion of the BIF units that may be potentially mineralised.
<i>Other substantive exploration data</i>	<i>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.</i>	Based on extensive downhole geophysical data, including calibrated density measurements, an average bulk density value of 3.0 t/m <sup>3</sup> has been used for the calculation of mineralisation tonnages.
<i>Further work</i>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	An infill drill program is planned to close the drill hole spacing to 40m by 20m. Drilling will test grade continuity of individual mineralised BIF units both along strike and down dip, essentially improving the confidence in the grade and spatial interpretation of the mineralisation.  The drill program will also test lateral extensions and previously un-tested BIF units for addition mineralisation.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Figure 2 displays the main geological interpretation being infill drilled, as well as BIF targets being tested.