RESOURCE DEVELOP GROUP
SUNDAY HILL MINERAL RESOURCE STATEMENT
AS AT JUNE 1st 2021

MINERAL RESOURCE SUMMARY

The Sunday Hill Mineral Resource, reported in accordance with the JORC Code as of the 1st June 2021, is estimated to be 5.0 million tonnes at 18.0 % Mn, 22.8 % Fe and 19.1 % SiO_2, using a nominal Mn cut-off of 10%.

The Sunday Hill Deposit is located on tenement M46/237, approximately 120 km southeast of Marble Bar and 5 km north of the Ant Hill Deposit (Figure 1). The topology is denoted by a prominent mesa that rises 20 - 30 metres above the surrounding plain.

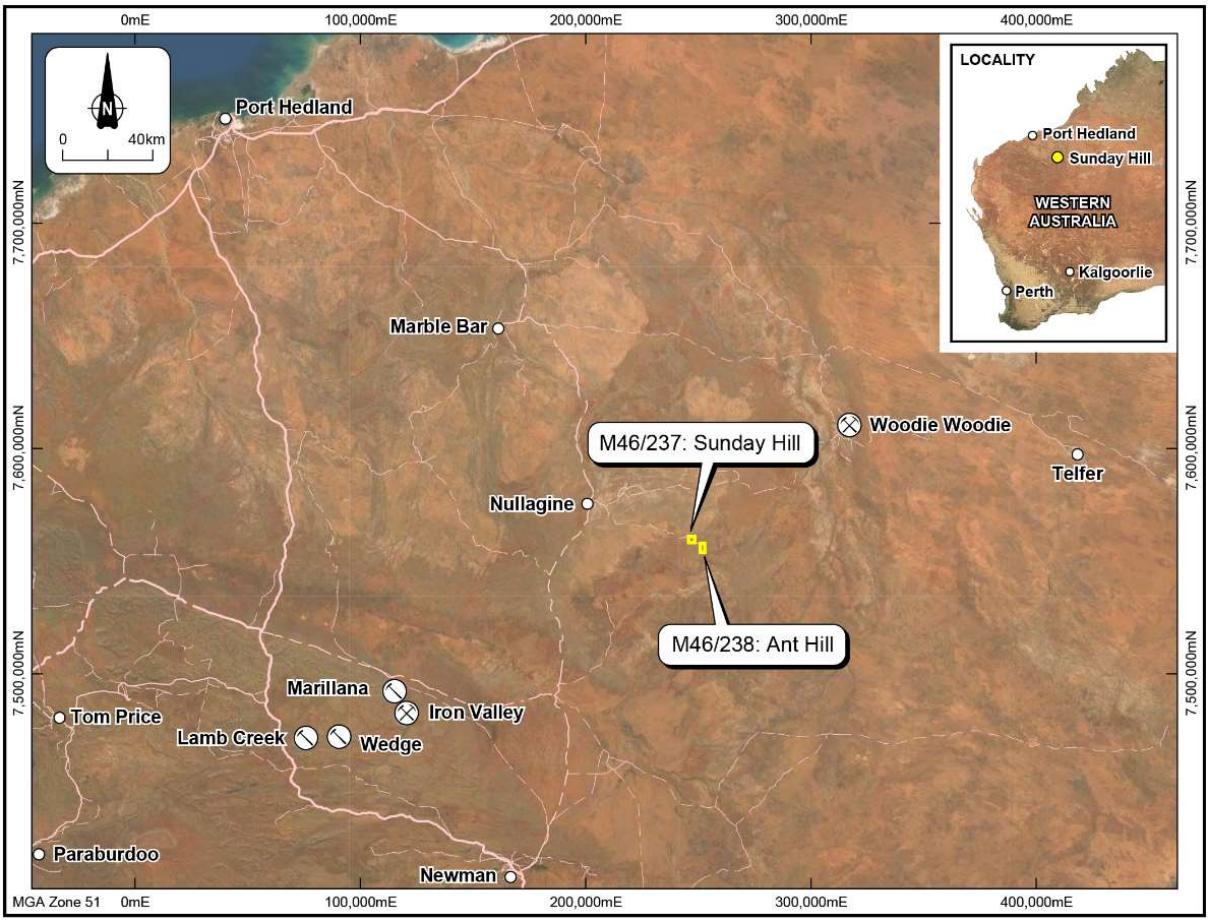


Figure 1 Location of Sunday Hill Manganese Deposit

Mineral Resource Estimate

The following Mineral Resource Estimate was generated by Jason Gotte, who is a full time employee of Mineral Resources Limited. The Resource Estimate was reviewed by Matt Watson who is a full time employee of Mineral Resources Limited. Mr Watson is acting as the competent person as defined by JORC 2012.

Geology and Geological Interpretation

Sunday Hill is a fault-bounded, remnant outlier of mid-Proterozoic sediments forming a broad syncline approximately 3 km wide and 4 km long and dipping shallowly to the West. The area contains rocks from the Coondoon (MnC), Hamersley (Hm) and Fortescue (Fj) Formations.

A prominent scarp occurs along the North Eastern margins of the deposit, where the Manganese and Hamersley Groups are faulted against Fortescue Group sediments.

Several types of manganiferous mineralisation have been observed at Sunday Hill.

Prominent mineralisation is associated with a south-westerly dipping fault zone (Rmn) along the Sunday Hill scarp (Figure 2). Mineralisation outcrops for 1,300 m with surface widths varying between 20 m to 80 m, and depths of +40 m. Massive manganite forms the primary manganese mineral with occurrences of pyrolusite. Mineralisation has developed by ferro-manganiferous alteration of host rocks along a series of cross-cutting sub-vertical faults.

Massive manganite mineralisation is also hosted within the sub-horizontal mudstones of the Marra Mamba Formation (Hamersley Group) and siliceous cherts of the Pinjan Chert Breccia: a karst-replacement of the Carawine Dolomite. Mineralisation trends NW-SE, dipping to the south-west. The mineralisation has a strike extent of 800 m with down dip extensions of 200 m and thicknesses of 40 m.

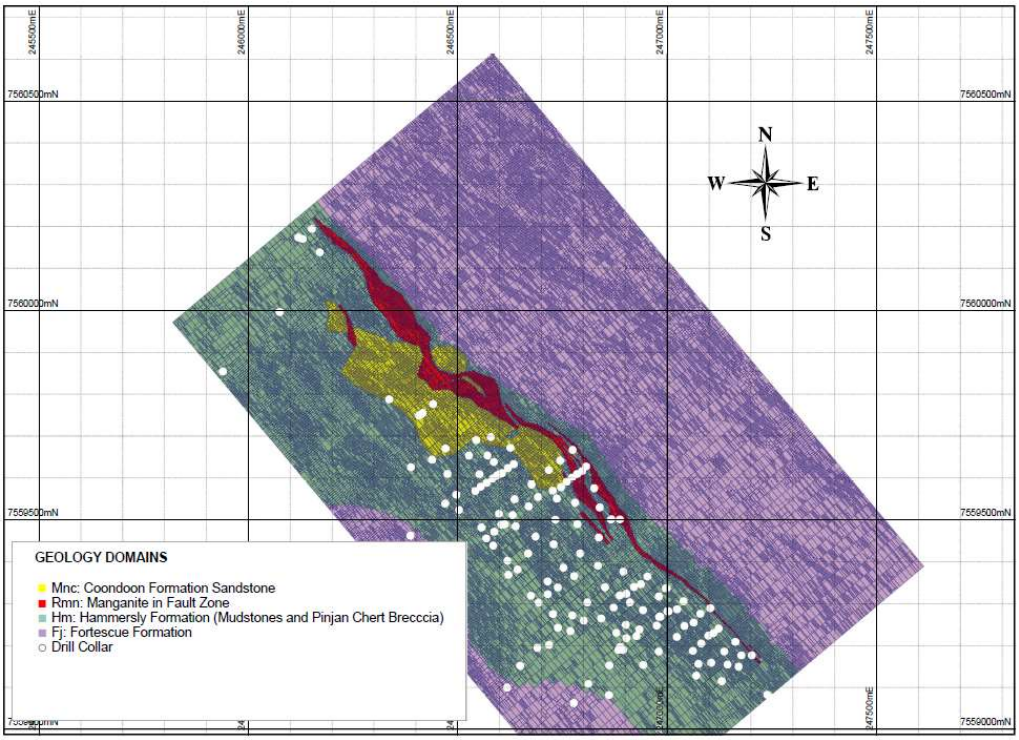


Figure 2 Sunday Hill geology domains

Drilling Techniques

The current Sunday Hill Resource is supported by 4 programs of drilling completed since 1976 as highlighted in Figure 3 below.

In 2020, Resource Development Group completed an additional 71 RC holes (4,239m) and 3 Diamond holes (150.4m) with the aim of generating a maiden Mineral Resource Estimate in compliance with JORC 2012.

A summary of significant intersections from the latest drill program are available in Table 3.

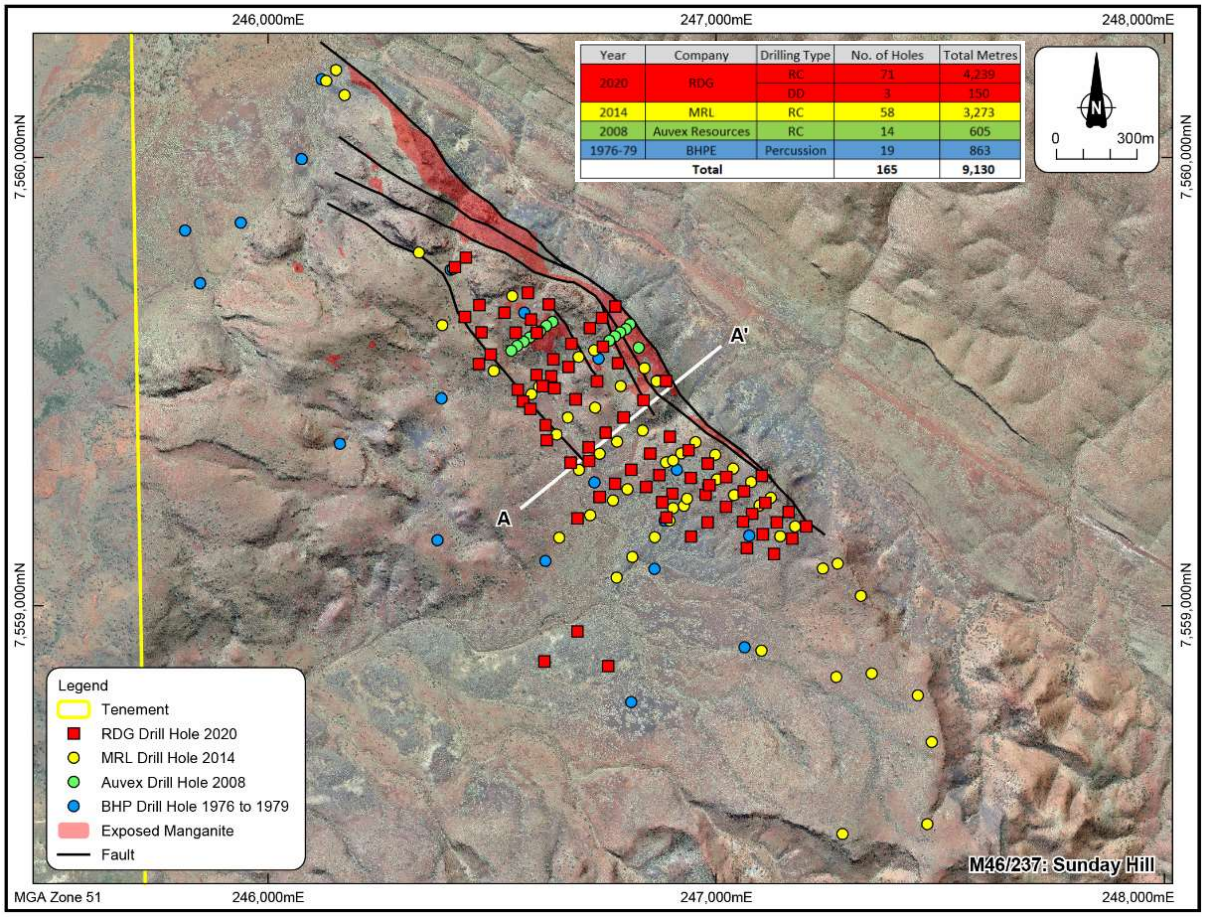


Figure 3 Overview of exploration drilling at Sunday Hill Manganese Deposit

All drilling completed in the 1970s was completed using open hole percussion. All post 1970 drilling was completed using RC face sampling hammers, and PQ3 size core for diamond drilling.

Drill spacing is variable across the deposit. In the southern areas, drill spacing is nominally 25 mE x 50 mN while in the Northern areas drilling spacing is wider where the steep nature of the topography has hindered the accessibility of drill rigs.

The majority of post 1970 drilling has been orientated at -60 degrees towards 055°, designed to intercept the true width of mineralisation. All collars have been snapped to a topographical surface derived from a LIDAR dataset.

A full list of drill collars for Sunday Hill is available in Table 2.

Sampling and Sub-Sampling

The 2020 RC drill holes were sampled at 1 m intervals with samples collected using a cone splitter attached to the rig's cyclone underflow. Samples with a nominal weight of 2.5 kg were collected in pre-numbered calico bags. A field geologist was present to monitor the quality of the sampling.

Diamond core was collected specifically for metallurgical test work using PQ3 triple tube.

Where wet or moist samples were encountered in MRL drill holes, the sample was collected into a numbered calico bag and left to dry in the sun, prior to collection for sending to the lab.

Sample Analysis Method

Analytical test work was completed by Nagrom commercial laboratories in Perth. Sample preparation involved oven drying, coarse crushing, rotary splitting and ring milling to produce an aliquot sample for fused disc x-ray fluorescence (XRF) and thermogravimetric analysis to determine total loss on ignition (LOI) content.

The following analytes were tested:

Al_2O_3, Ba, CaO, Cu, Fe, K_2O, MgO, Mn, P, Pb, SO_3, SiO_2, V_2O_5 and Zn.

Loss on ignition was determined at the following temperature point: 1100° C.

Estimation Methodology

The Estimation methodology used Ordinary Kriging (OK) for all ore domains and Inverse Distance squared (ID2) for all waste domains. The block model is rotated 40 degrees counter-clockwise in the Z-Axis. Block model dimensions used were 12.5 m (east) by 25 m (north) by 3 m (elevation) with sub-blocking down to 2.5 m (east) by 5 m (north) by 1 m (elevation).

All pre-2000 drilling was used as an interpretation guide only, with assays excluded from the estimation.

Estimation was constrained using manually produced mineralisation shells generated using a 10% Mn cut-off. Cut-off assessment was determined from statistical analysis of sample data for geological domains.

No top cuts were applied to the composited sample data.

A typical section through the geological model is shown in Figure 4.

Statistical investigations were completed including Exploratory Data Analysis (EDA), variography, Kriging Neighbourhood Analysis (KNA) as well as industry standard validations including Swath plots to understand local scale smoothing.

The estimation used hard boundaries.

The estimation employed a three-pass search strategy using the composite data. Where blocks were not estimated after the third pass, a 'fourth' pass assigned the domain average composite grade to those blocks.

The following variables were estimated: Mn, Fe, SiO_2, S & LOI.

The model has been validated using visual review on section and in plan, comparison of model vs data mean grades by domain and swathe plot comparisons.

A typical section through the grade model by analyte for Mn, Fe & SiO_2 are shown in Figure 5 – 7.

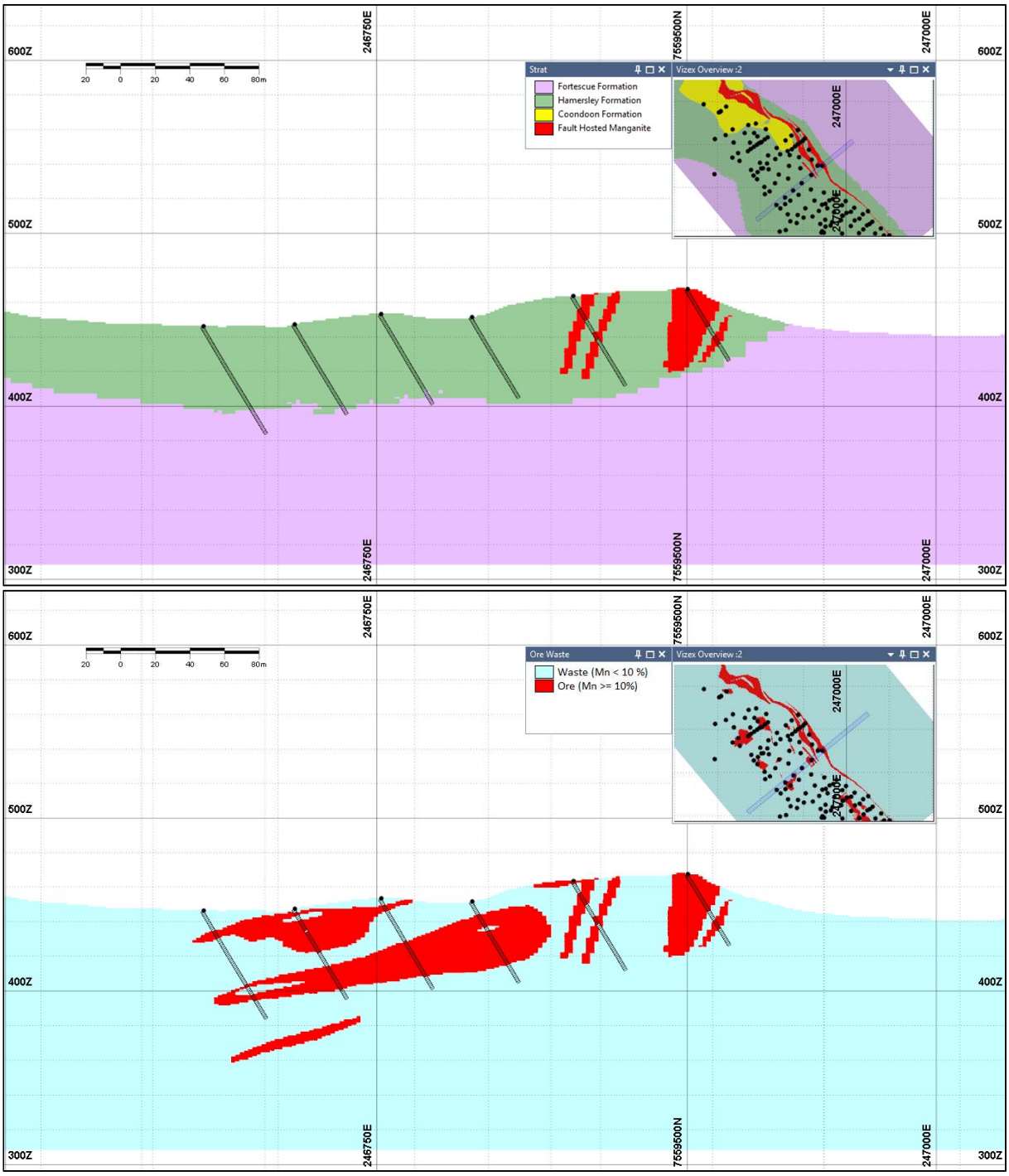


Figure 4 Typical geological model section with composite data showing coded Geology (Top) and Ore / Waste Delineation (Bottom)

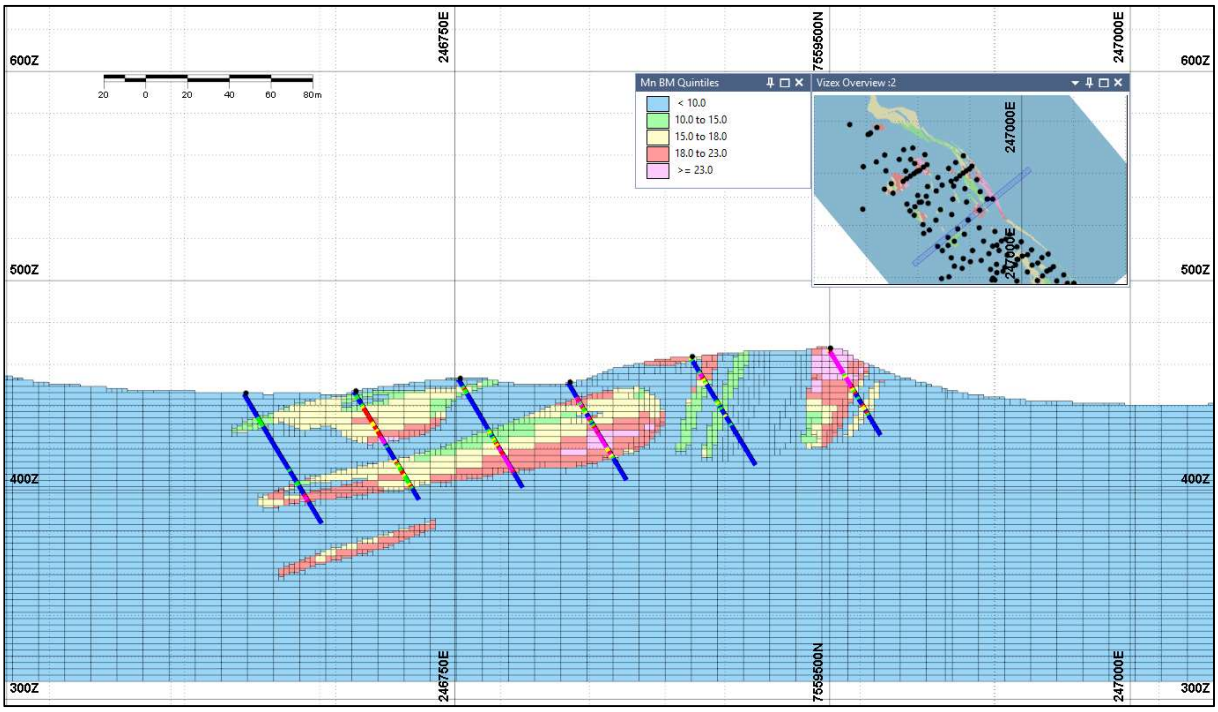


Figure 5 Typical Mn section showing block model and supporting drilling results

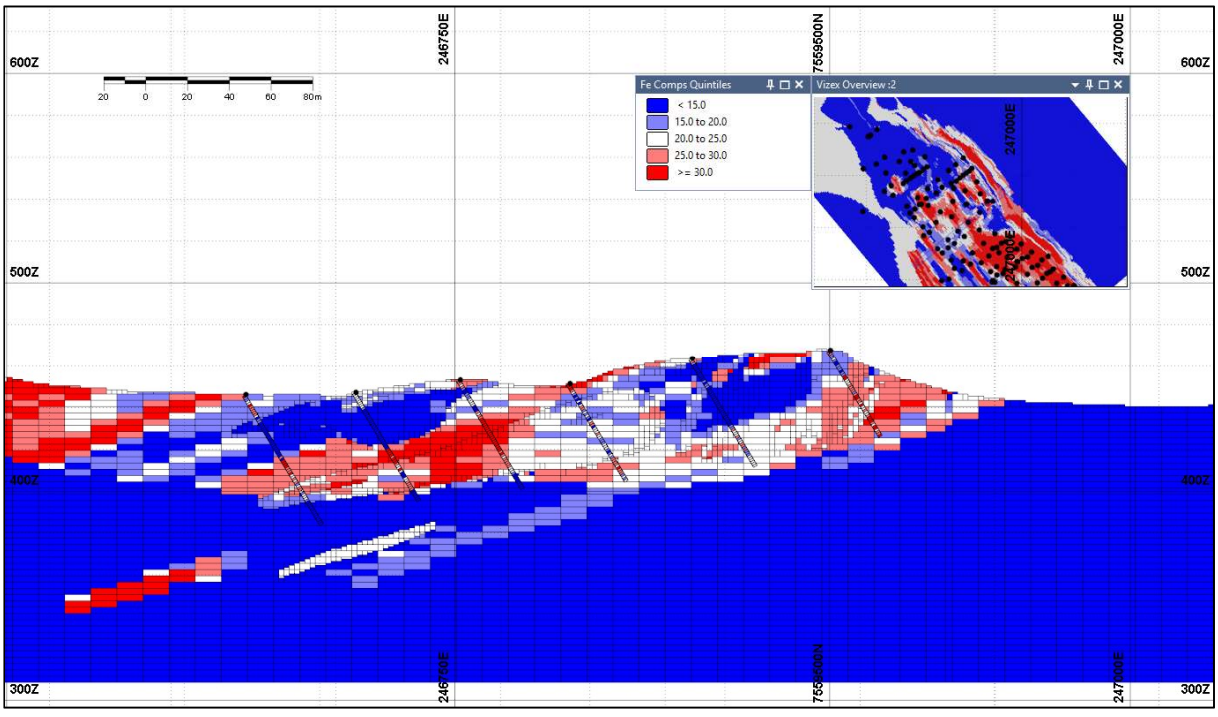


Figure 6 Typical Fe section showing block model and supporting drilling results

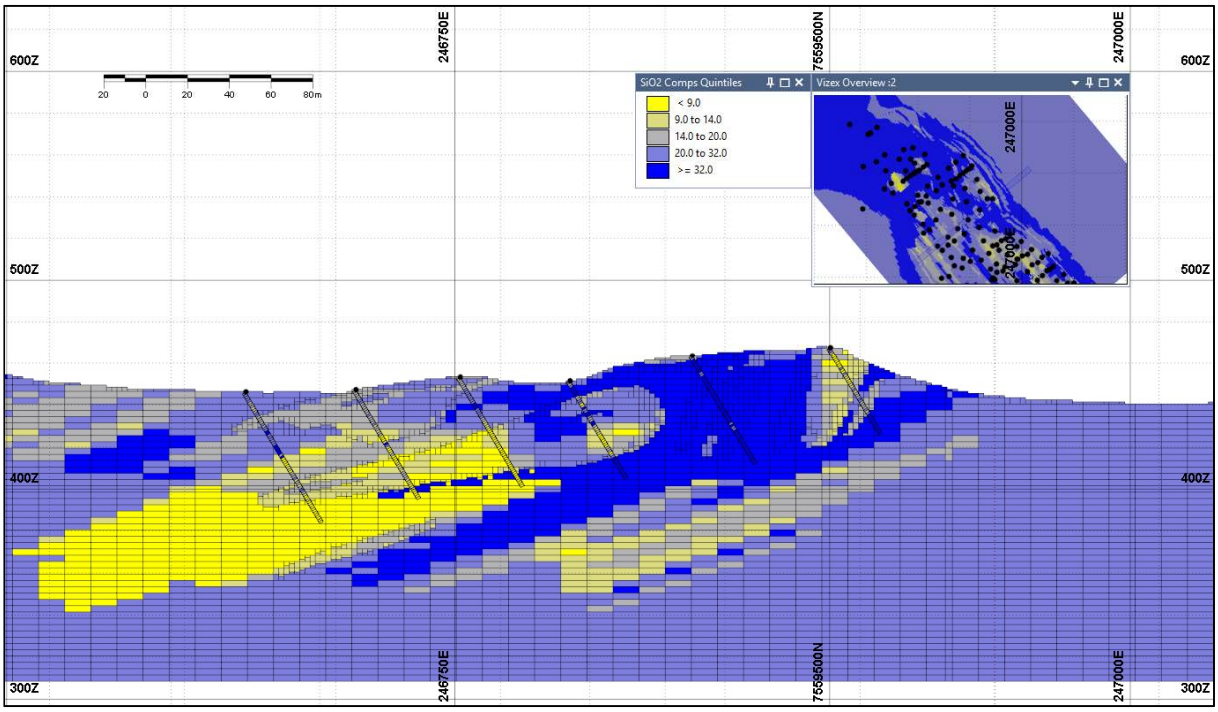


Figure 7 Typical SiO_2 section showing block model and supporting drilling results

Resource Classification

The Sunday Hill Resource has been classified as Indicated and Inferred, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code 2012).

A qualitative and quantitative approach has been applied to Resource Classification including:

- Drill hole spacing
- Geological domain and mineralisation continuity
- Quality of QAQC data
- Quality of sample data – collar and down hole surveys

Indicated mineralisation is confined to areas with good continuity (based on surface mapping and/or downhole assay results), blocks that were estimated in the first and second search passes, and where the average sample to block estimation distance was ≤ 50 m.

Inferred mineralisation is confined to areas with reasonable continuity (based on surface mapping and/or downhole assay results), where blocks were estimated in the second and third search passes, and where additional drilling is required to improve confidence in the down dip orientation and extent of mineralisation.

Unclassified mineralisation occurs in areas where manganite has been mapped at surface, but no drill hole composites were located during the first three search passes, and the default grade of the mineralised geology domain was assigned to the block.

Metallurgical considerations

Metallurgical factors were applied to the resource classification. These factors were derived from metallurgical test work carried out on diamond core collected during the latest drilling program.

Basic crushing and wet screening separation of the Sunday Hill material has been proposed to produce a product at or above 23.7% Mn that can be blended with the direct shipping ore (DSO) material from the Ant Hill deposit. It is assumed that the blended ROM product could either be sold directly as a low grade ore, or transported to a 3rd party for further processing.

Whittle optimisation software was used to determine a pit shell that demonstrates reasonable prospects of eventual economic extraction (RPEEE) of the Resource once the metallurgical factors were considered. Where mineralisation occurs above the RPEEE pit shell and is sufficiently supported by drill hole data, this mineralisation has been designated as a Resource in accordance with the JORC Code (2012). Mineralisation occurring below the RPEEE pit shell has been downgraded to unclassified mineralisation.

The following pricing parameters were adopted in the Whittle optimisation:

- Sales price (dtmu): 7.125 USD per Mn%;
- Exchange Rate: 0.72 AUD per USD

Figure 8 shows the Resources at Sunday Hill that are constrained by the RPEEE pit shell, as well as unclassified mineralisation which requires additional drilling before it can be classified as a Resource.

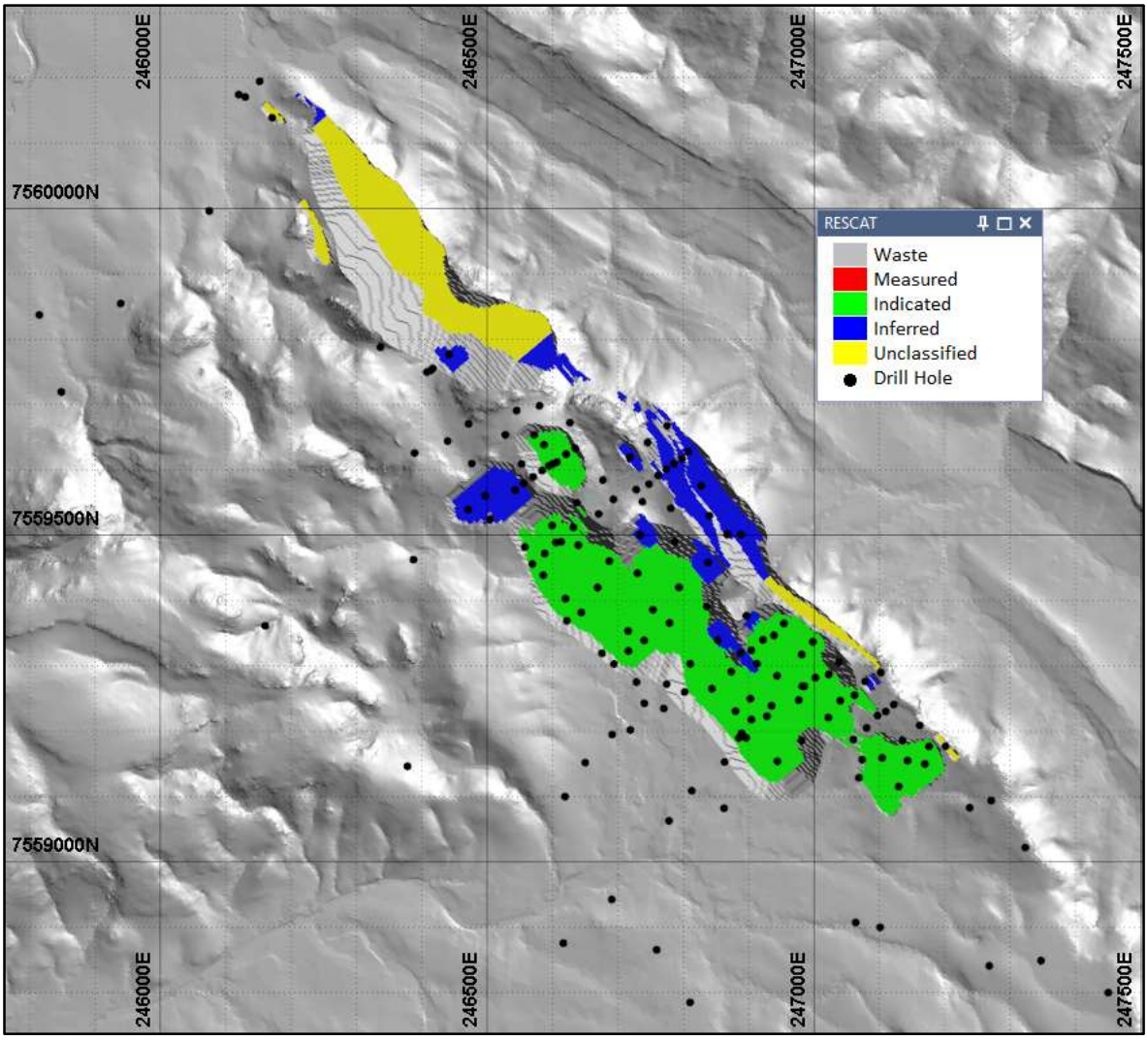


Figure 8 The Sunday Hill Resource with drill holes, constrained by the RPEEE pit shell

Cut-off Grade

A cut-off grade of 10% Mn has been used for the stated Mineral Resource Estimate.

The sensitivity of the Mineral Resource to the reporting cut-off grade is not measureable at cut-off grades below 10% Mn, as all Mineral Resource Material is greater than 10% Mn.

The Sunday Hill Mineral Resources as at 1 June 2021 are tabulated in Table 1.

Table 1 Sunday Hill Mineral Resource at 1 June 2021, reported above 10% Mn cut-off

Commodity: Manganese (Mn)							
Deposit	**Type**	**Cut-off (Mn %)**	**Tonnes (Mt)**	**Mn (%)**	**Fe (%)**	**SiO_2 (%)**	**Resource Category**
Sunday Hill	Sed-Hosted	10	4.0	17.7	23.2	17.7	Indicated
		10	1.0	19.1	21.2	24.2	Inferred
Total			**5.0**	**18.0**	**22.8**	**19.1**	**All**

Note: Small discrepancies may occur due to rounding

Competent Person's Statement

The information in this report that relates to the Mineral Resources listed in Table 1 is based upon work compiled by Mr Jason Gotte. Mr Gotte is a full-time employee of Mineral Resources Limited (a 75% shareholder of the RDG) and a Member of The Australian Institute of Mining and Metallurgy. The Resource Estimate was reviewed by Matthew Watson a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Watson is a full time employee of Mineral Resources Limited. Mr Watson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves'. Mr Watson consents to the inclusion in the report of the matters based on his information in the form and context that the information appears.

Forward Looking Statement

This ASX announcement may contain forward looking statements that are subject to risk factors associated with manganese 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, metallurgy, 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.

Resource Development Group

Table 2 Sunday Hill All Drilling - Collar Table

HOLEID	EAST	NORTH	RI	DEPTH	Dip	Azi	Drill Type
PSH4	245848.6	7559719.3	429.5	36	0	-90	RAB
PSH6	246810.4	7558785.1	447.3	59	0	-90	RAB
PSH7	247063.5	7558907.4	448.6	52	0	-90	RAB
PSH8	246885	7559190.0	446.2	43	0	-90	RAB
PSH9	246728.4	7559275.3	445.5	51	0	-90	RAB
PSH10	246619	7559100.0	446.3	42	0	-90	RAB
PSH11	246407.7	7559749.6	471.0	52	0	-90	RAB
PSH12	246571.9	7559653.8	475.7	67	0	-90	RAB
PSH13	246737.5	7559551.2	455.3	33	0	-90	RAB
PSH14	245939.4	7559854.6	432.5	40	0	-90	RAB
PSH15	246075.1	7559996.5	426.4	25	0	-90	RAB
PSH16	247073.6	7559156.5	452.1	30	0	-90	RAB
PSH17	246912.5	7559303.3	455.2	55	0	-90	RAB
PSH18	246862.3	7559082.2	443.0	23	0	-90	RAB
PSH20	246378.1	7559146.4	459.9	50	0	-90	RAB
PSH21	246160.5	7559361.5	460.9	36	0	-90	RAB
PSH22	246387.1	7559462.6	456.6	70	0	-90	RAB
PSH23	245815	7559837.2	426.7	59	120	-70	RAB
PSH24	246119.8	7560174.5	420.8	40	40	-60	RAB
SHRC001	246807.6	7559627.9	469.6	48	55	-60	RC
SHRC002	246798.3	7559617.2	469.0	40	55	-60	RC
SHRC003	246785.8	7559609.8	466.7	40	55	-60	RC
SHRC004	246774	7559601.2	461.9	40	56	-60	RC
SHRC005	246761.6	7559591.4	457.4	33	54	-60	RC
SHRC006	246634.6	7559633.3	469.5	44	57	-63	RC
SHRC007	246620.8	7559624.2	474.8	48	57	-60	RC
SHRC008	246606.7	7559612.0	473.3	48	57	-60	RC
SHRC009	246594.6	7559606.4	472.1	48	55	-60	RC
SHRC010	246584.2	7559598.9	470.7	48	56	-60	RC
SHRC011	246570.4	7559589.1	467.6	48	54.5	-60	RC
SHRC012	246555.9	7559579.6	462.1	40	55.5	-60	RC
SHRC013	246542.8	7559569.1	458.2	40	56	-60	RC
SHRC014	246827	7559575.9	476.8	40	55	-70	RC
14SHRC_001	246693	7559555.0	451.9	114	57.5	-58	RC
14SHRC_002	246605	7559489.0	450.8	79	54.1	-62	RC
14SHRC_003	246504	7559524.0	459.5	66	53.9	-61	RC
14SHRC_004	246840	7559530.0	468.3	54	53.3	-61	RC
14SHRC_005	246787	7559490.0	453.2	60	52	-60	RC
14SHRC_006	246730	7559442.0	458.5	90	50	-60	RC
14SHRC_007	246740	7559339.0	447.6	66	53	-60	RC

Resource Development Group

HOLEID	EAST	NORTH	Rl	DEPTH	Dip	Azi	Drill Type
14SHRC_008	246836	7559391.0	448.0	78	54	-60	RC
14SHRC_009	246954	7559365.0	463.6	78	52	-60	RC
14SHRC_010	246888	7559320.0	455.6	78	54	-60	RC
14SHRC_011	246802	7559260.0	446.9	78	52	-60	RC
14SHRC_012	246719	7559202.0	444.1	48	52	-60	RC
14SHRC_013	246650	7559152.0	446.1	36	52	-60	RC
14SHRC_014	246922	7559340.0	458.8	42	51	-60	RC
14SHRC_015	246998	7559337.0	466.5	60	52	-60	RC
14SHRC_016	247038	7559306.0	465.0	54	53	-60	RC
14SHRC_017	247002	7559282.0	461.5	48	54	-60	RC
14SHRC_018	247078	7559276.0	466.1	42	53	-60	RC
14SHRC_019	247040	7559247.0	461.2	36	52	-60	RC
14SHRC_020	247122	7559241.0	466.6	48	53	-60	RC
14SHRC_021	247176	7559177.0	464.2	36	0	-90	RC
14SHRC_022	247271	7559094.0	467.1	36	0	-90	RC
14SHRC_023	247238	7559083.0	462.4	36	0	-90	RC
14SHRC_024	247323	7559022.0	464.6	36	0	-90	RC
14SHRC_025	247347	7558849.0	465.1	30	0	-90	RC
14SHRC_026	247450	7558800.0	472.7	30	0	-90	RC
14SHRC_027	247481	7558696.0	481.9	24	0	-90	RC
14SHRC_028	247471	7558513.0	495.7	24	0	-90	RC
14SHRC_029	247282	7558491.0	493.5	24	0	-90	RC
14SHRC_030	247268	7558841.0	463.0	24	0	-90	RC
14SHRC_031	247101	7558900.0	450.0	30	0	-90	RC
14SHRC_032	246928	7559223.0	448.4	24	0	-90	RC
14SHRC_033	246896	7559190.0	446.5	10	0	-90	RC
14SHRC_034	246863	7559153.0	445.0	6	0	-90	RC
14SHRC_035	246813	7559109.0	444.3	6	0	-90	RC
14SHRC_036	246778	7559063.0	443.5	6	0	-90	RC
14SHRC_037	246413	7559752.0	470.9	114	50	-60	RC
14SHRC_038	246337	7559788.0	477.5	114	25	-60	RC
14SHRC_039	246728	7559570.0	453.5	84	59.7	-61	RC
14SHRC_040	246152	7560195.0	421.0	60	42.8	-61	RC
14SHRC_041	246130	7560171.0	421.0	60	42.6	-62	RC
14SHRC_042	246171	7560139.0	423.6	48	43.5	-61	RC
14SHRC_043	246588	7559472.0	452.5	84	55	-60	RC
14SHRC_044	246389	7559626.0	472.0	138	53	-60	RC
14SHRC_045	246545	7559691.0	479.7	120	53	-60	RC
14SHRC_046	246644	7559382.0	447.9	102	55	-60	RC
14SHRC_047	246694	7559303.0	446.0	94	57	-60	RC
14SHRC_048	246770	7559235.0	444.7	72	0	-90	RC
14SHRC_049	246904	7559324.0	456.6	58	53	-60	RC

Resource Development Group

HOLEID	EAST	NORTH	Rl	DEPTH	Dip	Azi	Drill Type
14SHRC_050	246982	7559269.0	458.1	48	55	-60	RC
14SHRC_051	246935	7559239.0	449.5	56	53	-60	RC
14SHRC_052	246904	7559218.0	447.1	66	53	-60	RC
14SHRC_053	247143	7559155.0	459.9	18	0	-90	RC
14SHRC_054	247097	7559224.0	462.4	48	55	-60	RC
14SHRC_055	246669	7559420.0	447.3	84	55	-60	RC
14SHRC_056	246868	7559502.0	468.3	54	55	-60	RC
14SHRC_057	246867	7559501.0	468.0	48	0	-90	RC
14SHRC_058	246779	7559366.0	450.7	66	55	-60	RC
20SHRC001	246690.5	7558942.5	442.5	60	50	-58	RC
20SHRC002	246616.6	7558875.7	442.7	60	53	-58	RC
20SHRC003	246944	7559154.1	445.8	60	52	-59	RC
20SHRC004	246889	7559197.0	446.5	84	51	-60	RC
20SHRC005	246740.2	7559242.8	445.0	66	51	-60	RC
20SHRC006	246843.7	7559265.2	447.6	78	51	-59	RC
20SHRC007	246902.6	7559249.9	448.7	78	48	-60	RC
20SHRC008	246879.8	7559230.8	446.8	72	50	-59	RC
20SHRC009	246981.1	7559185.9	448.7	48	50	-59	RC
20SHRC010	246675.6	7559319.2	446.3	72	48	-60	RC
20SHRC011	246622	7559369.0	449.1	72	53	-59	RC
20SHRC012	246619.6	7559402.9	447.8	66	47	-61	RC
20SHRC013	246639.3	7559485.0	448.7	90	50	-59	RC
20SHRC014	246632	7559512.0	449.7	78	50	-59	RC
20SHRC015	246636.8	7559549.6	453.7	60	52	-58	RC
20SHRC016	246599.2	7559515.1	451.2	90	52	-61	RC
20SHRC017	246417	7559755.5	470.9	75	52	-60	RC
20SHRC018	246476.3	7559609.8	466.3	72	50	-56	RC
20SHRC019	246439.4	7559644.2	467.0	60	52	-58	RC
20SHRC020	246810.6	7559303.2	448.4	78	52	-56	RC
20SHRC021	246691	7559195.0	444.7	96	49	-60	RC
20SHRC022	246759.1	7558865.5	445.4	54	52	-59	RC
20SHRC023	247201.1	7559177.0	466.8	24	50	-59	RC
20SHRC024	247169.6	7559150.0	459.9	24	53	-58	RC
20SHRC025	247135.2	7559186.1	461.4	30	52	-56	RC
20SHRC026	247129.3	7559115.4	453.9	54	52	-57	RC
20SHRC027	247109.6	7559230.1	464.4	48	53	-57	RC
20SHRC028	247161.8	7559209.2	467.6	30	51	-59	RC
20SHRC029	247102	7559289.7	469.7	42	52	-58	RC
20SHRC030	247061.9	7559255.3	463.0	24	50	-57	RC
20SHRC031	247021.9	7559221.0	457.3	36	52	-55	RC
20SHRC032	247080.3	7559205.2	458.5	42	48	-58	RC
20SHRC033	247104.1	7559159.4	454.1	36	51	-60	RC

Resource Development Group

HOLEID	EAST	NORTH	Rl	DEPTH	Dip	Azi	Drill Type
20SHRC034	247068.5	7559128.8	450.2	36	52	-61	RC
20SHRC035	247060.2	7559187.6	455.0	42	50	-61	RC
20SHRC036	247022.5	7559287.0	463.2	54	50	-60	RC
20SHRC037	246981.2	7559317.5	463.2	42	50	-60	RC
20SHRC038	246938.7	7559346.8	460.8	48	52	-61	RC
20SHRC039	246976.4	7559247.8	457.0	48	62	-89	RC
20SHRC040	246943.5	7559285.0	456.5	48	53	-58	RC
20SHRC041	246852.8	7559339.4	453.4	60	50	-60	RC
20SHRC042	246873.3	7559291.2	451.6	66	52	-59	RC
20SHRC043	246774.5	7559272.2	445.8	72	50	-60	RC
20SHRC044	246716	7559323.0	445.5	72	49	-60	RC
20SHRC045	246715.6	7559353.5	447.3	60	51	-59	RC
20SHRC046	246670.6	7559532.6	451.0	66	51	-58	RC
20SHRC047	246677	7559584.5	453.8	48	53	-60	RC
20SHRC048	246781	7559541.3	457.2	54	56	-58	RC
20SHRC049	246747.6	7559578.3	455.0	48	52	-59	RC
20SHRC050	246745.5	7559642.2	464.8	48	54	-59	RC
20SHRC051	246775.2	7559667.5	461.3	48	51	-59	RC
20SHRC052	246686.7	7559460.4	451.2	66	54	-59	RC
20SHRC053	246734.2	7559500.7	462.1	78	53	-59	RC
20SHRC054	246837.9	7559458.4	463.8	60	53	-59	RC
20SHRC055	246888.2	7559501.3	467.8	48	58	-59	RC
20SHRC056	246793.5	7559420.2	451.5	54	55	-60	RC
20SHRC057	246753.6	7559386.0	453.3	60	53	-59	RC
20SHRC058	246626.6	7559672.3	470.6	78	55	-60	RC
20SHRC059	246579.9	7559698.0	474.0	78	53	-60	RC
20SHRC060	246587	7559638.6	475.3	78	54	-59	RC
20SHRC061	246552.5	7559609.2	467.0	84	56	-59	RC
20SHRC062	246497.2	7559560.5	466.5	72	57	-59	RC
20SHRC063	246470.8	7559539.3	462.2	60	53	-59	RC
20SHRC064	246471.6	7559670.6	472.0	54	53	-59	RC
20SHRC065	246441.7	7559776.8	472.3	84	50	-59	RC
20SHRC066	246527.7	7559653.7	475.5	84	52	-60	RC
20SHRC067	246557.5	7559482.1	454.1	60	50	-58	RC
20SHRC068	246569	7559456.0	450.2	54	50	-60	RC
20SHRC069	246585.6	7559438.8	448.6	60	50	-61	RC
20SHRC070	246718.2	7559619.4	463.8	48	51	-60	RC
20SHRC071	246896.5	7559376.9	450.9	60	49	-59	RC
SHDD001	246985	7559269.0	458.5	36.2	46	-59	DD
SHDD002	246600	7559609.0	472.6	43.6	47	-59	DD
SHDD003	246613	7559490.0	450.3	70.6	48	-60	DD

Resource Development Group

Table 3 Sunday Hill 2020 Drilling – Significant Intersections

Hole ID	Easting	Northing	Azi	Dip	From	To	Intercept length (m)	Mn (%)	Fe (%)	SiO_2(%)
20SHRC001	246690.5	7558942.5	50	-60	32	39	7	26.6	24.0	6.1
20SHRC003	246944.0	7559154.1	50	-60	11	21	10	17.8	23.5	21.1
20SHRC003	246944.0	7559154.1	50	-60	26	39	13	19.5	21.9	24.2
20SHRC004	246889.0	7559197.0	50	-60	23	45	22	21.5	30.2	6.5
20SHRC006	246843.7	7559265.2	50	-60	37	46	9	23.8	25.7	11.9
20SHRC007	246902.6	7559249.9	50	-60	41	49	8	19.4	28.4	14.8
20SHRC008	246879.8	7559230.8	50	-60	35	39	4	17.7	27.4	13.3
20SHRC008	246879.8	7559230.8	50	-60	44	48	4	16.3	33.7	9.3
20SHRC010	246675.6	7559319.2	50	-60	56	60	4	23.4	18.5	9.6
20SHRC011	246622.0	7559369.0	50	-60	31	37	6	18.0	24.7	8.8
20SHRC011	246622.0	7559369.0	50	-60	57	62	5	19.4	21.0	11.6
20SHRC012	246619.6	7559402.9	50	-60	4	10	6	26.6	8.0	13.7
20SHRC012	246619.6	7559402.9	50	-60	27	50	23	22.6	21.6	8.9
20SHRC013	246639.3	7559485.0	50	-60	30	34	4	17.4	11.5	39.3
20SHRC013	246639.3	7559485.0	50	-60	48	52	4	19.2	23.0	21.1
20SHRC014	246632.0	7559512.0	50	-60	36	40	4	20.4	13.7	21.0
20SHRC015	246636.8	7559549.6	50	-60	51	55	4	18.7	33.6	8.6
20SHRC016	246599.2	7559515.1	50	-60	65	73	8	20.1	27.8	10.2
20SHRC018	246476.3	7559609.8	50	-60	22	26	4	24.6	19.5	22.0
20SHRC024	247169.6	7559150.0	50	-60	0	9	9	19.3	23.0	10.6
20SHRC030	247061.9	7559255.3	50	-60	0	7	7	20.1	32.5	7.6
20SHRC031	247021.9	7559221.0	50	-60	1	5	4	23.7	23.5	12.5
20SHRC031	247021.9	7559221.0	50	-60	13	17	4	18.2	21.6	18.1
20SHRC033	247104.1	7559159.4	50	-60	8	12	4	20.0	21.4	14.3
20SHRC034	247068.5	7559128.8	50	-60	18	22	4	16.4	19.0	27.2
20SHRC037	246981.2	7559317.5	50	-60	14	26	12	21.9	21.5	14.4
20SHRC038	246938.7	7559346.8	50	-60	17	36	19	24.1	20.0	14.8
20SHRC039	246976.4	7559247.8	50	-60	22	32	10	22.2	21.0	13.9
20SHRC040	246943.5	7559285.0	50	-60	4	26	22	20.2	21.6	14.8
20SHRC041	246852.8	7559339.4	50	-60	44	48	4	18.0	26.3	12.1
20SHRC042	246873.3	7559291.2	50	-60	56	60	4	18.7	26.6	15.0
20SHRC044	246716.0	7559323.0	50	-60	7	12	5	15.6	10.6	18.2
20SHRC044	246716.0	7559323.0	50	-60	48	53	5	24.0	22.7	7.2
20SHRC045	246715.6	7559353.5	50	-60	8	29	21	22.3	9.3	14.8
20SHRC045	246715.6	7559353.5	50	-60	38	46	8	17.0	22.9	10.4
20SHRC049	246747.6	7559578.3	50	-60	27	31	4	21.1	29.2	9.4
20SHRC050	246745.5	7559642.2	50	-60	38	43	5	19.6	27.2	14.0
20SHRC053	246734.2	7559500.7	50	-60	9	13	4	17.6	28.5	15.3
20SHRC054	246837.9	7559458.4	50	-60	9	15	6	20.7	14.4	35.9
20SHRC055	246888.2	7559501.3	50	-60	0	25	25	29.2	21.7	11.9
20SHRC055	246888.2	7559501.3	50	-60	31	36	5	16.3	24.5	17.1

Hole ID	Easting	Northing	Azi	Dip	From	To	Intercept length (m)	Mn (%)	Fe (%)	SiO_2(%)
20SHRC056	246793.5	7559420.2	50	-60	8	14	6	22.3	20.7	17.0
20SHRC056	246793.5	7559420.2	50	-60	19	36	17	23.8	20.1	14.6
20SHRC057	246753.6	7559386.0	50	-60	33	52	19	22.1	29.2	5.2
20SHRC059	246579.9	7559698.0	50	-60	71	76	5	18.2	28.2	12.9
20SHRC060	246587.0	7559638.6	50	-60	8	13	5	22.8	17.4	22.0
20SHRC060	246587.0	7559638.6	50	-60	49	54	5	20.1	22.3	27.3
20SHRC060	246587.0	7559638.6	50	-60	63	72	9	16.4	21.7	24.0
20SHRC062	246497.2	7559560.5	50	-60	5	16	11	22.7	28.6	3.5
20SHRC063	246470.8	7559539.3	50	-60	4	9	5	22.4	15.9	27.5
20SHRC063	246470.8	7559539.3	50	-60	15	19	4	16.7	21.2	19.3
20SHRC064	246471.6	7559670.6	50	-60	41	45	4	24.9	3.8	43.3
20SHRC065	246441.7	7559776.8	50	-60	0	5	5	19.4	15.0	33.5
20SHRC070	246718.2	7559619.4	50	-60	0	8	8	20.4	15.9	18.6

APPENDIX 1: JORC COMPLIANT MANGANESE RESOURCES

The following information has been 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) and Section 3 (Estimation and Reporting).

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

SUNDAY HILL DEPOSIT
JORC Code 2012 Edition – Table 1

Section 1 - Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	71 RC holes were drilled between September and October 2020 for a total 4,239m. All RC drilling was completed by McKay Drilling. Drill hole ID's were prefixed with 20SHRC. 3 diamond holes were drilled by Terra Drilling in October 2020 for a total of 150.4m. Drill hole ID's were prefixed with SHDD. Prior to the 2020 drilling program 72 RC holes and 19 percussion holes have been drilled across the deposit by various companies since the mid 1970's.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sample representivity in the 2020 program was ensured by a combination of MRL procedures regarding quality control (QC) and quality assurance testing (QA). Certified standards were routinely inserted into sample bags in the field during the collection process.
	Aspects of the determination of mineralisation that are Material to the Public Report. *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual*	RC samples were collected every 1m and were obtained via a cone splitter. Samples were dispatched to NAGROM in Perth for XRF and TGA analysis. Sample preparation involved: Dry sample to 105^{O}, sample crush to nominal top size of 6.3mm, riffle split off sample to 2.5kg, pulverize to 80% passing 75um.

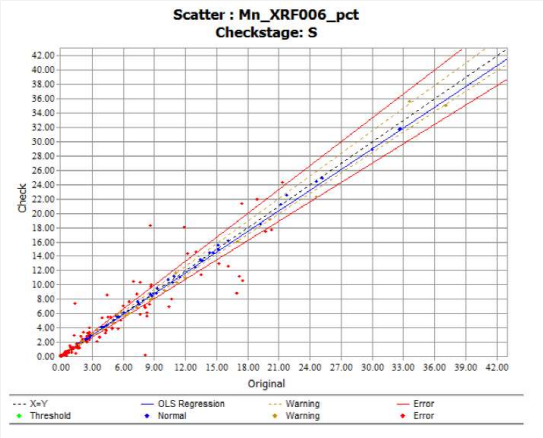
Criteria	JORC Code explanation	Commentary
	commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Diamond drilling was completed using PQ3 triple tubing to collect core samples. There has been no assaying of the diamond core.
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	RC drilling was completed using face sampling hammers with a drill bit size of $5^{1/4}$ inch. PQ3 triple tube diamond drilling was used to collect core samples for metallurgical test work.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Diamond core recovery was measured for all drill holes by comparing tape measured core runs against drill run lengths as recorded by the driller. Recovery was >90%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The cyclone was flushed with pressurised air every 2 second rod and a high-pressure water clean of the cyclone every hole. Sample recovery (%) and condition (Dry, Wet, Moist and Saturated) was quantitatively logged by site geologists for RC holes.
	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.	NAGROM measured all sample weights prior to preparation. Small weights (less than 0.5kg) are attributed to loss of fine material in the sampling process. Grade bias associated with field duplicate samples is detailed below.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	All drilling has been geologically logged to a level that allows the generation of a geological interpretation that supports an appropriate Mineral Resource Estimate. Drill logs included the following key items: • Lithology • Mineralogy • Mineralisation Type • Weathering • Colour • Sample recovery

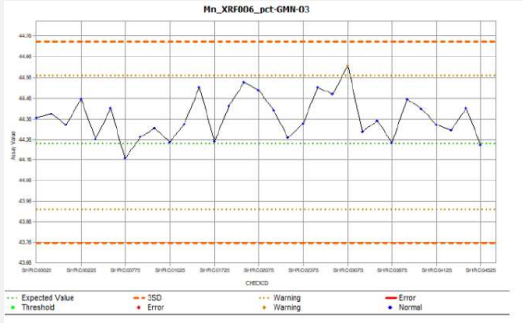
Criteria	JORC Code explanation	Commentary
		• Sample Condition There has been no geotechnical logging of core carried out across Sunday Hill to date.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging was qualitatively based on 1 metre samples derived from the RC drilling. Chip tray photography was taken for all RC drilling. There is no photography of chip piles. All diamond core was photographed wet and dry.
	The total length and percentage of the relevant intersections logged.	All sample intervals were logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Full core from 2020 diamond program was collected for metallurgical studies.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples were cone split at the rig. Dry and wet samples were recorded in the sample condition field in Acquire. Wet samples are attributed to perched water tables associated with underlying mudstones. The recovered samples were predominantly dry (>92%).
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	MRL Exploration procedures were followed to ensure sub-sampling accuracy and frequency. These included daily workspace inspections of sampling equipment and practices. RC cuttings were taken at regular 1m intervals. Samples were generated by sending dry drill cuttings through a cone splitter. All RC samples were collected in labelled calico bags and were stored onsite prior to transport and subsequent analysis.

Criteria	JORC Code explanation	Commentary
	Quality control procedures adopted for all sub-sampling stages to maximise representation of samples.	The rig sampling system was flushed during rod changes and again at the end of each drill hole to minimise cross-contamination between drill intervals.
	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 were taken with regular consistency to ensure sample representation.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The measured sample size is considered appropriate to correctly represent the mineralisation. 96% of the samples were greater than 1kg, 70% of the samples were greater than 2kg and 30% of the samples were greater than 3kg. The average sample weight was 2.5 kg. Field duplicates of sample weights were poor and attributed to misalignment\levelling of cone splitter not identified in the field and\or loss of fines during drilling.
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.*	NAGROM in Kelmscott were the certified analytical laboratory to conduct analysis for all samples drilled in 2020. The technique is considered to be a total analysis.
	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.	Samples were analysed using X-Ray Spectrometers and Thermogravimetric (TGA) analysers. The prepared samples were fused with lithium borate flux with a lithium nitrate additive. Samples were analysed for Al_2O_3, Ba, CaO, Cu, Fe, K_2O, MgO Mn, P, Pb, SO_3, SiO_2, V_2O_5 and Zn. LOI was measured at 1100^oC after initially driving off moisture at 105^oC. XRF and TGA analysis is the industry standard for iron and manganese mineralisation.

Criteria	JORC Code explanation	Commentary
	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.	In the 2020 RC drilling program, field duplicates were taken every 20th sample. A selection of 3 CRM standards were inserted in the field for every 50th sample commencing on the 25th sample (25, 75, 125 etc). Analysis of field duplicates (check stage S) shows poor reproduction of sample grades across major analytes due to potential loss of fines in the rig sampling process.

Analyte	Total Duplicate Pairs	Duplicate Pairs > 20% Difference	% of Duplicate Pairs with >20% Difference
Mn	215	61	28%
Al2O3	215	32	15%
Fe	215	30	14%
MgO	215	41	19%
SiO2	215	26	12%
SO3	215	55	26%
CaO	215	52	24%



Criteria	JORC Code explanation	Commentary
		Similar disparities with field duplicates have been identified with the 2008 RC drilling program. There is limited QAQC data from the 1970's and 2014 drilling program. Analysis of laboratory duplicates and repeats are within acceptable tolerances. Analyses of the 3 CRM standards are within acceptable tolerances with minor bias observed for some analytes. 
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intersections have been verified by The Competent Person. Comparisons were reviewed between logged lithology and geochemistry versus photographed RC chip trays. No major issues were identified.
	The use of twinned holes.	Three twin holes have been drilled across Sunday Hill. These holes were used for metallurgical analysis.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Logging was completed in Acquire (offline data entry workflow) on Panasonic ruggedized tough books. Drill hole logging and sampling data was collated and quality assessed by a MRL database administrator. All data was validated in 3D using Micromine 2020 software, prior to interpretation.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	Any samples not assayed (i.e. destroyed in processing, listed not received) have had the assay value left blank. Any samples assayed below detection limit, i.e. 0.01% SiO_2, have been converted to 0.005% (half detection limit) in the database.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill hole collars were pegged prior to drilling and surveyed using a Garmin handheld GPS with an accuracy of +/-3m. A full list of the collars for Sunday Hill is presented in Table 2. There have been no final collar survey pickups completed on the Sunday Hill Collars to date. Previous attempts to pickup collars have been hindered by inclement weather. All collars will be picked up as part of future exploration activities. 2020 RC down hole surveys were conducted by McKay drilling personnel using a North seeking gyro (Reflex Depth Encoder) every 10m. 2020 diamond down hole surveys were conducted by Terra Drilling using a Reflex EZ-Shot tool. There is limited to no down hole survey data for drilling programs prior to 2020.
	Specification of the grid system used.	The grid system is GDA94 MGA, Zone 51.
	Quality and adequacy of topographic control.	A topographic surface was derived from a LiDAR dataset flown by AAM on the 9th August 2020 with a density of 4 points/m^2 and accuracy of 0.1m. All data was provided in GDA94 MGA Zone 51. An accompanying aerial image (ecw format) was draped onto a triangulation generated from Lidar dataset. All data was reviewed and validated against the survey collars.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drill hole spacing is variable over the deposit. In the southern extents, spacing is nominally 25m x 50m. Drill spacing in the northern extents is wider (50m E x 100m) and a reflection of steep topography which is

Criteria	JORC Code explanation	Commentary
		inaccessible for drilling. Minor sections have infilled to 15m E to define heterogeneity within mineralised domains.
	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 data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralised domains to support the definition of Inferred and Indicated Resources.
	Whether sample compositing has been applied.	All sample intervals have been composited to 1m prior to estimation.
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.*	The orientation of RC and diamond drill holes is provided in Table 2. The dominant drilling direction is 050^{o} with -60^{o} angled drill holes designed to intercept the true width of mineralisation. Target depths were planned to drill 1-rod length past the Hamersley unconformity unless manganiferous shales were interested.
	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.	It is not believed that the drilling orientation has introduced a sampling bias.
Sample security	*The measures taken to ensure sample security.*	Samples were securely sealed in string drawn calico bags. Approximately 5 calicos were placed in a green plastic bag and labelled with Hole ID and sample numbers and sealed with cable ties. Each green bag then was compiled into large (~35 green bags) bulka bags before being sent to the Perth laboratory via contract freight transport. Sample submission forms were sent with the samples as well as being emailed to the laboratory and the MRL database administrator.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits or reviews of sampling techniques and data management has been carried out.

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.*	The Sunday Hill Deposit is located on tenement M46/237, approximately 120 km southeast of Marble Bar. The current registered holder of the tenement is Comcen Pty Ltd, a wholly owned subsidiary of Resource Development Group Ltd (RDG).
	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.	No impediments exist to obtaining a licence to operate over the listed tenure.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	BHPE completed 19 percussion holes (RAB) over two separate programs from 1976 to 1979 for a total of 863m. HiTec Energy Ltd, through its Mesa Mining Joint Venture with Auvex Resources Ltd, completed 14 RC drill holes in 2008 for 605m. Mineral Resources Ltd, through its subsidiary Process Minerals International (PMI), completed 58 RC drill holes in 2014 for 3,273m. All drilling and associated exploration activities in the 2020 program was completed by Mineral Resources Limited on behalf of Resource Development Group.
Geology	*Deposit type, geological setting and style of mineralisation.*	Sunday Hill is a fault-bounded, remnant outlier of mid-Proterozoic sediments forming a broad syncline approximately 3km wide and 4km long and dipping shallowly to the WNW. A prominent scarp is developed along the North Eastern margins, where the Manganese and Hamersley Groups are faulted against Fortescue Group Sediments. Manganese mineralisation outcrops for 1,300 metres along a Westerly dipping fault zone with surface widths varying from between 20m to 80m. Massive manganite forms the primary manganese mineral with occurrences of pyrolusite. Mineralisation is also hosted within mudstones of the Marra Mamba Formation (Hamersley Group) and siliceous cherts of the Pinjan Chert

Criteria	JORC Code explanation	Commentary
		Breccia: a karst-replacement of the Carawine Dolomite, and the Coondoon Formation (Manganese Group). Mineralisation has developed by ferro-manganiferous alteration of host rocks along a series of cross-cutting sub-vertical faults, resulting in discontinuous zones of mineralisation throughout the deposit.
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.*	A Summary of all drilling for Sunday Hill is available in Table 2. A list of the significant intersections resulting from the 2020 RC drilling is available in Table 3.
	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.	No material drill hole information has been excluded from this report.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	Data was aggregated based on geological and mineralised domains. All grades were weight average based on the sample interval length. No top cutting has been applied.
	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.	All grades were weight average based on the sample interval length.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are being reported.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	The orientation of RC and diamond holes is provided in Table 2. The dominant drilling direction is towards 050° with 60° angled holes designed as best as practical to ensure intercepts are close to true-width.
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 drillhole collar locations and appropriate sectional views.*	Refer to Figure 4 and Table 3 in this report.
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 results have been presented. Please refer to Table 3.
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.*	Haines Surveys was commissioned by Consolidated Minerals in April 2003 to conduct a Gravity survey (Bouger Anomaly) over a 650m x 1,300m area across Sunday Hill. The survey used 338 gravity stations with a grid design of 50m station intervals and 50m line intervals with lines offset in a NE-SW direction. Gap Geophysics Australia (GAP) was commissioned by Hitech energy in August 2007 to conduct magnetic surveys over Sunday Hill. GAP used its Sub Audio Magnetic technology (Gap Geophysics TM-6 Magnetometer Controller synchronised with GPS 1PPS pulse) on a 100m line spacing to survey two overlapping areas (totalling 2.5 square km) to assist with geological mapping. MRL commissioned Atlas Geophysics (Pegasus Airborne Systems) to conduct an unmanned (UAV) magnetic survey across Sunday Hill in

Criteria	JORC Code explanation	Commentary
		December 2020. The survey covered 188 line km's on a 20m nominal spacing to assist with high scale delineation of fault structures and controls influencing mineralisation.
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).*	No further works are planned at this time.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Figure 8 shows areas of inferred and unclassified material which would benefit from additional drilling.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Logging survey and sample data from the 2020 drilling program was captured in Acquire and validated by a dedicated database administrator. Post 2020 drilling data was initially accessed in Excel format and later updated into the Acquire database.
	Data validation procedures used.	All drilling data was reviewed and validated using a combination of Micromine 2020 and Supervisor V8 software.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	Jason Gotte visited the site in October 2020 after which time RC drilling was complete and diamond drilling was underway. During this period, time was spent validating historical mapping contacts with field geologists. Matt Watson has visited the site multiple times prior to 2020. During these visits Matt was accompanied by Roody Vooys from Raxev Pty Ltd who was

Criteria	JORC Code explanation	Commentary
		responsible for initial mapping and geological interpretations across the deposit.
	If no site visits have been undertaken indicate why this is the case.	Not applicable.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	Confidence in the geological interpretation is medium to high along the eastern margins of Sunday Hill. Continuity and mineralisation boundaries are informed by geological-structural interpretations identified through field mapping, magnetic surveys, drill hole assays and a manganese grade cut-off of 10%. Improved confidence along the Western margins of the deposit should be the focus of future exploration activities including additional mapping and drilling.
	Nature of the data used and of any assumptions made.	The geological data used to construct the geological model includes regional and detailed surface mapping, logging of RC drilling and associated geochemical assays.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretation on mineral resource estimation are offered.
	The use of geology in guiding and controlling Mineral Resource estimation.	The estimation was run separately for each Stratigraphic Member. Members were further divided into mineralised and non-mineralised domains (using the Mn 10 % cut-off) for the fitting of variogram models and the estimation. The estimation was carried out by using combinations of the 'Stratigraphy' and 'Ore' fields to isolate exploration data and geology model blocks for each separate estimation run.
	The factors affecting continuity both of grade and geology.	Weathering profile was briefly investigated for impact on the continuity of grades, no obvious grade trend was identified.

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		The karst style of mineralisation in the Hamersley mudstone and chert breccias is highly variable and reflected in the modelling of continuous 10% Mn grade shells.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	Prominent mineralisation is associated with a south-westerly dipping fault zone (Rmn) along the Sunday Hill scarp (Figure 2). Mineralisation outcrops for 1,300 m with surface widths varying between 20 m to 80 m, and to depths of +40 m. Massive manganite forms the primary manganese mineral with occurrences of pyrolusite. Mineralisation has developed by ferro-manganiferous alteration of host rocks along a series of cross-cutting sub-vertical faults. Massive manganite mineralisation is also hosted within the sub-horizontal mudstones of the Marra Mamba Formation (Hamersley Group - Hm) and siliceous cherts of the Pinjan Chert Breccia: a karst-replacement of the Carawine Dolomite. Mineralisation trends NW-SE, dipping to the south-west. The mineralisation has a strike extent of 800 m with down dip extensions of 200 m and thicknesses of 40 m.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	Ordinary Kriging (OK) Interpolation was selected as the estimation method for the ore domains and inverse distance squared (ID2) was used for the waste domains. The estimation used hard boundaries. The decision was based on visual inspection of down hole assay values at domain boundaries. Analysis of sample lengths indicated that sample compositing to 1m was appropriate. AHP (1976-79) drillholes were excluded from the estimation. Block discretisation was set to 3 points in each of the X, Y, Z dimensions for any given block.

Criteria	JORC Code explanation	Commentary
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	No check estimates have been run. No previous estimates exist, and there is no available production data.
	The assumptions made regarding recovery of by-products.	No by-products are present or modelled.
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	Mn, Fe, SiO_2, LOI and S analytes were estimated. Only Mn, Fe and SiO_2 are being reported here. Using sulphur assays grades above 0.3% S as a proxy for the presence of potentially acid forming sulphides below the water table (sulphate above the water table), sulphur values within both the waste rock and the mineralised rock are below 0.3% sulphur for 98% of the assayed rock mass.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Blocks were rotated counter-clockwise 40° in the Z Axis. Block model dimensions used were 12.5 m (along dip) by 25 m (along strike) by 3 m (elevation) with sub-blocking down to 2.5 m (NE along dip) by 5 m (NW along strike) by 1 m (elevation). Block sizes are nominally one quarter of the lateral sample spacing along dip in the NE-SW direction, one half of the lateral sample spacing along strike in the NW-SE direction. The majority of blocks that comprise the Resource statement were estimated after the 3rd pass (98%). The search ellipse was orientated and sized to match the anisotropy defined by the Mn variogram model for each combination of 'Stratigraphy' and 'Ore' fields. Variograms were run for Rmn and Hm combinations. Fj and MnC combinations used the Hm parameters due to the low number of samples within these domains.

Criteria	JORC Code explanation	Commentary
		The first pass used search ranges equivalent to 2/3^{rds} of the modelled Mn variogram range, a maximum of 5 samples per drill hole, a minimum of 10 samples and a maximum of 25 samples per block interpolation. The second pass used search ranges equivalent to the modelled Mn variogram range, a maximum of 5 samples per drill hole a minimum of 10 samples, and a maximum of 25 samples per block interpolation. The third pass used search ranges equivalent to 1.5 x the modelled Mn variogram range, a maximum of 5 samples per drill hole a minimum of 5 samples, and a maximum of 25 samples per block interpolation.
	Any assumptions behind modelling of selective mining units.	The vertical block size was selected to align with mining bench heights.
	Any assumptions about correlation between variables.	There is no correlation between Mn, Fe and SiO_2 for the mineralised zones of the Fortescue (Fj), Hamersley (Hm), Coondoon (MnC) or the fault hosted massive manganite (Rmn) formations.
	Description of how the geological interpretation was used to control the resource estimates.	The orientation of the interpreted mineralisation domains were used to inform and confirm the axial directions of the variogram model and search ellipses used to estimate the resource model.
	Discussion of basis for using or not using grade cutting or capping.	Top-cuts were not applied. This decision was informed through examination of histograms and probability plots of the composite data, and by considering the spatial location of the outliers within the mineralisation domains.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Validation of the final resource has been carried out in a number of ways, including: Drillhole section comparison, swath plot validation, and comparison of model mean grades versus composite mean grades by domain. All modes of validation have produced acceptable results. No production data is available for reconciliation.

Criteria	JORC Code explanation	Commentary
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages have been estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	A cut-off grade of 10% Mn has been used for reporting purposes.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Mining method is expected to be by open pit. Dilution from blast movement and during digging is expected.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	Mineralised material from the Sunday Hill deposit is expected to undergo crushing and wet screening to produce a manganese product head grade of +23.7% Mn. The following pricing parameters have been adopted in Whittle optimisation software to determine a pit shell that demonstrates reasonable prospects of eventual economic extraction for the Resource: • Sales price (dtmu): 7.125 USD per Mn%; • Exchange Rate: 0.72 AUD per USD
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this*	Waste storage is expected to occur on flat stable ground in the form of waste dumps to the east of the pit. Any potential acid forming (PAF) material is expected to be correctly stored within the waste dump landform. PAF forming material within the waste rock is not expected to be an issue for mining or waste storage.

Criteria	JORC Code explanation	Commentary
	should be reported with an explanation of the environmental assumptions made.	
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	Bulk density has been determined using hydrostatic weighing of 16 waste samples and 50 mineralised samples from the diamond core generated during the 2020 drill program.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	Archimedes water displacement test work using wax and non-wax coated diamond core rock specimens was used to measure moisture content. Where required, the hydrostatic derived density values were scaled back to account for the presence of void spaces. Scaling was carried out based on a global visual inspection of core photography for the presence of vugs and porosity.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	The following dry bulk density values have been assigned to the deposit: Rock Type / Waste Rock (t/m^3) / Ore Rock (t/m^3) Rmn / – / 3.1 MnC / 2.2 / 2.7 Hm / 2.2 / 2.7 Fj / 2.2 / 2.7
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	A range of criteria has been considered in determining this classification including: - Drill hole spacing - Geological domain and mineralisation continuity - Quality of QAQC data - Quality of sample data – collar and down hole surveys - Estimation properties including search strategy, number of

Criteria	JORC Code explanation	Commentary
		informing data and average distance of data from blocks
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralised envelopes and to support the definition of an Indicated and Inferred Mineral Resource under the 2012 JORC Code once all other modifying factors have been addressed.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Competent Person endorses the reported Mineral Resource classification.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	Mineral Resource estimate carried out by Mr Gotte has been reviewed by Mr Watson. The resultant Resource model is considered robust with no fatal flaws identified.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	See the Classification sub-section for a description of the approach used to classify the Mineral Resource estimate.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The reported Mineral Resource is a global estimate.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	There is no production data available for comparison.

This announcement is authorised for market release by the Board of Resource Development Group Ltd.

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Company Secretary
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