Resource Development Group

29 November 2024

ASX Market Announcements
Via e-lodgment

Mineral Resource Increase for Ant Hill Manganese Project

- Ant Hill Mineral Resource tonnage increases from **3.1Mt** to **8.58Mt.**
- The mineralised occurrence is yet to achieve full drill coverage across the deposit mesa outcrop area however un-drilled areas are likely to have very similar grades to that reported owing to the observed continuity of mineralisation across most areas.
- Builds on historic resource estimates and previous bulk test and pilot scale mining programs.
- Commercialisation studies are in progress for the Ant Hill & Sunday Hill Project which may confirm direct shipping ore opportunities.
- Manganese has uses in manufacturing steel alloys and most importantly is a Critical Mineral used in the production of batteries for Electric Vehicles.

Resource Development Group Limited (**ASX: RDG**) (**RDG** or the **Company**) is pleased to report the completion of an updated Mineral Resource Estimate for the Ant Hill Manganese Deposit near Nullagine in North-West, Western Australia.

Table 1 below summarises the resource tonnages and grades estimated at Ant Hill within the main project areas and includes estimates of ancillary elements Iron and Silicon (silica).

Table 1 - Ant Hill - Global Manganese Mineral Resources (as at November 20th, 2024)

Manganese Resources			Indicated Resources				
Deposit	**Area**	**Cut-off (Mn %)**	**Tonnes (Mt)**	**Mn (%)**	**Fe (%)**	**SiO_2 (%)**	**Resource Category**
Ant Hill	South Area	10	3.44	18.2	24.5	25.4	Indicated
Ant Hill	North Area	10	1.04	16.8	31.0	18.0	Indicated
Sub-Total			**4.48**	**17.88**	**25.97**	**23.66**	**Total Indicated**
Ant Hill	South Area	10	2.35	19.6	22.6	26.0	Inferred
Ant Hill	North Area	10	1.75	15.8	27.4	24.1	Inferred
Sub-Total			**4.10**	**18.0**	**24.7**	**25.2**	**Total Inferred**

Note: Some minor rounding errors may occur.

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The independent JORC 2012 resource estimate is based upon a consolidation of various geological and structural mapping and a number of previous drilling programs and includes extension and verification drilling carried out by Mesa Minerals Ltd in 2014 and by the Company in 2020. Included in the consolidated assessment of the resource area is a set of approximately 262 grade control scale drill-holes used in conjunction with a previous bulk sampling and pilot scale mineral production program in the South Mesa Area. The consolidation of all data into one resource model project is a significant advance on previous modelling and estimation work and has allowed the reliable definition of mineralization positions and continuity. Part of the resource increase here is due to not conservatively constraining the resource to a previously used preliminary pit optimisation shell by MRL in 2019.

Table 1 above summarises the currently identified Manganese mineral resources at Ant Hill.

Figure 1 below shows the position of Ant Hill relative to local small town of Nullagine and other regional centres and transport infrastructure.

Figure 1 – Regional Map Showing location of Ant Hill Manganese Project – Nullagine

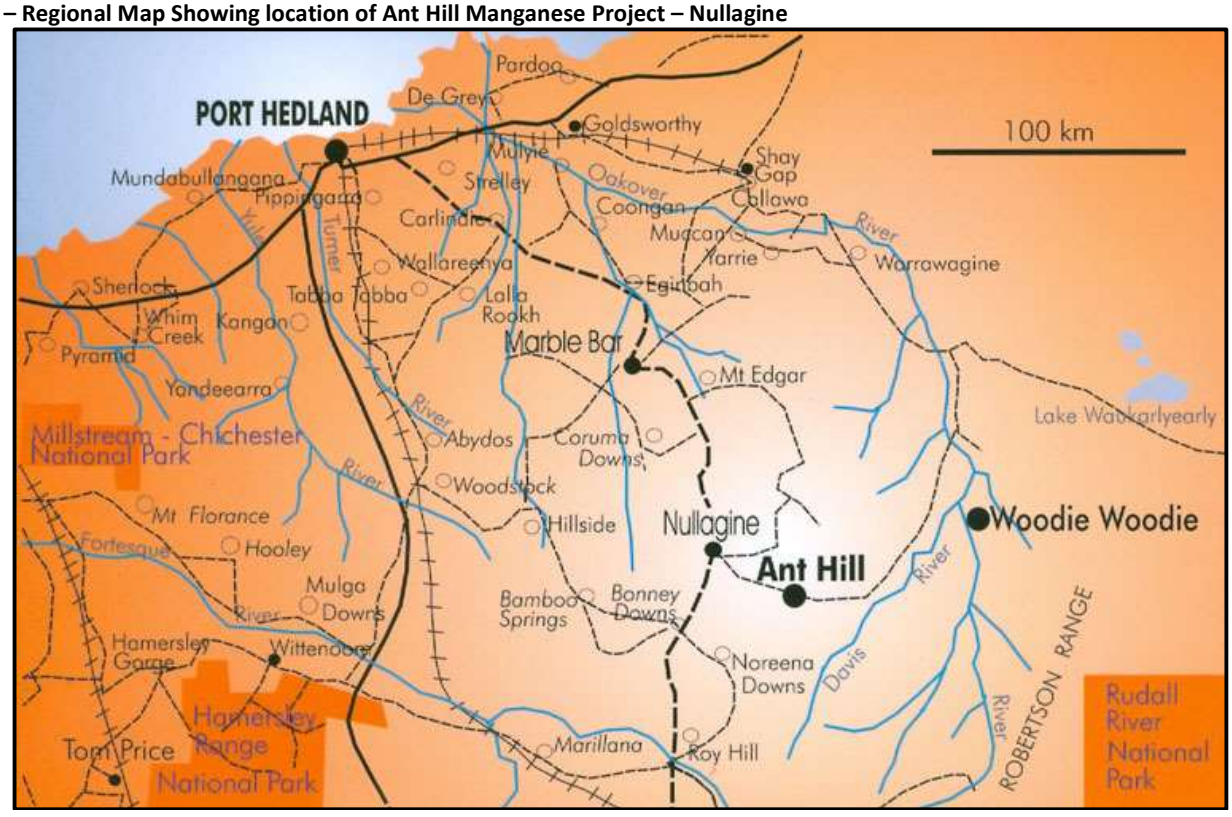
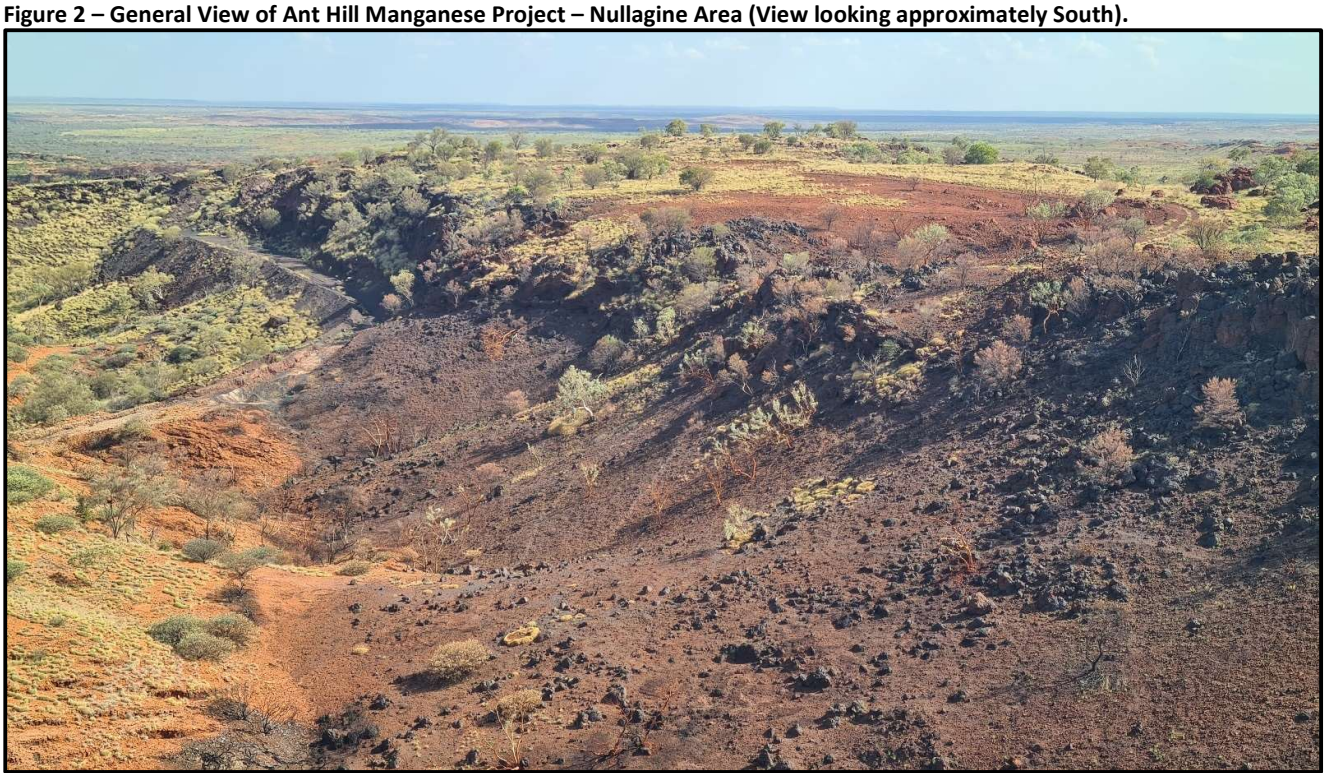


Figure 2 below is a general view of part of the Eastern Side of Ant Hill Deposit area (Photo taken on November 18th 2024).

Figure 2 – General View of Ant Hill Manganese Project – Nullagine Area (View looking approximately South).



RESOURCE SUMMARY

Previously Reported Mineral Resources

The previous stated Mineral Resource Estimate (JORC 2012) as at 31 December 2019 (ASX Announcement 19 March 2020 by Mineral Resources Limited (ASX: MIN) was reported to be 3.1 million tonnes at 24.7% Mn, 23.7% Fe and 16.5% SiO_2 using a nominal Mn cut-off grade of 10%. (Watson, 2019).

This followed an earlier stated Mineral Resource Estimate carried out by HiTec Energy Ltd in 2009 of 4.9 million tonnes at 20.3% Mn and 25.4% Fe (using a 10% Mn cut-off). These estimates concentrated on the Southern Zone Area as this was the area where access was easiest and thus where most resource development and test pit activities has taken place.

The new November 2024 Resource estimate represents an increase in tonnage of 5.48 million tonnes compared to the 2019 estimate due to it being a resource conservatively constrained by a pit optimisation shell as part of an approach satisfying "reasonable prospects for eventual extraction" (JORC 2012). The pit optimisation carried out at this time assumed operating costs, beneficiation parameters and a long-term price assumption USD$7.125/dmtu (per 1% Mn) for a product grade of 37%Mn (or USD$263.625/dmt for 37%Mn). Material occurring outside of the pit optimisation shells appears to have been deemed unclassified at that time and thus not reported.

The new November 2024 estimate is not similarly constrained and has therefore incorporated significantly more of the mineralised zones particularly in the Northern Area with some addition of peripheral slightly lower grade zones in both the Southern and Northern Areas. The incorporation of more material volume has in turn resulted in a small reduction in the overall reported grades for primary element Manganese.

Using a 10% Mn lower cutoff the November 2024 mineral resource of Ant Hill is 4.48Mt @ 17.9% Mn Indicated and 4.10Mt @18.0% Mn Inferred for a combined total of 8.57Mt @ 17.9% Mn.

The general Manganese mineralisation wire-frame definition models used for the Ant Hill resource model development are shown in Figure 3 below.

Similarly, the mineralisation distribution displayed as +10% Mn grade shell from the block model is show in Figure 4. Similarly, the distribution of the Indicated and Inferred components of the reported resource {(Ind) pink & (Inf) blue} is show in Figure 5 below.

Figure 3 – Ant Hill - Oblique View (looking North-West) Showing Manganese Mineralisation Wire-Frames).

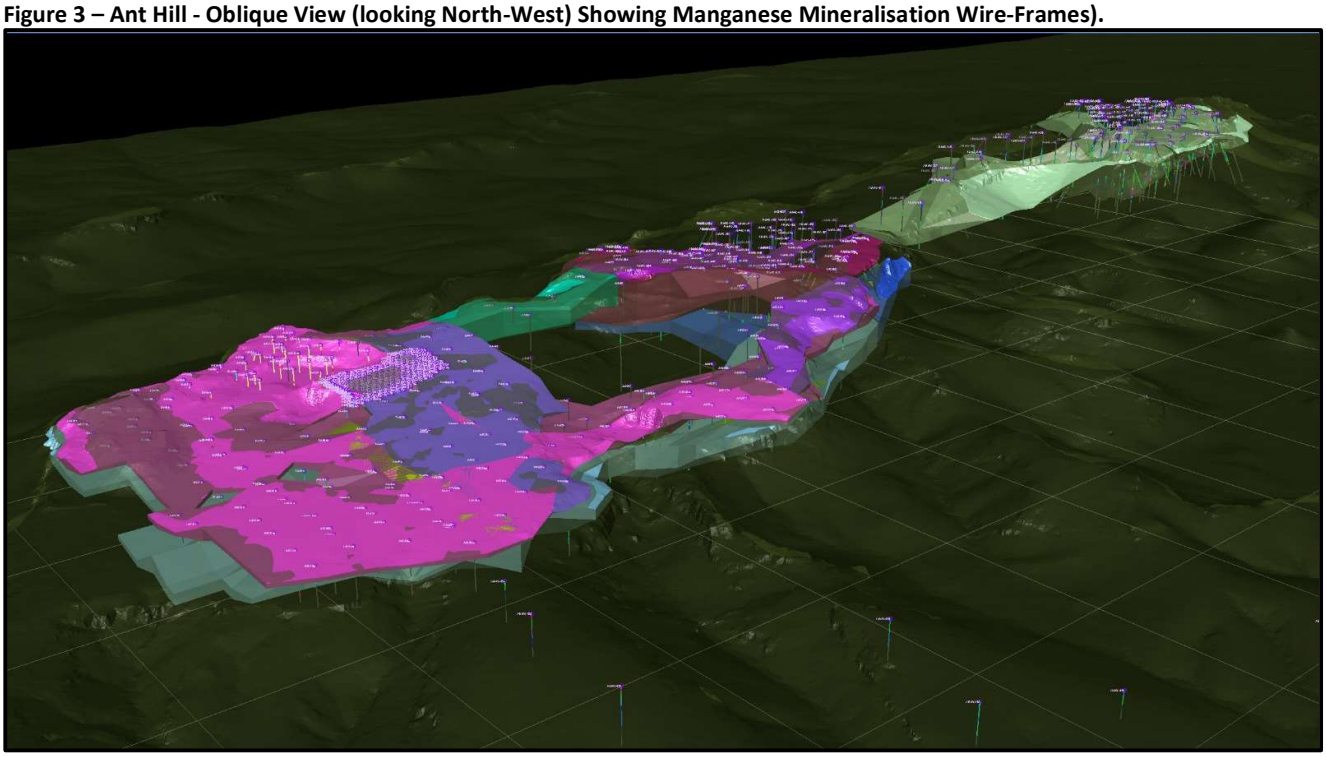


Figure 4 – Ant Hill - Oblique View Showing +10% Mn Grade Shell from Block Model (View looking towards North-East).

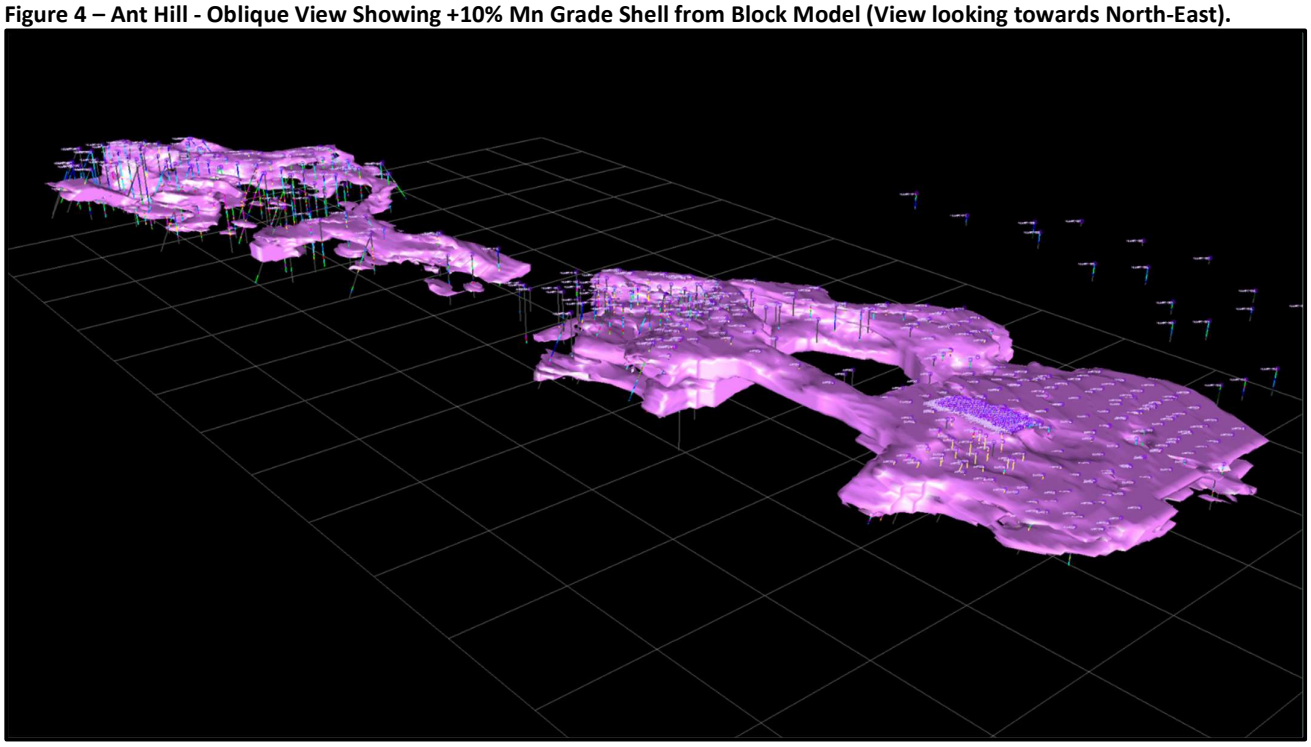
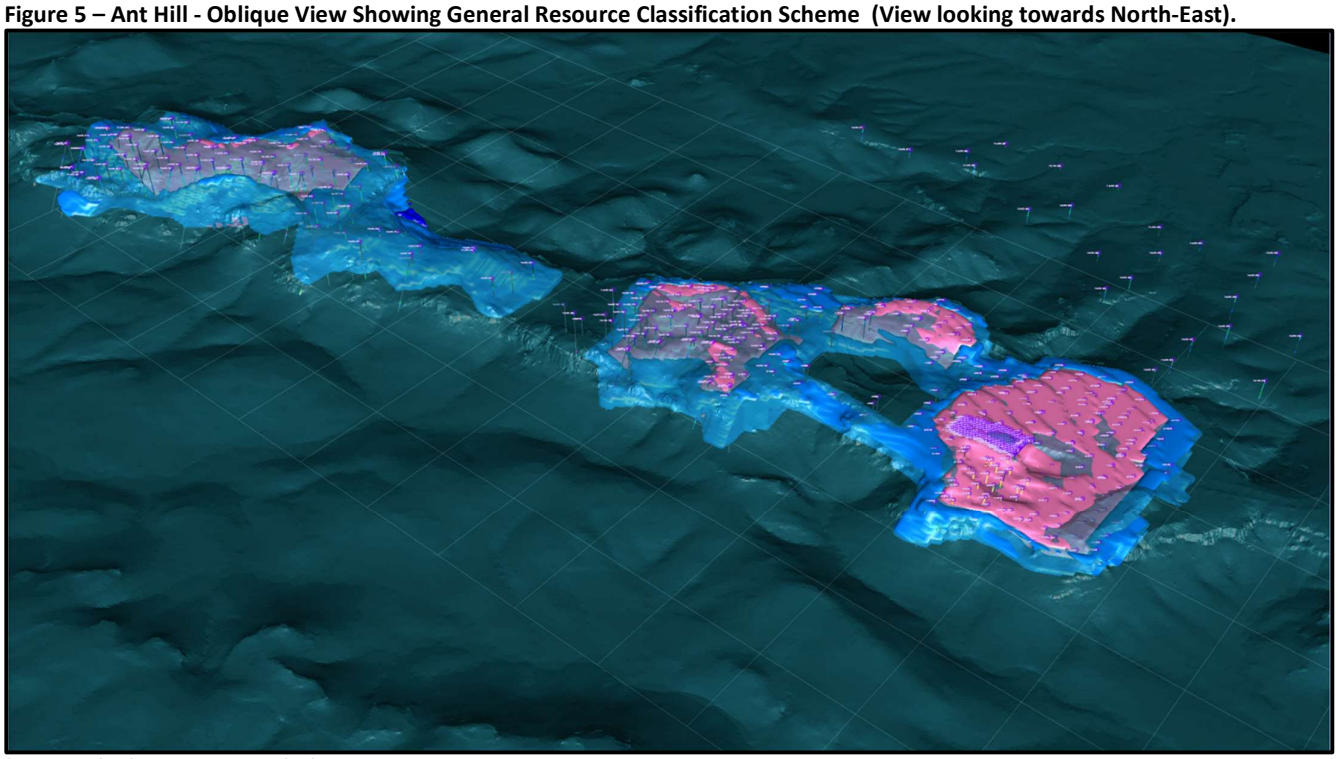


Figure 5 – Ant Hill - Oblique View Showing General Resource Classification Scheme (View looking towards North-East).



* RCAT = 2 (Ind) pink & RCAT = 3 (Inf) blue

Summary of JORC 2012 Table 1
A summary of JORC Table 1 (included as Appendix 1) is provided below for in-line with Mineral Resource Reporting and in compliance with requirements of ASX listing rule 5.8.1.

Mineral Resource Estimate
The Ant Hill Mineral Resource is based on 744 drill-holes including RC, Diamond and 262 closely spaced 'grade control' holes (informing local short-range levels of mineralisation variability). The majority of drill holes are Reverse circulation type used for exploration and 7 diamond core holes used for Geotechnical (2 holes) and metallurgical test work (5 holes). (Total metres drilled is 22,580m of RC, and 475m of DDH) The Manganese mineralization zones (containing mainly Pyrolusite and Manganite) were defined as a 3D wireframe based on drill-hole logging and analytical assay results which included total Mn%, Fe% SiO2% and Al2O3%.

Mineral Resource classification was based on a consolidation of drilling density, local sample (composite) density and local Kriging variance observation parameters in the block model.

Positively, HGMC notes that the entire Manganese bearing zone at Ant Hill is extensive and further in-fill drilling will likely confirm some extensions of the resource base. The continuity of the mineralization characteristics in conjunction with the relative uniformity of the spatial distribution of Mn mineralisation as well as the related Fe and SiO2 distribution add to the relative reliability of the estimated resources for Ant Hill.

Mineralised resources are reported for the majority of the Ant Hill deposit areas with view to defining some of the mineralisation volumes and grades suitable for either direct shipping ore and/or an off-site processing route to produce High Purity Manganese Sulphate Monohydrate.

Geology and Geological Interpretation
The Ant Hill manganese deposit, located 360 km by road from Port Hedland, lies within the Hamersley Basin near the eastern margin of the Pilbara Craton.

Ant Hill is a remnant basinal outlier of mid-Proterozoic sediments, primarily from the Manganese Group, Pinjian Chert Breccia, and Hamersley Group, which unconformably overlie the Nymerina Basalt of the Fortescue Group. The area features relatively undisturbed Archaean granite-greenstone terranes, with depositional platform and terrigenous sequences since the Archaean.

The deposit occurs as discrete podiform manganese bodies on the Ant Hill mesa, a fault-bounded, elongate feature approximately 1.4 km long, and 400 m wide in the Southern Zone area and ~175m in the Northern Zone area. The deposit outcrops with an approximate topographic relief of 50 m. The mesa has a prominent lateritic manganese and iron cap, particularly in its southern portion. Beneath this cap, iron- and silica-rich chemical sediments host several sub-horizontal manganese-rich layers, which petrographic studies suggest post-date the silicified host rock. Vertical faults cross-cut these layers, creating zones of mineralized fault breccia throughout the deposit.
Supergene processes enriched manganiferous shales of the Manganese and Hamersley Groups, forming sheet, scree, and irregular lensoidal replacement deposits. This enrichment occurred during a period of deep weathering following the uplift of the Hamersley Basin. Outcrops at Ant Hill consist mainly of mid-Proterozoic rocks, with laterites, colluvium, alluvium, and eluvium from the Tertiary and Quaternary periods in the surrounding area.

The Ant Hill deposit is a well-preserved example of manganese mineralization influenced by weathering and faulting, offering insights into the geological evolution of the Hamersley Basin.

Drilling Techniques

The first exploration drilling at Ant Hill was carried out by Valiant Consolidated in 1992 consisting of 79 percussion drillholes (open hole) totalling 1445m. This drilling was carried out on a nominal 20mE by 40mN grid over the southern quarter of the Ant Hill Mesa. Most of this same area was subsequently redrilled using Reverse Circulation(RC) drilling by BHP Engineering under commission by Sovereign Resources in 1998, and subsequently by Auvex Resources Ltd. This drilling was extended further north in 2008 on a closer spaced nominal 20mE x 20mN grid.

In 2014, the RC drilling coverage was extended over the northern two thirds of the Ant Hill mesa on a 25mE by 25mN grid by the Mesa Mining JV.

In 2020, the Company completed a programme of 7 diamond drillholes (5 to collect material for metallurgical test work and 2 for geotechnical analysis).

Sampling and Sub-sampling

The majority of samples from the recent Ant Hill drilling programs were collected through reverse circulation (RC) drilling, predominantly at 1m intervals, with some at 2m. Samples from all RC drilling programs were collected using face sampling hammer drill bits over 1m intervals, directed through a cyclone into large plastic bags.
Sub-samples were generated using either a three-way Jones riffle splitter or an inverted cone-splitter. Samples were collected via face-sampling hammer drill bits, directed through a cyclone into large plastic bags.

In the 1998 and 2008 programs, sub-samples were collected using a Jones riffle splitter. In 2014, a cone splitter was used, with most splits retained on-site. Composite sub-samples for assay were collected using a PVC pipe spear at 2m intervals in mineralized zones and 4m in waste. Later in 2014, 1m cone-split samples were submitted for assay in variable mineralization zones, while 2m spear samples remained standard for consistent high-grade material.

Diamond drilling collected HQ3 and PQ3 cores from the surface. While PQ3 core was used for metallurgical test work over bulk composite intervals, no detailed sub-sampling was conducted over shorter intervals. Core samples were primarily used for petrographic studies.

Statistical analysis of assay QAQC data confirmed that laboratory analyses met industry standards for precision and accuracy. All RC sub-samples were prepared and analysed by accredited laboratories in Perth using fusion XRF analysis, ensuring robust assay data for resource estimation despite some limitations in sampling methods.

Sample Analysis Method

Analytical test work for the Ant Hill project was conducted by Intertek Genalysis in Perth. Analyses included Fe, SiO_2, Al_2O_3, Na_2O, K_2O, CaO, MgO via XRF, with TGA for LOI. The 2008 and 2014 drilling programs also tested for Cl, P, S, and TiO_2.

Statistical analysis of assay QAQC data confirmed that analytical precision and accuracy met industry standards. All sub-samples were prepared and analysed by reputable Perth laboratories using fusion XRF, ensuring reliable data despite limitations in some sampling methods.

Estimation Methodology

The Manganese mineralisation zones were modelled using geological logging in conjunction with the analytical assay data (using a nominal ~5% Mn delineation cut-off). A 3D wire-frame model of the Manganese mineralization was constructed covering the entire drilled area of the Ant Hill deposit. A single zone of variable thickness was defined and referred to as the ZONX=1 & 2 Manganese Zone.

Pre-1998 drilling was used in mineralization interpretation and being of the same tenure of subsequent drilling and assaying programs and were reviewed on a local area basis and tested withing the block model interpolation runs leading to a consideration of this information as valid confirmation of mineralisation distribution in relevant domains.

The estimation was constrained within manually generated manganiferous mineralisation domains defined from the resource drill hole dataset using a Mn cut-off grade of nominally ~5% and guided by the earlier interpreted geology work by RAVEX Pty Ltd and information from the more recent Mineral Resources Limited 2019 resource estimation work. The Manganese zone mineralization zones were modelled using all available geological logging in conjunction with the analytical assay data.

A set of 3D wire-frame models of the Manganese mineralization was constructed covering the entire drilled area of the Ant Hill deposit. A single zone of variable thickness was defined and referred to as the ZONX=1 & 2 Manganese Zones. The Manganese mineralization wire-frames were coded to a block model with uniform block dimensions 4m(X) x 8m(Y) x 2m(Z) and volumetrically aligned on a coded '+/- 1% block-in/block-out' basis.

Detailed statistical spatial analysis investigations have been completed on the captured estimation assay (2m downhole composite) data set including probability distribution analysis as well as down-hole Variography. Using the derived semi-variogram parameters the various analytical element items were interpolated to the block model using the Ordinary Kriging technique. Interpolation was contained to withing the ZONX=1 & 2 Manganese zones only.

No high-grade cuts were applied to the composited sample data however a distance restriction threshold at approximately the 98th to 99th percentile level was applied during the Ordinary Kriging interpolation. This distance of interpolation restriction distance was set to 20m in order to constrain the area of influence of any isolated high grade 'outlier' composites. All interpolation runs used a 2-pass search strategy to interpolate block items Mn%, Fe%, SiO_2% and Al_2O_3%.
Orientated search "ellipsoids" were used to select composite data for interpolation with orientations based on mineralization zone orientation in conjunction with derived semi-variogram parameters ensuring the longest-range structures matched the typical drilling density for the majority of the mineralised area.

A single block model was constructed for the entire Ant Hill deposit area. The Block Model coordinate boundaries (GDA 94 Zone 50 Grid System) are;

251,200 → 252,700m E - (375 x 4m blocks)
7,554,400 → 7,556,720m N - (290 x 8m blocks)
360 → 520m RL - (80 x 2.0m benches)

Bulk Density
Previously BHP conducted density measurements on 50 rock samples (~0.5 kg each) from outcrops and quarry faces using the weight-in-air/weight-in-water method. Additional pycnometer tests were performed on 84 chip/pulp samples from three RC holes. HiTec Energy Ltd, through the Mesa Mining Joint Venture with Auvex Resources Ltd, tested the density of 26 rock samples, 12 bulk metallurgical test samples, and assayed remnants from sizing tests, though the specific measurement method was not documented.

This test work in conjunction with the Manganese grade (Mn%) allowed for the generation of an average bulk density assignment matrix to be developed for a range of Mn% concentration withing the deposit. The following matrix describes the grade and bulk density assignments used.

Block Grade Range (Mn%)	Bulk Density Assignment (tonnes / cubic Metre)
0-10	2.6
10-15	2.8
15-20	3.0
20-25	3.2
25-30	3.4
30-35	3.6
35-40	3.8
40-45	4.0
45-50	4.1

Cut-off Grade (Reporting)

A cut-off grade of 10% Mn was used for the stated Mineral Resource estimate, which is in line with the previously reported Mineral Resource estimates. At this lower cutoff the overall reported grades for Manganese (and the associated 'contaminant' elements Fe, SiO_2 and Al_2O_3) are in line with likely mine off-take or process input material.

Resource Classification

The Ant Hill Mineral Resource was classified as Indicated and Inferred, based predominantly on local drilling density and also taking into account the level of geological understanding and continuity of the deposit.

A portion of the contiguous mineralisation within a distance range of from 0-30m from drill-hole point of observation was assigned as Indicated Resources. Similarly, a proportion of contiguous material with points of observation from ~30m out to a maximum of nominally 50-60m was designated as Inferred Resources. All categorised resources are contained within a mineralisation wire-frame hard boundary. Also used as part of the classification process were other ancillary block model interpolation parameters including 'number of composites' within search ellipsoid and the local 'kriging variance' assigned on an individual block basis. These parameters all together help assign an estimation confidence level to parts of the block model which are then condensed to a RCAT code idem describing mineralisation classification levels.

Other modifying factors including relative reliability of geologic interpretation and the quality of sampling and associated QAQC data are considered as part of the Classification process. The Ant Hill Mineral Resource Estimate as modelled and reported appropriately reflects the view of the Competent Person.

Mining Factors

HGMC notes there has been some previous limited scale mining and production activities at Ant Hill but no mining assumptions were designated for the current Manganese mineral Resource Estimate. It is assumed that due to the outcropping and shallow geometry of mineralization and it's bulk commodity characteristics that a low 'ore-waste' strip ratio is evident and standard open pit truck and excavator mining methods will be used for mining.

Metallurgical Factors

Mineral processing test work at laboratory scale was carried out by ALS Metallurgy Pty Ltd specialising in integrated mineral processing solutions and led to the successfully production of High Purity Manganese Sulphate Monohydrate (HPMSM) (ASX Market Announcement 15 November 2023). Post the 15 November 2023 ASX announcement, the Company designed, constructed and is operating its own dedicated Pilot Plant, focused on producing samples of

HPMSM for potential Off-take Partners.

A sub-set of the reported resource of suitable quality with respect to Fe, SiO2 and Al2O3 content may be required prior to any mining schedule decision making. For mineral processing considerations, material type definitions will be necessary prior to determining the likely processing route to produce any given saleable Manganese concentrate or compound products, including HPMSM.

Competent Person's Statement

The information in this report that relates to mineral resource estimation is based on work completed by Mr. Stephen Hyland, a Competent Person and Fellow of the AusIMM. Mr. Hyland is Principal Consultant Geologist with Hyland Geological and Mining Consultants (HGMC) and holds relevant qualifications and experience as a qualified person for public reporting according to the JORC Code (2012) in Australia. Mr. Hyland is also a Qualified Person under the rules and requirements of the Canadian Reporting Instrument NI 43-101 Mr. Hyland consents to the inclusion in this report of the 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 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.

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 Resource Development Group Limited . 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.

APPENDIX 1: JORC COMPLIANT MANGANESE RESOURCES

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

ANT 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.*	Valiant Consolidated Ltd completed 78 open-hole percussion drill holes in 1992 for 1,435m. Drill hole ID's were designated AHP. Sovereign Resources NL in association with BHPE completed 74 RC drill holes using face sampling hammers in 1998 for 2,018m. Drill hole ID's were designated BAH. HiTec Energy Ltd through its Mesa Mining Joint Venture with Auvex Resources Ltd completed 96 RC drill holes using face sampling hammers in 2008 for 2,966m. Drill hole ID's were designated AHRC. A total of 2 Diamond holes using HQ triple tube were completed in 2008 for 14.1m. Drill hole ID's were designated AHD. Mineral Resources Ltd through its subsidiary Process Minerals International (PMI) completed 236 RC drill holes using face sampling hammers in 2014 for 11,489m. Drill hole ID's were designated 2014AHRC.

Criteria	JORC Code explanation	Commentary
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	No measurement tools other than for drill-rig positioning and drilling angle set-up were used by the geology team at the drill rig.
	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 commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	Open-hole percussion and RC drilling was used to obtain 1 m and 2 m sample intervals. All drill samples were collected from a fixed cyclone. Pre-2004 RC samples were obtained via a 3 way Jones riffle splitter. Post-2004 RC samples were obtained via an inverted cone splitter. Two sets of samples were collected into calico bags for each interval. A single set of calicos was dispatched to the lab for analysis. All samples were sent to the Intertek Genalysis commercial lab in Perth for preparation for XRF and TGA analysis. Sample weights were not recorded in the field or at the lab for any of the drill hole samples.
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).*	Open-hole percussion was used to collect AHP drill samples. Reverse circulation with face sampling hammers was used to collect BAH, AHRC and 2014 AHRC drill samples. Drill bit sizes were 5.25 inch diameter. HQ triple tube diamond drilling was used to collect AHD core samples.
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 very good. No qualitative visual measurements were recorded for RC recovery by the attending rig geologists.

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Beyond the standard drilling procedures, it is not known what additional measures were taken to maximise sample recovery and ensure sample representivity at the drill rig with respect to some of the historic drilling programs.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No direct observations are available to determine whether there is bias related to sample recovery. The relatively limited number of comments in thedrill logs regarding sample loss suggests that recovery was not an issue. The majority of drill-holes are relatively short and thus dry drilling conditions are present.
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.*	AHP and BAH drill samples were re-logged in 2011 using RAVEX Pty Ltd codes. Re-logging was carried out using chip tray samples. The RAVEX logging recorded lithology, colour and rock type. All chip samples have been geologically logged to a level of detail to carry out a geological interpretation that supports the Mineral Resource estimation method.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All logging is qualitative. Core and drill chip tray photography was carried out as part of the logging procedure.
	The total length and percentage of the relevant intersections logged.	All sample intervals are logged in full.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Core was collected for petrographic studies.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	AHP and BAH samples were riffle split. AHRC and 2014AHRC samples were cone split. All drill samples are from above the water table.

Criteria	JORC Code explanation	Commentary
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	All RC samples are collected in labelled bags which were stored onsite or sent for analysis. RC cuttings were taken at regular intervals. Samples were generated by sending dry drill cuttings through a riffle or inverted cone splitter.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	The rig sampling system was cleaned out during rod changes and again at the end of the 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 duplicate results show reasonable reproduction of sample grades across the major analytes with no obvious grade bias between the primary and duplicate sample grades.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample weights generated using +5 inch (RC) face sampling hammers per 1 m sample interval are considered appropriate in size to accurately represent the mineralisation style (sediment-hosted massive manganese).
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.*	Assaying was carried out in line with the procedures set down by the Intertek Genalysis commercial lab in Perth. The technique is consider a total analysis with measured analyte oxides summing to approximately 100%.
	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 analyzed using X-Ray Spectrometers and Thermogravimetric analyzers. AHP, BAH AHRC & 2014AHRC drill hole samples were analyzed for Al_2O_3, CaO, Fe, K_2O, LOI, MgO, Mn, Na_2O and SiO_2. AHRC and 2014AHRC drill hole samples were additionally analyzed for As, Ba, Cl, Co, Cr, Cu, Fe_2O_3, Ni, P, S, Sn, TiO_2, Total, V and Zn.

Criteria	JORC Code explanation	Commentary
		XRF and TGA analysis is industry standard for iron and manganese mineralization. As such, the competent person considers XRF and TGA analysis suitable for Resource estimation studies.
	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.	BAH and AHRC drill hole assays were submitted to Genalysis where standards, lab coarse repeats, blanks and pulp repeats were taken at regular intervals. The raw QAQC data is not available, however the BHPE resource report concluded that for the BAH holes the assays were within expected tolerance limits, and the 2009 Geologica resource report concluded that the variability of the AHRC standard assays is very low, while most of the repeat standards were within 5% of the original value. 2014AHRC drill hole assays were submitted to Intertek Genalysis where lab standards, field duplicates and pulp repeats were taken at regular intervals. The reproducibility of the field duplicates was good with no obvious grade bias.
Verification of sampling	*The verification of significant intersections by either independent or alternative company personnel.*	A significant number of the drilled intersections have been verified by Mr Watson of Mineral Resources Lth (MRL). Comparisons were made between logged lithology and geochemistry versus photographed RC chip trays. No major issues were identified.
	The use of twinned holes.	There are no twinned holes for comparison but a set of close spaced 'grade control' holes have provided information regarding the short range variability of mineralisation.
	Documentation of primary data, data entry procedures, data verification, data storage (and assaying physical and electronic) protocols.	Logging was completed on paper at the drill rig and later digitised into excel. Drill hole detail along with sampling information was entered into and validated with Micromine 2018 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.*	AHP drill holes were set out on a local grid. No survey reference control files are available and only 4 drill holes had their locational data verified. BAH and AHRC drill hole collars were picked up using a Leica System Real Time Kinematics system. 2014AHRC drill hole collars were picked up with a GPS. RL values were generated by dropping these locations onto the topographic surface. No downhole surveys were carried out on the drill holes. 437 drill holes were vertical and 96 were angled. The maximum drill depth was 102m with a mean depth of 37m and a median depth of 30m. Given that the majority of drilling is vertical and that the average drill depth is short, the risk of using unsurveyed drill holes for estimation is considered low.
	Specification of the grid system used.	The grid system used is MGA Zone 51 (GDA 94) for surveying pickups, as well as for all modelling work.
	Quality and adequacy of topographic control.	The topographic surface has been derived from a ground based survey carried out in E-W traverses by a registered surveyor.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Drill hole spacing over the deposit is nominally 20m along strike by 20m across strike.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	The data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralised domains to support the definition of

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	Inferred and Indicated Mineral Resources under the 2012 JORC code once all other modifying factors have been addressed.
	Whether sample compositing has been applied.	No sample compositing has been applied at the raw data stage.
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 dominant drilling direction is vertical (-90°) with a minor component of angled drill holes designed to test the edge of the mesa where drill rig access is not possible. Overall the drilling is roughly perpendicular to the strike and dip of the mineralisation, ensuring intercepts are close to true-width.
	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 considered that the drilling orientation has introduced a sampling bias with the style of deposit concerned.
Sample security	*The measures taken to ensure sample security.*	Samples are 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 are sent with the samples as well as emailed to the laboratory, and are used to keep track of the sample batches.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits on sampling techniques and data have been completed.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Ant Hill Deposit is located on M46/238 approximately 120km southeast of Marble Bar. The current registered holder of the tenements is Auvex Resources Pty Ltd, a wholly owned subsidiary of Mineral Resources Limited, however Mn Battery Minerals Pty Ltd, a wholly owned subsidiary of Resource Development Group Limited, is the beneficial owner. M46/238 was invalidly granted to the extent that it affects native title as it was granted during a period in which the State Government was not enforcing compliance with procedural requirements under the *Native Title Act 1993* (Cth) as a result of the decision in *Western Australia v Ward* (2000) 170 ALR 159 and prior to the High Court overturning that decision in *Western Australia v Ward* (2002) 213 CLR 1. Normal Western Australian State royalties apply.
	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.	M46/238 is the subject of forfeiture proceedings initiated by Black Range Mining Pty Ltd on 10 May 2017 pursuant to 98 of the *Mining Act 1978* (WA). The forfeiture proceedings are being vigorously defended.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Exploration drilling was carried out BHPE for Valiant Consolidated in 1992. Exploration was carried out by Sovereign Resources in 1998. Exploration was carried out by HiTec Energy Ltd through its Mesa Mining Joint Venture with Auvex Resources in 2008.

Criteria	JORC Code explanation	Commentary
Geology	*Deposit type, geological setting and style of mineralisation.*	Ant Hill is a remnant basinal outlier of mid-Proterozoic sediments comprised of the Manganese Group, the Pinjian Chert Breccia, and the Hamersley Group. The sediments form a broad NW plunging syncline and unconformably overlie the Fortescue Group which is locally dominated by the volcanics of the Nymerina Basalt. The manganese deposit occurs as a number of discrete podiform bodies of various sizes on the Ant Hill mesa. The mesa is a fault bounded elongate feature approximately 1.4km long and 400m wide with a maximum topographic relief of 50m. There is a prominent cap of lateritic manganese and iron at surface on the southern portion of the mesa. Underlying the lateritic cap and running the length of the mesa is a package of iron and silica rich chemical sediments which host several discrete sub-horizontal manganese rich bodies. Petrographic studies suggest that the manganese and iron oxides post-date the silicified host rock. The silicified host rock and the sub-horizontal manganese rich bodies are cross-cut by a series of vertical faults resulting in zones of mineralised fault breccia throughout the deposit.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *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.*	This release is in relation to a Mineral Resource estimate with no exploration results being reported.

Criteria	JORC Code explanation	Commentary
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Not applicable as there are no exploration results reported as part of this statement.
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.*	Not applicable as there are no exploration results reported as part of this statement.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Not applicable as there are no exploration results reported as part of this statement.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable as there are no exploration results reported as part of this statement.
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 (eg 'down hole length, true width not known').*	The dominant drilling direction is vertical (-90°) with a minor component of angled drill holes designed to test the edge of the mesa where drill rig access is not possible. Overall the drilling is roughly perpendicular to the strike and dip of the mineralisation, ensuring 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 drill hole collar locations and appropriate sectional views.*	Not applicable as there are no exploration results reported as part of this statement.

Criteria	JORC Code explanation	Commentary
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.*	Not applicable as there are no exploration results reported as part of this statement.
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.*	No other material exploration data to report.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	An infill drill program is planned to extend mineralisation across the deposit, and upgrade areas of inferred material.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	The geological interpretation is detailed further up in the report.

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.*	Data was provided by Resource Development Group Limited (RDG) . RDG has relied upon data comprehensively compiled and supplied previously by RAVEX Pty Ltd and other consultants. Data was provided in CSV and Excel format and includes some of the recent 'raw' assay reporting file reports from the assay laboratories.
	Data validation procedures used.	The database has been reviewed and validated by HGMC using a standardised error checking approach when loading through software to working block model project area.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	A recent site visit by the competent person (HGMC) was conducted to the Ant Hill site and to other nearby infrastructure from November 18-19th 2024.
	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 high. Continuity and mineralisation boundaries are informed by geological-structural interpretations identified through field mapping, drill hole assays and a manganese grade cut-off of ~5% Mn. Previous near surface mining in various location of the deposit, particularly the Southern Area to-date lends support and confirmation to

Criteria	JORC Code explanation	Commentary
		the understood geology and interpreted Manganese mineralisation distribution.
	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 the previous geologic modelling by RAVEX Pty Ltd and RDG. Emphasis has been given to align mapped or logged features with associated geochemical assaying.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	The Ant Hill mineralisation is in relative terms not complex and reasonably predictable. The generation of an alternative deposit geology interpretation with respect to structural features and associated mineralisation is considered unlikely.
	The use of geology in guiding and controlling Mineral Resource estimation.	The Mineral Resource estimate has been generated by HGMC using a combination of sectional ad plan view interpretations based on earlier mineralisation definition work initiated RAVEX Pty Ltd and RDG . Instead of using a 10% Mn mineralisation delineation (wireframe a lower 5% Mn definition regime has been used to define a more complete view of mineralization volumes present.
	The factors affecting continuity both of grade and geology.	RDG has noted an interpreted vertical cross-cutting set of faults oriented at ~050° which may have an effect of grade continuity of the manganese mineralisation. Upon review by HGMC these faults are not considered to be always clear and the amount of mineralisation disruption associated with them often does not appear significant.
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.*	The manganese mineralisation trends roughly north-south and has been modelled as two (2) broad designated Area Zones designated generally as the Northern Zone Area and the Southern Zone Area.

Criteria	JORC Code explanation	Commentary
		The majority of the Manganese mineralisation is comprised of surficial lateritic mineralisation zones and multiple buried sub-horizontal pods which daylight on the eastern wall of the mesa. The total Manganese mineralisation strike length is approximately 1400m. The across strike width is in the ~400m in the Southern Zone area and approximately 175m in the Northern Zone area and mineralisation thickness ranges from 10m to 30m and possibly up to ~40 thick in the northernmost part of the Northern Zone area.
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.*	Using geological logging in conjunction with the analytical assay data a 3D wire-frame model of the Manganese mineralization was constructed. A single zone of variable thickness was defined and referred to as the ZONX=1 & 2 for the Southern Zone Area and the Northern Zone Area respectively. The Manganese mineralization wire-frame was coded to a block model with uniform block dimensions 4m(X) x 8m(Y) x 2m(Z) and volumetrically aligned on a coded +1% 'block-in/block-out' basis. Statistical analysis was carried out for all analytical elements withing the main ZONX=1&2 Manganese zones which were also subdivided to define structural variations into 9 separate lithology and mineralization orientation domains (LITHG=1→9). Part of the statistical review included Probability distribution analysis as well as down-hole variography. Using the derived semi-variogram parameters the various analytical element items were interpolated to the block model using the Ordinary Kriging technique. Interpolation was contained to within the ZONX=1&2 Manganese zones and a localised LITH domain code (LITH=1→9).

Criteria	JORC Code explanation	Commentary
		The Interpolated items included : MN%, Fe% SiO_2% & Al_2O_3%. Small outlier 'cut-off' grade restrictions were applied to outlier composite grades above a nominal 98th to 99th percentile level. Orientated search "ellipsoids" were used to select composite data for interpolation with orientations based on local mineralization zone orientation (defined by thew LITH domain code) in conjunction with derived semi-variogram parameters ensuring the longest-range structures matched the typical drilling density for the majority of the mineralised area. A single search ellipsoid was used for interpolation of grades using a two (2) pass interpolation run series for all Manganese zones and associated LITH domains. No check estimate using different methods has been used for the Ant Hill Manganese deposit since similar past estimates have already been done. It is expected a 'parallel' estimation method will not produce results that will depart significantly from that presented in this reporting. In conjunction with Manganese it is possible that some Iron as a minor by-products could be recovered from the Ant Hill deposit. No other materials are being considered. The presence of potential contaminant elements has been considered Including Fe, SiO_2 and Al_2O_3, however their concentrations are deemed not to cause significant problems with respect to resource development. The adopted block size of 4m(E) x 8m(N) x 2m(RL) was selected to maintain the resolution of the mineralised zone which is observed to locally vary in thickness. The block size is relatively small with respect to the majority of drillhole spacing however it is intended as a reasonable

Criteria	JORC Code explanation	Commentary
		compromise as a 'Selective Mining Unit' (SMU) when considering the zone thickness variation and the block model bench 'resolution'. No other assumptions were made regarding selective mining units other than that which may be suitable for typical open pit operations using Truck and Excavator equipment. General observations have been made about the correlation between the various analytical variables such as Fe, SiO2 & Al2O3 as these are common components in the Manganese mineralisation. The Ant Hill deposit is a well-preserved example of manganese mineralization influenced by weathering and faulting, offering insights into the geological evolution of the Hamersley Basin. Supergene processes enriched manganiferous shales of the Manganese and Hamersley Groups, forming sheet, scree, and irregular lensoidal replacement deposits. This enrichment occurred during a period of deep weathering following the uplift of the Hamersley Basin. Outcrops at Ant Hill consist mainly of mid-Proterozoic rocks, with laterites, colluvium, alluvium, and eluvium from the Tertiary and Quaternary periods in the surrounding area. The ZONX=1&2 Manganese mineralization wireframes are used to directly constrain all subsequent block model coding and is treated as a hard boundary for all analytical item interpolation. All interpolated data in the block model was checked visually and by statistical analysis to ensure no departure from the underlying data-set had occurred.

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.	A set of previous Ordinary Kriging interpolated Block Models and related Inverse Distance Squared (ID2) Block Models have been generated and are used as a part of resource estimation checking. Previously these checks have produced confirmation of the preferred Ordinary Kriging (OK) results.
	The assumptions made regarding recovery of by-products.	No by-products are deemed to be present or in significant quantity to warrant reporting as a part of the likely economic mineralised resource.
	Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	Apart from Fe, SiO2 and Al2O3 no other analytes were considered deleterious and warranting estimation.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Block dimensions are 4m (E-W) by 8m (N-S) by 2m (Vertical) with a block proportion code ZONX% item (0-100%) was used to account for and accurately defining block volumes coded from the manganese mineralisation wire-frames. No sub-cells or sub-blocks are used in this Ant Hill resource block model. Block sizes are nominally one quarter of the lateral sample spacing in the E-W direction, one half of the lateral sample spacing in the N-S direction and 2 metres in the vertical.
	Any assumptions behind modelling of selective mining units.	The vertical block size was selected to align with likely future open pit mine bench heights.
	Any assumptions about correlation between variables.	For the Horizontal mineralisation pods, the Mn analyte is weakly and negatively correlated with Fe, and strongly and negatively correlated with SiO_2.

Criteria	JORC Code explanation	Commentary
		For the Lateritic mineralisation, the Mn analyte is moderately and negatively associated with Fe, and strongly and negatively correlated with SiO_2. The variograms for Mn and ancillary elements were used to inform all estimated block item variables.
	Description of how the geological interpretation was used to control the resource estimates.	The geological interpretation in conjunction with geochemistry was used to define the Manganese mineralisation domains. The mineralisation domain and local LITH domains were used to constrain composite data and model blocks during the block model interpolation process.
	Discussion of basis for using or not using grade cutting or capping.	No high-grade cuts were applied to the composited sample data however a distance restriction threshold at approximately the 98th to 99th percentile level was applied during the Ordinary Kriging interpolation. This distance of interpolation restriction distance was set to 20m in order to constrain the area of influence of any isolated high grade 'outlier' composites. The same outlier grade restriction regime was applied during block model interpolation for items Mn%, Fe%, SiO2% and Al2O3%.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Validation of the final resource has been carried out using Drill hole to block grade comparison on a sectional basis, swathe/trend plot validation, and comparing localised model mean grades versus composite mean grades by domain. The validation process has not showed any major or unexpected variations. Some historic reconciliation data from pilot scale mining of material from mostly the Southern Zone area has been used to broadly validate the validate the modelled grades within part of the Ant Hill Deposit and to a small extent has informed and confirmed the estimation process results.

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.*	Reported Mineralization tonnages have been estimated on a dry material basis. No moisture adjustment values were applied to the block model.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	A cut-off grade of 10% Mn is 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 open pit. Some edge dilution from blast movement and during digging is expected. External mining dilution has not been factored into the Resource Model as hard boundaries have been applied to the mineralisation zones using the 3D mineralisation wireframes used for the block model development.
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 Ant Hill deposit is expected to undergo crushing, screening and heavy media separation to produce a manganese mineral product concentrate or with further processing a High Purity Manganese Sulphate Monohydrate (HPMSM) compound product.
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*	Barren or waste material 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 low level and will be correctly stored within the waste dump landform.

Criteria	JORC Code explanation	Commentary
	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 should be reported with an explanation of the environmental assumptions made.	More than 95% of all waste material in the project area has an indicative Sulphur concentration value of below 0.3%. PAF forming material within the waste rock is not expected to be an issue for mining or waste storage.
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.*	Previously BHP Exploration conducted density measurements on 50 rock samples (~0.5 kg each) from outcrops and quarry faces using the weight-in-air/weight-in-water method. Additional pycnometer tests were performed on 84 chip/pulp samples from three RC holes. HiTec Energy Ltd, through the Mesa Mining Joint Venture with Auvex Resources Ltd, tested the density of 26 rock samples, 12 bulk metallurgical test samples, and assayed remnants from sizing tests, though the specific measurement method was not documented. This test work in conjunction with the Manganese grade (Mn%) allowed for the generation of an average bulk density assignment matrix to be developed for a range of Mn% concentration withing the deposit. A default waste material bulk density of 2.6 tonnes / cubic metre has been assumed except where previously interpreted BIF, MST material type zones have been specifically defined as per summary following below.
	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.	The following matrix describes the grade and bulk density assignments used within the Manganese Mineralisation Zones (ZONX=1&2). Mn% | Density (insitu) 0-10 | 2.6 10-15 | 2.8 15-20 | 3.0

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
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<tr><td>20-25</td><td>3.2</td></tr>
<tr><td>25-30</td><td>3.4</td></tr>
<tr><td>30-35</td><td>3.6</td></tr>
<tr><td>35-40</td><td>3.8</td></tr>
<tr><td>40-45</td><td>4.0</td></tr>
<tr><td>45-50</td><td>4.1</td></tr>
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<tr><td></td><td>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</td><td>The following density values have been assigned to the deposit as a general precursor material type designation and then further modified where necessary according to the above table by relating an equivalent density to the average manganese grade of the domain. Waste domain densities are assumed values:

Rock Type — Dry Bulk Density (t/m^3)
BIF — 2.5
MST — 2.3
MIN_LAT — 3.2
MIN_HOR — 3.2</td></tr>
<tr><td>Classification</td><td>The basis for the classification of the Mineral Resources into varying confidence categories.</td><td>The Ant Hill Mineral Resource was classified as Indicated and Inferred, based predominantly on local drilling density and also taking into account the level of geological understanding and continuity of the deposit.

A portion of the contiguous mineralization within a distance range of from 0-30m from drill-hole point of observation was assigned as Indicated Resources. Similarly, a proportion of contiguous material with</td></tr>
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Criteria	JORC Code explanation	Commentary
		points of observation from ~30m out to a maximum of 50-60m was designated as Inferred Resources. All categorised resources are contained within a mineralisation wire-frame hard boundary. Also used as part of the classification process were other ancillary block model interpolation parameters including 'number of composites' within search ellipsoid and the local 'kriging variance' assigned on an individual block basis. These parameters all together help assign an estimation confidence level to parts of the block model which are then condensed to a RCAT code idem describing mineralisation classification levels. Other modifying factors including relative reliability of geologic interpretation and the quality of sampling and associated QAQC data are considered as part of the Classification process. The Ant Hill Mineral Resource Estimate as modelled and reported appropriately reflects the view of the Competent Person.
	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 considered in context.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Ant Hill Mineral Resource Estimate as modelled and reported appropriately reflects the view of the Competent Person.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	A recent in-house reviews of this Mineral Resource estimate has been carried out by RDG with no immediate or major concerns or queries identified or referred to the competent person.

Criteria	JORC Code explanation	Commentary
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.*	Resource Estimation is qualitative in nature and based on the general approach used by resource estimation practitioners to indicate in relative terms the level of risk or uncertainty that may exist with respect to resource estimation which have cumulative effects on projected outcomes. Confidence in the estimate is based on the quality and distribution of the underlying data, continuity of the mineralisation and efficiency of the kriging algorithm. The Ant Hill Manganese Mineral Resource estimate has been assessed though a methodical approach and is in line with industry best practice standards resulting in an appropriate and robust resource classification in accordance with the JORC Code (2012 Edition). All modifying factors considered are described in Section 1 and Section 3 of Table 1.
	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 Ant Hill Resource is a global estimate.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Production data from bulk sample mining and pilot scale mining is limited, and there is insufficient data available to assess the reconciliation aspects directly for block model performance comparisons.