Greenvale MINING LIMITED

ASX ANNOUNCEMENT **30 November 2021**

DRILLING GATHERS MOMENTUM AT GEORGINA BASIN IOCG PROJECT, NT

First diamond hole completed and a second underway, with an exciting pipeline of new prospects identified in the central tenement group

Highlights:

- **First hole targeting the prominent "Twin Peaks" West magnetic-gravity anomaly now complete to a final depth of 796m.**
- **KNRDD002 has intersected strongly altered sedimentary rocks and breccias, consistent with oxidised style Tennant Creek IOCG systems.**
- **The hole was extended ~80m beyond its designed depth due to prospective veining and alteration observed in the core from 720m down-hole. Assays expected in late 2021 or early in the New Year.**
- **1,000m now complete as part of the maiden diamond drill program.**
- **Geophysical data received from the recent airborne geophysical survey over the central tenement EL32283 and applications 32284 and 32820.**
- **Gravity and magnetic inversion modelling completed on EL32295.**
- **Interpretation of aeromagnetic and gravity data adds multiple new high-priority targets to the drill-testing pipeline within the exciting central tenement group.**

Figure 1: Experienced drill contractors, Eagle Drilling NQ Pty Ltd, on hole KNRDD002 at the Georgina Basin IOCG Project

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Greenvale Mining Limited (ASX: **GRV**, "**Greenvale**" or "**the Company**") is pleased to advise that it has made a strong start to its maiden diamond drilling program at the 100%-owned **Georgina Basin IOCG Project** in the East Tennant area of the Northern Territory.

Greenvale continues to lead the way in exploring the East Tennant area with over 1,000m of diamond drilling already completed as part of its maiden drill program with the successful completion of the first diamond drill hole (KNRDD002) to a final depth of 796.6m.

KNRDD002 is the first of an initial four-hole drill program targeting the exciting "Twin Peaks" coincidental magnetic and gravity anomalies located within tenements EL32282 & EL32296.

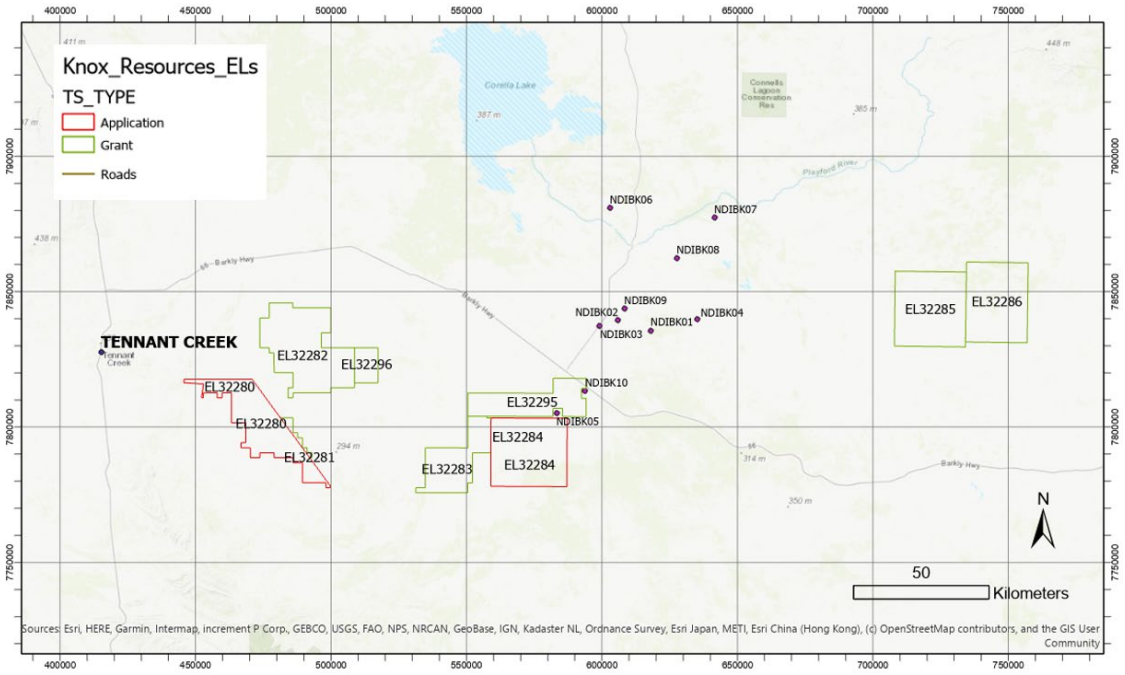

Figure 2: Greenvale Mining's 100%-owned Georgina Basin IOCG Project Tenement Locations.

Drill-hole KNRDD002 intersected a sequence of metasedimentary rocks and breccias through the target area, with hematite(-talc), hematite-quartz-chlorite and sericite alteration observed, in line with expectations.

The rock types observed are consistent with the regionally important Warramunga Formation, and the alteration observed is similar to the oxidised end-member Tennant Creek-style IOCG deposits (Figure 3).

Oxidised end-member Tennant Creek deposits, such as Nobles Nob and Eldorado, tend to be sulfur-poor and hematite-rich, with oxidation of magnetite to hematite[1].

1. Reduced and Oxidized Au-Cu-Bi Iron Oxide Deposits of the Tennant Creek Inlier, Australia: An Integrated Geologic and Chemical Model, ROGER G. SKIRROW AND JOHN L. WALSHE, Economic Geology Vol. 97, 2002, pp. 1167–1202.

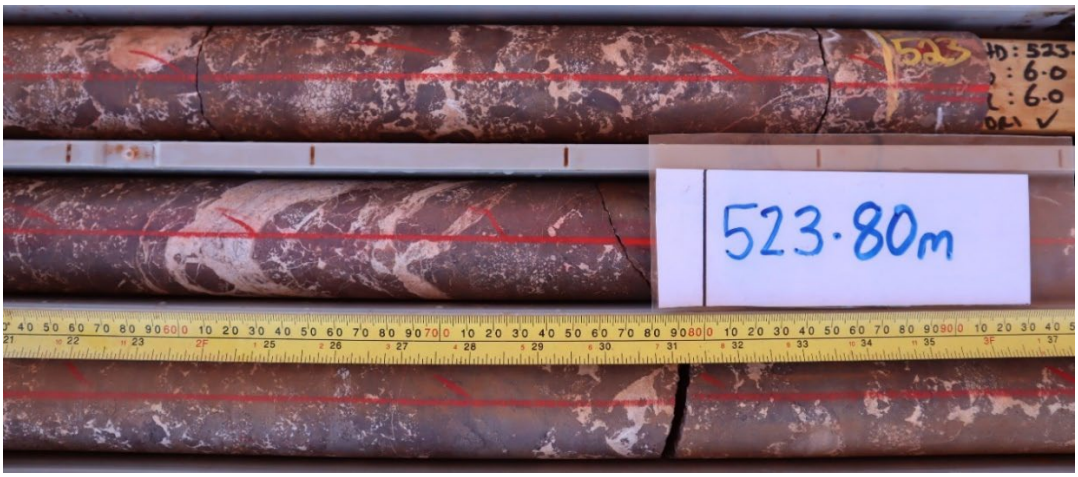

Figure 3: Quartz-hematite (iron-oxide mineral) altered breccia

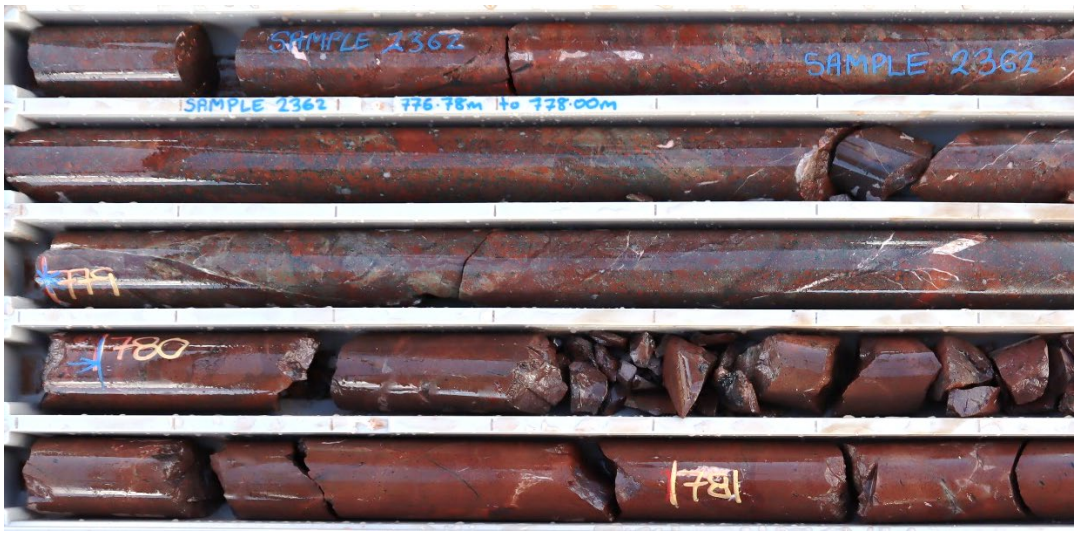

Figure 4: Hematite (iron-oxide mineral) altered breccia and sedimentary rocks between 776.78 and ~781m

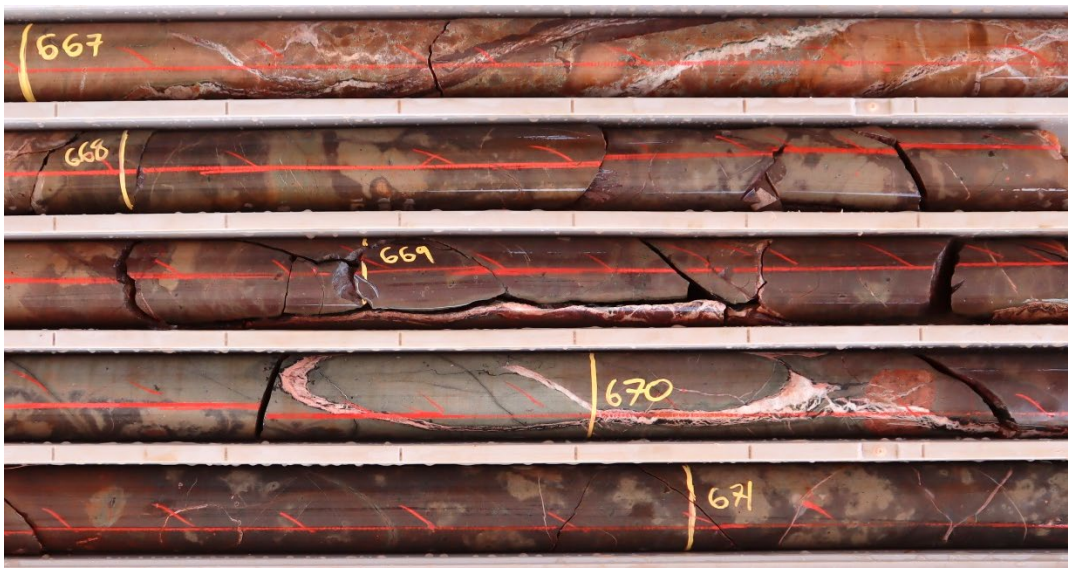

Figure 5: Veined and hematite (iron-oxide mineral) and chlorite-altered sedimentary rocks between 667 and ~671m

Consistent with the Tennant Creek deposit model, drill-hole KNRDD002 showed strong hematitic alteration, chlorite alteration and minimal magnetite, with no significant sulphide minerals observed.

In addition, trace native copper was observed on a slickensided shear (a slickenside is caused by frictional movement between rocks along the sides of a fault), at approximately 732.5m down-hole, which may indicate the presence of metals within fluids responsible for the observed alteration. As a result of observed veining and alteration intersected in drill core from 720m, the hole was extended by approximately 80m beyond its designed depth to further evaluate this exciting opportunity.

Figure 6: Slickensided parting KNRDD002 with fine native copper indicated at approximately 732.5m down-hole.

The diamond core from KNRDD002 has been geologically and structurally logged and will be sampled and assayed for a full suite of elements, including gold, with assay results expected to begin arriving in late December/early January. Once assay results are returned, the basement core will be sampled for petrography to confirm the host rock lithologies and alteration styles present at Twin Peaks.

Early on-site interpretation of the core is promising, with all the key ingredients present to suggest that the hole may sit on the edge of the geological source of the gravity and magnetic anomalies. Selected holes will be cased in order to undertake down-hole magnetic surveying to provide further directional data on the source of the observed magnetic anomalies at "Twin Peaks".

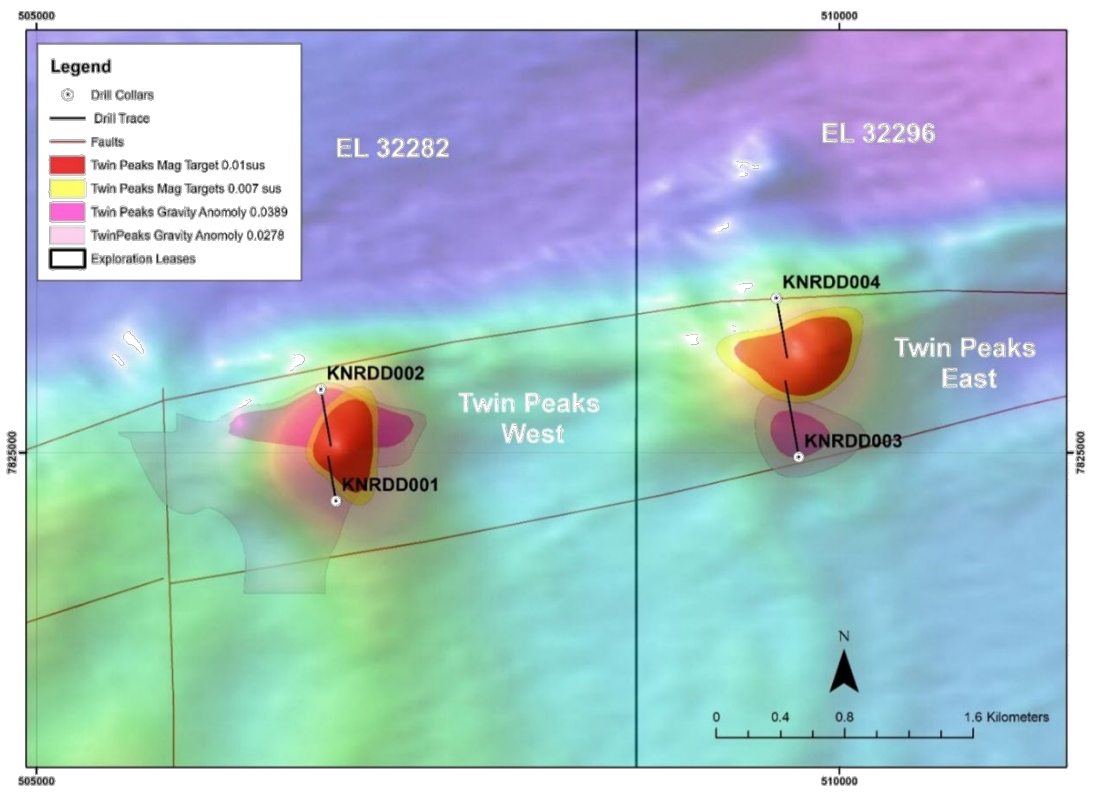

Figure 7: Overlay of Interpreted Gravity on "Twin Peaks" Magnetic Anomalies.

Drill hole KNRDD004, the second hole in the program, has been designed to target the eastern magnetic anomaly, and is expected to provide further insights into the potential prospectivity of the "Twin Peaks" targets. Work has already commenced on the second hole (KNRDD004), with the hole currently at a depth of 275m towards a planned total depth of 750m.

Table 1: Drill Collar & Setup Details

Hole ID	East (MGA53)	North (MGA53)	RL (AHD)	Azi (MGA)	Dip	Depth
KNRDD002	506771	7825392	250	170°	-61.5°	796.6m
KNRDD004	509608	7825960	251	160°	-61.5°	750m*

**Hole KNRDD004 design depth only, drilling underway*

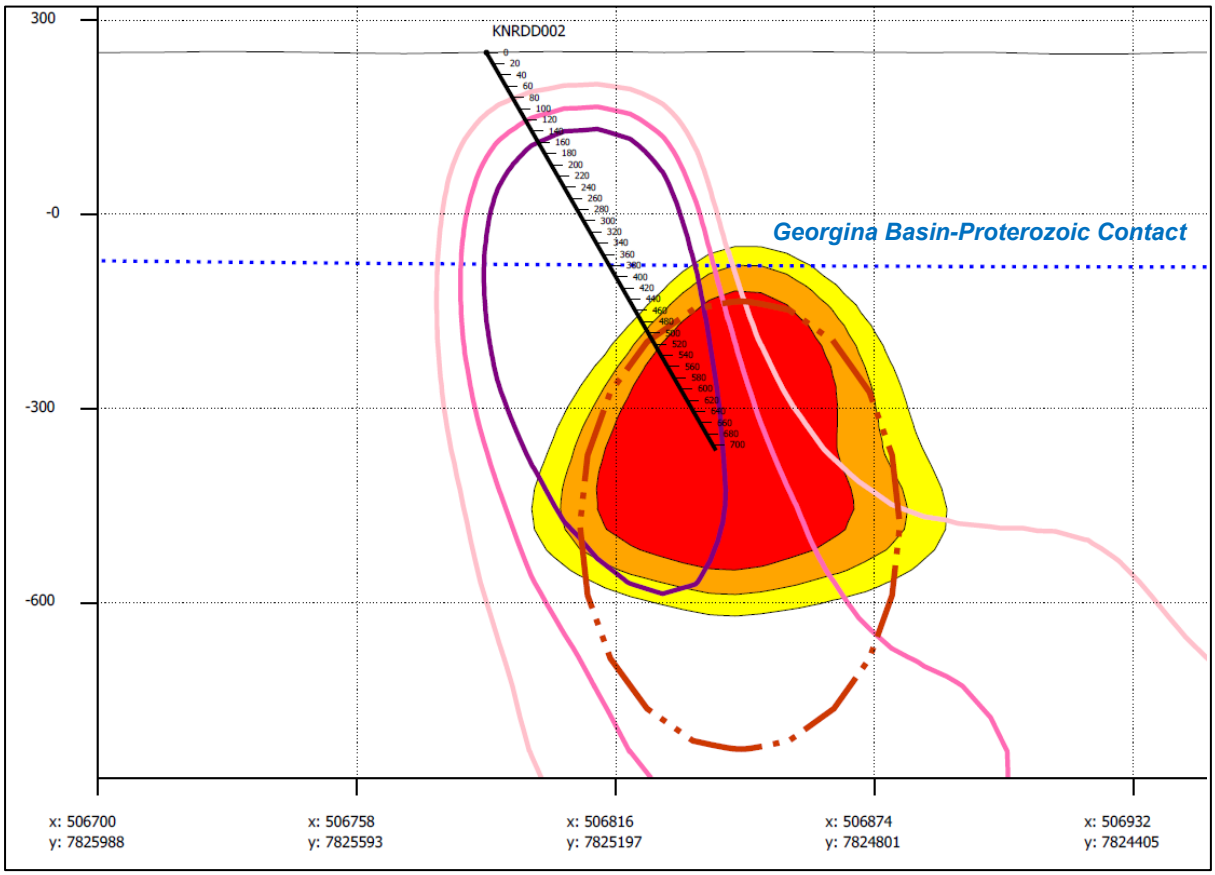

Figure 8: KNRDD002 design cross-section – the hole targeted magnetic (red) and gravity (purple line) anomalies from inversion of geophysical data.

While the drilling program has been progressing, the Company has been conducting desktop reviews of the recently completed gravity and aeromagnetic surveys over the Company's central tenement group (EL32295, EL32283 and EL32284).

These desktop reviews have yielded several new and exciting prospects in the Company's central tenement package, specifically within EL32295.

EL32295 is located adjacent to Middle Island Resources Ltd's (ASX: MDI) Crosswinds Prospect, where significant surface copper oxide mineralisation has been identified[2]. Tenement EL32295 also surrounds NDIBK05 and NDIBK10, two holes drilled as part of the National Drilling Initiative.

2. Middle Island Resources Ltd. (2020, December 23) *Breakthrough maiden copper discovery provides early encouragement for Barkly IOCG potential* [ASX release]. http://www.middleisland.com.au/wp-content/uploads/2021/01/20201223_Barkly-Copper-Discovery_final.docx.pdf

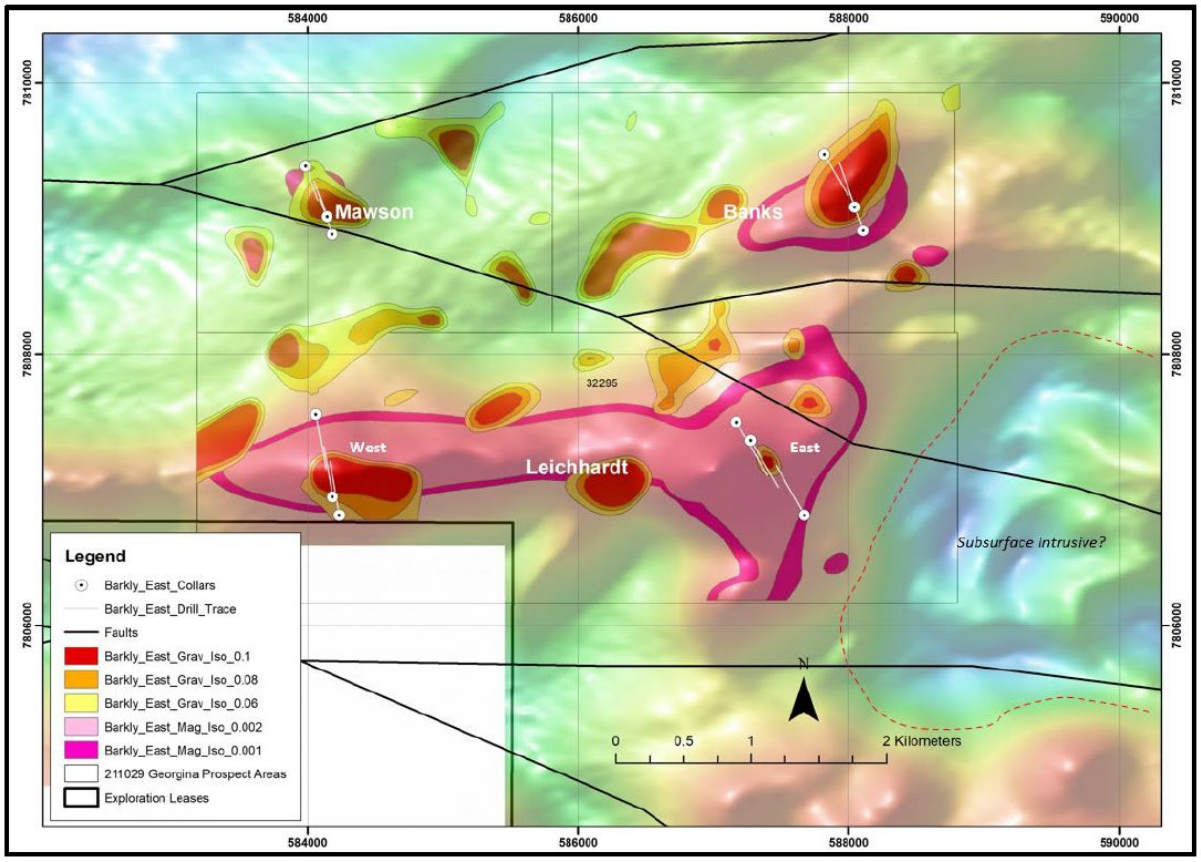

Figure 9: Overlay of Interpreted Gravity on Mawson, Banks & Leichhardt Magnetic Anomalies.

Greenvale has designed an initial 9-hole drill program for 5,860m (Figure 7) to assess three of the promising targets identified within EL32295 – Mawson, Banks, and Leichhardt. A further three contingent holes have been designed for 2,825m.

The three prioritised targets demonstrate coincidental magnetic and gravity anomalies similar to those seen at the Company's "Twin Peaks" prospects and consistent with IOCG deposit models.

As mentioned in previous announcements, IOCG deposits contain substantial amounts of dense iron oxide minerals, causing the deposits to have an elevated gravity response relative to the surrounding country rocks. They can have a range of magnetic responses that can vary considerably as a function of the type of magnetic minerals present and strength of remnant magnetisation relative to induced magnetisation.

In most IOCG deposits in the Gawler Craton (e.g., Prominent Hill, Olympic Dam) magnetic and gravity anomalies are non-coincident, however for other IOCG deposits – such as Ernest Henry in the Cloncurry region – magnetic and gravity responses occur together.

The proposed drill program design for the central tenement grouping will need further refinement once final geophysical modelling has been completed, expected in January 2022. The Company expects that it will be ready to commence the new drilling program in the second quarter of the New Year.

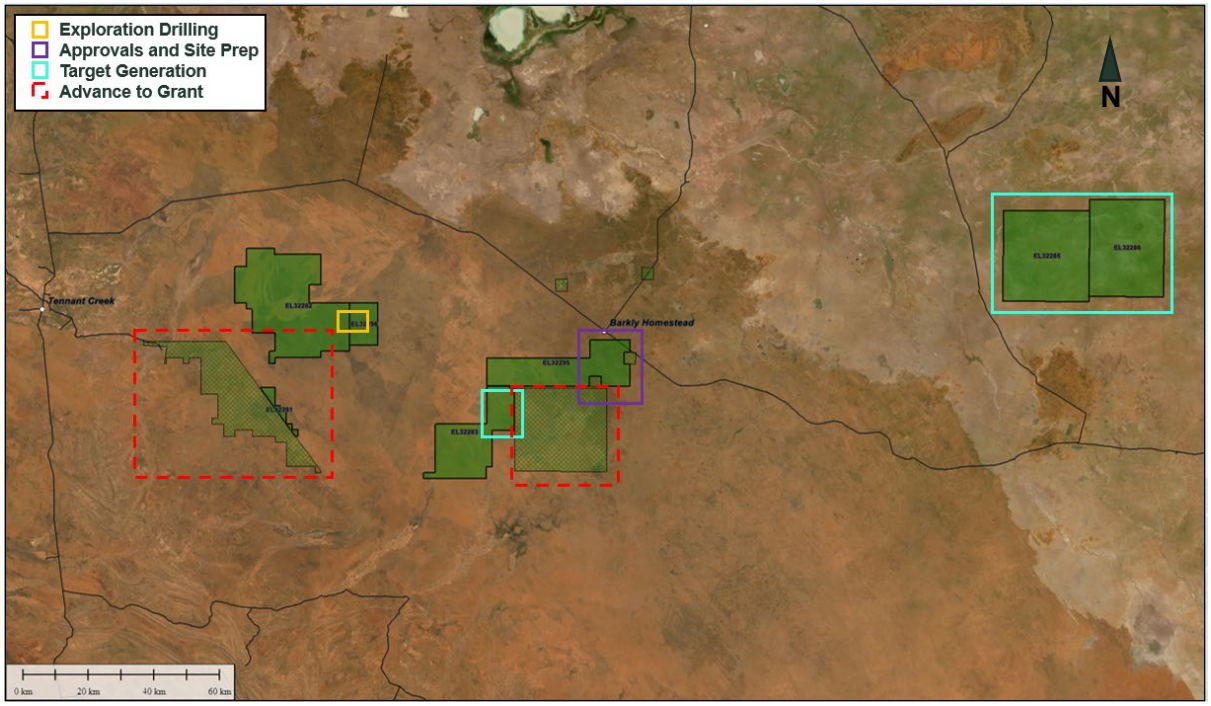

Figure 10: Greenvale's next steps for each tenement grouping at the Georgina Basin IOCG Project.

Greenvale and its field team are pushing hard to finish the year on a high, aiming to complete the current hole, KNRDD004, in the coming weeks, commence trial spinifex and superfine soil sampling within EL32282 and 32296 and fast-track assays and interpretation of KNRDD002.

The Company intends to maintain significant exploration momentum moving into 2022, with down-hole geophysical surveys scheduled to commence at Twin Peaks in conjunction with drilling of the remaining two holes, and site preparations, cultural heritage surveys and government approvals expected to advance rapidly to allow drilling to commence within tenement EL32295 (see Figure 8 above).

MANAGEMENT COMMENT:

Greenvale Mining CEO, Matthew Healy, commented:

"It is very encouraging that the inaugural exploration hole to be drilled at Twin Peaks West intersected not only the same rock types that host major IOCG deposits at Tennant Creek but also extensive hematite and chlorite alteration, which is associated with Tennant Creek-style IOCG deposits.

"The Greenvale team on site has done an exceptional job in preparing for and supporting drilling operations. Drill core samples from the first hole will shortly be in transit to the lab for assay and the second hole, at Twin Peaks East, is well under way, cementing Greenvale's status as a first mover in the district.

"Drill-hole design on the central tenements is well advanced, and further target generation planned for over the wet season will see the pipeline of high-prospectivity IOCG targets grow, positioning Greenvale well to make the first discovery in the East Tennant region."

"This is an exciting time for our shareholders as we look to finish 2021 on a high, with two completed drill-holes at Twin Peaks, initial assay results on the way, and a maiden JORC Mineral Resource Estimate nearing completion for the Alpha Torbanite Project in Central Queensland."

Authorised for Release
This announcement has been approved by the Board for release.

Alan Boys
Company Secretary

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COMPETENT PERSON'S STATEMENT:

The information in this report that relates to Exploration Results is based on information compiled by Mr. Matthew Healy, a Competent Person who is a Member or Fellow of The Australasian Institute of Mining and Metallurgy or the Australian Institute (AusIMM Member number 303597).

Mr Healy is a full-time employee of the company and is eligible to participate in a performance rights incentive plan of the Company.

Mr. Healy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Mr. Healy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1 Report Template

Section 1 Sampling Techniques and Data

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

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. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • 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.	• Altitude for airborne magnetic surveying was determined using a Reninshaw ILM-500-R laser with a vertical accuracy of 0.1m • Base station magnetic field monitoring was completed using GEM Overhauser and Scintrex ENVIMAG proton precession magnetometers with 1.0 and 0.5 Hz sampling rates respectively • Radiometric surveying was completed using an RSI RS-500 gamma-ray spectrometer with a sampling rate of 2Hz • Magnetic surveying was completed using a Geometrics G-823A caesium vapour magnetometer at a 20Hz sampling rate • NQ drill core to be cut in half lengthwise and sampled on nominal 1m intervals or as determined by geological boundaries
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).	• Mud-rotary methods employed to bit refusal, and HQ and ND diamond core drilling methods thereafter. • Drill core that has intersected basement (Proterozoic) rocks has been oriented where possible
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • 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.	• Core blocks inserted between runs by drill crew record run length and recovered core • Core recovery logged by field staff/contractors at the point of core markup
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	• Drill core logged by field geologists to capture interpreted lithology, weathering, alteration and veining, and structure orientations where appropriate

Criteria	JORC Code explanation	Commentary
	studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Core logging is largely qualitative, with some quantitative estimates of notable minerals • Core tray photography undertaken of wet and dry drill core • All drill core logged from
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Half-core to be crushed and pulverized to 85% passing 75 micron particle size prior to assay • Half drill core considered representative of sample intervals
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. • 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. • 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.	• NATA-accredited ALS Laboratories conducting preparation and analysis of samples • Laboratory analysis to include Fire Assay and AAS finish for Au and 4-acid digest and ICP-MS for a 48-element suite • Both techniques considered total for elements of interest • Certified reference materials (CRMs) and blanks inserted in the sample stream to monitor accuracy and potential contamination as part of Company QAQC processes • ALS in-house QAQC includes the use of CRMs, splits and duplicates to monitor accuracy and precision
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Sample intervals assigned a unique sample identification number prior to core cutting and analysis • Significant intersections to be checked against drill core photography and QAQC results by a company geologist
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.	• Magnetic survey flight path recovery was established using a NovAtel OEM 719 DGPS Receiver with a 0.4m RMS accuracy and a 2Hz sampling rate

Criteria	JORC Code explanation	Commentary
	• Specification of the grid system used. • Quality and adequacy of topographic control.	• Drill collar location determined using a Garmin hand-held GPS with location reported in GDA94 MGA Zone 53 • Downhole surveys determined using a Reflex north-seeking Gyro at 20m depth intervals
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied.	• A total of 12,618 line km of survey data was collected in total • Flight lines were spaced at 100m with perpendicular tie-lines at 1000m intervals. The survey was conducted in two orientations, with flight lines oriented north-south for approximately 15% of the survey, and at 135° for the remainder • Drill spacing is appropriate for early exploration purposes
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. • 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.	• Insufficient information available due to early exploration status
Sample security	• The measures taken to ensure sample security.	• Samples delivered from the drill site to Freight agent by Company staff/contractors for delivery to external laboratory
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Not applicable

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• Magnetic survey undertaken on granted EL32283 and EL Application 32284, the grant of which is subject to aboriginal freehold land negotiations and agreement execution • Modelling of geophysical responses undertaken on granted EL32295 • Twin Peaks exploration drilling undertaken on granted EL32282 and 32296 • Tenements held in 100% Greenvale subsidiary Knox Resources Pty Ltd

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Not applicable
Geology	• Deposit type, geological setting and style of mineralisation.	• The principal target deposit style is iron-oxide-copper-gold (IOCG). IOCG deposits are typically characterized by associated magnetic and gravity responses due the prevalence of dense and often magnetic iron oxide minerals as a substantial portion of the deposit footprint mineralogical constitution. IOCG deposits are known in the Tennant Creek region and recent Geoscience Australia prospectivity analysis indicates that basement rocks east of Tennant Creek, the location of the Company tenements, are prospective for IOCG deposits.
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. • 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.	• Drillhole KNRDD002 collared at 506771 E 7825392 N and 250m RL • Drillhole KNRDD004 located at 509608 E, 7825960 N and 251m RL • Drillhole KNRDD002 setup at 170° azimuth and -61.5° dip • Drillhole KNRDD004 setup at 160° azimuth and -61.5° dip • Drillhole KNRDD002 drilled to a total depth of 796.6m • Drillhole KNRDD004 has a design depth of 750m • Collar location reported in GDA94 MGA Zone 53
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. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Not applicable
Relationship between mineralisation	• These relationships are particularly important in the reporting of Exploration Results.	• Insufficient information available due to early exploration status

Criteria	JORC Code explanation	Commentary
widths and intercept lengths	• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
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.	• See in release
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.	• This release describes all relevant information
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.	• This release describes all relevant information
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Further drilling will be conducted at Twin Peaks. Assay work and petrography will be conducted on selected drill core. • Exploration drilling is planned for targets located on EL32295 • Further target generation will be conducted on prospective geophysical anomalies identified from airborne magnetic survey data