

ASX ANNOUNCEMENT 26 April 2021

#### QUARTERLY ACTIVITIES REPORT MARCH 2021

Greenvale closes-in on maiden JORC Resource at Alpha as drilling nears completion | Drilling at Georgina IOCG Project to be fast-tracked as major new targets emerge in the East Tennant region

# **Highlights**

## Alpha Torbanite Project, Queensland

- Preliminary 49 open-hole (non-core) drill program completed, with logging and surveying of the holes indicating that the seams are more extensive than initially thought.
- Alpha Torbanite and bituminous shale seams extend across the entire extent of MDL330 from the north-west to the south-east boundaries and remain open along strike to the north-west and south-east within the Company's surrounding EPM 27718.
- 45-hole broad diameter core drill program underway within the most prospective areas of the deposit to provide data for the 2012 JORC Mineral Resource Estimate and provide material for definitive metallurgical testing.
- Maiden JORC Mineral Resource scheduled for completion after receipt of retort test work results.

#### Georgina Basin IOCG Project, NT

- Outstanding results from the Government-funded National Drilling Initiative (NDI) further enhance the prospectivity of Greenvale's Georgina Basin IOCG Project, confirming the potential for large-scale IOCG discoveries in the emerging East Tennant region.
- Proposed maiden drill program brought forward to July after analysis of geophysical data reveals highly prospective drill targets within highly magnetic bullseye anomalies hosted by significant regional structures. These are classic host structures for Tennant Creek-style IOCG mineralisation.



#### Overview

The Company has enjoyed a strong start to the year with significant progress achieved at both of Greenvale's key projects, as well as significant corporate activity which saw it strengthen both its senior leadership team and its balance sheet during the March Quarter.

The work on Greenvale's Alpha Torbanite Project in Queensland has accelerated with the completion of the preliminary drill program and the installation of the test retort. Work continues on resource modelling, retort calibration and metallurgical testing – all of which are scheduled for completion in the June 2021 Quarter.

Exploration activity at the Georgina Basin Project has also gained significant momentum during the quarter with the release of results from the eagerly awaited Geoscience Australia National Drilling Initiative (NDI) program. The drilling has confirmed the potential to discover major new IOCG deposits in this emerging province. The Company has appointed SRK Australasia Pty Ltd. (SRK) as lead technical consultants for the Georgina Project and is now working with them to rapidly develop a comprehensive drill program commencing in July/August.

Alongside the continued advancements of both projects, the Company completed a successful Share Purchase Plan (SPP), raising \$4.5 million, and appointed experienced and highly respected mining executive Mr Neil Biddle as Managing Director to drive its growth strategy.

As a result of these developments, Greenvale is in a strong strategic and financial position to continue progressing its key projects and to continue to deliver value for its shareholders.

# **Projects**

## Alpha Project, Queensland

## **Background**

The Alpha Torbanite Project is located approximately 50km south of the Central Queensland town of Alpha. The Alpha torbanite deposit consists of two seams, an upper seam of low-grade torbanite with an average thickness of 1.12m and a lower seam containing lenses of torbanite up to 1.9m thick.

The Project has been subject to extensive exploration and laboratory testing since its initial discovery in 1939, over 80 years ago.

During 2019, SRK was engaged to reassess the project commercialisation strategy. This resulted in a report by SRK setting out a potential new development strategy based on the production of a diversified suite of value-added products.



SRK noted that, in contrast with typical oil shale deposits, the Alpha torbanite deposit is exceptionally high-grade, containing up to 650 litres of hydrocarbons per tonne of torbanite, and can produce high-value bitumen, light crude oil and activated carbon. The upper and lower bituminous shales also produce similar products albeit at lower yields of 110-140 litres per tonne. Additionally, the torbanite and bituminous shales can deliver high-quality value-added products through appropriate investment in processing infrastructure.

SRK has now been engaged to undertake a staged work program to assist in the assessment of the commercial viability of the project. The initial focus is on a comprehensive drill program together with down-hole wireline logging to establish a 2012 JORC compliant Mineral Resource and provide large diameter drill core to fully characterise the deposit.

The broad diameter drill core, together with a large 300kg sample from one location, will provide sufficient samples for a comprehensive retort testing program across a range of conditions to assess optimal outputs.

## **Activities During the Quarter**

An open hole (non-core) drilling program was completed on MDL 330 between 28 February and 12 March 2021. A total of 49 open holes (out of a planned 51-hole program) were completed for a total of 3,027m (Figure 1). A small number of drill-holes in the northern part of the tenement were unable to be completed due to access difficulties in challenging terrain.

Drill-holes were sited on an approximate 500m x 500m grid pattern across MDL 330. SRK developed a preliminary geological model prior to the commencement of the 2021 program using historical drilling information. The model was developed to support the planning and execution of the open hole program and minimise the risk of wasted drill meterage in barren areas.

Drill-hole depths ranged from 38m to 116m, averaging approximately 62m. All holes were drilled vertically from the topographic surface.

All drill-holes were surveyed and geophysically logged with wireline tools, providing down-hole gamma density and verticality surveys. An optical televiewer was run in selected drill holes. The wireline logs allow accurate measurement of both the upper and lower seam intervals (depth and thickness). However, the cannel coal (bituminous shale) and torbanite are indistinguishable in the wireline logs.

The drilling has exceeded the expectations of the Greenvale team with both the upper and lower seams extending from the north-west corner of the MDL to the south-west boundary.

The seams remain open along strike to the north-west and to the south-east continuing into the Company's EPM27718. The Company proposes to drill test the extensions later in the year.



The upper seam was intersected in a total of 33 drill holes at depths from 4.06m to 92.21m (average depth of 37.32m). The upper seam thickness ranged from 0.59m to 1.41m, averaging 1.09m.

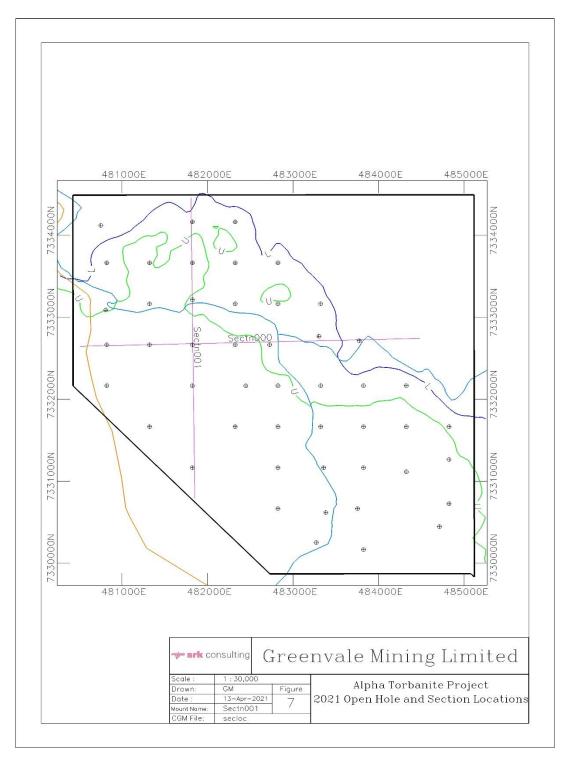


FIGURE 1. Open Hole and Section Locations.



The lower seam was intersected in a total of 46 drill holes at depths from 8.72m to 106.98m (average depth 44.33m). The lower seam thickness ranged from 1.41m to 2.68m, averaging 1.94m.

The inter-burden between the Upper and Lower seams was approximately 16m.

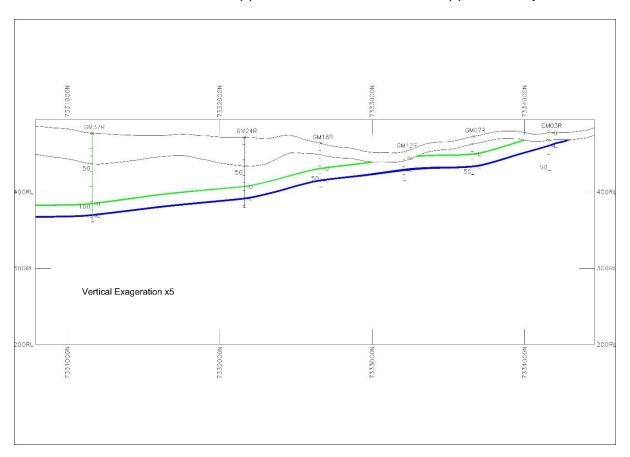


FIGURE 2. Cross Section 001 of Upper and Lower Bituminous Seams.

Just two drill holes were barren, being located beyond the sub-crop of the lower seam. One of these was a 'test hole' completed at the commencement of the program to test the drilling equipment.

The open hole drill data was compiled by the Company's technical consultants, SRK, and was used in the updated geological modelling of the deposit. The geological model was developed using GEOVIA Minex software and is based predominantly on the newly acquired drilling data, with only a small number of historical drill holes included to support the continuity of the model (mainly outside the MDL boundary).

An In-Situ Strip Ratio Model (Figure 3.) was created by SRK for the purpose of early definition of potentially economically mineable torbanite and bituminous shales. This also helped the design of the coring program to focus on the most viable parts of the deposit. The diagram below demonstrates strip ratios from 2:1 in the northern and central parts of the deposit gradually increasing up to 15:1 in the south-eastern part.



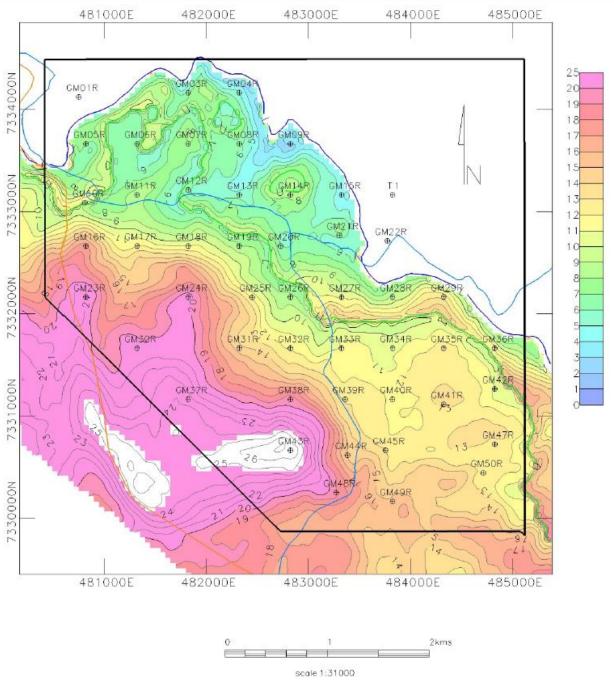


FIGURE 3. In Situ Strip Ratio Model.

Further to the successful completion of the preliminary drill program, continued progress has been made on the test-retort installation and configuration.

The test-retort is now installed in a private Gold Coast laboratory and is in the process of being calibrated (see Figures 4 and 5).



FIGURE 4. Schematic retort design and layout. As the retort is heated, vapour is then collected from copper condensation tubes at set temperature water baths and from gas bags. The bitumen is collected in a sump and spent shale remains in the retort cannister.

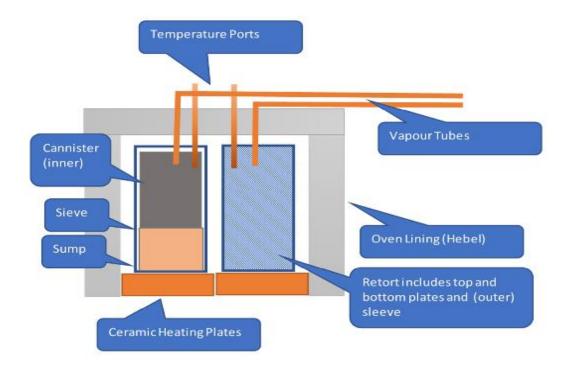




FIGURE 5. Retort set up and operational.



#### **Activities Planned for the June 2021 Quarter**

The updated Alpha model completed in the March Quarter has enabled a more robust interpretation of the deposit structure, limits and in-situ strip ratios. The model has been used to support the planning and execution of the current core drilling program, which is targeting the more prospective and higher priority areas of the deposit. The coring program commenced in early April and is expected to be completed in early May.

The core drill holes (4C 100mm Diameter Core) will allow accurate down-hole measurement of the cannel coal (bituminous shale) and torbanite intervals and provide samples for reservoir characterisation, including resource quality, organic petrology and source rock analysis.

After completion of logging and structural analysis, the core is going to be refrigerated and transported to Stratum Reservoir Laboratories in Brisbane for definitive retort testing and production of sample products for potential customers. Core from the first 25 holes has been delivered to Brisbane and retort testing is expected to commence in early May.

In conjunction with the ALS test work, additional retort test work is being undertaken in a private Gold Coast laboratory on a large 300kg sample collected from No. 2 shaft in the centre of the deposit. This work is being conducted in a Greenvale designed and built retort and is expected to provide test guidelines for the ALS definitive work.

Subject to successful retort test work results, SRK will undertake a 2012 JORC Mineral Resource Estimate.

## Georgina Basin IOCG Project, Northern Territory

#### **Background**

The Georgina Basin Project (Figure 6), held by Greenvale's wholly-owned subsidiary Knox Resources Pty Ltd, has provided a low-cost entry into one of Australia's most significant regional exploration areas.

Following the establishment of government funding programs aimed at boosting mineral exploration in northern Australia, significant work was undertaken by the Northern Territory Geological Survey and Geoscience Australia to progress initiatives aimed at unlocking the resource potential of the Barkly and Gulf regions (which includes the Georgina Basin) through upgrading geophysical coverage and data accessibility to assist in understanding the potential for large-scale IOCG mineral systems within the Georgina Basin.



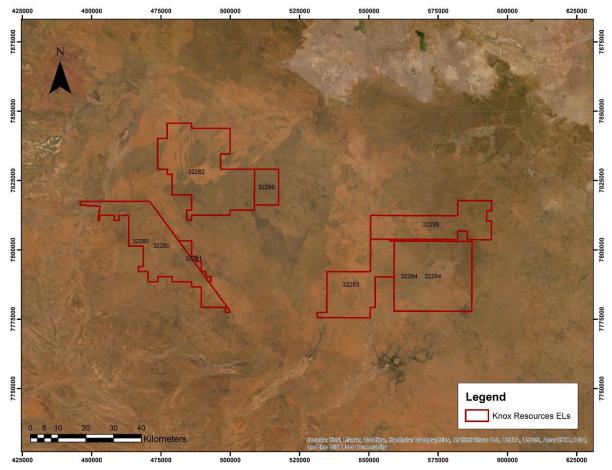


FIGURE 6. Georgina Project Tenements.

IOCG deposits are an important and highly valuable global source of copper, gold and uranium, as well as having the potential to host other minerals including silver, bismuth, molybdenum, cobalt and rare earth elements.

Knox was a successful applicant under an open tender for nine Exploration Licences over four distinct locations, covering a total area of 4,475km² situated between the historical IOCG provinces of Tennant Creek and Mount Isa.

On 23 September 2020, Knox was granted Exploration Licences over seven of the areas, with the remaining two being subject to negotiation with the indigenous freehold landowners.

#### **Activities During the Quarter**

Exploration activities at the Georgina Basin Project have gained significant momentum following the release of the results from the Geoscience Australia NDI program.

As part of this program, two stratigraphic holes, NDIBK05 and NDIBK10, were completed to depths of 293.8m and 765.7m respectively on the south-eastern corner and far eastern border of Greenvale's tenement, EL32295.



Both holes intersected broad zones of the Proterozoic Waramanga Formation, which hosts the world-class Tennant creek IOCG Deposits.

Strong hematitic alteration was intersected in both holes within sheared and brecciated structural features, supporting the potential for the East Tenant region to host significant IOCG mineralisation.



Photo 1. NDIBK05: (199.4m-202.7m) Altered, sheared unit. Looks granitic in composition. Brick red colour from hematite-potassic alteration. Lower contacts of the Georgina Basin with underlying granite shows strong hematite.



Photo 2. NDIBK05 (211.4m-214.4m)

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Photo 3. NDIBK10 (756.06 – 759.32): Equicrystalline qtz-plg-kfp-bio-mus granodiorite with poorly-developed schistose texture expressed mostly by bio and mus. Hem-altered 2 cm chilled margin (only slightly finer-grained than rest of unit) on lower boundary. No chilled margin or alteration at upper margin. Biotite partially weathered to hematite, particularly near upper and lower contacts. Minerals present (quartz, plagioclase, k-feldspar, biotite, muscovite.



Photo 4. NDIBK10 (762.57 – 765.67): Qtz-biotite-amphibole schist of psammitic protolith and minor granitoid protolith (kfp regions). Cut by qtz-kfp-muscovite pegmatites. All poly-deformed and gneissose in part. Minerals present (quartz, biotite, amphibole, k-feldspar, muscovite, hematite).

#### (Photos 1-4 Supplied Courtesy of Geoscience Australia Website)

The NDI holes, in conjunction with the Company's geophysical survey data and the discovery of surface copper by neighbouring Middle Island Resources, has further reinforced the potential of the East Tennant Creek region to the Company.

Given this potential, the Company has appointed SRK Consulting as the lead technical consultant for the Georgina Basin Project. This move, coupled with an increase in available funds from the recently completed SPP, has seen the compilation of data and subsequent drill program planning accelerate as a key strategic priority for the Company.



The Company and its technical consultants are confident that a rigorous and well-constructed plan for a maiden drill program will be completed in the June Quarter, with a commencement date for drilling scheduled in July/August of this year.

The compilation of the historical and new geophysical information has continued. Consequent interpretations have identified a number of promising anomalies across a number of Greenvale's tenements (Figures 4, 5 and 6).

Initial results of magnetic interpretation have identified immediate drill targets in a number of locations including within EL's 32282 and 32296 (Figure 4), which are the priority targets proposed to be drilled in July.

Work is continuing on several other structural targets identified within EL's 32283, 32295, 32284 and 32280 and results will be published when drill targets have been finalised.

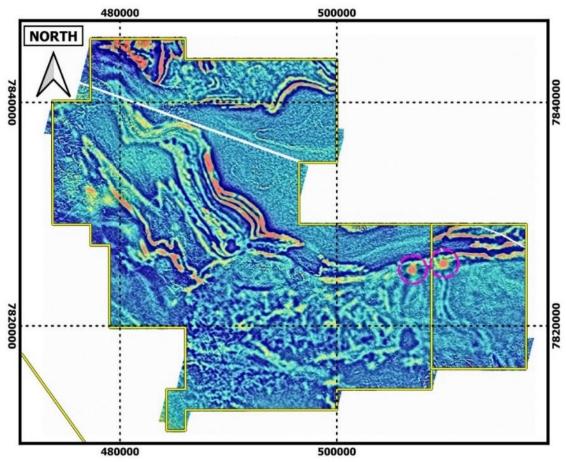


Figure 7: Bullseye Magnetic High Anomalies (circled) hosted within major regional structure EL32282-32296.



Figure 8. Inverse modelling of bullseye anomalies confirms occurrence at 250m depth below surface.

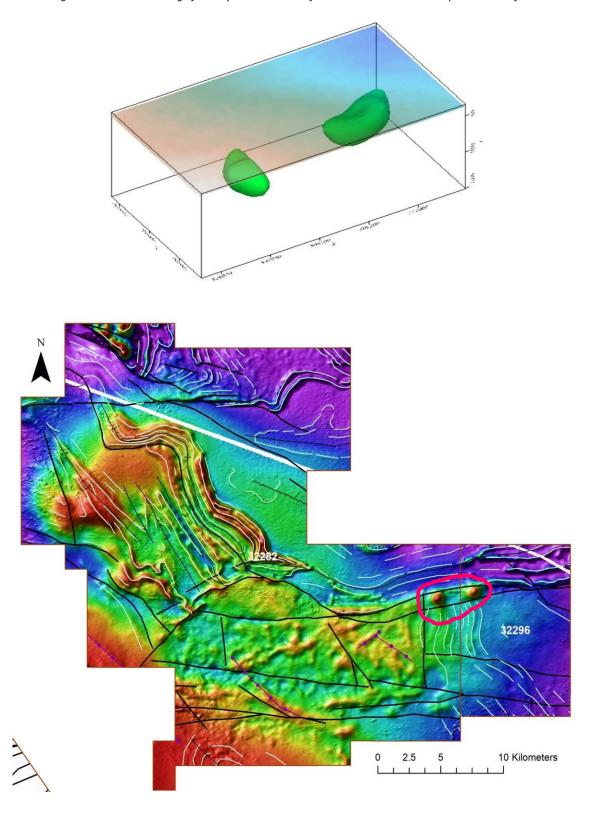


FIGURE 9. Magnetic and Gravity Data Sets EL32282-32296. High Mag Bullseye targets in red circle



## **Activities Proposed for the June 2021 Quarter**

The June 2021 Quarter will see activity continue to ramp-up at the Georgina Project.

Of note will be the Company's attendance at the AGES conference (20<sup>th</sup> & 21<sup>st</sup> April), where it will gain further insight into the results from Geoscience Australia's NDI program.

At the AGES conference, the Company and its technical consultants will be given the opportunity to inspect the core samples taken by Geoscience Australia as part of the NDI. Preliminary findings from this core viewing and any additional information presented by Geoscience Australia, along with the Company's subsequent interpretations, will be provided to the market during the June Quarter.

The Company has also commenced a recruitment process for an experienced Exploration Manager. The successful candidate will primarily be responsible for the drill program execution at the Georgina Project while also assisting as required with ongoing work at Alpha.

Despite the current labour market being highly competitive, Greenvale management are confident in their ability to quickly secure the right person for the job. The Company has enlisted the services of Acacia Consulting to assist in their search.

It is anticipated that the new Exploration Manager will be effectively embedded in their role during the June Quarter.

The Company will also continue to build a comprehensive and robust database of all available information with a continuation of GIS Mapping alongside further geological and structural interpretations. These activities will underpin the completion of the initial drill program plan and pave the way for drilling to commence in July/August 2021.

## **Mineral Exploration Spending During the March Quarter**

During the quarter the Company expended \$598,000 on exploration activities, This included \$502,000 with respect to field work and preparatory works and drilling costs with respect to the drilling program being undertaken at its Alpha Torbanite project. A further \$63,000 was expended on data collation and preparatory works in connection with the proposed retort testing for the Alpha Project. An amount of \$33,000 was expended on the further assessment of geophysical data and assessment of targets for potential further exploration at the Company's Georgina Basin Project.

No substantive mining production and development activities undertaken by the Company during the June Quarter.

# **Corporate Activities**

Executive Director Neil Biddle was appointed as Managing Director effective from 1 January 2021. Mr. Biddle is a senior geologist with over 35 years of senior



management experience in the Australian exploration and mining industry and will be responsible for overseeing the Pre-Feasibility Study and proposed commercial development of the Alpha Torbanite Project as well as establishing the pathways for exploration and evaluation of the Company's Georgina Basin Project.

On 19 February 2021, the Company announced a Share Purchase Plan to raise up to \$3,000,000 (before costs) from eligible shareholders who could acquire shares up to the value of \$30,000 at an issue price of \$0.13 per share. The offer was heavily oversubscribed with applications received in excess of \$6.4 million.

In response to the level of interest by members, the offer was increased to \$4.5 million, with the issue on 22 March 2021 of approximately 34.6 million new fully-paid ordinary shares which resulted in an increase of approximately 10.1% in the number of shares previously on issue.

The Company held a virtual meeting of members on 23 March 2021, wherein four resolutions were passed including the increase in aggregate remuneration of non-executive directors, the adoption of a new Constitution, the adoption of an incentive performance rights and option plan and the approval of the issue of performance rights to Managing Director Neil Biddle.

## **Funding**

As detailed in the Appendix 5B lodged with this report, during the Quarter, the Company's cash holdings increased by \$3.56 million to \$7.4 million at 31 March 2021.

#### All Tenement Details

Alpha Project, Queensland

Tenement	%age Ownership	Owned by	Status
MDL 330	99.99%	Alpha Resources Pty Ltd	Current to 31 January 2022

Alpha Project, Queensland

Tenement	%age Ownership of Applicant	Applicant	Status
EPM 27718	100%	Alpha Resources Pty Ltd	Under Application

**Georgina Basin Project, Northern Territory** 

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Tenement	%age Ownership	Owned by	Status
EL 32281	100%	Knox Resources Pty Ltd	Current to 22 September 2026
EL 32282	100%	Knox Resources Pty Ltd	Current to 22 September 2026
EL 32283	100%	Knox Resources Pty Ltd	Current to 22 September 2026
EL 32285	100%	Knox Resources Pty Ltd	Current to 22 September 2026
EL 32286	100%	Knox Resources Pty Ltd	Current to 22 September 2026
EL 32296	100%	Knox Resources Pty Ltd	Current to 22 September 2026

**Georgina Basin, Northern Territory** 

Tenement	%age Ownership Of Applicant	Applicant	Status
EL 32280	100%	Knox Resources Pty Ltd	Under Application
EL 32284	100%	Knox Resources Pty Ltd	Under Application



#### **Related Party Payments**

Payments made to related parties and associates of related parties during the quarter totalled \$77,000, as detailed at Section 6 of the Appendix 5B lodged today with the ASX.

## **Competent Persons Statement**

The information in this announcement is based on and fairly represents information and supporting documentation undertaken by SRK Consulting (Australasia) Pty Ltd. (SRK) and is based on information reviewed by Carl D'Silva, Principal Consultant (Exploration Resources). Mr D'Silva is a Member of The AusIMM and is a full-time employee of SRK.

Mr D'Silva is a geologist with >15 years' experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of The JORC Code.

#### Attachment 1

Enclosed with this release is Attachment 1 being Tables 1 & 2 in accordance with the JORC Code 2012 Edition.

#### **Authorised for Release**

This announcement and the accompanying Appendix 5 B have been approved by the Board for release.

Alan Boys **Company Secretary** 

#### Encl:

#### Contact

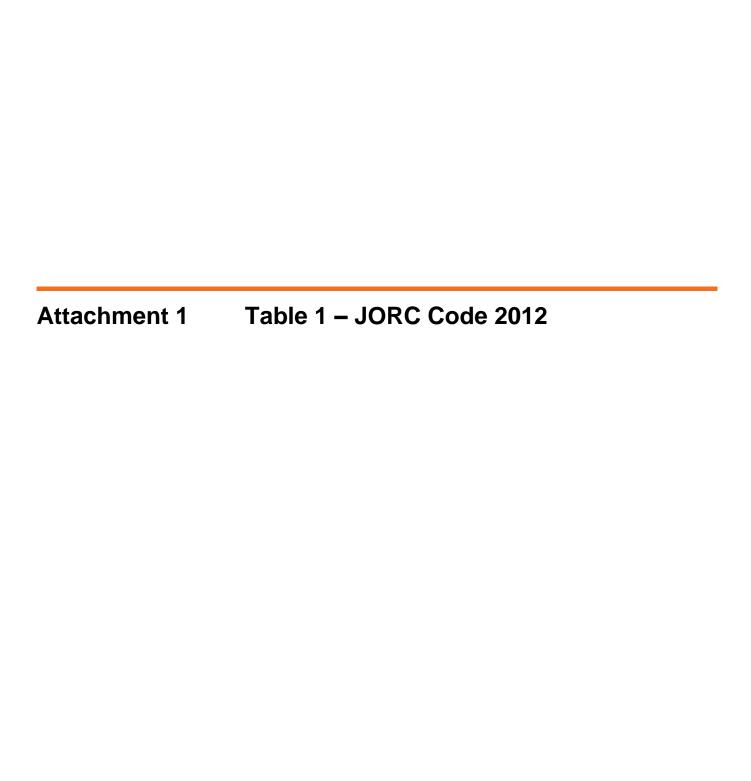
For further details, contact: Neil Biddle Executive Director 0418 915 752

Media Inquiries

For further details, contact: Nicholas Read – Read Corporate

Nicholas@readcorporate.com.au

Mobile: 0419 929 04



# JORC Code, 2012 Edition - Table 1

# Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done; this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	Exploration 28 February 2021 – 12 March 2021:  49 open holes were drilled in MDL 330 mainly for the purpose of structural modelling.  Chip samples representative of each metre drilled were laid out by the driller in order of increasing depth.
Drilling techniques	■ Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>Drill holes were oriented and levelled to produce vertical (i.e. 90°) holes.</li> <li>All drill holes were hammer drilled with air.</li> <li>6-inch blade for unconsolidated and weathered section near the surface hole.</li> <li>Set 100 mm surface PVC casing.</li> <li>Drill 4.5-inch hammer bit to final depth.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Chip samples were collected at approximately 1 m intervals.</li> <li>All chip samples were geologically logged and photographed.</li> <li>All drill samples were collected and stored in sample trays at a Greenvale Mining storage facility.</li> </ul>

Criteria	JORC Code explanation	Commentary
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Chip samples were collected every metre, geologically logged and photographed.</li> <li>All drill holes have been geophysically logged with the minimum suite of tools runs including: Density, Calliper, Verticality/Deviation and Gamma.</li> <li>Optical televiewer was run in selected boreholes.</li> <li>The calibration of the geophysical tools was conducted by the geophysical logging company engaged in the project at the time.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>No core samples were taken.</li> <li>Chip samples were recovered from each drill hole at 1 m intervals for lithological logging, but no laboratory analysis of the samples was undertaken.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	■ No laboratory analysis of the samples was undertaken.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	■ No laboratory analysis of the samples was undertaken.

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>All chip holes were professionally surveyed by Precise Positioning Solutions Pty Ltd.</li> <li>The origin of the survey was based on the calculated site base station coordinates.</li> <li>All surveyed coordinates are recorded in Map Grid of Australia 1994 (MGA94) Zone 56 using the GDA datum.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Structural drilling is in general on a pattern of approximately 500 m x 500 m.</li> <li>The density and distribution of drill holes supports a reasonable level of confidence in the depth and thickness of the Upper and Lower seams across the MDL area.</li> <li>However, the open holes do not support an assessment of the torbanite lens within the Lower Seam. This unit cannot be distinguished in the wireline logs or accurately measured in the chip samples.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>All drill holes were drilled at 90 degrees to the surface and are assumed to be vertical.</li> <li>Downhole verticality survey is available for all drill holes.</li> <li>Seam intercepts are recorded on a downhole basis.</li> <li>Downhole geophysical logs were used to confirm the seam intercepts and thicknesses.</li> <li>As the deposit is gently dipping and drill holes are generally shallow, the downhole seam thickness will approximate the true thickness of the coal.</li> </ul>
Sample security	■ The measures taken to ensure sample security.	■ All chip samples are secured in a Greenvale facility.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>A logging and sampling procedure was developed by SRK.</li> <li>The Competent Person is adequately satisfied that sampling techniques and procedures have been followed.</li> </ul>

# Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>MDL 330 held by Alpha Resources Pty Ltd, a subsidiary of Greenvale Mining Limited for a five-year term from 1 February 2017 to 31 January 2022.</li> <li>MDL 330 covers an area of 1904.5 ha.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Historically (since the 1930s), the title has been held by a number of other parties.

■ Held by Alpha Resources Limited since 2007.

License License Issued			
Asset Name	Holder	Type	Date
Anderson	H Anderson	MOPA 134	1939
Anderson & other	H Anderson & others	MOPA 137	1940
Anderson	H Anderson	ML 90-95	1941
Dobbie	R K Dobbie	MOPA 140	1941
Templeton	A N Templeton	MOPA 141	1941
Bradfield	JJC Bradfield	MOPA 142	1941
Templeton	J P Templeton	MOPA 143	1941
Ison	L Ison	MOPA 144	1941
Ison	A E Ison	MOPA 145	1941
IMC Alpha	International Mining Corporation	A to P 2240M	1980
Alpha Oil Shale	Greenvale Mining & Esperance Minerals	A to P 2203- 2206M	?
Alpha Oil Shale Project	Greenvale Mining & Esperance Minerals	A to P 2203M	1985
Alpha Oil Shale Project	Greenvale Mining & Esperance Minerals	MDL 211	1993
Alpha Torbanite Project	Alpha Resources Limited	MDL 330	2007, renewed in 2012 & 2017

Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Alpha deposit lies within the axis of the Glen Avon Syncline, a southwest plunging fold structure that occurs on the eastern flank of the Galilee Basin.</li> <li>The deposit is part of the Permian Colinlea Sandstone, which contains 150 m of cross-bedded sandstones with minor conglomerates, siltstones and mudstones.</li> <li>The geology of the deposit consists of an Upper and Lower seam of cannel coal with a torbanite lens present in the lower seam.</li> <li>The Colinlea Sandstone is thought to be an alluvial plain deposit with the coal deposited in swamps on this plain. The torbanite is thought to have been deposited from algae in a lacustrine environment when water entering the system held little sediment or organic material.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</li> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> <li>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.</li> </ul>	<ul> <li>A detailed list of the drill holes including downhole depths and seam intersects are shown in Table 1-1 and Table 1-2.</li> <li>Geophysical deviation logs (verticality) are available for all holes.</li> <li>All drill holes have been surveyed.</li> <li>The verticality data for all deeper holes has been loaded and the holes were modelled with account of any inclination.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	■ No analysis of chip samples was undertaken.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>All drill holes were drilled at 90 degrees to the surface and are assumed to be vertical.</li> <li>Downhole verticality survey is available for all drill holes.</li> <li>Seam intercepts are recorded on a downhole basis.</li> <li>Downhole geophysical logs were used to confirm the seam intercepts and thicknesses.</li> <li>As the deposit is gently dipping and drill holes are generally shallow, the downhole seam thickness will approximate the true thickness of the coal.</li> </ul>
Diagrams	■ Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	■ All appropriate diagrams are contained within.
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 avoiding misleading reporting of Exploration Results.	All available exploration data for the Alpha Torbanite area has been collated and reported.
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.	■ The updated interpretation is predominantly based on the 2021 drilling results. Limited historical drill hole information was used to supplement the 2021 drilling and support the continuity of the Upper and Lower seams outside the bounds of the MDL area.
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	■ The updated model has enabled a more robust interpretation of the deposit structure, limits and in situ strip ratios. The model will be used support the planning and execution of a core drilling program to target the more prospective and higher priority areas of the deposit.