Greenvale ENERGY LIMITED

13 November 2023

51% INCREASE IN ALPHA RESOURCE SUBSTANTIALLY EXPANDS PROJECT SCALE AND POTENTIAL

Significantly upgraded Mineral Resource sets a strong foundation for the upcoming Pre-Feasibility Study (PFS) as Greenvale makes strong progress towards its goal of becoming Australia's only end-to-end, domestic supplier of sustainable bituminous products.

Highlights:

- **Updated JORC Mineral Resource Estimate (MRE) completed for the Alpha Torbanite Project in Queensland by SRK Consulting.**
- **Updated Inferred Resource of 28Mt of Torbanite and Cannelite.**
- **This represents a 51% increase on the maiden 18.6Mt MRE (March 2022).**
- **Mineral Resource Estimate includes 4.3Mt of Torbanite.**
- **Increase to volumetrics with 27.7 million barrels of synthetic oil equivalent – up 30% on the previously stated MRE.**
- **Potential to further expand the Resource both down-dip, as well as on the adjacent EPM 27718 with further drilling.**

Summary

Greenvale Energy Limited (ASX: GRV, "Greenvale" or "the Company") is pleased to advise that it has taken another key step towards the commercial development of its flagship, 100%-owned, **Alpha Torbanite Project** in Queensland with the completion of an updated JORC Mineral Resource Estimate (MRE) for the deposit.

The updated MRE sees a **9.4Mt increase** in the total dry tonnes of the deposit, up from 18.6Mt in the maiden 2022 to **28Mt of combined cannelite and torbanite**. This represents a significant 51% increase in the total size of the Inferred Resource and reinforces the scale and potential of the Alpha deposit.

The synthetic oil equivalency of the deposit has also seen a noticeable improvement, adding 6.4 million barrels for a total of **27.7 million barrels of synthetic oil equivalent**. It is also important to note that the updated MRE synthetic oil equivalency has been calculated utilising yield estimations from the standardised Modified Fischer Assay (MFA) results reported back in December 2021.

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Yield results and subsequent synthetic oil equivalency estimations are likely to improve following completion of the final stage of liquefaction testing, currently being undertaken by Monash University.

The completion of Test Program Four will not only allow for a potential improvement in yields, but also an increase in the confidence level of the MRE from Inferred to Indicated for inclusion in the upcoming Pre-Feasibility Study (PFS).

Overall, the substantial upgrade in the MRE is a compelling result. The data from the updated MRE will now be utilised in the final delivery of the PFS and, with the increase in the overall size of the deposit, will potentially enhance the overall economic profile of the project.

A modest decline in the total tonnage of torbanite has been observed. However, as evidenced by the results from liquefaction Test Program Three (see ASX Announcement dated 17 May 2023), the Company and its technical advisors, Procom, have been able to achieve much greater yields from the cannelite than first observed in the initial MFA results.

Holistically, it is expected that improvements in the processing of the cannelite will negate any observed decrease in the total estimated tonnes of torbanite at this stage of the project. There is also scope for further increases in the total torbanite Resource with further extensional drilling into EPM 27718.

Greenvale's CEO, Mark Turner, stated: *"This is a fantastic outcome for our shareholders and a very exciting milestone for the Company in our journey to develop the Alpha Project. The completion of the updated MRE ticks another major box towards the completion of the PFS.*

"The significant improvement in the scale of the Inferred Resource is extremely positive and is expected to improve further when combined with the results from the final liquefaction test program.

"While we are all very pleased with the 51% increase in the MRE, we know that there is still work to be done and we look forward to further updating the market on the Alpha Project and the advancements of our partners Monash, Technix and Lycella in the coming weeks."

Local Geology of the Alpha Deposit

The Alpha Torbanite deposit consists of two seams, namely an Upper and Lower Seam which sit at the base of the Colinlea Sandstone. The Lower Seam is equivalent to the 'E' seam within the Colinlea Sandstone within the Galilee Basin.

The seam structure of the deposit is simple with the two seams – the Upper and Lower Seam – having an average interburden of 16 metres. The interval between the two seams is dominantly quartzose to lithic sandstone with minor conglomerate, siltstone and claystone (Figure 1).

The Upper Seam is classified as cannelite and has an average thickness of ~1m and the Lower Seam has an average thickness of ~2m. The Lower Seam is the main oil-yielding unit of the deposit. It consists of two main types of oil shale namely cannelite and torbanite, which is olive-grey to olive-black and is finely laminated.

The torbanite is lenticular in shape and has a variable thickness.

The Lower Seam can generally be split into three plies, as described below:

- L1 – comprising a relatively clean cannelite interval.
- LT – comprising the main torbanite interval, including coal bands.
- L2 – comprising a relatively clean cannelite interval.

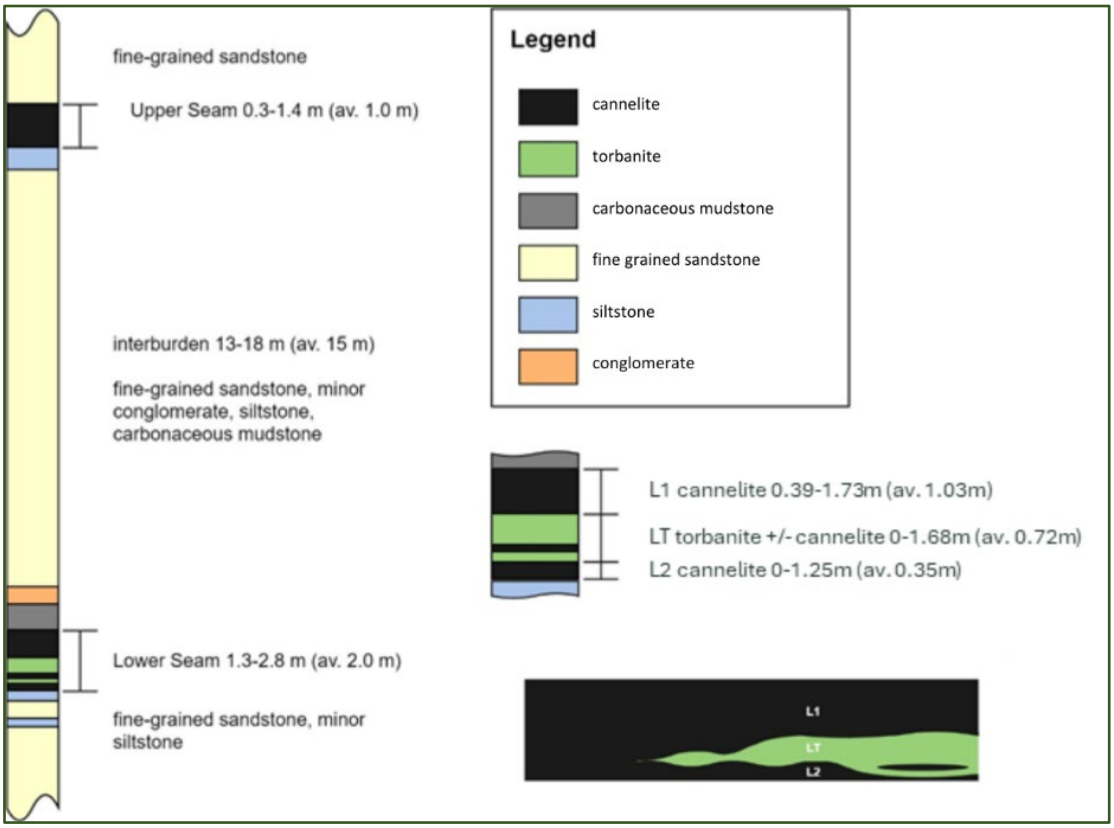

Figure 1: Summary of the seam geology within MDL330.

Alpha Phase 2 Drilling Program

The Company completed the Phase 2 drilling program at the Alpha Project in early October (see ASX announcement, 2 October 2023). The core drilling programme comprised a total of 20 HQ core holes for a combined 1,053.5m of drilling.

The program involved the acquisition of 16 cores targeting the Upper & Lower Seams and four cores targeting just the Lower Seam. All core hole locations have been geophysically logged with wireline tools providing down-hole gamma, density and verticality surveys.

The 15-hole chip reconnaissance drilling program which was planned to facilitate the delineation of potential extensions of the Resource outside the geological model area has been rescheduled to take place next year.

It is hoped that this program will improve on the reported MRE results and further boost the potential economics of the project.

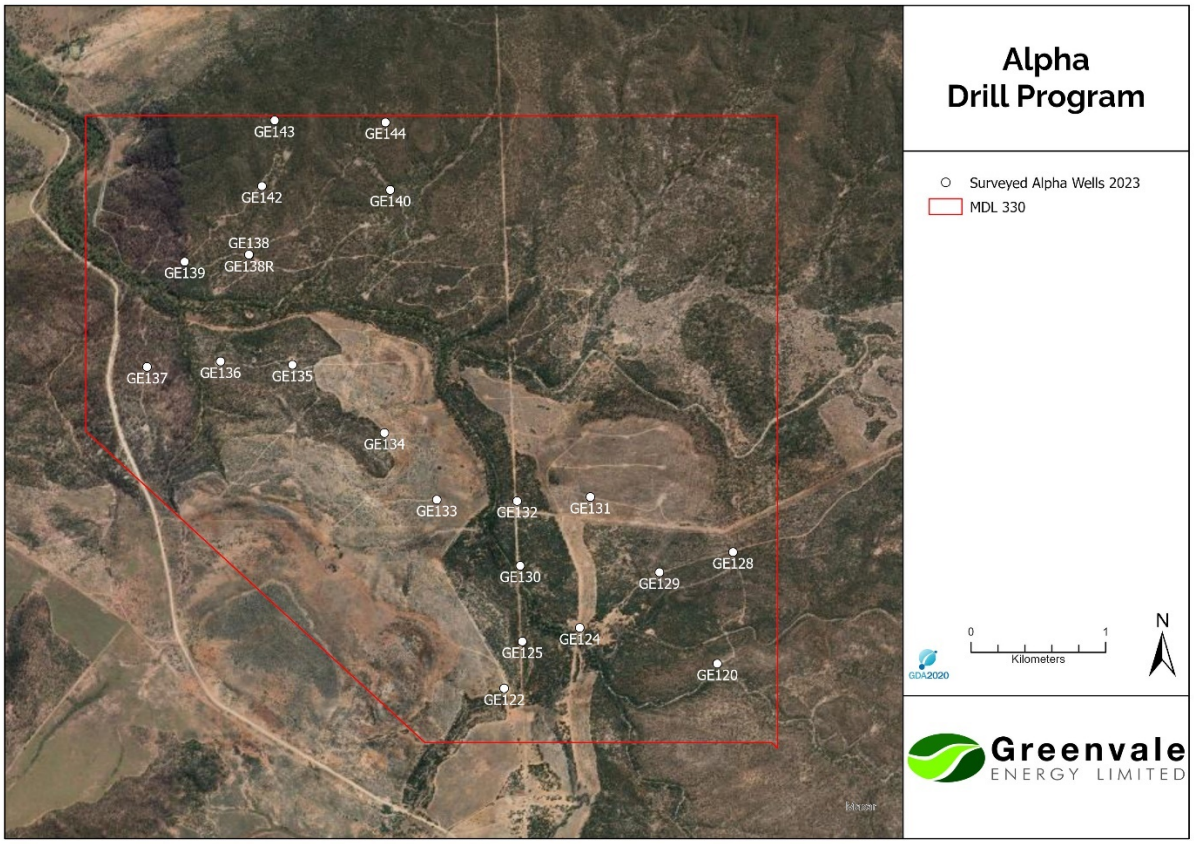

Figure 2: Alpha drill program hole locations from the recently completed field program.

Alpha JORC Mineral Resource

The updated JORC Mineral Resource Estimate for the Alpha Deposit is set out in Table 1 and Table 2 below, with the Inferred Resource Area shown in Figure 2:

Table 1: MDL 330 Inferred Mineral Resource Estimate by seam and ply unit (plus % +/- from maiden MRE)

Seam /Ply	Area (m^2)	Volume (cu m)	Waste Thickness (m)	Waste Volume (bc m)	Tonnes (Air Dried)	% +/- (Air Dried)	Tonnes (Dry)	Tonnes (In Situ)
U	5,199,146	5,409,700	21	181,383,104	6,491,640	+97%	6,653,931	6,437,543
L1	9,056,464	10,548,503	16	142,970,480	12,995,530	+64%	13,291,114	12,869,174
LT	6,774,137	3,635,190	0	157,694	4,301,324	-6.4%	4,325,876	4,289,524
L2	8,684,433	3,465,159	0	41,993	4,267,732	+49%	4,366,100	4,192,842
				Total	**28,056,227**	**+51%**	**28,637,021**	**27,789,083**

The Mineral Resources were estimated for each of the modelled plies for which there are reasonable prospects for economic extraction. Mineral Resources are limited to the area within MDL 330 and do not, as previously stated, allow for any extension of the deposit into the Company's surrounding exploration permit, EPM27718.

Table 2: MDL 330 preliminary volumetrics for Mineral Resource estimate

Seam /Ply	Inferred Dry Tonnes (Mt)	% of Total	Synthetic Oil (MMboe)	% of Total	Oil Yield LTOM	No. of Drill Holes
U	6.7	23%	4.4	16%	105	2
L1	13.3	46%	8.7	31%	104	4
LT	4.3	15%	10.7	39%	395	4
L2	4.4	15%	3.8	14%	140	4
Total	**28.6**	**100%**	**27.7**	**100%**	**154**	**6**

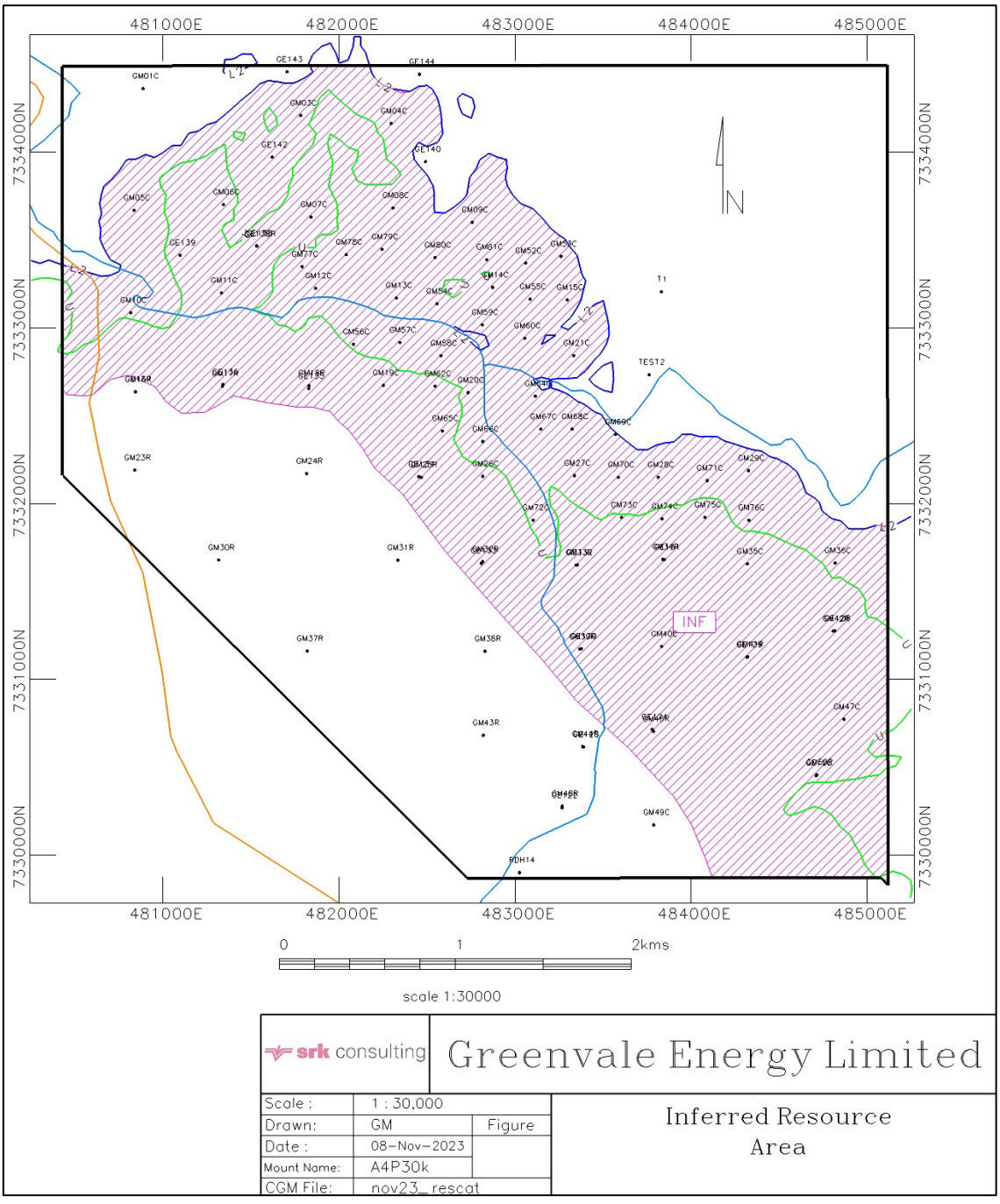

Figure 3: Inferred Resource Area at Alpha Torbanite Project, QLD.

Mineral Resources have been estimated for Upper and Lower seams (U, L1, LT, L2). Points of Observation for determining cannel coal and torbanite thickness and continuity include cored seam intersections, with geophysical wireline log.

The up-dip (northern and northeastern) limits of the Inferred Resource were defined by the modelled base of weathering. An improved topographic surface model obtained from airborne LiDAR acquired in 2022 has changed the projected base of weathering in the northern section of the deposit where terrain is more variable.

The down-dip (western, southern and southeastern) extent of the inferred resource was limited to a maximum open cut mining depth of 60 m to the floor of the Lower Seam and to the tenement boundaries of MDL330.

The cannel coal and torbanite lens Resource tonnage calculations were based on the bulk density model for the coal seam on an in-situ basis. The modelled laboratory air dried bulk density data for the cannel coal and torbanite units was used to calculate air dried tonnages and was subsequently adjusted to an in-situ moisture basis using the Preston and Sanders (1993) calculation.

As in-situ moisture cannot be measured directly, an assumed in situ moisture of 14% was used for the Alpha cannel coal, based on an air-dried moisture regression equation developed by Fletcher and Sanders (2003). The resultant in-situ moisture for the sampled cannel coal seams typically equates to the air-dried moisture of 9.4%.

A lower in-situ moisture of 6% was assumed for the torbanite lens. Due to its finer pore structure, lack of cleat and resultant lower air-dried moisture content (av. 5.1% ad) compared with the cannel coal plies.

No torbanite or cannel coal quality limits/grade cut-offs were applied to the MRE and the Resource is considered amenable to open cut mining methods.

Authorised for release:

This announcement has been approved by the Board of Greenvale for release.

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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. Carl D'Silva, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (Member number 333432). Mr. D'Silva is a full-time employee of SRK Consulting (Australasia) Pty Ltd, a group engaged by the Company in a consulting capacity. Mr D'Silva 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 D'Silva consents to the inclusion in the report of the matters based on his information in the form and context in which it appears

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 (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. ■ 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 (e.g., 'reverse circulation drilling was used to obtain 1 m sample 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.	**2023 partly cored hole drilling program** ■ 20 partly cored holes drilled (HQ3 – 61.1 mm diameter), on a nominal 250 m × 250 m grid, for the purpose of obtaining torbanite and cannel coal quality samples from the Upper and Lower seams (total drilling 1,058.7 m). The drilling includes 20 new holes and 1 redrill. ■ The core was briefly logged on surface, before being cut into variable lengths with the core preserved in PVC splits and wrapped plastic and refrigerated on site. All samples were transported to ALS Coal Laboratories, Richlands, on completion of the coring program for the follow-up assay program.
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, face-sampling bit, or other type, whether core is oriented and if so, by what method, etc.).	**2023 partly cored hole drilling program** ■ All core holes were drilled vertically from surface using a hammer bit until the coring point was reached. ■ Rods were then pulled and a HQ3 (96 mm) core barrel was run into the drill hole. ■ A total of ~464 m of HQ3 core was acquired during the program. ■ The partly cored program drill hole depths ranged from 15.3 m to 88.8 m, averaging approximately 50.4 m in depth.

Criteria	JORC Code explanation	Commentary
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.	■ Chip samples were collected at approximately 1 m intervals. ■ All chip samples were geologically logged and photographed. ■ All drill samples were collected and stored in sample trays at a Greenvale Energy storage facility. ■ Core recovery was good, and samples are representative of the seams. ■ Poor mechanical state was noted in some holes due to ground conditions. The upper ply of Lower Seam (L1) had broken and fragmented core in some drill holes. However, core recovery from these holes was still good. ■ Xenith Consulting supervised the field acquisition program under the technical guidance of Greenvale personnel. ■ All core was measured, geologically logged and photographed. ■ The core on-site was cut into variable lengths with the core preserved in PVC splits and wrapped in plastic and refrigerated on site and preserved to avoid oxidation of torbanite and cannel coal and to ensure a chain of custody from the field to the laboratory. ■ Due to the good core recovery, no relationship exists between sample recovery and torbanite and cannel coal quality results. It is highly unlikely that any sample bias has occurred.
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. ■ Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. ■ The total length and percentage of the relevant intersections logged.	■ Chip samples were collected every metre, geologically logged and photographed. ■ All core was collected, measured, geologically logged and photographed. ■ All drill holes have been geophysically logged with the minimum suite of tools run including Density, Calliper, Verticality/Deviation and Gamma. ■ The calibration of the geophysical tools was conducted by the geophysical logging company engaged in the project at the time.

Criteria	JORC Code explanation	Commentary
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.	■ Chip samples were recovered from each drill hole at 1 m intervals for lithological logging, but no laboratory analysis of the samples was undertaken. ■ Detailed core logging of the core and marking of sample intervals occurred at the ALS Coal Laboratories, Richlands, by experienced SRK personnel. ■ The core was then sampled into plies crushed and prepared for laboratory analysis as per Australian Standards.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	■ Laboratory analysis will be undertaken on the core samples from the partly cored holes. ■ ALS Coal Laboratories, Richlands, complies with Australian Standards for all torbanite and coal quality tests and is certified by the National Association of Testing Authorities (NATA) in Australia.
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.	■ Torbanite and cannel coal quality results were verified by experienced SRK personnel before inclusion in the geological model and resource estimate.

Criteria	JORC Code explanation	Commentary
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. ■ Specification of the grid system used. ■ Quality and adequacy of topographic control.	■ All holes were professionally surveyed by Precise Positioning Solutions Pty Ltd. ■ The origin of the survey was based on the calculated site base station coordinates. ■ All surveyed coordinates are recorded in Map Grid of Australia 1994 (MGA94) Zone 56 using the GDA datum. ■ A topographic surface model was constructed using satellite data (SRTM) and drill hole collar data. ■ A draft topographic surface was developed from SRTM data contoured at 2 m intervals and triangulated to develop a draft model topographic surface (TOPO). ■ Analysis of surveyed drill hole collar RLs versus the TOPO grid indicated that the TOPO grid was on average 5.51 m higher than the drill hole collar value. ■ A revised topography grid was created (TOPS) by subtracting 5.51 m from the TOPO grid. ■ The TOPS grid has been used as the model topographic surface from which the base of weathering grid was subsequently developed. ■ Confidence in the topographic model is considered low – acquisition of high resolution topographic survey data is recommended to support detailed mine planning investigations.
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.	■ Stratigraphic drilling is on a nominal grid of 500 m × 500 m. ■ Partly cored holes are on a nominal grid of 250 m × 250 m. ■ However, the open holes do not support an assessment of the torbanite lens within Lower Seam. This unit cannot be accurately determined in chip samples or readily distinguished in the downhole wireline logs (due the similar density of the coal and torbanite lens). ■ 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.

Criteria	JORC Code explanation	Commentary
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.	■ All drill holes were drilled at 90° to the surface and are assumed to be vertical. ■ Downhole verticality survey is available for all drill holes. ■ Seam intercepts are recorded on a downhole basis. ■ Downhole geophysical logs were used to confirm the seam intercepts and thicknesses. ■ As the deposit is gently dipping and drill holes are generally shallow, the downhole seam thickness will approximate the true thickness of the coal.
Sample security	■ The measures taken to ensure sample security.	■ All chip samples are secured in a Greenvale facility. ■ All core samples are secured at ALS Coal Laboratories in Richlands.
Audits or reviews	■ The results of any audits or reviews of sampling techniques and data.	■ A logging and sampling procedure was developed by SRK. ■ The Competent Person is adequately satisfied that sampling techniques and procedures have been followed.

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	▪ 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.	▪ MDL 330 is held by Alpha Resources Pty Ltd, a subsidiary of Greenvale Energy Limited. MDL 330 was first granted on 1 February 2002. An application for a renewal for an additional 5-year term was submitted in July 2021 and approved in July 2022. The current 5-year term expires on 31 January 2027. ▪ MDL 330 covers an area of 1,904.5 ha.
Exploration done by other parties	▪ Acknowledgment and appraisal of exploration by other parties.	▪ Historically (since the late1930s), the title has been held by a number of other parties. ▪ The title has been held by Alpha Resources Limited since 2002. ▪

Asset name	Licence holder	License type	Date
Anderson	H Anderson	EPM 134	1939
Anderson & other	H Anderson & others	EPM 137	1940
Anderson	H Anderson	ML 90-95	1941–42
IMC Alpha	International Mining Corporation	EPM 2240	1979–82
Alpha Oil Shale Project	Greenvale Mining & Esperance Minerals	EPM 2203	1978–85
		EPM 4023	1985–96
		MDL 211	1996–2001
Alpha Torbanite Project	Alpha Resources Limited	MDL 330	2002 to present

Criteria	JORC Code explanation	Commentary
Geology	■ Deposit type, geological setting and style of mineralisation.	■ 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. ■ The deposit is part of the Permian Colinlea Sandstone, which contains 150 m of cross-bedded sandstones with minor conglomerates, siltstones and mudstones. ■ The geology of the deposit consists of an Upper and Lower seam of cannel coal with a torbanite lens present in the lower seam. ■ The Colinlea Sandstone is thought to be a lower delta plain deposit with the coal deposited in swamps and shallow lakes in this near shore environment. 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.
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 ■ downhole 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.	■ A detailed list of the drill holes including downhole depths and seam intersects are shown in Table 1-1 and Table 1-2. ■ Geophysical deviation logs (verticality) are available for all holes. ■ All drill holes have been surveyed. ■ The verticality data for all deeper holes have been loaded and the holes were modelled accounting for any inclination.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	■ 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. ■ 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.	■ Torbanite and cannel coal were treated separately and not aggregated.
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 downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	■ All drill holes were drilled at 90° to the surface and are assumed to be vertical. ■ Downhole verticality survey is available for all drill holes. ■ Seam intercepts are recorded on a downhole basis. ■ Downhole geophysical logs were used to confirm the seam intercepts and thicknesses. ■ As the deposit is gently dipping and drill holes are generally shallow, the downhole seam thickness will approximate the true thickness of the coal.
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.	■ All appropriate diagrams are contained in the report.
Balanced reporting	■ Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.	■ All available exploration data for the Alpha Torbanite area has been collated and reported. ■ This release describes all relevant information.

Criteria	JORC Code explanation	Commentary
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 2023 and 2021 drilling results. ■ Limited historical drill hole information was used to supplement the 2023 and 2021 drilling and support the continuity of the Upper and Lower seams outside the bounds of the MDL area.
Further work	■ The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). ■ 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 updated geological model has enabled a more robust interpretation of the deposit structure, and the limits of the torbanite lens. ■ The geological model will be used support the planning and execution of a core drilling program to target down-dip areas to better define the limits of the torbanite lens in Lower Seam. ■ Additional core drilling is also recommended in the northern sector to provide higher confidence in the modelled subcrop of Lower Seam and the extent of torbanite lens in this area.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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 validation procedures	■ Data were entered in the field by the Field Geologist into Log Check software. ■ Detailed off-site core logging was conducted at ALS Coal Laboratories in Richlands, by experienced SRK geologists. ■ All lithological logs, and coal intersection depths have been reconciled and corrected to the downhole geophysical logs. ■ All drilling data were reviewed and validated by SRK post correction by experienced exploration geologists.
Site visits	■ Comment on any site visits undertaken by the Competent Person and the outcome of those visits. ■ If no site visits have been undertaken indicate why this is the case	■ Mr C D'Silva as Competent Person has conducted a number of site visits to the Alpha Torbanite Project area in 2021. ■ The Competent Person's familiarity with Galilee Basin coal and coal seam gas projects is extensive and his knowledge of the stratigraphy is thorough and sufficient. ■ Mr C D'Silva had oversight of the 2021 drilling program and is familiar with the coal seams and torbanite lens as described in this report.
Geological interpretation	■ Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. ■ Nature of the data used and of any assumptions made. ■ The effect, if any, of alternative interpretations on Mineral Resource estimation. ■ The use of geology in guiding and controlling Mineral Resource estimation. ■ The factors affecting continuity both of grade and geology.	■ The drill hole density (core and chip) in the Alpha Torbanite Project allows a good level of confidence in seam and ply structure, thickness, torbanite and cannel coal quality, and the location of sub-crops. ■ No alternative interpretations were considered for the geological interpretation of the Upper and Lower seams, due the simple and well-defined structural nature of the deposit.
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 extent of the reported Mineral Resource is ~4.0 km along strike trending southeast to northwest and ~2.3 km down-dip to the southwest. ■ The Upper Seam extents down-dip from its subcrop to ~95 m. ■ The Lower Seam extents down-dip from its subcrop to ~110 m.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Estimation and modelling techniques</td><td>■ 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.
■ The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.
■ The assumptions made regarding recovery of by-products.
■ Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</td><td>■ The 2023 and 2021 drill hole data were compiled by SRK and used to prepare an updated geological model for 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). The updated model is supported by partly cored drill holes that have allowed accurate downhole measurement of coal and torbanite intervals (not previously possible using open holes).
■ The modelling algorithm used for generating the seam structure and coal quality models was the Minex Growth Technique, a proprietary 2D gridding algorithm, which calculates the most fitting surface for stratiform deposits, taking into account the regional trends together with the ability to honour the drill hole data, given the appropriate gridding parameters.
■ Coal qualities and source rock parameters were incorporated in the geological model for each of the modelled plies/units.
■ Data modelled include the following: proximate analysis, ultimate analysis, TOC, and Modified Fischer Assay yields.</td></tr>
<tr><td>Moisture</td><td>■ Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</td><td>■ Tonnages of the cannel coal and torbanite are report on an in situ moisture basis.
■ As in situ moisture cannot be measured directly, an assumed in situ moisture of 14% was used for the cannel coal, based on an air-dried moisture regression equation developed by Fletcher and Sanders (2003). The resultant in situ moisture for the sampled coal seams typically equates to the air-dried moisture +4.6%.
■ Due to its finer pore structure, lack of cleat and resultant lower air-dried moisture content (av. 4.9% ad) compared with the coal plies, a lower in situ moisture of 6% was assumed for the torbanite lens.
■
<table><tr><th>Moisture</th><th>Assumed in situ</th><th>Average air dried</th></tr><tr><td>Cannel coal</td><td>14%</td><td>9.1%</td></tr><tr><td>Torbanite</td><td>6%</td><td>4.9%</td></tr></table></td></tr>
</table>

Criteria	JORC Code explanation	Commentary
Cut-off parameters	▪ The basis of the adopted cut-off grade(s) or quality parameters applied.	▪ No torbanite or cannel coal quality limits/grade cut-offs were applied to the Mineral Resource estimate.
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.	▪ SRK has applied a minimum thickness appropriate to the potential mining method (see 'Modelling technique') and deems the torbanite and cannel coal resources have reasonable prospects for eventual economic extraction. ▪ Detailed mining studies have not yet been completed. It is expected that torbanite and cannel coal will be extracted using conventional shallow open pit mining methods. ▪ Mining dilution assumptions have been factored into the Mineral Resource estimate.
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.	▪ Assumptions regarding the oil yields from the torbanite and cannel coal are currently based on a limited dataset. ▪ Modified Fischer Assay results, which give an indication of maximum potential oil yield, are reported for 14 samples from six drill holes, from the 2021 drilling program. ▪ The theoretical oil yields from the MFA support the assumptions regarding reasonable prospects for eventual economic extraction of the torbanite and cannel coal. ▪ Further investigations are required regarding the processing, potential products, and practical yields in order to support higher Mineral Resource classifications.

Criteria	JORC Code explanation	Commentary
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	■ It is SRK's opinion, that at this stage of the Project, there are no surface constraints due to environmental factors on MDL 330 that would impede further exploration or prospects for eventual economic extraction. ■ The resource is traversed by two ephemeral waterways (Native Companion Creek and Star Creek). These areas have been included in the Mineral Resource Estimate to allow for their consideration in future environmental assessment and mining studies. ■ Future work will include hydrological studies, groundwater and acid mine drainage assessments of the resource area. These factors have not yet been considered.
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. ■ 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. ■ Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	■ The cannel coal and torbanite resource tonnage calculations were based on the bulk density model for the coal seams on an in situ basis which were undertaken on lump samples. ■ The modelled laboratory air-dried bulk density data for the coal and torbanite units was used to calculate air-dried tonnages and was subsequently adjusted to an in situ moisture basis using the Preston and Sanders (1993) calculation.

Criteria	JORC Code explanation	Commentary
Classification	■ The basis for the classification of the Mineral Resources into varying confidence categories. ■ Whether appropriate account has been taken of all relevant factors (i.e. 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). ■ Whether the result appropriately reflects the Competent Person's view of the deposit.	■ The classification of the torbanite and cannel coal as an Inferred Resource is based on the opinion of the Competent Person. Mr C D'Silva has formed his option based on the drill spacing, the stratigraphic correlation, the results of analysis of the samples and on the geological and quality variability of the deposit, and in particular, on the thickness and quality variability of the torbanite lens. ■ The Competent Person is confident in the reliability of geological data and in the understanding of the geology including the continuity of the coal seams and the torbanite and cannel coal plies. The estimates appropriately reflect the Competent Person's view of the deposit.
Audits or reviews	■ The results of any audits or reviews of Mineral Resource estimates.	■ No independent audits or reviews have been conducted on the resource estimates, but Greenvale Energy's geology personnel have reviewed SRK's estimation. ■ SRK's work has also undergone a round of internal peer review.
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.• 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. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	■ The resource estimates have been prepared and classified in accordance with the guidelines that accompany the JORC Code (2012 edition), and no attempts have been made to further quantify the uncertainty in the estimates. ■ A classification of Inferred is applied globally to the Mineral Resource. ■ The Mineral Resource estimate should be considered as a global estimate only. The accompanying model is considered suitable in terms of supporting preliminary conceptual mine planning studies, but is not considered suitable for detailed production planning and mining studies