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GREENVALE PROGRESSES 2D SEISMIC APPROVALS FOR EP145 IN THE AMADEUS BASIN

Approvals progressing and on track for seismic acquisition to commence in August, allowing Greenvale to advance its high-potential helium project in central Australia.

Highlights:

- **EP145 2D Seismic Environmental Management Plan submitted to DEPWS.**
- **All remaining long-lead items ordered for the seismic program.**
- **Seismic data acquisition expected to commence in August, providing a key dataset for Greenvale to target ultra-high-grade helium, hydrogen and hydrocarbon resources within the highly prospective Amadeus Basin.**
- **EP145 represents an exciting opportunity for Greenvale to become a supplier to the rapidly growing helium market, which is experiencing severe supply shortages and strong demand growth and pricing.**
- **EP145 contains a reported Prospective Resource Estimate of 440 Billion cubic feet (Bcf) of Total Gas including 26.4Bcf of Helium and 26.4Bcf of Hydrogen.**

Greenvale Energy Limited (ASX: **GRV**, "**Greenvale**" or "**the Company**") is pleased to advise that the 2D Seismic Environmental Management Plan (EMP) for EP145 in the Amadeus Basin in Central Australia has been submitted to and accepted by the Department of Environment Parks & Water Security (DEPWS), representing a key milestone towards the start of exploration programs targeting ultra-high-grade helium, hydrogen and hydrocarbon resources.

The Wild Horse 2D seismic survey will comprise 118km of 2D seismic lines and has been designed to acquire additional seismic data along the southern extent of the West Walker anticline to understand the pre and post salt structure and stratigraphy and to delineate leads that have been identified on recent gravity and gradiometry data and existing vintage seismic data.

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All remaining long-lead items required for the 2D seismic program have been ordered. This includes the dynamite, which has already been acquired and received, and the detonators which have been ordered from France and are expected to arrive by mid-July.

This allows the nominated contractor to lock in the drill rigs and heli-support required for the mixed source (dynamite/weight drop) program, which are the final items required for the 2D seismic program.

The Wild Horse 2D survey is currently scheduled to begin in August, pending the approval of the EMP. Seismic acquisition is expected to take place over the months of August and September.

The survey results will provide an important dataset to assist with drill targeting within EP 145, which already hosts an existing "Best Estimate" Prospective Resource Estimate of 440 Billion cubic feet ("Bcf") Total Gas, including 26.4 Bcf of Helium and 26.4 Bcf of Hydrogen.

Preliminary technical analysis indicates the tenement hosts favourable geology for helium production, with similar characteristics to other producing helium wells in the Amadeus Basin. The Amadeus Basin has a long history of hydrocarbon production and has the potential to become a world-class province for helium and hydrogen, with some of the highest concentrations of helium globally and confirmed hydrogen accumulations.

EP 145 sits in close proximity to existing critical gas infrastructure, providing a pathway to near-term commercialisation.

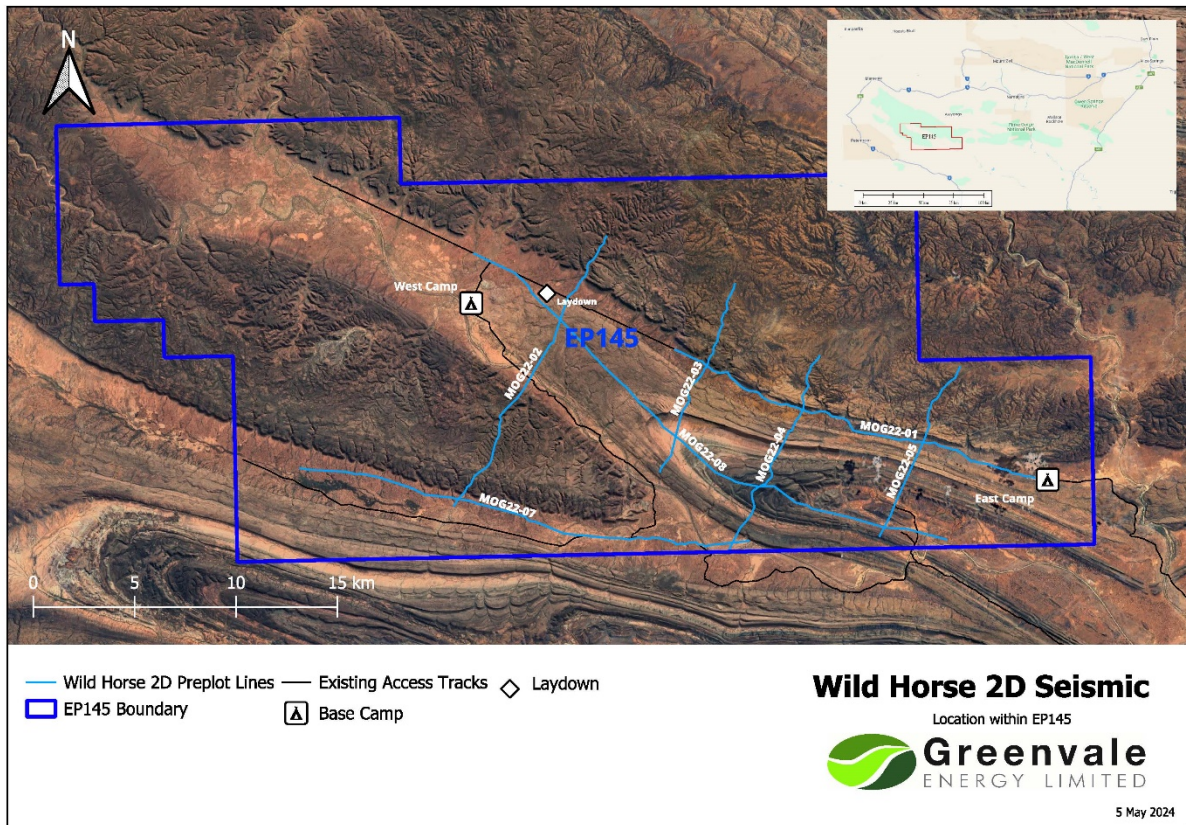


Figure 1: Wild Horse 2D seismic map

Management Comment

Greenvale's CEO, Mark Turner, commented: *"We are pleased that the permitting and approvals process for this 2D seismic program for EP145 is progressing smoothly, with the start of this survey representing a key milestone to allow us to finalise drilling locations to test the significant potential of this exciting asset."*

"Ongoing work programs by Greenvale and other operators in the Amadeus Basin will help us to fully evaluate the significant helium and hydrogen potential of this region and advance this exciting project for the benefit of our shareholders."

About EP145

Greenvale Energy Limited through its wholly owned subsidiary Greenvale Gas has a 75% interest in EP145 permit in the Northern Territory. With 25% owned by Trident Energy Pty Ltd, which is a wholly subsidiary company of Mosman Oil & Gas. Mosman reported a Prospective Resource Estimate for EP 145 on 24 October 2022 which included a "Best Estimate" (applying the SPE PRMS standard) of 440 Billion cubic feet ("Bcf") Total Gas, including 26.4 Bcf of Helium and 26.4 Bcf of Hydrogen.

The Amadeus Basin has a long history of hydrocarbon production in the Palaeozoic and late Proterozoic succession. Helium and hydrogen production have been proven through, exploration drilling, with some of the highest concentrations of helium globally – highlighting its potential to become a world-class province for helium and hydrogen.

The EP145 permit sits within recognised play fairways for helium and hydrogen and contains proven hydrocarbon discoveries. The permit lies on-trend with the producing Mereenie oil & gas field and is optimally located for helium, hydrogen and hydrocarbons. Successful helium wells are located along the margins of the Amadeus Basin at Mt Kitty-1 and Magee-1, with existing gas pipeline infrastructure (Amadeus Gas Pipeline) to Darwin and the Australian East Coast, providing an opportunity for rapid development and commercialisation.

Since 2006, the helium market has experienced periods of severe supply shortages, with strong forecast demand growth and very few new sources of supply in the pipeline. EP145 provides an exciting opportunity for Greenvale to target the rapidly expanding helium market, with global helium demand currently estimated to be around 6Bcf per annum and expected to increase to 8.5Bcf by 2030.

Helium

Helium is an inert gas that has the lowest cooling temperature of any element, making it invaluable for medical, manufacturing, and scientific applications. Helium is used in medical diagnostic equipment including magnetic resonance imaging (MRI) machines, nuclear magnetic resonance (NMR) spectrometers and is used to cool nuclear reactors. Due to its unreactive nature, helium provides a protective atmosphere for making fibre optics, semiconductors and in arc welding. Other uses include in rocket propulsion, meteorology (for instrument carrying balloons), refrigeration and cryogenic research.

Helium is extremely valuable and indicatively, longer term bulk pricing is expected to approximate USD\$450 or AUD\$675 per Mcf (thousand cubic feet)

Natural Hydrogen

Natural hydrogen in the Earth's sub-surface provides an alternative, clean, carbon free fuel which can be extracted for commercial use. Unlike the hydrogen produced via water electrolysis, natural hydrogen requires no additional energy input from either fossil fuels (coal/natural gas) or renewables.

Authorised for release:

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

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Prospective Resource

In 2022 a technical evaluation by Geognostics Australia Pty Ltd ("Geognostics"), identified favourable scenarios for all three essential play elements related to viable helium and hydrogen plays in EP 145 ("Technical Report"). These components are also present in the Mount Kitty-1 and Magee-1 wells in the Amadeus Basin which flowed helium, hydrogen and hydrocarbons.

Based on the Geognostics report, and data from other wells in the Amadeus basin, Mosman has estimated gross Prospective Resource volumes for hydrocarbons, helium, and hydrogen associated with the Walker Creek Anticline as a lead within the boundaries of the EP 145 permit using a deterministic approach and applying the SPE PRMS standard.

Table 1 – Prospective Resource Statement

Prospective Resources (Bcf)	Low Estimate	Best Estimate	High Estimate
Total gas	12	440	2,290
Helium	0.3	26.4	229
Hydrogen	0.24	26.4	275

Source: Mosman Oil and Gas Ltd, October 2022

SPE defines Prospective Resources are those quantities of petroleum which are estimated, on a given date, to be potentially recoverable from undiscovered accumulations. SPE also notes "Prospective Resources have both an associated chance of geologic discovery and a chance of development. Prospective Resources are further categorized in accordance with the range of uncertainty associated with recoverable estimates, assuming discovery and development, and may be sub-classified based on project maturity" and "The Range of Uncertainty.....reflects a reasonable range of estimated potentially recoverable volumes for an individual accumulation. Any estimation of resource quantities for an accumulation is subject to both technical and commercial uncertainties, and should, in general, be quoted as a range".

Qualified Person's Statement

The prospective resources statement contained in this announcement was reviewed and approved by Andy Carroll, Technical Director for Mosman, who has over 35 years of relevant experience in the oil industry. Mr. Carroll is a member of the Society of Petroleum Engineers. As at the date of this announcement, there is no change to information or additional information, since the effective dates, that would materially change the estimates of prospective resources quoted.