

ASX ANNOUNCEMENT

1 June 2023

Preparations Complete for ATP 1069 Seismic Acquisition

Top End Energy Limited (**Top End** or the **Company**) (ASX:TEE) is pleased to provide an update on its activities at its 100%-owned Coolibah prospect in the Adavale Basin, Queensland.

HIGHLIGHTS

- Key land access agreements, approvals and assessments completed ahead of upcoming acquisition of new 120km infill 2D seismic data over the Coolibah conventional gas prospect
- Coolibah is a large target (PMean prospective resource of 715 bcf) located near infrastructure and the gas short East Coast market
- Terrex Seismic scheduled to mobilise in June following completion of activities in the local area, dove-tailing programs to minimise costs
- Data processing contract awarded to industry leader, Earth Signal
- Seismic program designed to improve the geological understanding of the Coolibah prospect ahead of a drilling decision expected H2 2023
- Strategic location and scale of Coolibah prospect likely to attract farm-in interest

Commenting on the upcoming 2D seismic acquisition program, Managing Director Oliver Oxenbridge said:

"The Top End team has been working hard to complete all requisite processes in preparation for the acquisition of 2D seismic over our Coolibah prospect. We look forward to getting out in the field and gathering the necessary data to rapidly advance this exciting acreage position. Our focus is on maturing the Coolibah prospect ahead of a drilling decision targeted for later this year. We are confident that any discovery at the Coolibah prospect would be commercially advantaged given the permit's proximity to infrastructure and the strained supply outlook for the East Coast gas market."

PREPARATIONS FOR SEISMIC ACQUISITION

In February 2023, the Company announced the engagement of Terrex Pty Ltd (**Terrex**) to undertake the acquisition of approximately 120 line kilometres of new infill 2D seismic data on Authority to Prospect (**ATP**) 1069 (the **Permit**), focusing on the Coolibah prospect.

In preparation for the upcoming acquisition, the Company has completed all requisite processes, including:

- negotiation and execution of six Land Access Agreements (**LAA**) with respective owners of the land over which the acquisition will be undertaken¹;
- third-party environmental assessment of the proposed seismic line locations for the avoidance of environmentally sensitive areas;
- cultural heritage survey by representatives of the Bidjara Group of Peoples;
- third-party assessment for the identification and avoidance of Native Title claim areas; and
- grant of a Data Acquisition Authority to allow acquisition outside the Permit boundary in order to “tie-in” the new data with data from the historic Mount Morris well to the southwest of the Permit.

The scope of the seismic acquisition has been refined to avoid any areas of cultural, environmental and ecological significance or sensitivity identified during preparation work.

Top End is working with Terrex to schedule a scouting trip in the coming weeks to confirm and finalise line locations. Terrex is expected to commence mobilisation in late June 2023 following completion of another project in the immediate area. The Company and Terrex have scheduled the two programs in a way that minimises time and costs. Seismic acquisition activities are expected to be completed in July 2023.

PROCESSING, INTERPRETATION AND DRILLING

The Company awarded the contract for the 2D seismic data processing to Earth Signal Processing Ltd (**Earth Signal**) following a competitive tender process. The processing is expected to take between four and six weeks to complete.

The new infill seismic data, to be acquired and processed using the latest modern Pre-Stack Time Migration (**PSTM**) technology, will be used to enhance the Company’s geological understanding of the Coolibah prospect ahead of a final drilling decision. In parallel, the Company has initiated preliminary planning for the potential exploration well including basic well design, assessment of long lead items and compiling a short-list of potential drilling contractors. Subject to the outcome of the updated subsurface modelling and risk assessment, Top End is targeting drilling of the exploration well in H1 2024. The Company currently holds 100% of the Permit and intends to conduct a process to farm-down a portion of the interest ahead of any drilling event.

¹ Two further LAAs are in late-stage negotiations with the respective landowners and expected to be concluded shortly.

COOLIBAH PROSPECT

The Coolibah conventional gas prospect was identified following a thorough prospectivity review of ATP 1069.

The Coolibah prospect is a large anticlinal feature (~278km²) identified from geological and geophysical studies focussed on assessing the conventional gas potential of Devonian aged formations including the Buri Limestone. The Buri Limestone is of equivalent age to the producing Lissoy Sandstone formation of the nearby Gilmore Gas Field.

The following Prospective Resources at the Coolibah prospect have been independently assessed by Discover Geoscience (**Discover**):

Coolibah Prospect (100%) ²	PMean	P10	P50	P90
Gas in Place (bcf)	1,951	4,140	1,288	400
Prospective Resources (bcf)	715	1,573	491	150

Note: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both a risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially recoverable hydrocarbons.

Table 1: Coolibah Prospective Resources independently assessed by Discover

A proven working petroleum system exists in the Adavale Basin, as evidenced by the Gilmore Gas Field which is situated approximately 75km west of ATP 1069. Any discovered gas volumes at Coolibah would have the potential to be commercialised via existing nearby infrastructure into the East Coast gas market.

² Please see ASX announcement "Certified Prospective Resource & Operational Update" (29 November 2022); the Company is not aware of any new information or data that materially affects the information included in the ASX announcement and all material assumptions and technical parameters underpinning the estimates in the ASX announcement continue to apply and have not materially changed.

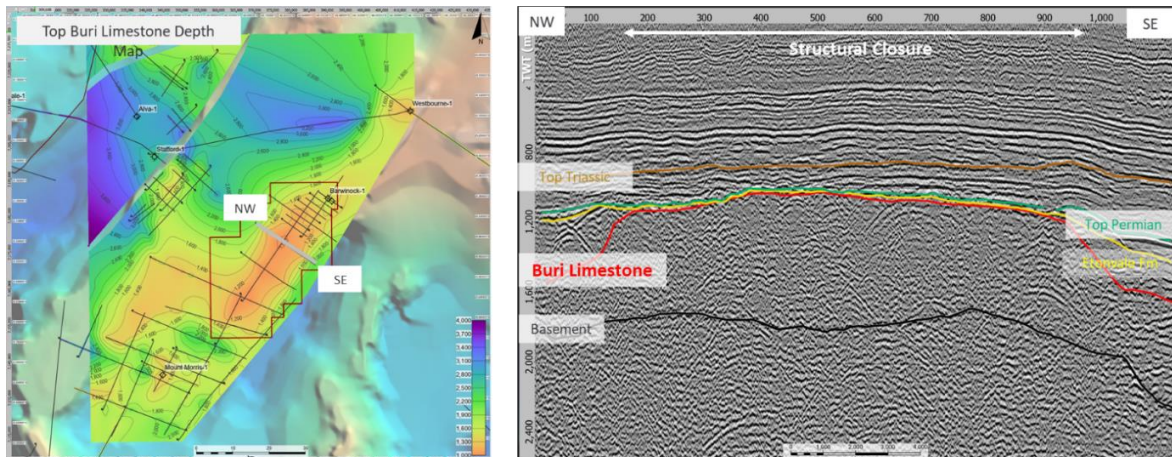


Figure 1: The Coolibah prospect on ATP 1069

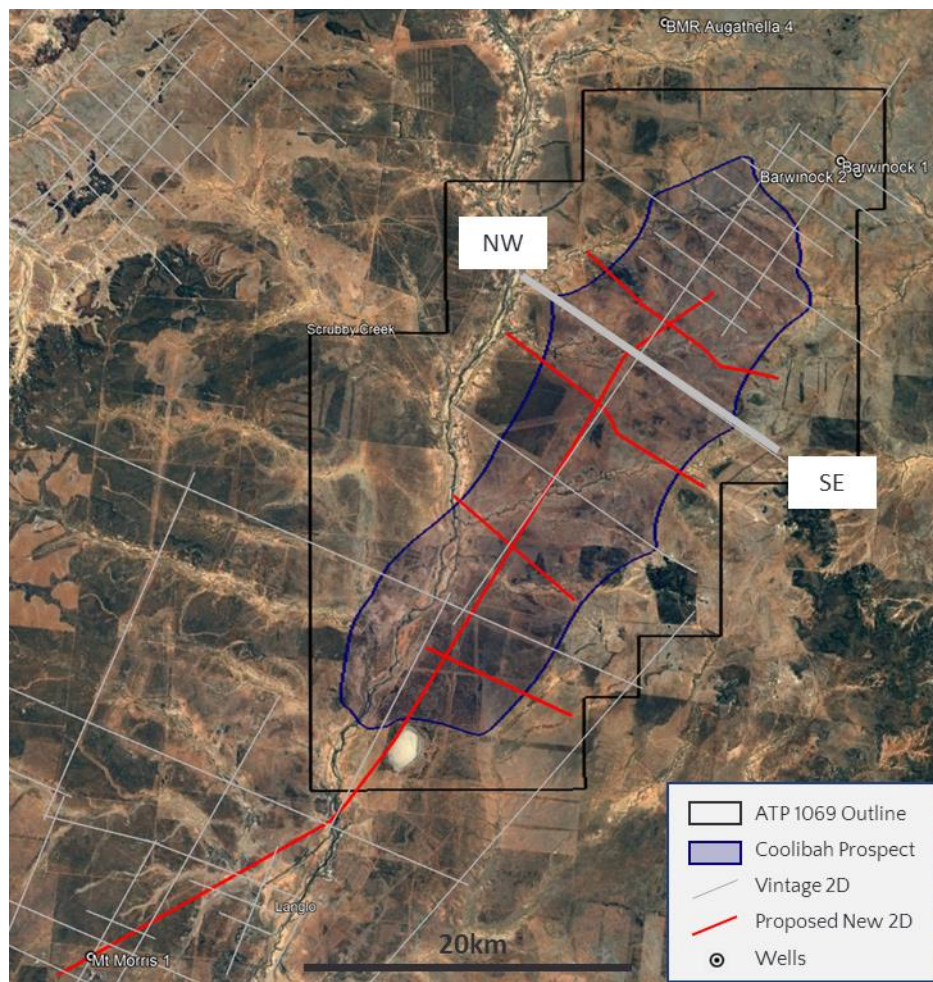


Figure 2: Refined 2D seismic scope

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This announcement was authorised for release by the Board of Directors of Top End Energy Limited.

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About Top End Energy Limited

Top End aims to be a leading Australian diversified energy provider at the forefront of the energy transition. Combining an attractive portfolio of granted and in-application petroleum permits across Australia, intending to pursue complementary clean energy solutions and achieve a target of net zero (Scope 1 and 2) emissions.

For further information on Top End Energy Limited please visit www.topendenergy.com.au

About Terrex

Terrex Seismic is a seismic acquisition company focused on onshore Australia. Terrex Seismic is one of Australia's most experienced seismic contractors, having worked for the last 38 years in every major Australian onshore sedimentary basin as well as in numerous other locations around the world. They have acquired over 1,000 seismic surveys to date and pride themselves on consistently supporting and serving the industry, bringing equipment and technical innovation to the forefront of seismic exploration regardless of the unpredictability of the cyclical nature of the resource industry.

For further information on Terrex Pty Ltd please visit www.terrexseismic.com

About Earth Signal

Established in 1993, Earth Signal Processing Ltd has established itself to become an industry leader in seismic data processing. The Calgary based company has worked with hundreds of clients from around the world and has experience in most major onshore Australian sedimentary basins.

For further information on Earth Signal Processing Ltd please visit www.earthsignal.com

Resource Estimation Methodology

Resource estimates have been prepared by Discover Geoscience in accordance with the definitions and guidelines set forth in the Petroleum Resources Management System, 2018, approved by the Society of Petroleum Engineers.

The primary target for the Company's permit in Queensland is the Buri Limestone, a reservoir with the potential to be productive for gas within ATP 1069 and the Adavale Basin more generally.

The Prospective Resource assessment has been conducted by Dave Gilbert. Mr. Gilbert is a subsurface advisor for Discover and has over 40 years of global experience evaluating and managing oil and gas exploration assets and is a qualified petroleum reserves and resources evaluator (QPRRE) as defined by ASX listing rules.

Discover is a well-known and respected independent energy advisory firm, with a history of providing impartial advice to the petroleum industry including providing Independent Technical Specialist Reports (ITSRs) and Competent Persons Reports (CPRs) for stock exchange and regulatory requirements.

For further information on Discover please visit www.discovergeoscience.com