



# LEADING AUSTRALIA INTO A LOW-CARBON ENERGY FUTURE

---

2023 AGM PRESENTATION

23 NOVEMBER 2023

# DISCLAIMER

---



This presentation is for the sole purpose of preliminary background information to enable recipients to review the business activities of Top End Energy Limited (Australian Company Number 650 478 774) (the Company).

This presentation is not a prospectus and does not constitute an invitation, solicitation, recommendation or an offer to purchase or subscribe for securities.

The Company and its directors, employees and consultants make no representations or warranty as to the accuracy, reliability or completeness of this presentation, and have no liability, including liability to any person by reason of negligence of, or contained in or derived from, or for any omissions from this presentation, except liability under statute that cannot be excluded.

This presentation contains reference to certain targets and plans of the Company which may or may not be achieved. The performance of the Company may be influenced by a number of factors, uncertainties and contingencies, many of which are outside the control of the Company and its directors, staff and consultants.

Investment in the Company is regarded as speculative and this presentation includes certain forward-looking statements that have been based on current expectations about future acts, events and circumstances. These forward-looking statements are, however, subject to risks, uncertainties and assumptions that could cause those acts, events and circumstances to differ materially from the expectations described in such forward-looking statements. These factors include, among other things, commercial and other risks associated with estimation of potential hydrocarbon resources, the meeting of objectives and other investment considerations, as well as other matters not yet known to the Company or not currently considered material by the Company.

The Company and its directors and representatives accept no responsibility to update any person regarding any error or omission or change in the information in this presentation or any other information made available to a person or any obligation to furnish the person with further information and the Company and its directors and representatives do not endorse or take any responsibility for investments made.

This presentation is not a financial product nor investment advice or a recommendation to acquire securities in the Company. It has been prepared without taking into account the objectives, financial situation or needs of individuals. Before making any investment decision, prospective investors should consider the appropriateness of the information having regard to their own objectives, financial situation and needs and seek legal and taxation advice.



# 2023 HIGHLIGHTS

---



1. COMPLETED 2D SEISMIC ACQUISITION IN QUEENSLAND  
MATURING COOLIBAH PROSPECTIVITY AHEAD OF PLANNED 2024 DRILLING
2. EXECUTED KEY AGREEMENTS FOR PRIORITISED PERMITS IN NT  
PLANNED EXPLORATION ACTIVITIES TO COMMENCE FOLLOWING ANTICIPATED GRANT OF EP 258
3. AWARD AND GRANT OF NEW PERMIT IN WA  
HIGHLY PROSPECTIVE ACREAGE OVER WESTERN MARGIN OF AMADEUS BASIN
4. IDENTIFIED HIGH NATURAL HYDROGEN AND HELIUM POTENTIAL  
PRELIMINARY STUDIES IDENTIFY HIGHLY PROSPECTIVE PLAY FAIRWAYS
5. PROGRESSING STRATEGIC INORGANIC GROWTH OPPORTUNITIES  
LEVERAGING EXISTING ONSHORE POSITION TO ACQUIRE HIGH IMPACT COMPLEMENTARY ASSETS
6. PRUDENT CAPITAL MANAGEMENT AND LEAN CORPORATE OVERHEAD  
PRESERVING CASH AMID CHALLENGING MARKET CONDITIONS WHILE STILL PROGRESSING STRATEGIC OBJECTIVES

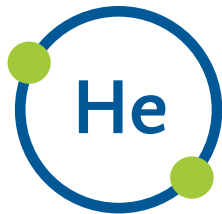


# INNOVATIVE ONSHORE GAS EXPLORATION AND DEVELOPMENT COMPANY

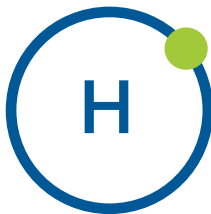
## UNLOCKING CRITICAL PRODUCTS TO DRIVE THE ENERGY TRANSITION



NATURAL  
GAS



HELIUM  
GAS



NATURAL  
HYDROGEN



### 1. ADAVALE BASIN

Proven producing region with material conventional gas prospect identified

### 2. MCARTHUR BASIN

One of Australia's most active gas exploration regions containing the Beetaloo sub-basin

### 3. AMADEUS BASIN

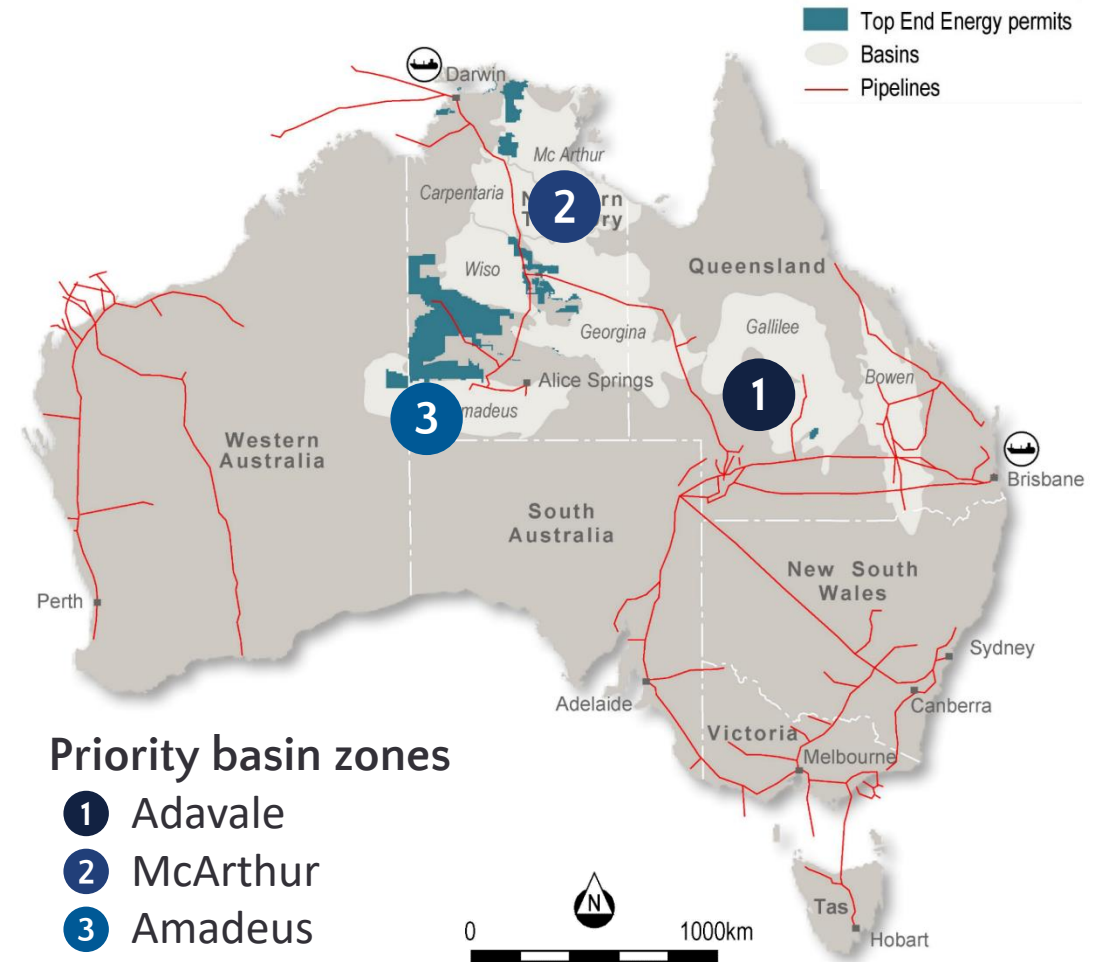
Existing hydrocarbon system with untested and historically overlooked margin extension opportunity

# LARGE, PROSPECTIVE AUSTRALIAN ACREAGE POSITION



## DIVERSIFIED ONSHORE EXPLORER TARGETING NEAR-TERM DRILLING EVENTS

- Strategy focused on maturing a portfolio of **high impact, technically independent** onshore targets
  - ➔ **Basin margin focus** with play opening potential for **natural gas, natural (gold) Hydrogen and Helium**
  - ➔ **High equity** acreage positions
  - ➔ Close to **existing infrastructure** with clear route to market
- Extensive existing footprint onshore Australia (~170,000km<sup>2</sup> total acreage<sup>1</sup>) with near-term focus on:
  - ① Conventional gas drilling on ATP 1069 (QLD)
  - ② Airborne gravity gradiometry and 2D seismic acquisition in the McArthur Basin to mature gas, Hydrogen and Helium prospectivity
  - ③ Soil gas sampling in the Amadeus Basin ahead of further on-ground activities
- Pursuing strategic and capital efficient M&A opportunities to accelerate strategic objectives

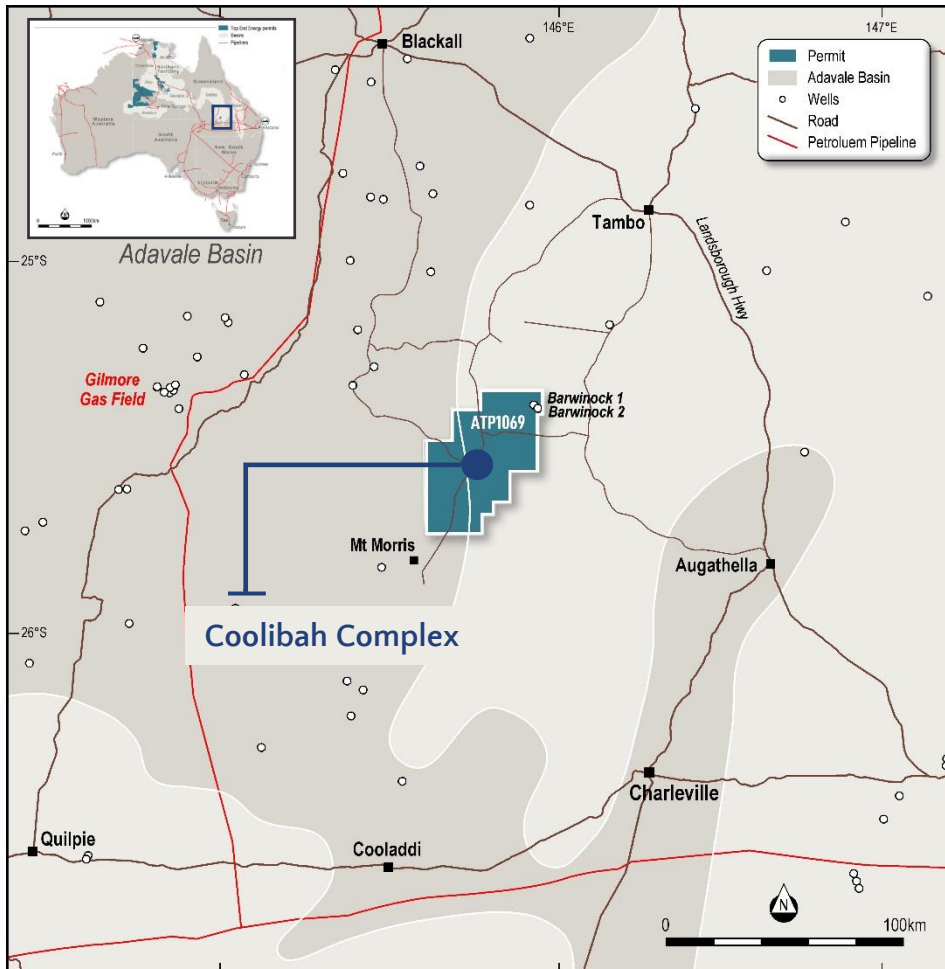


1. Acreage is a combination of granted and in-application permits

# 1. ADAVALE BASIN ZONE



## MATERIAL CONVENTIONAL GAS PROSPECTIVITY IN UNDER-EXPLORED BASIN



- ATP 1069 permit covering approximately 1,048km<sup>2</sup> located 130km NW of Charleville in Central Queensland
- Situated approximately 75km east of the **conventional Gilmore gas field**, **close to existing infrastructure** with potential to supply the east coast gas market
- **Acquisition of new 2D seismic over Coolibah Complex completed in Q3 2023**
  - ✓ Acquisition operations completed incident free and within budget
  - ✓ Geological & Geophysical (G&G) interpretation to be completed in coming weeks
  - ✓ Outcomes to inform farmout and drilling decisions



Vibrator trucks at the Coolibah Complex

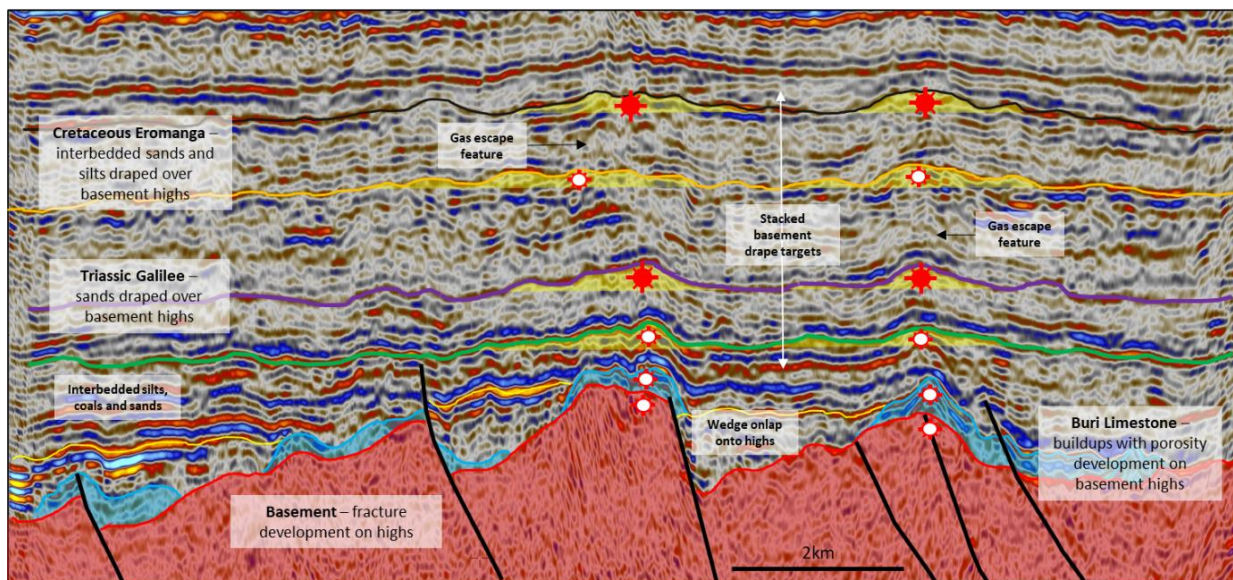




# 1. ADAVALE BASIN ZONE



## MULTIPLE STACKED PLAY TYPES IDENTIFIED

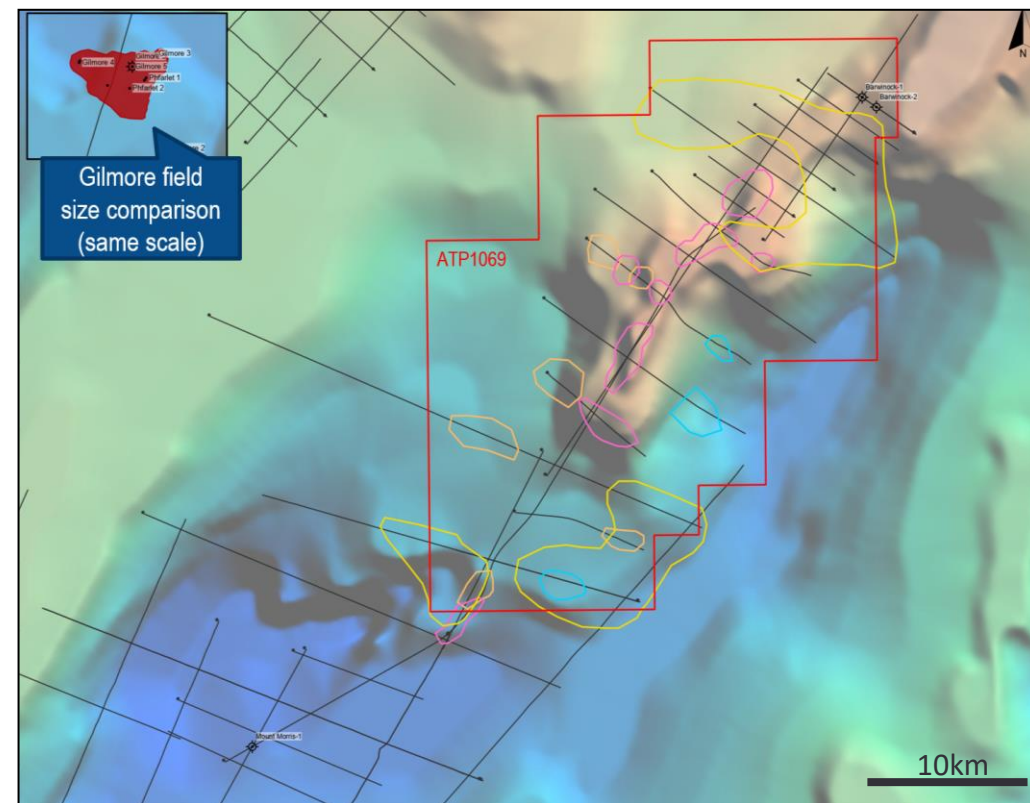


★ Primary targets

☆ Secondary targets

ATP 1069 Stacked Basement Drape Play

- ✓ Newly acquired Coolibah 2D data processing has provided a material uplift in data quality
- ✓ Seismic interpretation has confirmed the presence of the large Coolibah structure
- ✓ Update to depositional and structural settings complete
- ✓ Multiple stacked play systems identified across the greater Coolibah Complex; volumetric analysis ongoing
- ✓ Low exploration well costs anticipated due to shallow and conventional nature of stacked targets

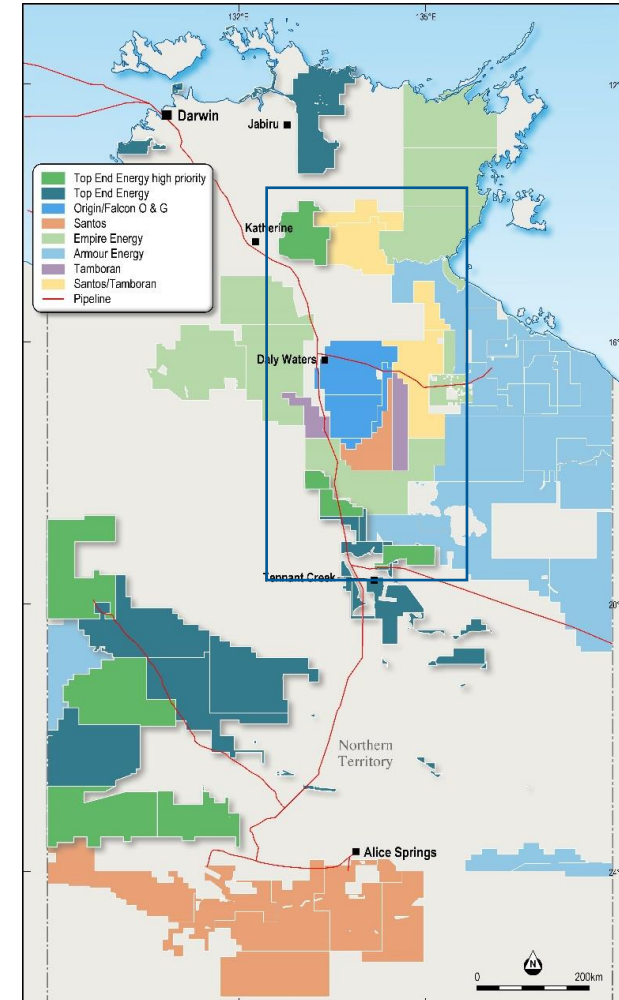


ATP 1069 Prospects & Leads Map

# 2. MCARTHUR BASIN ZONE

## ONE OF AUSTRALIA'S MOST ACTIVE GAS EXPLORATION REGIONS

- The McArthur Basin hosts multiple discovered resource plays including the **highly prospective Beetaloo sub-basin**
  - ➔ One of the largest shale gas deposits globally and Australia's largest undeveloped gas resource with an estimated 500 TCF of natural gas in place<sup>1</sup>
  - ➔ Market access to 87% of population and 38 mmtpa of LNG export capacity<sup>2,3</sup>
  - ➔ Conventional reservoir potential is also present in the basin
- Region has attracted **significant investment** from energy operators and multiple **ongoing work programs** continue to prove up resource base and commercial viability
- Supportive NT government, recognising the importance of natural gas to industrial development and the Territory economy
  - ➔ Beetaloo regulatory framework finalised, **greenlighting development of the sub-basin**
  - ➔ **\$1.5 billion federal government commitment** to expanded port infrastructure to support Darwin Middle Arm Sustainable Development Precinct



### E&P COMPANIES IN THE MCARTHUR BASIN

**Santos**

**EMPIRE**  
energy

**tamboran**  
RESOURCES

**FALCON**  
OIL & GAS

**armourenergy**

**DALY WATERS**

1. Petroleum supersystems in the greater McArthur Basin, Northern Territory, Australia: prospectivity of the world's oldest stacked systems with emphasis on the McArthur Supersystem (CSIRO, APPEA)

2. Australian Bureau of Statistics (population statistics at 30 September 2022)

3. Department of Industry, Science, Energy and Resources (Resources and Energy Quarterly December 2021)



## 2. MCARTHUR BASIN ZONE



### CRITICAL MILESTONES REACHED ON PRIORITY ACREAGE



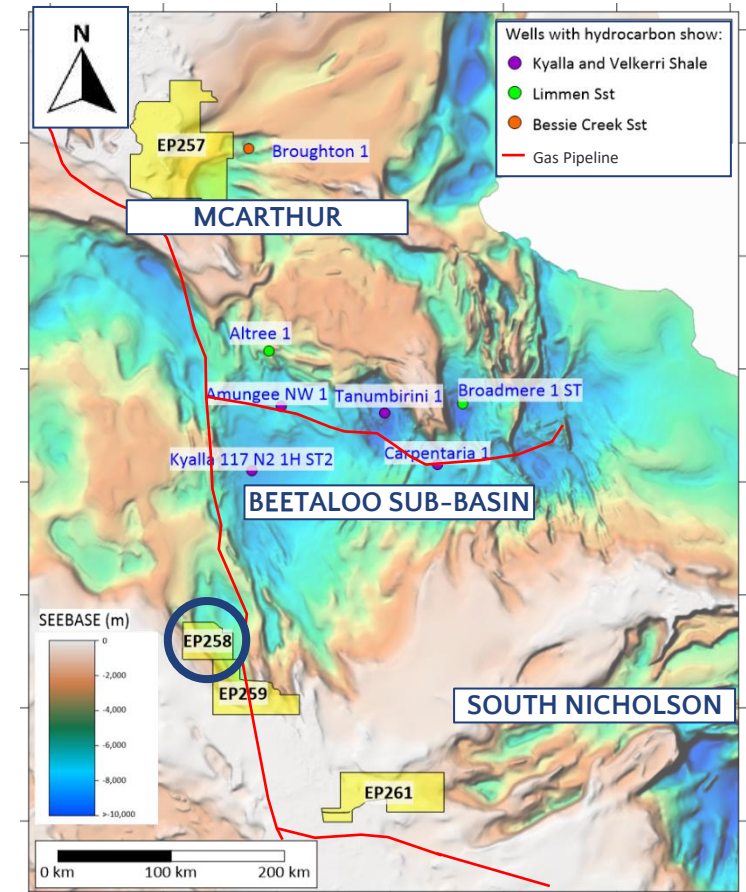
- ✓ Multiple **on-country meetings** with native title holders
- ✓ **Exploration Agreement executed** with native title holders
- ✓ **Section 31 Deed executed** with Northern Land Council and NT Government
- ✓ Permit with Minister for Mining for **formal grant**



- Airborne gravity gradiometry survey commissioned to aid structural interpretation and **optimise acquisition parameters / location of planned 2D seismic survey**
- To be undertaken following formal grant of EP 258



- **2D seismic acquisition** planned to further mature **natural gas, natural Hydrogen and Helium** prospectivity
- Seismic data to also inform potential **drilling targets**

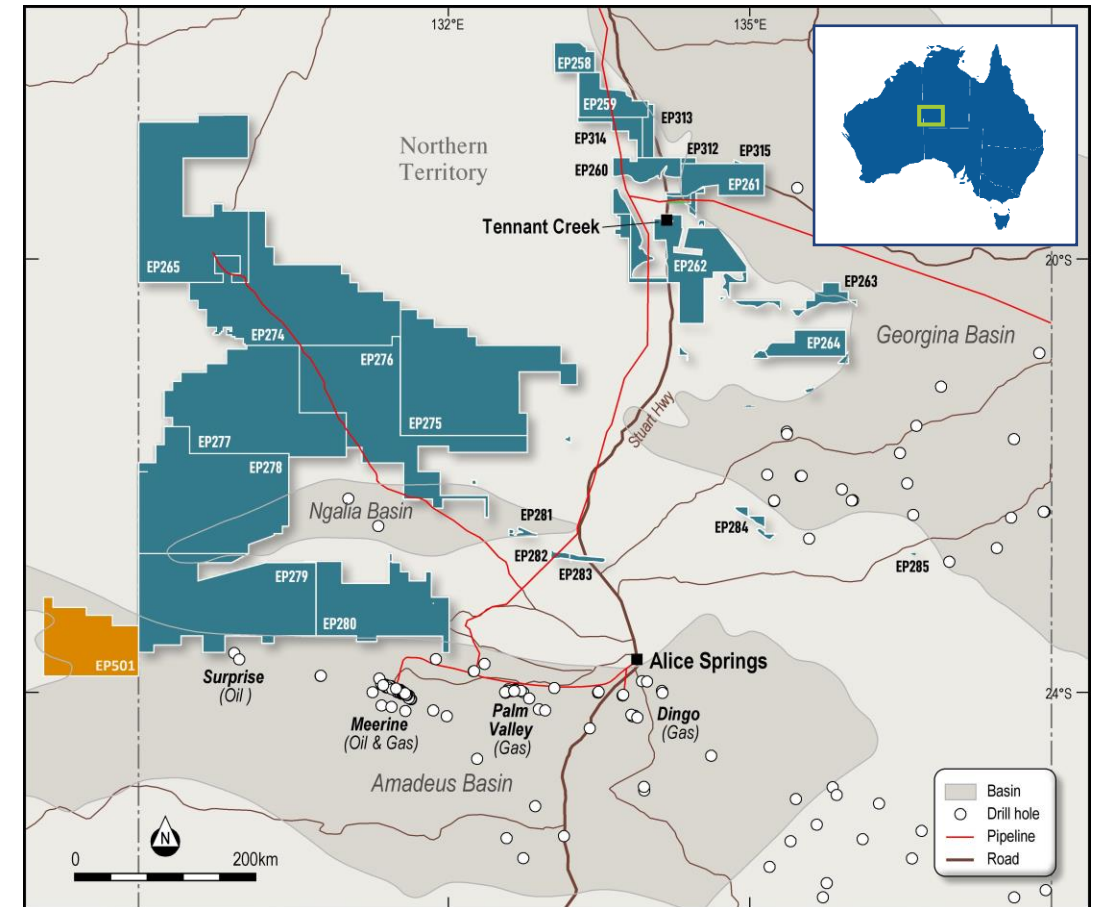


# 3. AMADEUS BASIN ZONE



## UNTESTED AND HISTORICALLY OVERLOOKED MARGIN EXTENSION

- Amadeus Basin is the NT's flagship onshore producing oil and gas basin, also hosting some of the largest undeveloped natural Hydrogen and Helium resource potential in the world
- Basin margins of the Amadeus remain underexplored
- Planned drilling activity in the basin by Santos JV aimed at sub-salt natural gas, Helium and Hydrogen play<sup>1</sup>
- **Technical and operational synergies** to be realised given high level of activity
- **Significant basin margin acreage position** with high potential permits<sup>2</sup> to be prioritised for play extension exploration for **natural gas, Hydrogen and Helium**



1. Sub-salt exploration program has been suspended while JV is restructured following termination of a farmout agreement with Peak Helium (Central Petroleum 2023 Annual General Meeting Presentation (14 November 2023))

2. EP 501 in WA is a granted permit; EP 279 and EP 280 are applications subject to Native Title agreements



# 3. AMADEUS BASIN ZONE



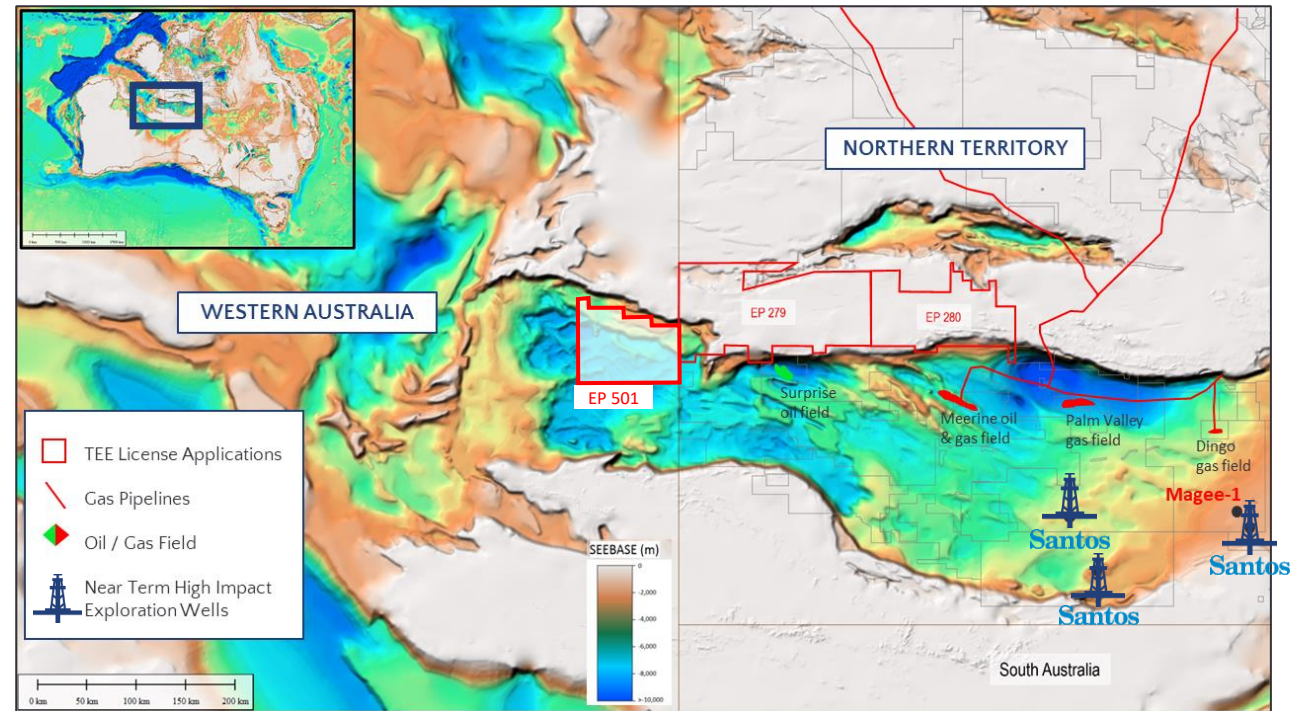
## AWARD AND GRANT OF PROSPECTIVE NEW ACREAGE



- ✓ Awarded **6,300 km<sup>2</sup> permit** in WA Petroleum Acreage Release 2P/2022
- ✓ **Formal grant** received from DMIRS
- ✓ Ongoing engagement with representatives of the Kiwirrkurra and Ngaanyatjarra Lands People to put in place **Heritage Protection Agreements**



- Near-term work program to address prospectivity for **natural gas, natural Hydrogen and Helium<sup>1</sup>**:
  - ➡ Technical and G&G studies
  - ➡ 250 line kilometre soil gas sampling
  - ➡ 2D seismic acquisition



Planned Santos wells targeting natural gas, natural Hydrogen and Helium<sup>2</sup>

1. On-ground activities to be undertaken pursuant to agreeing Heritage Protection Agreements with respective native title holders

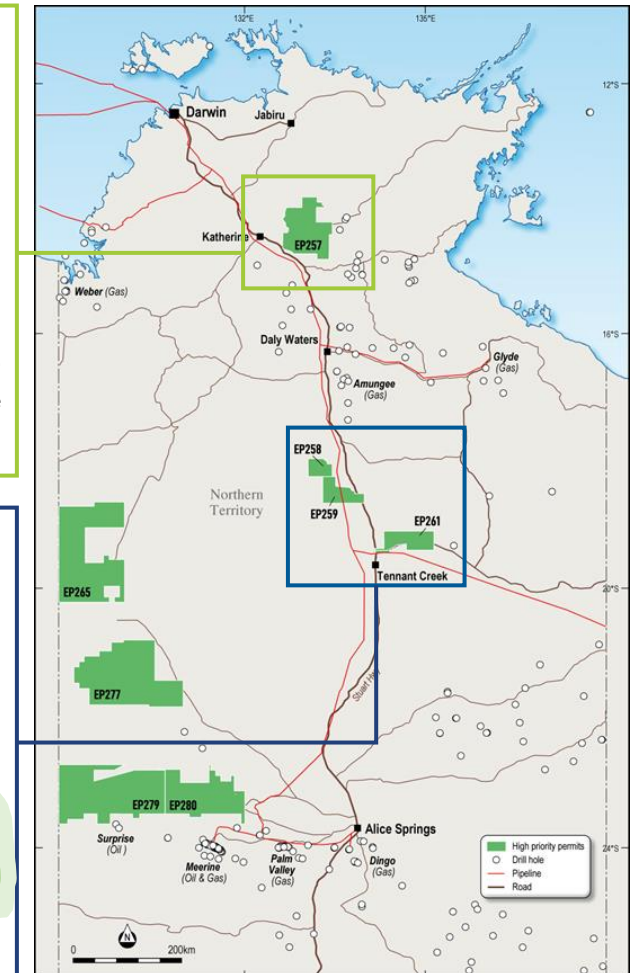
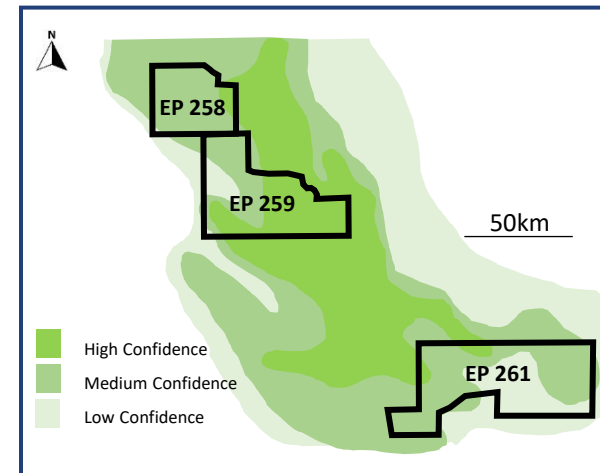
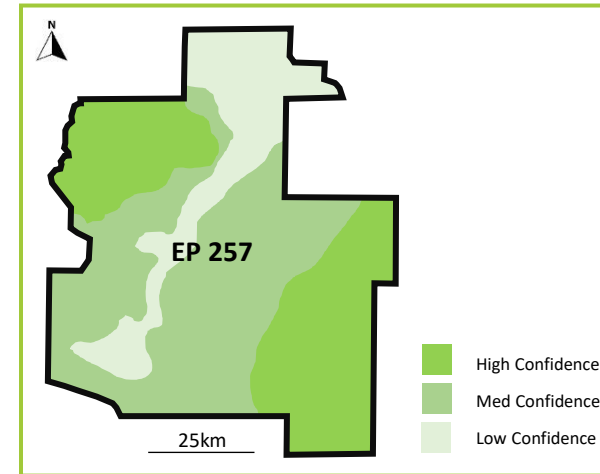
2. Sub-salt exploration program has been suspended while JV is restructured following termination of a farmout agreement with Peak Helium (Central Petroleum 2023 Annual General Meeting Presentation (14 November 2023))

# NATURAL HYDROGEN AND HELIUM POTENTIAL



## HYDROGEN STUDY IDENTIFIES HIGHLY PROSPECTIVE PLAY FAIRWAYS

- The Greater McArthur Basin margin is considered **highly prospective for natural (Gold) Hydrogen**
- Evidence of natural Hydrogen identified from internal play fairway mapping and open file well data
- Phase 1 natural Hydrogen screening study identified highly prospective play fairways
  - ➔ acquisition of 2,500km of Falcon airborne gravity gradiometry data over EP 258 to be integrated into natural Hydrogen study
  - ➔ Soil sampling and complementary on ground exploration alongside hydrocarbon activities
- **Focus on EP 258 with activities tailored to the exploration of natural Hydrogen and Helium in parallel with natural gas exploration programs**
- Natural Hydrogen and Helium exploration to be undertaken on additional Greater McArthur Basin licences as permits awarded

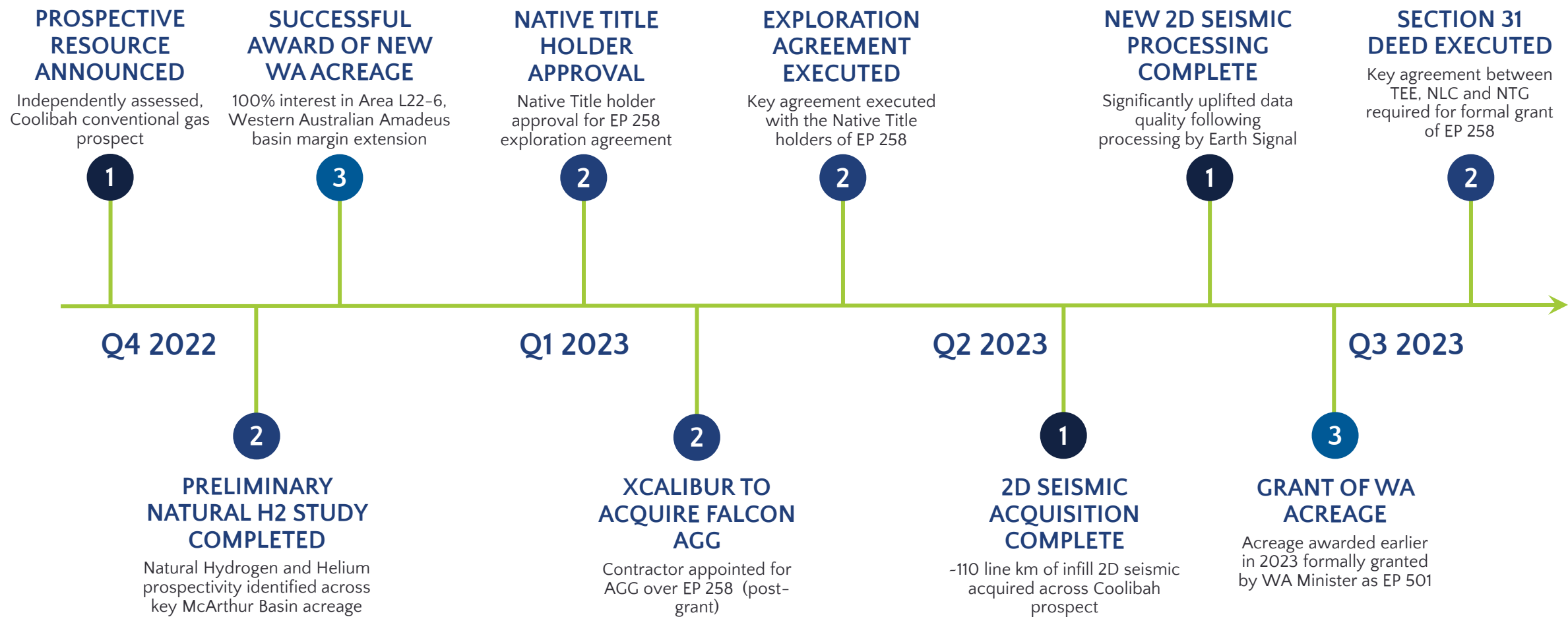




# DEMONSTRATED TRACK RECORD OF PROGRESS



## DELIVERING ON COMMITTED STRATEGY OVER LAST 12 MONTHS

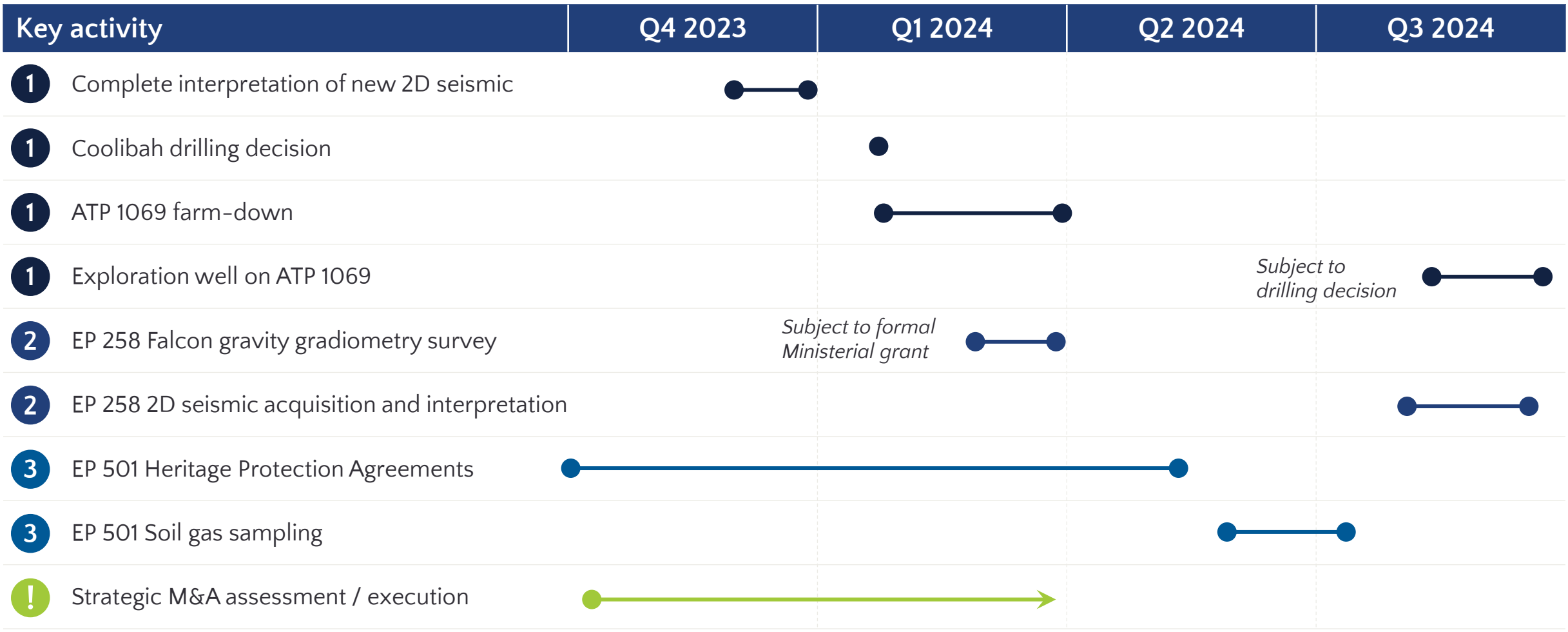


Priority basin zones: 1 Adavale 2 McArthur 3 Amadeus

# CLEAR ADVANCEMENT PATHWAY



## PLANNED WORK PROGRAM TO MATURE KEY FOCUS AREAS TO DRILLING



Priority basin zones: 1 Adavale 2 McArthur 3 Amadeus





# CORPORATE SNAPSHOT

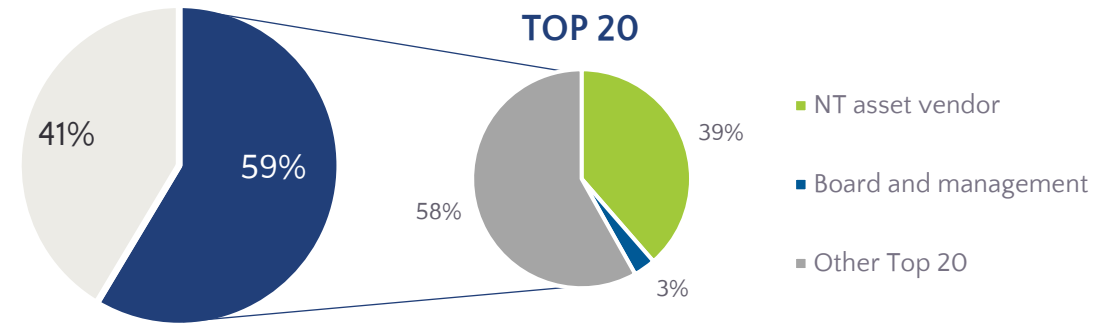


## TIGHT REGISTER, SUPPORTIVE MAJOR SHAREHOLDERS

### Capital structure

Share price <sup>1</sup>	A\$0.15/share
Shares on issue	69.6M
Market capitalisation (undiluted) <sup>1</sup>	A\$10.4M
Cash <sup>2</sup>	A\$2.1M
Implied enterprise value <sup>1,2</sup>	A\$8.3M
Options on issue	27.3M
Performance rights	2.3M
Total shares (fully diluted)	99.2M

### Register detail<sup>3</sup>



### Key technical service providers



1. As at 21 November 2023  
2. As at 30 September 2023  
3. As at 21 November 2023



# HIGHLY DRIVEN LEADERSHIP TEAM



## DEEP GAS EXPLORATION, DEVELOPMENT AND MARKET EXPERTISE



**EMMANUEL  
CORREIA**

**CHAIR**

- Over 25 years' public company and corporate finance experience in Australia
- Non-executive director of BPM Minerals Limited, Pantera Minerals Limited and Helix Resources Limited
- Previously Director of ASX listed entities including Argent Minerals Ltd, Canyon Resources Ltd and Orminex Ltd



**OLIVER  
OXENBRIDGE**

**MANAGING  
DIRECTOR**

- Over 12 years' experience in international oil and gas and energy across investment banking, private equity, and corporate development
- Experience in numerous large and mid-cap M&A transactions, with global experience spanning deal sourcing, structuring, execution and asset management at Woodside Energy, Waha Capital, Ophir Energy and Evercore Partners



**DR MIKE  
FISCHER**

**NON-EXECUTIVE  
DIRECTOR**

- Nearly 40 years' experience in the global oil and gas industry
- Non-executive director of OKEA ASA and Transitus Energy
- Held senior positions at Bangchak corporation, Nido Petroleum, Ophir Energy, OMV, Woodside Energy and BP
- PhD from the University of Wales and a B.Sc. (Hons) in Geological Sciences from the University of Leeds and a fellow of the Geological Society of London



**GREG  
LEE**

**TECHNICAL  
DIRECTOR**

- Petroleum Engineer with over 35 years of diversified oil and gas experience in both technical and managerial positions
- Chartered professional engineer and a member of the Society of Petroleum Engineers
- Independent petroleum engineer consultant since 1992 having worked with both large and small organisations in Australia and worldwide



**RICHARD  
LAMPE**

**NON-EXECUTIVE  
DIRECTOR**

- Over 15 years of experience across financial services, agribusiness and natural resources
- Including eight years with Goldman Sachs JBWere in financial services, five years in professional services including with EY, three years as a commercial analyst with a subsidiary of Marubeni Australia as well as active involvement in his family mixed farming business



**MARSHALL  
HOOD**

**EXPLORATION  
MANAGER**

- 18 years of technical, operational and commercial experience in the energy sector including Upstream Oil and Gas and Hydrogen
- Previously COO for Bangchak Corporation (Resources) and Nido Petroleum Limited
- Successful upstream oil and gas exploration track record; more than 15TCF of gas discovered across multiple operated assets