

# Perth Basin

## Exploration and Drilling



*Drilling in Perth Basin*

Project update | December 2023

## Project overview

Beach Energy is currently undertaking a gas exploration campaign in the North Perth Basin, around 40 kilometres southeast of Dongara.

The campaign includes a multi-well drilling program and a seismic survey that will help us safely identify natural conventional gas resources within our existing exploration permits and production licences.

We currently have exploration permits in the Shires of Irwin, Three Springs, Carnamah and Mingenew.

### About Beach Energy

Beach Energy is an ASX-listed oil and gas exploration and production company headquartered in South Australia, with an office and operations in Western Australia.

Beach's purpose is to 'sustainability deliver energy for communities' which means it operates while maintaining the highest health, safety, and environmental standards.

For over 60 years Beach has been working to discover and develop gas in the Perth Basin and provides a secure and clean source of affordable energy for Australia and globally.

## First Nations Peoples and Cultural Heritage

Beach respectfully acknowledges the Southern Yamatji people as the First Nations Peoples and custodians of the land on which Beach's Perth Basin operations are located. Beach respects their historical and ongoing connection to country through cultural and spiritual sites, language and ceremony, and pays respect to their Elders past, present and emerging.

Beach works closely with the Southern Yamatji people to ensure operational activities do not impact cultural heritage sites and areas of significance. This is conducted through ongoing engagement and communication on projects, and as applicable, on the ground cultural heritage field surveys.

Our cultural heritage engagement framework recognises the interconnectedness of cultural heritage, respectful relationships, community investment and economic participation. For further information refer to our [2023 Sustainability Report](#) which can be found on our website.

## Beach in the Perth Basin

The Perth Basin is a deep linear trough of sedimentary rocks extending north to south extending about 1300km along the southwestern margin of Western Australia from south of Perth to its northern tip offshore from Carnarvon. This is a large structurally complex basin, approximately 174,000km<sup>2</sup> and was formed during the separation of Australia and Greater India millions of years ago.

Beach's Perth Basin operations consist of the onshore Beharra Springs Joint Venture (operated by Beach) and Waitsia Joint Venture (operated by Mitsui E&P Australia (MEPAU)). Beach is working with its joint venture partner MEPAU to fully maximise the potential of the Waitsia Gas Field. It is ranked as one of the largest gas fields ever discovered onshore in Australia.

Waitsia Stage 2 involves further development of the gas field, with more wells and a new gas plant which is currently being built. When complete (targeting mid-2024) it will be capable of producing 250 TJ/day. To give some scale, 250TJ/day would be equivalent to meeting the energy needs of 1.4 million homes.

Waitsia Stage 2 is a key component of Beach's growth. Significant economic benefits flow to the Midwest region from the financial investments that are being made during both construction and operating phases.

In addition to domestic supply commitments, LNG will be exported from Waitsia Stage 2 via the North West Shelf via the Dampier-Bunbury pipeline.

The Perth Basin map on the following page shows the production licences EP320 and L11 held under the Petroleum and Geothermal Energy Resources Act (1967) (WA) operated by Beach as well as the production licences L1 and L2 operated by MEPAU. All production licences come under the JV partnership between Beach and MEPAU.

## Environmental regulations and approvals

Beach's exploration activities are subject to both Commonwealth and Western Australian legislation including the following:

- *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*
- *Petroleum and Geothermal Resources Act 1967*
- *Environmental Protection Act 1986.*

Prior to undertaking any activities, Environmental Management Plans (EMPs) are required to be approved. The EMPs describe the proposed activities, the environment in which it is to occur, identify the potential impacts and risks associated with the activity and measures to ensure that these impacts and risks are managed. The EMP is also required to demonstrate that there has been effective consultation with relevant persons or organisations.

## Our current activities

To explore for gas, investigation methods are used such as seismic surveys and exploration drilling.

### Seismic Surveys

Under our permits with the WA Government, and pursuant to the EMPs, we plan to look for conventional natural gas using seismic techniques. Seismic surveys help us identify gas reserves and safely and accurately plan future drilling activities.

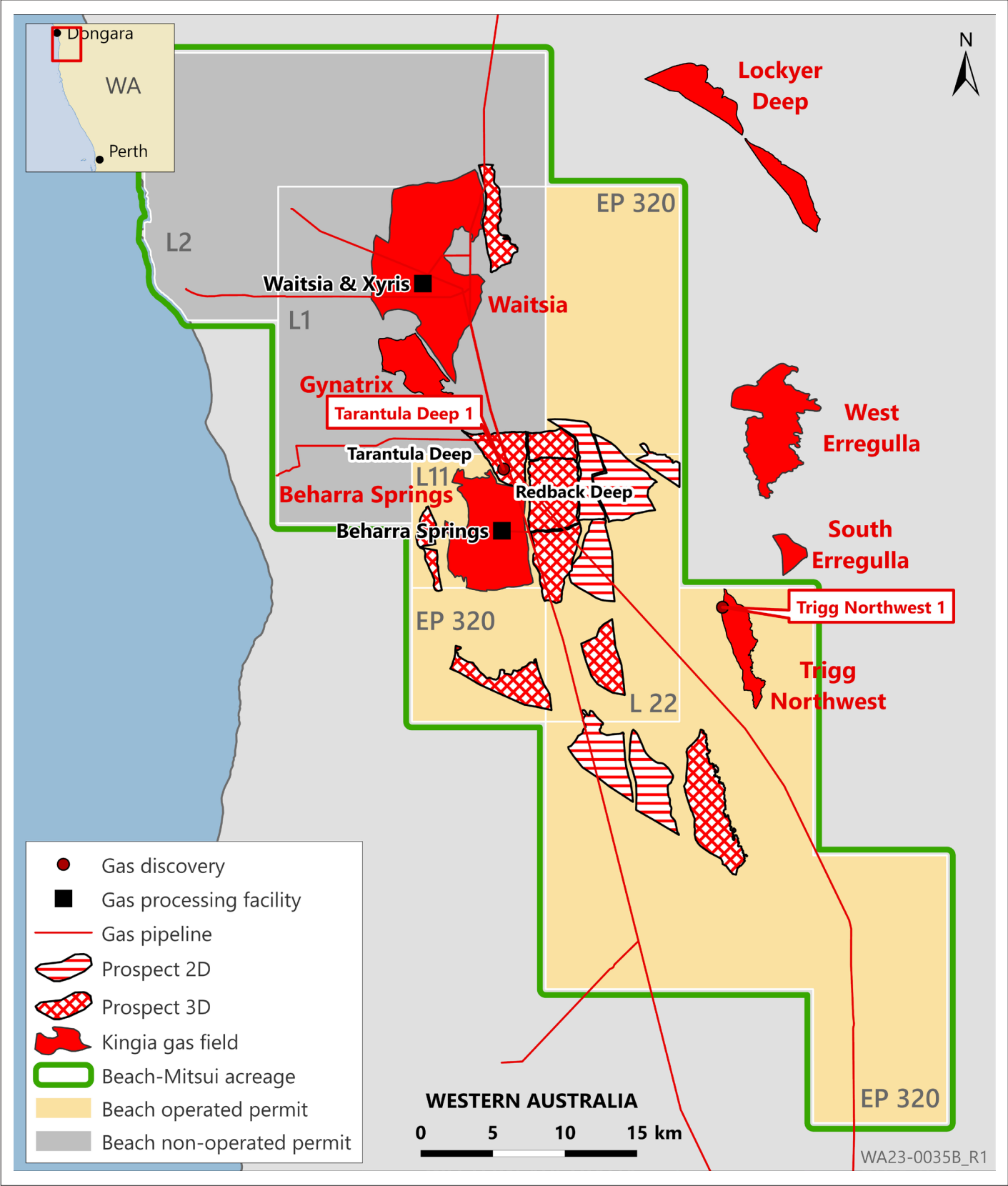
#### - Donkey Creek 3D Seismic Survey

Approximately 460km<sup>2</sup> of land was to be surveyed commencing in early 2024 but this is now on hold while current drilling is completed.

#### - Skipper 3D Seismic Survey

Approximately 500km<sup>2</sup> of land is to be surveyed in 2025. Final timing for the Skipper 3D Survey is subject to all approvals, weather windows, cropping schedules and availability of contractors. The approximate survey duration is between 30-90 days from commencement to completion.

# Perth Basin Map





## Drilling Campaign

As of 1 November 2023, Beach had drilled 3 exploration wells as part of the current drilling campaign:

### - Trigg 1

This well was the first to be drilled in April 2023. The field was assessed as not commercially viable. The Trigg 1 site is now being rehabilitated.

### - Trigg Northwest 1 (NW1)

Trigg Northwest 1 was completed in August 2023 and gas was discovered. Testing will be carried out in 2024.

### - Tarantula Deep 1

Tarantula Deep 1 was drilled in October 2023 and gas was discovered. Testing will also be carried out in 2024.

Other wells will be completed subject to the necessary approvals. We will continue to keep our stakeholders and the broader community updated on our activities in the region.

## Environmental Surveys

Every Spring, Beach undertakes an environmental survey in the Perth Basin relating to flora and fauna in areas where we operate. The data collected is used to inform our operational plans, ensuring that potential impacts to areas of environmental sensitivity are minimised.

Over the past two years, some interesting discoveries have been made:

### - Mallee Fowl

In a Beach first, new aerial imagery using Light Detection and Ranging (LiDAR) technology was used to assist in identifying potential nesting mounds of the vulnerable Mallee fowl bird. This was part of environmental surveys undertaken which covers 480km<sup>2</sup> and sits over the Beharra Springs Facility in EP320, L22 and L11.

After the data was assessed, it identified 12 potential nesting mounds. Five of them were confirmed as active and maintained by a male Mallee fowl for nesting. As a result of this survey, a number of sensitive locations will be avoided and removed from the survey area by the seismic team to prevent potential impacts.

### - Carnaby's Black Cockatoo

Ecologists also assessed the suitability of tree hollows for the endangered Carnaby's Black Cockatoo.

Beach is conducting targeted fauna surveys for Carnaby's Black Cockatoo, which will include an assessment of potential foraging, roosting, and breeding habitat.

### - Western Ground Parrot

The 'Critically Endangered' Western Ground Parrot or Kyloring is a relatively small and elusive parrot and is

restricted to coastal heathland in southern Western Australia.

Beach is currently undertaking a targeted fauna survey for the Western Ground Parrot using automated recording units (ARUs).

An ARU is a self-contained audio recording device that is deployed in the environment to track the behaviour of animals and monitor their ecosystems. Onshore, the ARU can detect noises coming from bird habitats and determine relative emotions that each bird conveys along with the population of the birds and the relative vulnerability of the ecosystem.

These surveys continue to be vital in achieving environmental approvals as well as ensuring we can minimise our environmental impact.

## Our role in the energy transition

Beach has a target of reducing emissions intensity from its portfolio by 35% by 2030 and has an aspiration to reach net zero Scope 1 and 2 emissions by 2050.

Beach recognises that action to address climate change is necessary and that all energy systems must contribute in order to meet the targets set out in the Paris Agreement, an international treaty on climate change.

A just transition is vital for the world to address the challenge of climate change, and this involves nations decarbonising their energy systems in a disciplined, considered way while considering the impact on their communities.

The natural gas that Beach produces continues to provide communities with an affordable, secure energy supply as we explore future energy opportunities for our customers.

Beach is committed to producing the energy needed for a sustainable transition – one that supports the needs of societies today, and into the future.



Carnaby's Black Cockatoo. Photo Courtesy of Tony Kirkby, WA Museum.



St Johns Ambulance telecommunications upgrade

## Community Partnerships

Beach is committed to supporting the communities in which we operate. We focus on partnerships and programs that build sustainable and resilient communities.

Our key focus areas are:

- Education
- Health, Wellbeing and Safety
- Environmental

Beach in partnership with our JV partner MEPAU has recently been supporting the following programs in Western Australia:

- St John Ambulance to support their operational capacity with a communications upgrade in the Midwest.
- Upgraded technology in the Nursing and Education classrooms at Geraldton Universities Centre
- Next Generation Schools Program with Energy Club WA.
- New scoreboard for Dongara Football Club.
- Dongara Police Legacy Charity Golf Day.
- Beach Scholarships at Central Regional TAFE in Geraldton.
- Irwin District Charity Ball.
- Dongara Men's Shed.

## Consultation and Engagement

Beach is committed to developing and maintaining positive relationships with traditional owners, landowners and occupiers, and the broader community. Beach was recently involved in some community events in the Mid West region:

### Beach at Mingenew Mid-West Expo

In August 2023, we attended the Mingenew Mid-West Expo in August with our JV partner MEPAU.

The team interacted with community members to share information on our operations in the Perth Basin as well as answer any questions. Beach was also part of the School Education Trail and students were able to learn more about our operations and how Beach seeks to sustainably deliver energy for the community. Beach would like to thank the community for meeting with us and providing invaluable feedback, so we continue to respond and improve our engagement.



Community team at Mingenew Mid-West Expo



## Irwin Industry Expo

Shire of Irwin provided Beach an opportunity to meet over 100 local business owners and community members to discuss our Perth Basin operations, community investments and potential business opportunities.

## Arrowsmith Community Chats

The Mid West Development Commission in partnership with the Shires of Mingenew, Three Springs and Carnamah invited Beach to attend the Arrowsmith Community Chats. The forums focussed on energy transition and future operations in the region.

The forums also enabled the broader community and businesses operating in the area to share information and discuss issues of importance.



## Key facts



**Safety and environmental sustainability** are priorities for Beach, and only proven technologies are used in our operations.



**Beach has not** undertaken any fracking activities in the Perth Basin.



**Exploration in the Perth Basin** commenced over 60 years ago.



**Beach invests in our community** projects that promote resilience, empowerment, and positive change.



In 2023 **\$238,000 was invested** by Beach via sponsorships, grants and partnerships into communities across our WA operational area.

## Want to find out more

If you think your functions, interests or activities may be affected we would like to consult with you to understand your concerns, and where possible, explore measures to reduce any impacts or risks.

Relevant Persons may request that the information they provide not be published in the Environment Plan.

If there is someone you believe may be affected by the proposed activities, please ask them to contact us.

For more information on Beach's operations in the Perth Basin visit [www.beachenergy.com.au/perth-basin/](http://www.beachenergy.com.au/perth-basin/)

## Contact Us

If you have any questions, concerns or would like more information, please contact the Community Relations team.

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**E** [community@beachenergy.com.au](mailto:community@beachenergy.com.au)



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