

# EMPEROR ENERGY EXPLORATION WELL

Emperor Energy are planning to drill a single appraisal well known as Judith-2 in Petroleum Exploration Permit VIC/P47 to identify hydrocarbons present within sandstone reservoirs. This is a follow-up to the 1989 Judith-1 Well gas discovery.

Emperor Energy is consulting with relevant persons as part of developing the Judith-2 Exploration Drilling Environment Plan. If your functions, interests or activities may be affected by Emperor Energy's proposed activities, you are considered a relevant person for the purpose of consultation on this Environment Plan.

## Who is Emperor Energy

Emperor Energy is an Australian Company listed on the Australian Securities Exchange. The Company is managed by a Board of Directors and owned by a diverse range of primarily Australian shareholders. Emperor Energy's key focus is the exploration, appraisal and potential development of the Judith Gas Field located near existing gas fields in the Gippsland Basin, offshore of Victoria.

Emperor Energy believes development of the Judith Gas Field would contribute substantially to improving the current and projected shortage of domestic gas in the Eastern Australian States.

## Why is Emperor Energy planning to drill the Judith-2 Well

Gas was discovered in the Judith Gas Field in 1989 when the Judith-1 well was drilled by Shell. At that time, the discovered gas resource was not considered for appraisal and development given market conditions and an abundance of existing gas supply from other fields in the Bass Strait precinct.

Emperor Energy has reassessed all available data from the Judith Gas Field including that of a recent 3D seismic survey. This reassessment has resulted in Emperor Energy now considering that a substantial economic gas resource exists at Judith. The Judith-2 well drilling program will enable a detailed appraisal of this gas resource and if successful will provide Victoria with additional gas reserves as production from existing fields declines.

Additional gas reserves could be developed and used as "transition gas" which is essential in supporting a stable transition to renewable energy sources. Additional gas supply for electricity generation will also assist Victoria in reducing its current dependence on high emissions Brown Coal Electricity Generation, which would significantly reduce Victoria's Greenhouse Gas Emissions.

## Consultation

Emperor Energy is identifying relevant persons and welcomes comments and feedback and encourages a 2-way dialogue about the potential impacts of the proposed activities. If you require further information or have any comments regarding the proposed exploration well, please contact us at [stakeholder@emperorenergy.com.au](mailto:stakeholder@emperorenergy.com.au). Our consultation with you will be included in the Environment Plan for the proposed activity, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for assessment.

## Activity Overview

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### Location (Figure 1)

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- Gippsland Basin
  - Within Commonwealth waters
  - Approximately 37 km offshore
  - Water depth approximately 70 m
  - Well location to be within 1,000 m of:
    - Latitude 38° 08' 30.87" S
    - Longitude 148° 32' 21.8" E
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### Estimated Duration

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- Activities will be undertaken between early 2026 to end the of 2027 depending on approvals, drill rig availability and weather constraints.
  - Total activity length is expected to be up to 69 days based on:
    - Geophysical: survey up to 4 days
    - Geotechnical: survey up to 5 days
    - Drilling Activities: up to 60 days, conducted on a 24-hour basis.
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## Environment Protection Regulations

NOPSEMA regulates activities in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023. Environment Plans (EPs) must be accepted by National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) before any petroleum-related activities in Commonwealth waters can commence. An EP has been prepared by Emperor Energy for the operations as detailed herein, based on previous operations plans and stakeholder feedback. This EP is now being further updated and any feedback received during this period of consultation, may be incorporated into the next submission.

You can register to be notified when environment plans are available for comment here:

[https://info.nopsema.gov.au/home/open\\_for\\_comment](https://info.nopsema.gov.au/home/open_for_comment)

## Proposed Activities Overview

As part of the overall program, there will be three separately conducted activities:

	Geophysical Survey	Geotechnical Survey	Judith-2 Well Drilling
Primary Vessel	Single specialty vessel	Single specialty vessel	Jack-up Drilling Rig
Support Vessels	N/A	N/A	Up to 3 support vessels Helicopters
Duration	4 Days	5 Days	60 Days
Planned Operations	Seabed surveillance utilising multiple survey tools, including shallow seismic to identify any hazards on the seabed and to characterise the shallow geological features of the area.	Seabed sampling utilising coring, drilling or grab samples to characterise the physical properties of the seabed and shallow sediments, to safely position the jack-up rig.	Mobilise jack-up rig. Drill Judith-2 well, conduct well evaluation including VSP and well flow test. Secure well, remove equipment above seabed. Demobilise jack-up.
Operational Area	4 km x 4 km box	1 km x 1 km box	500 m safety zone radius around the jack-up
Coordinates (GDA94)	<ul style="list-style-type: none"><li>• NW Corner: 38° 07' 27.0688" S / 148° 30' 58.3214" E</li><li>• NE Corner: 38° 07' 24.9169" S / 148° 33' 42.5529" E</li><li>• SE Corner: 38° 09' 34.6512" S / 148° 33' 45.3198" E</li><li>• SW Corner: 38° 09' 36.8059" S / 148° 31' 01.0076" E</li></ul>	Within the Operational Area.	Subject to surveys, the intended well site location is: <ul style="list-style-type: none"><li>• 38° 09' 6.7644" S</li><li>• 148° 33' 19.6692" E</li></ul>

## Judith-2 Well Location and Environment That May be Affected

The Judith-2 Activity will be located in Commonwealth waters, approximately 35 km south of Marlo Victoria. The Operational Area has been defined by a 4 km by 4 km area within the within petroleum title VIC/P47, where all activities will occur.

EPs include a detailed description of the environment that may be affected (EMBA), which is defined as an area where a change to ambient environmental conditions has the potential to occur as a result of the activities. The EMBA is the largest geographic area where operational activities could potentially have a direct or indirect environmental impact under worst-case scenarios. The EMBA includes an area where emergency response plans must be ready for activation in the unlikely event of an accident. The EMBA map can be found Figure 1.

EMBAs are also used to define the broadest area where environmental values and sensitivities are defined, the potential impacts assessed, and control measures to mitigate these impacts are developed.

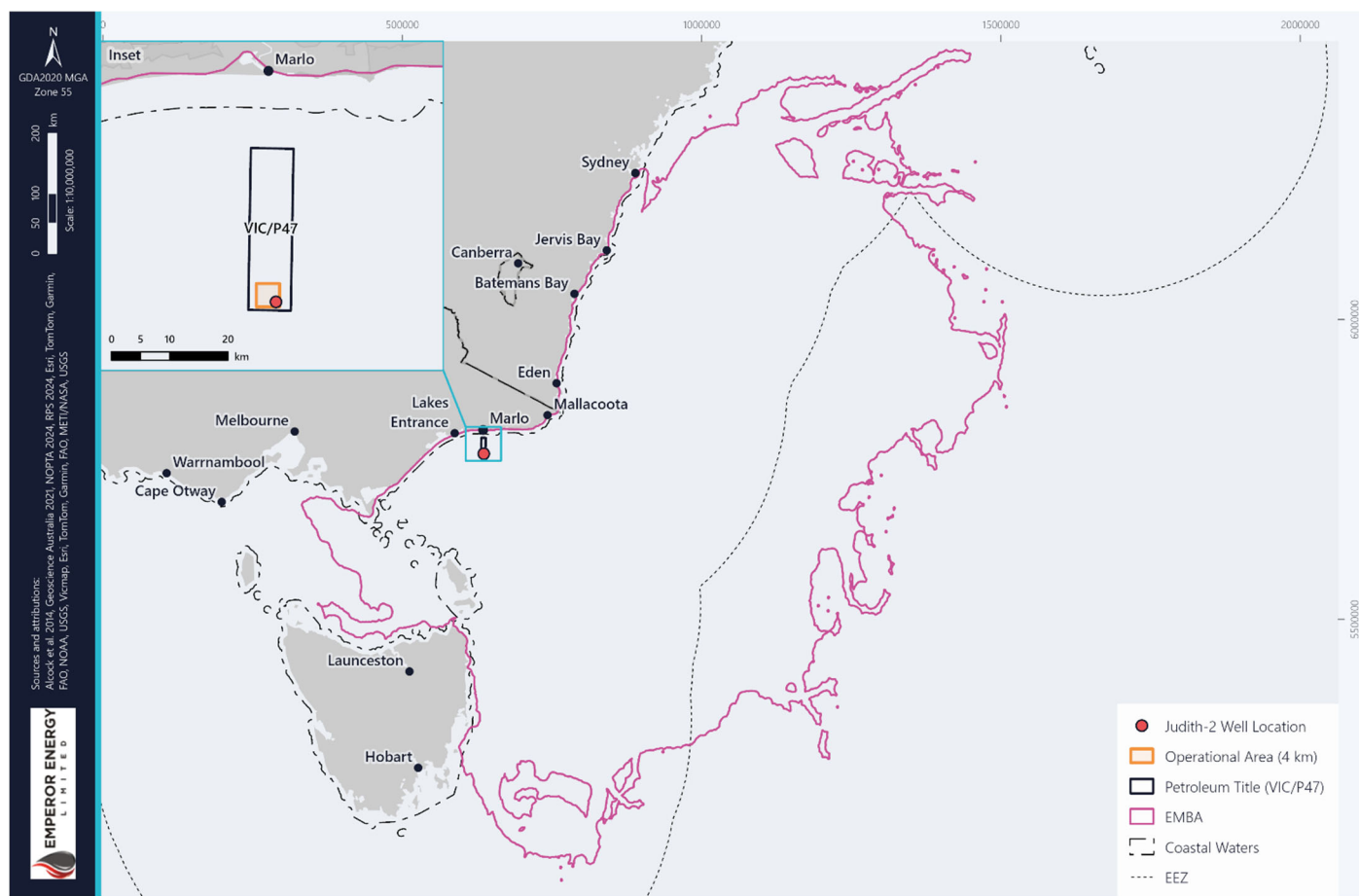


Figure 1: Judith-2 Well Location and EMBA

## Planned Operation: Geophysical Survey

This is required to identify seabed topography and any potential hazards at the proposed well location. The survey will be undertaken by a special-purpose vessel prior to the geotechnical survey and drilling the Judith-2 well. The vessel will utilise the following survey equipment to collect bathymetry data and detect seabed or shallow geological hazards using:

- Multibeam echo sounder
- Sub-bottom profiler, side scan sonar and magnetometer
- High resolution two-dimensional shallow reflective imaging (2D seismic survey).

While operating within the activity area (4km x 4km box), the single vessel will tow or deploy these sensors overboard. One of the key survey tools is a high resolution shallow 2D seismic survey. This is required to identify any shallow subsurface drilling hazards including geological faults, gas-charged sediments, shallow water flows and buried channels. Equipment will consist of a sound source up to 160 in<sup>3</sup> towed at a depth of approximately 1-3 m, with a streamer length of between 150 to 1,500 m towed by a vessel at a speed of ~ 8-9 km/hr (4 – 5 knots).

## Planned Operation: Geotechnical Survey

This is required to characterise the geological properties of seabed and underlying shallow sediments. Conducted by a single specialised vessel, testing will be collected at up-to 10 locations, within the 1 km x 1 km area. The vessel will deploy equipment overboard, using the following techniques:

- Core sampling (borehole)
- Piezo cone penetrometer test (PCPT)
- Grab samples

Both the geophysical and geotechnical surveys are commonplace in Australian Waters, such as the Gippsland Basin. They have been conducted recently for, petroleum, carbon capture, offshore wind and energy transmission routes. The Commonwealth Offshore Infrastructure Regulator, provides another good source of information on these types of surveys, also used in offshore wind. [www.oir.gov.au/news-and-community/brochures-and-fact-sheets](http://www.oir.gov.au/news-and-community/brochures-and-fact-sheets)

## Planned Operation: Judith-2 Drilling

A jack-up drilling rig will be towed to the Judith-2 location by 2 vessels, the 3 legs lowered to the seabed and the hull jacked out of the water. Drilling commences by drilling the top hole well sections (conductor and surface hole) and will be drilled without a riser, which is standard practice. The cuttings (rock chips) and drilling fluids from this section will be discharged to sea.

A riser and blow-out preventer (BOP) will be installed to facilitate the drilling of the deeper well sections once the surface casing is cemented in place. Once the riser and BOP are installed, drilling fluids and cuttings will be returned to the jack-up drilling rig, where the drilling fluids will be separated using solids control equipment. Recovered fluids that have been separated from the cuttings may be directed to centrifuges to remove the finer solids. The cuttings are usually discharged below the waterline and the reconditioned fluids are recirculated into the fluid system. The water-based drilling fluid performs several functions including cooling and lubricating the drill bit; transporting drill cuttings to the surface; and maintaining hydrostatic pressure in excess of formation pressure, thereby preventing the influx of hydrocarbons from the formation into the wellbore. This is the primary well control barrier.

While drilling, Logging While Drilling tools will record and evaluate the physical properties of the geology. In a success case, additional wireline deployed tools will be utilised, including a short Vertical Seismic Profile (VSP) program, which uses seismic (acoustic) sources to map the geological horizons of the gas field. A well test will then complete the appraisal program, with produced hydrocarbons brought to surface and flared-off, to demonstrate the potential flow-rate of future development wells.

The well will be securely plugged and abandoned following drilling activities, with the well secured, and all equipment above the seabed removed and then the rig will depart the Operational Area.

The drilling rig will be supported by up to 3 supply vessels, that bring supplies to sustain the drilling operation and the personnel offshore. Helicopters will be used for the transportation of workers, with daily flights.

## Description of the Environment

EPs include a detailed description of the EMBA by the activities described in the EP. The EMBA is the largest geographic area where operational activities could potentially have a direct or indirect environmental impact under worst-case scenarios.

The defined EMBA for the Judith-2 Drilling EP will include the following marine fauna which may be present in the area at various times during activities described within the EP:

- Blue, humpback and fin whales, particularly during the summer months
- Southern right and minke whales, particularly during the winter months
- Common dolphins and shark species throughout the year
- New Zealand and Australian fur seals throughout the year
- Migratory birds.

Importantly, Emperor Energy will not be conducting regulatory activities within Commonwealth or state marine parks. However, within the broader planning area for emergencies, National Marine Parks and State Marine Protected areas are included.

Socio-economic and cultural values and sensitivities within the EMBA include:

- Commonwealth managed fisheries, including southern and eastern scalefish and shark fishery
- Victorian, Tasmanian, and New South Wales managed fisheries, including rock lobster and giant crab
- Commercial shipping activities
- Offshore Wind Industries
- Subsea cables
- Sea Country cultural values and sensitivities held by First Nation peoples
- Cultural heritage including shipwrecks
- Recreational fishing
- Recreational diving focussed on shipwrecks and reefs close to the shoreline
- Significant tourism features and activities associated with the Gippsland region, including Marlo, Cape Conran, Ninety Mile Beach, Lakes Entrance and Mallacoota.

## Environmental Management of Potential Impacts

The objective of the EP is to minimise environmental and social impacts associated with the proposed activities. The operational activities will incur both planned (certain) and potential (risk) impacts upon the environment and stakeholders.

The EP assessment process considers these planned operations, durations, environmental and social impacts and considers how to reduce and manage the impact or risk, to As Low As Reasonably Practicable (ALARP). The subsequent tables provide details on this assessment and the proposed control measures.

## Judith-2 Drilling Potential Environmental Consequences and Control Measures

Impact	Potential Consequence	Environmental Management and Control Measures
<b>Seabed Disturbance</b>	Seabed disturbance can occur from seabed surveys, drilling rig and vessel anchoring, cementing operations, and well drilling.	Emperor Energy has implemented controls to reduce the impact of seabed disturbance and uses survey data helps us to identify and avoid sensitive benthic features and potential underwater cultural heritage.
<b>Underwater Sound</b>	Underwater sound will be generated through a 2D seabed seismic survey, vertical seismic profiling, drilling rig, support vessels, ROV, and drilling operations.	<p>Research regarding the impact of seismic noise on marine fauna has found that effects range from no effect to temporary and permanent hearing shifts, physiological changes, and behavioural avoidance. Typically, where effects have been identified, fauna have been at close range to the seismic source. To manage seismic noise impacts to fauna the following will be undertaken:</p> <ul style="list-style-type: none"> <li>• Compliance with EPBC Act Policy Statement 2.1 include pre-start observations, low power and shut down zones, and low-visibility procedures.</li> <li>• At least one member of vessel crew trained in marine fauna observation and low power and shut down zone procedures.</li> <li>• Reporting of marine fauna observations.</li> </ul>
<b>Interaction with Marine Fauna</b>	The well will be drilled with a jack-up drill rig with up to three support vessels. Pre-drilling seabed surveys will be undertaken using a purpose-built vessel. Interaction with marine fauna such as whales and turtles, may occur.	<p>To avoid marine fauna vessel strikes or potential entrapment in the streamer buoy the following will be implemented:</p> <ul style="list-style-type: none"> <li>• At least one member of vessel crew trained in marine fauna observation.</li> <li>• Vessels will not travel greater than 6 knots within 300 m of a cetacean or turtle (caution zone) and not approach closer than 100 m from a whale. Vessels will not approach closer than 50 m for a dolphin or turtle and/or 100 m for a whale in accordance with EPBC Regulations 2000 - Part 8 Division 8.1.</li> <li>• Streamer tail buoy designed to avoid entrapment risk to turtles.</li> </ul>
<b>Vessel Interaction with Other Marine Users</b>	The well will be drilled with a jack-up drill rig with up to three support vessels. Pre-drilling seabed surveys will be undertaken using a purpose-built vessel. Interaction with commercial and recreational vessels may occur.	<p>To avoid displacement of other marine users, Emperor Energy will be implementing the following controls:</p> <ul style="list-style-type: none"> <li>• Pre-start notifications and marine notices will be issued.</li> <li>• Ongoing stakeholder consultation and notifications.</li> <li>• A 500 m Petroleum Safety Zone around the drill rig with a 2km cautionary zone.</li> <li>• A 500 m exclusion zone around the survey vessel when undertaking seabed surveys.</li> <li>• The drill rig and vessels will have:</li> <li>• Automatic Identification System (AIS) and visual and radar watch will always be maintained</li> <li>• Appropriate lighting, signals, navigation, and communication in compliance with the <i>Navigation Act 2012</i> and associated Marine Orders.</li> <li>• While undertaking seabed surveys, the streamer tail buoy will be fitted with lights and radar reflectors.</li> </ul>
<b>Climate Change</b>	Greenhouse gases will be emitted during project activities.	The emissions from the Judith-2 project will be minimised through ongoing monitoring and management of fuel use. The Emperor Energy reports GHG emissions annually in compliance with the National Greenhouse and Energy Reporting (NGER) Scheme to comply with GHG emissions obligations.
<b>Accidental Hydrocarbon Release</b>	An accidental hydrocarbon release could occur during drilling, from fuel transfers between vessels and the rig, and collision between vessels offshore	<p>Emperor Energy works with regulators to develop management plans and safety cases to ensure the risk of an accidental hydrocarbon release is reduced to ALARP and to be prepared for a response in the unlikely event of an accidental release by:</p> <p>Drill and vessels (appropriate to class) will comply with MARPOL 73/78, the <i>Navigation Act 2012</i>, the <i>Protection of the Sea (Prevention of Pollution from Ships Act 1983)</i> and subsequent Marine Orders including the following:</p> <ul style="list-style-type: none"> <li>• Waste management requirements</li> <li>• Emergency drills</li> <li>• Shipboard Oil Pollution Emergency Plan or Shipboard Marine Pollution Emergency Plan.</li> <li>• The Judith-2 Oil Pollution Emergency Plan (OPEP) will be accepted by NOPSEMA and in place, appropriate to the credible hydrocarbon spill scenario associated with activities.</li> <li>• The Judith-2 Well Operations Management Plan will be accepted by NOPSEMA in accordance with the <i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i> requirements, which include:</li> <li>• BOP installed during drilling operations and regularly tested.</li> <li>• Relevant persons will be notified of activities prior to commencement of activities if requested</li> </ul>

## Further information on consultation

Your rights and Emperor Energy's obligations are described in the [NOPSEMA brochure](#) "*Consultation on offshore petroleum environment plans – Information for the community*". Please also advise if you are aware of any other relevant persons (individuals or organisations) who you think we should consult with. Emperor Energy is required to provide relevant persons sufficient information and time to make an informed assessment of the possible consequences of our activities on their functions, interests and activities. If you are a relevant person Emperor Energy looks forward to a 2-way dialogue that helps reduce potential impacts and risks to as low as reasonably practical and acceptable levels. Good consultation should be mutually beneficial.

Upon satisfactory completion of consultation with relevant persons, the environment plan will be updated and submitted to NOPSEMA for publication on their website for public comment. This provides an opportunity for the general public to also provide feedback on the draft environment plan prior to updating and submitting to NOPSEMA for assessment.

You are being consulted under section 25 of the OPGGS(E) Regulations (Cth). Environment plans are published by NOPSEMA and these contain summaries of consultation records. If you share any sensitive information, you have the right to request it not be published. Please advise if you consider any information provided to be sensitive.

## Additional Project Information

More information is available on our website, which will be regularly updated as the project progresses. A number of frequently asked questions is also available on the website, alongside some more graphic descriptions of the geophysical and geotechnical surveys operations.

Emperor Energy's website: [www.emperorenergy.com.au](http://www.emperorenergy.com.au)

Email us at: [stakeholder@emperorenergy.com.au](mailto:stakeholder@emperorenergy.com.au)