

Commercial Fishing

ConocoPhillips Australia is planning to undertake exploration activities in offshore permits VIC/P79 and T/49P located in Commonwealth waters. The proposed activities are a continuation of ConocoPhillips Australia's exploration program in the offshore Otway Basin which aims to identify commercially viable natural gas reserves to help meet Australia's energy needs.

About the Otway Exploration Drilling Program

ConocoPhillips Australia is proposing to undertake an exploration program that consists of seabed surveys and the drilling of up to six exploration wells in exploration permits VIC/P79 and T/49P located in Commonwealth waters offshore of Victoria and King Island, Tasmania.

ConocoPhillips Australia has commenced preparation of an Environment Plan (EP) that will seek approval for this exploration drilling program to be undertaken. Drilling commencement is dependent on regulatory approval and rig availability. The initial activity will be seabed assessments which will commence no earlier than January 2024.

We are committed to ensuring that commercial fishers and offshore petroleum activities can sustainably coexist, that impacts are limited to interference to no greater extent than is necessary and that commercial fishers are no worse off as a result of the Otway Exploration Drilling Program.

This information sheet summarises the ongoing assessment of potential impacts and risks to the commercial fishing industry arising from ConocoPhillips Australia's Otway Exploration Drilling Program.

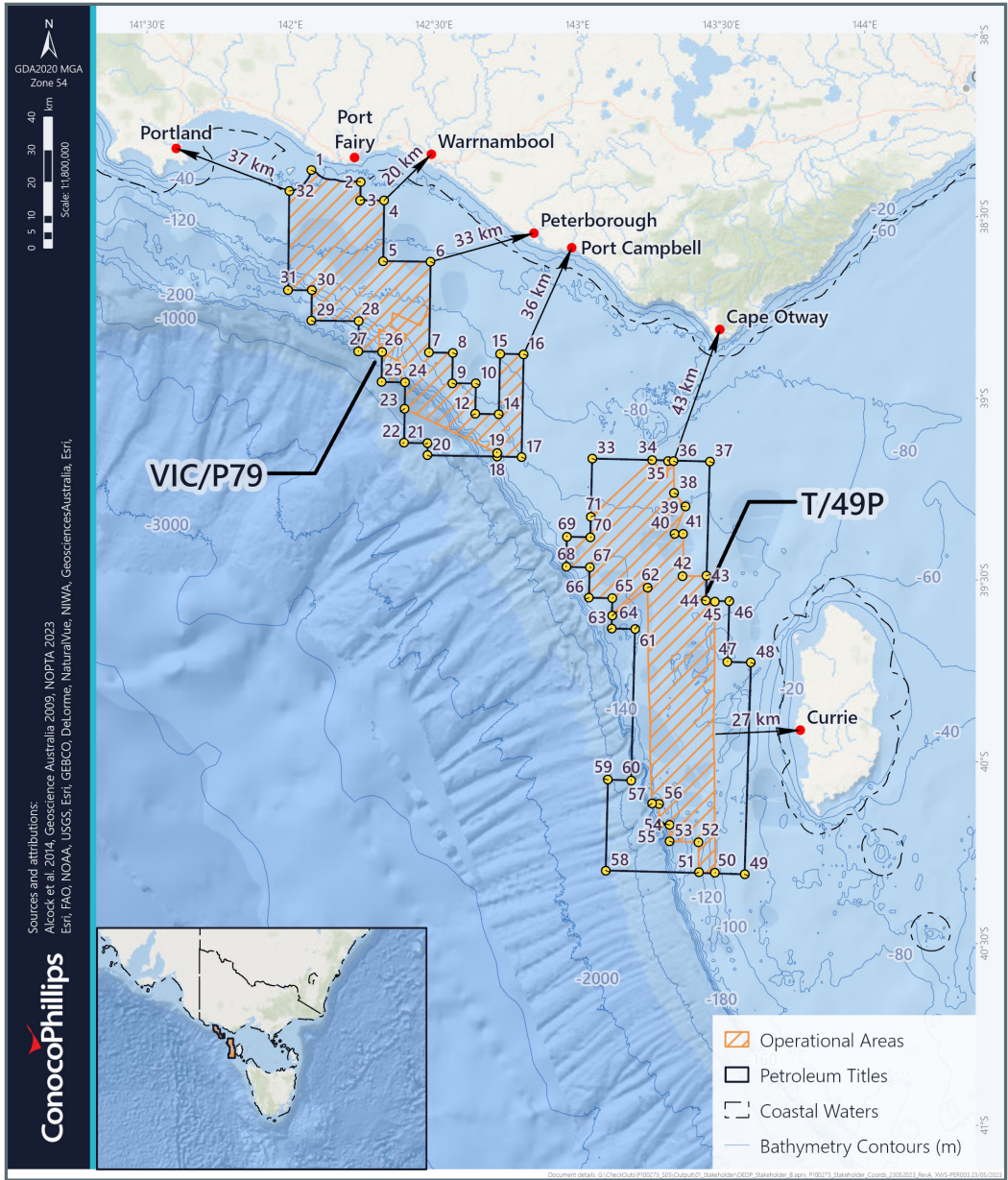
Figure 1 shows the permit areas and operational areas, within which exploration activities may occur.

KEY INFORMATION

- ConocoPhillips Australia is planning to undertake an exploration drilling program in the Otway Basin and is preparing an Environment Plan which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for public comment and assessment. Any decision to proceed to development will be dependent on a conducive investment environment.
- The Otway Exploration Drilling Program is located within existing designated Commonwealth and State fisheries. Exploration drilling activities will occur in only very small areas within the fisheries area.
- Specific locations for seabed surveys and exploration drilling are yet to be confirmed. ConocoPhillips Australia has undertaken to assess the environmental impacts and risks associated with seabed surveys and drilling activities that may occur anywhere within broader operational areas within petroleum titles T/49P and VIC/P79. This ensures that the impacts and risks associated with all potential survey and drilling locations are assessed.
- A preliminary assessment of potential impacts and risks to the commercial fishing industry has identified that:
 - Commercial fishers may be temporarily displaced from parts of the fisheries during exploration activities. Any displacement, i.e. through exclusion zones, would be communicated in a timely manner.
 - Impacts to fish and marine invertebrates from planned activities are predicted to be short term, limited within 10s to 100s of meters and will not affect the long-term sustainability of fisheries.
 - Potential risks from unplanned events have been identified and mitigation and management measures are being developed.

Map of Permit Areas

Figure 1



Coordinates

Label	Latitude (DMS)	Longitude (DMS)	Label	Latitude (DMS)	Longitude (DMS)	Label	Latitude (DMS)	Longitude (DMS)	Label	Latitude (DMS)	Longitude (DMS)
1	-38° 25'3.131"	142° 4'39.232"	20	-39° 11'54.708"	142° 30'4.951"	37	-39° 11'54.664"	143° 30'4.89"	54	-40° 12'5.982"	143° 23'34.74"
2	-38° 26'53.079"	142° 15'4.888"	21	-39° 9'54.707"	142° 30'4.949"	38	-39° 17'17.3"	143° 22'41.264"	55	-40° 12'7.05"	143° 21'24.852"
3	-38° 29'54.69"	142° 15'4.894"	22	-39° 9'54.71"	142° 25'4.953"	39	-39° 19'27.132"	143° 25'13.929"	56	-40° 8'39.816"	143° 21'12.975"
4	-38° 29'54.686"	142° 20'4.889"	23	-39° 4'14.315"	142° 25'4.946"	40	-39° 24'0.371"	143° 23'0.444"	57	-40° 8'39.34"	143° 19'41.017"
5	-38° 39'54.694"	142° 20'4.908"	24	-38° 59'54.705"	142° 25'4.938"	41	-39° 23'55.841"	143° 24'47.592"	58	-40° 19'54.707"	143° 10'4.993"
6	-38° 39'54.686"	142° 30'4.896"	25	-38° 59'54.709"	142° 20'4.943"	42	-39° 30'55.847"	143° 24'57.913"	59	-40° 4'54.701"	143° 10'4.976"
7	-38° 54'54.697"	142° 30'4.924"	26	-38° 54'54.706"	142° 20'4.935"	43	-39° 30'47.539"	143° 30'1.633"	60	-40° 4'54.697"	143° 15'4.971"
8	-38° 54'54.693"	142° 35'4.918"	27	-38° 54'54.711"	142° 15'4.94"	44	-39° 34'54.676"	143° 30'4.921"	61	-39° 39'54.688"	143° 15'4.942"
9	-38° 59'54.697"	142° 35'4.927"	28	-38° 49'54.706"	142° 15'4.932"	45	-39° 35'2.601"	143° 31'58.008"	62	-39° 33'0.546"	143° 17'31.908"
10	-38° 59'54.693"	142° 40'4.921"	29	-38° 49'54.714"	142° 5'4.941"	46	-39° 34'54.673"	143° 35'4.905"	63	-39° 39'54.691"	143° 10'4.947"
12	-39° 4'54.696"	142° 40'4.93"	30	-38° 44'54.71"	142° 5'4.932"	47	-39° 44'54.677"	143° 35'4.906"	64	-39° 37'47.264"	143° 10'8.348"
14	-39° 4'54.692"	142° 45'4.924"	31	-38° 44'54.713"	142° 0'4.935"	48	-39° 44'54.675"	143° 40'4.882"	65	-39° 34'54.689"	143° 10'4.941"
15	-38° 54'54.684"	142° 45'4.905"	32	-38° 28'31.755"	142° 0'4.902"	49	-40° 19'54.686"	143° 40'4.966"	66	-39° 34'54.692"	143° 5'4.946"
16	-38° 54'54.679"	142° 50'4.899"	33	-39° 11'54.684"	143° 5'4.92"	50	-40° 19'47.484"	143° 33'41.868"	67	-39° 29'54.69"	143° 5'4.94"
17	-39° 11'54.694"	142° 50'4.933"	34	-39° 11'56.572"	143° 17'52.217"	51	-40° 19'48.944"	143° 30'10.185"	68	-39° 29'54.694"	143° 0'4.945"
18	-39° 11'54.697"	142° 44'55.692"	35	-39° 12'0.644"	143° 21'13.397"	52	-40° 14'49.127"	143° 29'56.024"	69	-39° 24'54.692"	143° 0'4.939"
19	-39° 11'18.194"	142° 44'49.999"	36	-39° 12'1.03"	143° 22'24.381"	53	-40° 14'47.42"	143° 23'40.631"	70	-39° 24'54.689"	143° 5'4.934"
									71	-39° 21'31.898"	143° 5'7.348"

Assessment of Commercial Fishing

Several Commonwealth and State fisheries (with recorded activity in the last five years) have been identified within the Otway Exploration Drilling Program’s permit areas.

Commonwealth Fisheries	State Fisheries	
	Victoria	Tasmania
Southern and Eastern Scalefish and Shark Fishery <ul style="list-style-type: none">Commonwealth Trawl SectorScalefish Hook SectorGillnet Hook Trap Sector Shark Gillnet sub-sectorGillnet Hook Trap Sector Shark Hook sub-sector	Giant Crab Fishery	Giant Crab Fishery
Bass Strait Central Zone Scallop Fishery	Rock Lobster Fishery	Rock Lobster Fishery
Southern Squid Jig Fishery	Wrasse (Ocean) Fishery	
	Octopus Fishery	
Eastern Tuna Billfish	Multi-species Ocean Fisheries	



Potential Effects on day-to-day Fishing Operations

ConocoPhillips Australia is aware that the Otway Exploration Drilling Program may interfere with the operation of Commonwealth and State fisheries and result in temporary displacement. There are three key aspects to potential displacement:

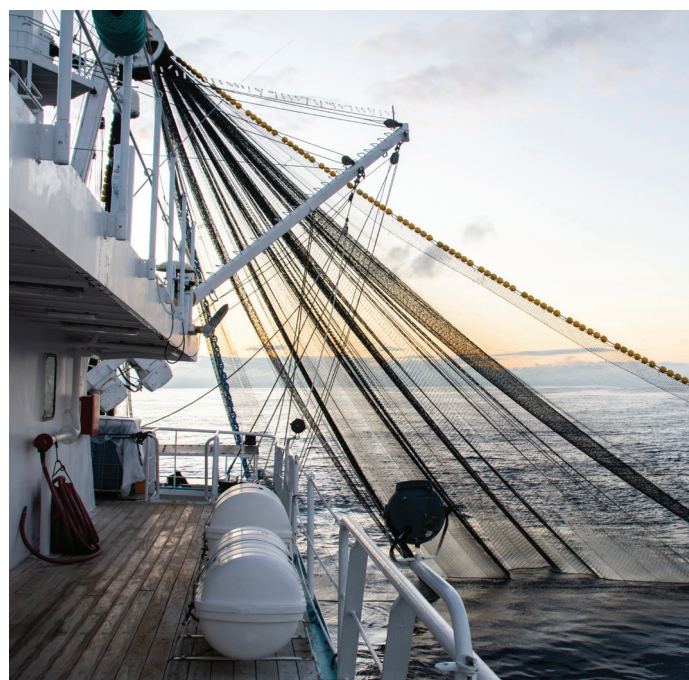
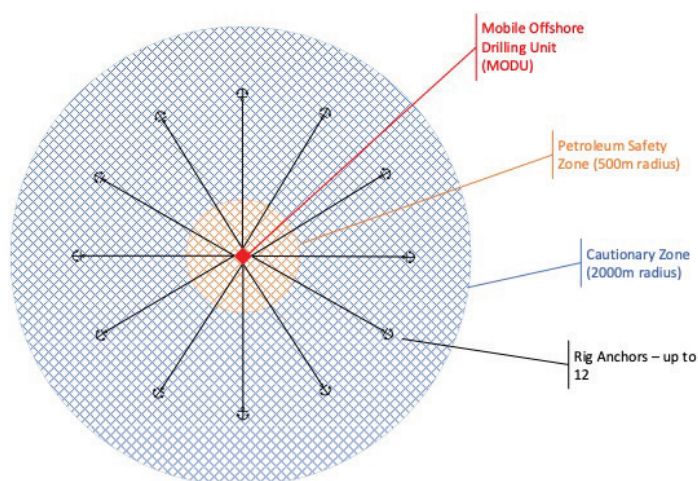
1. Location

Drilling will be undertaken at up to a maximum of six locations that are yet to be determined, but will be entirely within the permit areas. Once prioritised drilling locations are identified, seabed surveys will be conducted to identify possible hazards and natural features which may impact operations. Up to a maximum of six exploration wells will be drilled over both permit areas, with each taking typically between 30 to 40 days to complete. Specific seabed survey and drilling locations will be communicated with commercial fisheries prior to commencement.

2. Exclusion Zones

Exclusion zones are in place as a safety precaution for fishing vessels and crew as well as drilling equipment and crew. These zones allow anchors and mooring equipment to be placed within the operational area during the drilling program and prevent interactions or collisions with equipment or between vessels. Exclusion zones will be communicated via a 'Notice to Mariners' by the Australian Hydrographic Office. Three types of exclusion zones will be in place at set times and locations during the program:

- **Safe Navigation Area** – A 500 m radius safe navigation area will be established around seabed survey vessels and any towed equipment when conducting seabed surveys.
- **Cautionary zone** – a 2 km radius cautionary zone will be established around the drilling rig and once in position. This zone will cover the area of seabed anchors and mooring equipment and will be maintained by support vessels.
- **Petroleum Safety Zone** – A 500 m radius petroleum safety zone will be enforced around the drilling rig once in position at each drilling location.



3. Timing and Duration

Up to nine seabed surveys may be completed, each expected to take approximately 1 week to complete. Surveys will commence no earlier than January 2024.

For drilling, each well will typically take between 30 to 40 days, and a maximum of 90 days to complete accounting for operational delays and weather events.

Potential interactions with commercial fishing

ConocoPhillips Australia has assessed the potential for interactions between our planned activities and unplanned events that could affect commercially targeted fish and marine invertebrates such as the southern rock lobster.

The following table describes these events.

Aspect	Activity	Commercially relevant species	Assessment
Planned			
Underwater sound (Impulsive)	Seabed survey operations	<ul style="list-style-type: none"> • Marine invertebrates • Fish 	Seabed surveys involve a range of geophysical assessment techniques with the most potentially environmentally impactful method being Sub-bottom Profiling (SBP). SBP uses an impulsive acoustic source to penetrate typically less than 100 metres into the seafloor to identify shallow geological hazards prior to drilling. The sound levels emitted during SBP do not reach or exceed any of the relevant thresholds for effects on fish, fish eggs and larvae or marine invertebrates.
	Well evaluation operations (during drilling)		<p>An evaluation will be performed on all drilled wells to determine the well's ability to produce hydrocarbons. This may include a range of tests, with the most potentially environmentally impactful being Vertical Seismic Profiling (VSP).</p> <p>Fish and benthic invertebrates may be sensitive to the impulsive sound emitted from this activity, however, the short duration (maximum 20 hours per well), along with the likelihood of negative affect being restricted to within a few hundred metres of the source, reduce the potential for impacts to these species.</p> <p>Further, fish are expected to exhibit avoidance behaviour and swim away when sound reaches levels which may cause physiological effects¹.</p>
Underwater Sound (Continuous)	Drilling rig and support vessel operations	<ul style="list-style-type: none"> • Marine invertebrates • Fish 	<p>Drilling and support vessel operations are expected to occur 24 hours a day for typically 30-40 days per well. Sound produced by these activities is predicted to reach the levels associated with physiological effects, recoverable injury and temporary threshold shift (TTS or temporary injury) for some fish species within 10 metres to the sound sources. For effect thresholds to be exceeded, fish would have to remain continuously at those distances for either 12 hours (temporary injury threshold) or 48 hours (recoverable injury threshold).</p> <p>Although there are no threshold criteria relevant to marine invertebrates for continuous sound, there is the potential for sub-lethal impacts².</p>
Routine Operational Discharges	Seabed survey vessel, drilling rig and support vessel operations	<ul style="list-style-type: none"> • Marine invertebrates • Fish 	Discharges from seabed survey vessels, the drilling rig and support vessels will be of low toxicity and dilute rapidly within the marine environment. These discharges are typical of marine vessels and are treated to meet relevant standards.
Routine Drilling Discharges	Drilling rig operations	<ul style="list-style-type: none"> • Marine invertebrates • Fish 	Cement, cuttings and drilling fluid discharges occur during drilling activities, resulting in localised and temporary changes in water quality, but will dilute rapidly within the marine environment.

Potential Effects on day-to-day Fishing Operations *continued*

Aspect	Activity	Commercially relevant species	Assessment
Unplanned Events			
Introduction of Invasive Marine Species	Seabed survey vessel, drilling rig and support vessel operations	<ul style="list-style-type: none"> • Marine invertebrates • Fish 	Drilling will occur in deep, well mixed waters which are unfavourable conditions for most invasive marine species. ConocoPhillips Australia will implement its Marine Assurance System and Invasive Marine Species Risk Assessment process to mitigate the risk of introduction, and vessels operating within permit areas will comply with Australian requirements for ballast water and biofouling management.
Accidental hydrocarbon release	Seabed survey vessel, drilling rig and support vessel operations	<ul style="list-style-type: none"> • Marine invertebrates • Fish 	<p>In the unlikely event of an accidental hydrocarbon release, an exclusion zone will be put in place resulting in the displacement of fishing activities.</p> <p>ConocoPhillips Australia and their contractors will have tested plans in place to support an effective and timely response to minimise the duration of any effects, including:</p> <ul style="list-style-type: none"> • A Shipboard Oil Pollution Emergency Plan or Shipboard Marine Pollution Emergency Plan, depending on the class of vessel. • An Oil Pollution Emergency Plan. • A Source Control Emergency Response Plan. <p>In addition, an Operational and Scientific Monitoring Program will be implemented to ensure that potential impacts to commercial fisheries are assessed and monitored to recovery.</p> <p>Impacts to fisheries from a hydrocarbon spill are expected to be limited to small numbers of juvenile fish, larvae and plankton, and are not expected to affect population viability or recruitment, or the long-term sustainability of the fisheries.</p>
Interaction with Marine Fauna	Seabed survey vessel, drilling rig and support vessel operations	<ul style="list-style-type: none"> • Fish 	<p>Given the underwater sound emitted during exploration activities, fish are expected to exhibit avoidance behaviours resulting in a low likelihood of interaction. ConocoPhillips Australia will implement additional measures to minimise the risk of interaction, including:</p> <ul style="list-style-type: none"> • Reducing vessel speeds within operational areas. • Minimising the number of vessels within operational areas at any one time; and • Implementing procedures to detect and protect marine fauna.

¹ As accepted by McCauley (1994) in *Environmental Implications of Offshore Oil and Gas Developments in Australia: Seismic Surveys*.

² Day et al (2020), *Lobsters with pre-existing damage to their mechanosensory statocyst organs do not incur further damage to exposure to seismic air gun signals (Lobsters with pre-existing damage to their mechanosensory statocyst organs do not incur further damage from exposure to seismic air gun signals - ScienceDirect)*

Questions

and Answers

How is ConocoPhillips Australia consulting commercial fishers for the Otway Exploration Drilling Program?

The proposed exploration activities will occur in designated Commonwealth and State fishery management areas. The seabed survey and drilling activities require access to relatively small areas for short periods of time, however, these activities may displace commercial fishing activities and other commercial marine users.

ConocoPhillips Australia has arrangements in place with Seafood Industry Victoria (SIV), the Tasmanian Seafood Industry Council (TSIC) and Tuna Australia to be the primary point for consultation with their members. All members may choose to engage directly with ConocoPhillips Australia at any point to represent their individual interests. To do this, contact ConocoPhillips Australia on the details below.

All other commercial fishers will be consulted individually by ConocoPhillips Australia unless directed otherwise.

We encourage commercial fishers to provide feedback, request a meeting and ask questions on the proposed activity by contacting us via the Otway Consultation Hub or email or telephone.

Will seismic surveys be used as part of the Otway Exploration Drilling Program?

No, seismic survey is not part of the Otway Exploration Drilling Program.

The sound emitted by vessel operations and exploration drilling is a continuous sound. Whereas, the sound emitted during a marine seismic survey is a non-continuous or impulsive sound. A number of studies predict that, for a range of species exposed to impulsive sounds, impacts occur at lower sound levels than for exposure to continuous sounds.

- Vertical seismic profiling (VSP) may be conducted over a maximum of 20 hours at each well, and may not be conducted at all depending on specific well appraisal objectives. The sound generated during VSP is significantly lower in intensity and duration than sound produced from a seismic array.

Seabed surveys are designed specifically to map the seabed and directly below the seabed (up to ~100 m), whereas seismic surveys are designed to image the subsurface up to several kilometres below the seabed. Sound generated from sub-bottom profiling during the seabed survey is significantly lower in intensity and duration than sound produced from a seismic array.

What is well evaluation and Vertical Seismic Profiling (VSP)?

Well evaluation is a process of assessing the potential of an oil or gas reservoir by drilling a well and conducting tests to measure its characteristics such as pressure, temperature and fluid properties.

One of the techniques used in well evaluation is called Vertical Seismic Profiling (VSP).

VSP involves measuring the seismic response of the rock formations surrounding the well by sending sound waves into the ground and recording the reflections. The data collected from the VSP can be used to create a picture of the rock formations and determine the location and size of potential hydrocarbon reservoirs.

Fish and benthic invertebrates may be sensitive to the impulsive sound emitted during VSP. However, the short duration (maximum of 20 hours per well), along with the likelihood of negative effects being restricted to within a few hundred meters of the source, reduce the potential for impacts to these species.

VSP sound levels are not predicted to result in permanent or temporary threshold shift to marine mammals and only localised behavioural disturbance, and are significantly lower than those produced during 3-dimensional (3D) marine seismic surveys.

Will ConocoPhillips Australia compensate commercial fishers if economically impacted?

Yes, ConocoPhillips Australia is committed to having a commercial fishing adjustment protocol in place prior to the commencement of the drilling program. ConocoPhillips Australia will work in consultation with identified peak fishing industry associations to develop this protocol.

Questions

and Answers

continued

Will light impact commercial fishing species?

The National Light Pollution Guidelines (CoA 2020) do not provide specific guidance for the assessment of impacts to plankton, marine invertebrates or fish and, it is considered that impacts to these species are not likely to be significant.

Will dive-based fisheries be impacted?

Commercial divers have the potential to be impacted by underwater sound where certain exploration activities occur in close proximity to the shoreline and shallow waters. If vertical seismic profiling was to occur near the northern border of permit VIC/P79, Victorian dive-based fisheries would be impacted. Sound emissions from VSP will occur only once per well (maximum of six) for no longer than 20 hours. This activity has the potential to result in displacement for a maximum of 6 days over the entire exploration program for these fisheries, assuming all wells are drilled in the northern extent of VIC/P79, which is highly unlikely.

How will ConocoPhillips Australia determine when and where drilling will occur?

Drilling commencement is dependent on regulatory approval and drilling rig availability. The initial activity will be seabed surveys which will commence no earlier than January 2024.

Specific locations for seabed surveys and exploration drilling are yet to be confirmed. ConocoPhillips Australia has undertaken to assess the environmental impacts and risks associated with seabed surveys and drilling activities that may occur anywhere within broader

operational areas within petroleum titles T/49P and VIC/P79. This ensures that the impacts and risks associated with all potential survey and drilling locations are assessed.

The process for selecting drilling locations involves several steps, including the acquisition and processing of seismic data, interpretation of the data to select high probability of success targets, and efficiency of the program to prove up resources with the least amount of wells. A summary of current activities to support this effort are described below:

1. Interpretation of seismic data: Skilled geoscientists analyse the processed data to identify potential drilling locations. They look for feature such as faults, folds and stratigraphic traps that could indicate the presence of hydrocarbons.
2. Selection of high probability targets: After identifying potential drilling locations, geoscientists prioritise them based on their likelihood of success. They consider factors such as the quality and quantity of the reservoir, the geologic complexity of the area and the cost of drilling.
3. Efficiency of the program: The goal is to prove up resources with the least number of wells, which involves optimising the drilling program whilst maximising the chance of success.

Overall, the process for selecting drilling locations is a complex and multidisciplinary effort that requires skilled professionals and advanced technology. It involves a careful balance of science, economics and risk management to ensure that drilling efforts are successful and efficient.

Contact us

ConocoPhillips Australia values consultation and feedback and invites consultation with individuals, groups and organisations potentially affected by the proposed activities to help inform the development of the EP.

You are invited to provide feedback, request a meeting and ask questions on the proposed activity by contacting us in one of the following ways:

E: otway@conocophillips.com

T: 07 3182 7122

PO BOX 1243, MILTON, QLD, 4064

conocophillips.com.au



ConocoPhillips
Australia