

## Acceptance subject to conditions decision

### Duntroon Multi-client 3D and 2D Marine Seismic Survey Environment Plan

This document provides notification of NOPSEMA’s decision made under regulation 10 of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Environment Regulations) to accept an environment plan.

#### Submission information

<b>Titleholder<sup>1</sup>:</b>	PGS Australia Pty Ltd
<b>Environment plan:</b>	Duntroon Multi-client 3D and 2D Marine Seismic Survey Environment Plan (EP) (Revision 3, 7 November 2018)
<b>Petroleum title(s)/Application number(s):</b>	Application 4BCCBD
<b>Date first submitted to NOPSEMA:</b>	27/02/2017
<b>Activities type(s)<sup>2</sup>:</b>	<ul style="list-style-type: none"> <li>Seismic surveys</li> </ul>
<b>Activity overview:</b> <i>As described in the accepted environment plan.</i>	<p>The geophysical company PGS Australia Pty Ltd (PGS) proposes to acquire a MultiClient three-dimensional (MC3D) and MultiClient two-dimensional (MC2D) marine seismic survey (MSS) in the Great Australian Bight (GAB) known as the Duntroon MC3D and MC2D Marine Seismic Survey.</p> <p>The survey area is located 51 km from Cape Carnot, Eyre Peninsula (mainland South Australia), 90 km west of Kangaroo Island and approximately 80 km south-south west of Port Lincoln, the nearest township. The survey covers Petroleum Exploration Permits EPP-41, EPP-42, EPP-45 and EPP-46 and a small amount of open acreage area. The water depths of the survey area are in the range 100m to 3500m with the shallowest water depths located along the northern boundary of the survey area.</p> <p>Data acquisition will occur in the operational area which covers approximately 30,100 sq.km, and the surveys will be undertaken from September 1 to November 30, 2019 (season 1); with further provision for September 1 to November 2020 (season 2) in the event that one or both of the surveys are unable to be completed in 2019. The total planned survey timeframe is 91 days within any one season.</p>
<b>Decision:</b>	Accepted subject to conditions
<b>Decision date:</b>	14/01/2019
<b>Decision made by:</b>	Representative of NOPSEMA: Environment Manager - Seismic & Production Operations

## Basis of decision

NOPSEMA has assessed the environment plan in accordance with its assessment policies and procedures. Having regard to all information provided by, and referred in the environment plan, NOPSEMA decided to accept the environment plan subject to conditions in accordance with regulation 10(6) of the Environment Regulations.

NOPSEMA accepted the EP subject to conditions to provide greater transparency and certainty to stakeholders about how the activity will be managed in a way that ensures adequate environmental protection. The conditions were applied to address scientific uncertainty, and ensure sufficient protection for the environment, associated with timing of upwelling events and presence, abundance and movements of EPBC Act listed species. These conditions are in addition to the requirements that are applied through measures detailed in the accepted EP.

Acceptance of the EP is subject to the following conditions applying to operations for the Duntroon Multi-client 3D and 2D Marine Seismic Survey (the petroleum activity):

### 1. Timetable of the activity

1-1 Operation of the seismic survey acoustic array must not occur outside of the period 1 September 2019 to 30 November 2019 (Period A) and 1 September 2020 to 30 November 2020 (Period B).

### 2. Pygmy blue whales

2-1 The petroleum activity may only be carried out in a manner that ensures no injury to pygmy blue whales (*Balaenoptera musculus*); or interference with foraging behaviours of pygmy blue whales in the foraging biological important area (BIA), including no displacement from foraging areas.

2-2 To identify a possible upwelling event associated with pygmy blue whale food availability, PGS shall:

- a. Engage an independent third party expert to undertake daily real-time monitoring of wind direction and speed, sea bottom temperature and sea surface temperature in the Eastern Great Australian Bight upwelling (Kangaroo Island Canyons) biologically important area (BIA) from 23 October to 30 November in 2019 and/or 2020.
- b. Based on monitoring observations mentioned in condition 2-2.a, PGS shall undertake an aerial survey if the following initiation conditions are met:
  - i. Wind stress from the south-east greater than 0.03 Pa at the Neptune Islands; and
  - ii. Real time sea bottom temperatures in conjunction with bottom topography characteristics detect conditions typical of cold water interface uplift indicative of an upwelling event; or
  - iii. Real time sea surface temperatures are between  $19.2^{\circ}\text{C} \pm 0.7^{\circ}\text{C}$

2-3 If aerial survey initiation conditions specified in condition 2-2.b. have been met the aerial survey will commence on the following day and will be repeated every day that the acoustic array is in operation for the duration of the petroleum activity.

2-4 The aerial survey referred to in condition 2-3 will be undertaken consistent with the methodology outlined in Gill *et al.* (2011)<sup>1</sup> within the operational area, and up to 100km from its seaward boundaries, by a suitably qualified marine mammal expert (MME) who will maintain communication with the survey vessel master.

<sup>1</sup> Gill, P.C., Morrice, M.G., Page, B., Pirzl, R., Levings, A.H., & Coyne, M, (2011) – Blue Whale Habitat Selection and within Season Distribution in a Regional Upwelling System off South Australia, Vol. 421: 243-263, 2011, Marine Ecology Press Series, doi:10.3354/meps08914

- 2-5 In the event the MME observes any pygmy blue whale during the aerial survey specified in condition 2-4, operation of the acoustic array will cease and not recommence until the following year, or if the activity is occurring in Period B the activity will cease and not recommence.
- 2-6 In the event vessel based observations by Marine Fauna Observers (MFOs) on vessels or passive acoustic monitoring from the seismic vessel detects a pygmy blue whale in November, operation of the acoustic array will cease and not recommence until the following year, or if the activity is occurring in Period B the activity will cease and not recommence.

### 3. Southern blue fin tuna

- 3-1 The petroleum activity may only be carried out in a manner that ensures no interference with the migration of southern blue fin tuna (SBT) (*Thunnus maccoyii*) into the Great Australian Bight.
- 3-2 PGS will develop and implement a process to detect the migration of SBT into areas within and adjacent to the operational area during November 2019 and/or 2020. This detection process is to be designed on the advice of a suitably qualified and experienced person for the purpose of detecting SBT aggregations within 30 km of the operational area.
- 3-3 In the event that SBT aggregation(s) are detected within 30km of the operational area, SBT behaviour is to be monitored and should SBT aggregations be detected within 20 km of the operational area operation of the acoustic array will cease for the remainder of Period A, or if the activity is occurring in Period B, the activity will cease and not recommence.

### 4. Southern right whales

- 4-1 The petroleum activity may only be carried out in a manner that ensures no injury; or biologically significant behavioural disturbance to Southern Right Whales (*Eubalaena australis*) in calving/aggregation areas located in coastal South Australian waters.
- 4-2 PGS shall engage a suitably qualified and experienced underwater sound propagation physicist to design and implement a sound verification study for the duration of Period A utilising acoustic loggers on the seabed at the boundary of the Southern Right Whale Calving biological important area (BIA) at locations that are most likely to receive the highest received levels from the petroleum activity in petroleum titles EPP-41/42.
- 4-3 Within three months of the completion of the petroleum activity in Period A, PGS must retrieve and analyse data from the acoustic logger study referred to in condition 4-2 and prepare a report that documents the received levels relevant to low frequency cetaceans at the boundary of the southern right whale calving BIA.
- 4-4 If received levels are 120 dB re 1µPa (SPL) or higher, results are to be utilised to inform an appropriate setback between any petroleum activity and the southern right whale calving BIA to provide assurance that received sound levels within the BIA will be at or below 120 dB re 1µPa (SPL) for the duration of the petroleum activity in Period B.
- 4-5 PGS shall implement EPBC Policy Statement 2.1 (Part B) procedures (Increased Precaution zones and Buffer zones) utilising the following mitigation zones specific to southern right whales:
- i. Observation zone: > 3km horizontal radius from the acoustic array
  - ii. Low power zone: 3km horizontal radius from the acoustic array
  - iii. Shutdown zone: 1km horizontal radius from the acoustic array



## 5. Publication of the Environmental Performance Report

5-1 PGS shall publish a report on the environmental performance for the petroleum activity detailing compliance with these conditions and the environmental performance outcomes and standards detailed in the EP. This report must be to the satisfaction of NOPSEMA and submitted to NOPSEMA within three months of completion of the petroleum activity both for Period A and Period B.

## 6. Definitions

For the purposes of this notice, unless otherwise specified all terms have the same meaning as in the Environment Regulations.

*Eastern Great Australian Bight upwelling (Kangaroo Island Canyons) biologically important area (BIA)*: is taken to be the area defined in the Blue Whale Conservation Management Plan and the National Conservation Values Atlas (Kangaroo Canyon – Eastern GAB, object ID 2570) published by the Department of Environment and Energy

*Environment Regulations*: means the Offshore Petroleum and Greenhouse Gas Storage (environment) Regulations 2009

*EP*: is taken mean the Duntroon Multi-client 3D and 2D Marine Seismic Survey Environment Plan (Revision 3, dated 7 November 2018)

*Petroleum activity*: means the Duntroon Multi-client 3D and 2D Marine Seismic Survey

*Period A*: is taken to mean the period 1 September 2019 to 30 November 2019

*Period B*: is taken to mean the period 1 September 2020 to 30 November 2020

*PGS*: means PGS Australia Pty Ltd

*Operational area*: is taken to be the operational area for the petroleum activity as defined in Section 2.3 of the EP

*Southern Right Whale Calving biological important area (BIA)*: is taken to be the area defined in the National Conservation Values Atlas – Object ID 2599 published by the Department of Environment and Energy

*Titleholder*: for the purposes of this notice is taken to be PGS Australia Pty Ltd

## Next steps for the petroleum activity

An *environment plan summary* must be provided to NOPSEMA for publication. Regulation 11(4) requires that this document provide some material from the accepted environment plan. In this case, PGS have agreed to publish the actual environment plan, omitting only personal information and the full text of consultation records, as the *environment plan summary*.

Due to public interest in the activity, NOPSEMA has also published a report that describes consideration of key matters in its assessment of the environment plan.

The environment plan and *NOPSEMA's Key Stakeholder Matters* report should be read for further information. Refer to <https://www.nopsema.gov.au/environmental-management/activity-status-and-summaries/details/387>.

PGS is required to notify NOPSEMA 10 days prior to the commencement of the activity. This notification will be published on NOPSEMA's website.

## Titleholder environmental performance requirements

A titleholder is required to undertake a petroleum activity in accordance with the accepted environment plan and conditions imposed by NOPSEMA. It is an offence under the Environment Regulations to act in a manner contrary to the accepted environment plan and any conditions set by NOPSEMA. A titleholder must submit a revision to the environment plan in response to a new or increased environmental impact or risk, or a significant modification or stage of the activity not provided for in the accepted environment plan.

NOPSEMA has imposed a condition that requires PGS publish an environmental performance report detailing compliance with conditions imposed and the environmental performance outcomes and standards detailed in the EP. Once the document meets NOPSEMA satisfaction it will be published on NOPSEMA's website. Refer to <https://www.nopsema.gov.au/environmental-management/activity-status-and-summaries/details/387>.

## How to get further information

If you have any further questions regarding the activity it is suggested you contact the titleholder's nominated liaison person for the activity.

If you would like to access any further information regarding this decision, or contact NOPSEMA please email [environment@nopsema.gov.au](mailto:environment@nopsema.gov.au).

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<sup>1</sup> A titleholder includes an applicant for a petroleum access authority, petroleum special prospecting authority, pipeline licence, greenhouse gas search authority or greenhouse gas special authority under sub-regulation 9(2).

<sup>2</sup> Activity type as listed in the Offshore Petroleum and Greenhouse Gas Storage (Regulatory Levies) Regulations 2004