

Gem 3D Marine Seismic Survey

1. Purpose of this report

NOPSEMA has accepted the Gem 3D Marine Seismic Survey Environment Plan (the EP) submitted by SapuraOMV Upstream (Western Australia) Pty Ltd (the titleholder) for a seismic survey activity in the Boneparte Basin within the period(s) January 2020 and June 2020.

As required by the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (the Environment Regulations), the public was provided with an opportunity to comment on the EP. There were no public comments received during the public comment period.

Following the public comment period, the titleholder submitted the EP for assessment by NOPSEMA on 23 October 2019. NOPSEMA has since completed its assessment of the EP and has determined that it is satisfied that the EP meets the criteria for acceptance¹ on 4 February 2020.

This report explains how NOPSEMA took into account key matters raised by stakeholders in making its decision². Comments have been grouped into 'key matters' that capture the key issues, concerns or new information provided during the consultation process. This report also contains other key matters reflecting important values and sensitivities that may be of interest to the public.

This report accompanies the accepted Gem 3D Marine Seismic Survey Environment Plan (Revision 3 dated 23 January 2020) submitted by SapuraOMV Upstream (Western Australia) Pty Ltd which is available on the NOPSEMA website and should be referred to for further information.

1.1. Information relevant to NOPSEMA's decision:

In making the decision to accept this EP, NOPSEMA took into account:

- the Environment Regulations;
- NOPSEMA Assessment Policy (PL0050), Environment Plan Assessment Policy (PL1347) and Environment Plan Decision Making Guidelines (GL1721);
- the Gem 3D Marine Seismic Survey Environment Plan;
- the information raised by relevant persons, government departments and agencies that is relevant to making a decision;
- relevant peer reviewed scientific literature; and
- relevant plans of management and threatened species recovery plans developed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and relevant guidance published by the Department of the Environment and Energy.

¹ Environment Regulations, Regulation 10A Criteria for acceptance of environment plan

² Environment Regulations, Regulation 11(3) Publication of notice, etc.



2. Next steps

Responsibility for the ongoing environmental performance of the Gem 3D Marine Seismic Survey activity remains, at all times, with SapuraOMV Upstream (Western Australia) Pty Ltd.

NOPSEMA has legislated responsibilities to inspect and investigate offshore petroleum and greenhouse gas storage activities, and to enforce compliance with environmental law. These functions will be applied to this activity in accordance with NOPSEMA's policies.

3. Sensitive Information

Sensitive information received during consultation with relevant persons or during the public comment period, such as the names and contact details of commenters and specific information identified by the commenter or relevant person as 'sensitive', is not published in this report. Sensitive information is contained in a sensitive information part of the EP which has been considered by NOPSEMA during its assessment process.

4. Further information

This report does not provide an exhaustive record of all matters relevant to environmental management and decision making for this EP.

If you would like further information about the activity, please contact the titleholder's nominated liaison person specified in the EP and on NOPSEMA's webpage for the Gem 3D Marine Seismic Survey.

If you would like to be notified of regulatory information on the activity, such as start and end dates and enforcement actions (if any), please subscribe to updates from the https://info.nopsema.gov.au/environment_plans/472/show_public on NOPSEMA's website.

How NOPSEMA has taken into account key matters raised during the assessment and decision making process for the Gem 3D Marine Seismic Survey

#	Matter	Titleholder response	NOPSEMA's assessment and decision
1	<i>There would be unacceptable impacts to pygmy blue whales within the biologically important area (BIA) during the migration period.</i>	<p>SapuraOMV undertook a comprehensive assessment of the potential impacts to Blue Whales. This was informed by underwater acoustic modelling to account for sound propagation and predicted received levels within the migratory BIA.</p> <p>SapuraOMV will ensure that the activity is conducted such that there is no injury to marine mammals using BIAs (EPO I1). This will be achieved through the application of EPBC Act Policy Statement 2.1 standard control measures.</p> <p>SapuraOMV will make all attempts to avoid the peak northern migration period for blue whales, however should their survey timing overlap with the migration period, they will implement additional controls to prevent unacceptable impacts to blue whales. This includes the adoption of adaptive mitigation measures such that night time operations will cease where there have been three or more</p>	<p>NOPSEMA recognises that there is the potential for the activity, if not appropriately managed, to have an unacceptable impact on pygmy blue whales utilising the migratory BIA</p> <p>In making a decision regarding this matter, NOPSEMA took into account the content of SapuraOMV's EP, relevant scientific literature and NOPSEMA's Decision Making Guidelines (GL1721), the Conservation Management Plan for the Blue Whale (DoE, 2015), EPBC Act Policy Statement 2.1 (DEWHA, 2008), and the EPBC Act Significant Impact Guidelines 1.1- Matter of National Environmental Significance (DEWHA, 2013).</p> <p>During the course of the assessment, NOPSEMA required SapuraOMV to consider:</p> <ul style="list-style-type: none"> • Uncertainties and variability in the timing and distribution of pygmy blue whales at the northern extent of their migration. This resulted in the adoption of adaptive control measures to allow for mitigation action to be taken in the presence of higher than expected numbers of pygmy blue whales. • Additional control measures to address uncertainty in the response of blue whales to seismic sound and variability in habitat use and timing. This resulted in the adoption of an adaptive management regime which is directly linked to the presence/absence of whales in the area. <p>Given the limited overlap of the blue whale migratory BIA with the operational area, and additional control measures proposed, NOPSEMA is satisfied that impacts to migrating blue whales will be limited to short term</p>

		<p>whale instigated shut downs, or more than seven confirmed blue whale sightings in the preceding 24 hours.</p>	<p>behavioural responses, with no injury or displacement from migratory corridors.</p> <p>NOPSEMA has concluded that after taking into consideration all the environmental management requirements, that the activity will not cause unacceptable impacts to pygmy blue whales.</p>
<p>2</p>	<p><i>There would be unacceptable impacts on protected site attached fish species inhabiting shoal environments</i></p>	<p>SapuraOMV undertook a comprehensive assessment of the potential impacts to site attached fish inhabiting the shoal environments within the operational area. This was informed by underwater acoustic modelling and bathymetry surveys.</p> <p>SapuraOMV will ensure that the activity is conducted such that there is no mortality or unrecoverable injury to site attached fish (EPO I3), or significant impact to the ecological communities of shallow water shoals (EPO I4), as a result of instantaneous sound exposure, or re-exposure within 24 hours.</p> <p>This will be achieved through the application of a 150 m acquisition exclusion zone from the 80 m depth contour of shallow water shoals, and not acquiring adjacent survey lines within 24 hours to allow for adequate recovery time of temporary threshold shifts in the hearing of site-attached fish.</p>	<p>NOPSEMA recognises that there is the potential for the activity, if not appropriately managed, to have an unacceptable impact on the site attached fish and associated ecological communities of the shallow water shoals within the operational area.</p> <p>In making a decision regarding this matter, NOPSEMA took into account the content of SapuraOMV’s EP, relevant scientific literature and NOPSEMA’s Decision Making Guidelines (GL1721).</p> <p>During the course of the assessment, NOPSEMA required SapuraOMV to consider:</p> <ul style="list-style-type: none"> • The bathymetry of the shoals and likely presence of suitable habitat for site attached fish. • The distance at which permanent threshold shifts (PTS) and temporary threshold shifts (TTS) for fish will be exceeded based on acoustic modelling. <p>This resulted in SapuraOMV implementing control measures to prevent seismic acquisition within 150 m of the 80 m depth contour, which is considered to be a conservative depth limit beyond which suitable habitat to support site attached fish is unlikely to be present.</p> <p>NOPSEMA is satisfied that with the proposed control measures in place, impacts to the ecological communities of the shoals, including site attached fish species, will be localised, short term and recoverable. Consequently, NOPSEMA has concluded that the activity will not result in unacceptable impacts to site attached fish or the shoal ecological communities.</p>

