



Galactic Hybrid 2D MSS Environment Plan: Public Comment Report

Exploration

October 2021

Revision 0

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1. INTRODUCTION

The Galactic Hybrid 2D MSS Environment Plan was submitted to NOPSEMA 10 September 2020 and as required by the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009, was open for public comment from 16 September to 19 October 2020.

This report provides a summary of the comments received and Woodside Energy Ltd's (Woodside's) response.

2. TITLEHOLDER CONTACT DETAILS

Matthew Docherty
Exploration Manager
Mia Yellagonga, 11 Mount Street, Perth WA 6000
Phone: 08 9348 4000
Fax Number: 08 9214 2777
feedback@woodside.com.au

3. PUBLIC COMMENTS

One comment was received during the public comment period. The comment and Woodside's response are provided in **Table 1**.

Table 1: Summary of comments and Woodside’s response

Comments received	Titleholder Response
<p>Recommendation 1</p> <p>The Galactic Hybrid seismic survey program is delayed until additional research studying the short-term, long-term and cumulative impacts of seismic testing on marine animals and the marine environment is completed for the Timor Sea and mitigation strategies developed to address the findings of this research.</p>	<p>Section 6.4.3 of the EP includes a comprehensive assessment of the potential impacts of acoustic emissions from the seismic source on a range of sensitive receptors, including plankton, benthic invertebrates, fishes and elasmobranchs, fish spawning, cetaceans, turtles, seabirds and migratory shorebirds. This assessment was based on the most up-to-date research findings into the potential impacts of marine seismic surveys on marine life, including the recently published paper from the Australian Institute of Marine Science (AIMS) on the potential impacts of seismic acoustic emissions on tropical snapper on the North West Shelf (part of the North West Shoals to Shore Research Program [NWSSRP]).</p> <p>Recommendation 2 of the Senate Inquiry report, “Making waves: the impact of seismic testing on fisheries and the marine environment,” recommended that the Australian Government significantly fund additional research to study the short-term, long-term and cumulative impacts of seismic testing on marine animals and the marine environment. It is not reasonable to suggest that acquisition of the Galactic Hybrid 2D MSS is delayed until additional research studying the short-term, long-term and cumulative impacts of seismic acquisition on marine fauna and the marine environment of the Timor and Arafura seas is completed. The timeframes for the scoping, implementation, analysis and reporting of robust, properly designed and funded scientific studies to understand these impacts are extensive. As an example, the NWSSRP commenced in 2017 and it took a period of 4-years for the first publication of results of these studies in a peer-reviewed journal.</p> <p>Woodside was awarded the NT/P86 permit on the basis of 6-year work program, which includes acquisition of new 2D seismic data in Years 1-3. This means that Woodside has to acquire the Galactic Hybrid 2D MSS by the July 2023 to meet the requirements of the work program associated with this petroleum title.</p> <p>During development of this EP, relevant stakeholders were identified, provided information on the proposed activities and given the opportunity to provide comment. All feedback received is summarised in Section 5 of the EP, with any concerns taken into consideration in impact and risk assessment and to demonstrate impacts and risks are acceptable (Section 6).</p>

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<p>Recommendation 2</p> <p>The full extent of NT/RL5 and NT/RL6 covering the Barossa and Caldita fields be removed from the operational area for the proposed Galactic Hybrid 2D seismic survey to limit impacts to marine biota from multiple seismic surveys.</p>	<p>The Galactic Hybrid 2D MSS will involve the acquisition of up to a maximum of 4475 line kilometres of 2D seismic data, mostly within the NT/P86 exploration permit. The proposed survey includes a limited number of well-to-seismic tie lines to link the 2D data acquisition with exploration data available at existing well locations in the region, including several within the NT/RL5 and NT/RL6 retention leases over the Barossa and Caldita gas fields. The majority of the proposed 2D lines (as shown in Figure 3-2 in the EP) are within the NT/P86 permit, and do not overlap NT/RL5 and NT/RL6. Whilst there has been some historic 2D seismic acquisition within the area covered by NT/P86, no 3D surveys have been acquired in the permit. The Caldita 3D survey (acquired 2006-2007) and the Caldita-Barossa 3D survey (acquired 2016) mainly covered the NT/RL5 and NT/RL6 retention leases, with a minimal amount of overlap with the western extent of the NT/P86 permit. Thus, there has been no previous 3D seismic acquisition that overlaps the proposed maximum 4475 km line plan shown in Figure 3-2 of the EP.</p> <p>Section 6.4.3 of the EP includes a comprehensive assessment of the potential cumulative impacts of acoustic emissions from the eleven 3D seismic surveys acquired in the North Marine Region since 2006. Of these, as indicated above, only three surveys had spatial overlap with the Galactic Hybrid 2D MSS Operational Area—Caldita 3D, Caldita-Barossa 3D and Bethany 3D (acquired 2018). As outlined above, this overlap is restricted to the western side of the Operational Area, where the proposed well-to-seismic tie lines extend to historical wells in NT/RL5 and NT/RL6. Given the time that has elapsed since the last survey overlapping with the Galactic Hybrid 2D MSS Operational Area (Bethany 3D MSS), all receptors are expected to have recovered from the effects of previous surveys prior to commencement of the Galactic 2D survey. Therefore, cumulative impacts to ecological receptors are not expected to occur as a result of any previous seismic surveys in the region and the acquisition of the proposed Galactic Hybrid 2D MSS.</p>
<p>Recommendation 3</p> <p>The operational area traversing the Oceanic Shoals Marine Park be withdrawn until such time as extensive public consultation on the matter shows conclusively that the proponent has a social license to conduct seismic surveys within the marine park.</p>	<p>The management plans for Australian Marine Parks (AMP) provide for the Director of National Parks (DNP) to authorise allowable activities through a permit, class approval, activity licence or lease. The DNP has authorised offshore petroleum exploration activities to occur in certain marine park blue (IUCN category VI) zones by issuing class approvals. The class approvals themselves specify the relevant marine park zones where activities are allowable. The class approvals require that titleholders have, and operate in accordance with, EPs for the allowable activities accepted by NOPSEMA. Under the Class Approval for the North Marine Parks Network (https://parksaustralia.gov.au/marine/pub/class-</p>

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	<p>approvals/North Marine Parks Network.pdf) mining operations (including petroleum exploration) are allowable actions within the Multiple Use Zone (MUZ) and the Special Purpose Zone (Trawl) Zone of the Oceanic Shoals Marine Park (OSMP).</p> <p>Under the North Marine Parks Network Management Plan 2018, the objective of the MUZ is to provide for ecologically sustainable use and the conservation of ecosystems, habitats and native species. The Operational Area overlaps a large proportion of the MUZ on the north-eastern side of the OSMP. There is no overlap between the Operational Area and the National Park Zone or Habitat Protection Zone of the OSMP.</p> <p>Section 6.4.3 of the EP includes a comprehensive assessment of the potential impacts of acoustic emissions from the seismic source to the natural values of the OSMP, including Key Ecological Features (KEFs) and the flatback turtle internesting biologically important area (BIA) and Habitat Critical. No long-term impacts to these values are predicted to occur, and the values of the OSMP will be conserved and protected. Based on the predicted levels of impact to values of the OSMP, the Galactic Hybrid 2D MSS will be undertaken in a manner that is consistent with the management objectives for the AMP and the North Marine Park Network.</p> <p>The DNP was consulted during development of this EP, with no concerns raised on the activity occurring within the OSMP so long as the EP has demonstrated that all impacts and risks have been managed to ALARP and acceptable.</p>
<p>Recommendation 4</p> <p>The operational area is amended to exclude any Biologically Important Areas and to comply with environmental protection legislation and international obligations.</p>	<p>As described in Section 4.4.4.3 of the EP, and illustrated in Figure 4-11, only one BIA overlaps the Operational Area—the flatback turtle internesting (likely to occur) around Melville Island and Cobourg Peninsula, defined by an 80 km internesting buffer around nesting sites.</p> <p>The Operational Area overlaps with the internesting buffer Habitat Critical to the survival of flatback turtles defined by a 60 km radius around Tiwi Islands, and a specific management control will be implemented to minimise the potential of acoustic emissions from the seismic source causing any behavioural disturbance to internesting flatback turtles within this Habitat Critical:</p>

- During June to September, a 5 km exclusion zone will be applied around the flatback turtle internesting Habitat Critical, inside which the source will not be operated at full power.

Seven additional BIAs were identified to overlap with the EMBA:

- Olive ridley turtle internesting (likely to occur) around Bathurst Island/Melville Island.
- Green turtle internesting (likely to occur) north-west of Melville Island.
- Olive ridley turtle foraging (known to occur) Joseph Bonaparte Gulf (JBG), northern JBG and western JBG depression.
- Green turtle foraging (known to occur) JBG.
- Loggerhead turtle foraging (known to occur) Western JBG depression.
- Flatback turtle foraging (known to occur) Western JBG depression.
- Crested tern breeding (known to occur) at Seagull Island.

Given the distance between the Operational Area and these BIAs, there is no potential for acoustic emissions from the seismic source to cause any unacceptable impacts (e.g. biologically significant behavioural disturbance) to marine turtles or seabirds within these BIAs. The potential risks of accidental hydrocarbon release resulting from vessel collision or at sea bunkering to these protected species are comprehensively assessed in **Section 6.5** of the EP.

Section 6.6. of the EP includes a detailed assessment that Woodside has undertaken to demonstrate that the Galactic Hybrid 2D MSS is not inconsistent with the relevant action areas/objectives and relevant actions of the Recovery Plan for Marine Turtles in Australia 2017–2027.

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