NOPSEMA
Australia's offshore energy regulator

INSPECTION REPORT

Well Integrity Inspection of Blacktip P3 Well Construction - Inspection Report

Inspection details

Duty holder(s) inspected		
Titleholder	Eni Australia B.V.	
Entity inspected		**NOPSEMA Inspection No.**
Well(s)	Blacktip P3	2522
Permissioning documents		
Well Operations Management Plan	WA-33-L Well Operations Management Plan, Doc No. 000036_DV_PR.D&C.1090.000, Rev. 05	
Inspection dates		
Onshore	Duration of BT-P3 well construction, from 19 December 2022 to 31 May 2023	
Inspection team		
Lead Inspector	[redacted]	
Inspection Team	[redacted], [redacted], [redacted]	
Duty holder contacts		
Nominated titleholder's representative (wells)	[redacted] – [redacted] [redacted] - [redacted]	

Report distribution

Position	Company
Records management	NOPSEMA
Titleholder representatives	Eni Australia B.V.

Revision status

Rev	Date	Description	Prepared by	Approved by
A	18 July 2023	Internal draft	[redacted]	[redacted]
B	31-July 2023	Draft for review by titleholder	[redacted]	[redacted]
0	10/08/2023	Final	[redacted]	[redacted]

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1. Inspection legislative framework and methodology

1.1. Legislative framework

NOPSEMA conducts inspections as part of its legislated function to implement an effective compliance monitoring strategy to ensure compliance with NOPSEMA listed laws[1]. Inspections are undertaken by NOPSEMA inspectors appointed by NOPSEMA under Section 602 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGSA).

This report has been prepared as required by the OPGGSA[2] and includes the Inspectors' conclusions from the inspection and the reasons for those conclusions. Where those conclusions indicate that there is non-compliance with the requirements of the OPGGSA, and/or commitments in permissioning document(s), resulting in a risk or potential risk to well integrity, the Inspectors have provided advice regarding the action(s) or outcomes recommended to address these conclusions.

A list of acronyms and abbreviations used in this report are provided in Appendix A.

1.2. Inspection objective and scope

The objectives of this inspection were to ascertain, for the scopes stipulated below, whether risks to well integrity are being managed by the duty holder(s) as required by their duties under the OPGGSA and in accordance with accepted permissioning document(s); and that the controls described in those documents are effective in reducing these risks to ALARP.

The planned scope of this inspection was:

- **Management of Change**
- **Performance Standards (Well Barriers)**

1.3. Preparation and conduct of the inspection

The inspection team issued an inspection brief to Eni Australia on 18/11/2022 and received the requested documentation on 22/11/2022. During well construction activities, Eni provided NOPSEMA with daily operations reports, weekly performance standard reports and additional documents as requested. Appendix C includes a list of documents collected.

As per NOPSEMA's inspection policy, a sampling approach was taken to assess the inspection scope and to arrive at the conclusions in this report. The findings and observations in this report provide the basis for the conclusions and compliance advice (where applicable) but are neither exhaustive nor definitive.

2. Inspection results

The following sections contain the detailed observations, findings and conclusions for the inspection topics.

NOPSEMA expects the duty holder to consider the conclusions, and the reasons for those conclusions, and undertake sufficient investigation/action to fully understand the conclusions presented and take action to:

[2] NOPSEMA listed laws are defined in Section 601 of the OPGGSA.

[2] Division 3 of Schedule 2B

- Reduce the risks and impacts to ALARP and
- Ensure compliance with their duties under the OPGGSA and/or the commitments made in the WOMP.

Compliance advice, in the form of recommendations, has been provided to assist the duty holder in their consideration of the conclusions and the actions they may need to take to address those conclusions. The considerations may indicate better practice actions or outcomes that should be reviewed for implementation and/or provide a warning regarding potential future non-compliance. Management of risk will however always remain the responsibility of the duty holder.

2.1. Operational context

This inspection spanned the operational sequence of Blacktip P3 through drilling, completion and well testing, and was conducted remotely by review of DDRs, MoCs and WACs to monitor compliance with well barrier performance standards set out in the WOMP.

2.2. Inspection Topic 1 – Management of Change (MoC) Process

2.2.1. Objective and summary of requirements

The objective of this inspection topic was to monitor if changes during the construction of Blacktip P3 were managed in accordance with the WOMP to reduce risks to well integrity to ALARP.

Section 5.11 of the Blacktip WOMP includes a high-level description of the Eni's MOC processes, including flow charts for deviations and Management of Change.

2.2.2. Observations and findings

- Ten MoCs were issued during the drilling and completion of Blacktip P3. Eni did not list the MoCs on the daily operations reports, which is commonly done by titleholders to raise visibility.
- Each MoC included a risk assessment and was signed by the responsible authority, in accordance with Figure 5.10 in the WOMP. The inspectors sighted evidence of Valaris and Eni sharing their MoCs for awareness, which is good practice.
- During the inspection, the inspectors noted that Eni has several guidelines and procedures related to MOC processes:

s 47 - commercial value

- The inspectors made the following observations regarding Eni's MoC procedures:

s 47 - commercial value

2.2.3. Conclusion and advice

Conclusion [2522-C01]

Based on the observations and findings, the inspectors concluded that Eni's management of change process is implemented and functional. However, the links between Eni's various MoC procedures and guidelines have not been clearly identified, and the inspectors consider that this could introduce confusion regarding whether an MoC is required.

The inspectors recommend that Eni considers a review of Eni's MoC procedures to improve consistency and coherence.

2.3. Inspection Topic 2 – Performance Standards (Well Barriers)

2.3.1. Objective and summary of requirements

The objective of this scope was to monitor the installation and verification of well barriers against the WOMP and the pre-defined well acceptance criteria (WAC).

The Blacktip WOMP included the performance standards for well barriers as follows:

- Tables for "Performance standards, control measures and measurement criteria" for well equipment (Table 5.3), well design (Table 7.12), well construction (Table 8.4), operations (Table 9.1) and, well abandonment (Table 11.12).

2.3.2. Observations and findings

- During well construction, Eni provided weekly performance standard reports to NOPSEMA based on Tables 5.3 and Table 8.4 of the WOMP, including documentary evidence of achieving the WACs, e.g. DARTT pressure tests signed by the Operator and the Eni Drilling Supervisor [7]. During the review of the documents submitted (selected sampling), the inspectors did not detect any major irregularities with the well barrier installation versus the pre-defined criteria.
- As WACs were achieved, Eni also prepared and provided well barrier schematics signed off offshore by the Eni Drilling Supervisor and Valaris OIM, then reviewed by the Well Engineering Coordinator [7]. Achievement of WACs was also recorded in the daily operations reports, for example WAC D8 (13-5/8" casing pressure test) in DDR #23 [6].
- The inspectors found that Eni had updated their well barrier management document DRL-RP-025 to include additional information on well barrier verification procedures, as recommended in the last NOPSEMA well integrity inspection ([redacted]).
- Eni document "Blacktip BT-P3 Acceptance Criteria" [10] set out the acceptance criteria for key steps in the BT-P3 well construction, including a summary of the remedial actions for failed tests, required supporting documentation and the communication and approval protocol. [redacted] s 47 - commercial value [redacted]

- Two topics related to well barriers were the subject of additional Eni/NOPSEMA discussion during the inspection:
  - s 47 - commercial value
  - In February 2023, 5 weeks after cementing the 13-5/8" casing, Eni detected anomalous sustained casing pressure (SCP) of ~660psi in the 13-5/8" x 20" annulus of Blacktip P3. This inspection report should be read in conjunction with NOPSEMA investigation report IVT12244 which addresses the SCP, including the adequacy of the pre-defined acceptance criteria for the 13-5/8" cement.

2.3.3. Conclusion and advice

Conclusion [2522-C02]

s 47 - commercial value. Refer to the investigation report for NOPSEMA's findings and conclusions related to the annulus pressure and issues with the 13-5/8" cement.

The inspectors recommend that Eni submits a WOMP revision describing the actions and changes to manage the risk associated with sustained casing pressure and prevent reoccurrence in future Blacktip wells, as detailed in investigation report IVT12244.

Appendix A: Acronyms and abbreviations used in this report

Acronym or abbreviation	Definition
ALARP	As Low As Reasonably Practicable
DSV	Drilling Supervisor
MoC	Management of Change
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
OIM	Offshore Installation Manager
OPGGSA	Offshore Petroleum and Greenhouse Gas Storage Act 2006
SCP	Sustained Casing Pressure
WOMP	Well Operations Management Plan
WAC	Well Acceptance Criteria
WBS	Well Barrier Schematic
DDR	Daily Drilling Report

Appendix B: Summary of conclusions and advice from this inspection

Conclusion [2522-C01]

Based on the observations and findings, the inspectors concluded that Eni's management of change process is implemented and functional. However, the links between Eni's various MoC procedures and guidelines have not been clearly identified, and the inspectors consider that this could introduce confusion regarding whether an MoC is required.

The inspectors recommend that Eni considers a review of Eni's MoC procedures to improve consistency and coherence.

Conclusion [2522-C02]

s 47 - commercial value [redacted] Refer to the investigation report for NOPSEMA's findings and conclusions related to the annulus pressure and issues with the 13-5/8" cement.

The inspectors recommend that Eni submits a WOMP revision describing the actions and changes to manage the risk associated with sustained casing pressure and prevent reoccurrence in future Blacktip wells, as detailed in investigation report IVT12244.

Appendix C: Document register

C.1: Documentation provided prior to inspection

Item	Description
1	s 47 - commercial value
2	
3	
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5	

C.2: Documentation provided during inspection

Item	Description
6	Daily Drilling/Completion Reports
7	Documentary evidence of well barriers as per verification steps and measurement criteria in the WOMP on weekly bases: - Performance Standard Reporting - Well Barrier Schematics during construction - Pressure test reports - Cementing Reports
8	s 47 - commercial value
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