





# WELL EXPERTISE

## *Review of Deep Sea Mooring's deliveries to the Gomez, Fat Canyon and Hemispheres wells*

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*DNO Norge AS, Wellesley Petroleum AS, and INEOS E&P Norge AS*

AUDITEE Deep Sea Mooring		DATE 21/06/2021	
AUDIT NO. EA-2021-10		REV. NO. 01	
DOCUMENT APPROVAL			
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Approved by:	Callum Smyth	21/06/2021	

## Revision history

Revision	Date	Chapter	Reason for revision
01	21/06/2021	All	Issued for Use
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# 1 Executive summary

*On behalf of DNO Norge AS (DNO), Wellesley Petroleum AS (Wellesley) and INEOS E&P Norge AS (INEOS), Well Expertise AS (WE) carried out a review on Deep Sea Mooring (DSM) on their planning and readiness related to delivery on anchoring equipment to the exploration wells Gomez, Fat Canyon, and Hemispheres. The review was conducted 27<sup>th</sup> May 2021 on Teams according to agenda and timing given in [Chapter 2.3](#).*

*A risk-based approach is applied for follow up of contractors and subcontractors and an audit, review, and verification (ARV) plan has been established for all operations to assure the operators that critical activities and services related to the project are following contractual and regulatory expectations.*

*The review team identified five (5) Findings (1 Non-conformance (NC), 2 improvement suggestions (IMP) and 2 Observations (O)) – all described in this report. The identified areas for potential improvement and needed actions were presented in the closure meeting of the review. DSM is requested to **respond within 2 weeks** of receiving this report on how they intend to handle the NC IMPs and Os, and sending WE the needed information. Six (6) actions were also agreed on.*

## 2 Introduction

### 2.1 Scope and Objective

The objective of the review was to assess DSM's capability to handle requirements related to anchoring providing up-to-date equipment and trained personnel.

Focus areas and scope were:

1. Short presentation of all companies present (DNO/INEOS/Wellesley/WE/DSM)
2. Service deliveries and SoW
  - Personnel
    - Selection of personnel to support anchoring
    - Experience and competence of offshore personnel
    - Relevant competence and training of offshore personnel
  - Equipment
    - Status on equipment
    - Please explain internal procedure checking and measuring equipment prior to departure
    - Please explain how to ensure equipment availability
    - Please explain how quality control of equipment incl. maintenance, certification is maintained
    - Please explain how R5 chain is handled in terms of martensite, both onshore and offshore
4. Summary of DSM's handling/risk assessments of the Covid-19 pandemic with mitigating measures

### 2.2 Participants

Role	Name	Position	Company
Lead Auditor	Anniken B. Meisler	QHSE Manager	Well Expertise
Technical Lead	Stian Engvik	Senior Marine Advisor	Well Expertise
Assistant	Arild E. Lund	Operational QHSE Lead	DNO
Assistant	Eivind Glærum	Senior Marine Advisor	INEOS
Assistant	Callum Smyth*	Operations and HSE Manager	Wellesley
Assistant	Helge Hamre	Senior HSE and Ops. Advisor	Wellesley
Auditee	Hanne Haga	HSSEQ Manager	Deep Sea Mooring
Auditee	Bengt Hugo Jørgensen	Operations Manager	Deep Sea Mooring
Auditee	Jørund Havnerås	Managing Director	Deep Sea Mooring
Auditee	Åge Straume	Asset Management Director	Deep Sea Mooring

\*Partly present

Confirmation of persons present is shown in [Appendix C](#).

### 2.3 Agenda

09.00 – 09.15 Presentation of attendees and background for the review (DNO/INEOS/Wellesley/WE/DSM)

09:15 – 09:45 Presentation of Service delivery and SoW – Personnel (DSM)

09:45 – 10:15 Presentation of Service delivery and SoW – Equipment (DSM)

10:15 – 10:30 *Presentation of Covid-19 handling/RA and mitigating measures (DSM)*

10:30 – 10:45 *Review Team Internal Summary*

10:45 – 11:00 *Review Closure Meeting (All)*

## 2.4 Abbreviations

DSM	Deep Sea Mooring AS
DNO	DNO Norge AS
DSIS	Deep Sea Interaction System
HSE	Health, Safety, Environment
HSSEQ	Health, Safety, Security, Environment, Quality
IMP	Improvement Suggestion
INEOS	INEOS E&P Norge AS
LL	Lesson Learned
NC	Non-conformance
O	Observation
QHSE	Quality, Health, Safety, Environment,
WE	Well Expertise AS
Wellesley	Wellesley Petroleum AS

## 2.5 Definitions

<i>Finding</i>	<i>A statement of fact made during a verification/review, which might be substantiated by objective facts</i>
<i>Improvement suggestion</i>	<i>Non-fulfilment of a requirement related to an intended or specified use (opportunities for improvement)</i>
<i>Non-Conformance</i>	<i>Non-fulfilment of a requirement</i>
<i>Observation</i>	<i>Observations of deficiencies where there is not enough available information to prove a breach of the regulations</i>
<i>Review</i>	<i>Evaluation of a service, or company - to view, look at, or look over again. Assess (something) with the intention of instituting change if necessary.</i>

## 3 Findings

### 3.1 Categories of findings

Findings are categorised as:

- Non-conformance (NC)
- Improvement Suggestion (IMP)
- Observation (O)

Non-conformances are classified as:

- Major (MA)
- Significant (S)
- Minor (M)

The reported non-conformances, improvement suggestions and observations shall be followed up as soon as possible. All relevant actions and/or mitigating measures shall be identified (including action owner and due date) **within 14 days** after receipt of this report.

### 3.2 Non-conformities

One (1) non-conformity was identified by the verification team. This is described in subchapter 3.2.1 and summarised in Table 3-1.

Table 3-1: Identified NC

NC No.	Description	Ref.	Responsible	Classification
<a href="#">NC-1</a>	Several procedures and documents have not been updated.	DSM routines and ISO 9001, refs. /1/ & /2/	HSSEQ Manager	M

#### 3.2.1 NC-1 Updating procedures

Before the review the review team received required documents and procedures, see [Appendix A](#). Several were revised in 2018. Under the review DSM confirmed that their internal requirement is to update their procedures and guiding documents at least every 3<sup>rd</sup> year. This is therefore seen as a NC from own routines and requirements, ref. /1/. The ISO 9001:2015 also states that the organisation shall ensure appropriate review and approval, ref. /2/.

It is the review teams understanding that the update of procedures is delayed due to a rebranding process. The review team would like feedback on when DSM expects to have updated their procedures and documents.

### 3.3 Improvement suggestions

Two (2) improvement suggestions were identified under the review and are described in the following sub-chapters. Identified improvement suggestions are summarised in Table 3-2.

Table 3-2: Improvement Suggestions

IMP No.	Description	Ref.	Responsible
<a href="#">IMP-1</a>	Proper training and how to secure LL is missing for external resources.	-	HSSEQ Manager
<a href="#">IMP-2</a>	Covid-19 is not identified as a risk in received risk assessments.	Risk assessments, refs. /3/ & /4/	HSSEQ Manager

### 3.3.1 IMP-1 Improper training and LL transfer for external resources

During the review it became apparent that DSM do not conduct proper training of hired personnel, and it seems quite random how LL is communicated to external resources. The review team recommend that DSM establish a separate qualification scheme for those travelling offshore.

### 3.3.2 IMP-2 Covid-19 not identified as a risk

Due to the ongoing Covid-19 pandemic, the virus is still considered a risk for upcoming operations. Even though the review team experience that DSM has taken the necessary precautions to avoid being infected and have implemented routines for reducing extent of potential infection, it would be beneficial to add Covid -19 as a risk related to relevant working processes. In received risk assessments (refs. /3/ & /4/) Covid-19 is not identified as a risk. The review team recommend that this is reflected in relevant risk assessments, including mitigating actions.

## 3.4 Observations

Two (2) observations were identified during the review and are described in the following sub-chapters. Identified observations are summarised in Table 3-3.

Table 3-3 Observations

O No.	Description	Ref.	Responsible
<a href="#">O-1</a>	The procedure "Training Programme Marine Supervisor DSM" refers to DSIS.	/5/	HSSEQ Manager
<a href="#">O-2</a>	The front page of procedure "Maintenance and Repair" states that it has 188 pages – but it really has 18.	/6/	HSSEQ Manager

### 3.4.1 O-1 Wrong reference in training programme

DSM changed their reporting system from DSIS to Safety Manager 01.01.2021. The procedure "Training Programme Marine Supervisor DSM" (ref. /5/) refers to DSIS. During next review, the procedure should be updated to reflect this change.

### 3.4.2 O-2 Wrong number of pages

This is just a minor observation, but when opening the procedure "Maintenance and Repair", seeing that the document is of 188 pages, makes one discouraged. "A lot to go through!". Then realising that it is only 18 pages – that was a relief. The review team recommend that this is updated at next review of the procedure.



### 3.5 Follow-up Actions

Some follow-up actions were identified in the review, ref. Table 3-4. The follow-up and closing of these actions will be handled between the contact persons in the respective companies.

Table 3-4: Follow-up actions agreed on in the review

No	Follow-up Action	Responsible	Deadline	Status
A-1	Send information/guidelines regarding use of fibre, to avoid damage	Åge Straume	23.06.2021	Open
A-2	Send presentations	Hanne Haga & Anniken B. Meisler	30.05.2021	Closed
A-3	Send training matrix (positions and necessary courses, training)	Hanne Haga	23.06.2021	Open
A-4	Send a track record of hired personnel, qualification scheme	Hanne Haga	23.06.2021	Open
A-5	Risk #R13 on manual handling and Risk #R6 Spooling. Mitigating actions not implemented. DSM to provide some information on plan for mitigation or what to be done.	Hanne Haga	23.06.2021	Open
A-6	WE on behalf of the operators plan to perform an on-site survey/verification (operational readiness. Need to look into MAICY, as there was no time for going into such details in the review.	Stian Engvik	Before start-up of Gomez (July/August)	Open
A-7	Secure log-in info (e-portal) for the operators' Marine personnel	Bengt Hugo Jørgensen	In due time before operations starts	Open

### 3.6 Other

DSM did not appear prepared for the review. It would have been good if a presentation had been made in beforehand, reflecting the scope given in Notification letter sent 18<sup>th</sup> May (see [Appendix B](#)). Then the review would have been more structured.

## 4 Conclusion

*The review team's overall impression is that DSM's pool of equipment and inspection routines will strengthen the planned operations. The NC, improvement suggestions and observations made are considered non-critical for the operations, but an increased focus training of external personnel is encouraged.*

## 5 References

Ref. no.	Document
/1/	<b>DSM</b> comment in review meeting. 3-yearly update of procedures was not documented, just a common knowledge/routine. This will be implemented in next update of L-3 PRO-QU-001 – Control of Document.
/2/	<b>Standard Norge</b> . Norsk standard ISO 9001:2015. Ledelsessystemer for kvalitet. Krav. Chapter 7.5/7.5.2*
/3/	<b>DSM</b> , 2021. L-4 LST-HSE-039 Risk assessment - Spooling of wire and fibre onshore.
/4/	<b>DSM</b> , 2021. L-4 LST-HSE-049 Risk Assessment manual handling Mongstad
/5/	<b>DSM</b> , 2018. L-5 PRO-HR-004 Training Programme Marine Supervisor DSM
/6/	<b>DSM</b> , 2018. L-5 PRO-MT-001 Maintenance and Repair

\* See on homepages <https://vryhof.com/about-vryhof/> that DSM/Vryhof is accredited according to ISO 9001:2008 not 2015 (and OHSAS 18001:2007 now ISO 45001:2018). 18.06.2021: The review team received documentation of updated ISO certification.















## Appendices

[Appendix A](#) – Received documents/procedures

[Appendix B](#) – Review Notification




[Appendix C](#) – Confirmed participants

## Appendix A - Received documents/procedures

-  Audit Plan Deep Sea Mooring
-  DSM presentation
-  HSSEQ Statistics
-  L-2 MTX-HR-003 DSM Norway Organisation
-  L-4 LST-HSE-039 Risk assessment - Spooling of wire and fibre onshore
-  L-4 LST-HSE-049 Risk Assessment manual handling Mongstad
-  L-5 PRO-DEMOB-001 Return of equipment from Customer
-  L-5 PRO-HR-004 Training Programme Marine Supervisor DSM
-  L-5 PRO-INSP-001 Visual Inspection
-  L-5 PRO-MOB-001 Mobilisation of Equipment
-  L-5 PRO-MOB-004 Mobilisation and Demobilisation of Personell
-  L-5 PRO-MOB-005 Marine Operations
-  L-5 PRO-MT-001 Maintenance and Repair
-  Rental return kenter shackle - job card

## Appendix B - Review Notification

### Review notification



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DATE and TIME : 27.05.2021 at 09:00-11:00  
WHERE : Online on Teams  
TO : Deepsea Mooring  
ATT. : Hanne Haga  
E-MAIL : [hanne.haga@deepseamooring.com](mailto:hanne.haga@deepseamooring.com)  
OUR REF. : Anchor Handling Review  
COPY TO : Dan Pedersen, Bengt Hugo Jørgensen, Jørund Havnerås, Einar Framnes, Arild Lund, Grethe Lønø, Helge Hamre, Callum Smyth, Lill-Gøril Seljelv, Magnus Florvaag, Morten Ege, Åse Pettersen, Stig Seland, Morten Laget, Eva Moen, Stian Engvik  
  
FROM : Anniken B. Meisler  
E-MAIL : [anniken@wellexpertise.com](mailto:anniken@wellexpertise.com)  
MOBILE : +47 476 67 507  
PAGES : 3 (including this)

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#### NOTIFICATION OF REVIEW OF ANCOR HANDLING SERVICES

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Dear Hanne,


Reference is made to e-mail sent 28<sup>th</sup> April 2021 planned review. As a part of the ongoing preparations for exploration drilling with Borgland Dolphin and according to the Audit, Review and Verification (ARV) plans for Gomez, Fat Canyon and Hemispheres, Well Expertise will perform a review of Deep Sea Mooring (DSM) on planning and readiness related to Anchoring services on behalf of DNO, INEOS and Wellesley.

We plan to perform the review 27<sup>th</sup> of May 2021 according to agenda and timing given below. The review will be performed on Teams.

**Scope**

1. Short company information/presentation (DNO/INEOS/Wellesley, DSM)
2. Service deliveries and SoW
  - Personnel
    - Selection of personnel to support anchoring
    - Experience and competence of offshore personnel
    - Relevant competence and training of offshore personnel
  - Equipment
    - Status on equipment
    - Please explain internal procedure checking and measuring equipment prior to departure
    - Please explain how to ensure equipment availability
    - Please explain how quality control of equipment incl. maintenance, certification is maintained
    - Please explain how R5 chain is handled in terms of martensite, both onshore and offshore
4. Please present summary of DSM's handling/risk assessments of the COVID-19 pandemic with mitigating measures

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## Review notification



INEOS



### Timing

27.05.21, online via Teams.

Indicative time plan:

09:00 – 09:15	Presentation of attendees and background for the review (DNO/INEOS/Wellesley, DSM)
09:15 – 09:45	Presentation of Service delivery and SoW - Personnel (DSM)
09:45 – 10:15	Presentation of Service delivery and SoW - Equipment (DSM)
10:15 – 10:30	Presentation of Covid-19 handling/RA and mitigating measures (DSM)
10:30 – 10:45	Review Team Internal Summary
10:45 – 11:00	Review Closure Meeting (All)

We will take short breaks as convenient.

### Request for information

Prior to the review, and within 21.05.21, the review team would like to receive the following documentation:

- QHSE statistics for NCS last 3 years (personnel and equipment)
- Project Specific Competence and training documentation
- Procedure(s) for training of offshore personnel
- Procedure(s) for handling of R5 chains
- Procedure for re-certification and maintenance of equipment
- Procedure for mobilization and de-mobilization incl. relevant Risk Assessments
- ARV plan for 2021
- Organogram

### The Review Team

Anniken B. Meisler	HSEQ Coordinator	Review Team Lead
Stian Engvik	Senior Marine Advisor	Technical Lead
Arild E. Lund	Operational HSEQ Lead, DNO	Participant
Grethe Lønø	Senior Drilling Engineer, DNO	Participant
Morten Ege	Senior Marine Advisor, INEOS	Participant
Callum Smyth	Operations and HSE Manager, Wellesley	Participant
Helge Hamre	Senior Operations and HSE Advisor, Wellesley	Participant

## Review notification



INEOS



### Reporting

The review team will present a summary with observations and/or improvement items in a closing meeting at the end of the review. The formal report will be issued within two (2) weeks after the review.

Please confirm by e-mail ([anniken@wellexpertise.com](mailto:anniken@wellexpertise.com)) that date and timing for this review is OK for required DSM personnel.

If need for clarifications related to this notification or the review activity, please contact the undersigned. We look forward to meeting the DSM personnel and hope that this review will be to our mutual benefit.

Kind Regards

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**Anniken B. Meisler**

Review Team Lead

DNO Norge AS/INEOS E&P Norge AS/ Wellesley Petroleum AS/Well Expertise AS

[anniken@wellexpertise.com](mailto:anniken@wellexpertise.com)

476 67 507

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## Appendix C – Confirmed participants

