

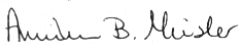





WELL EXPERTISE

Review of Oliasoft deliveries to Well Expertise

On behalf of DNO and Wellesley

AUDITEE		DATE	
Oliasoft		14/09/2021	
AUDIT NO.		REV. NO.	
EA-2021-11		01	
DOCUMENT APPROVAL			
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Revision history

Revision	Date	Chapter	Reason for revision
01	14.09.2021	All	Issued for Use
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1 Executive summary

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 their projects are following contractual and regulatory expectations.

The verification was held at Oliasoft's premises in Oslo, 12th of August 2021, and relevant personnel from Oliasoft Management and Well Expertise (WE) were present.

All persons involved from Oliasoft were helpful and positive during the verification.

The verification started with an opening meeting where WE presented information about the company, services, clients and scope for the verification. Then Oliasoft presented the different topics requested in the notification letter, followed up by questions from WE. Interviews with relevant personnel were then carried out. The verification was summarised, and findings presented in the closing meeting at the end of the day.

Oliasoft was ISO 9001:2015 and 14001:2015 certified by Gabriel Registrar in June 2021.

WE have conducted a verification of WellDesign calculations and compared them against Landmark's Compass, StressCheck and Wellcat, ref. /16/. The results have been similar.

In addition, Oliasoft informed the verification team that Equinor has conducted several technical verifications according to their Technology Readiness Level (TRL) process (ref. Appendix B) and it is expected that Oliasoft will be qualified for level 4 in Q3, which is the final level.

The verification team identified five (5) findings, which included three (3) observations and two (2) improvement points. The findings are described in chapter 4 and summed up in an action list for follow up in chapter 5. Oliasoft is requested to **respond within 2 weeks** of receiving this report on how they intend to handle the findings and sending WE the needed information.

The overall impression of the verification was positive and none of the findings are considered critical for WE and our clients.

2 Introduction

Well Expertise signed a contract with Oliasoft in June 2020 (ref. /1/) for the software "WellDesign". Well Expertise is using "WellDesign" in the planning of exploration, production and injection wells for customers in the Petroleum industry.

The Oliasoft software is considered critical for deliverable of well and casing design and is therefore included in Well Expertise's ARV plan for 2021.

2.1 Purpose

The purpose was to verify compliance with contractual requirements and relevant Norwegian rules and regulations.

2.2 Scope

The Scope and focus areas:

- Ethics and values
- Quality objectives
- Qualification of software against regulations and approved software
- Audits and verifications
- Handling of non-conformances
- Experience transfer
- Continual improvement

2.3 Abbreviations and Definitions

2.3.1 Abbreviation

ARV	Audit, Review and Verification
BMS	Business Management System
CEO	Chief Executive Officer
CPO	Chief Product Officer
HR	Human Relations
HSE	Health, Safety, Environment
IMS	Integrated Management System
IMP	Improvement Suggestion
ISO	International Standards Organization
KPI	Key Performance Indicators

MA	Major
MI	Minor
MoC	Management of Change
NC	Non-Conformance
O	Observation
QA	Quality Assurance
QHSE	Quality, Health, Safety, Environment
S	Significant
TRL	Technical Readiness Level (1-4)
VP	Vice President
WE	Well Expertise

2.3.2 Definitions

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

3 Method

3.1 General

The verification was conducted through interviews with personnel and review of relevant documents at the Oliasoft head office in Hoffsvæien 1C, 0275 Oslo.

3.2 Participants

3.2.1 Verification Team

Role	Name	Position	Company
Lead Auditor	Morten Laget	Business Development Manager	Well Expertise
Auditor - Technical	John M. Langelandsvik	Drilling Engineer	Well Expertise
Auditor- BMS&QA	Åse K. Pettersen	Senior QHSE Advisor	Well Expertise

3.3 Auditee

Name	Position	Company	Participants in:		
			Opening meeting	Interview	Closing meeting
Jim Strand	Chief Product Officer	Oliasoft	X	X	X
Andre Backen	Chief Executive Officer	Oliasoft	X	X	X
Per Inge Remmen	Advisor	Oliasoft	X	X	X
Lasse S. Jensen	VP Engineering	Oliasoft	X	X	X
Ida Kildal	Head of HR, HSE	Oliasoft	X	X	X
Mohamed Ali Hassan*	Sales Representative	Oliasoft	X		X

*Partly present

3.4 Final Timetable

Time	Topic	Presentation
12:05	Opening meeting Basis and reason for activity	Oliasoft WE audit team
12:15	Short company information/presentation	Oliasoft WE audit team
12:30	Brief presentation of Business Management System, relevant to focus areas	Oliasoft
13:15	Status on Audits and verifications Status on non-conformances/improvement proposals	Oliasoft
13:45	Break / internal sum up	WE audit team

Time	Topic	Presentation
14:00	Presentation of new modules in software, status and expected finalization	Oliasoft
14:15	Interview with QA/HSE Manager	Oliasoft WE audit team
14:45	Interview with Technical Team	Oliasoft WE audit team
15:15	Follow up of observations and document references	Relevant personnel Oliasoft WE audit team
15:45	Closing Meeting. Short sum up of findings.	Oliasoft WE audit team
16:00	End	

4 Findings

4.1 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 (MI)

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.

4.2 General

Oliasoft was formed in 2015 by energy sector and software professionals to automate the well planning workflow. The result is Oliasoft WellDesign, which is an integrated platform for well design systems. Oliasoft's WellDesign provides collection, modelling, simulation, and interactions. WellDesign can be used for Trajectory design, Casing design, Hydraulic and Surge & Swab, Torque & Drag, Tubing design and Blowout & Kill calculations.

Oliasoft has 35 employees and 80 % of the company is owned by the employees. The other 20 % is owned by external investors.

Oliasoft has a Business Management System (BMS) that is fit for purpose and the company was ISO 9001:2015 and 14001:2015 certified by Gabriel Registrar in June 2021.

WE have conducted a verification of WellDesigns calculations and compared them against Landmark's Compass, StressCheck and Wellcat, ref. /16/. The results have been similar.

In addition, Oliasoft has been undergoing a technical verification process for several months by Equinor and Shell. Equinor has a TRL Process (ref. Appendix B), with levels from 1-4 and there is only one finding on well path that is left for Oliasoft to be qualified for level 4. This is expected to be checked out and approved in Q3 2021.

Oliasoft's WellDesign is cloud based and information is stored in Microsoft's Azure Cloud Platform. There is at all times a back-up of the data if anything would happen to it. Back-ups are stored for one week.

4.3 Non-conformities

Zero (0) non-conformances were identified during the verification.

4.4 Observations

Three (3) observations were identified during the verification and are described in the following sub-chapters. Identified observations are summarised in Table 4-1.

Table 4-1 Observations

O No.	Description
0-1	Guideline for Risk Assessment is not referring to any industry standard and is not quantifying the consequence
0-2	The Business Risk Register does not have specified actions with action responsible and deadline. The business risk should be evaluated continuously.
0-3	Several goals did not have an action plan.

4.4.1 0-1 Guidline for Risk Assesment

The guideline for risk assessment (ref. /2/) is not referring to any industry standard such as ISO or NORSOK and the probability and consequence is not quantified. For example, is it a financial, environmental, reputation or human risk and how severe?

4.4.2 0-2 Business Risk Register

Oliasoft has a business risk register (ref. /3/), and the business risks is reviewed on a yearly basis. The actions are visited weekly in the management meeting. The business risk register is lacking responsible position/person for follow up and a deadline. The Engineering department has a separate risk register. The different departments should feed into the business risk register continuously and evaluate to be lifted up as a business risk.

4.4.3 0-3 Goals and objectives

Oliasoft presented the company goals and KPI's. The procedure "Objectives and Targets" (ref. /4/) describes the process. According to the procedure, each goal shall have activities with timeframe for implementation. This was only presented for the environmental goals.

4.5 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 4-2.

Table 4-2: Improvement Suggestions

IMP No.	Description
IMP-1	Recommend using one system for follow up of actions
IMP-2	Bugs and updates in the software should be continuously communicated to the clients

4.5.1 IMP-1 Follow up of actions

Oliasoft is using several systems for follow up of actions. For non-conformance reports (ref. /5/) an excel sheet is used. For bugs, MoC and customer feedback, the software Jira is used. The verification team recommends using one system for follow up of actions/improvements.

4.5.2 IMP-2 Bugs and updates in the software

Bugs and updates are not communicated continuously to the clients. Oliasoft has acknowledged that this is an area of improvement that should be handled. The 1.0 version has over 3667 updates and Oliasoft is planning to release 2.0 version with information to the clients.

4.6 Other Actions

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

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

Action No.	Description
A-1	Formalise industry standards and regulations – Summary slides
A-2	Description of Security Management
A-3	Oliasoft to send a description of the Equinor TRL process (1-4)

5 Follow up

5.1 Actions

Oliasoft is requested to reply with a response on how the identified observations and improvement suggestions will be followed up, including timeline for corrective measures according to the action list below.

No.	Action	Responsible	Deadline	Comment	Reference
1.	Update procedure for risk assessment according to industry standard and quantify probability and consequence	Head of HR/HSE	31.09.2021		O-1
2.	Update Business Risk register with specific responsible position/ person and deadline	CEO	31.09.2021		O-2
3.	The Goals should have an action plan. Suggest making a HSEQ Plan that includes KPIs and activities	CEO	31.09.2021		O-3
4.	Recommend using one system for follow up of actions from audits, customer feedback, deviations, and improvements suggestions.	CEO	31.10.2021		IMP-1
5.	Bugs and software updates should be continuously communicated to the clients	VP Engineering	31.08.2021		IMP-2
6.	Formalise industry standards and regulations – Summary slides	CPO	31.08.2021		A-1
7.	Description of Security Management	CPO	31.08.2021		A-2

8.	Send a description of the Equinor TRL process (1-4)	CPO	31.08.2021		A-3
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6 Conclusion

The verification team's overall impression is that Oliasoft's Software WellDesign is qualified to be used in the design and planning of wells. The observations and improvement suggestions identified are considered non-critical.

7 References

Ref. no.	Document
/1/	Oliasoft Subscription Agreement, Date: 30.06.2020
/2/	Oliasoft. Guidelines for Risk Assessment, Doc. No. RSK-IMS-R-01, rev. 00. Date: 24.03.2021
/3/	Oliasoft. Business Risk Register
/4/	Oliasoft. Objectives and Targets, Doc. No. OSAS-IMS-PRO, Rev. 00. Date: 24.03.2021
/5/	Oliasoft. Non-Conformance Report template, Doc. No. OSAS-IA-FR-03, Rev. 00. Date: 24.03.2021
/6/	Oliasoft. Code of Conduct, under preparation
/7/	Oliasoft. Vision, Mission and Values
/8/	Oliasoft. Internal Audit Plan & Schedule, Doc. No. OSAS-IA-FR-01, Rev. 01. Date: 24.03.2021
/9/	Oliasoft. Integrated management System (IMS), Doc. No. OSAS-IMS.M01, Rev. 01. Date: 23.04.2021
/10/	Oliasoft. Integrated Management System Policy, Doc. No. OSAS-IMS-POL01, Rev. 00. Date: 24.04.2021
/11/	Oliasoft. Legal Compliance Monitoring, Doc. No. OSAS-HSE-FR-07, Rev. 00. Date: 24.03.2021
/12/	Oliasoft. Customer Satisfaction Procedure, Doc. No. OSAS-IMS-PRO-04, Rev. 00. Date: 24.03.2021
/13/	Oliasoft. Customer Satisfaction Form, Doc. No. OSAS-SAL-FR-03, rev. 00. Date: 24.03.2021
/14/	Oliasoft. Org. Kart
/15/	Gabriel Registrar. Certification Audit report ISO 9001:2015 & ISO 14001:2015. Date: 21.06.2021
/16/	Well Expertise. Verification of Oliasoft Well Design, Doc. No. WE-D-SFTW-01-OLST. Rev.02. Date: 14.09.2020

Appendices

[Appendix A – Verification Notification](#)

[Appendix B – Summary TRL](#)

Appendix A - Verification Notification

Notification Letter



DATE and TIME : 12.08.2021, at 12:00-16:00
WHERE : OliaSoft, Hoffsvæien 1C, 0275 Oslo
TO : OliaSoft
ATT. : Per Inge Remmen
E-MAIL : pir@oliasoft.com
OUR REF. : Verification of OliaSoft
COPY TO : John Magne Langelandsvik, Åse K. Pettersen, Anniken Meisler (QHSE Manager)
FROM : Morten Laget
E-MAIL : morten@wellexpertise.com
MOBILE : +47 474 50 823

NOTIFICATION OF VERIFICATION OF OLIASOFT

Background

Reference is made to e-mail sent 29.07.2021 regarding planned verification. 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 and Hemispheres, Well Expertise will perform a verification of OliaSoft. The verification will cover focus areas related to software services on behalf of DNO and Wellesley.

The verification will take place 12.08.2021 according to agenda and timeline below. The verification will be carried out in OliaSoft offices in Oslo.

Scope

Verify that OliaSoft is in compliance with contractual requirements and Norwegian rules and regulations relevant to the subject of the audit.

Focus Areas

- Ethics and values
- Quality objectives
- Qualification of Software against regulations and industry approved software
- Audits and Verifications
- Handling of non-conformances
- Experience transfer
- System for Continual improvement

Timing

Indicative time plan:

Time	Topic	Presentation
12:05	Opening meeting Basis and reason for activity.	OliaSoft WE audit team
12:15	Short company information/presentation	OliaSoft WE audit team
12:30	Brief presentation of Business Management System, relevant to focus areas	OliaSoft
13:15	Status on Audits and verifications Status on non-conformances/improvement proposals	OliaSoft
13:45	Break / internal sum up	WE audit team
14:00	Presentation of new modules in software, status and expected finalization	OliaSoft
14:15	Interview with QA/HSE Manager	OliaSoft WE audit team
14:45	Interview with Technical Team	OliaSoft WE audit team
15:15	Follow up of observations and document references	Relevant personnel OliaSoft WE audit team
15:45	Closing Meeting. Short sum up of findings.	OliaSoft WE audit team
16:00	End	

Agenda may change upon request from the Verification Lead.

Please invite relevant Company personnel.

Request for information

Prior to the verification, and within 04.08.2021, the verification team would like to receive the following documentation:

- Ethic statement and values
- Quality Manual
- KPI for Quality objectives
- CSR Policy
- Procedure covering Human Rights responsibilities
- Process/procedure for handling of Non-conformances
- Procedure for customer satisfaction
- Procedures for continual improvement
- Procedure(s) for handling of security threats, including risk assessment
- Audit plan for 2021
- Copy of external audits reports
- Organogram

The verification team:

At Location

Morten Laget	Verification Team Lead, Drilling Superintendent	WellExpertise
Åse K. Pettersen	Team member, HSEQ Coordinator	WellExpertise
John Magne Langelandsvik	Team member, Drilling Engineer	WellExpertise

Reporting

The verification team will present a summary with observations and/or improvement items in a closing meeting at the end of the verification. A draft report will be issued within two (2) weeks after the verification and shared with DNO and Wellesley.

Please confirm by e-mail (morten@wellexpertise.com) that date and timing for this verification is acceptable to OliaSoft and personnel will be available to the verification team.

Please contact Verification Team Lead if need for clarifications related to the notification or the verification activity.

Kind Regards,

Morten Laget



Verification Team Lead
Well Expertise AS
morten@wellexpertise.com
+47 474 50 823

Appendix B – Summary TRL