




# PL274 CS Relinquishment Report

OSEO-DNO-A-GEN-0001 PL274 CS Relinquishment Report  
Revision date: 30 May 2022 Rev. 01

## Oselvar Decommissioning Project

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[Security Class]				
<b>Revision history</b>				
Revision	Date	Reason for issue:		
01	30/05/2022	Issued for Use		
<b>Registration Codes</b>				
Contract No:	External Doc No:	Tag(s):	System(s):	Facility / Area:
Project Code	Originator Code	Discipline Code	Document Code	Sequence No
OSE	DNO	A	GEN	0001

Security Classification	
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# 1 License History

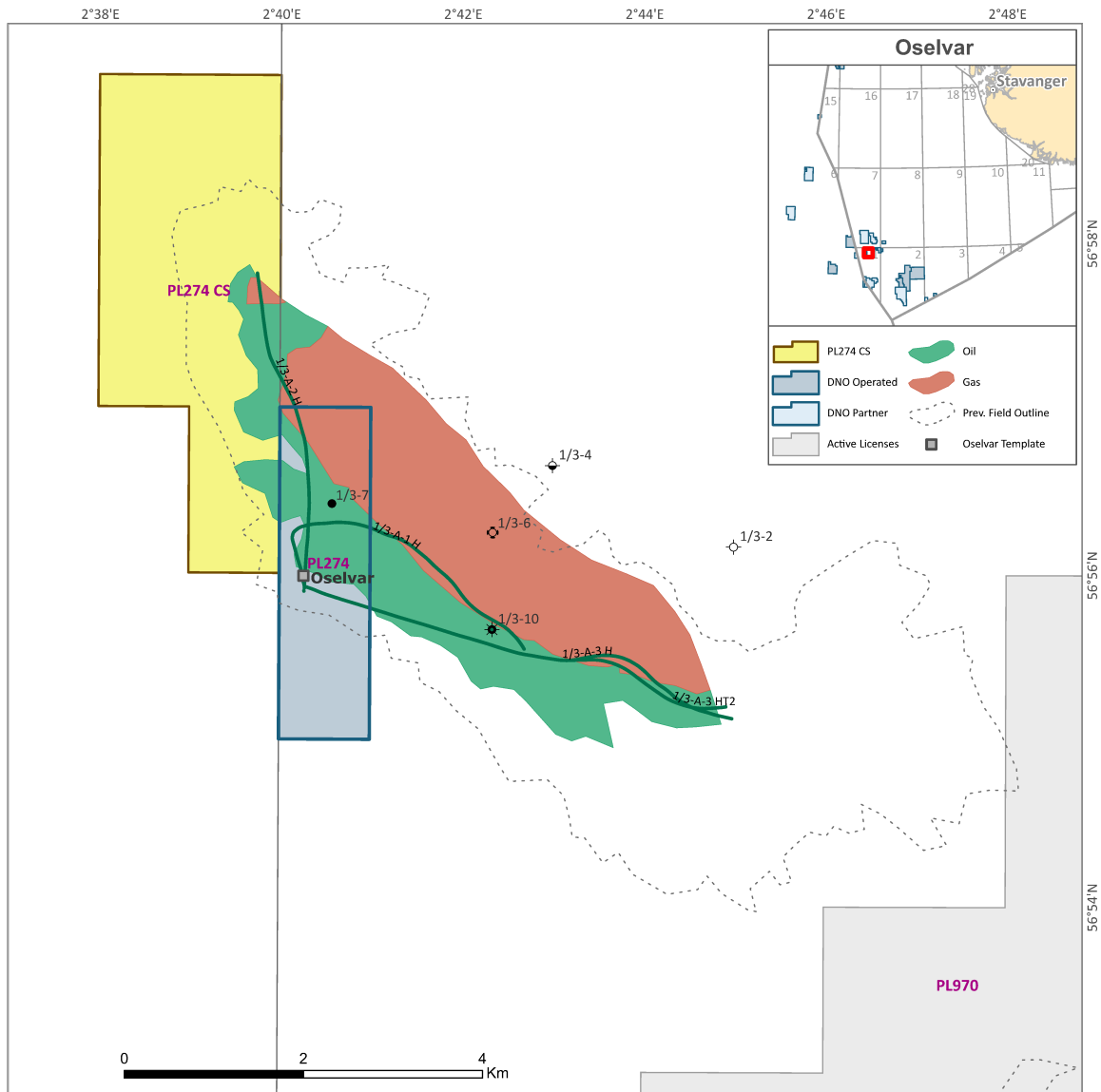
PL274CS is located in block 1/3 in the Southern North Sea.

The license was awarded to DONG E&P Norge AS (later Faroe Petroleum Norge AS and subsequently DNO Norge AS) as Operator on 29 February 2008 through the 2007 APA licensing round, with PA Resources Norway AS, Norwegian Energy Company ASA and Revus Energy ASA as partners. The license partnership at the time of relinquishment is shown in Table 1.1

**Table 1.1 PL274CS partnership**

Company	Equity
DNO Norge AS	55% and operator
CapeOmega AS	45%

The license was applied for as an extension to PL274 which contained the Oselvar field development project as the field was at the time interpreted to stretch substantially into this license. The most recent outline is shown in Fig. 1.1 . PL274CS is a stratigraphic license where only the ownership for the levels above the top Ekofisk Formation is included.



**Fig. 1.1 Oselvar field outline**

The Oselvar field PDO was submitted and approved in 2009. The production from the three horizontal producers (1/3-A-1 H, 1/3-A-2 H & 1/3-A-3 HT2) in the Forties Formation drilled from a 4-slot template started in April 2012. Production was shut down in March 2018 due to an agreement between Oda and Oselvar made in November 2016 where the riser and umbilical would be transferred to the Oda license. This was due to the significant underperformance of the field compared to the PDO estimates.

As the production at the time of shutdown was higher than envisaged at the time of the agreement made with the Oda field, the pipeline was temporarily plugged and capped to allow a possible reconnection of Oselvar to the Ula platform.

The Oselvar reconnection project consisted of a complete subsurface re-evaluation focussed on quantifying the remaining reserves from the existing producers combined with a technical and commercial discussion towards Oda and Ula as subsea and platform hosts respectively. In June 2019 the DG1/Feasibility gate was passed in the license with a positive outcome for the Oselvar reconnection project. During the following Concept Select Phase work it was concluded that a tie-in of the Oselvar production to the Oda pipeline with commingling of the Oda and Oselvar wellstreams was the recommended concept.

Following further technical studies, including cost estimation, and negotiations to establish commercial terms for tie-in to the Oda pipeline and processing and transportation in the downstream facilities, the conclusion was made that the Oselvar reconnection project did not meet the internal economic criteria of the licensees. The Oselvar reconnection project was therefore stopped and focus was moved towards the plugging and abandonment of the three wells.

The plugging and abandonment operations of the three wells was executed in the period from late March to early August 2021. The template is planned to be removed in September 2022.

## 2 Database Overview

### 2.1 Seismic data

The seismic database used in the license is shown in Fig. 2.1. The BPN9202 survey was the principal dataset for the planning of the Oselvar development. A re-interpretation of the Oselvar field was done in 2017 and 2018 after the change of operatorship from DONG Norge AS to Faroe Petroleum Norge AS. This was done on both CGG Cornerstone 2016 and PGS15908CGR.

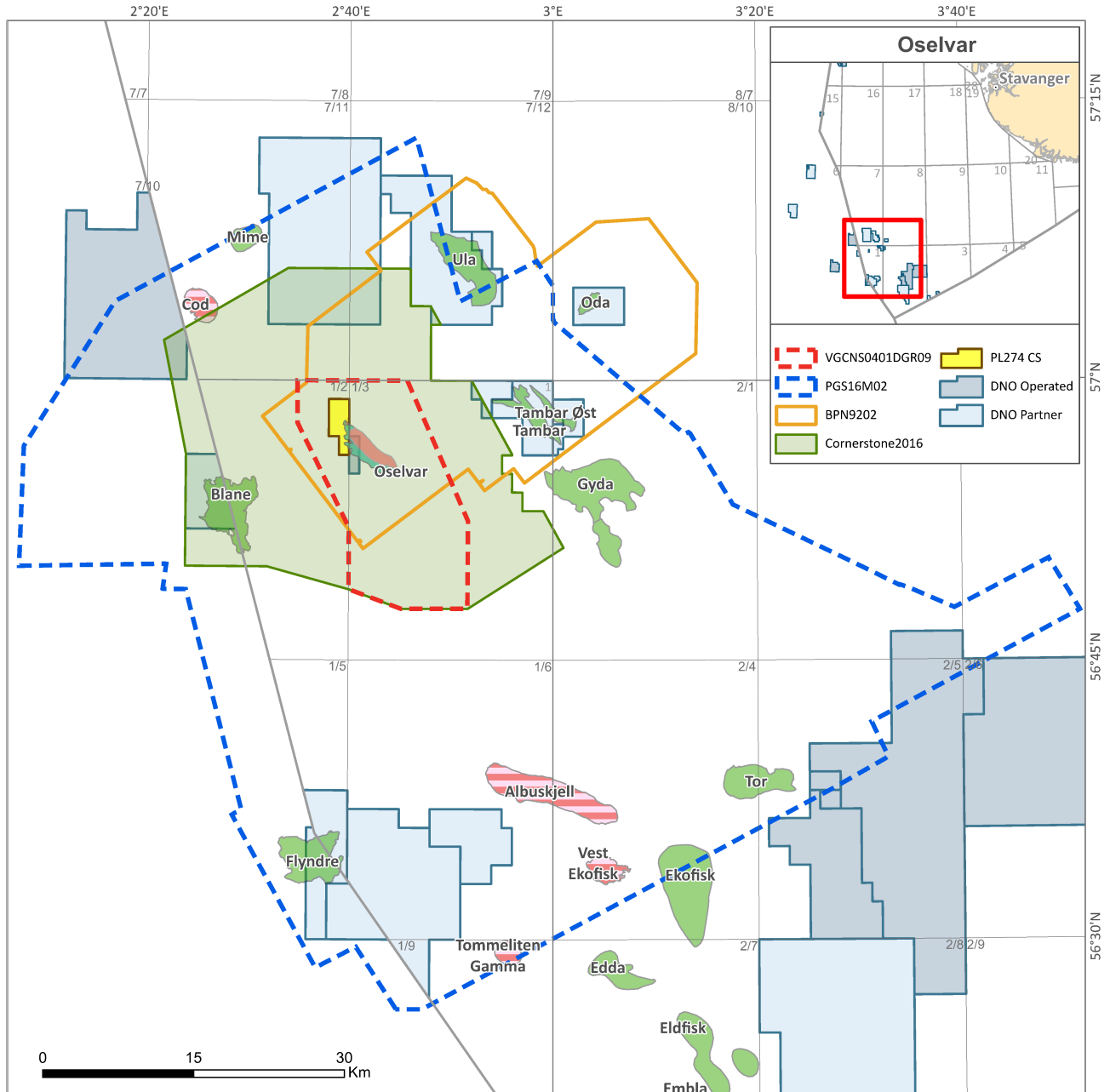


Fig. 2.1 Seismic coverage over PL274CS

### 2.2 Well data

A list of the relevant wells used for the evaluation of the potential of the reconnection of the Oselvar field is shown in Table 2.1



Table 2.1 Summary of Oselvar wells

Well	Year	Objective	Results	TD (mTVDSS)
1/3-6	1991	Upper Jurassic/ Palaeocene	Gas/Condensate discovery Palaeocene	3561
1/3-7	1995	Palaeocene 1/3-6 appraisal	Oil	3303
1/3-10	2008	Palaeocene 1/3-6 appraisal	Oil	3242
1/3-10A	2008	Sidetrack 1/3-10 water and FWL	Proved water and salinity	3290
1/3-A-1H	2011	Palaeocene Forties Fm	Completed as oil producer	3125
1/3-A-2H	2011/2012	Palaeocene Forties Fm	Completed as oil producer	3125
1/3-A-3H	2012	Palaeocene Forties Fm	Not completed due to technical problems	3132
1/3-A-3HT2	2012	Palaeocene Forties Fm	Completed as oil producer	3125

### 3 Geological and Geophysical Studies

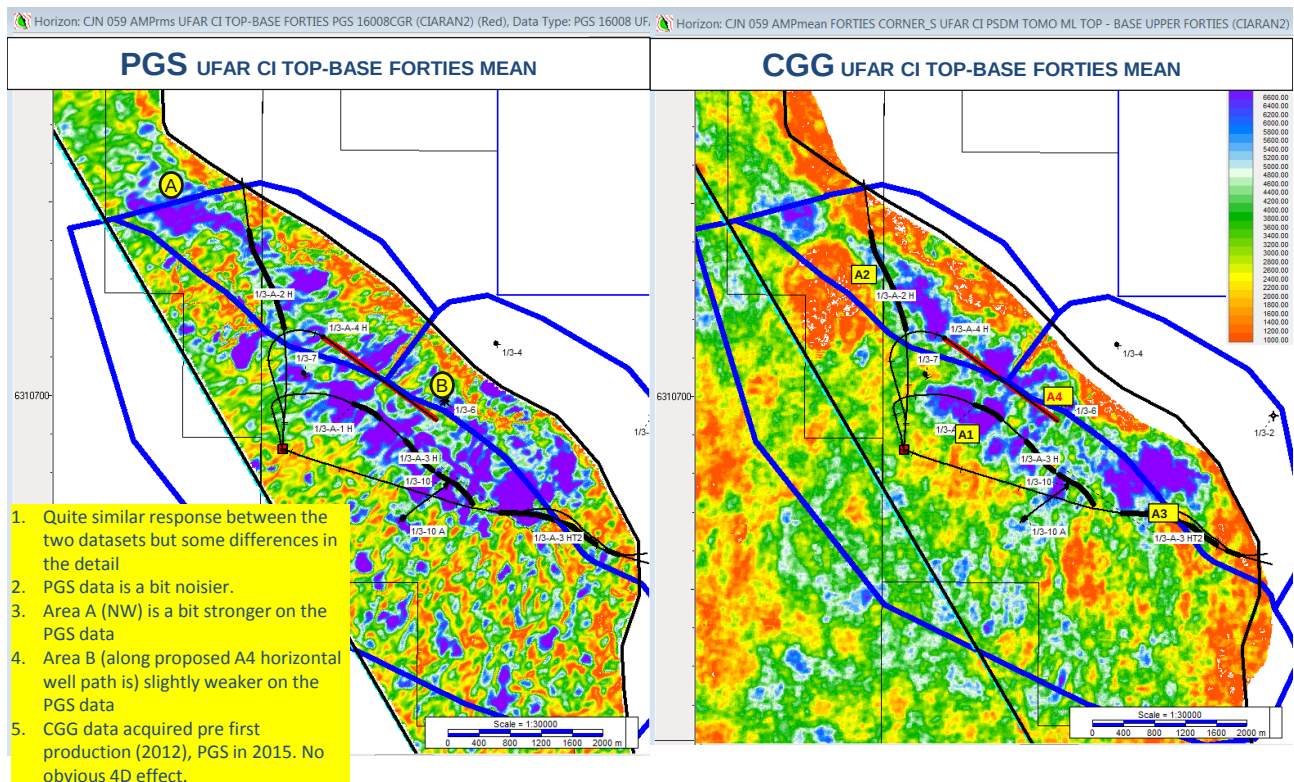
Below is a description of the geological and geophysical studies carried out in the license. The work described was common for PL274 and PL274CS. The work described here is the work done by Faroe and DNO from early 2017 onwards.

#### Core description and sedimentological study

The license decided in 2017 to revisit the cores from the exploration wells to build an updated subsurface understanding also including the data from the production wells. A consultant company (AM Geos) with regional Forties Fm knowledge was contacted to interpret lithofacies and depositional elements on the core material. This interpretation was then used to determine depositional elements for the non-cored section of the exploration wells and subsequently the horizontal wells. These depositional elements have formed the basis for the facies model that was used to construct the static model.

#### Geophysics

Faroe carried out a detailed geophysical evaluation on Oselvar between 2017 and 2018. The evaluation has integrated the results of all exploration, appraisal and development wells with two modern 3D datasets (CGG Cornerstone 2016 and PGS15908CGR). The evaluation has demonstrated an ultra-far offset brightening within the Forties over all the three Forties fields covered by CGG Cornerstone 2016 (Cod, Blane and Oselvar). Fig. 3.1 compares the extracted average coloured impedance data of the Forties interval between the PGS and CGG ultra-far offset stacks. Overall the response is quite similar, shows the average colour impedance from the CGG Ultra-Far data. The observed ultra-far offset brightening is consistent with a modelled hydrocarbon response and is consistent with the updated reservoir and fluid models. It is observed on both the PGS and CGG datasets which have separate acquisition and processing properties.



**Fig. 3.1 PGS v CGG Forties Ultra Far Coloured impedance** Overall quite similar response between the two datasets but some differences in the detail. PGS data is a bit noisier. CGG data acquired pre first production (2012), PGS in 2015. No obvious 4D effect.

**Petrophysics**

The large difference in production performance from the three producers in the Oselvar was the driver for a revisit of the petrophysics with a special focus on possible different Free Water Levels for the different producers. The resulting water saturation functions were implemented in the static model.

**Static modelling**

The new horizon and fault interpretation was used to build the framework for a static model. The sedimentological concept was implemented in a facies model using data and interpretations from the vintage exploration wells and the horizontal producers.

**Dynamic modelling**

The dynamic modelling consisted of two main steps. The first one being obtaining an acceptable history match when compared to the 6 years of production with the second one being the forecast of the future production from the A-1 and A-2 wells taking into account the pressure build ups as seen during shut-in periods in the field life. The forecast also modelled the expected behaviour of the Oda field to correctly represent comingling.

## 4 Prospect Update

The aim of the extensive subsurface re-evaluation of the Oselvar field was to obtain a production forecast for a reconnection project. The base case production profile for reconnection of the A-1 and A-2 well had a start rate of approx 4000 boe/d with a total resource estimate of 0.84 MSm<sup>3</sup> o.e. with half of the volume being oil and NGL.

## 5 Technical Assessment

The technical solution to reconnect the Oselvar field to the Ula platform consisted of a 1 km of new pipeline to connect the end of the existing Oselvar Pipe in Pipe flowline to a new Choke Metering Skid to allow comingling at the riser with the Oda field. Flow assurance studies and hydrate management strategies were made to evaluate the challenges of comingling these fields.

The relative high CAPEX for reconnecting the field combined with a high commercial cost and risk made the business case not attractive.

## 6 Conclusion

The risk reward picture at the time of DG2 was not acceptable to the owners of PL274 & PL274CS hence the decision was made to proceed towards permanent abandonment of the field which was completed in the Summer of 2021. The removal of the template is planned for September 2022.