PL878C – License status report

Summary

Production license 878C was awarded to Equinor Energy AS (operator) and partners in TFO2021. The work program of the license was that of conducting a study of geology and geophysics towards an initial decision to drill on the 11th of March 2024. The license was extended twice to a final decision to drill deadline on the 11th of March 2026, pending evaluation of prospectivity from re-processed seismic acquired in 2025. The partnership agreed to relinquish PL878 C Q1 2026.

The main prospect in the license is the Upper Jurassic stratigraphic Sculptor prospect. Sculptor is an amplitude driven, conceptual prospect with Kimmeridgian-Tithonian intra Draupne Formation sandstones as reservoir, positioned down-flank and west of Corvus. The re-processed CGG24M01 seismic enabled better definition of the prospect geometry and areal extent. However, the prospect is of sub-commercial volumes and of too high risk to support a drill decision. No other drillable candidates have been identified within the license.

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1 License history

License: PL878 C

Awarded: 11.03.2022

License period: 11.03.2022 – 11.03.2027 Initial
12.03.2027 – 11.03.2028 Initial extended
12.03.2028 – 11.03.2029 Initial extended

License group:	11.03.2022 – 30.05.2023	Wellesley Petroleum AS	40%
		Equinor Energy AS	40% (operator)
		Source Energy AS	20%
	31.05.2025 – 29.08.2024	Equinor Energy AS	80% (operator)
		Source Energy AS	20%
	30.08.2024 – 25.09.2024	Equinor Energy AS	80% (operator)
		PGNiG Upstream Norway AS	20%
	26.09.2024 – 29.06.2025	Equinor Energy AS	80% (operator)
		ORLEN Upstream Norway AS	20%
	30.06.2025 – 14.03.2026	Equinor Energy AS	75% (operator)
		ORLEN Upstream Norway AS	20%
		Wellesley Petroleum AS	5%

License area: **86km^2**. Additional area to PL 878.

Work programme: Geological and geophysical study and analysis towards drill or drop decision on 11th of March 2026.

Work performed:

- Acquired and evaluated new seismic: CGG24M01 (Dual Azimuth)
- Analysis of petrophysical data and SWCs of 30/5-3A.
- Source-to-sink and sequence stratigraphic studies analysing governing controls on a possible sand delivery system to Sculptor. Interpretation of seismic facies and seismic geometries within the prospect.
- Analogue studies on reservoir quality preservation.

Reason for surrender:

The PL878 C Sculptor prospect was re-evaluated on re-processed CGG24M01 seismic. The improved seismic enabled better imaging of internal geometries within the prospect. This resulted in a better definition of the prospect, and a more robust geological concept. The presence of sandstone was de-risked, but the risk of internal segmentation and risk on seal was increased. The increased risk on segmentation and seal together with sub-commercial volume calculations resulted in a decision to drop. The decision was unanimous within the partnership.

2 Database overview

2.1 Seismic data:

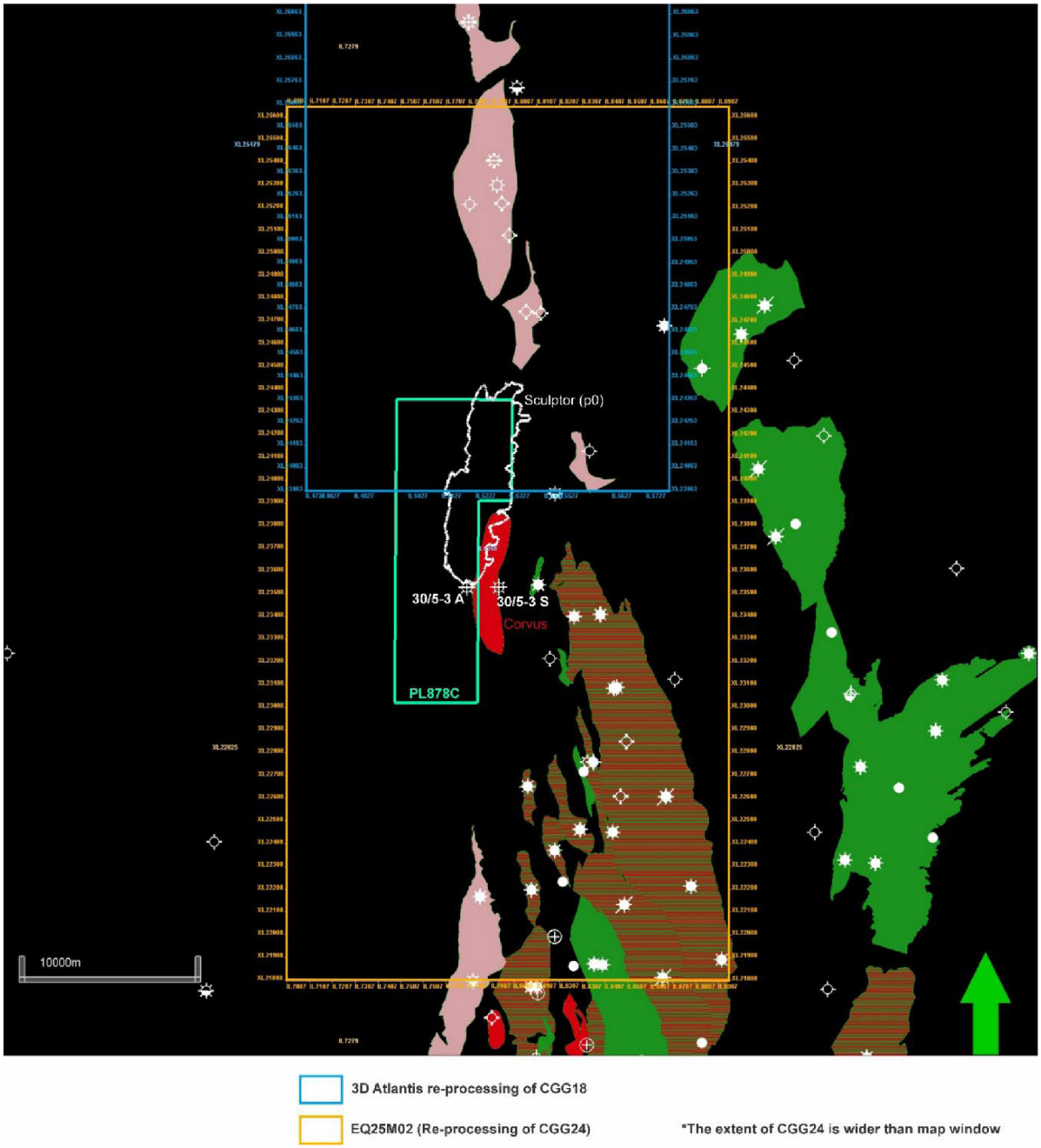


Figure 1: Overview map showing the license outline, Sculptor prospect P0 outline, the well location of 30/5-3A at top reservoir, and the extent of the seismic volumes used in the subsurface analysis of the prospectivity of the license.

2.2 Well data:

Well:	Year:	Drilling operator:	Production license:	Type, purpose, status:	Discovery. HC type:	Reservoir age, group:	Age, Fm at TD:
30/5-3 A	2009	StatoilHydro Petroleum AS	PL 309 (2009)	Exploration, wildcat, P&A	Yes, gas	Late Jurassic, Viking Gp.	Late Jurassic, Draupne Fm
30/5-3 S	2009	StatoilHydro Petroleum AS	PL 309 (2009)	Exploration, wildcat, P&A	Yes, gas	Late Triassic, Hegre Gp.	Early Triassic, Teist Fm.

3 Results of geological and geophysical studies

PL878C was awarded to the partnership as an area extension of PL878 to include the Upper Jurassic Sculptor prospect following initial prospect evaluations done by Wellesley Petroleum AS. The extension was submitted as APA application in 2021 and awarded on the 11th of March 2022 with a study of geology and geophysics as work programme. The aim of the G&G work was to derisk the Sculptor Prospect by addressing the key geological uncertainties:

- Reservoir presence and effectiveness
- Refine prospect definition

3.1 30/5-3 A: Analysis of well log and geological data

30/5-3 A, the sidetrack to the 30/5-3 S Corvus discovery well, is the only well within PL878C. The objective of 30/5-3 A was to evaluate the Cretaceous play east of Corvus. The well proved the absence of reservoir sands in the Cretaceous interval but encountered thin and tight gas bearing Draupne Formation sandstones immediately below the BCU. Located immediately outside the outline of Sculptor, 30/5-3 A is a critical data point for the evaluation of Sculptor. The following work was done on 30/5-3A:

- PVT analysis of fluid samples. Reassessment of hydrocarbon type from gas condensate to dry gas (with wide GCR distribution)
- Geological description of sidewall cores (SWC). Only two SWC samples were retrieved due to tool failure. Both samples are argillaceous very fine grained sandstones with a massive/structureless appearance. Insufficient data to interpret depositional environment.
- Unable to improve on petrophysical data and biostratigraphic data. Still large uncertainty on the age of the intra Draupne reservoir interval.

3.2 Source-to-sink and sequence-stratigraphic studies.

The reservoir body geometries and properties are governed by the depositional system and the sediment delivery system. Through integration with regional work, it is considered unlikely that Sculptor is connected to a large sediment system of deltaic origin (Sognefjord delta on the Horda Platform). The sands of the Sculptor prospect are

likely sourced from local erosion of the Oseberg fault block. Subcrop mapping and calculations of gross and net erosion concludes that sufficient erosion has occurred along the crest of the Oseberg fault block to account for the sediment accumulations within and adjacent to Sculptor. Sequence-stratigraphic surfaces were interpreted for offset wells, but these could not be confidentially correlated to 30/5-3A or Sculptor for improved control on the reservoir stratigraphy.

3.3 Analogue studies and reservoir properties

The crest of the Sculptor prospect is at a depth of 3900 TVD SS. Analouge fields, and dry wells, containing sandstones of the same play at a similar burial were investigated to be predictive on the expected reservoir properties for Sculptor. Analogue wells include 25/7-11 S (Norma) and 25/7-7 (Busta) as well as UK wells from the Rhum and Dunbar East fields.

3.4 Seismic interpretation on re-processed seismic

EQ25M02, the seismic re-processing of CGG24, has slightly improved imaging over the Sculptor prospect, however there are still challenges with regards to noise and multiple energy. A continuous reflector representing "top reservoir" could not be identified and a bulk shift down of 40m from BCU was used as Top reservoir in the prospect evaluation. The improved imaging of the seismic allowed for interpretation of internal geometries within the prospect. Low confidence mapping of internal geometries reveals compensationally stacked lobate geometries interpreted to be gravity flow deposited intra-slope aprons in a subaqueous environment. The original and alternative depositional model of a wave influenced fan delta environment with laterally extensive sandstones are deemed less likely. The observation of lobate geometries lowers the risk of sandstone presence but increase the risk of internal stratigraphic compartmentalisation.

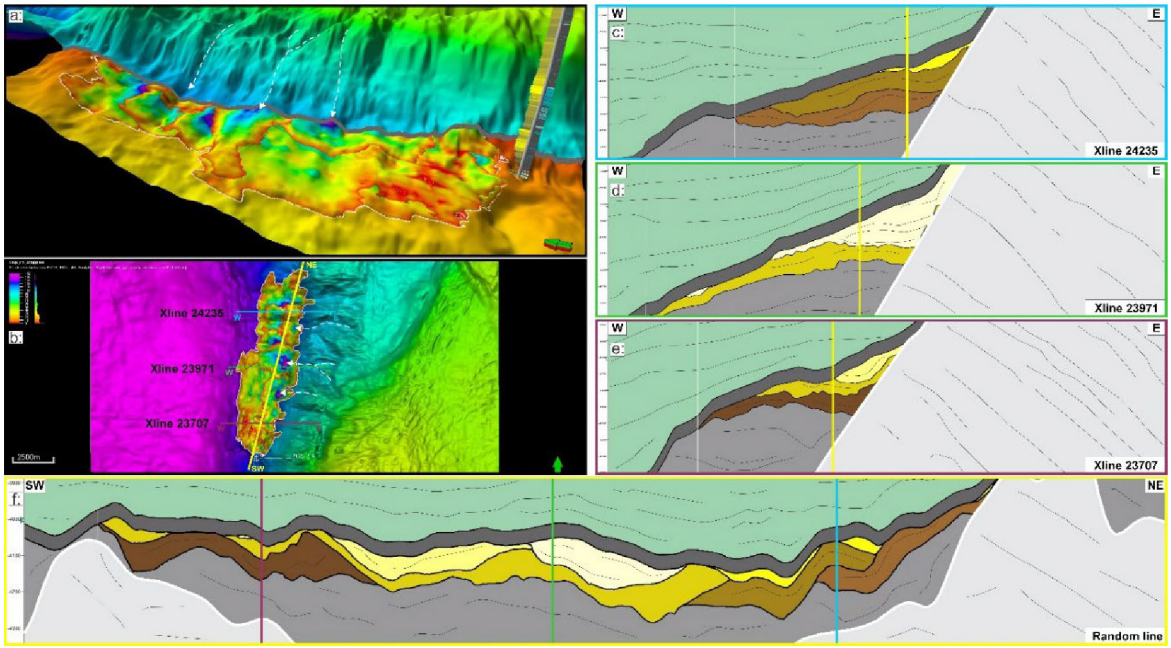


Figure 2: a: 3D window view of isochore maps of internal geometries within Sculptor below the BCU. b: 2D map view of lobe isochores superimposed on BCU structure map. c-e: Interpreted geobodies (lobate geometries) along W-E oriented seismic inlines. f: NNE-SSW oriented composite line showing alond depositional strike variability in internal geometries within Sculptor.

4 Prospect update report

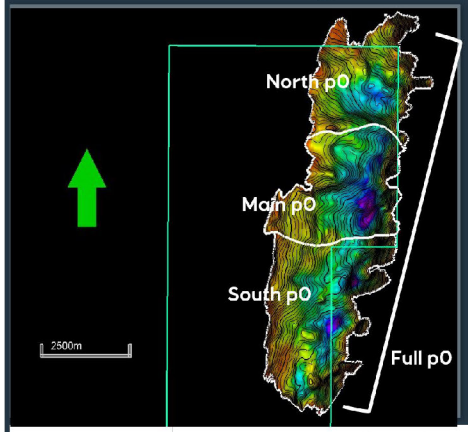
The G&G work conducted within the license forms the basis of the re-evaluation work done on the Sculptor prospect. The prospect evaluation is summarized in Figure 3.

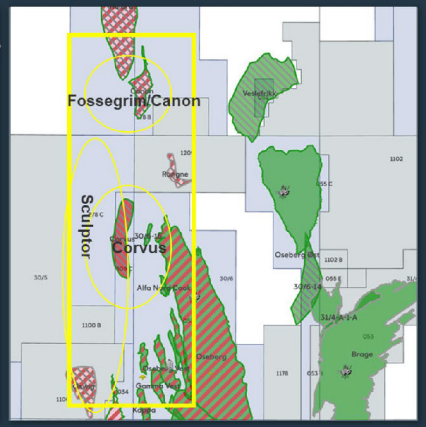
In previous prospect evaluations of Sculptor, the reservoir was treated as a continuous laterally connected sandstone within the full outline of the prospect, and it was evaluated as a single segment. A depositional environment of a wave influenced fan delta, with wave induced longshore transport and deposition of sand could explain such a “sheet” like distribution of sand. Observations on internal seismic facies and mapping of internal lobate geometries on the re-processed EQ25M02 seismic forms the basis of an alternative interpretation of intra-slope aprons in a subaqueous environment; below the influence of wave activity. In the current re-evaluation of the prospect, Sculptor is sub-divided into three segments. The three segments were made based on thickness trends of the total reservoir thickness and each segment comprise of one or more individual lobes.

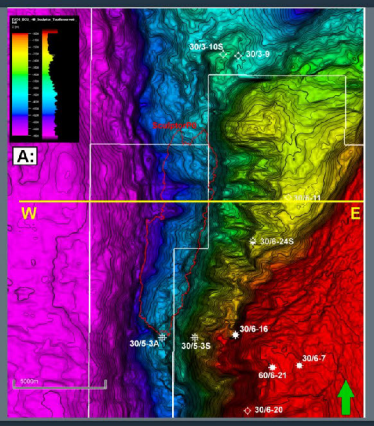
The three segments were risk assessed similarly with a risk of 0.3 on “Trap Seal”, 0.7 on “Reservoir Presence” and 0.6 on “Producibility”. No risk was given on “Source Presence” and “Source Migration” and no risk was given on play. The individual Pg of the three different segments is 0.126. For the total prospect evaluation, a max positive correlation on HC water contact and a medium positive correlation on recovery factor (non associated gas) was applied.

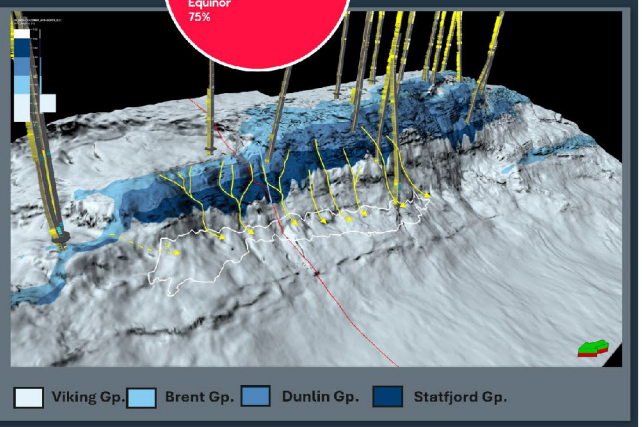
PL878C | Sculptor prospect

Area Plan: Corvus-Oseberg or Atlantis-Kvitebjørn - Blocks: 30/5 - Sea: North Sea – HPHT: Y

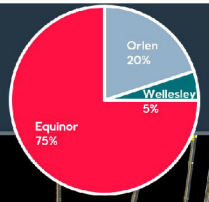








PL 878C:



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Prospect evaluation rationale	• Conceptual+amplitude driven UJur Stratigraphic trap W of Corvus. • Uplift in data quality - seismic repro of CGG24 (EQ25M02) • Ongoing development plans in the area
Strategic fit/ rationale	• Co-development with Corvus to an Oseberg host? • Co-development with Atlantis to a Kvitebjørn host?
Key risks	• Trap/seal • Reservoir presence (quality)

Prospect maturity and impact	**Subsurface QA = Y* Subsurface QC = N Valuation QC= N**	**New idea = Y* ILX = Y Exist in portfolio (GeoX) = Y**	**Follow-up potential =Y**

Prospect information– tie-back host: xx

Prospect	Age	Trap type	HC phase	HPHT	Status @ access	Exp. type	CO2 emission	Competition
Prospect name: Sculptor	*Ujur: Kimm-Tith*	*Strat*	*Dry gas – gas conden sate*	*Y* **low case not High T*	*xx*	*xx*	*xx*	*xx*

Geox ID 814574	In-place. volumes (MSM3 100%)			Rec. volumes (MSM3 100%)		
Pg / DFI 0.231	*P90 1.86*	*Mean 6.82*	*P10 13.6*	*P90 0.6*	*Mean 2.19*	*P10 4.5*
Work Program Cost:	-					

Figure 3: Summary 1-page slide containing maps and table of key prospect parameters of the Sculptor prospect.

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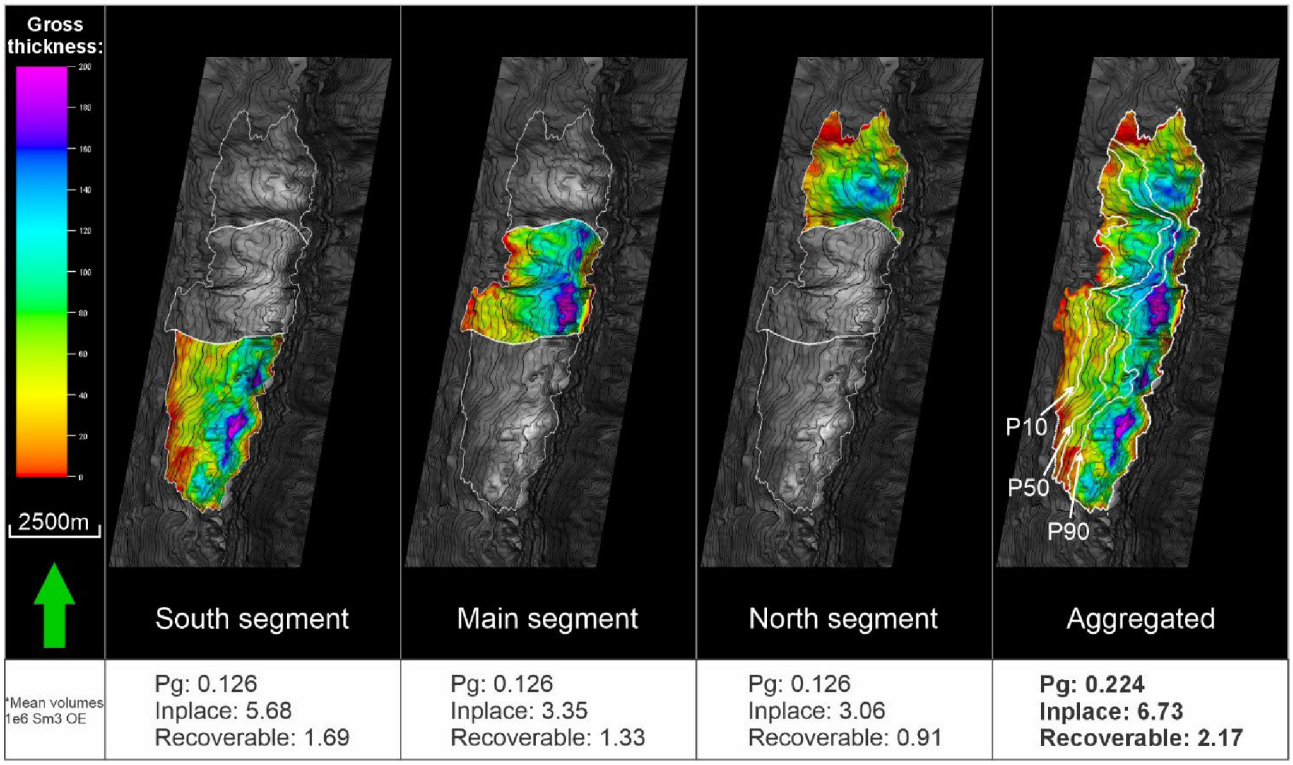

Figure 4: The three segments of the Sculptor prospect with segment Pg and volumes. Figure of aggregated prospect shows P90, P50 and P10 outlines.

5 Technical evaluation

Due to the low volume potential and high risk of the remaining prospects, no detailed technical-economic analysis has been undertaken.

6 Conclusions:

With the G&G work conducted, the work programme for PL878C has been fulfilled. In addition, re-processed seismic allowed for a more detailed analysis of the Sculptor prospect. Neither the volumetric potential nor the associated risk could justify drilling an exploration well. No other significant prospectivity has been identified within the license.