

Our Ref: 01.01.01.01-5902U
UKOP Doc Ref:1315913



Offshore Petroleum Regulator
for Environment & Decommissioning

ITHACA ENERGY (UK) LIMITED
13 QUEEN'S ROAD
ABERDEEN
AB15 4YL

Registered No.: SC272009

Date: 15th December 2023

Department for Energy Security &
Net Zero

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]

Fax

www.gov.uk/desz
opred@energysecurity.gov.uk

Dear Sir / Madam

**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020**

CAPTAIN, COSLPioneer DRILLING PRODUCER WELL 13/22a-B18Y

A screening direction for the project detailed in your application, reference DR/2438/0 (Version 3), dated 13th December 2023 has been issued under regulation 6 of the above Regulations. The screening direction notice, and any relevant conditions and comments are attached. A copy of this screening direction will be forwarded to the application consultees, the Oil and Gas Authority and published on the gov.uk website.

If you have any queries in relation to this screening direction or the attachments, please do not hesitate to contact [REDACTED] on [REDACTED] or email the Environmental Management Team at opred@energysecurity.gov.uk.

Yours faithfully



**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020**

**SCREENING DIRECTION CONFIRMING THAT AN ENVIRONMENTAL IMPACT
ASSESSMENT IS NOT REQUIRED**

CAPTAIN, COSLPioneer DRILLING PRODUCER WELL 13/22a-B18Y

DR/2438/0 (Version 3)

Whereas ITHACA ENERGY (UK) LIMITED has made an application dated 13th December 2023, under The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020, and whereas the Secretary of State has considered the application and is satisfied that the project is not likely to have a significant effect on the environment; in exercise of the powers available under regulation 6, the Secretary of State hereby directs that the application for consent in respect of the project need not be accompanied by an Environmental Impact Assessment, provided that the project is carried out as described in the application for the screening direction and in accordance with the conditions specified in the attached schedule.

In giving a screening direction under regulation 6 of the above Regulations, the Secretary of State accordingly gives agreement to the Oil and Gas Authority to the grant of consent for the project as detailed in the application, WONS/16036/0/GS/1.

Effective Date: 15th December 2023

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SCHEDULE OF SCREENING DIRECTION CONDITIONS

The grant of this screening direction is conditional upon the screening direction holder complying with the following conditions.

1 Screening direction validity

The screening direction shall be valid from 1 January 2024 until 31 August 2024.

2 Commencement and completion of the project

The holder of the screening direction must notify the Department for Energy Security & Net Zero (hereinafter called the 'Department') of commencement and completion of the project within two days:

- a) of commencement of the project and
- b) of completion of the project.

Notification should be sent by email to the Environmental Management Team Mailbox: opred@energysecurity.gov.uk

3 Prevention of pollution

The holder of the screening direction must ensure that appropriate measures are taken to minimise discharges, emissions and waste, in particular through the appropriate use of technology; and to ensure that necessary measures are taken to prevent incidents affecting the environment or, where they occur, to limit their consequences in relation to the environment.

4 Inspections

Should the Department consider it necessary or expedient for an inspector appointed by the Secretary of State to investigate whether the conditions of the screening direction are being complied with, the holder of the screening direction shall afford the inspector with such facilities and assistance as the inspector considers necessary to exercise the powers conferred by the regulations. The holder of the screening direction shall additionally ensure that copies (electronic or paper) of the screening direction and any other relevant documents are available for inspection by the inspector at:

- a) the premises of the holder of the screening direction; and
- b) the facilities undertaking the project covered by the screening direction.



5 Check monitoring

Should the Department consider it necessary or expedient to undertake an independent monitoring programme to assess the impact of the project covered by the screening direction, the screening direction holder shall afford the Department with such facilities and assistance as the Department considers necessary to undertake the work.

6 Atmospheric emissions returns

Following completion of the project covered by the screening direction, the holder of the screening direction shall report all relevant atmospheric emissions, such as combustion emissions, extended well test emissions or flaring and venting emissions relating to a well test, using the appropriate Environmental Emissions Monitoring System (EEMS) reporting forms. In the case of atmospheric emissions relating to drilling projects undertaken from a fixed installation, they should be included in the annual EEMS reporting forms for the fixed installation.

7 Unauthorised deposits

Following completion of the project covered by the screening direction, the holder of the screening direction shall recover any materials accidentally or temporarily deposited on the seabed, such as debris, temporary containers, structures or deposits, or scientific instruments, and shall return the materials to land. If it is not possible to recover any of these deposits, full details of the materials remaining on the seabed must be reported to the Department in accordance with the requirements of Petroleum Operations Notice No.2 (PON2).

8 Screening direction variation

In the event that the holder of the screening direction proposes changes to any of the particulars detailed in the application for a screening direction, the holder must notify the Department immediately and submit an application for a post screening direction amendment. The post screening direction must be in place prior to the amended proposals taking effect.

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COMMENTS ON THE APPLICATION FOR SCREENING DIRECTION

Section 1

The attention of screening direction holders is drawn to the following provisions regarding The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020.

1) You are deemed to have satisfied yourself that there are no barriers, legal or otherwise, to the carrying out of the project covered by the screening direction. The issue of a screening direction does not absolve the screening direction holder from obtaining such authorisations, consents etc that may be required under any other legislation.

2) The Department would draw your attention to the following comments:

The Department has no comments

3) All communications relating to the screening direction should be addressed to:

opred@energysecurity.gov.uk

or

Offshore Petroleum Regulator for Environment & Decommissioning
Department for Energy Security & Net Zero
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]
Fax



SCHEDULE OF SCREENING DIRECTION DECISION REASONS

The Secretary of State has decided that, based on the information provided, the project is not likely to have a significant effect on the environment. The main reasons for this decision are:

1) Decision reasons

The following provides a summary of the assessments undertaken by OPRED to determine whether an Environmental Impact Assessment is required for this project, summarises the information considered, the potential impacts and sets out the main reasons for the decision made.

In considering whether an Environmental Impact Assessment is required or not, the following have been taken into account:

- a) the information provided by the developer;
- b) the matters listed in Schedule 5 of The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Regulations 2020) (the Regulations);
- c) the results of any preliminary verifications or assessments of the effects on the environment of the project; and
- d) any conditions that the Secretary of State may attach to the agreement to the grant of consent.

Characteristics of the Project

Having regard, in particular, to the matters identified at paragraphs 1(a) to (g) of Schedule 5 to the Regulations, the characteristics of the project include the following:

- a. Drilling of a new production well (UC02P), which will be a sidetrack well drilled from abandoned well B18y at the existing Captain Drill Centre (area B). The top-hole sections from the previously abandoned well will be used for the new well and as such there will be no cuttings associated with these sections.
- b. The well will be drilled by a mobile drilling unit (MoDU), the COSL Pioneer, which will have a 500m exclusion established during drilling. The COSL Pioneer will be held in position using 8 x 12t anchors and chains. The anchors will be deployed by 2 anchor handling vessels however the chains will extend outside of the 500m safety zone.



- c. The well be drilled in 2 sections using Water Based Mud (WBM), with a discharge of cuttings and mud to the marine environment, but not directly to the seabed.
- d. A contingency sidetrack (8 " section) has been included to represent the worst assessment case.
- e. There will be no vertical seismic profiling or extended well tests carried out on the well with drilling and completion expected to last 157 days.

Description of the Project

The Captain development began production with the field tied back to a Floating, Production, Storage and Offloading Vessel (FPSO). There were 2 subsequent topside developments - a Bridge Linked platform which serves Area B and C drilling centres, and a Wellhead Protection Platform (WPP'A') which is a self-contained drilling rig position above Area A drill centre. Crude oil is exported from the FPSO via a shuttle tanker, and gas is exported and imported via the Frigg pipeline. To enhance oil recovery, Ithaca has developed the Captain Enhanced Oil Recovery (EOR) Project which has been ongoing for some time. Stage 2 Phase II of the project is proposed, which involves the drilling of 6 polymer injection wells (3 at new drill centre E, and 3 at new drill centre D), and a new production well (at existing drill centre B). New subsea infrastructure will be laid, and there have been ongoing modifications to the Captain topside. Polymer will be injected into wells, that will sweep the remaining oil left in the field. The polymer has a higher viscosity than oil, and therefore provides a higher oil recovery than using water.

Well UC02P is the production well which will be drilled by COSL Pioneer using WBM at the existing Area B drill centre, with drill cuttings and mud discharged to sea. One contingency sidetrack has been included for the well to allow for a worst-case drilling scenario to be assessed. The well will be drilled within the existing 500m safety zone that is already in place for Drill Centre Area B, however the COSL Pioneer will have its own 500m safety zone. Operations are expected to last a total of 157 days. The proposed project area is within a well-developed area of the Central North Sea and cumulative impacts from drilling discharges, atmospheric release and oil and chemical releases have been assessed.

It has been concluded that there will be no cumulative impacts expected to occur with this project due to the selection of low bioaccumulation water-based muds, the proposed mitigation and the short duration of the project.

It is not considered to be likely that the project will be affected by natural disasters and the risk of a major accident such as a well blowout has been assessed. The Developer has control measures in place to reduce the risk of a major accident occurring and the probability of such an event occurring is very low.

Other than the matters considered further below, there is not likely to be any significant impact from the project on population and human health.



Location of the Project

Having regard in particular to the matters identified at paragraphs 2(a) to (c) of Schedule 5 to the Regulations, the environmental sensitivity of geographical areas likely to be affected by the project has been considered as follows:

The Captain field is located in the Outer Moray Firth area, approximately 190 km west from the UK/Norwegian median line and 68km north of Aberdeen. Survey data shows the area to be indicative of a homogenous sediment mainly made up of sandy mud/muddy sand, which is classified as 'deep circalittoral mud'. Small, localised areas comprising sandy mud were also observed, with pebbles, cobbles and boulders, and are representative of 'deep circalittoral mixed sediments'.

Seabed scars were observed within the area, and are thought to be the result of trawl scars, and relic anchoring activities and associated small pull out pits. Water depths across the area range from 96.5m in the west to 124.1m in the east of the area. Water depth at the proposed drilling location is 105m and the average wave height is 1.9m.

A survey of the area showed that epibenthic fauna was relatively sparse. The dominant epifauna were sea pens, with other species observed including Norway Lobster, starfish, brittle stars, polychaetes and gastropods. Sea pens were observed over the majority of the survey area, with densities ranging from occasional to frequent using the SACFOR scale, and burrow densities ranging from common to abundant. A SACFOR assessment concluded that the Captain area would be considered to represent the OSPAR habitat 'Sea pens and burrowing megafauna communities'. There was no evidence of ocean quahog in stills or video footage, however grab samples taken had evidence of ocean quahog shells.

Observations of areas of sand concluded that the area may fall broadly within the habitat 'subtidal sands and gravels', which is a priority habitat in the UK. Sandy mud interspersed with boulders and cobbles are indicative of 'stony reefs' however it was concluded that the area was to be 'low reef' and the Annex I 'stony reef' is not considered to be present.

Minke whale, white beaked dolphin, Atlantic white-sided dolphin and harbour porpoise have all been recorded in the vicinity of the Captain area. Densities of the species are categorised as very low with the exception of the white beaked dolphin which is low in February, July, September, October and December. Grey and harbour seals may be encountered, and density maps show the presence of grey seals in the area of the Captain field as <5 and <1 individuals per 5km² respectively. It is unlikely that harbour seals are unlikely to frequent the area.

The Captain area is not situated within any conservation areas, with the nearest area of conservation interest being the Southern Trench NCMPA which lies 45km to the south. This site is designated due to a variety of biodiversity and geological features including burrowed mud, sub-glacial tunnels and minke whale.



The Captain field lies within fishing designated ICES rectangle 45E8 and the proposed operations will coincide with fish spawning and/or nursery activity for a number of species. Fishing effort in the area is designated as of moderate importance, with demersal fishing dominating the species type. Fishing in the area accounted for 0.39% of the total UK value, and 0.25% of the total live weight landed for 2022. It is not anticipated that the drilling of well UC02P will have a significant impact on the fishing industry in the area.

Seabird oil sensitivity in the vicinity of the Captain field is extremely high in February, very high in December, high from April to June, and medium to low for the remaining months.

The closest wreck to the proposed drilling location is a non-dangerous Foul wreck located 1.2km to the north of the Area B location. The closest wind farm is located 8km to the southwest, with 3 other windfarms proposed within 40km of the Captain field. (17, 22 and 25km respectively - all at pre-planning stage). There is a carbon storage licence (CS003) located 15km to the southeast of the Captain field. There are no military restrictions within the block, and the nearest MoD practice and exercise area is located 7 km to the west of the Area B location. The closest oil and gas installation is the Bleo Holm FPSO which is 27km to the southeast of the proposed location. Shipping density within the area is considered to be low. It is not anticipated that the proposed project will have a significant impact on either the wrecks, offshore wind area or the CCS project.

Given the location of the project, it is not likely that the areas identified at paragraphs 2(c)(i), (iii), (iv), (vi), (vii) of Schedule 5 to the Regulations will be affected by the change to the project.

Type and characteristics of the potential impact

In accordance with paragraph 3 of Schedule 5 to the Regulations, the likely significant effects of the change to the project on the environment have been considered. Potential effects on the environment from the activities associated with the project were assessed, including impacts arising from atmospheric emissions, seabed disturbance, physical presence, planned discharges and accidental spills. Other than the matters considered further below, there is not likely to be any significant impact from the change to the project on population and human health.

The MoDU will be sited at the drilling location with its own newly established 500m zone but also with the existing 500m zone of Area B drilling centre. The areas exclude unauthorised access of vessels and prohibits access to fishing vessels. The MoDU mooring anchors will extend beyond this 500m zone, and the Captain platform Emergency Response Rescue Vessel (ERRV) will be on location to support the MoDU and warn other users of the sea of the presence of the mooring anchors. Fishing activities within the area are moderate, and shipping density is considered to be low. No additional impacts to other marine users are identified as part of the drilling of well UC02P. Therefore, there are no significant effects likely in terms of



physical presence from the proposed project.

There will be no cuttings discharged directly to the seabed as the well is a sidetrack well from a previously abandoned well. The WBM and cuttings will be discharged into the marine environment, however cuttings dispersion modelling was undertaken and has been included in this assessment for completeness and to assess the overall impact on the seabed along with the anchors and anchor chains from the MoDU. The cuttings modelling was undertaken to assess the cumulative effect of 3 wells to be drilled at the Captain field as part of the Captain EOR Stage 2 Phase II project. The modelling assessment concluded that the cumulative effect of drilling all 3 wells shows a cuttings pile thickness of > 6.5mm occurring within 15 -180m from the well, covering an area of 0.019km². This reduces to an area of 0.0087km² after 10 years. Where burial thickness is > 5cm, this thickness is limited to within 50m of the well.

Seabed disturbance from the laying of anchors, anchor chains and the deposit of WBM and cuttings to the water column could result in the smothering and mortality of benthic fauna which will result in some short-term temporary impacts. Burrowed mud habitats show a medium sensitivity to smothering and abrasion, however studies have shown that species of sea pen can re-anchor themselves when dislodged. Ocean quahog are considered to be highly sensitive to abrasion and they have a short inhalant siphon which can become blocked with suspended sediment. Studies have shown that with sediment depths of up to 30cm, it is unlikely to have an impact on ocean quahog as they can burrow to the surface. Modelling showed that burial depth >5cm extends to 50m from the well, and higher burial depths (>20cm) extend to 10m from the well. There is the potential for mortality of individual ocean quahog if present in the area, and the potential to effect sea pens and burrowing megafauna. However, given the very small area of impact and the discharge of the WBM to the water column, the widespread distribution, short life spans and high reproductive rates of the sensitive species in the area, it is not expected to affect the population levels across the North sea and it is expected that the benthic communities will regenerate in the area over time.

Historic WBM may be discharged into the marine environment from the abandonment of well B18y. The historic WBM may be contaminated with reservoir hydrocarbons, and will be assessed in a separate application to OPRED.

Noise generated from the project activities will not be significant, and it is concluded that the project is not expected to have a likely significant effect on the site in relation to harbour porpoise and the supporting habitats and prey.

There are no expected transboundary effects from the proposal to drill UC02P well. The nearest boundary (UK/Norwegian median) is located approximately 191 km from the proposed well location. It is not considered likely that any planned operational discharge (cuttings and chemicals) will be detectable at this distance from the well location.

The well to be drilled is a production well, and an assessment has been included within the project proposal to assess as a worst case, an uncontrolled well blow out



from the Captain field, and the subsequent potential for a Major Environmental Incident (MEI). The assessment concluded that there is a potential for an MEI to occur, however the risk of an oil spill event as a result of a well blow out from well UC02P well is minimal, and the developer has suitable mitigation in place to prevent such an occurrence.

The proposed operation will utilise a MoDU, supply vessels, helicopter flights (4 flights per week) and the platform ERRV. Atmospheric emissions have been assessed from the diesel used for each vessel (including the mobilisation of the drilling rig) and the time spent on location. The total atmospheric emissions (asCO₂(e)), from the vessels undertaking the project work is approx. 15750 tonnes and accounts for 0.1% of the total UKCS CO₂(e) emissions (using 2021 as a baseline). COSL Drilling Europe who operate the COSL Pioneer, have set a target to provide climate neutral drilling by 2025, and the MoDU utilises energy control systems to monitor the consumption of fuel to reduce CO₂ and NO_x emissions. The company maintains compliance for ISO systems for environmental and energy management. The developer has a set a target for their assets to reduce all scope 1 and 2 CO₂(e) emissions by 25% of 2019 levels by 2025 and is committed to the North Sea Transition Deal targets. The emissions may result in a short-term deterioration of the local air quality, but due to the relatively short duration of the work, and that the exposed conditions in the area will rapidly disperse the emissions, it is not anticipated that there will be a significant impact.

2) Decision

Taking the above considerations into account, the Secretary of State has concluded that the project is not likely to have a significant impact on the environment and that an environmental impact assessment is not required.

3) Mitigation of significant effects

The following are features of the project or measures envisaged that the developer has proposed to avoid or prevent what might otherwise have been significant adverse effects on the environment:

n/a