Department for Business, Energy & Industrial Strategy

Nexen Petroleum U.K. Limited

Environmental Statement Summary
Cragganmore Appraisal Well

To: **Jonathan Ward**
From: **Nienke Mayo**
Date: **23 February 2018**

ES Title:	Cragganmore Appraisal Well Environmental Statement
Developer:	Nexen Petroleum U.K. Limited
OGA Field Group:	West of Shetland
ES Report No:	W/4200/2017
ES Submission Date:	10 October 2017
Block No:	208/17a
Development Type:	Appraisal well

Project Description

Nexen Petroleum U.K. Limited (Nexen) propose to drill an appraisal well in the Cragganmore prospect, to establish the extent of commercially viable hydrocarbons. The prospect is located in Block 208/17 northwest of Shetland, approximately 85 kilometres (km) from the nearest UK coastline at Unst on the Shetland Isles and approximately 90 km from the UK/Faroe Islands median line. The water depth in the area is approximately 725 metres (m).

The drilling programme is expected to commence in May 2018 and is estimated to last for up to 140 days. The expected hydrocarbons are gas with some associated condensate. The well will be drilled vertically using either a semi-submersible drilling rig or a drillship suitable for harsh environment deepwater drilling operations. It is anticipated that the well will consist of five sections, 42", 26", 17.5", 12.25" and 8.5", but the drilling programme is still being finalised and it has still to be confirmed which sections will be drilled with water-based mud and which will be drilled with low toxicity oil-based mud. Cuttings from all sections drilled with water-based mud will be discharged at the site. Cuttings from all sections drilled with oil-based mud will either be contained and shipped to shore for treatment and recycling, or processed onboard using a thermo-mechanical cuttings cleaning system so that they can be discharged to sea with an oil content of less than 1% oil on dry cuttings.

After the well has been drilled, a programme of logging and coring will be performed to evaluate the reservoir. In addition, a well test will be performed. Following completion of all operations and subject to the necessary consent from the Oil and Gas Authority (OGA), the well will be plugged and abandoned in accordance with Oil and Gas UK Guidelines.

Key Environmental Impacts

The Environmental Impact Assessment (EIA) identified and discussed the following as having the potential to cause an environmental impact:

- Disturbance to the seabed;
- Discharges to sea;
- Atmospheric emissions;
- Underwater noise;
- Interaction with other users of the sea;
- Waste; and
- Accidental events.

Key Environmental Sensitivities

The EIA identified the following environmental sensitivities:

- Fish: The Cragganmore prospect is located within spawning grounds for haddock, Norway pout and saithe; and within nursery areas for cod, blue whiting, European hake, haddock, ling, Norway pout, saithe, whiting, sandeel, herring, mackerel, spurdog and anglerfish. However, the spawning and nursery areas are extensive and the proposed drilling operations are unlikely to have any impact on these species.

- Seabirds: Seabird vulnerability is very high in May, high in January, February, March and September and low for the remainder of the year. It is considered that there are sufficient mitigation measures in place to prevent accidental spills that could have a significant impact on seabirds. Nexen will have an approved Oil Pollution Emergency Plan (OPEP) in place before drilling can commence.

- Protected habitats: The Cragganmore prospect is located approximately 6 km from the North-east Faroe-Shetland Channel Nature Conservation Marine Protected Area (NCMPA) and approximately 10 km from the Faroe-Shetland Sponge Belt NCMPA. The proposed drilling operations are not expected to have any significant impact on these or any other protected habitat.

- Protected species: Harbour porpoise, white-beaked dolphin, white-sided dolphin, killer whale, minke whale, and pilot whale have all been recorded in Block 208/17. Grey and common seals inhabit coastal and inshore waters adjacent to Scotland and have occasionally been observed to travel long distances when foraging. However, both species are unlikely to be present in large numbers in the Cragganmore prospect area. No disturbance of marine mammals, or any other adverse impacts on marine mammals, are anticipated in relation to the proposed drilling operations.

- Other users of the sea: The Cragganmore prospect is located within ICES rectangle 51E8 and fishing effort in the area is relatively high. Shipping density in the vicinity of Block 208/17 is very low. Appropriate navigational controls will be put in place and it is not anticipated that there will be any significant impact on other users of the sea as a result of the proposed drilling operations.

- In-combination, cumulative and transboundary effects: No significant in-combination, cumulative or transboundary effects are anticipated as a result of the marine discharges, atmospheric emissions, underwater noise or waste.

Key Mitigation Measures (including environmental or monitoring conditions)

No significant adverse impacts are anticipated that would warrant specific mitigation measures or monitoring conditions. All activities will be undertaken in line with commitments detailed in the ES and best industry practice.

Consultation

The Joint Nature Conservation Committee (JNCC), Marine Scotland (MS), the Maritime and Coastguard Agency (MCA) and the Ministry of Defence (MoD) were consulted on the project. The ES was also subject to public notice.

JNCC: JNCC confirmed that they had no objections.

MS: MS confirmed that they had no objections.

MCA: MCA confirmed that they had no objections.

MoD: MoD confirmed that they had no objections.

No comments were received in response to the public notice.

Further Information

Further information was requested from Nexen to address issues raised during the internal BEIS OPRED review. The information requested included clarification on spill modelling outputs, assumptions behind seabed disturbance calculations, sediment habitat classifications and the expected hydrocarbons. The additional information received from Nexen on 5 February 2018 addressed all of the issues that were raised.

Determination

Following review of the ES, the responses received from consultees and the additional information provided by Nexen, BEIS OPRED is satisfied that this project will not have a significant adverse impact on the receiving environment or the living resources it supports, or on any protected habitats or species or other users of the sea.

On the basis of the information presented within the ES, the advice received from consultees and the additional information provided by Nexen, BEIS OPRED is content that there are no objections, and agrees to the OGA issuing the necessary consent for the proposals.

Jonathan Ward

Jonathan Ward — Date 06 March 2018
Director, Environmental Operations
BEIS OPRED

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& Industrial Strategy