

## Environmental Statement (ES) Summary and Sign-Off

<b>Title:</b>	Rochelle Environmental Statement
<b>Operator:</b>	Endeavour Energy UK Limited
<b>Report No:</b>	D/4060/2009
<b>Submission Date:</b>	March 2010
<b>Block No:</b>	15/27
<b>Development Type:</b>	Field Development
<b>Reviewer:</b>	Saravanan Marappan
<b>Date:</b>	October 2010

### A) Project Description:

Endeavour is planning to develop the Rochelle Field as a subsea tieback to the existing Scott Platform, situated over the Scott Field. The field development will consist of the drilling of up to two production wells and the installation of subsea infrastructure, including a production manifold, a 30 km production flowline to transport reservoir fluids to the Scott Platform and a control and chemical umbilical.

Situated within Block 15/27, the Rochelle Field lies approximately 115 km northeast of the nearest UK coastline and 64 km west of the UK / Norway median line, in a water depth of 140 metres. The Rochelle Field has a maximum estimated recovery of 215 billion scf of gas and 7.8 million barrels of condensate.

The wells will be drilled using a conventional semi-submersible drilling rig anchored over the well location, with the top hole sections being drilled riserless with seawater and high viscosity sweeps. The lower sections will be drilled with low toxicity oil based mud (LTOBM). Each well will generate approximately 770 tonnes of water based mud and cuttings which will be discharged at the seabed, and 570 tonnes of LTOBM cuttings (with an additional 570 tonnes of LTOBM cuttings if a geological sidetrack is required) which will be skipped and shipped ashore for treatment and disposal. No extended well test will be carried out, but there will be limited flaring during well clean-up over a period of approximately 48 hours.

Pipelay operations will be conducted using a dynamically positioned (DP) reel-lay vessel, a DP S-lay vessel and/or an anchored S-lay barge. The production flowline will be trenched by either ploughing or water jetting, and the umbilical trenched by jetting. The trench left by ploughing would be mechanically backfilled, while trenching and backfilling would be achieved as a combined operation using jetting. An estimated 120,000 tonnes of rock and concrete mattresses will be required along the length of 30 km production flowline to mitigate against upheaval buckling and to protect pipeline crossings and the manifold structure.

Drilling is scheduled for Q2 2011, subsea installation scheduled for Q2 2011 and commissioning scheduled for Q3 2011. First production is expected in Q3 2011. All activities will be the subject of an approved Oil Pollution Emergency Plan.

## **B) Key Environmental Impacts:**

The EIA identified and discussed the following key activities as having the potential to cause an environmental impact:

- Drilling – combustion emissions, well clean-up emissions, discharge of drill cuttings with WBM, drill rig anchors, rig and vessel noise, accidental hydrocarbon spills.
- Sub-sea installation – combustion emissions, subsea infrastructure and pipelines installation, rock dumping, pipelay vessel noise, hydrotest discharges, accidental spills.
- Production – atmospheric emissions, produced water discharge, accidental hydrocarbon spills.
- Wider concerns – noise impacts, accidental events, transboundary issues, cumulative effects.

## **C) Key Environmental Sensitivities:**

The EIA identified the following environmental sensitivities:

- Fish: The area is recognised as a spawning area for Norway pout and Nephrops and nursery area for Norway pout, Nephrops, Blue whiting and Sprat. The spawning and nursery areas are extensive and the area of impact would be localised and temporary. Therefore the drilling of wells and pipelay is unlikely to impact these species.
- Seabirds: Seabird vulnerability is highest in November and lowest in March, April and June. It has been assessed that there are sufficient mitigation measures in place to prevent accidental spills that could have a significant impact on seabirds.
- Protected habitats: A number of pockmarks have been identified in the area during various surveys, but subsequent investigations did not identify any methane derived authigenic carbonate (MDAC) structures or chemo-synthetic activity within the pockmarks. Therefore these pockmarks would not fit the Annex 1 Habitat definition.
- Protected species: Minke whale, killer whale, white-beaked dolphin, white-sided dolphin and harbour porpoise have been recorded in this general area. Harbour porpoise has been recorded frequently in the vicinity of the proposed development in low numbers. Grey and Common Seals inhabit the coastal waters and although common seals have occasionally been observed to travel long distances when foraging, both species are unlikely to be present in the area of the proposed development. Any disturbance of marine mammals is expected to be limited to the drilling period, and the short duration and localised disturbance is considered unlikely to have any significant impact.
- Other users of the sea: The proposed development is situated within ICES rectangle 45F0 and a total of 2,249.2 days fishing effort was recorded in 2008. Shipping density in the vicinity of the proposed development is moderate.

## **D) Consultees:**

The Joint Nature Conservation Committee (JNCC), Marine Scotland (MS), Maritime and Coastguard Agency (MCA), Ministry of Defence (MoD) and Northern Lighthouse Board (NLB) made the following comments:

**JNCC:** JNCC requested additional information in relation the noise assessment. Following the provision of additional information by Endeavour on the 2 July 2010, JNCC confirmed

that Rochelle Development is unlikely to have a significant environmental impact on the nature conservation value of the marine environment.

**MS:** Marine Scotland had a number of mainly editorial comments on the ES and have confirmed that they are content for the Rochelle ES to be accepted.

**MCA:** MCA confirmed that they have no objections.

**MoD:** MoD confirmed that they have no objections.

**NLB:** NLB advised that the permanent infrastructure on the seabed must be communicated to UK Hydrographic Office to ensure updating of all relevant admiralty charts. A more detailed assessment will be provided at the Coastal Protection Act (CPA) application stage.

**E) Public Consultation:**

No comments were received following the public notice.

**F) Further Information:**

Further information was requested from Endeavour which addressed the issues raised by JNCC, MS and the internal DECC review, which included clarification in relation to the pipeline and umbilical installation, the pipeline protection (rock dumping), the drilling discharges and the atmospheric emissions. Additional information was provided by Endeavour on 2 July 2010, 12 August 2010 and 22 September 2010, which adequately addressed the issues raised.

**G) Conclusion:**

Following consultation and the provision of further information, DECC OED is satisfied that this project is unlikely to have a significant environmental impact, and content that it will not have a significant adverse effect on the marine environment in general or on any protected sites or species.

**H) Recommendation:**

DECC OED recommends that the Rochelle Development is given consent to proceed.

**Approved :** Sarah Pritchard - Head of Environmental Operations Unit

*Sarah Pritchard*.....

**Date: 13.10.2010**