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Consents given under the Petroleum Act 1998 and Reviews under the Assessment of Environmental Effects Regulations 1999

Enterprise

BLOCK 154/1

Pursuant to Regulation 5(8) of the above Regulations, the Secretary of State for Trade and Industry gives notice that, being content that the requirements of the above Regulations have been satisfied, he has, pursuant to Licence P958, granted a consent to Enterprise Oil Plc to the getting of petroleum and the drilling of an exploration well in Block 154/1 (hereafter referred to as "the project") subject to Enterprise Oil Plc conducting operations in respect of the project in accordance with the relevant environmental statement. Consent for the well was given on 13 January 2000.

Background

Enterprise Oil Plc plan to drill a well to the west of Shetland in deep water (980 m) on the continental slope, to a target depth of 2580 m, with a 60% probability of finding oil. An initial review of the proposed drilling operation was carried out and a consultative document prepared. This was discussed informally with local authorities and conservation groups to obtain feedback on any concerns, which could then be addressed through the environmental assessment process.

Drilling and Well Testing

Drilling

The drilling will be carried out using a semi sub rig, specially designed for drilling in deep water and open ocean environments. The top two sections will be drilled with seawater and the cuttings discharged (393 tonnes). The remaining sections will be drilled with wbm, generating 498 tonnes of cuttings. Total cuttings 891 tonnes. These will also be discharged to sea after mud recovery and cuttings treatment. All drilling mud chemicals categorised under OCNS as grade D or E, indicating least potential for environmental impact.

Well Testing

A short well test of about 24 hours may be carried out, with a well clean-up operation prior to testing, the chemicals used being of OCNS category 0. Liquid hydrocarbons from the test are planned to be stored in a specialised well test vessel and transferred to a suitable onshore terminal for processing and use. With a flow time of about 24 hours, "absolute maximum flow rates" ca. 7000 bbls oil per day or 40 mm scf gas per day.

Well Suspension / Abandonment

This will be dependant on the results of the well evaluation/logging/testing programme. It will be undertaken in accordance with standard UKOOA guidelines and recommended industry practices. Suspension would leave a well head on the seabed for further activity while abandonment would plug the well and cut the drill casing well below the sea bed, leaving no visual indication of the well. A debris clearance survey will be undertaken after either operation.

Drainage

Drilling area drainage: any mud spillage around the rotary table will be collected in a drip tray situated below the rotary table and directly connected to the mud holding tank. Any mud spilled elsewhere will be collected and pumped to the same tank.

Open deck drainage: Liquids contaminated with oils will be routed to oily water separator tanks. Cleaned water will be discharged overboard, provided the oil content is less than 15 ppm. This discharge is constantly monitored and automatically closed if it exceeds 15 ppm.

Environmental Sensitivities and Impacts

The key features of the marine environment in the vicinity of Block 154/1-A together with any seasonal patterns have been adequately summarised in Table 6-15, page 6-20 of the ES. The area experiences very low levels of fishing effort. Seabird vulnerabilities are highest during the first half of the year, a factor that has been recognised by Enterprise in planning their operations. A sea bed survey found no traces of the deep

water coral *Lophelia pertusa*. The possibility that isolated small colonies may occur in the Block is recognised, but large colonies were not found. Comparison with larger seabed animals in this whole West Hebridean region showed block 154/1-A to be typical of animals occurring throughout the region.

Significant effects were identified as:

1. Drill mud and cuttings discharges
2. Well testing
3. Accidental spillages

1. Modelling predicts very thin and possibly undetectable cuttings deposition on the seabed. 1000 g/m² in the immediate well area decreasing to 1 g/m² in line with prevailing seabed currents. The well will be drilled with wbm in all sections, using chemicals selected for minimal environmental impact. If significant oil is detected during drilling (> 10 g/kg), cuttings will be separated and shipped ashore for disposal.

2. No burning of liquid hydrocarbons will be carried out on site. These will be stored on board a specially designed vessel and transferred to a refinery for disposal. Any gas would be flared; combustion emissions have been calculated using UKOOA/DTI Environmental Emissions Monitoring Scheme factors

3. An oil spill risk assessment has been carried out modelling events, slick trajectory and the fate and behaviour of spilt oil. Management control measures are in place to minimise spill risk including an approved oil spill contingency plan. Enterprise Oil are members of Oil Spill Response Ltd. Southampton.

Recommendation

Overall the ES is satisfactory and adequately assesses the potential environmental impacts of the proposed development. Recommend that consent be given.