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

AGIP

BLOCK 164/28-A

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 P960, granted a consent to Agip (U.K.) Limited to the getting of petroleum and the drilling of an exploration well in 164/28-A (hereafter referred to as "the project") subject to Agip (U.K.) Limited conducting operations in respect of the project in accordance with the relevant environmental statement. Consent for the well was given on 11 August 1999.

Background

Agip (U.K.) Limited plan to drill a single exploration well to around 2500m depth in around 850 m water to test geological prospects identified by seismic survey. A semi-submersible rig capable of deepwater drilling in the open Atlantic Ocean will be used. An environmental survey of the Block was carried out by Dunstaffnage Marine Laboratory, Cordah Ltd and ERT Ltd; cuttings dispersion and oil slick trajectory modelling by Applied Science Associates Ltd and oil spill risk assessment undertaken by ECOS Ltd.

Drilling and Well Testing

Drilling

The rig is expected to be on site for 56 days, with a further period of 10 - 20 days if hydrocarbons are found and the well is tested.

Hole Section (in)	Section Length (m)	Cuttings Weight (tonnes)	Disposal
36	156	291	Direct to seabed
26	500	480	Direct to seabed
17♦	650	260	Below sea surface
12♦	750	150	Below sea surface
8♦	450	45	Below sea surface
Total	2506	1226	

Drilling Statistics

The intention is to use Water Based Mud (WBM) wherever possible, with a contingency for an ester system in the remote case that the well♦s objectives cannot be achieved. The quantity of cuttings generated and their disposal are given in the table above. The top two sections will be drilled riser less; cuttings generated from the deeper sections are returned to the rig for mud recovery and reuse and cuttings treatment.

Well Testing

Two short well tests may be carried out if indications of hydrocarbons are found. At the time of ES production, the well completion fluid is not yet known. None of the displaced fluids will be dumped or flared. The anticipated flow period for each test will be a maximum of 36 hours, with a further 6 hours to reach a stabilised condition, i.e., 84 hours or 3.5 days in toto. It is anticipated that the following amounts of fluids will be flared during the tests:

- Gas 150,000m♦ per day = 525,000m♦ total
- Oil 1500 tonnes per day = 5250 tonnes total

If liquid fallout occurs while testing during a period of high seabird sensitivity, the test will be suspended.

Abandonment / Suspension

To be undertaken in accordance with standard UKOOA guidelines and recommended industry practices. If abandoned, the well will be sealed and a seabed survey using a ROV will be carried out within a radius of at least 70 m from the well to ensure no debris remains. If it is suspended, a safety cage will be installed to protect the protruding wellhead. The location will be revisited at a later date to confirm integrity.

Environmental Sensitivities and Impacts

The proposed well location lies at a depth of c.844m; the seabed in the vicinity of the site is gently sloping with no significant bathymetric features. Depths in the Block vary from 200m to 1000m. The deepwater coral *Lophelia pertusa* has not been found in recent surveys of the Block, although the record of apparently living coral from 219m shows a discrepancy between the recorded position and the water depth.

No colonial cold water corals were observed in the seabed photographs nor recorded by side scan sonar surveys of the area.

The effects of routine operations and accidental events on the environment were reviewed and assessed for significance. The events for which in-depth assessments were considered necessary are:

- 1) - Drill mud and cuttings discharge
- 2) - Well testing (accidental events)
- 3) - Accidental oil spills

1) The main areas of potential impact associated with wbm cuttings discharges are:

- Physical smothering of benthic fauna
- Impact of finer particles

The calculated maximum average seabed concentrations are around 1000g/m♦ within a 300m radius of the well. Beyond this the level of deposition falls off rapidly to give extremely low concentrations. A cuttings pile is unlikely to develop due to small amount of cuttings predicted to be deposited, normal sediment transport processes, action of burrowing fauna and sediment redistribution due to action of trawl boards on the seabed.

2) Data from oil spills during well testing have demonstrated that spills are small, with nearly 83% of all reported spills being under 1 tonne.

The main mitigation measures include containment of clean-up fluids on board the rig and the use of new generation ♦green♦ burners.

The test would be suspended should hydrocarbon fallout occur during periods of high seabird vulnerability. Any such spill would be responded to as described in the approved oil spill contingency plan.

3) The level of risk posed by oil spills has been assessed as very low.

Despite the low probability of such an event, modelling of a range of oil spill scenarios has been carried out. The assessment also concluded that, in the very unlikely event of a major spill, even in the absence of any intervention, the oil slick would most likely move in a north-easterly direction, avoiding any land, while undergoing a degradation process. The shortest time for any oil to beach would be 38 hours on Sula Sgeir. It should be noted that these simulations take no account of comprehensive remedial measures that would be put into place.

An approved oil spill contingency plan has been developed, with the response strategy taking careful account of the well location and environmental sensitivities.

Recommendations

The document provides a good description of the immediate environment, the proposed site, interactions and mitigation measures.
Recommend that consent for the project is given.