Rockhopper Exploration PLC

ENVIRONMENTAL IMPACT STATEMENT WELL TEST ADDENDUM FOR OFFSHORE FALKLAND ISLANDS EXPLORATION DRILLING

(Licences PL024 and PL032)

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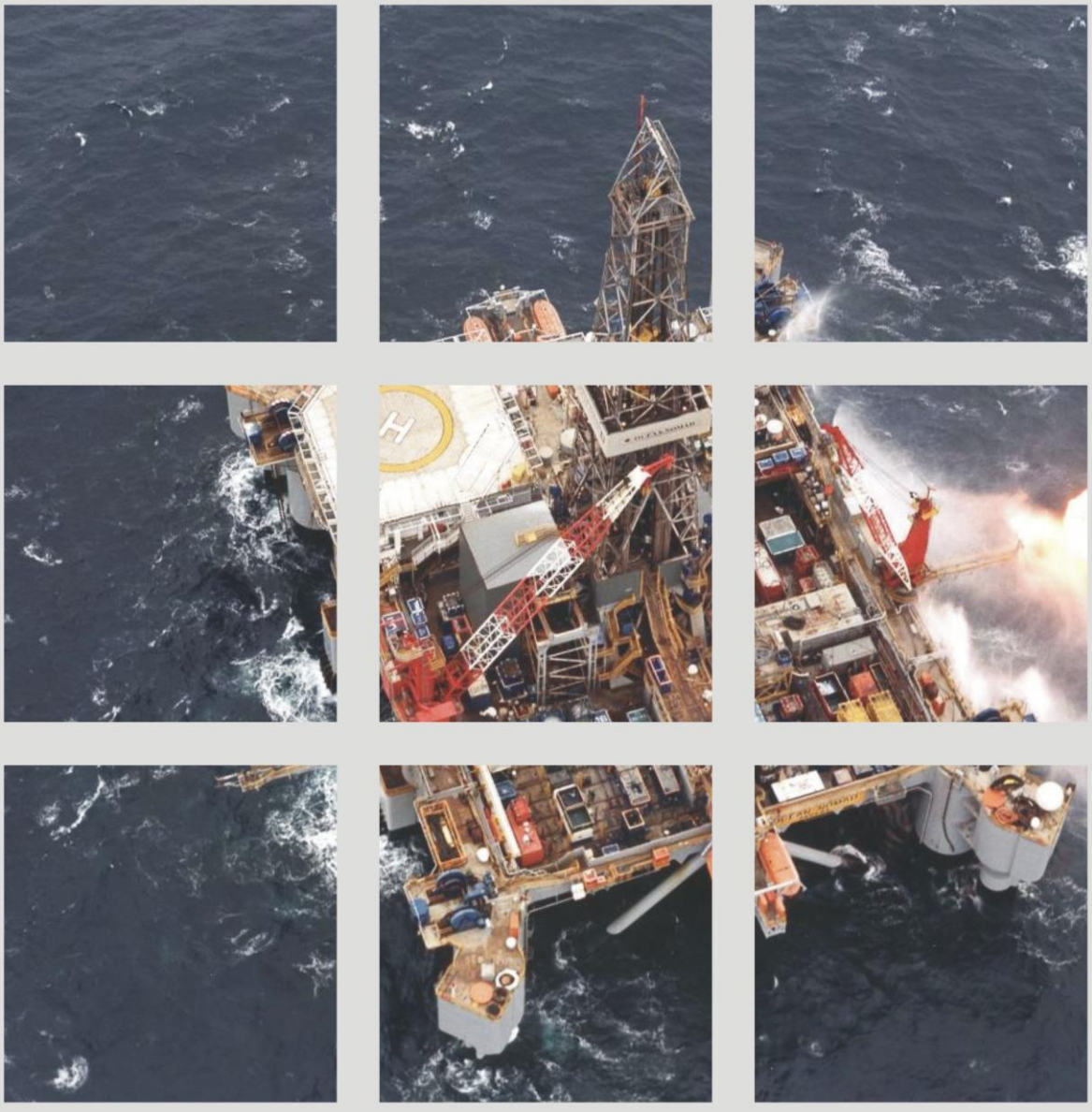

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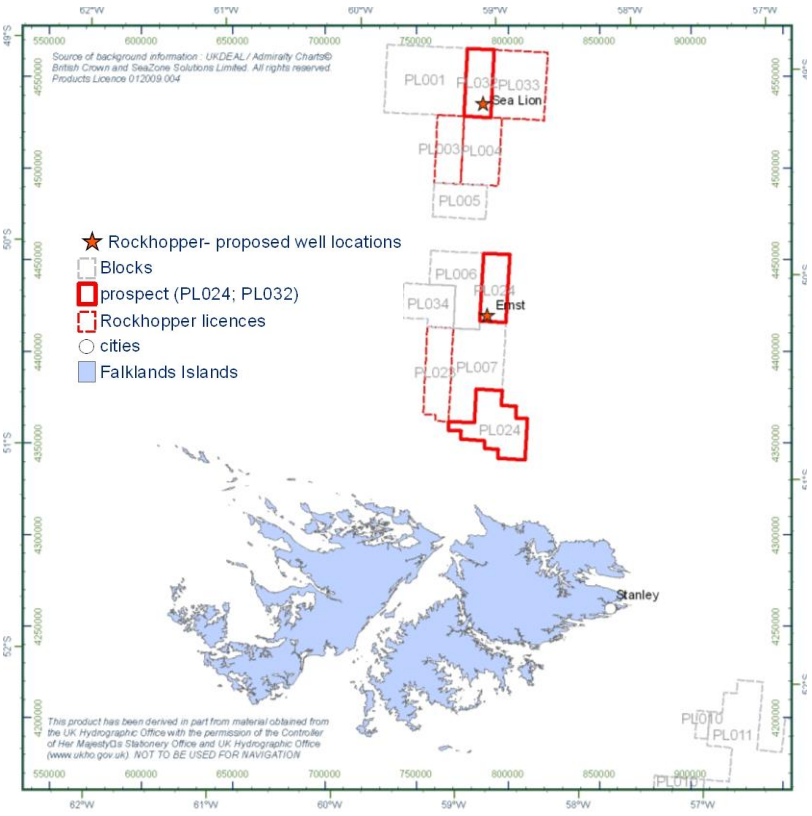
1 Background

Rockhopper Exploration plc (hereafter referred to as 'Rockhopper') is a UK company set up in 2004 to explore for oil and gas in the Falkland Islands. Rockhopper is the operator of four Production Licences (PL) in the North Falkland Basin; PL023, PL024, PL032 and PL033. PL032 and PL033 were previously licensed to Shell. Rockhopper also holds an interest in licences PL003 and PL004, operated by Desire Petroleum plc.

Rockhopper plans to drill two wells – Sea Lion in Block 14/10 and Ernest in Block 26/6 - using Ocean Guardian semi-submersible drill rig operated by Diamond Offshore drilling contractor. Figure 1 highlights the Rockhopper's relevant Production License areas in relation to the other license areas in the Falkland.

Rockhopper have now finalised their drilling programme and contracted Diamond Offshore's Ocean Guardian semi-submersible drilling rig. It is planned to drill two exploration wells: the Sea Lion exploration well within Block 14/10- (PL032) and the Ernest exploration well within Block 26/6 (PL024). Drilling operations are anticipated to commence on 1st March 2010 at Sea Lion and 1st June 2010 at Ernest. It is estimated that the rig will be 30 to 40 days at each well location.

Figure1 Location Map Showing Rockhopper Production Licence Areas



This document constitutes the Well Test Addendum to the Rockhopper Exploration plc Falkland Islands Offshore Drilling Environmental Impact Statements (EISs). The EISs include two initial submissions:

- Report Ref: EOE0612 submitted in March 2009 to assess the environmental impact from drilling up to three exploration wells within PL032 and PL033.
- Report Ref: EOE0593 submitted in March 2009 to assess the environmental impact from drilling two exploration wells within PL023 and PL024.

In addition an Operational Addendum was issued in December 2009 to provide further details on the drilling programme, which were unknown when the EISs were produced.

The objectives of the Operational Addendum were to:

- Provide details of the drilling contractor, drilling rig, location and number of wells to be drilled and the proposed dates of operation;
- Assess seasonal sensitivities within the vicinity of the licence areas at the time of the proposed drilling operations;
- Review and update the impact assessment to identify the environmental hazards, effects and mitigation measures;
- Detail the project Environmental Mitigation Register (EMR), with particular emphasise on waste management and resource use.

This document addresses additional environmental hazards and impacts that would be associated with any well testing that may be undertaken. The initial EIS stated that no well testing would be undertaken. However, further discussions have identified where well testing may be undertaken under specific scenarios.

Any questions, comments or requests for additional information regarding this Operational Addendum should be addressed to:

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2 Well Testing

Although the wells are planned for exploration only there is the potential to test the wells if the results were particularly positive. Well testing involves bringing hydrocarbons to the surface in order to assess the characteristics of the reservoir. As there are no facilities to store or export the hydrocarbons, they are burnt on the rig using specialist well test equipment. If tested, the rig will be on location for an additional 7 to 10 days.

During the well test, up to up to 25MMscf/d of gas may be flared dependent on the reservoir characteristics such as pressure and flow rates. The main environmental hazard associated with well testing is the atmospheric emissions associated with burning hydrocarbon. The Table below shows the predicted atmospheric emissions arising from the well testing.

Table 1.1 Potential Atmospheric Emissions from Well Testing

Gas[1]	Flaring of Gas (1325 tonnes)
Carbon dioxide	3710.00
Carbon monoxide	8.88
Oxides of nitrogen	1.59
Nitrous oxide	0.11
Sulphur dioxide	0.02
Methane	59.63
Volatile organic chemicals	6.63

Note 1: Emission factors used from UKOOA 2002a based on methodology proposed by OGP

A simple dispersion model has been used to predict the concentration of some of the key gases in the air at various distances from the exploration well locations during drilling activities (Tables 1.2). These calculations show that atmospheric emissions disperse rapidly and are orders of magnitude below health or environmental guidelines within a short distance of the rig.

Table 1.2. Predicted Atmospheric Concentrations of Combustion Products Resulting from Well Testing

Pollutant	Concentration (μg/m^3)									
	0.5km	1km	2km	3 km	4km	5 km	10 km	20km	30km	50km
CO2	0.75	2.33	1.65	1.10	0.77	0.56	0.22	0.07	0.04	0.02
CO	0.004	0.011	0.008	0.005	0.004	0.003	0.001	0.000	0.000	0.000
NOx	0.0139	0.0432	0.0306	0.0205	0.0143	0.0104	0.0040	0.0014	0.0008	0.0004
SO2	0.0009	0.0290	0.021	0.014	0.001	0.0007	0.0003	0.00009	0.00005	0.00003
CH4	0.00004	0.0131	0.00928	0.00062	0.00433	0.00316	0.00121	0.000411	0.0000241	0.000134
VOC	0.0005	0.001	0.001	0.001	0.0005	0.0004	0.0001	0.00005	0.00003	0.00001

All values based on UKOOA emission factors for fuel emissions during drilling

The key to controlling any impacts to as low as practicable is to ensure maximum efficiency of the combustion process. This is achieved through selection of an appropriate flare tip and ensuring appropriate test procedures are in place. These control measures are standard for well test operations however, Rockhopper will ensure that appropriate measures are in place prior to any well testing.

Well testing also involves a slight increase in oil spill risks as hydrocarbons are brought to the surface. Potential risks, impacts and control measures are the same as those described in the main section on oil spills in the EIA. Additional risk reduction for well testing involves ensuring maximum efficiency of the combustion process as outlines for atmospheric emissions above.