

**Marathon Oil U.K. Limited.
West Brae Production Consent
Environmental Statement Summary**

To: Sarah Pritchard

From: Angus Laurie

Date: 10 November 2009

ES Title:	West Brae Production Consent
Operator:	Marathon Oil U.K. Limited.
Field Group (DECC):	Aberdeen
ES Report No:	D/4035/2008
ES Date:	July 2009
Block Nos:	16/07a
Development Type:	Production Increase

Project Description

The West Brae field lies 9km north-west of the Brae Alpha platform and is one of a number of subsea fields tied back to the Brae Alpha platform. Over the past few years Marathon has carried out work on several of the West Brae wells with the result that West Brae is expected to achieve greater than expected production than is currently consented for. In addition in Q2/Q4 2010, Marathon is looking to drill new sidetracks from two existing West Brae wells

The project comprises:

- The drilling of two sidetrack wells (WPFz and WPGz) using a semi-submersible drilling rig;
- The 6½ " section is being drilled using Water Based Mud (WBM), which will be discharged at surface; Organo Phase Fluid (OPF) and drill cuttings from the 8½" section will be retained ,skipped and sent onshore for treatment and disposal.
- The drilling period is estimated to be 60 days.
- The forecasted oil production (P50) is 1,359 tonnes per day with the current consented level being 828 tonnes per day.

Key Potential Environmental Impacts

The following key potential environmental impacts and mitigation measures were outlined and identified in the West Brae ES:

- **Seabed disturbance** – As a result of the proposed drilling activities there will be a temporary disturbance to the seabed through:
 - (i) **Physical presence of the rig** – the drilling rig will be positioned within the existing West Brae 500m exclusion zone and there will be limited disturbance of the seabed due to rig anchoring. However, there are not expected to be any long-term effects and the area is expected to recover quickly.
 - (ii) **Mud and cuttings discharge** - Drilling operations at the West Brae will include the use and discharge of Water Based Mud (WBM) mud and cuttings to the sea-surface. A

worse case scenario of 77 tonnes of cuttings will be discharged at the sea surface. WBM is comprised largely of PLONOR components and there is a substantial body of evidence from the North Sea that indicates little or no detectable effects of WBM discharges in shelf water depths.

- **Noise** – the drilling operations and the presence of standby vessels and helicopter traffic will produce noise for the duration of the proposed activities. The West Brae area is of low to moderate importance for cetaceans and it is unlikely that marine mammals or seabirds will be disturbed or displaced from the area. However, November is a month of high seabird vulnerability for the West Brae area and Marathon have been requested to avoid drilling activities during this month.
- **Atmospheric emissions** – Brae Alpha gas, surplus to that required for power generation and other platform activities, is exported. Any increase in production from West Brae will have no significant impact on these activities and associated gas flaring. No additional equipment will be needed to process the increase in production from West Brae and no associated increases in power will be required. The main sources of atmospheric emissions during drilling operations will be the result of diesel burnt for power generation by the drilling rig and associated stand-by vessels. Given travel times of vessels, the number of vessels required and drilling time being optimized, emissions will be negligible.
- **Produced Water** – West Brae has its own dedicated produced water treatment train on the Brae Alpha platform and the facilities are constrained to handle ca. 5993 tonnes/day. If the constraint level is reached, the system is optimized and one or more wells are choked back to compensate. The total amount of produced water from West Brae will therefore not exceed this amount.
- **Marine discharges** – the only foreseeable discharges are associated with the proposed drilling of the West Brae side track wells and the discharge of associated Water Based Muds (WBMs), drill cuttings, cementing chemicals and well clean up chemicals. As per OCR 2002, all chemicals will be CEFAS registered, risk assessed and will be predominately PLONOR in nature. There will be no overall increase in produced water or chemicals as a result of the increased production. The lower hole sections of the well will be drilled using Organo Phase Fluids (OPF) mud. All OPF mud and cuttings will be skipped and shipped on-shore.
- **Accidental events** – Drilling and production operations in the Brae and West Brae area will be covered by a DECC approved Oil Pollution Emergency Plan (OPEP) and Emergency Response Plan (ERP).

Public Consultation: No Comments were received as a result of the public consultation exercise.

Consultee(s) Comments:

The statutory consultees for this project were JNCC and Marine Scotland. The following comments were made:

JNCC: JNCC commented that they were 'content for the ES to be approved with the condition that the PON15B provides evidence that the drilling of the two new sidetracks will not impact on any potential Annex I habitats.'

Marine Scotland: Marine Scotland was prepared to accept the ES once details of missing citations were supplied. This was supplied in a letter from Marathon dated 4 November, 2009.

Further Information: DECC sent a request for further information to Marathon on 1 September, 2009 and received a satisfactory reply dated 4 November, 2009.

Conclusion(s):

Following consultation and the provision of additional information on 4 November 10, 2009, DECC is satisfied that the increase in production proposed is not likely to have a significant impact on the receiving environment, including any sites or species protected under the Habitats Regulations.

Recommendation(s):

On the basis of the information presented within the West Brae ES and advice from consultees ,it is recommended that approval is granted for the increase in production.

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Sarah Pritchard

Head of Offshore Environmental Operations (EDU-OED)

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Date