

**Venture North Sea Gas Limited.
Marram Appraisal Well
Environmental Statement Summary**

To: Sarah Pritchard

From: Sarah Dacre

Date: 17th March 2009

ES Title:	Marram Appraisal Well
Operator:	Venture North Sea Gas Limited
Consultants:	Rudall Blanchard Associates
Field Group (DECC):	London
ES Report No:	W/4032/2009
ES Date:	December 2008
Block Nos:	110/4
Development Type:	Single appraisal well

Project Description

The project comprises:

- The drilling of a normally deviated slim hole well to a depth of 573m using the ENSCO 92 jack-up drilling rig;
- The well being drilled using Water Based Mud (WBM), which will be discharged at surface;
- A well test, if hydrocarbons are found. This will be performed over a period of 48 hours. Drilling operations are likely to take a maximum of 32.8 days (if no sidetrack used, 19.2 days).

Environmental Sensitivities

The EIA identified the following environmental sensitivities:

- Moderate shipping activity (c.26 vessels per day passing within 10nm);
- High fishing activity;
- Fish spawning area for cod (peak in February and March), whiting, sole (peak in April), sprat (peak in May and June), plaice (peak in January and February) and *Nephrops* (peak in April-June). There are currently no restrictions on drilling or seismic activity in this block during the drilling period proposed.
- Nursery area for whiting, sole, plaice and *Nephrops*.
- Seabird vulnerability is high in August-January and March-May.
- Low numbers of cetaceans have been recorded;
- Annex I Habitats: Site surveys did not identify any potential Annex I habitats within the vicinity of the proposed project.
- Annex I Species: red-throated diver occurs within the vicinity of the proposed operations.
- Annex II Species: harbour porpoise and bottlenose dolphin occurs in low numbers, mainly in the summer months;
- Protected sites: The proposed operations are within the boundary of the proposed Liverpool Bay Special Protection Area. The area qualifies for designation under the EC Birds Directive as it supports an internationally important population of common scoter

and is an area regularly used by the red-throated diver, an Annex I species.

Key Potential Environmental Impacts

The following potential impacts and mitigation were addressed in the EIA:

- Obstacles to other marine activities during operations – the primary obstacles will be the presence of the rig and associated support vessels during mobilisation, drilling and demobilisation. A collision risk management plan will be in place to minimise the risk of vessel collision. In addition, safety zones will also be designated and the operations will be promulgated in advance through the Notices to mariners, Navtex and VHF broadcast.
- Seabed disturbance – As a result of drilling activities there will be a temporary disturbance to the seabed through:

(i) *Physical presence of the rig* - The placement of the spud cans of the jack-up rig on the seabed will disturb localised areas of seabed. Each spud can impact area will be approximately 154m², therefore the total impact area of the 3 spud cans is estimated to be 464m². This represents around 0.000033% of the total area of the proposed pSPA

(ii) *Mud and cuttings discharge* - Drilling operations at the Marram well will include the use and discharge of WBM mud and cuttings to the sea-surface and at the seabed. Due to the slim-hole design, a worse case scenario of 109 and 129 tonnes of mud and cuttings will be discharged at the seabed and at the sea surface respectively, totalling 238 tonnes.

Proteus Modelling indicates that cuttings deposition will be between 0.01mm and 0.09mm in thickness. However, the majority of the depositional area will be in a layer 0.06mm thick. Studies have shown that impacts from smothering can occur where the depth of cuttings is 1mm or more (Bakke et al., 1986). As the thickness of cuttings is unlikely to exceed more than 0.09mm at any location within the depositional area, smothering effects on flora and fauna are not expected. The worse case total depositional area down to a thickness of 0.01mm is approximately 30km². Based on a pSAC area of 1400km², this equates to 2% of the overall pSAC. There is unlikely to be any noticeable smothering or impacts on the benthic fauna and flora. In addition, due to the shallow waters and sandy nature of the sediment re-suspension and re-distribution of cuttings will take place and recovery of the area will occur soon after drilling ceases.

- Noise – the drilling operations and the presence of standby vessels and helicopter traffic will produce noise for approximately 33 days. Given that noise modelling suggests that the propagation of the drilling noise will reach background noise levels within 1km of the source and the short duration of operations, it is unlikely that marine mammals or seabirds will be disturbed or displaced from the area beyond a radius of 1km. In addition, the drilling period is out with a period of high seabird density and Venture plan to minimise traffic of vessels to the rig and as far as practical, to hold vessels in deeper water to the south-west of the rig, where populations of common scoter are minimal. In addition, helicopter traffic will be routed to approach the rig from the south to minimise traffic over areas of high populations of common scoter.
- Atmospheric emissions – the main sources of atmospheric emissions during drilling operations will be the result of diesel burnt for power generation of the drilling rig and associated stand-by vessels. Well testing may also be carried out. Given travel times of vessels, the number of vessels required and drilling time being optimised emissions will be negligible. In addition, all equipment and generators will be well maintained to ensure optimum efficiency. In the event a well test is carried out, high combustion efficiency burners will be used and volumes flared will be kept to a minimum, not exceeding 96

hours.

- Marine discharges – the only foreseeable discharges are associated with the proposed drilling of the Marram appraisal well. The drilling operation will only use Water Based Muds. All chemicals are CEFAS registered and are not considered to be significantly harmful to the environment.
- Accidental events – A number of control measures will be in place to minimise the risk of accidental events such as an Oil Pollution Emergency Plan (OPEP) and an Emergency Response Plan (ERP). In addition, an environmental briefing pack will also be prepared for contractors to ensure awareness of environmental risks associated with the proposed operations.
- Cumulative Impacts – There are a number of proposed operations being considered within the vicinity of the Marram well, however it is unlikely that operations will be conducted simultaneously and therefore the Marram Appraisal well is unlikely to have a significant effect in combination with other projects

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

Consultee(s):

The statutory consultees for this project were Natural England (NE)/JNCC and CEFAS. The following comments were made:

NE/JNCC: it was advised that an Appropriate Assessment screening exercise be undertaken as there is the potential for significant impact on the conservation objectives of the pSPA.

NE/JNCC agreed with the conclusions of the screening exercise undertaken by DECC; that the Marram Appraisal well is unlikely to have a significant effect alone or in combination with other projects upon the integrity of the potential Natura 2000 site, the Liverpool Bay pSPA. On this basis, an Appropriate Assessment is not required and therefore no further information is required from Venture North Sea Gas Limited. Recommendation for approval was given.

CEFAS: There are no fisheries related restrictions covering this Block during the proposed works period. Recommendation for consent was issued.

Further Information: In addition to the consultee comments a number of issues were highlighted by DECC and further information was requested.

Venture North Sea Gas Limited provided the additional information requested and where appropriate acknowledged comments and committed to incorporating them in future submissions. All issues were considered satisfactorily amended and clarified.

Appropriate Assessment Screening: DECC undertook an Appropriate Assessment screening exercise as advised by NE. It was concluded, that the Marram Appraisal well is unlikely to have a significant effect alone or in combination with other projects upon the integrity of the potential Natura 2000 site, the Liverpool Bay pSPA. On this basis, an Appropriate Assessment is not required and therefore no further information is required from Venture North Sea Gas Limited.

Conclusion(s):

Following consultation and the provision of the additional information on the 10th February, DECC and its consultees are satisfied that this project 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 ES and advice from consultees it is recommended that the ES should be approved.

Sarah Pritchard

18 March 2009

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Sarah Pritchard

Date