

EXECUTIVE COUNCIL

CONFIDENTIAL

Title: Consultation on Environmental Impact Statement submitted by Noble Energy Falklands Limited for the “Rhea” Well in PL001 (North Falklands Basin).

Paper No: 102-15

Date: 7th May 2015

Report of: Director of Mineral Resources

1 Purpose

- 1.1 The purpose of this paper is for Executive Council to receive an Environmental Impact Statement from Noble Energy Falklands Limited and to seek approval from Executive Council to commence public consultation on the Environmental Impact Statement, in accordance with the requirements of Sections 64C and 65 of the Offshore Minerals Ordinance.

2 Recommendation

- 2.1 Honourable Members are asked to approve that the consultation process for the Environmental Impact Statement submitted by Noble Energy Falklands Limited for the “Rhea” well commence and be carried out in accordance with paragraph 6.
- 2.2 Honourable Members are asked to make this paper available to the public with the legal implications redacted.

3 Additional Budgetary Implications

- 3.1 Nil.

4 Background

- 4.1 Environmental Impact Assessments and corresponding Environmental Impact Statements are required under section 64C of the Offshore Minerals Ordinance (“the Ordinance”) in order for the Governor to consider an application to drill a regulated well in controlled waters.
- 4.2 The Ordinance stipulates that prior to a person making an application to drill and prior to the Governor determining that application to drill, the EIS

document must be subject to a public consultation period lasting 42 days and requiring regular advertisements on FIRS and Penguin News. The consultation process and timings are also published in the Falkland Islands Gazette. It is for the Governor to agree commencement of the consultation period and some elements of the consultation.

- 4.3 The Ordinance further requires that any EIS must contain all the information detailed in Schedule 4 of the Ordinance before it is made available for consultation.
- 4.4 The purpose of this paper is therefore to advise Executive Council whether the EIS does meet the minimum requirements for consultation, and to recommend a date for commencement of the consultation period.
- 4.5 Noble Energy Falklands Limited (NEFL) and Edison International (SpA) recently agreed terms to farm-in to 75% and 25% respectively of Production Licence 001, previously held by Argos Resources Limited (Executive Council paper 89-15). As a result of the farm-in agreement, NEFL (as operator of the licence) have announced plans to drill the Rhea prospect to take up their second drill slot at the end of the current Eirik Raude drilling campaign (August – September).
- 4.6 The Ordinance allows for an exemption for the requirement for an EIS to be granted on the basis of the project being covered by a previous EIS. Although Executive Council had approved an EIS submitted in April 2011 by Argos Resources for the area in question, that approval was conditioned to the submission of an operational addendum confirming details of the operation. In April 2015 the applicant sought an initial steer about how to proceed in relation to an EIS and was informed that a request for exemption on the basis of the previous EIS was unlikely to be supported by the Environmental Planning and Mineral Resources Departments. The previous EIS was submitted before the Ordinance was amended in 2011 so is unlikely to meet the technical requirements of the amended legislation. The applicant was advised that a new and updated EIS was required to reflect requirements brought in by the Ordinance amendment of October 2011, and to incorporate new data that has become available since the original EIS was approved. As a result, the new EIS will be required to undergo public consultation as described in paragraph 4.2.
- 4.7 An EIS was submitted to the Department of Mineral Resources on May 4 and consequently underwent an intensive initial review by staff from the Environmental Planning and Mineral Resources Department on May 5 to ensure that all the information required by the Ordinance was indeed present in the submitted EIS. This review was also used to try to identify any other fundamental flaws in the EIS which might have potentially delayed the process at a later stage by creating a requirement for further information (and consultation), or by preventing approval of the application to drill based on concerns arising from the EIS. That is not to say that this initial assessment of the EIS obliges Executive Council to approve any subsequent application to drill; nor does it limit Executive Council's powers to subsequently request for

information in connection with the EIS. It is simply noted that a broad approach was taken to try and identify any concerns about the EIS at this early stage; ie beyond merely checking that it complies with the minimum standards set out in the legislation. An assessment sheet was prepared according to the requirements stipulated in Schedule 4 of the Ordinance and is therefore appended to this paper.

- 4.8 Based on the initial review, the document is well presented and shows an acceptable description of the environment. The time required to collect and process benthic data meant that the applicant could not reasonably carry out a full environmental baseline survey without losing the planned drilling slot. In order to address this data gap, NEFL has made considerable efforts to incorporate relevant data by purchasing data collected by Premier Oil in the Sea Lion area in addition to data available from contiguous surveys carried out in 1998. This data has been used as surrogate data for the Rhea area, and its accuracy will be verified prior to drilling through a remote operated vehicle (ROV) survey. It is expected that a recommendation will be made to Executive Council for such a survey to be a condition of any consent to drill, if granted. Essentially, this will ensure that there are no sensitive habitats at the drilling site, and will result in the final drilling location being moved if there are.
- 4.9 Importantly, the EIS acknowledges the increased uncertainty associated with the lack of recent benthic baseline data. This increased uncertainty potentially leads to increased environmental risk, which will need to be weighed up against the benefit of drilling as and when the application to drill is considered by Executive Council. The level of potential environmental risk does not preclude an EIS being made available for consultation.
- 4.10 The impacts arising out of the drilling activity are defined and cover a wide range of sources, both from the drilling operation itself and from associated logistical operations. These include: noise, light, waste, discharge of cuttings and drilling fluids, and emissions. Where impacts on given aspects of the environment are dependent on scant data (for example, marine mammals), this is acknowledged through a “degree of confidence” rating. The methodology in carrying out the impact assessment has been explained, follows a logical pattern, and has been consistently applied throughout. Equally, modelling of cutting deposition and oil spill dispersion has been carried out and the appropriate maps included.
- 4.11 Well designs have not been finalised as they are subject to geological and engineering evaluation, and therefore the exact nature and quantities of chemicals and cement to be used have not been confirmed. For the purposes of the EIS, the mud formulations used for the Humpback well have been used, and these are likely to represent a conservative estimate due to that well’s greater depth. The EIS states that the vast majority (by volume) of chemicals will pose little or no risk to the environment (PLONOR) as per the current North Falklands Basin wells. This will require an addendum to be submitted as and when the information is available. Only water-based muds will be used.

- 4.12 Measures to reduce and mitigate the environmental impacts have been included for each aspect. Monitoring of seabed impacts will be carried out through a post-drilling survey, and noise impacts will also be monitored in order to better quantify the impact for future campaigns.
- 4.13 A number of changes were proposed as a result of the initial review, and these have all been incorporated in the version attached to this paper. As such, and on the basis of the initial review and prior to public consultation, it is felt that the EIS submitted by NEFL includes all the information detailed in schedule 4 of the Ordinance. It is therefore recommended that the statutory consultation process be allowed to commence.
- 4.14 It bears highlighting that this paper does not make a recommendation on whether the EIS itself is sufficient to determine an application to drill, but merely confirms that it contains all the information required for it to undergo public consultation in accordance with the requirements of the Ordinance. The Governor has power to request additional information on the EIS post consultation.
- 4.15 Members of the Mineral Resources Committee have been consulted on the contents of this paper, and approve the recommendations contained within the paper.

5 Proposed details for public consultation

- Start date: [May 8th 2015] - a notice to be issued in the Gazette (which refers to the publication of the EIS and describes the consultation process)
- A paper copy of the EIS to be available in Stanley for the public to inspect without charge during at least normal government office hours (the Governor may direct that paper copies are also made available at one or more other places in the Falkland Islands, ie Executive Council may wish to give instructions on this)
- A paper copy of the non-technical summary to be provided without charge and as soon as possible to each member of the public who requests one during the consultation period
- Electronic copies of the EIS and non-technical summary to be provided on request as above
- Initial announcement of publication of the EIS on FIRS
- Further weekly radio announcements of publication of the EIS: (further radio announcements are envisaged by the Ordinance, but details are not set out in it, so this is a proposal made by the Minerals Resources department; and Executive Council may wish to suggest something different here).

- Notice in the Penguin News every week during the 42 day consultation period.
- The announcements and notices referred to above must also advise the public about; (a) their right to make representations; (b) how to make those representations; and (c) the closing date for representations.

6 Financial Implications

- 6.1 Mineral Resources and Environmental Planning Departments will commission an external review of the Environmental Impact Statement by the Scottish Association of Marine Sciences. This has been quoted at £15,110 and will be borne by the Department of Mineral Resources from its existing external consultancy budget. Such reviews are carried out for all submitted EIS documents and are budgeted for accordingly; therefore the expenditure is not over and above the Department's existing budget. All direct costs related to the consultation will be borne by the applicant.

7 Legal Implications

7.1 REDACTED

7.2 REDACTED

7.3 REDACTED

8 Human Resources Implications

8.1 None.

EIS CONTENTS ASSESSMENT SHEET

The below table lists the requirements for Environmental Impact Statements outlined in Schedule 4 of the Offshore Minerals Ordinance. This sheet has been used to ensure that the Environmental Impact Statement submitted by Noble Energy Falklands Limited meets those requirements and can therefore undergo public consultation as per the requirements of Sections 64C and 65 of the Offshore Minerals Ordinance.

Legislation Section	Legislation requirement	How has it been addressed in the EIS?
Project Description		
1.1,1.2	Description of the project, including details of the location, design and size	NTS would be improved by inclusion of project dates or schedule as per Table 4, p68. Appropriate description of project, including both the offshore drilling operations and onshore footprints. Includes information additional to previous EIS documents as project logistics have been finalised.
1.4 (a)	Details of land seabed requirements	No requirement for anchoring on seabed, transponders with clump weights will be deposited but fully recovered. Details of cutting discharges and cutting discharge modelling, which will shape how seabed is affected, are included.
1.4 (b)	A description of the production processes, including the nature of the materials used. This should also include CHARM or ONCS classification of chemicals where chemical and cementing plans have been finalised.	Processes and drilling operations described in detail, including onshore-offshore logistics and TDF interface Mud and cementing plans have not been finalised due to the EIS timing and lead time on well designs, therefore this will have to be subject to an addendum. However, there is an undertaking to ensure that "the vast majority (by volume)" of cement and mud chemical fall into PLONOR or ONCS Category E (lowest environmental risk categories), which is in line with previous EIAs and current operations. Only water-based muds will be used.
1.4 (c)	An estimate of emissions to air, water and land, including: cuttings, chemicals, waste, oily water, drilling muds, noise, light, vibration and radiation	Emissions of light are covered, but it would be useful for light emission to be added to table 10, p.81 for completeness, even if they are not quantified. GHG emissions need to be included in relation to overall FI emissions
Measures to protect environment		
2 (a) (b) (c)	Description of measures to reduce significant adverse effects on the environment and, where possible, reduce and offset those impacts	Water quality mitigation extensively described throughout as part of chemical selection, waste and discharge management, and cetacean management. Noise impacts arising out of VSP will be mitigated by following JNCC guidelines and providing JNCC trained MMO. General anthropogenic noise will be measured and quantified to inform future activities. Soil quality to be monitored through pre and post rig-based survey. Sediment trap will also be deployed to determine nature and quantity of cuttings disposed and correlate that to modelling. Vessels and rig to comply with Merchant Shipping Prevention of air pollution regulations 2008, combustion equipment regularly monitored. Light pollution will be mitigated through use of blackout blinds, and directional lighting (where safety allows). Implementation of seabird strike monitoring and reporting. Waste impacts will be mitigated through the implementation of campaign waste management plan (already approved), under which all hazardous material will be exported internationally or processed by a local waste-to-energy contractor.
Requirement for Data		
3	Data required to identify and assess the main effects of the project on the environment	Includes summary data from Sea Lion and 1998 surveys, which are not immediately proximate but are a good approximation. A rig-based survey will be carried pre and post drilling to ensure there are no sensitive species on and around the planned drilling site.
Environmental Effects		
4 (2)	Specific aspects of the environment likely to be significantly affected by the project to which it relates, including: - Human Population - fauna - flora - soil (including seabed and subsoil) - water (including sea and aquifers) - climatic factors - landscape and seascape - tangible property - architectural and archaeological heritage - interactions between any of the above	Human population - impacts to Stanley population addressed extensively, including through increased onshore presence, noise and introduction of non-native species. Impacts to fauna extensively described and include impacts arising out of normal operations (noise, light, discharges) and out of emergency situations (oil spills). Impacts to flora concentrate on marine flora arising out of cuttings and chemical discharge and well footprint. Soil impacts arising as a result of cutting deposition are included. Impacts to sea water covered through discharge and spill modelling. Climatic impacts addressed in emission profiles. All the others do not apply.
4 (3)	Likely significant effects on the environment arising from: - the existence of the project itself - the use of natural resources - the creation of nuisances - the elimination of waste	Table in Appendix uses "Negligible" category for residual risk, but a definition for negligible is not included earlier on in the document. Therefore this should be changed to "very low" as per the predefined risk categories. All reasonably expected impacts are covered, although there are some discrepancies in the impact/risk assessment methodology which applicant will be asked to change prior consultation. Impacts cover planned activities and unplanned events
Forecasting Methods		
5(2)	Details of the forecasting methods used to assess the effects on the environment of the project to which it relates	The methodology behind the Impact Assessment is explained, logical, and clear parameters are used to classify likelihood and severity of impacts. The methodology for the cuttings deposition and oil spill modelling is also explained.
Remediation		
6	Measures to eliminate or reduce significant adverse effects on the environment of the project and its infrastructure, and, where possible, remedy and offset	Mitigation is proposed throughout to reduce residual impacts and risks. There is a requirement to cut the wellhead below the mud line, leaving no disturbance to shipping or fishing at the seabed. It is believed that the seabed will recover within 10 years, although the area of the seabed will be small, and the impact low.
Alternatives		
7	An outline of the main alternatives (if any) that were studied by the applicant, and the reason for the applicant's choice, taking into account the environmental effects	Applicant requested to expand on this prior to consultation
Non-technical Summary		
8	Non-technical summary of paragraphs 1 to 7	Chapter 1 is to be separated and act as a Non-Technical Summary.
Difficulties encountered		
9 (2)	A description of technical difficulties, lack of data and lack of know-how in encountered by the applicant in compliant the information	Separate impact assessment tables include degree of confidence throughout the document, but this is not included in the summary table in the appendix. "Areas of uncertainty" only refers to uncertainty additional to previous EIAs, but does not address general area-wide uncertainties. Degree of confidence has been included for each impact, where there is uncertainty over and above previous EIS this has been accordingly acknowledge in their degree of confidence.