

CONOCOPHILLIPS 2011/2012 EXPLORATION DRILLING CAMPAIGN

ENVIRONMENT PLAN BRIDGING DOCUMENT: PUBLIC SUMMARY

This Environment Plan Bridging Document summary has been prepared for the Browse Basin 2011/2012 drilling campaign to be conducted by ConocoPhillips (Browse Basin) Pty Ltd (COP) and has been submitted to the Western Australia Department of Mines and Petroleum (DMP) to comply with Regulations 11(7) and 11(8) of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (OPGGS Act (E) Regulations).

INTRODUCTION

COP will conduct an exploration drilling campaign within three adjacent petroleum exploration permits (WA-314-P, WA-315-P and WA-398-P) in Commonwealth waters within the Browse Basin, offshore northwest Australia. The drilling campaign involves the drilling and potential well flow testing of up to eight wells within a drilling area (Figure 1).

The purpose of the bridging document is to provide additional information for the Boreas-1 and Zephyros-1 wells to that presented in the ConocoPhillips 2011/2012 Exploration Drilling Campaign EP (EP (COP 2011a)), including well-specific drilling activities. Results of representative drill cuttings and fluids discharge and oil spill trajectory modeling for each well is also presented and assessed. The proposed drill cuttings and fluids management strategy to be implemented is also described.

Drilling activities for the Boreas-1 and Zephyros-1 wells are scheduled to commence in the fourth quarter of 2011, with Boreas-1 to be drilled first followed by the Zephyros-1 well. The drilling contractor's relevant policies and procedures, specific mobile offshore drilling unit (MODU) and facilities for the campaign are described within the bridging document. It is anticipated that each well will take 49 days of active drilling, during the approximate 107 days of each well construction process. Drilling operations will be conducted on a 24-hour basis.

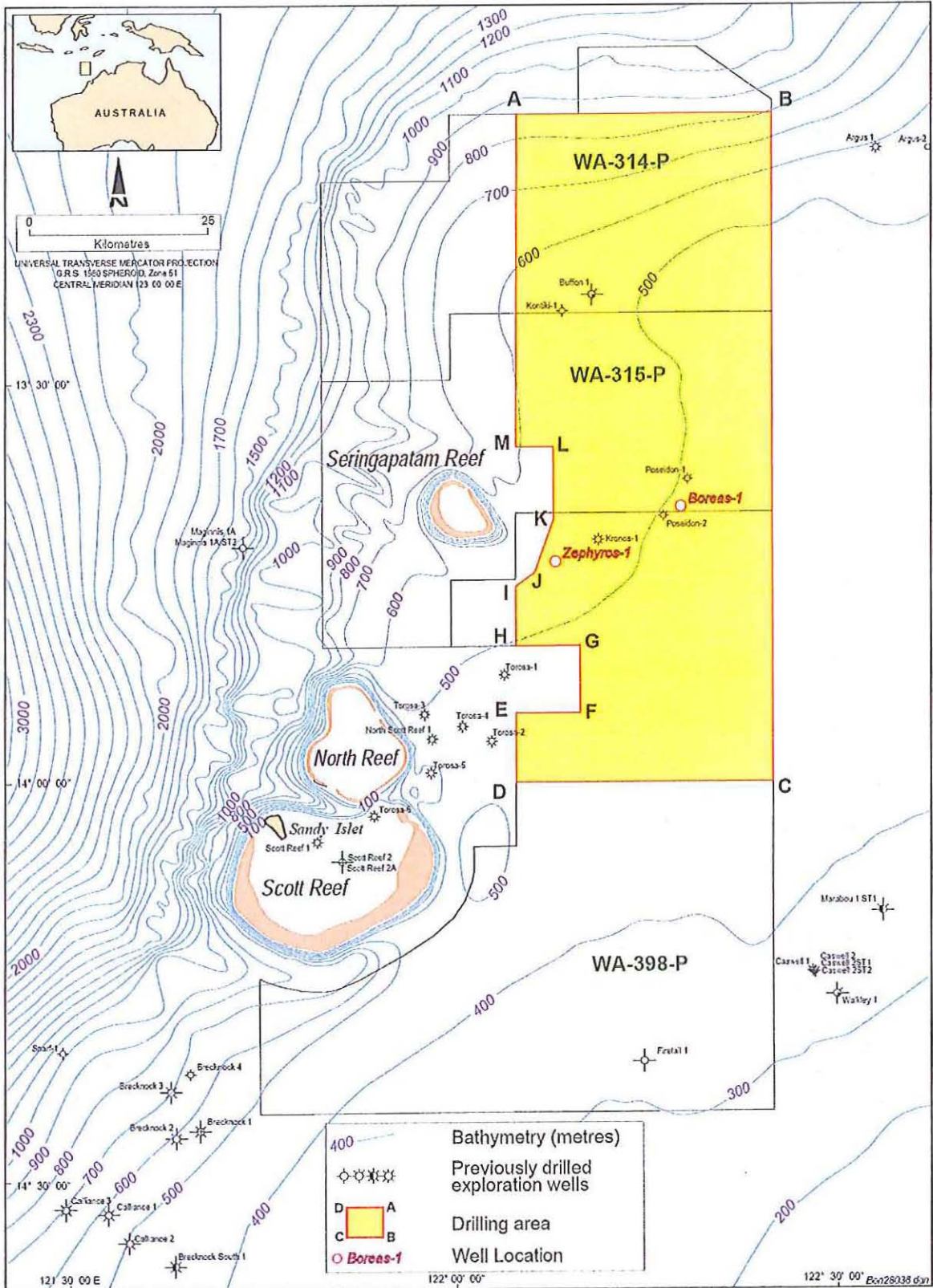
COORDINATES OF THE PETROLEUM ACTIVITY

The exploration permits WA-314-P, WA-315-P and WA-398-P are shown on Figure 1 and the boundary coordinates of the drilling area are provided in Table 1. All well operations associated with Boreas-1 and Zephyros-1 will be undertaken within the drilling area.

Table 1. Boundary Coordinates of the Drilling Area

| Location Point | Latitude (South) | | | Longitude (East) | | |
|----------------|------------------|---------|---------|------------------|---------|---------|
| | Degrees | Minutes | Seconds | Degrees | Minutes | Seconds |
| A | 13 | 09 | 51.89 | 122 | 05 | 15.11 |
| B | 13 | 09 | 51.57 | 122 | 25 | 03.91 |
| C | 14 | 00 | 06.82 | 122 | 25 | 02.80 |
| D | 14 | 00 | 03.10 | 122 | 05 | 02.73 |
| E | 13 | 54 | 51.82 | 122 | 05 | 03.05 |
| F | 13 | 54 | 52.09 | 122 | 10 | 02.15 |
| G | 13 | 49 | 51.04 | 122 | 10 | 03.34 |
| H | 13 | 49 | 50.90 | 122 | 05 | 03.69 |
| I | 13 | 45 | 22.37 | 122 | 05 | 03.50 |
| J | 13 | 44 | 21.55 | 122 | 06 | 33.29 |
| K | 13 | 40 | 23.57 | 122 | 08 | 03.42 |
| L | 13 | 34 | 54.13 | 122 | 08 | 03.28 |
| M | 13 | 34 | 54.04 | 122 | 05 | 06.77 |

Figure 1: Location of Drilling Area



DESCRIPTION OF THE ACTIVITY

As part of COP's obligations for Permits WA-314-P, WA-315-P and WA-398-P, COP will conduct exploration drilling and potential well flow testing activities at up to eight well locations in the drilling area. All operations will be conducted in accordance with relevant regulatory requirements.

The Boreas-1 will be the first well drilled and is located approximately 26 kilometres (km) east from Seringapatam Reef and 51 km northeast from Scott Reef North, in water depth of approximately 497 metres (m).

The Zephyros-1 is planned to be the second well drilled and is located approximately 10 km from Seringapatam Reef and 32 km northeast from Scott Reef North, in a water depth of approximately 531 m.

Table 2 gives the coordinates for the Boreas-1 and Zephyros-1 well locations.

Table 2. Coordinates of the wells (Datum: GDA 94)

| Well | Latitude (South) | | | Longitude (East) | | |
|------------|------------------|---------|---------|------------------|---------|---------|
| | Degrees | Minutes | Seconds | Degrees | Minutes | Seconds |
| Zephyros-1 | 13° | 43' | 30.4" | 122° | 08' | 16.4" |
| Boreas-1 | 13° | 39' | 24.8" | 122° | 17' | 52.7" |

Drilling operations will be undertaken by Transocean using the Transocean Legend semi-submersible MODU. The MODU will be towed onto location and its eight anchors deployed at each well location. The drilling operations will be supported by up to three anchor handling/support vessels.

The MODU will be operated in accordance with Transocean's Environmental Management System (HQS-HSE-PR-05) which communicates Transocean's quality, health, safety and environment performance standards. It includes the Transocean Environmental Policy and describes environmental requirements (including procedures) for system and operational controls, monitoring, training and competencies, and communications. Specific control and monitoring procedures are also in place to minimise the likelihood of significant leakages occurring from the slip joint packer during the drilling campaign.

The slip joint packer will be continuously monitored via closed circuit television. In addition, pressure gauges are installed on the diverter panel and the rig floor, with a check valve fitted on the air line to monitor changes in pressure in the slip joint packer. Regular maintenance of the slip joint packer will also be conducted via scheduled maintenance tasks to ensure optimum performance is maintained during drilling operations.

The wells have been designed in accordance with COP standards, accepted industry practices and regulatory requirements. Drilling will be conducted to a target depth of approximately 5,370 m below seabed. Well construction information for the Boreas-1 and Zephyros-1 wells is outlined in Table 3.

Table 3. Well Design Details

| Hole size | | Well Interval | Cuttings | Drilling Fluid | | Point of Cuttings Discharge | Active Drilling (Days) |
|-----------|-----|-------------------|---------------------------------|---|--------------------------|--|------------------------|
| Inch | mm | | Approx Volume (m ³) | Type | Volume (m ³) | | Days |
| 36 | 914 | Conductor Hole | 38 | Seawater with high viscosity sweeps (guar gum or bentonite) | 255 | Seabed | 0.1 |
| 17.5 | 445 | Surface hole | 355 | Seawater with high viscosity sweeps (guar gum or bentonite) | 1840 | Seabed | 5 |
| 12.25 | 311 | Intermediate hole | 91 | Seawater with high viscosity sweeps (guar gum or bentonite) | 2250 | Sea surface Sept to April, seabed (or discharge at alternative location) May to August | 14 |
| 8.5 | 216 | Intermediate hole | 29 | Novatec SBM | 6 | Sea surface Sept to April, seabed (or discharge at alternative location) May to August | 8 |
| 6.5 | 165 | Intermediate hole | 12 | Novatec SBM | 3 | Sea surface Sept to April, seabed (or discharge at alternative location) May to August | 22 |
| Total | | | 525 | | 4354 | | 49.1 |

Note: Volumes provided are best available estimates, calculated based on data acquired from previous drilling activity undertaken by COP in the Browse Basin.

Vertical seismic profiling (VSP) and well flow testing may be undertaken on individual wells, depending on the results of the well evaluation, following the drilling of each well to its target depth. A VSP survey will be conducted for approximately eight hours per well (12 hours maximum).

The Boreas-1 and Zephyros-1 wells will be permanently plugged and abandoned after completion of data acquisition and evaluation. All wellhead structures will be removed in accordance with the OPGGS Act and Regulations, prior to completion of the campaign. A seabed survey (via remotely operated vehicle) will be conducted for each well to survey the seabed for debris after well completion. Waste management for the drilling campaign will be conducted in accordance with the International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (MARPOL 73/78).

DESCRIPTION OF THE RECEIVING ENVIRONMENT

The environmental conditions at the two well locations have been described in Section 5 of the EP (COP 2011a), and are therefore not repeated in the bridging document.

ASSESSMENT OF ENVIRONMENTAL EFFECTS

The EP (COP 2011a) details the methodology, outcomes (likelihood and consequence) of the drilling campaign's environmental risk assessment and proposed management measures. All risks associated with the drilling of the two wells will be mitigated and managed by the measures outlined in Sections 6.3 and 7 of the EP (COP 2011a).

Potential environmental impacts and the sources of risk associated with the drilling campaign are discussed in Section 6.3 of the EP (COP 2011a). The potential impacts from atmospheric emissions, waste generation and physical presence of the MODU and support vessel remain unchanged from the EP (COP 2011a).

Modelling of Zephyros-1 and Boreas-1 well locations has been completed for drill cuttings and fluids discharge and potential hydrocarbon spill scenarios. The risk assessment for the discharges to the marine environment presented in the EP have been reconsidered. This bridging document has assessed the significance of the following aspects:

- **M2** Routine sea surface discharge of drill cuttings and residual SBM into the marine environment.
- **M10** Accidental discharge of a large volume of hydrocarbons into the marine environment for an extended period.

Potential Impacts of Drill Cuttings and Fluids Discharge

Drill cuttings and fluids discharge modelling was undertaken for the Zephyros-1 and Boreas-1 wells (APASA 2011a) to predict the distribution of drill cuttings and fluids discharged from the drilling operations near the seabed (2 m above seabed) and at the sea surface, depending on the hole section. The modelling accounted for metocean conditions, and predicted the maximum bottom deposition, area of coverage, and minimum distance from Seringapatam Reef based on a 5 day seabed discharge period and 44 day sea surface discharge period commencing at the start of each month, for a period of one year. Impact to the reef was defined as an amount not exceed a total discharge threshold of 10 g/m² for the duration of discharge.

Boreas-1 Drill Cuttings and Fluids Modelling Results

Contact within 1 km of Seringapatam Reef is not predicted to occur when drill cuttings and fluids are discharged near the seabed (2 m above seabed) from the upper hole sections (36" and 17.5" sections) from the Boreas-1 well. The maximum distance the discharged material is predicted to deposit to Seringapatam Reef is 26.06 km, which may occur in December. There is no predicted contact to Seringapatam Reef, Scott Reef North or South under any of the modelled conditions (APASA 2011a).

Contact within 1 km of Seringapatam Reef is not predicted to occur when drill cuttings and fluids are discharged at the sea surface from the lower hole sections (12.25", 8.5" and 6.5" sections) of the Boreas-1 well. The maximum distance the discharged material is predicted to deposit to Seringapatam Reef is 25.86 km, which may occur in December. There is no predicted contact to Seringapatam Reef, Scott Reef North or South under any of the modelled conditions (APASA 2011a). These modelling results correlate with the information provided in the EP.

Zephyros-1 Drill Cuttings and Fluids Modelling Results

For the Zephyros-1 well contact within 1 km of Seringapatam Reef is not predicted to occur when drill cuttings and fluids are discharged near the seabed from the upper hole sections (36" and 17.5" sections). The maximum distance the discharged material is expected to come to the Seringapatam Reef is 2.64 km, which may occur in September. There is no predicted contact with the Seringapatam Reef or Scott Reef under any of the modelled conditions (APASA 2011a).

Drill cuttings and fluids contact within 1 km of Seringapatam Reef was predicted to occur in May, June and August when drill cuttings and fluids are discharged at the sea surface from the lower hole sections (12.25", 8.5" and 6.5" sections) of the Zephyros-1 well. An assessment of the potential environmental impacts from the drill cuttings and fluids to Seringapatam Reef is provided in Section 6.3.2.1 of the EP (COP 2011a). North and South Scott Reef are not predicted to be contacted by drill cuttings and fluids from sea surface discharge from the drilling of the Zephyros-1 well. These modelling results correlate with the information provided in the EP.

Potential Distribution of Hydrocarbon Spills

Oil spill trajectory modelling for each well location, for an 80-day condensate release was completed for the three distinct seasons, defined by unique prevailing wind conditions:

- Summer westerlies (December to February).
- Transitional (March, September to November).
- Winter easterlies (April to August).

Results of the oil spill trajectory modelling presented in the EP (COP 2011a) are for the Zephyros-1 well location. This well location is expected to be the closest well drilled during the campaign to the sensitive coral reef environments of Seringapatam and Scott Reefs, and therefore represent the 'worst case scenario' for the drilling campaign.

Zephyros-1 Hydrocarbon Spill – Extended Condensate Release

Modelling indicates that a long term condensate release would most likely distribute in a north-easterly direction with the 90-100% probability contour extending approximately 25 km from Zephyros-1 in summer. During the transitional period the condensate was also predicted to move northeast. No dominant direction was predicted during winter, with greater than 60% sea surface contact extending 30 km from the Zephyros-1 location.

Based on the modelling results, the heaviest hydrocarbon loads predicted to contact Seringapatam Reef was under winter conditions, and Scott Reef North and South under summer conditions, Hibernia Island under summer conditions, Sandy Islet under winter conditions and Browse, Ashmore and Cartier Islands under transitional conditions (APASA 2011b).

In summary, the worst case scenario was predicted to be a long-term blowout of 5,400 m³ condensate released over 80 days in winter, in which contact to Seringapatam Reef, Scott Reef South and Scott Reef North was predicted in all conditions. There was also predicted to be a >15% possibility of other islands/reefs being contacted. The first hydrocarbon contact was predicted to occur approximately 27 hours after the initial release, with the last island predicted to be contacted 1077 hrs (45 days) after the release. The modelling predicted a hydrocarbon loading of 2771 g/m² on Seringapatam Reef and greater than 1000 g/m² on Scott Reef.

An assessment of the potential environmental impacts from hydrocarbon spills to environmentally sensitive locations is provided in Section 6.3.2.5 of the EP (COP 2011a).

Boreas-1 Hydrocarbon Spill – Extended Condensate Release

Modelling predicts that a long term condensate release would most likely distribute in a north-easterly direction with a high probability of the slicks (90-100%) predicted to distribute in a

predominantly east-northeast direction from Boreas-1 in summer. During the transitional period, a high probability of slicks (90-100%) was predicted to extend in a north-northeast direction. In winter, slicks were predicted to drift west from the release location, with a 90-100% probability of sea surface contact to waters immediately adjacent to Seringapatam Reef.

Based on the modelling results Seringapatam Reef, Scott Reef North and Sandy Islet are most likely to receive the heaviest load under winter conditions, Scott Reef South and Browse under summer conditions, and Ashmore, Hibernia and Cartier Islands under transitional conditions (APASA 2011b).

In summary the worst case scenario would be a long-term blowout of 5,400m³ condensate release over 80 days in winter, which would contact Seringapatam Reef, Scott Reef South and Scott Reef North with a >15% possibility of other islands/reefs being contacted. The first loading would be expected 62 hrs after the initial release, with the last island being contacted 1487 hrs (62 days) after the release. The extent of the contact would create a loading of 1141 g/m² on Seringapatam Reef, with greater than 1000 g/m² on Scott Reef North.

An assessment of the environmental effects of hydrocarbon spills to environmentally sensitive locations is provided in Section 6.3.2.5 of the EP (COP 2011a).

Risk Assessment and Mitigation Measures

The environmental risk assessment presented in the EP (COP, 2011a) has been reviewed based on the well specific information presented in the bridging document.

The outcomes of the review of the risk assessment for Boreas-1 and Zephyros-1 are:

- For both sites, during all seasons, the modelling predicted zero sedimentation above 10 g/m² within 1 km of the reefs as a result of near seabed discharge of drill cuttings and fluids.
- Sedimentation above 10 g/m² within 1 km of the reefs was only predicted to occur during sea surface discharge of drill cuttings and fluids from the Zephyros-1 well location, in May, June and August.
- No sedimentation above 10 g/m² within 1 km of the reefs was predicted as a result of sea surface discharge from the Boreas-1 location.
- From Zephyros-1 well location, surface hydrocarbon contact to reef from a worst case long term condensate release was predicted to occur within a minimum of 27 hours after release during winter and within a minimum of 29 hours during the transitional periods.
- From the Boreas-1 well location, no surface hydrocarbon contact to reef from a worst case long term condensate release was predicted to occur within 36 hours, with a minimum of predicted time of first contact of 62 hours during the winter season.

With the site specific mitigation measures described in Section 5 of the EP, the risk assessment presented in the EP remains unchanged. In addition, mitigation measures that can be employed to manage the risks associated with the Boreas-1 and Zephyros-1 wells listed above are detailed in the next section.

ENVIRONMENTAL MANAGEMENT

Eight environmental management strategies are provided in the EP to address the identified potential environmental impacts for the drilling campaign, categorised in the following five groups: atmospheric emissions (A), discharges into the marine environment (M), waste (W), physical presence (P) and socio-economic (S).

Site specific mitigation measures have been developed following the review of the risk assessment presented in the EP (COP 2011a), as described below.

1. Management of Drill Cuttings and Fluids Discharge at Sea Surface from Zephyros-1

To ensure potential impacts to reef communities are avoided, COP has adopted a conservative Drill Cuttings and Fluids Management Strategy (COP 2011b) for drill cuttings and fluids discharge at sea surface. The management strategy requires no sediment deposition (exceeding a threshold of 10 g/m²) in any areas located within 1 km of both Seringapatam and Scott Reefs' edge at the Lowest Astronomical Tide (LAT) from sea surface discharge of drill cuttings and fluids, based on predictive modelling.

Where sedimentation from sea surface discharge is predicted within the 1 km (from LAT) area around Seringapatam or Scott Reefs, COP will implement specific mitigation measures, as appropriate for each well location. The Drill Cuttings and Fluids Management Strategy (COP 2011b) includes mitigation measures, such as:

- Alternative timing for drilling the well.
- Alternative well location.
- Subsea discharge.
- Drill cuttings and fluids recovery and disposal at an alternative offshore location.

Modelling does not predict drill cuttings and fluids deposition above 10 g/m² within 1 km from Seringapatam Reef from sea surface discharge at the Zephyros-1 well during September to April, and in July. Therefore, sea surface discharge of cuttings will be conducted from the Zephyros-1 well location during these months. Modelling predicts drill cuttings and fluid deposition above 10 g/m² within 1 km from Seringapatam Reef from sea surface discharge at the Zephyros-1 well during May, June and August. As modelling does not predict deposition within the 1 km (from LAT) area around Seringapatam or Scott Reefs if these drill cuttings and fluids were to be discharged 5 m above the seabed, the alternative measure to be implemented is near seabed discharge (within 5 m above the seabed) from May to August (inclusive).

If discharge at depth is not deemed practicable during the drilling campaign, the contingency action will be to transport the drill cuttings and fluids, via support vessel, to an alternative location for discharge. The most likely alternative location will be at the Boreas-1 site, as no contact within 1 km of the reefs from sea surface discharge of drill cuttings and fluids have been predicted by the modelling at any time of the year (APASA, 2011a).

Alternative discharge strategy

Drill cuttings and fluids from the lower hole sections (12.25", 8.5" and 6.5" sections) will be retrieved from the well onto the MODU and processed as described in section 4.3.4.2 of the EP. The drill cuttings will be collected and mixed in a separate tank system with water, a high viscosity material where required to keep the cuttings in suspension (such as bentonite or a polymer fluid which is already approved for use in the sea water sweeps fluid system), and excess water based drilling fluid.

If discharging at depth, drill cuttings and fluids will be pumped down a discharge hose, weighted and anchored at two to five metres above the seabed. Depth of discharge will be maintained as far as practicable, depending on sea and weather conditions. If discharge is unable to be maintained at this depth, discharge will be ceased until weather conditions improve. If sea conditions continue to not be conducive to discharge, drill cuttings and fluids will be stored on the MODU or arrangements to discharge at an alternative location implemented.

The entire length of hose will be inspected periodically using a remotely operated underwater vehicle and can be retrieved back on to the MODU, if necessary, for additional inspection and/or repair as necessary.

If discharging at an alternate location, drill cuttings and fluids will be transferred onto an offshore supply vessel by pumping material through a dedicated hose, every few days as required. The most likely limiting factor will be the ability of the vessel to stay alongside the MODU and take on drill cuttings and fluid material in inclement weather conditions. Under these circumstances drilling will cease, therefore reducing the material to be discharged, until the vessel can take on the drill cuttings and fluids to be discharged. Drill cuttings and fluids will be stored in closed deck tanks or below deck tanks on the vessel. The vessel will transport material to the chosen alternative disposal location.

The vessel will maintain its position by propulsion system (DP) and no anchoring will occur at the discharge location. Drill cuttings and fluids will be pumped from the vessel and discharged to the sea surface. Aspects such as vessel presence, routine discharges from vessels, transfer of materials from the MODU to a supply vessel, as well as risks of leaks and spills have already been assessed in the EP (COP 2011a).

2. Management of Hydrocarbon Spills from Boreas-1

The modelling of an 80-day uncontrolled subsea condensate release at the Boreas-1 location shows that for all seasons, a potential hydrocarbon spill will not reach environmentally sensitive areas within 36 hours.

In accordance with the OSCP, the equipment and personnel of an OSRV will be available for mobilisation from the Port of Broome during drilling operations at Boreas-1.

3. Management of Hydrocarbon Spills from Zephyros-1

The modelling of an 80-day uncontrolled subsea condensate release at the Zephyros-1 location shows that for winter and transitional seasons (i.e. March to November inclusive), hydrocarbons are predicted to make surface contact with environmentally sensitive areas, including Seringapatam reef, within 36 hours.

In accordance with the OSCP, based on the 80-day uncontrolled well flow scenario modelling results, a dedicated infield oil spill response commander, response personnel and an OSRV will be located on site and on standby 24 hours a day during drilling operations at Zephyros-1 during March to November inclusive. Where drilling activities related to the 80-day uncontrolled subsea condensate release scenario are completed during December to February inclusive, an OSRV will not be located at the site, however the equipment and personnel of an OSRV will be available for mobilisation from the Port of Broome. Materials and personnel that will be available during the drilling campaign to respond to other possible spill scenarios are detailed in the OSCP.

CONSULTATION

COP initiated a stakeholder consultation program as part of its planning for the drilling campaign. The stakeholder consultation program commenced in November 2010 and will continue for the duration of the drilling campaign. All stakeholders were initially contacted by letter or via a meeting in 2010. A second consultation letter was sent to all stakeholders on 23 May 2011, providing an update on the Federal and State approvals process for the 2011/2012 Exploration Drilling Campaign.

A list of stakeholders for the drilling campaign (Table 4) has been developed based on the location and potential impacts of the activity, previous stakeholder consultation and organizations that have shown interest in other campaigns.

Table 4: Stakeholders

| Government | Commercial Fisheries |
|---|---|
| WA Department of Fisheries (DoF) | A Raptis and Sons |
| WA Department of Mines and Petroleum (DMP) | Australian Fisheries Management Authority (AFMA) |
| Commonwealth Department of Resources, Energy and Tourism (DRET) | Commonwealth Fisheries Association (CFA) |
| Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) | Western Australian Northern Trawl Owners Association (WANTOA) |
| WA Department of Transport (DoT) | Northern Fishing Companies Association (NFCA) |
| Office of the Environmental Protection Authority (OEPA) | Kimberley Professional Fisherman's Association (KPFA) |
| Non-Governmental and Scientific Organisations | Western Australian Fishing Industry Council (WAFIC) |
| Australian Institute of Marine Science (AIMS) | Shipping, Ports and Marine Safety |
| Centre for Whale Research (CWR) | Australian Customs Service (Coastwatch) |
| Charles Darwin University | Australian Hydrographic Office (AHO) |
| Conservation Council of WA | Australian Quarantine and Inspection Service (AQIS) |
| Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO) | Australian Maritime Safety Authority (AMSA) |
| Pendoley Environmental | Broome Port Authority |
| Roebuck Bay Working Group | Dampier Port Authority |
| WWF | National Offshore Petroleum Safety Authority (NOPSA) |
| Petroleum Industry | Port of Darwin |
| Australian Petroleum Production and Exploration Association (APPEA) | Border Protection Command (BPC) |

FURTHER DETAILS

For further information about the drilling campaign, please contact:

ConocoPhillips External Affairs
 53 Ord Street
 West Perth, Western Australia 6005

Tel: +61 8 63 63 2073

abuquery@conocophillips.com