Husky White Rose Development Project

New Drill Centre Construction & Operations Program

Project Description

Prepared by:

Husky Oil Operations Limited
235 Water Street
St. John's, NL
A1C 1B6

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1.0 Introduction

Husky Oil Operations Limited (Husky) proposes to undertake the development of four new drill centres. These centres would be located in three areas adjacent to the current Northern, Central and Southern drill centres currently active in the White Rose Field. These three areas are depicted in Figure 1.

The most southerly of the areas proposed for a drill centre has been designated South White Rose Extension (Figure 1). The area adjacent (1.3 to 3 km northwest) to the current Central drill centre and designated as West White Rose could support up to two drill centres. The most northerly area one to three kilometres northeast of the current Northern drill centre and designated North White Rose would, like South White Rose Extension, support one drill centre.

Current planning calls for South White Rose Extension drill centre to be constructed in the summer of 2006. The viability of any or all of the other new drill centres noted above is contingent on successful delineation drilling results over the coming 3 to 5 years.

The Canada-Newfoundland & Labrador Offshore Petroleum Board (C-NLOPB), the lead Responsible Authority (RA) advises that Work Authorization(s) under the Atlantic Accord Implementation Act must be issued to permit the South White Rose Extension drill centre or any other drill centre development to proceed and hence a Screening pursuant to the Canadian Environmental Assessment Act (CEAA) is required.

This document provides a project description to assist the C-NLOPB in fulfilling its responsibilities under the Canadian Environmental Assessment Act Federal Coordination Regulations. The project description with the scoping and technical advice received from the C-NLOPB, other Federal Agencies, and stakeholders consulted by Husky will guide the preparation of a Screening Level environmental assessment.

If technically appropriate and relevant the assessment will consider amended cuttings dispersion and other modeling needed to support the potential environmental effects analysis. No new field data collection is foreseen as necessary at this time. Husky also recognizes that its existing environmental effects monitoring program will need to be amended to accommodate measurement of effects from the proposed new drill centres.

During the course of the assessment, Husky will consult with stakeholders with an interest in the project. Those consulted and the results of those consultations will be in the environmental assessment report.

The regional scale study area boundaries will take into consideration those established for previous project assessments e.g., Hibernia, Terra Nova and White Rose Developments and Husky's Jeanne d'Arc exploration and delineation drilling programs. The valued ecosystem components (VECs) will encompass, but may not be limited to, Marine Birds, Fish and Fish Habitat, Commercial Fisheries, Marine Mammals and Sea Turtles. Identification and evaluation of "species at risk" will also form part of the assessment as a valued ecosystem component.

The environmental assessment will also contain information on federal agencies that may be involved in the Project or affected by it, including the nature of agencies'

involvement. It is foreseen that Fisheries and Oceans Canada and Environment Canada responsibilities and interests will be affected in terms of fish habitat alteration, species at risk, navigable waters, and ocean disposal. The environmental assessment will also identify any other permitting and approval processes that may apply.

Based on previous experience the following environmental permits, issued by the federal agencies referred to above, will be required to support the project:

- Ocean disposal permit from Environment Canada to support disposal of dredged materials.

- Habitat Alteration, Disruption, Destruction Authorization from Fisheries and Oceans Canada supported by an appropriate habitat compensation plan.

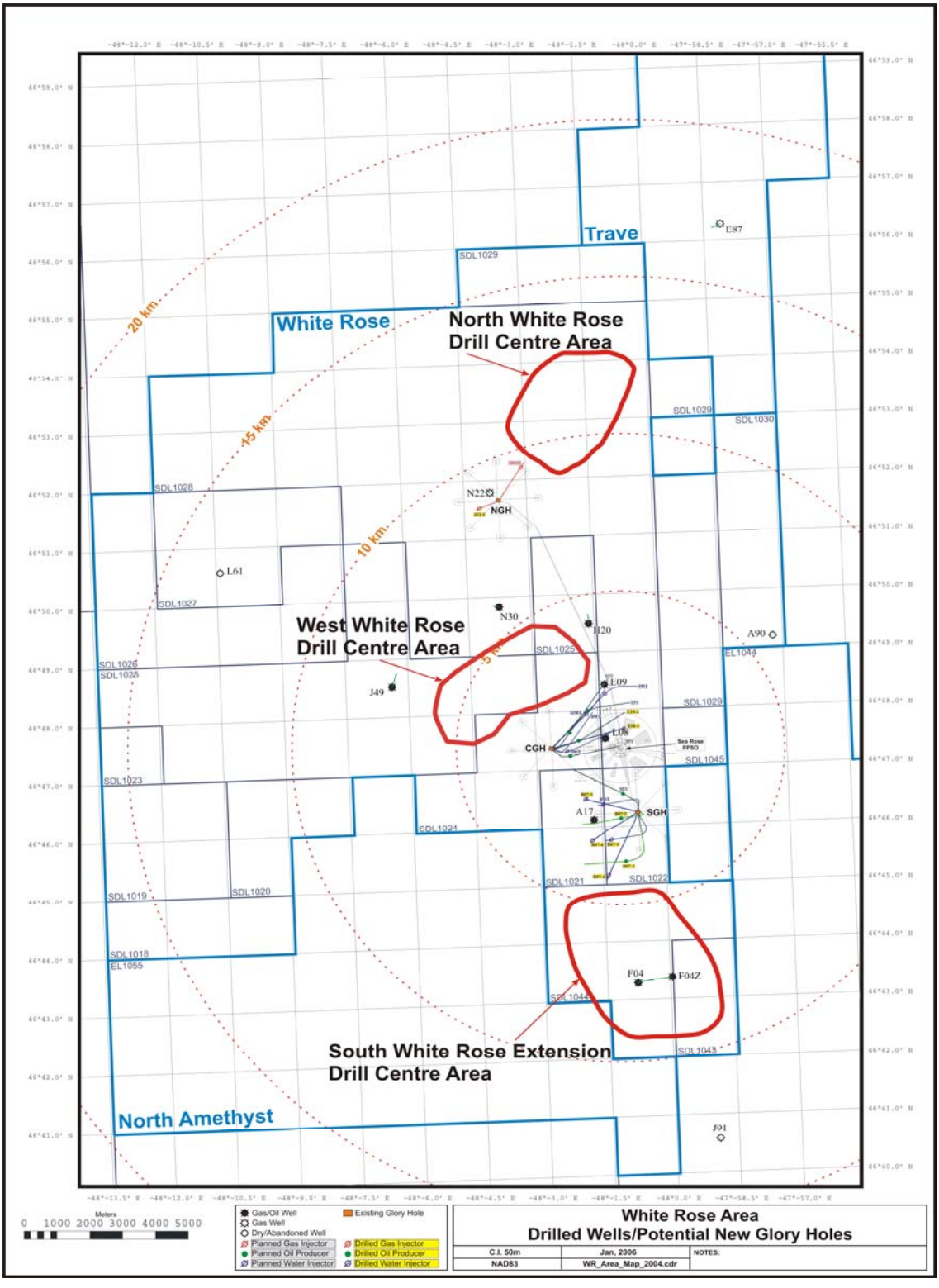

Figure 1: General Locations for Proposed Drill Centres

Existing Glory Hole Designations: NGH - Northern Glory Hole, CGH - Central Glory Hole, SGH - Southern Glory Hole

2.0 The Proponent

Headquartered in Calgary, Alberta, Husky Oil Operations Limited (the Operator) is a Canadian-based integrated energy company serving global customers, committed to maximizing returns to its shareholders in an ethical and socially responsible way, through the dedicated effort of its people. It is involved in:

- Exploration and development of crude oil and natural gas,
- Production, purchase, transportation, refining and marketing of crude oil, natural gas and natural gas liquids and sulfur, and
- Transportation and marketing of refined products.

The Operator is the management and operating company for the Operator's seven Significant Discovery Areas (SDA) and ten Exploration Licenses, offshore Newfoundland. The White Rose field, the largest of the Operator's SDA's, is estimated to contain approximately 200-250 million barrels of recoverable reserves.

Operator Contacts concerning this project are:

Ken Dyer HSEQ Manager Husky Oil Operations Limited Suite 801, Scotia Center 235 Water Street St. John's, NL A1C 1B6	Phone: (709) 724-3900 Fax: (709) 724-3993 Ken.dyer@huskyenergy.ca
Chris Laing Development Manager, East Coast Operations Husky Oil Operations Limited Suite 901, Scotia Centre 235 Water Street St. John's, Newfoundland A1C 1B6	Phone: (709) 724-4760 Fax: (709) 724-3980 Chris.laing@huskyenergy.ca

2.1 Proponent's Business Vision and Objectives

Husky's East Coast Development long-term goals are to continue to develop and exploit oil and gas exploration and production in the Newfoundland and Labrador Offshore Area. We will deliver superior Shareholder value through financial discipline, safe and reliable operations, continuous improvement and long-term growth. We will strive to:

- Aggressively increase our portfolio of hydrocarbon reserves.
- Generate competitive returns of investment.
- Be a core producing area for Husky Energy running quality operations, where nobody gets hurt, the environment is protected, opportunities for growth are effectively realized, and where our people enjoy coming to work and are supported to realize their potential.
- Execute cost-effective programs, while maintaining health, safety and environmental responsibilities and meeting all due diligence requirements.
- Establish and maintain cost-effective relationships with suppliers and contractors, creating long-term mutual benefits and a local infrastructure.
- Optimize synergy opportunities with other operators in the area.

Husky's East Coast operations are managed from its local offices and supported using the logistics infrastructure and resources that have been established in St. John's, Newfoundland & Labrador. Consistent with the legislative requirements of the Canada Newfoundland Atlantic Accord Implementation Acts, Husky Oil Operations Limited is committed to enhancing the business opportunities for Canada and Newfoundland as outlined in the Company's Canada-Newfoundland and Labrador Benefits G/L outlined in the Benefits Plan. Consequently, Husky will utilize the services of Newfoundland and other Canadian companies and personnel wherever possible.

The work associated with this project description will be managed by Husky's East Coast Operations Development Manager located in St. John's. The onshore management team that supports the Development Manager includes: the Drilling and Completions Manager, Sub-Surface Manager, Production Operations Manager, Logistics Manager, Administration Manager, HSEQ Manager and the Regulatory Affairs and Administration Manager.

Offshore, the Management teams will vary by project phase and requirements but will generally consist of a:

- **Drilling Operations Team** led by the Drill Rig(s) Offshore Installation Manager(s) (OIM) and Offshore Senior Drilling Supervisor reporting to Drilling Superintendent and the Drilling and Completions Manager onshore.
- **Subsea Construction and Installation Team** led by the Subsea Manager and the Subsea Installation Manager onshore will manage the design and construction of the glory holes and the design construction and installation of the subsea drilling

templates, well head appurtenances and flow lines connecting the new drill centres to the existing White Rose Development subsea and production infrastructure. The work involved in the construction of the glory holes and the installation of the incremental subsea infrastructure will be carried out by sub-contractors managed by Husky.

Once the project described herein is completed, the operating facilities will be integrated with the White Rose Production Operation's organization under the Production Operations Manager.

Logistical support will be managed through Husky's Logistics Coordinator. The Logistics Coordinator manages supply vessels, helicopters, and materials movement activities for Husky's East Coast operations. No new shore-based facilities will be constructed for this project. The transport of personnel to and from St. John's and the Operating Area will be conducted mainly by helicopter but, in isolated situations, supply vessels may be used.

3.0 Project Description

3.1 Overview

The following sections provide an overview of the proposed project insofar as it is available at this time.

Husky Oil Operations Ltd. proposes to undertake an expansion of its White Rose Development in the Jean d'Arc Basin on the Grand Banks within its Significant Discovery License area including SDL's 1025, 1024, 1028, 1043 & 1044.

Four new drill centres are being proposed:

- **South White Rose Extension** (one glory hole with drill centre) approximately five kilometres due south of the current Southern Drill Centre in approximately 120 meters of water.

- **West White Rose** (one or two glory holes with one or two drill centres) approximately 1.5 to 3 kilometres northwest of the current Central Drill Centre in approximately 120 meters of water.

- **North White Rose** (one glory hole with drill centre) approximately 3 kilometres northeast of the current Northern Drill Centre in approximately 125 meters of water.

Figure 1 depicts the general locations of the new drill centres in the context of the overall White Rose Development.

The number of wells that will be drilled in each glory hole has yet to be finally determined and as noted elsewhere will be dependent on the results of delineation drilling and economic analysis. However, for planning purposes it will be assumed that each of the four drill centres could potentially support the following distribution of wells if all the drill centres are constructed over the next five years:

- South White Rose Extension: up to 6 wells.
- West White Rose: up to 18 wells.
- North White Rose: up to 4 wells.

It is proposed that initial construction operations will start with glory hole excavation at South White Rose Extension during the 2006 construction season with drilling and subsea construction operations and tie-ins to the SeaRose FPSO occurring over the 2007 – 2008 period. The time table for the remainder of the construction, installation and tie back operations is provided in Section 3.1.7 of this document.

As noted previously, the construction of the West and North White Rose drill centres is subject to successful delineation drilling results, and full economic assessment prior to committing to development.

3.2 Glory Hole Construction

The glory holes needed to support establishment of the drill centres will be excavated to -9 to -11 meters below existing seabed level to protect the subsea wellheads and templates from iceberg scour. This will likely be accomplished by use of a trailing suction hopper dredge operation however; the option of using a clamshell technology is possible.

The glory holes will be excavated to a “floor” dimension of 70 by 70 meters with sloped sides as required for stability and the flowline ramps. Approximately of 105,000 cubic metres of seabed sediment per glory hole (provisional upon final design and length of side slopes) will be moved and dumped at a previously used dumpsite approximately 3 kilometres south-southeast of the current southern glory hole if suction hopper dredge technology is used or deposited immediately adjacent to the glory hole in question if clam shell excavation technology is used.

Flow line protection will be provided near the flow line exits from the glory holes to protect from drill rig anchor chains during drilling operations by concrete mattresses or impact resistant “plastic” sleeves. The flow lines themselves are not planned to be buried in the seabed.

3.3 Subsea Equipment Installation Activities

The subsea equipment installation will be done in a similar fashion to the same work previously carried out for the other White Rose drill centers in recent years – i.e., flowlines, umbilicals, and subsea manifolds with control system components.

The new South White Rose Extension, West White Rose and North White Rose drill centers will be tied into the existing and southern, central and northern glory holes respectively using subsea flowlines or one or more of them may be tied back directly to the SeaRose FPSO**.** For tie backs into the existing glory holes the workscope will involve shutdown and purging of the existing equipment in the glory holes, removal of some flanged equipment, tie-in and extension of all the flowlines and control lines to the

new drill centers. Once complete, the system will be brought back into service through the existing infrastructure at the SeaRose FPSO.

3.4 Drilling Operations

Husky's current drill rig contractor or a separate contractor will operate a Mobile Offshore Drilling Unit (semi-submersible, jack-up or drill ship) to drill the wells associated with this project.

Whichever drill rig is employed will have been constructed to an appropriate design for the operating area and physical environment. The drilling unit will have the necessary capability for drilling in the water depths required and the functional specifications of the well design. The rig will have a valid Certificate of Fitness for Canadian waters issued by the rig contractor's Certifying Authority; a Transport Canada Marine Safety Inspection will be conducted as part of the requirements for a Letter of Compliance issued by that agency.

The rig contractor(s) will have an operations office located in St. John's, Newfoundland. The strategy concerning drilling unit crewing plans will be presented in the associated Canada-Newfoundland Benefits Plan and/or components of the Safety Program update documentation. Any foreign Worker's Permits will be sought as the overall project crew complement is finalized.

3.5 Marine Support Vessels

Husky's existing fleet of Anchor Handling Tug Supply (AHTS) and Supply/Standby vessels will be used to support the offshore construction and installation operations associated with this project. However, depending on the type of drill rig used the number of vessels may need to be supplemented. These vessels are and will be Canadian Flagged, crewed and will be managed from the Contractor's office in St. John's, Newfoundland. Letters of Compliance for each chartered standby vessel will be in place prior to Work commencing.

3.6 Helicopter Support

Cougar Helicopters Inc. (CHI) have been contracted to provide helicopter support for the Project and will have access to a Sikorsky S61, AS-332L Super Puma or other equivalent rated aircraft pooled with all operators in St. John's to service the Company's requirements. Cougar Helicopter Inc. will also provide all auxiliary flight services including First Response Equipment and technicians, alternate landing site at Long Pond complete with weather station, aviation fuel, and helicopter passenger transportation suits and an aircraft maintenance and passenger handling facility located at the St. John's Airport. Cougar Helicopters Inc. will utilise their own internal flight following service using the Blue Sky tracking system.

3.7 Shorebase Facilities

The Project will be managed and operational decisions will continue to be made from Husky Oil Operations Limited's existing Regional Office in St. John's at Suite 901, 235 Water Street.

A. Harvey and Company Ltd. will provide marine base facilities to support Project activity and to the extent necessary it is anticipated that Pier 17 will provide the appropriate wharfage for the dredge vessel. Existing port facilities are capable of servicing multiple operations with the existing infrastructure including office space, crane support, bulk storage and consumable (fuel, water) storage and delivery capability. The existing infrastructure and activity at the Harvey's facility enables the industry to optimise the utilisation of supply vessels and other logistic assets.

Warehouse facilities will be provided by Husky's contracted warehouse provider (ASCO) and Project contractors as required and will consist primarily of storage for tubular goods, and the equipment belonging to the rig contractor which can be stored onshore.

Operation and co-ordination service of voice and data communication services from offshore installations and vessels will be provided from the central facility Stratos Wireless Communications in St. John's. The primary communications link between the offshore installation(s) and the Project Operations office in St. John's will be via a dedicated C-Band satellite service. Details on communications systems are outlined in the Husky East Coast Emergency Response Plan currently on file with the C-NLOPB.

3.8 Project Phases and Scheduling

The project is considered to consist of 6 phases as follows:

Project Phases	Timing
Glory Hole Excavation & TGB Installation	
South White Rose Extension Glory Hole	Summer - Fall 2006
West White Rose Glory Holes (2)	Summer - Fall 2007
North White Rose Glory Hole	Summer - Fall 2008/2009
Drilling	
South White Rose Extension	Fall 2007-2008
West White Rose	Fall 2007-2009
North White Rose	Fall 2008 -2010
Subsea Production Equipment Installation	
South White Rose Extension	Fall 2007-2009
West White Rose	Fall 2008-2010
North White Rose	Fall 2009-2011
Subsea Flowline Installation and Tie-ins	
South White Rose Extension	Fall 2007-2009
West White Rose	Fall 2008-2010
North White Rose	Fall 2009-2011
Production Operations	August 2008 – 2020
Abandonment	After 2020