

Application for Approval of the
Development Plan for

Taglu Field

Project Description

Submitted to:
National Energy Board

Submitted by:
Imperial Oil Resources Limited

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PREFACE

**APPLICATION FOR APPROVAL OF
THE DEVELOPMENT PLAN FOR
TAGLU FIELD
PROJECT DESCRIPTION****EXECUTIVE SUMMARY****P.1.1 PURPOSE**

Imperial Oil Resources Limited, a wholly owned subsidiary of Imperial Oil Limited and the registered interest holder of Significant Discovery Licence (SDL) 063 for the Taglu field, is applying for approval to develop the natural gas and natural gas liquids (NGLs) contained within the Taglu field. The Taglu field is located near the northern margin of the Mackenzie Delta, about 120 km northwest of Inuvik and about 70 km west of Tuktoyaktuk.

This development plan application is being submitted to the National Energy Board (NEB) for approval under the *Canada Oil and Gas Operations Act* (COGOA).

P.1.2 SCOPE

Taglu is currently the largest discovered onshore natural gas field in the Mackenzie Delta. It is one of three natural gas fields proposed for development as part of the Mackenzie Gas Project to deliver sweet natural gas and NGLs to market. The other two gas fields are Parsons Lake and Niglintgak. In addition to the field development facilities at Taglu, Parsons Lake and Niglintgak (the anchor fields), the project will consist of:

- the Mackenzie gathering system, consisting of:
 - gathering pipelines to transport production from the three gas fields to a facility located near Inuvik (the Inuvik area facility)
 - the Inuvik area facility, which will process production from the three gas fields into gas and NGLs
 - a pipeline to transport NGLs from the Inuvik area facility to Norman Wells
- the Mackenzie Valley pipeline, which will transport gas from the Inuvik area facility to an interconnection with the NOVA Gas Transmission Ltd. system in Alberta

P.1.2 SCOPE (cont'd)

This development plan application is limited to the Taglu field only and describes the general approach to developing the natural gas resource from the Taglu reservoir.

Supporting documents for this development plan application include the:

- Mackenzie Gas Project Environmental Impact Statement (EIS), Volumes 1 to 8
- Mackenzie Gas Project Public Consultation, Volumes 1 and 2

P.1.3 RESOURCE

The Taglu field, discovered in 1971 by Imperial Oil Enterprises with the successful drilling of the Imperial Oil Enterprises Taglu G-33 exploration well, is well delineated with data from five wells and a 3-D seismic survey. The trap is a high-side faulted anticline with dip closure in three directions and a cross-fault seal in the fourth direction. The field has a closure area of about 30 km² and 640 m of relief from crest to spill point. Reservoir quality is good, and comprises fluvial and deltaic sands deposited about 50 million years ago.

Taglu contains an estimated 109 Gm³ (3.8 Tcf) of raw gas-in-place. The ultimate gas recovery is expected to be 81 Gm³ (2.8 Tcf). The initial production rate is about 12.6 Mm³/d (445 MMscf/d), declining over the predicted 30-year life of the field.

P.1.4 DEVELOPMENT

The development plan for Taglu, which is a northern frontier natural gas field, is flexible enough to accommodate contingencies that could arise during the detailed design, construction and operation of the development. The Taglu development concept was assessed as an integral component of the Mackenzie Gas Project. Opportunities to obtain synergies with the other two anchor gas fields and take advantage of coordinating infrastructure requirements for the Mackenzie Gas Project were evaluated.

The Taglu field will be developed in stages. When complete, the following will be located on a common site:

- a well pad consisting of:
 - 10 to 15 production wells
 - one or two disposal wells
- a gas conditioning facility
- above-ground flow lines from the well pad to the gas conditioning facility
- supporting infrastructure, including an airstrip

Public consultation feedback from residents in potentially affected communities and from other interested parties has been incorporated into this development plan. Consultation will continue as details of the development plan are further defined. Imperial Oil Resources Limited is confident that developing Taglu according to this plan will allow recovery of the hydrocarbon resources from Taglu in a manner that considers the environment and current land uses, while meeting the technical, safety and integrity needs of facilities operating in a northern frontier environment.

Subject to the timely receipt of regulatory approvals and a decision to proceed with construction, construction activities are expected to begin in 2006. In 2007, construction of the site infrastructure will begin.

Drilling will start early in 2008 and will continue year-round for about 16 months to complete the first stage.

Natural gas production is expected to begin in 2009.

Future phases, included as part of this development plan, will occur about three to 10 years after start-up and will include drilling additional wells and adding inlet compression.

P.1.5 COST

The estimated capital cost to develop the Taglu field is about \$935 million (constant Q1 2003 Canadian dollars), which includes the initial development phase and all future drilling and compression costs.

The estimated annual cost to operate and maintain facilities at Taglu over the 30-year life of the field is about \$18 million (constant Q1 2003 Canadian dollars).

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