

CONSTRUCTION AND INSTALLATION**APPLICATION FOR APPROVAL OF
THE DEVELOPMENT PLAN FOR
PARSONS LAKE FIELD
PROJECT DESCRIPTION****CONSTRUCTION EXECUTION PLAN****9.1.1 SCOPE**

The development of the Parsons Lake field will begin with the construction and installation of the north pad, all-weather airstrip and connecting access road. Production start-up is scheduled for Q4, 2009. To accomplish this, construction must start in Q4, 2006.

This section describes the activities required to construct and install the north pad, airstrip and road. The south pad will be developed later in the life of the Parsons Lake field, as will be satellite wells, if they are required. The facilities for the south pad and satellite wells will each be constructed and installed, likely during a single winter season, using ice pads for construction surfaces. The use of granular resources for these facilities will be limited, relative to the north pad.

Schedule dates and some details depend upon the actual dates of receipt of regulatory approvals and the conditions they will set.

9.1.2 CONSTRUCTION MANAGEMENT PHILOSOPHY

ConocoPhillips' construction management philosophy for the Parsons Lake field is to develop an integrated team that combines the experience and skills of employees with the knowledge and experience of contractors and consultants. The objective of the construction plan is to ensure the safety of the workers, the quality of the facilities, and the fulfillment of benefits obligations and impact mitigation plans, while maintaining the cost and schedule requirements of the development. The construction plan will also comply fully with all applicable regulatory requirements.

Parsons Lake field development involves phased construction activities for constructing the:

- north pad
- all-weather airstrip and connecting access road
- future north pad compression facilities
- future south pad
- future satellite wells, if required

The conceptual design of these facilities has been completed. An experienced, competent engineering contractor will carry out the preliminary engineering design of the north pad, airstrip and connecting road only, as the other facilities

9.1.2 CONSTRUCTION MANAGEMENT PHILOSOPHY (cont'd)

are not initially required. A specific location for the airstrip has not been identified at the time of preparation of this development plan.

Various contract packages will be created for supplying, fabricating, constructing and installing the north pad facilities. The contracting philosophy in Section 1 will be the basis for determining how each package will be contracted. Expressions of interest will be requested for all of these packages. Evaluation of contractors' expression of interests will be based on the following criteria:

- technical suitability
- quality of work
- client references
- performance and management in health, safety and environment (HSE)
- reliability
- cost
- scheduled delivery
- Aboriginal, northern and other Canadian content

All successful contractors will be required to follow ConocoPhillips' guidelines and management policies to create a successful field development at Parsons Lake. When the north pad facilities are successfully completed and commissioned, custody of the facilities will be turned over to ConocoPhillips' operations group.

9.1.3 CONSTRUCTION SCHEDULE

Preliminary engineering started early in 2004, and will be followed by detailed engineering in mid-2005 (see Section 1.5, Project Scope). Following regulatory approval of this development plan, procurement and construction activities for the north pad will begin.

Construction activities are planned to begin in Q4, 2006, contingent upon receipt of all other required regulatory approvals, with hauling and spreading of granular material at the north pad site and airstrip. The granular material will be dewatered and compacted during the summer of 2007. During Q1, 2008, pile installation activities will take place at the north pad. In summer 2008, the modules are planned to be transported by barge to a staging site. During Q1, 2009, the modules will be transported from the staging site by truck over a winter road to the Parsons Lake field. Planning indicates that the modules will be installed, commissioned and started up in Q4, 2009.

The schedule will be updated regularly, based on improved information about equipment availability, material lead times and resource availability.

9.1.4 MAJOR MATERIALS AND SERVICES

Construction of the north pad facilities will require the following major materials and services:

- about 25 to 30 modules (arriving in 40 to 80 pieces)
- cranes
- heavy equipment, such as:
 - bulldozers
 - graders
 - compactors
 - front-end loaders
- other construction equipment, such as:
 - trucks, BobCats and forklifts
 - lighting plants
 - portable heaters
- granular material
- about 150 construction personnel
- a temporary construction camp

The size of cranes required for construction depends on the size and weight of equipment that will be shipped. The expected crane requirements are:

- two 135 t mobile cranes to set the molecular sieve dehydration vessels, which will be shipped loose
- one 59 t rough-terrain crane for the remainder of the construction work

In summer, material and equipment will be transported by barge to a staging site. In winter, the material and equipment stored at the staging site will be transported to the work site by truck over a winter road.

9.1.5 CONSTRUCTION ACTIVITIES

Before the main construction period of six to ten months begins in late 2008, some early work is required, such as:

- levelling and grading
- granular material pad, airstrip and road construction
- pile installation

The main activities during construction include having modules transported by truck to the site, followed by field construction to interconnect and test the modules. The main construction period requires careful coordination of the following key elements:

9.1.5 CONSTRUCTION ACTIVITIES (cont'd)

- transporting modules by barge to a staging site in summer 2008
- transporting modules from the staging site to the site by truck via winter road early in 2009
- supplying fuel to the site
- transporting personnel to the site by fixed-wing aircraft and helicopter
- providing camp accommodation for about 150 construction workers
- coordinating construction activities from 2008 through 2010 with simultaneous drilling operations

9.1.6 CONSTRUCTION STAGES

The major stages of construction involve:

- module fabrication
- infrastructure and logistics
- site preparation
- pile installation
- module installation
- site installation and precommissioning

9.1.6.1 Module Fabrication

The proposed construction method is based on a modularization concept requiring the following sequence of activities:

1. Fabricate modules at module fabrication facilities, most likely in Alberta. It should take three to six months to construct them. Modules must be sized so that they can be transported by truck and must not exceed a weight that meets winter road guidelines.
2. Transport the modules by truck to Hay River, where they will be stored until the barge season of 2008 begins.
3. Ship the modules by barge from Hay River to the staging site, where they will be unloaded and stored until a winter road can be built to the Parsons Lake site.
4. Transport the modules to the Parsons Lake site by truck over a winter road or by a low-ground-pressure vehicle early in 2009. Set the modules on piles.

9.1.6.2 Infrastructure and Logistics

The north pad will require about 45 to 50 barge loads of material and equipment for construction. Fuel storage and fuel will be among the first items required on site. Other important items required early include:

- facilities for transporting personnel
- winter road construction
- adequate camp facilities

9.1.6.3 Site Preparation

Site preparation consists of providing granular resources for fill and levelling the site, airstrip and access road. It also includes constructing short permanent access roads for construction requirements and laydown areas.

9.1.6.4 Pile Installation

Piles will be required for the Parsons Lake facility at the north pad. Piling equipment will likely be brought in by barge during the summer of 2007 and transported from the staging site to the construction site by truck over a winter road early in 2008. Two pile-drilling units will likely be needed to complete the pile installation. The piles will be frozen into the ground using a sand slurry mixture.

9.1.6.5 Module Installation

Modules shipped to the staging site by barge in the summer of 2008 will likely be unloaded using Scheuerle-type transporters. Modules are planned to be constructed with drop legs so that they can be unloaded without using heavy cranes. Modules will be unloaded and stored at the staging site until a winter road is constructed, planned for early in 2009. At the field installation site, modules will be placed on previously set piles.

9.1.6.6 Site Installation and Precommissioning

The site installation and precommissioning stage of the construction work will:

- require a peak workforce of about 150
- involve numerous craft disciplines
- be the longest stage of construction, at about six to 10 months

As construction of the north pad and its facilities will start in the winter, temporary lighting will be required.

9.1.7 PERSONNEL TRANSPORT AND ROTATION

Providing and coordinating transportation for drilling and construction personnel will be an important aspect of the north pad development. The primary methods of transportation will be by:

9.1.7 PERSONNEL TRANSPORT AND ROTATION (cont'd)

- fixed-wing aircraft
- helicopter

The planned facilities construction work schedule is based on 21 days of work followed by seven days off. The construction work day is based on a 12-hour work period. Two drilling crews will each work one 12-hour shift per day. They will work a schedule of two weeks on and one week off. The work schedule and work day might be revised when the contractors have been awarded the work.

9.1.8 DRILLING PAD

The portion of the north pad comprising the drilling pad foundation will be completed before facilities construction. A gravel work pad will be built to provide stability and prevent the ground from thawing. For details on drilling, see Section 6, Drilling and Completions.

9.1.9 QUALITY ASSURANCE

ConocoPhillips will develop a quality management plan that will provide plans and processes for checking, measuring and verifying the quality of all aspects of the work, including:

- design input data and calculations
- design drawings, specifications and other output
- mechanical inspection and testing during fabrication, construction and installation
- commissioning and start-up

CONSTRUCTION AND INSTALLATION

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CONSTRUCTION INFRASTRUCTURE

9.2.1 CAMPS**9.2.1.1 Construction Requirements**

The estimated peak workforce for facilities construction is about 150, including:

- inspectors
- camp support staff
- third-party and client representatives
- construction workers
- welders
- electricians

This peak will occur during the site installation phase of construction. As this phase will start in the early part of 2009 and extend into the latter part of 2009, a camp with facilities to accommodate this workforce will be installed at the north pad in the early part of Q1, 2008.

During earlier construction activities, such as site preparation and pile installation when fewer personnel are required, multiple 30 to 35-person skid camps will be used.

South pad construction will likely require a peak workforce of about 60.

9.2.1.2 Drilling Requirements

Camp accommodation for up to 120 people will be required. This camp will be mobilized in early winter 2007 and installed at the north pad. It is expected to remain there for the duration of the north pad drilling program and be demobilized in early winter 2011.

A camp of similar capacity will be mobilized for the south pad drilling program in early 2015. It will be demobilized in 2017, after completion of drilling and before the close of the winter road season. This camp will likely be located at the north pad, although a south pad location will be considered.

A camp for up to about 40 people will likely be required at Tuktoyaktuk or Lucas Point for logistical support during 2007–2008. An existing facility would likely be used at Tuktoyaktuk.

9.2.2 SEWAGE TREATMENT SYSTEMS

Sewage will be treated by temporary facilities provided with camps. The sanitary sewage will be bio-treated with a sludge-free system that will treat the sewage to a level that renders it acceptable to be disposed of at an approved location.

9.2.3 STAGING AND STOCKPILE SITES

Northern staging and stockpile sites for the Parsons Lake field will be located at one or more of Tuktoyaktuk, Swimming Point, Lucas Point and Inuvik. ConocoPhillips has been evaluating access options for the Parsons Lake field. The following is an example of one plan currently being evaluated:

- late 2006 – construct granular material pad and airstrip. Use Lucas Point for stockpile and staging and an over-lake winter road, via the traditional Pete's Creek route, for final transport to site.
- late 2007 – mobilize one drilling rig and two facilities pile rigs. Use Tuktoyaktuk for stockpile and staging and an overland winter road for final transport to site.
- late 2008 – mobilize modules and resupply drilling rig. Use Lucas Point for stockpile and staging and an overland winter road for final transport to site.
- late 2009 – resupply drilling rig. Use Lucas Point for stockpile and staging and an over-lake winter road, via the traditional Pete's Creek route, for final transport to site.

9.2.4 GRANULAR RESOURCES

Preparing the site for the north pad, airstrip and connecting access road consists primarily of:

- adding granular fill, where required
- levelling the plot plan area, where required and possible

The site terrain is hilly and some levelling might be required to reduce the amount of granular material required for fill. The supply of granular resources will likely come from a borrow site that has been identified about 2 km southeast of the north pad. However, ConocoPhillips is coordinating the location of the actual borrow sites with the Mackenzie Gas Project.

Granular resources will likely be:

- hauled to the site, spread and stockpiled in late 2006 and early 2007
- compacted in late summer 2007

This plan allows time for frozen granular material to thaw, drain and settle. The compaction equipment will likely remain on site to complete the compaction in the summer of 2007 and be demobilized via the winter road in the first part of 2008.