

1.0 INTRODUCTION

ExxonMobil Development Company (ExxonMobil) has prepared this Project Description to support the Environmental Impact Statement (EIS) process, as well as state, federal and North Slope Borough (NSB) permitting processes, associated with the Point Thomson Gas Cycling Project. The document is intended as a core (controlled) reference that describes the major design, construction, and operational features of the project. The Project Description will be issued as a series of revisions as project engineering and definition progress at key intersections of the engineering, EIS, and permitting processes. The Project Description is designed to ensure that all reviewers (state, federal, local and the public) have the same information and level of detail to assess the proposed project.

Revision B (Rev. B) of the Project Description as a draft has been produced to provide the agency EIS team and their third-party contractor with the current project design features and development concept as envisaged at the time of preparation of the Preliminary Draft EIS. Rev. B reflects the design of the project near the completion of preliminary engineering. It is also intended to provide project information to support pre-application process discussions that ExxonMobil has entered into with federal and state agencies and the NSB. Further, it will be the core support document for state and federal permit applications scheduled to be submitted to the regulatory agencies in the spring of 2003. Rev. B draws upon Rev. A of the Project Description which was issued on September 23, 2002, at the start of the EIS process, and updates information to the extent ongoing engineering studies have further defined the development concept. Rev. B describes ExxonMobil's base case project design as currently envisaged. Also, Rev. B, like Rev. A, does not detail the extensive environmental and safety mitigation measures already incorporated into the project design (please refer to *The Point Thomson Gas Cycling Project Environmental Report*¹ for details on project mitigation measures).

The basic development concept and design features were developed during Conceptual Engineering, which was completed in 2001, and were further described in the Environmental Report (2001) and its addendum (2002),² and in Rev. A (2002). The concepts and features have not changed substantially since. Currently, it is envisaged that the basic project features such as the location of the facility and well pads, and of the export pipeline route, will remain essentially the same.

Where appropriate, this Project Description contains comments on the level of project-scope definition to provide an understanding of where continuing engineering work will provide further

¹ URS Corporation (2001). *Point Thomson Gas Cycling Project Environment Report*. Prepared for ExxonMobil Production Company on behalf of the Point Thomson Unit owners by URS Corporation (Anchorage, Alaska). July 30, 2001.

² URS Corporation (2002). *Point Thomson Gas Cycling Project Environmental Report Addendum*. Prepared for ExxonMobil Production Company on behalf of the Point Thomson Unit owners by URS Corporation (Anchorage, Alaska). July 31, 2002.

definition over the next 12 months or so. Those comments draw attention to project features that may change as a result of completion of Preliminary Engineering. The principal changes between Rev. A and Rev. B include expansion of the central pads (increase of about 10 acres) due to results from safety studies which resulted in placement of the camp and other manned facilities south of the process facilities. In addition, the East and West Pads have been slightly increased in size (about one acre each) and reoriented. The alignments of the export pipeline and gathering lines have been optimized to avoid ponds and lakes, and to reduce stream crossing lengths. Minor adjustments have been made to the infield gravel road alignments and more detail is provided about stream crossings (three bridges and culverts). More definition is provided about dredging methods, disposal and volumes.

This draft of Rev. B of the Project Description will be made final after consideration of comments and to reflect resolution of any project issues in time to support various permit applications. The final Rev. B could be included as an appendix to the Draft Environmental Impact Statement (DEIS) at the Environmental Protection Agency's (EPA's) direction. Rev. B will also support major permit applications to be submitted to the State of Alaska and NSB and for the Alaska Coastal Management Program (ACMP) consistency review process that should be initiated shortly thereafter.

This draft of the Project Description includes two appendices, which have been added since the issuance of Rev. A. Appendix A provides an overview of rehabilitation activities (subject to owner approval) for the old gravel exploration sites in the Point Thomson Unit. The inclusion of this summary relates to the fact that the Point Thomson Gas Cycling Project, if progressed, affords a logistical opportunity to conduct rehabilitation work and, in some cases, reuse of the gravel. Some of the pads were constructed before implementation of Section 404 jurisdiction on the North Slope by the U.S. Army Corps of Engineers (Corps), and thus the rehabilitation obligations for these pads rest primarily with the lessor, the State of Alaska, Department of Natural Resources (DNR). Rehabilitation plans for two of the pads subject to Corps permits were submitted to the Corps in January 2003. Another site with a Corps permit is the Point Thomson No. 3 pad, which is planned to be incorporated into the Central Facilities/Central Well Pad.

Appendix B provides a draft mining and rehabilitation plan for the proposed Point Thomson gravel mine site. This plan will be required as part of ExxonMobil's submittal to the DNR for a Material Sales Contract.

1.1 PROJECT OWNERS

ExxonMobil proposes to develop the Thomson Sand reservoir in the Point Thomson Unit located east of Prudhoe Bay, Alaska. The Point Thomson Unit is composed of multiple state leases with different ownerships. ExxonMobil is the Unit Operator and has a working interest in the Unit of approximately 36 percent (%). Other major working interest owners include: BP Exploration Alaska, Inc. (~31%), ChevronTexaco (~25%) and ConocoPhillips (~5%). Other minor interests comprise the remaining 3%.

1.2 PURPOSE AND NEED

1.2.1 Purpose of the Project

The purpose of the proposed project is to produce gas condensate from the Point Thomson Unit and deliver that condensate to the Trans Alaska Pipeline System at Prudhoe Bay for shipment to market. This Project Description provides a summary of the current development concept, which has been selected based on engineering, economic, and environmental evaluations conducted during Conceptual Engineering.

1.2.2 Need for the Project

Development of this resource will help the United States meet domestic energy demand. Initial average annual production of condensate is expected to be approximately 75,000 barrels (bbl) per day. It is estimated this project could sustain economic production for 30 years or longer.

Through taxation and creation of jobs, the Point Thomson Gas Cycling Project will also provide economic benefits to the state and local communities including the NSB. This will include both temporary jobs during drilling and construction, and long-term jobs supporting permanent operations. Over the life of the project, significant benefits will accrue to the state and NSB through the payment of royalties, severance, income, and *ad valorem* taxes.

1.3 PROJECT SAFETY, HEALTH, AND ENVIRONMENTAL (SHE) OBJECTIVES AND STRATEGIES

ExxonMobil's primary SHE objective is to deliver exemplary safety, health, and environmental performance by providing a workplace free from accident and illness. Goals of this objective are no lost-time incidents, and overall safety, health, and environmental performance that equals or exceeds the best of international operators.

Strategies to ensure flawless execution of this objective include:

- Employing contractors experienced in the Alaskan North Slope environment, and keeping scope and execution approach within their proven capabilities;
- Learning from experience of prior projects, particularly those on the North Slope;
- Leveraging project management resources via an Engineering Procurement Construction Management contractor;
- Using proven ExxonMobil project management systems and practices;
- Engaging co-venturers via ongoing consultation and formal reviews;
- Including experienced personnel from co-venturers in the project team;
- Focusing on interface management and emphasizing ExxonMobil's high business ethical standards; and
- Implementing sound, verifiable business controls.

There are a number of design and operational features of the project that are planned to protect the environment and lower capital costs of the development including:

- Shore-based extended reach drilling (ERD) to reduce the number of well pads;
- Use of the existing Badami and Endicott sales oil pipelines to transport condensate to the Trans Alaska Pipeline System (TAPS);
- No permanent roads to Badami or Prudhoe Bay infrastructure;
- Use of existing exploration pads and gravel where technically and economically feasible;
- Zero discharge policy for drilling wastes;
- Class I (Industrial) injection well for underground disposal of most waste streams including drilling waste, produced water, and camp discharges;
- Use of existing and new gravel mines at Point Thomson for fresh water sources; and
- Timing and/or routing of marine support operations to minimize potential disturbance to subsistence hunters and whaling crews.

1.4 PROJECT SUMMARY

The Point Thomson Unit is located on the North Slope of Alaska immediately west of the Staines River, approximately 22 miles (mi) east of the Badami Development (Figure 1-1). Thomson Sand is a high-pressure gas reservoir that was discovered in 1977. The reservoir is estimated to contain more than 8 trillion cubic feet of gas and over 400 million stock tank bbl of recoverable condensate.

The Point Thomson Unit owners are proposing to develop this reservoir with a “gas cycling” project. A gathering pipeline system will collect production from well pads located on the eastern and western margins of the reservoir and deliver the three-phase stream to the Central Processing Facility (CPF). Gas, water, and hydrocarbon liquids (condensate) will be separated from the three-phase stream at the CPF. Residue gas³ will be reinjected into the reservoir at the Central Well Pad (CWP) located near the CPF. A small amount of gas will be used to supply fuel for the facility. Produced water will be reinjected into one or more disposal wells at the CWP.

Condensate is the hydrocarbon liquid that condenses from the produced gas as pressure and temperature fall below original reservoir conditions during production and surface handling (gathering and processing facilities). The separated condensate will be dehydrated and stabilized at the CPF to meet pipeline specifications.

The recovered hydrocarbon condensate will be shipped to market through a new 22-mile export pipeline that will extend from Point Thomson to the Badami Development. From there, it will tie into the existing Badami and Endicott sales pipelines, with ultimate delivery to TAPS Pump Station No. 1.

Also located at the CPF will be infrastructure designed to support remote operations including temporary and permanent camps; office, warehouse and shop space; normal and emergency power-generating equipment; fuel, water, and chemical storage; and treatment systems for potable and effluent water. An airstrip will be built south of the CPF, and a dock will be constructed adjacent to the CWP. Because no permanent roads between Point Thomson and Prudhoe Bay or other North Slope infrastructure are proposed, the dock and airport facilities are critical to supporting long-term operations.

³ The term “residue gas” refers to the gas leaving the process facilities and injected into the reservoir. This gas is stripped of condensate and produced water prior to injection, but has not been dehydrated.