SABLE OFFSHORE ENERGY

EXECUTIVE SUMMARY

This volume presents the technical information in support of the Development Plan Application for the Sable Offshore Energy Project. The Project consists of six gas fields that have currently been identified as being suitable for initial development: Venture, South Venture, Thebaud, North Triumph, Alma and Glenelg.

The six fields of the Sable Offshore Energy Project were discovered between 1972 and 1986, and are estimated to contain approximately 85 billion cubic metres (3 TCF) of recoverable gas. Hydropressured and overpressured gas accumulations occur in Late Jurassic and Early Cretaceous porous sandstone reservoirs at depths of 2,800 to 5,000 metres below sea level. Reservoir sandstones are interpreted to be of deltaic and shallow marine origin, associated with a large, ancient delta system which was deposited in the vicinity of the present Sable Island area. Repeated delta advance and retreat resulted in a thick, vertically stacked succession of coarsening upward delta progradation cycles. Marine flooding events provided the shale seals to individual sandstone reservoirs, and gas accumulations are associated with rollover anticlines on the downthrown side of major down to the basin growth faults. Reservoirs have zonal average porosities of up to 20 percent, and permeabilities up to 300 millidarcies. The occurrence of pervasive gain-coating chlorite is characteristic of many of the reservoirs, and is believed to have preserved high porosities at great depth by inhibiting the development of quartz cement. Individual sandstone reservoirs in the six project fields are generally in the range of 20 to 35 metres in thickness.

The current subsurface database discussed in this volume, consists of well information such as logs, cores and drillstem tests from the existing exploration and delineation wells, as well as 2D, and some 3D seismic data acquired during the 1980 s. Petrophysical, Geological and Geophysical studies were conducted during the 1980 s, and early 1990 s. Analyses to date, indicate that modern 3D seismic will significantly improve the ability to map reservoir distribution and quality. Plans are in place for the acquisition of 3D seismic in 1996. Future Geoscience studies will focus on the integration of new 3D seismic data with wellbore data to generate comprehensive geologic and reservoir models for optimized field depletion and reservoir management.

The reservoir engineering section within this volume describes the data used in the development of reservoir characterizations for the purpose of individual field and project simulation studies. The individual field simulation studies were conducted to generate depletion plans. The depletion plans included the predicted number of required development wells, well offtake rates, well locations, completion details and the overall field deliverability and recovery efficiency. The integration of the individual field simulation models with a surface network simulator provided the tool necessary for the study of alternative project development options.

This volume presents the current Project plan that was developed through multiple simulation iterations with full account for the surface, subsurface and market sales gas rate constraints. The current plan begins development with production from Thebaud, Venture and North Triumph and phases in the other fields to maintain a production rate of 11.3 E6M3/d for 16 to 17 years. The simulated event sequence indicates an initial high level of activity for the start of production, with five Venture wells, four Thebaud wells and three North Triumph wells assumed to be predrilled. In production years five through eight, the remaining four Venture wells, two wells in South Venture and five wells each in Alma and Glenelg are added, as required, to maintain the desired level of sales gas.





Drilling and Completion planning activities, incorporates the use of two cantilever jack-up drilling rigs capable of working year round in all water depths associated with the Project fields. The pre-drilling of 12 of the 28 wells planned for the Project commences using both rigs prior to platform installation. The current plan envisages the use of both water-base and oil-base fluids for different sections of the hole depending on wellbore angle, hole stability and total depth of the well.

The current well completion design uses a step-monobore concept allowing for the flexibility to provide up to 5 inch tubing for deep high-pressure zones and 7 inch tubing for the shallower lower-pressured zones as required for deliverability. All wells are planned to contain subsurface safety control valves, polished-bore receptacles and non-damaging packer fluid. The wellhead is planned as a standard configuration with the capability to sever and seal against wireline or coiled tubing. All completions, testing and major workovers are currently planned to be performed by the jack-up drilling rig(s).

When fully developed, the production facilities for the current development plan will include up to six production platforms and an accommodation platform. The central facilities at Thebaud will be continuously manned, and include wellheads, production and processing equipment and an adjacent accommodation platform. The remaining fields, Venture, North Triumph, South Venture, Glenelg and Alma will be developed with normally unmanned satellite platforms. These satellites will support wellheads and minimal processing facilities and be equipped with emergency shelters only. The satellite platforms will be tied-back to the Thebaud platform via subsea interfield flowlines. A single subsea production gathering pipeline will transport the gas from Thebaud to an onshore natural gas processing plant, with its related facilities, in the Country Harbour area. This plant is anticipated to deliver a sales gas volume of 11.3 E6M3/d into the Maritimes and North East Pipeline, supplying markets in Canada and the eastern United States. Natural gas liquids extracted from the produced gas will be fed by buried pipeline to liquid processing, storage, and shipping facilities in the Point Tupper area.

This volume also describes the facility construction and installation philosophy. The objective is to establish a management structure and Project execution plan that will assure a quality product at low cost within an acceptable schedule. The current Project schedule has first gas production by the end of 1999.

The principle associated with the decommissioning and abandonment activities is that such activities will be undertaken in accordance with the regulatory requirements applicable at the time of such activities. Furthermore, abandonment plans will be submitted to the appropriate regulatory authorities for approval prior to abandonment.

The Environmental, Health and Safety Management (EHSM) system proposed for the Project is described in the Development Plan, together with the major steps in the system s development. Key components of the Environmental, Health and Safety Management system include the Project's Safety Plan, the Environmental Protection Plan (EPP) and Contingency Plans. Together these provide the framework for managing and improving operations, in terms of personnel and public safety and protection of the environment consistent with the SOEP Project Principles, including:

- ¥ We will develop this Project with meticulous attention to safety, ensuring that risks to both employees and the public are as low as reasonably possible.
- ¥ We will meet or exceed Canada s tough standards for environmental protection.
- ¥ We will respect the environmental significance of Sable Island, and the Gully.

The policies, standards and practices of the Project are being developed consistent with a philosophy founded on three beliefs:



- ¥ All environmental, health and safety incidents are preventable.
- ¥ Environmental, health and safety objectives must never be sacrificed for expediency.
- ¥ Environmental, health and safety objectives are an integral part of operations objectives.

The Safety Plan is being developed with a deliberate, systematic and efficient approach, ensuring Project activities are planned, organized, executed and maintained in a manner that achieves safety and protects the environment. The Environmental Protection Plan will provide detailed guidance for Project personnel, on how to eliminate or minimize any adverse environmental effects from the Project. In addition, Contingency Plans are being developed to ensure the safety of Project personnel and the public, and to protect both the environment and the Proponents investment by establishing procedures for responding to emergency situations. These deal with the response to, and mitigation of, accidental events affecting the safety of personnel and the public or the integrity if the facilities, and the response to, and mitigation of, accidental release of hazardous substances. An important component of the plans will be coordination with existing industry and government plans, facilities and equipment.

The subject of Project liability and compensation is also addressed in this volume. Liability may be imposed upon a party responsible for an incident or activity that has impacted the environment while conducting offshore operations. The Accord legislation as well as fisheries, shipping and other legislation may impose liability for impacts to the environment arising from offshore operations. Voluntary compensation plans and government policy may also establish a basis for liability and compensation. As part of the Project strategy to address compensation, environmental degradation community concerns and financial responsibility matters, a fisheries compensation plan will be filed during activities leading up to construction of facilities for the Project. Fisheries industry consultation will be ongoing in preparing the plan. Community concerns relating to the environment have been recorded as part of the pre-filing public consultation program and have been used as input in certain Project decisions. Evidence of financial responsibility to address prescribed liabilities that may be incurred in conducting the Project will be provided prior to the commencement of the specific offshore activity in respect of which the applicable financial requirement relates.

The current development strategy is based on present estimates of gas reserves, based primarily on exploration seismic data and current projections of future market conditions. As new seismic data, reanalysis of old data and new engineering studies become available, the development scheme may be altered in significant ways. For example, the number of wells and/or the sequence of fields may be adjusted during the life of the Project or new discoveries may be added. The plan must have sufficient flexibility to also incorporate advances in technologies and the integration of more accurate real-time information about winds, waves and currents in the offshore region. Flexibility in responding to these conditions is a key element in the Project development and will be needed in its ongoing regulation.

PREFACE



This **Development Plan Application** (DPA) is **Volume 2** of five documents comprising an application for approval of the **Sable Offshore Energy Project**. These documents are:

Volume 1	Project Overview
Volume 2	Development Plan Application
Volume 3	Environmental Impact Statement
Volume 4	Socio-Economic Impact Statement
Volume 5	Canada-Nova Scotia Benefits Plan

The purpose of each volume is:

Volume 1 Project Overview:

To summarize the application and to provide a description of the Project in sufficient detail to satisfy readers interested in a general review.

Volume 2 Development Plan Application:

To describe the gas reservoirs, development strategy, proposed facilities, and Project environmental and safety management.

Volume 3 Environmental Impact Statement (EIS):

To describe the physical and biological environment surrounding the Project, assess potential impacts and identify ways to minimize them.

Volume 4 Socio-Economic Impact Statement (SEIS):

To describe the socio-economic environment of Nova Scotia, with particular emphasis on the Country Harbour and Strait of Canso areas; to assess potential socio-economic impacts and discuss ways to minimize them and to maximize potential benefits; to estimate the economic impacts from the Project.

Volume 5 Canada-Nova Scotia Benefits Plan:

To describe how the Project plans to promote the natural flow of benefits from the Project to Nova Scotia and Canada.

The **Sable Offshore Energy Project** Proponents are: Mobil Oil Canada Properties (Mobil), Lead Operator, Shell Canada Limited (Shell), Joint Operator, Petro-Canada, Imperial Oil Resources Limited (Imperial) and Nova Scotia Resources Limited (NSRL).

The Project is currently planned for development in conjunction with a sales gas pipeline, the **Maritimes and Northeast Pipeline Project**, to be built from the gas plant at Country Harbour through Nova Scotia, New Brunswick and the New England states by a consortium of Canadian and American companies. The Proponents are: Westcoast Energy, Inc., Panhandle Eastern Corporation, Mobil Oil Canada Properties and

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1 PROJECT OVERVIEW

1.1 Introduction

The Scotian Shelf, located in the Nova Scotia offshore region, has been a focus of study and exploration by the oil and gas industry for the past 50 years. Early geological studies of this subsea region predicted the presence of sediments similar to those found in the petroleum rich Gulf Coast of the United States. In the late 1960's, the first successful test wells were drilled in the Sable area leading to initial discoveries of natural gas in sandstone reservoirs that marked the beginning of intensified exploration. During this exploratory period, a total of 125 test wells were drilled in the Nova Scotia offshore region, 121 of these in the Scotian Basin. Some eighty-eight separate geologic structures have been tested.

The Geological Survey of Canada (GSC) and the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) have estimated the total potential gas resources for the Scotian Shelf at 512 billion cubic metres. Actual discovered gas reserves amount to about one third of the estimated total resources. Most of the discovered gas is located in the vicinity of Sable Island where gas pools are estimated to contain 142 billion cubic metres of recoverable gas. The size of this resource base can be measured against the total Canadian consumption which in 1993 was approximately 62 billion cubic metres.

There is significant demand predicted for competitively priced natural gas in the Maritimes and in the northeastern United States. Both Atlantic Canada and the densely populated northeastern US region have substantial growth potential, due in part to increasing environmental concerns. Clean burning natural gas is expected to continue to find increased markets. The combination of a rich resource base, advances in gas supply technology and increasing market requirements for this environmentally favourable energy source provide the foundation for the Sable Offshore Energy Project (SOEP).

This Development Plan Application (DPA, Volume 2) and its supporting documents (Environmental Impact Assessment, Socio-Economic Impact Assessment and Benefits Plan, Volumes 3-5) propose development of these reserves. A summary of the application and supporting documents is found in Volume 1. The DPA is divided into two major parts: Part 1 is a detailed description of the Project and the reservoirs to be developed, and Part 2 is a bibliography of reports and internal correspondence that support the submission. These documents will be made available to the Canada-Nova Scotia Offshore Petroleum Board upon request. This submission has been prepared pursuant to the requirements of the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act* and the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act* .





1.2 Project Scope and Timing

From the mid 1960's through to the late 1980's, significant deposits of natural gas were discovered in the porous sandstone rocks underlying the Sable Island area, approximately 160 to 300 km off the east coast of mainland Nova Scotia. Six gas fields have currently been identified as being suitable for development: Venture, South Venture, Thebaud, North Triumph, Glenelg and Alma. These fields contain about 85 billion cubic metres of recoverable gas reserves. The fields lie 10 to 40 km north of the edge of the Scotian Shelf in water depths between 20 and 80 metres, as shown in **Figure 1-1**. The Sable Offshore Energy Project proposes to develop these six natural gas reservoirs.

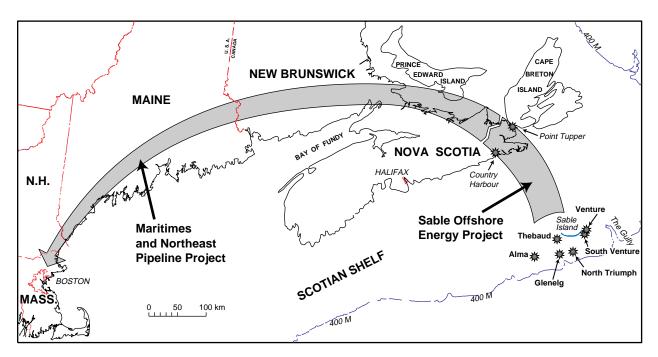


Figure 1-1: Current Development Plan Summary

The Project requires offshore and onshore facilities for production, transmission and processing of natural gas. Gas and associated natural gas liquids from offshore production platforms would be collected and brought ashore via a submarine pipeline to a gas plant located near Country Harbour, Guysborough County, Nova Scotia. Natural gas liquids would be transported by an onshore gathering line to the Point Tupper area of Richmond County, Nova Scotia for further processing and shipping. The degree of processing at the Point Tupper facility will be determined during the Front End Engineering Design process, following further marketing studies. The processed natural gas would be transported to Canadian and US markets through a pipeline proposed via Nova Scotia and New Brunswick to tie into the existing North American gas pipeline grid in the northeastern United States.

The Project includes:

- Offshore wells: engineering, drilling, completion, production and maintenance;
- Offshore production platforms: engineering, fabrication, installation, operation and maintenance;
- Interfield gathering lines, main subsea gathering lines and onshore natural gas liquids gathering lines: engineering, fabrication, installation, operation and maintenance;
- Onshore facilities for processing the natural gas and liquids: engineering, construction, operation and maintenance;
- Project management: including implementation of the Benefits Plan, Safety Plan, Environmental Protection Plan and Contingency Plans; and
- Decommissioning and abandonment of facilities at the conclusion of the Project.

The current development plan specifies six gas fields for development, which will be phased to maintain a sales gas volume of 11.3 million cubic metres per day for approximately 16 years. Compression and well recompletions will be implemented as appropriate to maximize gas recovery as the field pressure declines. The life cycle of the **Sable Offshore Energy Project** begins with development, followed by construction, production and finally abandonment and reclamation. The Project is expected to last at least 25 years from the initial gas flow at the end of 1999. The facilities will be designed so that with proper inspection, maintenance and repairs, they can be used beyond the projected Project term. This will support subsequent development at satellite fields and future exploratory discoveries by the Project.

The current development plan has 28 wells at the six gas fields, drilled over the Project life to maintain the sales gas rate. Jack-up drilling rigs capable of year-round operation are planned for use. These rigs must be certified for safe operation in water depths to 90 metres and for environmental conditions found in the Project area. The number and sequence of wells will be subject to adjustment throughout the Project life, depending on drilling results, production performance and market conditions.

One platform located at each of the six fields is currently envisioned for full development of the Project **(Figure 1-2)**. The Thebaud platform providing the central facilities for gathering, dehydration and future compression of the gas from the satellite fields in addition to wellhead and production facilities. Remote monitoring and control of the other field platforms would also be conducted from the Thebaud platform. This figure illustrates a separate living quarters platform at Thebaud linked to the production platform by a walkway.

The satellite platforms currently envisaged for Venture, North Triumph, Glenelg and Alma will be unmanned wellhead and production facilities, each equipped with emergency living quarters and a helideck. All platforms have safety, fire protection and evacuation systems designed to meet or exceed Project standards and codes and local regulations. Ships and boats will be excluded from a 500 metre radius safety zone around all platforms.

The South Venture field would be developed using a minimum wellhead support structure and tied-back to the Venture platform. It is also possible that South Venture could be developed using extended reach wells drilled from the Venture platform. This decision is to be made at the time South Venture production is required to sustain production rates.

Gas, condensate and water produced at the satellite platforms would be transported through a system of buried subsea flowlines to the Thebaud platform . A 200 metre no-anchor zone would be established around subsea gathering lines.





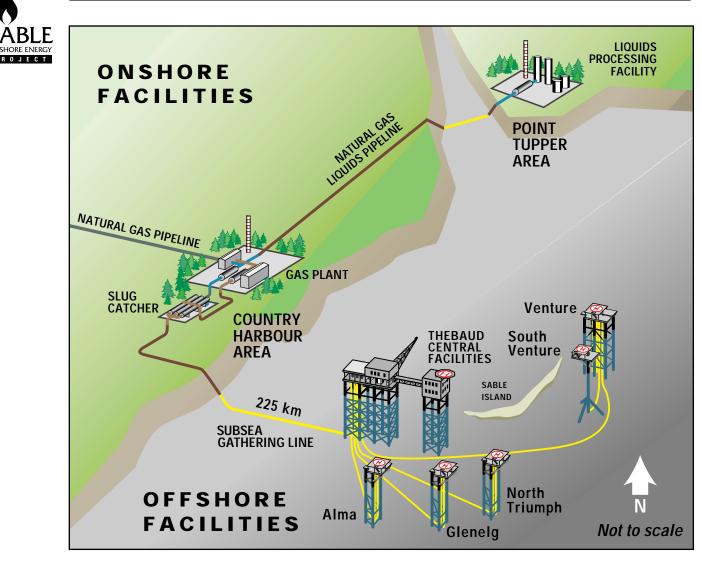


Figure 1-2: Project Facilities

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At the Thebaud platform, unprocessed gas would be separated and dehydrated. The produced water would be treated to specified standards and then discharged to the sea. The gas and associated natural gas liquids would then be recombined and transmitted via a subsea gathering line to landfall in the Country Harbour area, Guysborough County, Nova Scotia and a gas processing plant located nearby. Gas conditioning to meet sales gas specifications would be completed at the gas plant and sales gas would be delivered by existing and proposed pipelines to areas of Atlantic Canada and the northeastern United States. Natural gas liquids would be sent by onshore pipeline to a handling facility near Point Tupper, Richmond County, Nova Scotia. At this site, the natural gas liquids would be further processed and prepared for shipping.

 Table 1.1 summarizes the development plan presented in this application.

Sales Gas: Plateau Rate: 11.3 E6M3/d Plateau: 16 years Life: 25 years minimum Raw Gas Reserves: 129.3 E9M3 Mean Value Platforms: Site **Design Rates** Туре (E3M3/d) Central Thebaud (Inlet) 6230 Central Thebaud (Six Field) 12750 Satellite 7080 Venture North Triumph Satellite 3680 Wellhead South Venture 1840 Satellite Alma 3680 Satellite Glenelg 3680 **Development Wells:** Field Number Thebaud 4 9 Venture 3 North Triumph South Venture 2 Alma 5 Glenelg 5 Total 28 Offshore Pipelines: Diameter Length Wall Max. Operating (Km) Thickness Pressure (mm) (mm) (KPa) Thebaud - Shore 225 609 15.9 11,725 Venture - Thebaud 56 457 12.7 13,800 North Triumph - Thebaud 35 324 13,200 12.7 South Venture - Venture 5 219 12.7 14,140 Alma - Thebaud 50 324 13,200 12.7 324 Glenelg - Thebaud 32 12.7 13,200 Slugcatcher: Location: Country Harbour Area Multipipe Type: Liquid Capacity: 2385 m3 Gas Plant: Location: **Country Harbour** Type: Turboexpander /Natural Gas Dewpointing Products: Sales Gas, NGL mix NGL Transmission Pipeline: Location: Country Harbour to Point Tupper Size: 219 mm Length: 67 km Wall Thickness: 6.4 mm Max. Op. Pressure: 6900 KPa NGL Processing: Location: Point Tupper Type: Fractionation / Stabilization Products: LPG Mix, Condensate

Table 1.1: Current Development Plan Summary

ROJECT

The Project has two main phases:

Initial Development Phase:	Development drilling to prepare initial production wells Construction of Project facilities Development of drilling and construction of facilities for additional production sites
Production Phase:	Gas production and processing

As shown in the Project schedule, **Figure 1-3**, the Proponents intend to make the final decision to proceed in 1997, with gas production from the first phase of the Project by late 1999. Drilling and construction in the current proposal would start at Thebaud, Venture and North Triumph. During the Production Phase, fields would be developed as required to maintain the sales gas rate of 11.3 million cubic metres per day. Construction at the South Venture, Glenelg and Alma fields is currently planned for 2004-2007. The Sable Project is projected to last until the year 2025. Project facilities will be designed so that with proper inspection, maintenance and repairs, they can be used well beyond the current Project life. This enables subsequent development at existing satellite fields and further exploratory discoveries to be incorporated into the Project as warranted.

The timing of these Project elements may be adjusted during the life of the Project in order to respond to evolving market conditions and additional information from field and design studies, as well as exploration successes.

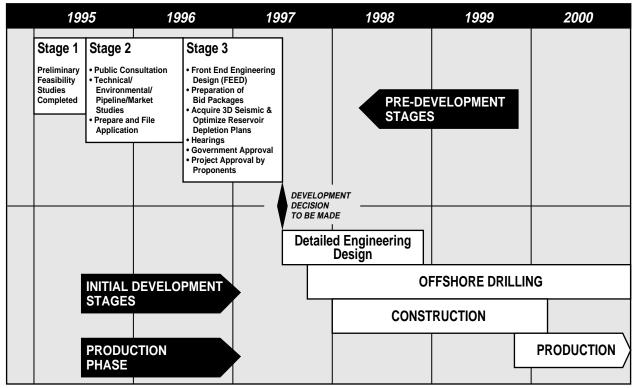


Figure 1-3: Proposed Project Schedule

1.3 Project Development Strategy

In offshore development, the Project plan must, at the outset, be flexible to accommodate all likely contingencies since unanticipated changes may be costly and are often extremely difficult to accommodate. The development approach adopted for this Project relies on the use of multi-disciplinary teams to evolve the Project design as information becomes available.

The current development plan is based on estimates of gas reserves, established primarily from exploration seismic data and current projections of future market conditions. As new seismic data, reanalysis of old data and new engineering studies become available, the development scheme may be altered in significant ways. For example, the number of wells and/or the sequence of fields may be adjusted during the life of the Project or new discoveries may be added. The plan must have sufficient flexibility to also incorporate advances in technologies and the integration of more accurate real-time information about winds, waves and currents in the offshore region. Flexibility in responding to these conditions is a key element in the Project development and will be needed in its ongoing regulation.

As illustrated in Figure 1-4, a wide range of alternatives were considered during the early stages of the Project. In the early 1980's, Mobil submitted a development proposal for natural gas for the Venture Field. Preliminary studies of other development options, including generating electrical power from the natural gas, the feasibility of applying Liquid Heavy Gas (LHG) technology, and the potential transportation of gas as a Liquified Natural Gas (LNG) have also been evaluated.

The criteria used in assessing the potential alternatives included the following:

- safety
- environmental protection
- economic criteria
- capital cost and cost uncertainty
- operating and maintenance costs
- reliability and availability of facilities
- complexity of operations
- operating flexibility
- pipeline route
- ease of expansion
- Canada Nova Scotia benefits
- regulatory requirements

The following sections of the Development Plan Application identify alternatives that could be incorporated into the Project design during the development phase. These are identified as Development Alternatives. The application also presents alternatives that preliminary studies indicate are unsuitable, for economic, environmental, safety or technological reasons. These are identified as Eliminated Alternatives.



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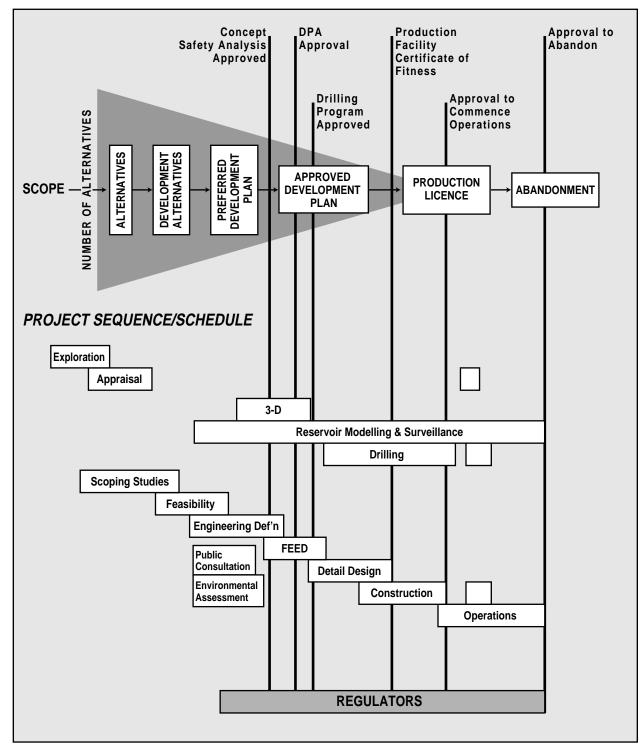


Figure 1-4: Project Development Process

The Project schedule of activities shown in **Figure 1-5** indicates that many activities are being conducted concurrently. Therefore, as information becomes available, the Project scope will continue to be refined. This approach allows the Project team to make increasingly precise decisions about Project options, such as the

OFFSHORE ENERGY

1-9

need for further data acquisition or the implementation of new or emerging technologies for the purpose of maximizing reserves recovery. This process of refinement of the Project scope through the integration of information throughout the development is expected to produce the most responsive and cost-effective development plan.

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DE	SERVOIR	3D Seismic Op	s	3D Seismic	Reserve	oir Characterization		
	NAGEMENT			Interpretation & Reservoir Mapping			Res Surv	ervoir veillance →
		Reservoir Modelling						

Figure 1-5: Schedule of Project Activities



1.4 Project Management

1.4.1 Project Management Approach

The Sable Offshore Energy Project management approach relies on the use of multi-disciplinary teams with common goals to successfully integrate the knowledge, skills and experience of Project personnel and participating contractors. Initially, the Project team will consist of employees from the Proponent's companies and the selected engineering contractor(s). The use of multi-disciplinary teams allows for better integration of information in the refinement of Project design which results in shorter time between discovery to gas sales. As production facilities are better matched to the expected reservoir potential, investment is optimized. During Front End Engineering Design (FEED), the team will also seek the participation of specialists in environmental engineering, hazard and risk analysis, drilling, construction, and other areas. Specialists in these areas will assure standards of health, safety and environmental protection are maintained.

Following Project approval and the decision to proceed, the current plan envisages operations conducted through a single entity, such as an operating company or a joint venture. The successful history of joint ventures in the petroleum industry will provide experience and direction in developing sound management structure and effective, incentive-based relationships with contractors.

1.4.2 Project Principles and Guidelines

The Sable Offshore Energy Project is a complex undertaking, involving five Project participants, many contractors and suppliers, and hundreds of individuals. In order to provide common guidance to all of the people involved, the Proponents have established a set of Project Principles as shown in Figure 1-6. The principles address four major areas:

- Business Principles
- Responsible Development Principles
- Compensation and Benefits
- Project Ethics

SOEP Project Principles

Business

Guiding Principle:

Our Project is market driven and must be competitive with other North American energy alternatives.

Guidelines

- Our Project will be competitive with energy alternatives available to our companies and to our customers. We will deliver our product at the right price and time.
- Our Project will connect with the North American gas pipeline system to provide both domestic and export market access and alternatives to gas buyers and sellers.
- We will target all markets along our pipeline route on a basis of economic justification, with the expectation that areas along the route which are currently unserved will be developed as it becomes economically viable to do so.
- Our Project will be a stand-alone investment without any reliance on government funding.
- We will access technology, goods and services on an internationally competitive basis.

Responsible Development

Guiding Principle:

We will implement and operate the Project in an efficient manner, seeking win/win outcomes in our relations with all stakeholders - government, public and investor.

Guidelines

- We will honor the Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, and other relevant legislation, ensuring that we do so in a cost-effective and timely manner.
- We will develop this Project with meticulous attention to safety, ensuring that risks to both employees and the public are as low as reasonably possible.
- We will meet or better Canada's standards for environmental protection.
- We will respect the environmental significance of Sable Island, and the Gully.
- Our relationship with the governments will be non-partisan.
- Our communications with the public will be open, proactive and two-way. We will strive to establish good, long-term relationships with the communities with whom we interact.
- The need to provide an adequate return to our investors, commensurate with the size and risk of the investment, will underlie all of our business decisions.

Compensation and Benefits

Guiding Principle:

We will provide full and fair opportunity for all stakeholders to share in the economic benefits flowing from the Project.

Guidelines

- Our procurement policies will be driven by the concept of "best total value", and will adhere to the requirements of applicable legislation.
- We will encourage the development of a long term industrial support base for the Project in Nova Scotia and Canada.
- We will strive to coexist with, and have a minimum impact on, existing fishing, aquaculture, forestry, agricultural and other businesses.
- Where appropriate, we will provide compensation for services provided, property utilized, and other potential business impacts occurring due to the Project.

Project Ethics

Guiding Principle:

We hold ourselves and our contractors to the highest standards of business ethics and professional performance.

Guidelines

- We will carry out our business in an open, fair, and forward-thinking manner, while respecting legal and commercial considerations.
- We respect every person directly or indirectly associated with this Project and will provide them an opportunity for involvement in formulating our development plan.
- We will employ Quality Assurance and Continuous Improvement practices in all of our Project activities.

September 19,1995

Figure 1-6: Project Principles and Guidelines

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1.4.3 Proponent's Experience

Mobil and Shell are providing technical, business, safety and environmental leadership to the Project's engineering and management team. Substantial work was completed for the proposed Venture Project in the 1980's, much of which is incorporated into the development plan for the Sable Offshore Energy Project. The Proponents have also drawn upon their considerable experience though their international affiliates in offshore developments in the North Sea and the Gulf of Mexico.

Mobil and its affiliates produce 48 billion cubic metres of natural gas per year worldwide. Shell and its affiliates produce 71 billion cubic metres annually, much of this from wells in the Gulf of Mexico where the daily production rate is three times that planned for the Sable Offshore Energy Project.

Shell's development of deep water as well as shallow water gas resources in the Gulf region has required technological innovations in drilling and production operations that may be adapted to the shallow water Sable fields. Mobil is also a leader in offshore development on a global scale. In Mobile Bay, an environmentally sensitive area of the Gulf Coast, Mobil has successfully operated for a decade using production facilities similar to those proposed for the Sable Project. Mobil also has extensive experience using unmanned platform facilities more than 100 km offshore in the North Sea. The use of satellite technology, unmanned platforms and jack-up rigs are expected to increase the cost-effectiveness and safety of the Sable Offshore Energy Project. The North Sea experiences provide a source of information about a northern climate comparable to the waters offshore Nova Scotia.

1.5 REGULATORY OVERVIEW

A number of regulatory authorities are responsible for representing the interests of the people of Nova Scotia and Canada in the management of natural resources. These interests include the equitable access to natural gas and other resources, protection of the environment, and sharing of the economic benefit from the production of natural resources via economic activity and through the collection of royalties and tax revenues. This submission addresses regulatory guidelines based on energy policy established in key legislation.

Primary Legislation

The Sable Offshore Energy Project will be regulated by a number of federal and provincial agencies. Relevant legislation includes:

- Canada Nova Scotia Offshore Petroleum Resources Accord Implementation Act
- Canada Nova Scotia Offshore Petroleum Resources Accord Implementation (Nova Scotia) Act; (these two acts are jointly known as the Accord Acts)
- National Energy Board Act
- Nova Scotia Energy and Mineral Resources Conservation Act
- Nova Scotia Pipeline Act.

Chapter 1: Project Overview

The following three agencies have indicated that they are the responsible regulatory authorities for regulating various aspects of the Project:

- Canada Nova Scotia Offshore Petroleum Board
- National Energy Board
- Nova Scotia Energy and Mineral Resources Conservation Board

These agencies are developing a coordinated regulatory process for a collaborative approach to the effective and efficient regulation of the Project.

Environmental Review

Several government departments and agencies have indicated they are responsible for review of the Project's environmental and socio-economic impacts:

- Canadian Environmental Assessment Agency
- Natural Resources Canada
- Nova Scotia Department of the Environment
- Nova Scotia Department of Natural Resources
- National Energy Board
- Canada-Nova Scotia Offshore Petroleum Board

In order to coordinate their efforts, these agencies are developing a Memorandum of Understanding to carry out joint environmental assessment reviews of the Sable Offshore Energy Project. A five member panel is anticipated to be appointed to hold public hearings for the Sable Project and to prepare a report with recommendations to the responsible government agencies.

