

1.0 INTRODUCTION

In 1958, the first offshore seismic activity took place in the Queen Charlotte Basin off Canada's west coast. A moratorium was imposed on exploration drilling in the coastal waters between Vancouver Island and Alaska by the Province of British Columbia in 1959. By 1961 Shell Canada Limited had begun acquiring exploration permits for offshore areas in Hecate Strait, Queen Charlotte Sound and on the continental shelf off the western coast of Vancouver Island. This led the company to conduct geological mapping and offshore seismic surveys between 1963 and 1967. The Province's moratorium was lifted in 1966 and between 1967 and 1969 Shell drilled 14 wells, eight of which were in the Hecate Strait - Queen Charlotte Sound. The locations of these wells is shown on Figure 1.1. By 1970 Shell had entered into a farm-out agreement with Chevron Canada Resources whereby Chevron would earn an interest in the Shell offshore area by conducting seismic surveys and drilling two deep exploratory wells. Offshore British Columbia oil and gas lease tenures as of 2001 are shown on Figure 1.2. However, exploration soon came to a standstill. In 1972 the federal government imposed a moratorium preventing crude oil tankers en route from the Trans-Alaska pipeline terminal at Valdez, Alaska from travelling through the Dixon Entrance, Hecate Strait and Queen Charlotte Sound. Shortly afterwards, the federal government placed a moratorium on drilling in these waters. In 1981, the Province of British Columbia declared the region an Inland Marine Zone. Simultaneously, a moratorium was placed on offshore exploration in Johnstone Strait south of Telegraph Cove and in the Straits of Georgia and Juan de Fuca. These moratoria remain in effect today.

Consideration was given to lifting the moratorium in 1984 to allow the petroleum companies holding leases in the region to undertake exploration programs. A five person panel was appointed and held public information meetings and public hearings throughout northern coastal British Columbia during the fall of 1984 and 1985 respectively. Chevron Canada Resources Ltd. acted as a proponent and Petro-Canada initially participated but withdrew in November 1984. Based on information obtained at those meetings, the Panel delivered its report in April 1986. Entitled "Offshore Hydrocarbon Exploration, a Report and Recommendations of the West Coast Offshore Exploration Environmental Assessment Panel", the report contained 92 (ninety-two) recommendations covering a broad spectrum of issues including:

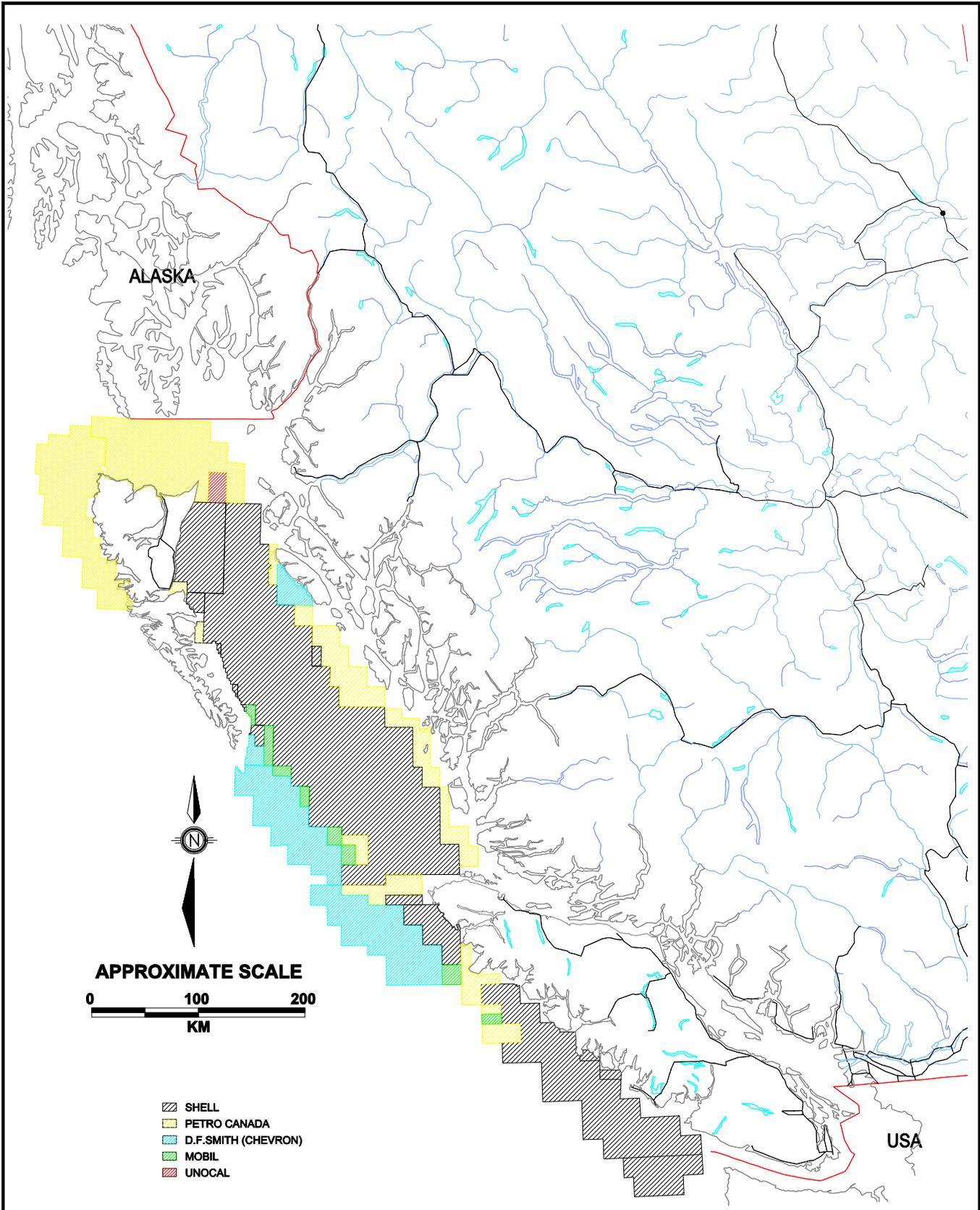
- *the environmental assessment process;*
- *seismic surveying;*
- *routine exploratory drilling and support operations;*
- *socio-economic effects of routine operations;*
- *hydrocarbon blowouts;*
- *fate and effects of oil in the marine environment;*
- *oil blowout contingency;*



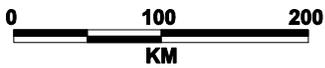


Figure 1.1 Exploration Well Locations





APPROXIMATE SCALE



-  SHELL
-  PETRO CANADA
-  D.F.SMITH (CHEVRON)
-  MOBIL
-  UNOCAL

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SCALE:
AS SHOWN

FIGURE No.
1.2



- *planning and countermeasures, and*
- *compensation and managing for environmental protection.*

On the basis of the report and its recommendations, both the provincial and federal governments decided to negotiate a Pacific Accord, which would have allowed the lifting of the moratorium. However, spills from a tanker and a tug in 1989 (Exxon Valdez and Nestucca barge) and the subsequent public reaction to these events persuaded the two governments to continue an indefinite extension to the moratorium with no mechanism for its review.

1.1 Canadian Offshore Oil and Gas Production in a Global Context

Canada is the third largest producer of natural gas and the 13th largest producer of crude oil in the world. In 2000, Canada produced 2.2 million barrels per day of crude oil and 6.3 trillion cubic feet of natural gas per year (CAPP 2001).

While Canada has long been producing oil and gas from on-land developments, it is a very recent participant in offshore oil and gas production. On the East Coast, one development has been decommissioned (Cohasset-Panuke, NS). There are two producing fields on the East Coast (Hibernia oil field, NF and Sable gas field, NS), one nearing development (Terra Nova, NF), one nearing the end of the regulatory approvals process (White Rose, NF) and several in the exploration stages and early stages of the regulatory approvals process. On the West Coast, the Province of British Columbia imposed a moratorium on exploration drilling in the coastal waters between Vancouver Island and Alaska in 1959. The moratorium was temporarily lifted between 1966 and 1972, during which a total of 14 exploratory wells were drilled, and it remains in effect today.

To put Canadian offshore oil and gas development in context, the following provides a brief overview of the state of offshore oil and gas development in other select jurisdictions worldwide:

- Pacific Outer Continental Shelf Region – there are currently 24 oil and gas production facilities (operated by six companies) in federal waters off the coast of California, and with one exception, all are still in operation. As of April 2001, these facilities have produced over 1 billion barrels of oil and 1.2 trillion cubic feet of gas (MMS Pacific OCS Region web site).
- Gulf of Mexico Region – while a recent study (Pulsipher *et al.* 2001) indicated that the total number of federal water (Outer Continental Shelf) oil and gas platforms in the U.S. Gulf of Mexico would begin a slow but steady decline to 2023, in 2001 (MMS Gulf of Mexico Region web site), in the Gulf of Mexico Region there were:
 - 7,480 active leases (as of September 17, 2001),
 - 40,513 approved applications to drill (as of September 17, 2001),
 - 4,025 active platforms (as of September 17, 2001),
 - 54 wells being drilled (as of February 2001), and
 - 6,440 wells producing (as of February 2001).



- Alaska Outer Continental Shelf Region – since offshore drilling began in the Alaska Outer Continental Shelf Region in 1975, nearly 100 wells have been drilled. Of the three current development exploration activities, one exploration plan was withdrawn by the developer and one received federal approval (and is expected to begin production in late 2001). The required development and production plan for the third proposal has been recently submitted, for which the draft Environmental Impact Statement (EIS) was released from the assessment process and is expected to be finalized by the end of 2001 (MMS Alaska OCS Region web site).
- United Kingdom North Sea – natural gas first came ashore from the United Kingdom North Sea in 1967; the first oil came ashore in 1975, with 1976 the first full year of production from a United Kingdom North Sea oil field. As of the beginning of 1999, 204 offshore fields in the United Kingdom North Sea were in production, of which 109 were producing oil, 79 producing gas and 16 producing condensate. In 1998, the United Kingdom North Sea produced 132.6 million tonnes of oil and 95.6 billion cubic feet of gas (UKOOA web site).
- Norwegian Continental Shelf – as of December 2001, there were 62 offshore oil and gas fields on the Norwegian continental shelf, 45 of which are producing fields (40 in the Norwegian North Sea and five in the Norwegian Sea) and 10 have shut down. Seven of the oil and gas fields (all in the Norwegian North Sea) have been approved for development and operation but have not yet started production (Norwegian Petroleum Directorate web site).
- Australia – the Australian oil and gas industry has been operating in the marine environment for 25 years and drills over 100 wells each year (both offshore and onshore). As of 2000, 19 development wells (five in first quarter 2001), and 50 explorations wells (18 in first quarter 2001) were spudded in offshore Australia (APPEA web site).