Offshore Hydrocarbon Development: Is British Columbia Ready?

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Abstract

Potential offshore oil and gas deposits in the Queen Charlotte Basin have driven debate in British Columbia for many decades. Since the early 1980s, millions of dollars have been spent on environmental impact assessments, socio-economic cost analysis, research, exploration, public and policy debate, negotiation, and regulatory formation. To this day, no large scale exploratory project has been undertaken because of a federal and provincial policy of moratoria. The government of British Columbia Ministry of Energy and Mines has recently commissioned a scientific panel to examine whether offshore oil and gas can be extracted in a scientifically sound and environmentally responsible manner. The panel concluded there is no scientific basis for the moratorium on offshore oil and gas development. The government of British Columbia may be attempting to move offshore hydrocarbon development into reality, but there are many obstacles to overcome before it can occur. With proper public consultation, many of these obstacles can be minimized.

Introduction

The Queen Charlotte Basin encompasses the Queen Charlotte Islands and the sea around them (figure 1). The first attempt to reach oil in the Queen Charlotte Basin was made in 1913 on Graham Island. By 1971, nine other wells were drilled on the island, but none had commercial success. Offshore drilling started in 1967 with eight exploratory wells in the Queen Charlotte Basin, and six in the Tofino Basin. No significant amount of oil or gas was discovered. In 1969, the last year of exploratory drilling in the Queen Charlotte Basin, an offshore rig experienced

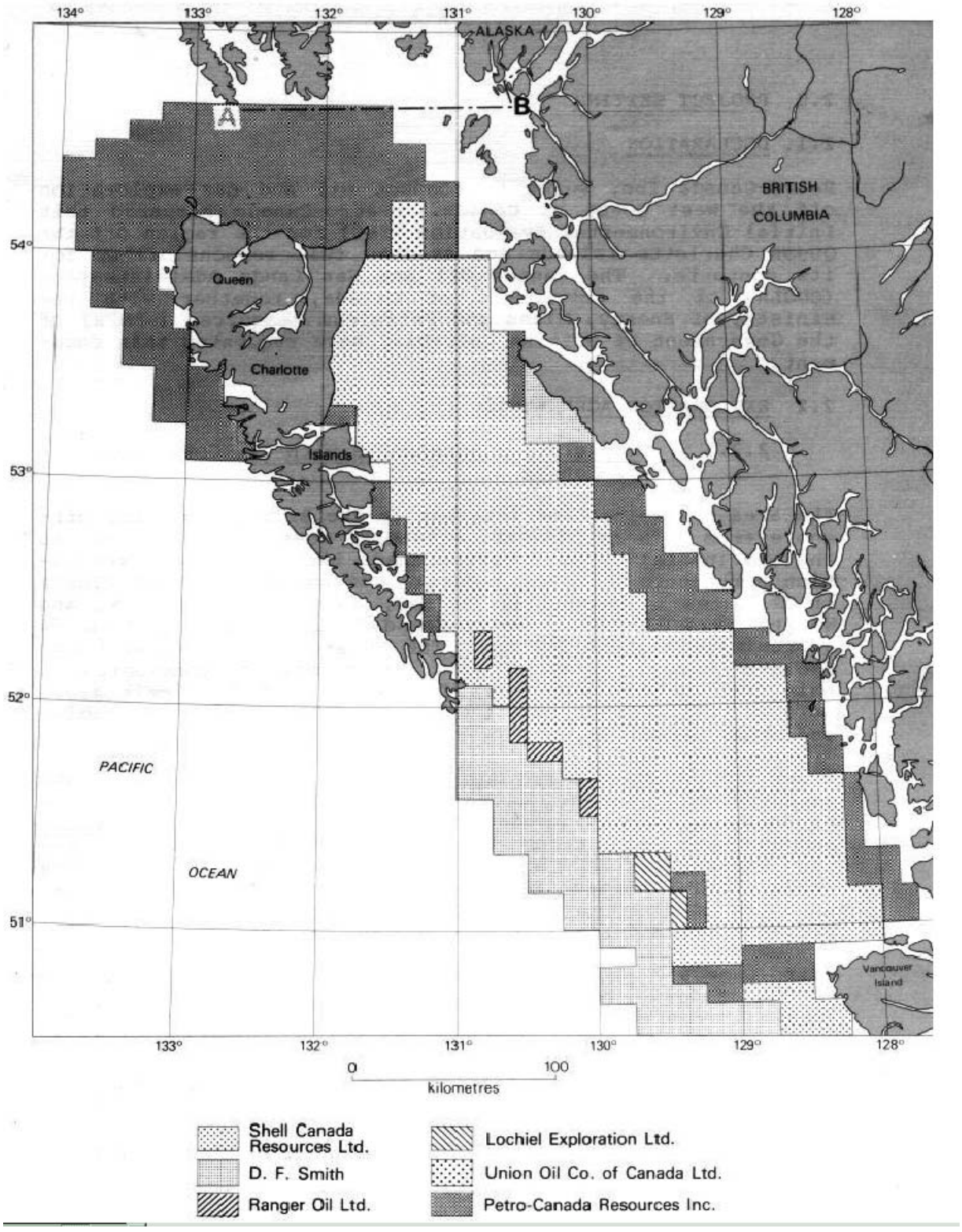

Figure 1: Map of Offshore Leases. (Petro-Canada Inc.,1983).

a blow-out off Santa Barbara, California. No further permits for exploratory drilling were issued by the Canadian government. In the same year, the United States made proposals to use British Columbia's coastal waters to ship Alaskan oil. Shortly after, in 1972, Canada imposed a moratorium on tanker traffic and further drilling in the Hecate Straight and Queen Charlotte Sound.

It was the federal government that expressed interest in offshore hydrocarbon development in 1980 (BCMCSE, 2001b). One year later, British Columbia issued an order in council that restated earlier claims to all submerged lands including the Hecate Straight and Queen Charlotte Sound. This order also established a moratorium on offshore exploration. The federal and provincial governments agreed in 1983 to establish a panel to assess the impacts of offshore development. The conclusions of the panel, as well as reports from other areas, indicate significant environmental and socio-economic risks associated with offshore hydrocarbon development.

Environmental issues have always been the most debated aspect of lifting the moratorium (WCEEAP, 1986; BCMEM, 2002c). The environmental impacts of offshore hydrocarbon development are numerous and complex. These impacts begin during the exploratory phase of offshore development. Seismic testing, used to map the seafloor, has been shown to adversely affect marine life (BCMEM, 2002b), although to what degree is debated. Blowouts, although rare, can occur during exploratory drilling and release large amounts of oil into the marine environment. The production phase of offshore development also generates numerous environmental impacts including: incidental and operational oil discharges; release of carbon dioxide into the atmosphere through burning; the release of toxic chemicals and oils through the drilling process; an increase in marine debris; and an increase in oil discharges through a proliferation of ship traffic.

The socio-economic effects of offshore hydrocarbon development have also been a large concern to coastal area residents. This has been shown in the report of the Offshore Oil and Gas Task Force (BCMEM, 2002c) which indicates a concern by residents that development would not bring benefits to smaller communities because they lack the infrastructure and workforce

necessary to attract industry: They also worried the North American Free Trade Agreement (NAFTA) would further allow companies to hire outside workers. Many others believed the benefits would be large because of the many jobs offshore hydrocarbon exploration would bring. Clearly residents of these communities must weigh the environmental risks with economic benefits.

Even if economic benefits are established and environmental concerns are satisfied, there may be a larger questions regarding offshore hydrocarbon development. The first recommendation of the Scientific Panel's report, conducted for the British Columbia Ministry of Energy and Mines (BCMEM), is that the government of British Columbia consider offshore hydrocarbon development within the broader context of provincial energy policy (BCMEM, 2002b). Opponents believe that by allowing offshore hydrocarbon development, industries that contribute to global warming are benefited and alternate energy sources such as those based on tides and waves will suffer (Parfitt, 1999; Marshall, 2001). Proponents believe that this attitude is hypocritical in the sense that residents of British Columbia use the resource and have the opportunity to establish a regulatory structure that will minimize impact to the environment; in effect, the "not in my backyard" attitude towards hydrocarbons results in less developed countries bearing the environmental burden of western over-consumption (Johnston and Hildebrand, 2001).

In examining legal issues around the moratorium, the report indicates that before a regulatory framework can be negotiated between the federal and provincial governments that would govern offshore hydrocarbon development, strategic environmental assessments would be required by at least the federal government and possibly the provincial (Duval and Hopkinson, 2002). Following this, further environmental assessments would be needed by a joint federal-provincial panel. With the positive outcomes of these assessments, negotiations could begin on jurisdiction and regulations. A regulatory authority could be negotiated easily by drawing on the existing Atlantic Accords; however, jurisdiction could be far more difficult to resolve with British Columbia, Canada and First Nations all claiming ownership of the area. Industry has recently indicated it's refusal to get involved until, among other things, jurisdiction is resolved and the regulatory authority is established (Greenwood, 2002; Petroleum Economist, 2001). If the

authority is established and industry applies for exploratory permits, environmental impact statements will need to be submitted to the specifics of the operation. Clearly there are many obstacles for offshore hydrocarbon development to occur. It will be the people of British Columbia who decide if it occurs – the provincial government needs more than one term to carry out such a complex task. Proper public review will be essential. If the public feels in the end that offshore hydrocarbon was pushed on them without proper review, competing political interests could use the issue to either force the government to change its policy or oust them entirely. Ultimately the question will be decided by concern for the environment, analysis of socio-economic effects, cultural values, and political will.

Background

In order to understand the processes that need to occur to bring offshore hydrocarbon exploration to the British Columbia coast, we must look to the 1980s when the policy of moratoria came very close to ending. As part of a National Energy Program, in 1980, the federal government offered incentives towards developing offshore resources. The provincial government claimed jurisdiction of Hecate Straight and Queen Charlotte Sound and issued an Order-In-Council stating it. In 1982, Chevron Canada Resources Ltd. submitted an initial environmental evaluation (IEE) to the federal Canada Oil and Gas Lands Administration (COGLA) for an exploratory permit. Petro-Canada Inc. submits its own IEE the next year.

To deal with environmental concerns, the Federal Minister of Energy, Mines and Resources and the British Columbia Minister of Energy, Mines and Petroleum Resources commissioned the West Coast Offshore Exploration Environmental Assessment Panel (WCEEAP) to conduct a public review. The panel was to ignore aspects of jurisdiction in its report. It was provided IEEs from British Columbia Ministry of Environment, Chevron Canada Resources Ltd., Petro-Canada Inc., and a technical analysis of the IEEs by the Canada Oil and Gas Lands Administration (COGLA) and British Columbia Ministry of Energy, Mines and Petroleum Resources (BCMEMPR). Its terms of reference asked it "to examine the environmental and directly related socio-economic effects of offshore petroleum exploration, and

to present recommendations under which offshore petroleum exploration could proceed in a safe and environmentally responsible manner" (WCEEAP, 1986). In effect, recommendations were to be made not only for exploration but for establishing a regulatory authority. Extensive public review of these four documents was undertaken by the Panel which considered more than 1800 submissions from local residents. In 1984 it requested additional information from government, Chevron Canada Resources Ltd. and Petro-Canada Inc. Petro-Canada Inc. withdrew from the process, however further information was provided by the other parties.

The panel released its final report in 1986. The first concern it expressed was the structure of the review process itself. It claimed that because its mandate was to assess an entire industry and not a specific project, the onus should be on government to provide the proper environmental evaluation. The withdrawal of Petro-Canada Inc. from the process left the panel with less information to make its decisions. The report stated:

"To many, the withdrawal of a proponent, without any apparent effect upon the holdings or future plans for operation within the area, cast into doubt the government's commitment to the environmental review process. For others, it called into question the ability of regulatory bodies to control the industry" (5).

The panel seemed to question the government's commitment to the public review process as well. To be able to properly inform residents in remote communities, the panel requested some form of intervenor funding. This request was denied by both the federal and provincial governments. Money was apparently raised by the panel itself with help from the Department of Indian Affairs and Northern Development. The report quotes:

"… we see funding for intervenors as extremely important and we see it even more extremely important when you're looking at the capital that is backing Petro Canada, and Shell, Chevron, as compared to the capital that that is backing groups that may oppose offshore oil drilling …" (Joy Thorkelson, Prince Rupert Labour Council, 1984, 6).

Ninety two recommendations were made under which offshore hydrocarbon exploration could occur. These recommendations covered a wide range of topics and provided a challenge to federal and provincial negotiators in creating a regulatory authority. In 1988, COGLA and

BCMEMPR released a report on the status of the "Pacific Accord" – the name of the future regulatory authority. Of the 92 recommendations by the West Coast Offshore Exploration Environmental Assessment Panel, 7 were rejected, 28 were accepted, 37 were accepted on their intent and 2 were under review. The creation of the Pacific Offshore Petroleum Exploration Environmental Coordinating Committee was announced to guide the petroleum regulators on the implementation of the recommendations related to environmental and socio-economic aspects in which the intent was accepted, in effect recommendations that needed to be adjusted to fit into the new regulatory structure. Many recommendations that placed restrictions on exploration and further development were accepted. Recommendations that were rejected by the governments included those that would place certain restrictions on seismic testing as well as making government responsible for compensation in the event of blowout or other accident.

Six years after Chevron submitted its IEE, the provincial and federal government still had not formed a regulatory body that could issue an exploratory permit. Only government insiders know how close a deal was; how the two governments would share royalties and jurisdiction; and what role, if any, First Nations would play. Two events occurred in 1989 that ended any hope for renewed exploration. These were oil spills that occurred first from the Nestucca barge off Washington State, then from the Exxon Valdez oil tanker off Alaska. British Columbia broke off negotiations and announced a five-year moratorium on offshore hydrocarbon exploration. Canada announced it wouldn't consider further development until British Columbia requested a continuation of negotiations.

Environmental Concerns

The Offshore Oil and Gas Task Force, (2002c) recently reported that "No single issue elicited greater passion or emotion from presenters than did the environment". Offshore hydrocarbon development brings many risks to the environment. These include potential harm to mammals and fish larvae during seismic testing, the possibility of a blowout during exploratory or developmental drilling, numerous smaller yet chronic problems during development and production, and an increased potential of spill during shipping. To look at how future proposals

by either government or industry for the development of offshore resources will be received by the public, a short look at these environmental concerns is needed.

Seismic testing

Seismic testing involves measuring the speed of sound waves in strata below the seabed. The purpose is to locate configurations that could potentially contain hydrocarbons. Seismic testing received much scrutiny in the 1986 report by the WCEEAP. Many recommendations were made that included limiting the duration and scope of testing, extensive monitoring during and after testing, and making further testing dependent on those results. At the time of the report, the largest concern was the effect on fish eggs and larvae. Since then very few studies have looked at this effect, however those that have been done indicate mortality only occurs when the larvae are within close proximity to the air guns which transmit the sound waves; some mortality has also been shown to occur in adult fish, again, only in close proximity to the air guns (Whiford, 2001). Marine mammals however, are shown to be more susceptible to seismic tests through a disruption in surfacing and respiration functions, hemorrhaging of hearing organs, and beaching; these effects can be reduced however by "turning up" the air guns slowly, giving time for fish and mammals to leave the area (BCMEM, 2002b).

Blowouts

Blowouts are defined as the uncontrolled release of oil and other fluids (BCME, 1983). They occur when pressure from the oil and gas reserve overpowers the pressure from the drilling apparatus and mud which is used as a counterbalance. Very little of the overall oil pollution in the oceans is a result of blowouts; in fact the offshore industry as a whole contributes only 2.1% (Johnston and Hildebrand, 2001). The occurrence of blowouts is rare. Since 1955, of one hundred and fifty thousand offshore wells, only 5 blowouts greater than one hundred and fifty thousand barrels occurred, and since 1988, only one blowout greater than ten thousand barrels has occurred (Johnston and Hildebrand, 2001). These statistics may not apply the same to all regions. The Queen Charlotte Basin is a unique area with significant seismic activity, strong winds and some

of the world's largest waves. These factors have been noted in all the original IEEs submitted by government and industry as well many other reports (Johnston and Hildebrand, 2001; Whiford, 2001; Orr, nd). Oil spills can also result from transporting oil in the production phase of offshore wells. These spills also account for a relatively small percent of overall oil pollution in oceans, estimated at less than six percent (Johnston and Hildebrand, 2001).

Spills

Despite the small amount of overall oil pollution contributed by oil spills and blowouts, significant local damage can occur. The Exxon Valdez oil spill which occurred in Alaska's Prince William Sound in 1989, provides an indication of what might occur with a significant spill around the Queen Charlotte Basin. The total number of animals killed by this spill shows its severity. 250,000 seabirds, 2,800 sea otters, 300 harbor seals, 250 bald eagles, up to 22 killer whales, and billions of salmon and herring eggs are estimated to have died from only the 34rth largest oil spill in the world (Wilderness Society, 1991). Furthermore, twelve years after the spill, oil still persists in salmon streams, soft sediments, and cobble beaches; this residual oil still affects salmon eggs and herring larvae as well as mussels and other invertebrates, indicating a continued risk to other species in the food web including fish, birds and marine mammals (BCMEM, 2002b).

Seismic testing may occupy much debate because it is the first process to take place while spills and blowouts are large spectacular events that also focus public attention. Other environmental impacts are associated with development and production. Drilling muds can contain heavy metals that impact life around the rigs. Studies conducted in Atlantic Canada, the North Sea, Gulf of Mexico, and California show little risk exists, however, further studies of the specific larval and planktonic communities in British Columbia waters are necessary (BCMEM, 2002b). Lights and flares may confuse seabirds causing them to fly continuously around them disrupting foraging and migration patterns (Whitford, 2001). Oil pollution may increase due to leaks, small accidental or incidental spills and increased ship traffic (Parfitt, 1999). Atmospheric emissions from the burning of well fluids, excess gas and combustion products can lead to global warming (Whitford, 2001).

One common theme in reports regarding offshore hydrocarbon exploration and development off British Columbia is the lack of information or "information gaps". "The gaps included: a considerable lack of basic inventory information … and an absence of knowledge on how local environmental and social systems operate…" (WCEEAP, 1986). "…significant gaps remain in a number of scientific and technical areas… the Panel emphasizes the need to address the deficiencies of knowledge in these areas of scientific knowledge. Reference to research in other offshore areas provides valuable guidance to researchers in BC, but this kind of knowledge is not a substitute for the regional and site-specific research needed in the event of offshore exploration and development." (BCMEM, 2002b).

As the government of British Columbia continues to move forward with offshore hydrocarbon exploration, some form of public review is likely. When and if this review takes place, it will be extremely important for the public to have accurate and current information. Without this information, the public cannot make informed choices. A new public review process, lacking necessary information, may also call into question the government's concern for the environment and those residents whose livelihood depends on it.

Socio-economic Effects

Residents must also have a clear understanding of how offshore hydrocarbon development will affect their way of life and more importantly their pocketbooks. Regional support for renewed exploration has been driven by a downturn in forestry and fishing. Proponents see renewed exploration as having "the potential to stimulate their sagging economies" (BCMEM, 2002c). Many look to Hibernia where 3,100 workers have been employed from local communities and hope for a similar situation here (BCMEM, 2002c). However, some of the excitement coastal community residents feel about new job opportunities from offshore hydrocarbon exploration may be misplaced. Reports have shown that the economic benefits of offshore hydrocarbon exploration are usually overestimated by local residents (House, 2000; Johnston and Hildebrand, 2001; Whitford, 2001).

The British Columbia Ministry of Energy, Mines and Petroleum Resources with the Ministry of Industry and Small Business Development commissioned a report in 1982 named the Potential Onshore Effects of Oil and Gas Exploration and Development off the Coast of British Columbia. The report found that most workers would come from Alberta, Northeast British Columbia, or foreign countries. Further more, because offshore hydrocarbon developers usually pay for transportation costs, these workers would either commute from their present location (Alberta and British Columbia residents), or take up residence in the lower mainland (foreigners). The report concluded that local residents would comprise 10% of the initial workforce, and through time would plateau at 20%. These predictions may be high; estimates were made by comparisons with Newfoundland, and the regulatory structure there that "aggressively promote[s] the use of local employment". Any regulatory structure put in place in British Columbia in the present would have to follow the rules of NAFTA. These rules could severely restrict requirements to hire local residents - fortunately for Newfoundlanders, the Atlantic Accord predated and was subsequently exempt from NAFTA.

A report by Jacques Whitford Environment Ltd. (2001) for the BCMEM notes difficulties where employment levels do not meet community expectations. Local residents may purchase new property and build structures in response to exploration plans, such as happened in Nova Scotia and Newfoundland, only to find little to no industry need; "These speculative responses are often based on a lack of understanding of the industry and its requirements and may be contrary to the interests of local residents and businesses…". The report went on to identify a number of changes in industry effecting employment levels in local communities.

- Improved seismic technologies have increased the speed and effectiveness of exploratory drilling reducing the scale of activity.
- Further globalization of the industry has created a worldwide range of products in a competitive market.
- The components of production are being constructed at greater distances from sites when local resources are inadequate.

Even with a regulatory structure that promotes and requires local hiring, such as in Newfoundland, economic benefits may not be substantial. Although government money was not intended to be spent on the Hibernia project, it has received $190 million in tax exemptions, $1.15 billion in grants, $1.14 billion in loans and loan guarantees and purchased almost $1 billion in equity; this has resulted in a return of investment, including the multipliers used to measure indirect effects, of 7.5 jobs per million dollars (Marshall, 2001). The Hibernia project employs 66% local residents (CNOPB, 1998) bringing the total return on investment at 5 local jobs per million dollars which could be considered a poor exchange (Marshall, 2001).

It will be important that, in any future public review, residents of coastal communities are presented with well based predictions of socio-economic benefits. It could be argued one of the purposes of the Scientific Panel's report was to dispel myths of environmental catastrophe. Whether or not that is the case, it is equally important that any misconception of benefits also be dispelled. This is especially relevant in the communities of Prince Rupert, Port Hardy, Bella Coola, Masset and Kitimat, where current economic difficulties may create a false hope in renewed offshore exploration.

Policy Questions

Where does offshore hydrocarbon development fit into the larger provincial energy policy? This question was raised by both the WCEEAP report (1986) as well as the Scientific Panel report (2002). While the 1986 report addressed the question but decided it was not within its mandate to make recommendations based on it, the 2002 report's first recommendation was:

"We recommend that a decision by the BC government on the immediate question of whether or not to lift the offshore moratorium should be taken with a view to its priorities in the larger context of a provincial energy policy."

The first question that comes to mind may be do we need offshore hydrocarbon development as a province to meet or current and future energy needs, or perhaps what type of energy projects will provide our needs for the future while creating permanent jobs to help

stabilize our communities? Given that the rate of employment on investment has been shown to be quite low in the case of Hibernia, it is encouraging that renewable energy sources create 60% more jobs than conventional energy projects (Campbell, B *et al*., 1997). BC Hydro is currently looking at wind energy technologies and is implementing a project on Vancouver Island (Marshall, 2001).

Reports by the Sierra Legal Defense Fund (Parfitt, 1999), the Canadian Centre for Policy Alternatives (Marshall, 2001), and the Maritime Awards Society of Canada (Johnston and Hildebrand, 2001) question the morality of supporting an industry that contributes to global warming when alternatives such as renewable energy sources are available. Johnston and Hildebrand (2001) provide a counter argument that British Columbians use fossil fuels and therefore should play a role in developing them if possible; using fossil fuels that originate from areas with low standards contributes to environmental degradation in these areas and this "not in my backyard" attitude is hypocritical .

Perhaps these larger questions can help the public decide on a path for the future. For example, rather than waiting for an environmental assessment then subsequent public review, perhaps a public forum should be established for coastal communities that offers a number of solutions to the employment problems. Offshore hydrocarbon development has been a contentious issue to say the least. Asking the public to decide between yes or no – between environmental risks with possible socio-economic benefits and a bleak economic future – could create further divisions between stakeholders. A consensus based approach to public debate that presents a number of options for the future may help ease conflicts between the numerous interests of coastal residents.

The Future

The report by the Scientific Panel was one step further towards offshore hydrocarbon exploration off British Columbia however, many other steps need to be taken and each has obstacles. In the 1980s, three years were spent conducting environmental evaluations, two and a half years in public review and three in provincial and federal negotiation and regulatory

formation. This time around, the process faces: new laws which affect the environmental assessment process; a different political landscape facing federal provincial negotiators; new interest in ocean conservation and marine protected areas; First Nations land claims; industry interest levels; and a new approach to coastal zone management.

Any policy change by the federal government would trigger the 1999 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (BCMEM, 2002b). This directive requires a Strategic Environmental Assessment be undertaken when any general policy or program proposal submitted to a Minister may result in important environmental effects. A strategic Environmental Assessment is defined as:

"a systematic, on-going process for evaluating, at the earliest appropriate stage of decision-making, the environmental effects and consequences of policy, plan or program proposals, by ensuring full integration and consideration of the relevant biophysical, economic, social and political factors" (CEAA, 1999).

Strategic Environmental Assessment requires public input to "strengthen the quality and credibility of the policy, plan, or program decision" in question. The first, among many, guiding principles are early integration and examination of alternatives (CEAA, 1999).

"One of the most critical aspects of any strategic environmental assessment is the opportunity to evaluate and compare the environmental effects of alternatives in the development of a new policy, plan or program." (CEAA, 1999).

Implementing offshore hydrocarbon development could be a difficult policy to justify under such scrutiny. Federal Environment Minister David Anderson seems committed to the process and has stated a scientific review could last for years and cost tens of millions of dollars (Times Colonist, 2002).

In Atlantic Canada, jurisdiction is clear with the federal government having all rights to the sea floor; jurisdiction of the Pacific Ocean is not as clear. In 1981 British Columbia restated

its claim to all “submerged lands”. The Province saw its jurisdiction as extending in a line that connects the West coast of Vancouver Island and the Queen Charlotte Islands. The issue was taken to the Supreme Court and in 1982 it ruled the province had jurisdiction of the water and seabed between Vancouver Island and the mainland. There is little doubt among Canadian constitutional lawyers that the sea beds of Hecate Strait and Queen Charlotte Sound belong to the federal government (Johnston and Hildebrand, 2001). In 1980 it was the federal government that initiated proposals to develop hydrocarbon off British Columbia’s coast (BCMCSE, 2001b). The present interest by the federal government is not known, though it is possible that with increased environmental awareness federal decision makers will not be afraid to move slowly. In response to the report by the Scientific Panel, Herb Dhaliwal, federal Minister of Natural Resources, stated that as far as Ottawa is concerned "there is a moratorium"; and more scientific and environmental research work must be done before Ottawa can make a decision (Greenwood, 2002).

In recent years there has been increased interest in protecting coastal areas. Fisheries and Oceans Canada has initiated a program to identify environmentally sensitive areas and work with local resource users to develop a management plan with the goal of designating the area a marine protected area (MPA). Authority for the designation is granted through the Ocean’s Act. The goals of the MPA program are:

- To proactively conserve and protect the ecological integrity of each MPA site.
- To contribute to the social and economic sustainability of coastal communities by providing for uses which are compatible with the reasons for designation.
- To further knowledge and understanding of marine ecosystems (FOC, 1999).

Parks Canada has also become active in protecting marine areas with the establishment of the National Marine Conservation Areas Policy in 1994. One national marine conservation area (NMPA) close to designation is Gwaii Haanas on the southern end of Moresby Island. It includes 138 islands and was made possible, in part, by the voluntary relinquishment of petroleum rights by four major oil companies (Parks Canada, 2001). The National Marine Conservation Areas Program is actively looking in the Queen Charlotte Sound for other areas of interest (Parks

Canada, 2001). With both Parks Canada and Fisheries and Oceans Canada actively working towards conservation in the area, proponents of offshore hydrocarbon exploration may face even more rigorous examination of environmental impacts.

First Nations are powerful stakeholders in the region. At least four First Nations claim rights and title over marine resources in the Hecate Strait and Queen Charlotte sound (Marshall, 2001). This Nations include the Haida, the Tsimshian, the Heiltsuk, and the Kwakiutl. The Tsimshian and Haida issued a joint statement in 2001 which stated:

"Deborah Jeffrey, President of the Tsimshian Nation and Guujaaw, President of the Haida Nation are united in their statement to the federal and provincial governments, 'The Moratorium on Offshore Oil and Gas Exploration must remain in place.'" (Jeffrey and Guujaaw, 2001).

In a workshop held at Simon Fraser University titled: "Exploring the Future of Offshore Oil and Gas Development in BC: Lessons from the Atlantic", Philip Hogan, councilor of the Heiltsuk First Nation spoke of industry in the area:

"…we are not going to see the benefits. The benefits do not come to Bella Bella from any of these types of developments… – we call it colonization. Removing resources from our people and taking away our futures. And who benefits? Not us. I do not see how we can afford to allow this to happen." (Hogan, 2001).

Although it is not likely claims of title could challenge mineral rights of the federal or provincial governments, both governments are bound by the constitution to protect First Nation's fishing rights; any infringement on these rights by government would require "meaningful consultation with aboriginal people, conducted in good faith" (Dodell and Abbott, 2002). Consultation with First Nations is also required under the 1999 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals (CEAA, 1999).

The process that occurred in the 1980s to develop offshore hydrocarbon resources was initiated by the federal government but industry played a key role in performing IEEs and taking

part in public reviews. Today industry's role is more of an observer. This can be expected after the amount of resources it spent in the 1980s to take part in the process only to have the provincial government withdrawal six years after it started. Industry has recently stated that before it considers offshore hydrocarbon exploration off British Columbia again, it would like certain issues resolved. These issues include:

- Ending the moratorium.
- Establishing jurisdiction over the disputed area.
- Establishing a regulatory framework.
- Resolving aboriginal claims of title.
- Completing environmental assessments.
- Designation of any environmentally sensitive areas (Greenwood, 2002; Petroleum Economist, 2001).

These requirements for industry involvement are challenging indeed. Not only will they require a substantial amount of time to resolve, they require a long term commitment by government to see them through. Richard Neufeld, Minister of Energy and Mines, is aware of the problem: "It's going to take quite a while, based on what the industry has told me, if we lifted the moratorium tomorrow, it would be at least eight years before the first well was drilled." (Petroleum Economist, 2001). With the new requirements for strategic environmental assessments, it looks as if the federal moratorium, at least, will remain for some time. The designation of any environmentally sensitive areas could also take some time. Gwaii Haanas has been in the planning stages for many years and is still not formally designated.

In 1998, the United Nations International Year of the Ocean, the British Columbia government released the Coastal Zone Position Paper. This paper was intended to present the "province's longer-term vision, interests, and objectives for its coastal zone and resources." (Government of British Columbia, 1998). The paper identified many needs for a provincial position including:

- Threats to resource sustainability

- Economic stability and coastal community diversification
- Coastal land and resource conflicts
- Jurisdictional complexity and overlap
- Fisheries as a part of coastal management
- First Nations
- Federal and provincial collaboration

Underlying principles of the position include:

- Sustainability
- Leadership
- Integration
- Partnerships
- Certainty
- Transparency

The British Columbia government is not alone in moving towards integrated coastal management. The Oceans Act requires the Minister of Fisheries and Oceans Canada (FOC) to "lead and facilitate the development and implementation of plans for Integrated Management." (FOC, 2002). The FOC is already committed to protecting the marine resource in the area; with the new mandate in the Oceans Act requiring it to work with the province and stakeholders in decision making, it will be interesting to see how the FOC responds to offshore hydrocarbon exploration..

Fitting offshore hydrocarbon exploration and development into the context of the provincial coastal zone strategy could be difficult. The position paper states a need to "promote local involvement in decision-making and special consideration of the needs and interests of aboriginal peoples and local communities that rely on marine resources." (Province of British Columbia, 1998). Not only would the province need to portray offshore hydrocarbon exploration and development as sustainable and economically stable, it would need to form some degree of consensus within local communities.

Conclusion

In the end, the government of British Columbia may find these obstacles insurmountable. The best interests of both the government and public will be served if the residents of coastal communities are able decide on their own future. Residents of coastal communities should not be asked to decide on the question of renewed hydrocarbon exploration alone; they should be given a number of options with it being but one alternative. A “top down” approach, basing regulatory formation on certain conditions and recommendations derived through public review could lead to further division between stakeholders. However, through building consensus by giving informed stakeholders a place in the decision making process and by offering alternatives with a chance for public driven initiatives, the government of British Columbia could lead its coastal communities to a prosperous and sustainable future.

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Appendix 1: History of related events

1913 The first on-shore well was drilled on Graham Island. Eight additional on-shore wells are drilled from 1949 to 1971.

1959 British Columbia issued an Order-In-Council claiming submerged lands belong under Provincial jurisdiction.

1961 Federal oil and gas exploratory permits acquired by Shell Canada Ltd. for the offshore of British Columbia (see figure 1).

1963 Shell Canada Ltd. began exploration surveys including mapping of seafloor geology, aeromagnetic and seismic surveys.

1967 The Supreme Court of Canada decided the Territorial Sea off British Columbia, outside of bays, harbours and inland waters, belongs to Canada. Canada asserted this claim by authorizing 14 offshore wells to be drilled by Shell Canada Ltd.

1967-1969 Shell Canada Ltd. drilled eight wells in Hecate Strait and Queen Charlotte Sound and six wells off the West Coast of Vancouver Island. Four wells in the Hecate Strait and Queen Charlotte Sound area showed minor signs of oil and gas, and were not considered significant. Minor amounts of gas were found off Tofino.

1969 The U.S. made proposals to ship Alaska oil south by tanker through British Columbia coastal waters and the Strait of Juan de Fuca.

1970 The federal government declared a moratorium on drilling and exploration in the Strait of Georgia. British Columbia suspended work obligations on provincial permits in the region until the question of ownership is resolved.

1970 Shell Canada Ltd. leased its offshore area permits to Chevron Canada Resources Ltd.

1971 The British Columbia legislature passed a resolution opposing tanker traffic off the west coast.

1972 The federal government imposed a moratorium on oil tanker travel through Dixon Entrance, Hecate Strait and Queen Charlotte Sound. Shortly after, the federal government also imposed a moratorium on further exploratory drilling in the same area. This "moratorium" took effect by the government's refusal to issue new licenses, or to allow work under existing licenses.

1976 British Columbia Court of Appeal decided the Strait of Georgia is owned by British Columbia.

1978 Geological Survey of Canada estimated potential reserves at 150 million barrels of oil and 6 trillion cubic feet of natural gas.

1980 The federal government increased incentives for developing offshore oil and gas reserves as part of the National Energy Program.

1981 BC issued an Order-In-Council restating BC's claim to all submerged lands, and placed a moratorium on exploration in parts of Johnstone Strait, Georgia Strait, and Juan de Fuca Strait.

1982 Chevron Canada Resources Ltd., seeking a renewal of exploration, submited an initial environmental evaluation (IEE) for the federal Canada Oil and Gas Lands Administration (COGLA).

British Columbia Ministry of Energy, Mines and Petroleum Resources and Ministry of Industry and Small Business Development commissioned a report on the potential onshore effects of oil and gas exploration and development off the coast of British Columbia. The report concluded only ten to twenty percent of jobs in offshore development would come from local sources.

1983 Petro-Canada Inc., also seeking a renewal of exploration, submitted its IEE to the federal and provincial governments.

The British Columbia Ministry of Environment submitted their IEE in response to the proposal from Petro-Canada Inc. and Chevron Canada Resources Ltd. to renew oil and gas exploration in the offshore of British Columbia.

1984 The West Coast Offshore Exploration Environmental Assessment Panel was appointed by the Federal Minister of Energy, Mines and Resources and the British Columbia Minister of Energy, Mines and Petroleum Resources to conduct a public review of the potential effects of offshore oil and gas exploration based on IEEs submitted by industry and government.

A Technical evaluation of the IEEs performed by Petro-Canada Inc. and Chevron Canada Resources Ltd. was submitted by the federal Canada Oil and Gas Lands Administration (COGLA) and British Columbia Ministry of Energy, Mines and Petroleum Resources (BCMEMPR) to the West Coast Offshore Exploration

1984 Environmental Assessment Panel. The report concluded the IEEs are generally adequate but contain a number of deficiencies.

The West Coast Offshore Exploration Environmental Assessment Panel, after conducting public reviews, requested additional information from government, Chevron Canada Resources Ltd. and Petro-Canada Inc. to supplement the IEEs.

Petro-Canada Inc. withdrew from the public review process.

Supreme Court of Canada decided Strait of Georgia is owned by British Columbia. The Hecate Strait and Queen Charlotte Sound are still in dispute.

1985 Chevron Canada Resources Ltd. and the federal and provincial governments provided additional information based on the request by the West Coast Offshore Exploration Environmental Assessment Panel.

Workshops and Panel hearings conducted by the West Coast Offshore Exploration Environmental Assessment Panel continued through Victoria, Vancouver and eighteen other communities.

1986 The West Coast Offshore Exploration Environmental Assessment Panel submitted its final report. The report included 92 recommendations. Based on these recommendations, the provincial and federal governments began negotiating on the Pacific Accord. The accord would create a new regulatory authority which would manage the offshore on behalf of the federal and provincial governments.

1987 Canada Oil and Gas Lands Administration (COGLA) and British Columbia Ministry of Energy, Mines and Petroleum Resources (BCMEMPR) held public meeting in a number of coastal communities and vow the new regulatory authority created under the Pacific Accord will assume the responsibility for ensuring appropriate public consultation.

1988 Canada Oil and Gas Lands Administration (COGLA) and British Columbia Ministry of Energy, Mines and Petroleum Resources (BCMEMPR) released a report on the status of negotiations and response to the West Coast Offshore Exploration Environmental Assessment Panel's final report. Of the 92 recommendations by the West Coast Offshore Exploration Environmental Assessment Panel, 7 were rejected, 28 were accepted, 37 were accepted on their intent and 2 were under review. The creation of the Pacific Offshore Petroleum Exploration Environmental Coordinating Committee was announced to guide the petroleum regulators (COGLA and BCMEMPR) on the implementation of the recommendations related to environmental and socio-economic aspects in which the intent was accepted, in effect recommendations that needed to be adjusted to fit into the new regulatory structure.

1989 Oil spills occurred first from the Nestucca barge off Washington State, then from the Exxon Valdez oil tanker off Alaska.

British Columbia announced a continuation of the moratorium for at least five years. Negotiations on the Pacific Accord were halted. The federal government announced it will not consider offshore development until requested by British Columbia.

1994 British Columbia extended the moratorium for another five years.

1995 Geological Survey of Canada revised estimates to 2.6 billion barrels of oil and 20 trillion cubic feet of natural gas.

1996 Canadian Ocean Frontier Initiative (COFRI) conference in Prince Rupert BC urged further investigation of the potential for offshore oil and gas exploration and move towards lifting the moratoria.

1997 North Coast Oil & Gas Task Force, which is comprised of private citizens in Prince Rupert, began to lobby for a reexamination of the moratorium. It had the support of the BC Chamber of Commerce.

1998 The Geological Survey of Canada revised its estimate of potential oil and gas reserves in BC coastal waters to 9.8 billion barrels of oil and 25.9 trillion cubic feet of gas. Estimates on how much of this oil and gas can be recovered vary.

1999 The BC Alliance for the Preservation of the Moratorium on Offshore Oil and Gas was created by a coalition of environmental, fishing, and First Nation groups.

British Columbia asked the Northern Development Commission to initiate public discussions with North Coast residents on their views of the moratorium.

2000 A workshop on the moratorium is held at Simon Fraser University. Attendants were included from industry, government, academia, native communities, environment groups and the general public.

The Northern Development Commission selected a Process Design Team to develop recommendations for a public consultation framework in regard to the present moratorium.

2001 The Process Design Team issued its final report outlining a structure for further public hearings to determine support for the moratorium in coastal communities. It recommends a process that would take approximately 18 months to complete. British Columbia Ministry of Energy and Mines dismissed most of the report and moved to carry out scientific studies. It appointed an independent scientific panel to examine whether offshore oil and gas could be extracted in a scientifically sound and environmentally responsible manner. Also appointed was a six-member, sub-committee, Offshore Oil and Gas Task Force to hold a series of public hearings on the issue of the moratorium.

The Haida and Tsimshian Nations issued a joint statement indicating their support for the moratorium.

The Heiltsuk Nation, with Dr. Craig Orr, published a paper outlining their concerns towards offshore development. The Nation previously declared its support of the moratorium during the workshop at Simon Fraser University.

The Oil free Coast Alliance was formed with 70 groups opposed to the lifting of the moratorium.

2002 The scientific panel appointed by the Ministry of Energy and Mines issued its final report claiming there is no scientific basis for the moratorium. The report also outlined a number of areas that needed to be addressed before the removal of the moratorium takes place.

The Offshore Oil and Gas Task Force concluded the public had many concerns that needed to be addressed before the moratorium is lifted. The report stated coastal residents want to be active participants in further debate.

2002 The Province of British Columbia enlisted the University of Northern British Columbia to carry out scientific and technical research that would address the recommendations from the scientific panel and The Offshore Oil and Gas Task Force.

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