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## **APPENDIX 1**

### **SUMMARY OF DFO'S HADD COMPENSATION PROCESS**



Any project that is referred to DFO is reviewed to determine if there is likely to be a HADD to productive fish habitat as defined under Section 35 of the *Fisheries Act*. DFO have a hierarchy of preferred options to avoid a HADD. These are, in order of preference:

- **relocation** or physically moving a project, or part of a project, to eliminate adverse impacts on fish habitat;
- **redesign** of a project so that it no longer has negative impacts on fish habitat;
- **mitigation** of impacts in cases where relocation and redesign are not possible; or
- **compensation**, which involves replacing damaged habitat with newly created habitat or improving the productive capacity of some other natural habitat.

Compensation is DFO's least preferred option and as such, should only be considered when relocation and redesign prove impractical and where mitigation measures fail to avoid a HADD.

Once a HADD is determined to occur, and it cannot be avoided by the first three options above, the federal Fisheries Minister, under Section 35(2) of the *Fisheries Act*, must authorize the HADD or the project cannot proceed. The authorization may be granted on the condition that losses to habitat caused by the project must be balanced by gains elsewhere. This requirement stems from DFO's Policy for the Management of Fish Habitat, which states that there shall be no net loss of fisheries habitat. A quantification of the potential HADD, proposed compensation, a schedule and any required follow-up will be detailed in a Compensation Plan developed by the Proponent. Based on this plan, a legally binding Compensation Agreement will be entered into by the Proponent and DFO and the agreement will be appended to the authorization granted by the Minister. The requirement for an authorization is a *CEAA* trigger that initiates a federal environmental review.

The amount of HADD is usually quantified based on known project activities that have a defined 'footprint' that will disrupt, damage or alter fish habitat (i.e., seabed). This can include construction of glory holes, installation of subsea infrastructure, installation of pipelines, etc. The total surface 'footprint' area that is affected by project activities is calculated. To complete the environmental review, DFO requires an acceptable habitat compensation strategy to be developed. The habitat compensation strategy provides alternatives that could be used to compensate for lost habitat.

Alternatives that would provide habitat compensation should be considered in terms of a hierarchy of preferred compensation options:

- create similar habitat at or near the development site within the same ecological unit;
- create similar habitat in a different ecological unit that supports the same stock or species;
- increase the productive capacity of existing habitat at or near the development site and within the same ecological unit;
- increase the productive capacity of a different ecological unit that supports the same stock or species; or
- increase the productive capacity of existing habitat for a different stock or a different species of



fish either on or off site.

Compensation may not be an option for particularly valuable habitat.

In some cases, more than one alternative may be used in a single project to protect and maintain habitat capacity to produce fish. Once agreement has been reached for a habitat compensation strategy, the Proponent then prepares a Habitat Compensation Plan, which provides specific information on the selected strategy (and transmits that information to the public) and details how the strategy will be implemented and monitored.

Examples of marine habitat compensation plans in Atlantic Canada include the:

- construction of a reef to provide lobster habitat in the vicinity of a wharf constructed for the Newfoundland Transshipment Terminal (which provides on-land storage for crude from the offshore platforms prior to second-leg tanker transport to markets); and
- creation of nearshore habitat for Iceland scallops to compensate for offshore Iceland scallop habitat lost due to the excavation of glory holes and burial of a seabed pipeline for the Terra Nova development (offshore Newfoundland).



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**APPENDIX 2**

**FIRST NATIONS POSITIONS ON THE  
OFFSHORE OIL AND GAS MORATORIUMS**





## Press Release

### Tsimshian and Haida Statement on the Moratorium on North Coast Oil and Gas Exploration

May 14, 2001

The Tsimshian Nation and the Haida Nation continue to support the Moratorium on Offshore Oil and Gas Exploration. The Tsimshian and Haida have examined the issues and determined that the reasons cited for initiating the Moratorium have not changed. "The petroleum interests that are being promoted are within the territorial seas of our people, says Deborah Jeffrey, President of the Tsimshian Tribal Council. "Our culture and identities are integrally tied to our land and seas, including the marine resources."

The cultures of Northwest Coast peoples are derived from their relationship with their lands. The marine environment is amongst the richest on the planet while the coastal rainforests attract visitors from around the world. "The risk of harm from an accidental spill or from allowable discharge is not acceptable and they expect us bear the risk, says Guujaaw, President of the Council of Haida Nation. "We intend to pass on a life and culture to the following generations which includes fish and birds."

The position of the Tsimshian and the Haida is consistent with the position of the federal government. The Environment Minister David Anderson stated previously in the media dated August 9, 2000. "I am not going to in any way support lifting of the moratorium until it's clearly shown that the reasons for having it in the first place are no longer valid." He stated interested parties would have to satisfy concerns about the environment, the fishery, earthquakes and aboriginal involvement in any proposal.

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 Explorations must remain in place."

For further information:

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Tsimshian Tribal Council  
1 877 627-8782

Guujaaw, President  
Council of Haida Nation  
1 877 559-4468



**SPEAKING NOTES - GARRY REECE  
OIL AND GAS CONFERENCE  
OCTOBER 2, 2001**

Thank you for inviting me to speak at this important conference. These are significant issues before us, and I appreciate the recognition that First Nation involvement is essential to any suggestion that development can proceed under any conditions.

I'd like to start by referring you to the official joint position of the Tsimshian Tribal Council and the Haida Nation, which opposes oil and gas exploration and development in our waters at this time. We are full members of the Tsimshian Tribal Council, but I should note that I represent only the Lax Kw'alaams Band at this meeting, and my comments come only from myself as Chief of that Band.

**THE LAX KW'ALAAMS BAND**

As the elected Chief of the Lax Kw'alaams Band, let me tell you more about our Band for those of you who are not familiar with us:

- we are one of BC's largest bands
- with approximately 2,700 members; 1300 live in the Village of Lax Kw'alaams, at Port Simpson, north of Prince Rupert, which is accessible only by ferry and air service
- the Band has jurisdiction over 72 reserves totalling some 11,800 hectares of land.
- separately governed (an elected council and Hereditary system) but also a member of the Tsimshian Nation; full participants in the Tsimshian Tribal Council
- our membership consists of nine of the fourteen tribes of the Tsimshian Nation
- have occupied the north coast since time immemorial, there is evidence of 5,000 years of occupation in the Prince Rupert area
- The Lax Kw'alaams are in Treaty process, as a member of the Tsimshian Tribal Council, but are not yet at the Approval in Principle stage. (Things, as you know, are going slowly, and the current approach of the Lax Kw'alaams Band is not to stake our future on this process. We intend to move forward through economic development initiatives to become completely self-sufficient)

The Lax Kw'alaams Band have long been participants in the modern economy. The Band has business interests:

- in commercial fishing
- participated extensively in the commercial salmon, halibut, herring and other fisheries since the commercial fishery started,
- set up Lax Kw'alaams Marine Industries which operated a cannery ever since the 1970's
- participated in joint ventures with fish processing companies, (currently one is active)
  
- and logging:
- set up the Lax Kw'alaams Development Corporation which engaged in logging on reserve through the 1980's and 1990's
- set up and operates Tsimskow Resources Ltd. which does contract logging and silviculture sub-contracting, and a non-replaceable 10 yr Forest Licence with a significant volume.
  
- and we're also no stranger to the Oil and Gas industry, and not adverse to doing business: In the 1980s the Band entered into a comprehensive agreement with Dome Petroleum regarding the development of a liquid natural gas plant, which was ground-breaking at the time, and one that showed the industry that reasonably progressive relationships are possible.

**Reliance on the Sea**

For us the sea is not an "industry", it is our life. Our people have traditionally relied on the ocean for a very wide variety of resources – from salmon, herring, groundfish, to abalone, sea urchin, kelp etc.

We fish commercially, it is still our largest source of employment, it is still the basis of our culture. Its value cannot be measured in money.



Each of these activities, all of which have their own seasons, and each of which have traditional practices, modern methods and commercial implications, are potentially impacted by both the possibilities of lower-level chronic impacts, and by the possibility of a catastrophic spill.

*Consideration of the Full Risks to First Nations*

I am not a scientist, but I do know something of the wide variety of possible negative effects of the proposed developments. I will leave it to others to talk of these in detail. But issues for us that would suggest that oil and gas development could be unacceptable or possibly devastating to us include:

- the sensitivity of the Coastal environment in general
- the salmon and other commercial fisheries
- Seismic exploration and noise effects on the marine environment
- Groundfish and other less mobile species
- General toxic effects on wildlife, sea mammals like otters and seals
- the Big Spill (even low risk is unacceptable if impacts are devastating)
- The negative effects on other economic development alternatives – eg. tourism, alternative fisheries, aquaculture etc.

I note however, that for us, this issue is not limited to environmental or technical matters – primarily perhaps this is a social issue. From a whole range of possibilities, our culture is put at risk, not only from any disaster, or environmental impacts, but also by the possible changes that large industrial activity will bring to us.

Also, please do not suggest that the risk of exploration are lower than that of production. That may indeed be true, but we know this: if exploration produces significant developable reserves, they will be developed. The pressures for development will be huge. Why look for oil and gas unless you intend to produce it.

*The Benefits – How much would really come to First Nations?*

Any analysis that was intended to justify such risks, would, it is fair for any government to say, have to be justified by a clear cost-benefit analysis, and one that ensured that the provable and certain benefits clearly outweighed the risks – the benefits to us, and the risks to us.

We are told there are very significant economic benefits to be obtained from oil and gas development, and these will be shared fairly with First Nations. We are told that the risks can be mitigated, and that science and technology have evolved to the point where there is no risk.

We have one thing to say to this: "PROVE IT".

Promises and good intentions will never be enough to put our way of life and our lands at risk.

Do you wonder that First Nations should be suspicious?

- o If you look at the history of the crisis in our fisheries and the so-called scientific management of salmon and other species;
- o If you look at forestry and mining, and how few benefits have gone to First Nations;
- o If you look at the general process of "consultation" and how little difference it has made to most decisions;

the wonder is not that First Nations would be cynical, the wonder is that First Nations representatives like myself might still have an open mind, might still be willing to discuss these issues.

If we look to the experience in B.C. with forestry, with mining, with the fishery; even if we look to Northeastern B.C. and the oil and gas there, we do not see an overwhelming history of fairness in the distribution of resource opportunities, opportunities that once belonged exclusively to our nations.



First Nations do not want to have a few of their members employed in your operations. Yes, we need employment, but such employment alone is insufficient, and can even be disruptive of our culture and communities. First Nations today want an ownership stake in the businesses and opportunities that arise, we want revenue sharing, and an effective role in decision making. We want to be full and active participants if we would ever accept the very substantial risks to our lands and resources and way of life that this activity suggests.

Do not make the mistake of assuming that First Nations have a knee-jerk and uninformed opposition to oil and gas exploration. Yes, we have an immediate and fundamental realization of the potential risks. But Band governments like ours also have the capacity to make sophisticated decisions, based on science and business. We have the capacity to make decisions with an open mind (but with open eyes as well, and full awareness of past lessons). But, where significant risks exist that will primarily be borne by us, do not expect us anymore to make these decisions without a full assessment of these risks.

#### Need for First Nations-led Investigations

And perhaps more importantly, do not assume that we will be satisfied by the investigations controlled by others, whether it is government sponsored Environmental Assessment Panels, or inquiries, or by company-led scientific consultant reports, or particularly by the current proposed provincial government process.

Those who will bear the risks should make the assessment.

First Nations have legal and moral rights in the coastal areas on which exploration would occur. We are the major users of marine resources. Outside of the cities, we are the primary inhabitants of most of the coastal areas. We are the ones who will suffer the risks. We do not intend to allow this exploration or development to proceed unless it has our full consent.

And I cannot contemplate that we would ever give our consent until we had conducted our own investigation of all the facts in a manner we could trust.

#### The Inadequacy of Consultation

Do not make the mistake that governments and other industries have made in thinking that simple "consultation" will satisfy our concerns. 'Consultation' has become a dirty word to many First Nations because it usually occurs after industry has formulated its plans, after it has spent years in planning and talking to government, after decisions in principle have been made and, generally, far too late to have any honesty or integrity. Such consultation is designed to soothe First Nations, to convince us that real risks are not real, that real harms are not harmful, and to buy our acceptance of the inevitable for bits and pieces and pennies on the dollar. First Nations have come to realize that no matter how friendly and decent the bureaucrat who comes to consult, no matter how lengthy the process, there is little value in such consultation.

In the past, First Nations received 'Trinkets and Beads' for valuable goods or lands – that is no longer something which we will accept.

#### Need for Dialogue Now

We are told that the Canadian Association of Petroleum Producers and companies like PetroCanada and Shell have confirmed that they will not be involved in activity off our coasts until land claim issues are settled. If they are sincere, we applaud them. Of course, if they are honest in waiting for Treaties, at the rate that process is going, we may all be waiting a very long time.

But even then, I caution industry that they should not, must not, wait until that time, and then expect to proceed without First Nations involvement. It is very much in the interest of everyone to have honest dialogue now, if you ever wish to proceed in good faith.



If there is one piece of advice I can give industry (and government), it is this: if you want to do business in First Nation lands, on our coasts, in our seas – We must be involved and we must be involved at the front end. You must start working with us BEFORE you complete the planning process, before or at least in parallel with your consultations with other governments.

You need to start working with First Nations now, you need to spend as much money and effort understanding us and our use of the sea and our lands, as you do understanding the geology and the environmental and technical challenges. You need to work with us to understand the very real risks. You need to ensure that the benefits you propose are real and substantial, and are real and substantial to the First Nation communities who inhabit the area. And most importantly, you need to respect us, and respect our rights, and respect our decision making processes. Then, perhaps, we can do business in a way that works for you, and for us.

Thank you.



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## **APPENDIX 3**

# **SUMMARY OF CUMULATIVE EFFECTS ASSESSMENT FOR OFFSHORE OIL AND GAS EXPLORATION AND DEVELOPMENT ACTIVITIES IN US FEDERAL WATERS**



Environmental Component	Other Projects and Activities	Conclusions
<b>Source Document/EIS: OCS Environmental Assessment. Extended-Reach Exploratory Drilling Project</b>		
Air Quality	<ul style="list-style-type: none"> <li>• On-going oil and gas activities.</li> <li>• Marine Shipping and Tankering</li> </ul>	<p>Insignificant increase to overall cumulative air quality</p> <p>No cumulative impacts expected to regional air quality</p>
Marine Water Quality	<ul style="list-style-type: none"> <li>• On-going oil and gas activities</li> <li>• Intermittent River Run-off</li> </ul>	No incremental additive effect
Fish Resources	<ul style="list-style-type: none"> <li>• On-going oil and gas activities</li> <li>• Dredging</li> <li>• Discharge of Dredged material</li> <li>• Water-intake structures</li> <li>• Aquaculture</li> <li>• Wastewater Discharge</li> <li>• Oil and Hazardous Waste Spills</li> <li>• Coastal Development</li> <li>• Agricultural Run-off</li> <li>• Commercial fishing</li> <li>• Recreational fishing</li> </ul>	Impacts from the proposed project are not expected to add measurably to cumulative impacts
Protected Areas		Refer to other sections
<b>Source Document/EIS: Delineation Drilling Activities in Federal Waters Offshore Santa Barbara County, California: Draft Environmental Impact Statement (2002-2006 Timeframe)</b>		
Air Quality	<ul style="list-style-type: none"> <li>• On-going and proposed oil and gas activities</li> <li>• Natural petroleum seeps</li> <li>• Marine shipping and tankering</li> </ul>	<p>The potential is low for incremental emissions to add to cumulative impacts to air quality</p> <p>(low = insignificant)</p>
Water Quality	<ul style="list-style-type: none"> <li>• On-going and proposed oil and gas activities</li> <li>• Municipal and industrial wastewater discharges</li> <li>• River run-off</li> <li>• Oil Spills</li> </ul>	<p>The discharge of drilling muds and cuttings may overlap in space and time with other projects or activities</p> <p>Oil spills may result in short-term moderate (significant) impacts, and long-term low (insignificant) impacts</p> <p>Incremental impacts from the proposed project are low (insignificant)</p>
Seafloor Resources	<ul style="list-style-type: none"> <li>• On-going and proposed oil and gas activities</li> <li>• Commercial fishing</li> <li>• Fiber cable installation</li> <li>• Sediment and contaminant</li> </ul>	<p>Overall impacts to high relief hard bottom habitat are high from all sources, particularly commercial fishing activities. Irreversible habitat alteration resulting from the proposed projects could occur from anchoring activities. Overall impacts to soft bottom resources is low</p>



Environmental Component	Other Projects and Activities	Conclusions
Fish Resources	<ul style="list-style-type: none"> <li>• On-going and proposed oil and gas activities</li> <li>• Tankering</li> <li>• Military operations</li> <li>• Dredging</li> <li>• Discharge of dredged material</li> <li>• Aquaculture</li> <li>• Coastal development</li> <li>• Agricultural runoff</li> <li>• Commercial fishing</li> </ul>	The proposed project will add a negligible increment to the overall cumulative effects on fish resources
Marine mammals	<ul style="list-style-type: none"> <li>• On-going and proposed oil and gas activities</li> <li>• Oil spills</li> <li>• Military Activities</li> <li>• Commercial Fisheries</li> <li>• Other Anthropogenic Activities (e.g., vessel strikes, marine pollution)</li> <li>• Non-anthropogenic (e.g., disease)</li> </ul>	The incremental contribution of the proposed project on cumulative effects is expected to be negligible to low (insignificant)
Threatened and Endangered Species	<ul style="list-style-type: none"> <li>• On-going and proposed oil and gas activities</li> <li>• Oil spills</li> <li>• Military Activities</li> <li>• Commercial Fisheries</li> <li>• Other Anthropogenic Activities (e.g., vessel strikes, marine pollution)</li> <li>• Non-anthropogenic (e.g., disease)</li> </ul>	<p>The incremental contribution of the proposed project on cumulative effects is expected to be negligible to low (insignificant)</p> <p>Negligible to low (insignificant) impacts may occur to blue, fin, and humpback whales from the proposed project.</p> <p>No impacts are expected to sei, right or sperm whales, Steller sea lions, Guadalupe fur seal, or southern sea otters</p> <p>Negligible impacts to sea turtles as a result of the proposed project is expected.</p>
Protected Areas		No impact is expected
Cultural resources		No impact is expected
<b>Source Document/EIS: Delineation Drilling Activities in Federal Waters Offshore Santa Barbara County, California: Draft Environmental Impact Statement (2002-2030 Timeframe)</b>		
Air Quality	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Marine shipping and tankering</li> </ul>	<p>Level of effect is speculative and uncertain</p> <p>A more comprehensive review is required as oil and gas developments progress</p>
	<ul style="list-style-type: none"> <li>• Oil Spills</li> </ul>	Localized, insignificant
Water Quality	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• River input</li> <li>• Sewage Treatment plant Discharge</li> </ul>	Low Impact



Environmental Component	Other Projects and Activities	Conclusions
Rocky and Sandy Beach Habitat	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Storm Events</li> <li>• Warm water trends</li> <li>• Natural seeps</li> <li>• Public use</li> </ul>	<p>Moderate to high impacts (significant) in Southern California</p> <p>Low to moderate (insignificant to significant) impact to the north</p>
	<ul style="list-style-type: none"> <li>• Oil Spills</li> </ul>	<p>Low to High impact, depending on location and size of spill</p>
Seafloor Resource	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Trawling</li> <li>• Fibre optic cable installation</li> </ul>	<p>Low to moderate impacts, depending on whether hard bottom habitat is affected</p>
Kelp Beds	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Warm water trends</li> <li>• Commercial fishing</li> <li>• Vessel traffic</li> <li>• Discharges</li> </ul>	<p>Incremental impact of oil and gas development is low</p>
Fish resources	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Commercial fishing</li> <li>• Water Pollution</li> <li>• Habitat degradation</li> </ul>	<p>Cumulative impacts to fish resources as a result of oil and gas development are expected to be moderate (significant)</p>
	<ul style="list-style-type: none"> <li>• Oil spill</li> </ul>	<p>The incremental increase in a risk of an oil spill represents a measureable overall cumulative oil spill risk</p>
Marine and Coastal Birds	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Helicopter traffic</li> <li>• Climate events</li> <li>• Pollution</li> <li>• Habitat Loss</li> <li>• Predators</li> <li>• Commercial fishing</li> <li>• Human disturbance</li> </ul>	<p>Routine operations of oil and gas development will not contribute to cumulative effects on birds</p>
	<ul style="list-style-type: none"> <li>• Oil Spills</li> </ul>	<p>Moderate to high impact</p>



Environmental Component	Other Projects and Activities	Conclusions
Threatened or endangered species	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Storm Events</li> <li>• Warm water trends</li> <li>• Trawling</li> <li>• Fibre optic cable installation</li> <li>• Commercial fishing</li> <li>• Helicopter traffic</li> <li>• Vessel traffic</li> <li>• Discharges</li> <li>• Natural seeps</li> <li>• Public use</li> </ul>	<p>Cumulative impacts from routine oil and gas activities to threatened and endangered marine mammals are expected to be low.</p> <p>Most activities from routine oil and gas activities would not contribute to cumulative effects to threatened and endangered bird species; oil spills and disturbance from helicopter flights range from low to high.</p> <p>Cumulative impacts from routine oil and gas activities to threatened and endangered sea turtles are expected to be negligible.</p> <p>Cumulative impacts from routine oil and gas activities to threatened and endangered amphibians are expected to be negligible</p> <p>Cumulative impacts from routine oil and gas activities to threatened and endangered fish species are expected to be low</p> <p>Most activities from routine oil and gas activities would not contribute to cumulative effects to threatened and endangered plant species; oil spills and construction of onshore facilities range from low to high.</p>
	<ul style="list-style-type: none"> <li>• Oil Spills</li> </ul>	<p>The cumulative impact of an oil spill to threatened or endangered species ranges from low to high, depending on the size, location, timing, and duration of the spill.</p>
Marine Mammals	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Commercial fishing – incidental take</li> <li>• Ship strikes</li> <li>• Pollution</li> <li>• Shipping (Noise)</li> <li>• Military Activities (noise)</li> </ul>	<p>Cumulative impacts from routine oil and gas activities are expected to be low</p>
	<ul style="list-style-type: none"> <li>• Oil spills</li> </ul>	<p>Negligible to high, depending the location,, size and duration of the oil spill</p>



Environmental Component	Other Projects and Activities	Conclusions
Estuarine and Wetland Habitats	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Storm Events</li> <li>• Warm water trends</li> <li>• Trawling</li> <li>• Fibre optic cable installation</li> <li>• Commercial fishing</li> <li>• Helicopter traffic</li> <li>• Vessel traffic</li> <li>• Discharges</li> <li>• Natural seeps</li> <li>• Public use</li> <li>• Commercial and residential development</li> </ul>	<p>Cumulative impact of oil and gas activities is low</p> <p>Overall cumulative effects from all activities ranges from low to high</p>
Onshore Biological Resources	<ul style="list-style-type: none"> <li>• Future oil and gas developments (including construction, pipeline installation, and decommissioning)</li> <li>• Storm Events</li> <li>• Warm water trends</li> <li>• Fibre optic cable installation</li> <li>• Helicopter traffic</li> <li>• Discharges</li> <li>• Public use</li> </ul>	<p>Cumulative effects from all activities is low to moderate.</p>
<b>Source Document/EIS: Liberty Development and Production Plan – Volume 1: Draft Environmental Impact Statement</b>		
Endangered Species (Bowhead whales, Eiders, Other species)	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> <li>• Transporting oil through the Trans-Alaska pipeline</li> <li>• Tankering from Valdez</li> <li>• Vessel traffic</li> <li>• Subsistence hunting</li> </ul>	<p>The incremental contribution of the Project to cumulative effects is likely to be quite small (not significant)</p> <p>Some bowhead whales may temporarily avoid noise-producing activities</p>
	<ul style="list-style-type: none"> <li>• Oil spills</li> </ul>	<p>A large offshore oil spill could increase adverse cumulative effects to potentially significant population levels</p>
Seals and Polar Bears	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> <li>• Transporting oil through the Trans-Alaska pipeline</li> <li>• Tankering from Valdez</li> <li>• Sport harvest of Wildlife</li> <li>• Commercial fishing</li> <li>• Subsistence hunting</li> <li>• Habitat alteration</li> </ul>	<p>The incremental contribution of the Project to cumulative effects is likely to be quite small (not significant)</p> <p>The Project should only briefly and locally disturb or displace a few seals or polar bears</p>



<b>Environmental Component</b>	<b>Other Projects and Activities</b>	<b>Conclusions</b>
Marine and Coastal Birds	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> <li>• Transporting oil through the Trans-Alaska pipeline</li> <li>• Tankering from Valdez</li> <li>• Sport harvest of Wildlife</li> <li>• Commercial fishing</li> <li>• Subsistence hunting</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to be quite small (not significant) Collisions with structures may occur, but losses are expected to be low
	<ul style="list-style-type: none"> <li>• Oil Spills</li> </ul>	Significant effects could occur to some populations, with particular note to the long-tailed duck and common eider
Terrestrial Mammals	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> <li>• Transporting oil through the Trans-Alaska pipeline</li> <li>• Tankering from Valdez</li> <li>• Sport harvest of Wildlife</li> <li>• Commercial fishing</li> <li>• Subsistence hunting</li> <li>• Habitat alteration</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to be quite small (not significant) Some caribou may be displaced (represents less than 1% of the local short-term disturbance of caribou) The Project should only briefly and locally disturb or displace a few muskoxen and grizzly bears
Lower trophic-level Organisms	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to not be measureable (not significant)
Fishes and Essential Fish Habitat	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to not be measureable (not significant)
	<ul style="list-style-type: none"> <li>• Oil Spills</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to not be measureable on fish populations (not significant)
Vegetation-Wetland Habitats	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> <li>• Oil Spills (minor issue)</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to be less than 1% of the cumulative disturbance effects (not significant)
Archaeological resources	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> </ul>	The incremental contribution of the Project to cumulative effects is likely to be minimal (not significant)
Water Quality	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> </ul>	Sediment effects are expected to be short term, having the greatest impact in the immediate vicinity of the activity Regional long-term, degradation of water quality to levels above regulated criteria due to hydrocarbon contamination is very unlikely
	<ul style="list-style-type: none"> <li>• Oil spills</li> </ul>	A large spill (greater than 500 barrels) would have a significant effect
Air quality	<ul style="list-style-type: none"> <li>• On-going oil and gas development activities</li> </ul>	Air emissions from the Project essentially



Environmental Component	Other Projects and Activities	Conclusions
	<ul style="list-style-type: none"> <li data-bbox="467 226 764 254">• Tankering from Valdez</li> </ul>	<p data-bbox="1062 226 1446 254">would have no effects on air quality</p> <p data-bbox="1062 260 1513 394">Projects in the past and present have caused essentially no deterioration in air quality or contribute measurably to global climate change.</p>

Source: MMS 2000; 2001a; 2001b

