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Chair

Mr. Leon Benoit

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● (0905)

[*English*]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)): Good morning, everyone. We are here today to continue our study of the status of emergency response to offshore oil and gas drilling and the adequacy of the current regulatory regime.

We have two panels today. The witnesses for the first panel are from the Canada-Newfoundland and Labrador Offshore Petroleum Board: Max Ruelokke, chairman and chief executive officer, and Jeff Bugden, manager, industrial benefits power and regulatory coordination. Welcome.

From the Canada-Nova Scotia Offshore Petroleum Board, we have Diana Dalton, chair, and Stuart Pinks, chief executive officer. Welcome to both of you.

And by video conference from Aberdeen, Scotland, we have Stuart Greer.

Mr. Greer, could you introduce the other gentleman with you today, please?

Mr. Stuart Greer (Rig Manager, Stena Carron, Stena Drilling Ltd.): This gentleman is Mr. John Banks, the chief operations officer of Stena Drilling.

The Chair: All right.

We're going to hear from the witnesses in the order they appear on the agenda, so we'll start today with the Canada-Newfoundland and Labrador Offshore Petroleum Board.

Go ahead, gentlemen, with your presentation. You have around seven or eight minutes.

Mr. Max Ruelokke (Chairman and Chief Executive Officer, Canada-Newfoundland and Labrador Offshore Petroleum Board): Thank you very much, Mr. Chairman.

Mr. Chairman, members of the committee, I'd like to begin my comments to you by expressing the heartfelt sympathy of all of us at the Canada-Newfoundland and Labrador Offshore Petroleum Board for the families and friends of those who were killed or injured in the April 20 explosion on the *Deepwater Horizon*. Our hearts and prayers go out to them, and to the victims.

Our board was established in 1985 under the Atlantic Accord, to regulate offshore oil and gas activity on behalf of the governments of Canada and Newfoundland and Labrador. We have 69 staff, with approximately 600 years of combined experience in offshore oil and gas operations.

Our mandate encompasses four key areas: worker safety, environmental protection, resource management, and industrial benefits. The board's mission statement confirms that worker safety and environmental protection will be paramount in all board decisions. The board has no part in the establishment or administration of royalties or taxes for any offshore activity. We do not promote the industry, that is the role of governments. Our role is one of regulatory oversight of operator activity, and when I say "operator", we refer to companies that hold operating permits authorized by the board.

The Atlantic Accord legislation defines a chief safety officer with broad powers and responsibilities for worker safety, as well as a chief conservation officer with powers over resource management. The legislation stipulates that an order made by the chief safety officer cannot be overruled by the board, and it prevails over a decision of the chief conservation officer.

The Atlantic Accord legislation therefore already accomplishes what the United States is proposing to do now with respect to separating some of the responsibilities of the Minerals Management Service. In short, our legislation provides that in matters of safety versus resource management and production, safety is paramount.

Drilling for oil and gas in the Newfoundland and Labrador offshore area began over 40 years ago in 1966. Since that time, some 355 wells have been drilled, including 144 exploration wells, and 15 of those wells have been in deep water, which is considered to be 500 metres or more. Production of oil from our offshore area started in 1997. At the end of March 2010, 1.1 billion barrels of oil had been produced from three projects: Hibernia, Terra Nova, and White Rose.

Since the beginning of production, 1,100 barrels of crude have been spilled in our offshore area, one barrel for every million barrels produced. There have been no blowouts in our offshore area. Obviously, we would prefer to always have no injuries or no spills, but we believe that the record for our offshore area is quite respectable.

Currently there is one exploration drilling program taking place in our offshore area. Chevron Canada Ltd. is drilling the Lona-055 exploration well some 430 kilometres northeast of St. John's, in a water depth of approximately 2,600 metres. I will speak to this project in further detail shortly.

The board's mandate is to interpret and apply the provisions of the Canada-Newfoundland Atlantic Accord Implementation Act and regulations to the Newfoundland and Labrador offshore area. In addition to the legislation, the board provides guidance to industry, which is developed on the basis of experience and expertise here and best practices from around the world.

The Gulf of Mexico incident is a reminder that accidents can happen. Regulations and regulators are designed to require that the risk of an offshore incident occurring is reduced to a level that is as low as reasonably practicable. This is a reality that safety regulators deal with as part of our responsibilities. It is precisely for this reason that safety regulators focus on ways to improve safety and prevent accidents from occurring.

Before drilling programs even are contemplated, before the relevant licences are issued in a potential area of exploration, the board undertakes a strategic environmental assessment of potential operations in that area. This initiative is over and above the requirements of both the Atlantic Accord legislation and the current federal environmental assessment legislation. The strategic environmental assessment for the Orphan Basin area was undertaken in 2003 and included solicitation of public comments on both the scoping document for the strategic environmental assessment at the outset of the process, as well as on a draft of the final report. The final report was posted on the board's website in November 2003 and is still available there today.

The strategic environmental assessment, while necessarily more of an overview nature than subsequent project-specific assessments, included a consideration of potential blowout risk and fate.

I'd like to describe for you now the regulatory approval process for drilling programs. As part of the planning process for a drilling program and before any authorization respecting the program is issued, an environmental assessment of the proposed program is conducted. This is conducted under both the federal Canadian Environmental Assessment Act and the accord legislation.

● (0910)

In the case of the Orphan Basin drilling program, the assessment was concluded in July 2006, prior to authorization of Chevron's first well in the area, the deepwater exploration well Great Barasway F-66. The documentation associated with this assessment, like all such board assessments, is publicly available, and the principal document still can be downloaded from the board's website.

The board's oversight of an offshore drilling program commences at the early planning stages, typically 18 months or more in advance of any proposed program. The operational review and approval of drilling programs is a two-tiered process that requires, firstly, an operations authorization, and secondly, an approval to drill a well for each one to be drilled as part of the drilling program.

Prior to receiving the operations authorization, a number of statutory obligations must have been met. The applicants must have completed the environmental assessment process required by the Canadian Environmental Assessment Act as well as the Atlantic Accord Implementation Act. The operators must have obtained a certificate of fitness from an independent third-party certifying authority and a letter of compliance from Transport Canada for the drilling installation, and they must file a safety plan and an environmental protection plan and a contingency plan that includes an oil spill response plan. In addition, they must submit documentation respecting financial responsibility, and finally, they must provide a declaration of fitness attesting that the equipment and facilities to be used during the program are fit for purpose, that the operating procedures relating to them are appropriate, that the personnel employed are qualified and competent, and that the installation meets all necessary Canadian standards. Only after all of this documentation is presented to and approved by the board may an operator proceed with the application.

Drilling and well control are critical aspects of offshore operations and are addressed extensively in the regulatory framework. This involves review of the operator's well planning and technical capabilities in respect to well and casing design, well control measures, kick prevention and detection, establishment of severe-weather operating limits, a review of emergency disconnect requirements, and an assessment of the relief well drilling arrangements.

Emphasis is also placed on ensuring that all personnel have the requisite training in well control and blowout prevention. A review is conducted to ensure suitable redundancy of the blowout preventer control system in the event of any situation that could result in a disconnect from the well.

Oversight of these matters is achieved in a systematic manner through the board's safety assessment system, which includes review of the operator safety management system and confirmation that the operator has identified the hazards and the measures to be put in place to reduce the risk from those hazards to a level that is as low as reasonably practicable.

Last but not least, the board's safety and environment professionals review the emergency response plans for the project in the event that an incident occurs despite the preventive measures in place. These plans include an oil spill response plan, which describes in detail the command structure the operator will put in place to respond to a spill event. It also describes the plan's relationship with other operators' and governments' plans and a description of spill response resources available at site in eastern Newfoundland, nationally, and internationally. Locally available resources include large containment and recovery systems—boom-and-skimmer systems—with fluid pumping capacities over 50,000 barrels per day each.

Detailed modelling of the potential fate of a spill at these locations using 40 years of weather data indicates that even if a large spill were to occur, it would be unlikely that oil would approach the Newfoundland and Labrador shoreline. Thus, scenes like those we see off the coast of Louisiana would not occur here. The impacts of a spill occurring this far from the Canadian coastline nevertheless would be serious and would require immediate response, but it would be a situation substantially different from what we are seeing in the United States today.

The second tier of the approval process involves a requirement to obtain an approval to drill a well, or an "ADW", for each and every well drilled. The ADW must provide detailed information on the drilling program and well design, including the BOP equipment and the casing and cementing program as well as a geologic prognosis. This application is reviewed by a multi-disciplinary team within the board comprising engineers, technicians, geologists, geophysicists, and environmental specialists prior to the issuance of the ADW.

The drilling and production guidelines in place speak to all critical matters in relation to well barriers, blowout prevention, and well control, including BOP stacks, casing, and cementing matters as well as detailed requirements and expectations pertaining to the termination of wells. These guidelines reflect high standards and modern thinking with respect to drilling, cementing, and well control matters.

Mr. Chair and committee members, Chevron Canada Limited has been issued an approval to drill a well for the Lona O-55 well after having met all the regulatory requirements under the drilling and production regulations and associated board guidelines.

Chevron's safety plan identifies all hazards, including a blowout, and describes how these hazards will be managed. Its safety plan describes the use of appropriate equipment, proper procedures, and competent personnel to undertake safe drilling operations.

● (0915)

Chevron is using the *Stena Carron* drillship, which is a state-of-the-art, sixth-generation, harsh-environment drillship. The BOP can be activated from the drill floor using either of two hydraulic control systems. This redundancy helps ensure that the well can be shut in by the drilling crew.

The vessel also has three backup systems capable of activating the BOP and shutting in the well should the need arise to do so. It has an acoustic system, an ROV intervention capability, and an auto-mode function, which automatically activates the BOP and shuts in the well when the signal is lost.

Prior to starting operations on the Lona O-55 exploration well, the *Stena Carron* was contracted out to ConocoPhillips in the Laurentian Basin, off the southern coast of Newfoundland and Labrador. The ConocoPhillips East Wolverine G-37 well was also a deepwater exploration well, in nearly 1,900 metres of water. It was successfully drilled to total depth, logged, and then terminated.

The Lona O-55 well was spudded on May 10, 2010. The BOP was fully pressure- and function-tested, including its backup activation systems, and was run in preparation for it to be run on riser and installed on the wellhead. Chevron continues to conduct drilling operations as per the ADW, and the well should be completed in early September, if the schedule is maintained.

Mr. Chairman and members of the committee, it is prudent practice for a regulator to conduct an internal review following an incident like the one in the Gulf of Mexico to determine if more can be done from an oversight perspective to address concerns about the risks of offshore drilling. In light of the situation unfolding in the Gulf of Mexico and heightened public concern over drilling operations currently under way in the Newfoundland and Labrador offshore area, the board has taken the following measures for overseeing well operations at Chevron's Lona O-55 well. These measures are in addition to requirements contained in the drilling and production regulations and associated guidelines.

A team has been established within the board to provide regulatory oversight of Chevron's operations. This team comprises the chief safety officer, the chief conservation officer, members of the board's management team, and selected senior staff with extensive experience in the regulatory oversight of drilling programs. Chevron is expected to ensure the timely posting of daily reports, seven days a week, so that up-to-date information is always available to this team. Chevron is required to meet with the board's oversight team every two weeks to review everything associated with the well. The board's chief safety officer will chair these meetings.

Chevron is required to provide the board's well operations engineer with copies of the field reports prepared in respect to the following: testing of the blowout preventer stack; function testing of the acoustic control system; function testing of the remotely operated vehicle intervention capability; and function testing of the auto-mode function system, together with an assessment of the readiness of the ROV system, in terms of equipment, procedures, and spare parts.

Chevron is expected to monitor developments at the *Deepwater Horizon* incident site and provide periodic assessments on the impact of any lessons learned from that situation to operations at Lona O-55, particularly any lessons learned with respect to well operations, BOP equipment, or spill response readiness.

The frequency of audits and inspections on board the *Stena Carron* will be approximately every three to four weeks. Normally these are conducted on offshore operators every three to four months.

Prior to penetrating any of the drilling targets, Chevron must hold an operations timeout to review and verify, to the satisfaction of the chief safety officer and the chief conservation officer, that all appropriate equipment, systems, and procedures are in place to allow operations to proceed safely and without polluting the environment.

Prior to penetrating any of these targets, Chevron should assure itself and the board that all personnel and equipment for spill response, which are identified in its oil spill contingency plan, are available for rapid deployment.

Chevron must also make arrangements for a representative of the board to be on board the *Stena Carron* to observe the cementing operations of the last casing string set prior to entering any target zones. The observer will also be present to witness the BOP testing, well control drills, and the results of the pressure test of the cementing job. In the case of the BOP testing, a representative of the certifying authority will also be present.

In due course, Chevron must provide, for review and assessment by the board's oversight team, a copy of the proposed well termination program, to be issued to field personnel for implementation. Chevron must also make necessary arrangements for a representative of the board to be on board the *Stena Carron* to observe the well termination program.

Finally, the board is confident that it administers a robust safety and environmental protection regime. Operators here work in a harsh environment, which demands diligence on their part to reduce risks to as low as is reasonably practicable. It is our role as a regulator to oversee their program, a role to which all of us at the board are dedicated.

Thank you very much for your attention.

● (0920)

The Chair: Thank you very much, Mr. Ruelokke, for your presentation.

We'll get to questions and comments after all three presentations.

We'll go directly to the next presentation from the Canada-Nova Scotia Offshore Petroleum Board. I believe Ms. Dalton will make the presentation.

Go ahead, please, for about seven or eight minutes.

Mrs. Diana Dalton (Chair, Canada-Nova Scotia Offshore Petroleum Board): Thank you for the opportunity for our board to provide information on the state of emergency response assets available and the adequacy of the current regulations governing this industry as they pertain to Nova Scotia. I won't repeat, but we are a similar board to the Newfoundland board, same type of legislation and responsibilities.

The Cohasset-Panuke project operated from 1992 to 1999, producing a total of 45.5 million barrels of light oil. When it began production in 1992, it became Canada's first offshore oil project. Our board regulates petroleum activities that total in the area of some 45.5 million hectares. During the life of that Cohasset-Panuke project there were no significant spills or well control incidents.

The Sable offshore energy project is the only currently operating project. It involves production of natural gas from five separate fields in shallow water approximately 225 kilometres off the east coast of Nova Scotia. Production began in December of 1999, and is expected to continue well into this decade. Development of additional past discoveries and any new discoveries could extend that project life. It is producing approximately 350 million cubic feet of natural gas, brought ashore via a subsea pipeline to a processing plant in Goldboro, Nova Scotia.

Now under development is EnCana's Deep Panuke offshore gas development, which involves the production of natural gas from an offshore field approximately 250 kilometres southeast of Halifax in shallow water, the gas to be transported to shore to Goldboro via a subsea pipeline.

Today you've asked us to talk about the regulatory regime, so rather than repeat what Mr. Ruelokke has said, I'll add some other things that both boards do.

Our regulatory regime is permissive in nature, meaning that any work activity to be conducted in the offshore area must first be authorized by our board. To obtain an authorization to conduct a particular work activity, an application must be submitted by the holder of the licence. There are a number of attendant elements, including a demonstration of financial responsibility, safety, environmental protection, resource conservation, industrial benefits, certification, declarations, and operating licences, as more detailed in Mr. Ruelokke's presentation.

The health and safety of offshore workers and the protection of the environment is paramount to our board. By regulation, an application for any authorization of drilling or production operations must be accompanied by safety plans, an environmental protection plan, and also by contingency plans and emergency response procedures. These plans must demonstrate that an operator has a robust safety and environmental management system in place and must clearly demonstrate that the operator has properly identified the health, safety, and environmental hazards associated with the proposed work activities. Training of the offshore workers is paramount. I should add that in our offshore, both in Newfoundland and Nova Scotia—I think Max would agree with me—we have a safety culture that is second to none.

The operator must also demonstrate that the associated risks have been evaluated and can be mitigated and managed. Drilling and production activities proposed in the offshore area trigger a requirement under CEAA to conduct the environmental assessment. The board is a federal authority under this act and follows the environmental assessment requirements in the CEA Act. Environmental assessments must also be in compliance with the Species at Risk Act to ensure the protection of listed species that may be affected by offshore areas. These environmental assessments must be completed and a determination made that the project is not likely to cause significant adverse environmental effects before the board would issue an authorization for a proposed work or activity.

Specific to drilling and production installations, such facilities must also have a valid certificate of fitness issued by a government-recognized independent certifying authority before that installation can be used to conduct any activity in the offshore area. In addition to verifying compliance with regulations and with detailed scope of work that is approved by the board's chief safety officer, the certifying authority reviews and approves the maintenance, inspection, and testing programs, and the operations manual for installation.

● (0925)

In accordance with our act, the board, prior to issuing that authorization, considers safety by reviewing, in consultation with its chief safety officer, the system as a whole, as well as its components.

With regard to evidence of financial responsibility, the operator must submit to the board documentation that evidences the required proof of financial capacity. No authorization will be issued until that evidence is satisfactory to the board.

Activities authorized by the board are subject to ongoing monitoring programs that evaluate operator compliance with health, safety, and environmental requirements. Operators must submit a variety of reports to the board providing information on the status of their work programs and to confirm compliance with regulatory requirements.

Board staff regularly conduct health, safety, and environmental compliance audits and inspections at the offshore work sites. I should add that there is always follow-up to any of the issues they find.

Operators are required to report all spills and other specified hazardous incidents that occur in their work locations. In each case, the board ensures the operator takes appropriate action to determine the causes of the spills or incidents and to prevent the recurrence. In more serious cases, the board will conduct its own independent investigation.

The board has established compliance and enforcement policies to address regulatory non-compliance. Under this policy, the board will seek voluntary compliance from the operator, but other possible actions may include issuance of orders, directives or notices, suspension or revocation of approvals and authorizations, and, lastly, prosecution.

The regulations we enforce are written and promulgated by the two governments. A key element of that under which we operate is a set of comprehensive guidelines that our board issues to aid operators in understanding and interpreting how they may achieve regulatory compliance.

With the promulgation of the new drilling and production regulations in December of last year, the CNSOPB, along with the Newfoundland board and the National Energy Board, issued a set of four guideline documents in association with these new regulations. These guidelines address requirements for the submission of details with respect to well control and cementing programs for drilling program approvals and, furthermore, for the submission of safety plans and environmental protection plans.

The board's focus in its review of applications is to ensure operators have taken any necessary steps to prevent hazardous incidents and spills. Should a major accident, spill, or uncontrolled release of hydrocarbons occur during an authorized activity, the board would lead the government response.

The exception to this would be in the case of a rupture of an export pipeline, in which case the response would then be jointly led by our board and the NEB. The operator would be fully accountable and responsible for attending to any spill and for any damages.

Our board has an emergency response plan that will be activated during a significant spill event. Depending upon the significance of the spill and the operator's response, the board's roles range from monitoring operator activities, giving direction to the operator, or, in the most severe cases, actually managing the spill response.

The regulatory requirements in place require a very high level of training and demonstrated competency for the offshore workforce. This includes well control certification and emergency response training, combined with regular drills and exercises. These standards are in keeping with or exceed the highest of international standards.

I should mention that over the weekend I spoke with the CEO of Survival Systems Limited, located in Dartmouth, which is considered to be one of the best training centres in the world for all of this. They do training for the Spanish and French navies, Australia's homeland security, and our own navy.

In fact, in Canada alone, I note on their website, 11 individuals have testified that they survived actual helicopter ditchings because of the training they received at Survival Systems. Their CEO has extended to this committee an invitation to visit that facility so you can see for yourself the extremely vigilant standard for the training of the offshore workers.

In the unlikely event that relief well operational plans must be executed, the contingency plans referred to earlier must provide details of how they would secure the necessary equipment to undertake those operations.

● (0930)

Some of the natural gas fields in offshore Nova Scotia do contain some light hydrocarbon liquids called condensate. Should a release occur from one of these fields, there would be a plume dispersed down current from the source over the duration of the release. However, given the properties of the condensate, the resultant surface sheen would have a thickness that would be measured in microns. Its overall size would be limited, given that it would rapidly dissipate through evaporation and through dispersion within the upper water column.

All operators have a contract with an environmental response organization, such as Eastern Canada Response Corporation, to provide additional resources and expertise as and when necessary in responding to a spill. Transport Canada can also provide aerial surveillance services.

The board would also coordinate with the regional environmental emergencies team, REET, which is chaired by Environment Canada, to provide expert advice. REET members include Transport Canada, the Canadian Coast Guard, the Canadian Wildlife Service, and many other departments, provincial governments, and aboriginal groups where appropriate.

In closing, the board is of the opinion that the regulatory regime that is in place provides for a high level of safety and environmental protection. The board is vigilant in its administration of its mandate and holds all operators accountable to meet the expected standards. We are keen to learn from the unfortunate accident in the Gulf of Mexico, and, like others, we will apply learnings that come out of that investigation.

Thank you for this opportunity.

The Chair: Thank you, Ms. Dalton, for your presentation.

The final presentation today is by video conference from Scotland. From Stena Drilling, we have Stuart Greer, rig manager, *Stena Carron*; and John Banks, operations manager.

Thank you very much, gentlemen, for being with us this morning. Go ahead with your presentation, please.

Mr. Stuart Greer: We're going to make a presentation. I'm able to put it up on your screen, actually, so you can see some of the graphics.

Mr. Chairman and members of the committee, I'd like to make a brief presentation on the *Stena Carron* and Stena Drilling safety management system. I'd like to talk a little bit about the vessel class and go into how we bridge our procedures with the operator of business, in this case Chevron Canada.

Stena Carron is a dual-mast, dynamically positioned, harsh-environment, ultra-deepwater drillship.

Can you confirm that you can see this presentation?

● (0935)

The Chair: Yes.

Mr. Stuart Greer: Okay.

The *Stena Carron* is number two in a series of three Drillmax series vessels. These are state-of-the-art, sixth-generation, ultra-deepwater, dynamically positioned drillships designed and certified for year-round worldwide operations in ultra-deepwater.

The latest-generation drillship is able to operate in harsh environment areas, such as the Norwegian and Barents seas, down to minus 20 degrees Celsius, including operation in the Barents Sea's extreme winter conditions.

These vessels are designed for high efficiency and safety, providing the optimum layout for exploration, appraisal, and development drilling; batch drilling and multiple well clusters; well testing; and completions.

On the principal characteristics of the vessel, I won't go through all of these, but the overall length is 228 metres, 42 metres moulded breadth, 19 metres moulded depth, displacement 96,000 metric tonnes, and approximately—

The Chair: Excuse me, Mr. Greer. We have a point of order at committee here. Would you hold on for a few seconds?

Madame Brunelle.

[*Translation*]

Ms. Paule Brunelle (Trois-Rivières, BQ): Mr. Chair, I would like to draw your attention to the presentation that is in English only. Out of respect for the witnesses—I see they have taken you by surprise, you did not think it would come like that—since they are from Scotland, which is really far, we will let it go. But we would like to have this presentation in French, please. Thank you.

[*English*]

The Chair: Thank you very much for your consideration, Madame Brunelle. It's very much appreciated.

Mr. Stuart Greer: I'd like to apologize for that.

The Chair: Go ahead and continue with your presentation, please, Mr. Greer.

Mr. Stuart Greer: Yes.

The vessel has an approximately 15,000-metric-tonne variable deck load and a maximum transit speed of 12 knots.

The classification class by DNV is a 1A1 ship-shaped drilling unit, drill "N" classification, which means all the drilling equipment actually comes under the classification society, not just the main equipment.

In terms of water depth, it's capable of operating in a maximum of 10,000 feet of water. For dynamic positions, she has a Kongsberg Simrad dynamic positioning system, complying with class notation DNV Dynpos-AUTRO NMD, or Norwegian Maritime Directorate, class 3. This system controls the vessel's position and heading using the vessel's azimuth thruster pods.

In terms of station keeping, again, as I've mentioned, the DP system is rated DNV class 3; such a loss of position should not occur from any single failure, including a completely burned fire subdivision or flooded watertight compartment.

The vessel has installed the Kongsberg Simrad dynamic positioning system. This system controls the vessel position heading using the vessel's azimuth thrusters. It can be done in a variety of modes, including manual and automatic. Manual thrusters can be selected at the panels; however, the automatic function requires at least one reference unit in use.

The SDP system is computerized for automatic positioning and heading control of a vessel. To control the vessel's head, the DP control system uses data from three gyrocompasses, with at least one position reference system—for example, the differential global positioning system or hydroacoustics. This enables the DP control system to position the vessel at all times. This is how the vessel maintains station.

Set points for heading and position are specified by the operator, that's the DP operator, and then processed by the DP control system, to provide control signals to the vessel's thruster and main propeller systems.

The DP system always allocates optimum thrust to whichever propulsion units are in use. Deviations from the desired heading or position are automatically detected and appropriate adjustments are made by the system.

Power management, obviously part of the DP system, is designed to ensure that sufficient power is available at all times. To accomplish this, the power management system control system will perform the following functions.

It will monitor the condition of each diesel engine generator set, and start up or shut down specific generator sets in response to alarm conditions, barometers measured and monitored by the system.

It controls the load-sharing of the generator sets online and monitors the load situation of the power grid. It initiates starting and recommends stopping of engine generator sets as required to maintain sufficient power to the electrically driven equipment. This is accomplished whilst at the same time not allowing unnecessarily high amounts of power to be connected to the grid.

The power management system provides a system of anti-blackout protection, provides blackout restart of the power system in the event of a total system loss, and at all times maintains sufficient power for the operation of the ship thrusters to maintain the vessel's position as a priority.

Moving on to the *Stena Carron* management system and HSE case, the *Stena Carron* currently operates under an approved HSE case, which is aimed at three main constituencies. That is the employees and contractors, customers, and regulators.

The said HSE case demonstrates the effective risk management of the drillship to the stakeholders through documentation of the following.

Stena Drilling operates with an effective management system that includes the identification and management of hazards to the health and safety of people and harm to the environment.

The *Stena Carron* is a high-specification vessel, and the vessel, with its critical equipment, has been designed, built, and maintained in accordance with good industry practice.

Stena Drilling operates the *Stena Carron* with a clear understanding of the risks from major accident hazards based on the application of formal risk assessment techniques.

Moving on to the Stena Drilling management system, this provides a formal set of policies, procedures, and processes required for planning and execution of its business processes: promote the Stena care, innovation, and performance values; improve health, safety, and environmental performance; provide key management-of-risk tools; enhance business processes and productivity; demonstrate procedural compliance; document control to clients, third parties, and other regulatory authorities; and be formally controlled and auditable.

● (0940)

In terms of main documents within the management system, we have policies, principle documents, guidance documents, forms, procedures, and process maps.

The management system itself has a hierarchy. We have level one, which is our corporate. This level includes the quality manuals, Stena policies and values, and organograms done by the managing director.

Moving down through the various levels, we have the support processes at level two. This level incorporates all the main departments that support the organization. That's HSE operations, engineering, HR, accounts payable, purchasing, IT, commercial, etc.

Moving down to regional, this level includes all regional-specific procedures and documents that may be required to operate within that region or country, and do not apply as a level two worldwide.

Moving on to level four, that's at the rig vessel level—

The Chair: Excuse me, Mr. Greer. I'll just interrupt your presentation for a minute. We have another point of order at the committee.

Go ahead, Mr. Cullen.

Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP): I apologize to the witness for interrupting.

Very briefly, Mr. Chair, my concern is that we have only 15 minutes left. Some of our witnesses have travelled from far, and at this pace we're only going to have a few minutes each to ask them questions. Often in the questioning we can get some more information out.

I don't know what to say; our next panel is four witnesses, and this is challenging, or frustrating I suppose, as a committee member. We've prepared a lot to try to drill into this, so to speak.

A voice: No pun intended.

Mr. Nathan Cullen: No, none.

I'm just concerned about the time.

I hand it back to you, but it's worrisome that with 15 minutes left, we'll just get what we get.

The Chair: Thank you, Mr. Cullen.

Continue, Mr. Greer, but please wrap up your presentation as quickly as possible. Thank you.

Mr. Stuart Greer: Okay. It's not much longer.

At level five, we have rig-specific work methods. This level includes procedures specific to the rig vessel—short, detailed instructions.

I'll go quickly through the main safety tools: risk assessment; “toolbox talks”; lifting plans; a safe behaviour program that's actively used on the vessel; permit to work; isolation; safe entry procedures; Stena golden rules of safety; and STOP, which is a very commonly used monitoring and reporting system within the industry.

There's a very important bridging between Chevron and Stena management systems. The purpose of the bridging document that exists is to identify and document areas of shared responsibilities and/or activities in which Chevron Canada and Stena Drilling shall be jointly involved during the execution of the contract while working in Newfoundland. All operations on board the *Stena Carron* will be implemented in accordance with Stena's management system.

Areas of shared responsibilities and/or activities are considered to be where one party's employees' assets or reputations may be at risk from the other party's activities. Each company is deemed to be in control of its own HSE management system and shall be accountable for the management of HSE risks arising from its own activities.

The bridging document has been developed through consultation between Chevron Canada and Stena Drilling, and has been agreed upon by both companies' senior management. The bridging arrangements have been communicated to all personnel involved in or affected by the activities.

Key areas covered in the bridging document include policy objectives; purpose; scope; organization; communications and reporting lines; roles and responsibilities; and safety standards and procedures, including risk assessment, loss of possession contingency planning, permit to work, personal protective equipment, occupational health and hygiene, waste management, emergency response, process, spill management, well control and blowout contingency, medical...[*Technical difficulty—Editor*]...emergency response drills. Incident investigation reporting, management of change, and key management system documents are also referred to in the bridging document.

That concludes the presentation from Stena Drilling in Aberdeen.

● (0945)

The Chair: Thank you very much, Mr. Greer, for the presentation.

We now have about 13 minutes for questions. With four parties, we're going to have to go with about three minutes per party.

Go ahead, Mr. Regan.

Hon. Geoff Regan (Halifax West, Lib.): Maybe, Mr. Chairman, in future we should explain that instead of a question and answer period with the witnesses, we'll have a period with a question and an answer.

The Chair: Yes.

Hon. Geoff Regan: That's unless you as chair say, look, we're going to have strict times, and if we ask witnesses to speak for seven minutes, we encourage them to try to stick to the issues that are of most interest to the committee. Obviously we can do that. We can give them an idea of that ahead of time. Then, when they're at seven minutes, we can say, "I'm sorry, that's it."

Really, what we need to have here is an exchange of information and to get at the questions that are of greatest interest to the committee.

That said, I appreciate this very much, and I don't blame the witnesses at all. It's just a challenge we have as a committee to manage this a little better.

This is a serious matter, obviously. We're all watching what's happening in the Gulf of Mexico. There are no guarantees that it couldn't happen in Canada or off our shores. We're seeing now, in fact, that Greenland is proposing that Davis Strait have drilling in deep waters adjacent to Canadian waters. We should be concerned about that. There's not much sign the government is concerned about any of this, so it is a serious matter.

But let me turn, in the few minutes I have, to the questions at hand. Let me talk about the nature of the offshore petroleum boards for a moment.

Maybe you could tell us what numbers of employees you have who are focused on environmental protection.

Mr. Max Ruelokke: Mr. Regan, we have a total of 69 employees at present. Our environmental affairs group numbers six.

Mr. Stuart Pinks (Chief Executive Officer, Canada-Nova Scotia Offshore Petroleum Board): At the Canada-Nova Scotia Offshore Petroleum Board, we have approximately 38 staff in total.

We have an operations, health, safety, and environment group that is combined, and it has about seven or eight people. Two of them, day to day, work directly on environmental protection, along with the manager, but a number of the other people in the operations group will tend to environmental issues as well.

Hon. Geoff Regan: Thank you.

Mr. Ruelokke, I'm looking at a document that I think is from your website or from a basin exploratory drilling program environmental assessment.

On the second page, it says:

> Physical recovery of spilled oil off the coast of Newfoundland will be extremely difficult and inefficient for large blowout spills. There are two main reasons for this. First, the generally rough sea conditions mean that containment and recovery techniques are frequently not effective. Second, the wide slicks that result from subsea blowouts mean that only a portion of the slick can be intercepted.

You spoke earlier about the expectation that any oil that flowed would be more likely to move away from Newfoundland rather than toward it. I suppose that's because of the Gulf Stream. The Labrador current would be coming in one direction, but the Gulf Stream mainly would carry it over toward Europe. Is that right?

Mr. Max Ruelokke: It would be the Gulf Stream, as well as the prevailing winds, which are generally southwesterly in our area. So yes, the winds and currents would have that effect.

Hon. Geoff Regan: I see on the next page that the document says, "There could be adverse effects on the fishery, mostly in terms of market perception viz a viz potential tainting of the product." You're saying that this area particularly isn't directly in the middle of where there's a lot of fishing, although there are some draggers and trawling going on in that area.

It also says that "losses to the fishery would be mitigated through a financial compensation program to a not significant level", which suggests that you can't mitigate those losses to a significant level. Am I reading this correctly?

● (0950)

Mr. Max Ruelokke: I think you are. I think we always have to be cognizant of the fact that if oil escapes into the ocean environment, there's going to be some consequential damage to the fish stocks.

Hon. Geoff Regan: One of the concerns we've had here, I think, is that we've heard BP's executive vice-president for the U.S. saying that BP assumed that the blowout protectors there would work. My impression is that they're not really tested. I don't know if this is the first test of blowout protectors or not, in the gulf, but if so, they've failed miserably.

How can you give us some confidence that the blowout protectors that would be in place at the Orphan Basin, for example, would work?

Mr. Max Ruelokke: I'll let Jeff answer that. Jeff is currently one of our senior managers, but prior to that, for a long time Jeff was our well operations engineer, and he is very well versed in blowout preventer controls.

Mr. Jeff Bugden (Manager, Industrial Benefits Power and Regulatory Coordination, Canada-Newfoundland and Labrador Offshore Petroleum Board): Thank you, Mr. Chairman.

The whole concept of the blowout preventers is to act as a well barrier. It's intended to be one of at least two well barriers that must be in place at all times. The primary well barrier while drilling is in fact the drilling fluid itself, which prevents oil and gas from flowing into the well and keeps the well under control. The BOP stack is routinely tested—function-tested, pressure-tested—in accordance with established standards, so this instance in the Gulf of Mexico is not the first time that a BOP has ever been used or activated. These BOPs come into play throughout the operation of a well, and are routinely function-tested and pressure-tested.

In fact, one of the elements we routinely do, and one of the elements we are going to focus extensively on in respect of the current operations with the *Stena Carron*, is to provide extensive oversight of that testing, including the blowout preventer itself, as well as the acoustic control system and the ROV intervention system. We're going to have witnesses on board the installation to oversee those activities, including a representative of the certifying authority, and we will examine those records and tests to ensure that they meet prescribed standards. We intend to bring a level of oversight to this operation over and above what is normally exercised.

Thank you.

The Chair: Thank you, Mr. Regan.

Go ahead, Madame Brunelle.

[*Translation*]

Ms. Paule Brunelle: Good morning, Mr. Ruelokke.

I am interested in the impact on Îles de la Madeleine. You are saying that you had spills. Has the impact on Îles de la Madeleine really been quantified in terms of fishing?

Something else worries me. In the event of an accident, has compensation been set aside for Quebec? When we look at Old Harry, we realize that 60% of the drilling rights are in Quebec. Are you drilling for our resources?

[*English*]

Mr. Max Ruelokke: With respect to the first question, which I understand to have asked if there was any spill in the area around Îles-de-la-Madeleine, the spills that we had in our jurisdiction were from activities associated with the production platform, so the spills were in the area of the Grand Banks that we know as Jeanne d'Arc Basin. They were very distant from the Îles-de-la-Madeleine.

We have currently one exploration licence that is active. A company called Corridor Resources has some plans in the future to drill in the area you refer to as Old Harry, but our exploration licence is maintained to be at least one kilometre east of the boundary that we see between the area that's inside Newfoundland and Labrador's offshore area and the area that isn't, which I understand is presently being negotiated between Quebec and Canada. We are trying to make certain that the activity that occurs will be within our jurisdiction and not in another jurisdiction.

● (0955)

[*Translation*]

Ms. Paule Brunelle: I have one concern. Could you clarify for me what the federal government's role is in the extraction process? Natural resources are under provincial jurisdiction. Since the oil extraction takes place in the sea, is it under federal jurisdiction?

[*English*]

Mr. Max Ruelokke: My understanding is that our board—the Canada-Newfoundland and Labrador Offshore Petroleum Board—and the Nova Scotia board have jurisdiction within our own physical boundaries. For offshore areas outside those boundaries, the National Energy Board is the regulator, so that would apply in the Arctic and I would presume in the Gulf of St. Lawrence as well.

The Chair: Go ahead; you still have a few seconds.

[*Translation*]

Ms. Paule Brunelle: Mrs. Dalton, you say that you have had few spills. What does that mean? What are we talking about? What does "few" mean?

In the conclusion of your presentation, you also told us that you have responsible operators and that they are required to comply with the standards in place.

Given the recent events in the United States, do you feel that the standards in place are sufficient? Should we not consider reviewing them to make them a little tougher?

[*English*]

Mrs. Diana Dalton: I think we certainly operate to the highest of standards. Both the Newfoundland board and us, and the NEB, are members of the International Regulators' Forum. They are the main countries who have offshore operations around the world. We meet every year on specific safety issues so we are aware of the latest standards, technologies, accidents that have happened and what has happened as a result. We are constantly able to update how we are able to approach issues should they arise in our jurisdictions.

We're extremely vigilant about new standards and new technologies This industry is a very highly technical industry, and the changes in the technology are so rapid it's very difficult to keep ahead of them sometimes. This International Regulators' Forum is a way we are able to stay on top of the latest changes and to make changes in order to address issues that may arise.

The Chair: *Merci, Madame Brunelle.*

Mr. Cullen, go ahead, please.

Mr. Nathan Cullen: Thanks, Chair.

Thanks to the witnesses.

I guess what we have to be critical of is that the assurances offered today probably sound pretty similar to the assurances offered in the gulf around British Petroleum's project. I'm sure they didn't imagine a blowout like the one that's occurred and their inability to stop the blowout. I'm sure all the things were tested and the regulations were in place.

What we have to get at is whether the situation is different. Does Canada have stronger regulations? Could a similar scenario happen for us?

Mr. Ruelokke, do we know what went wrong in the Gulf of Mexico, particularly with regard to the BP spill?

Mr. Max Ruelokke: We've heard some information that has not really been fully substantiated and that probably won't be fully substantiated until the actual BOP stack that was at fault in this case is recovered. But the understanding we have is that what occurred is not something that we would have ever been allowed to see happen here in Canada.

Mr. Bugden referred to the dual barrier system we require when all wells are being drilled. As he said, the first barrier is the drilling fluid itself, the drilling mud, which has a high specific gravity, and it's high enough to counterbalance the hydrostatic pressure of the hydrocarbon. Before that barrier is removed, ordinarily there's another barrier put in place for the cement plug—actually it's concrete, but the industry uses the term cementing—so that you seal a certain length of the well bore, perhaps as much as 30 metres or 40 metres.

Mr. Nathan Cullen: To return us to British Petroleum, though, at the beginning of this you said we don't know, we won't know for some time. There was a poll on the weekend that said almost eight out of ten Canadians said it was probably a good idea to pause deepwater drilling until we do know.

If there's some piece that malfunctioned that's also being employed in deepwater drilling in Canada, would it not be prudent or conservative to suggest that the company drilling an even deeper well than the one that was drilled in the gulf be paused until we know the actual procedure or piece that went wrong? Would that be prudent?

● (1000)

Mr. Max Ruelokke: We certainly gave that some consideration. The situation now with the *Stena Carron* is that they have identified a number of drilling targets or areas in the substrata that could contain hydrocarbons. They're a considerable distance away from achieving either of those targets yet.

What we require—and Chevron has signed on to this—so that when you move from an area of very low risk you're not encountering hydrocarbons, prior to entering a target where there is enhanced or increased risk, there would be an operations timeout. We, Chevron, and the Stena people would review the situation to make sure everything we need is in place to be able to control this hydrocarbon, if in fact it's encountered—

Mr. Nathan Cullen: I guess that's my question, then. Once that pause happens before you enter into the enhanced risk zone, when you're actually drilling oil at 2,600 metres depth, is that the point you'll say we need to know what happened in the gulf before we start extracting oil from the sea floor, to make sure there isn't a malfunctioning part or a procedure we don't want to repeat here?

Mr. Max Ruelokke: We will certainly do two things. We will make sure the dual barrier concept remains valid, and both barriers would have to be in place. Before there's any potential to take away the drilling mud, we'll make sure there's a cement plug in place. We'll also make sure that the blowout preventer is fully tested so we can verify it can function, and it will function, when it's necessary to do so. We will make sure that is done. Chevron has assured us they want to do that, and I'm sure the folks at Stena have the same objective we all have, to have a safe, well-drilled exploration well.

The Chair: Thank you, Mr. Cullen.

Mr. Harris, go ahead, please.

Mr. Richard Harris (Cariboo—Prince George, CPC): Mr. Ruelokke, you were talking about what you thought may have happened in the gulf and why you thought it could not happen in the case of Canadian offshore drilling. If you could finish that story I would appreciate it, because I think it will be helpful to our committee.

Mr. Max Ruelokke: Certainly.

Again, this is not hard and fast evidence. We don't have solid evidence to...but the information we do have is that a decision was made as they were in the process of getting ready to terminate or abandon the well. Ordinarily what would happen is that before you would do that you would set a cement plug and seal the interior of the well bore and then you would circulate out the drilling mud with enhanced sea water or brine.

What we believe happened at the Macondo well is that they circulated the mud out prior to setting or establishing this cement plug. So that barrier was removed. The second barrier then should have been, and would have been, the blowout preventer, but for some reason the blowout preventer failed. We don't know why that failed or what the mechanism of failure was. There was some speculation that it may have been a control system, but the remotely operated vehicle should have been able to activate it once they got to it. They turned all the right handles but it still didn't activate.

So we know there was some sort of failure within the BOP but we don't what that was, and we won't know until such time as that BOP is eventually recovered.

Mr. Richard Harris: It sounds as if they missed a step that you would have—

Mr. Max Ruelokke: We believe that is the case, yes. But as I say, those are just things we've heard. We don't have any real evidence.

Mr. Richard Harris: Okay.

Someone said earlier that we are assuming that this safety method will work—I can't remember which one we were talking about. Is there actual testing, critical testing, of all these different methods under conditions that could be expected in real life?

Mr. Max Ruelokke: I'll defer to Jeff. I know he's been in communication with our current well operations engineer, who has witnessed some of the testing.

Mr. Jeff Bugden: Thank you, Mr. Chairman.

One of the key premises is that there be at least two well barriers against flow at all times. One of the concepts of a well barrier is that a barrier is not a barrier until it's been tested and confirmed to be so.

So in the case of all well operations, the drilling regulations specify clearly the requirement for two well barriers. The guidelines expand on and clarify exactly what is needed by way of testing of those barriers for them to be effective.

In the case of well barriers in particular, we have decided to draw upon a standard issued by the Norwegian industry, the NORSOK standard D-010, which outlines very clearly exactly what the expectations are for well barriers during all phases of an operation. Provided you have two independently verified, tested barriers, then that is the standard we expect of operators. We intend to ensure that during all phases of the operation, from drilling through to the final termination of the well, there are procedures, mechanisms, and policies in place to verify those barriers.

One of the key elements is the BOP stack. The BOP stack is equipped with a number of mechanisms and barriers itself. It typically consists of three pipe rams, a shear ram, and what's known in the industry as a super-shear ram, which is capable of cutting through large-diameter, high-strength tubular goods. A systematic method of pressure testing the BOPs is the mechanism to verify the well barrier and the same concept applies to all well barriers. They have to be tested and verified to be functioning to qualify as a well barrier and two of them must be in place at all times. There is no compromise on that whatsoever.

● (1005)

The Chair: Thank you, Mr. Harris.

Thank you to all the witnesses on the first panel for your presentations and for the short time you had to answer questions. I think in the future the committee will have to be more realistic and either have fewer witnesses or more time. But we will deal with that.

Thank you all very much for coming.

We will suspend the meeting for about two minutes before the second panel.

● _____ (Pause) _____ ●

● (1010)

The Chair: We'll resume the meeting.

On our second panel we have four individuals or groups. I'll just introduce the individuals or groups as they make their presentation in the order that they appear on the agenda.

We will start with Dr. William Adams, a research scientist who is appearing as an individual.

Go ahead, please, Mr. Adams.

Dr. William Adams (Research Scientist, As an Individual): Thank you, Mr. Chairman.

Mr. Chairman, members of the committee, as a research scientist with Environment Canada, I was involved in the 1970s series of studies called the “Beaufort Sea project”, which included extensive research on the potential impacts of oil pollution in the Arctic and on the climate. It appears that, as oil exploration and production are again being planned, there is a growing probability of a major oil spill or even a blowout occurring, which would release oil into the Arctic ice and water regime.

I would also like to make the point that recently Bill C-3 extended Canadian jurisdiction to 200 nautical miles offshore, thus greatly increasing the area requiring monitoring, and has increased the cost and difficulty of remedial activities in the case of oil spills that are now a Canadian responsibility.

I am the immediate past chair of the Defence Science Advisory Board, which is working on studies sponsored by DND on infrastructure requirements for increased activities by the Canadian Forces in the Canadian arctic. We are also looking at an all-of-government approach in trying to assess the potential for collaborative infrastructure initiatives with northern communities. I mention that just for some background on myself.

The results of my early studies, part of the 1970s Beaufort Sea project, were on the physical and biological impacts of the largest—to date—controlled experimental crude oil spill on sea ice. I want to help the committee to gain an appreciation of the risks and to see what regulations and timing may be appropriate with regard to granting permission for offshore drilling to be undertaken safely in ice-covered waters. There is some background on the Beaufort Sea project provided in the text of my brief, which unfortunately didn't get translated in time. This is the sort of thing that you should gain access to. These are the summary reports. There are five of them and they are available from Fisheries and Oceans. There are 42 technical reports, which this summarizes, and I'm talking about the summaries now.

We studied the impact of oil on the melting of sea ice in the spring, as well as the impacts on the organisms living in, under, and on the ice. Another major area of study was the impact of oil on the reflectivity of ice, in other words the albedo of the oil-contaminated sea ice. This measures how much the sun's radiation is absorbed compared to how much is reflected back from the surface. The concern was whether oil-polluted sea ice from a major blowout could impact the climate by influencing the degree of ice cover in the Arctic Ocean from year to year.

The field experiments were conducted by releasing eight individual spills of hot crude oil in the winter, 36 barrels each, under two-metre-thick landfast ice. We then followed the fate of the crude into the spring breakup period and on into the following year when landfast ice melts, of course, each year. The spills were into 800-foot diameter containment booms frozen into the ice such that the average depth of the crude was one centimetre in the contaminated areas.

I have a few images here that will give you an idea of what we did. The first shows where the experiments took place on the Beaufort Sea at a place called Balaena Bay near Cape Parry, which is to the east of Inuvik and Tuk. You can see here that the bay was an enclosed bay with a very small mouth into the open Beaufort Sea. This was chosen for safety: if we had to seal it off, we could. The actual spills took place in this little corner of the bay and consisted of these eight boomed areas under which the crude was pumped.

This is what it looked like in the spring. You can see the eight boomed areas and you can see crude oil beginning to emerge.

This was in June, so the melt had begun. Partial disposal of oil by burning is possible, and in June we did begin to try burning. Oil can be burned when it first arises in the spring, but soon after being exposed to the air and the sun, the lighter fractions disperse and you can't burn it. Large areas of the surface can also be contaminated by black soot from the burning.

Oil rises up through brine channels. Sea ice is a very complex material and it has channels through which the oil rises.

This is what it looks like on a burned area where you can see soot. There's a lot of soot and that extends over hundreds and hundreds of metres from the site, even when it's not very windy.

● (1015)

This shows one of the organisms that's at the heart of the food chain in the marine environment; this is a marine diatom. We studied these, and there were various changes. We found them to be more numerous and more diverse in the presence of oil. We also found much algal growth in the melt ponds in the oil area compared with the control area. Here is an image that gives you an idea what it looks like from a human perspective out on the ice.

And here is an indication of where the landfast ice is. You can see that there's an active shear zone between the landfast ice, which is the ice that melts every year and remains stable throughout the winter, and a transition zone, which is multi-year ice and some first-year ice, and then the main polar pack, which has a sort of gyre that goes in the direction I am pointing, past Banks Island and the Canadian shores.

Just to give you, from a cartoon perspective, a sense of what the ice looks like, you can see in this next image that you have the first-year ice, you have an active zone that contains multi-year ice, often with ridges and the possibility of scoring the seabed, and then you are out into the polar, multi-year ice. Multi-year ice can grow up to ten feet thick, and every ten years it's basically regenerated by refreezing from the bottom and melting from the surface. It's a very dynamic system.

That gives you a short course on the ice in the Arctic.

The tests we conducted, the largest so far ever conducted with real crude oil, were conducted without natural gas. There would normally be gas accompanying the crude in a blowout, and the large gas bubble that would form under the ice therefore couldn't have been observed in this. It would have major effects on what would actually happen.

The major conclusion we came to was that oil-contaminated landfast sea ice melts faster in the spring and stimulates biological processes that differ from those in normal sea ice. Secondly, any physical modelling, without including the surprising biological responses to the oil itself and to the burn products that have seen from these experiments, would not predict the impact of an oil blowout on the dynamics of the sea ice regime in the Arctic. That is, biological systems may be a determining process in looking at the impacts of oil on the environment and climate.

The Chair: Dr. Adams, you're at seven and a half minutes. We just have to keep the presentations to seven,or seven and a half maximum. You're going to have to—

● (1020)

Dr. William Adams: I'll summarize, then.

The Chair: The rest of your information will have to come from questioning, unfortunately.

Dr. William Adams: There's one final thing I'd like to say.

The Chair: Okay, you may say one final thing, very quickly, please.

Dr. William Adams: My recommendation is that, first, more research is needed to assess the degree of risk.

Secondly, I recommend a moratorium on drilling that is not either on landfast ice or in shallow water areas until the required technological capability and scientific knowledge is in place. Our present knowledge base is not adequate for the open-water situation in deep drilling, and is certainly not adequate to risk drilling in deeper ice-covered Arctic waters.

The Chair: Thank you very much, Mr. Adams. I do appreciate that.

We go now to the second witness, from the Canadian Association of Oilwell Drilling Contractors: Don Herring, president.

Go ahead, please, and if you could, make sure your presentation is seven minutes. Thank you.

Mr. Don Herring (President, Canadian Association of Oilwell Drilling Contractors): Certainly.

The CAODC represents 45 drilling contractors and 72 service rig contractors operating just over 800 drilling rigs and more than 1,000 service rigs across Canada. Of these totals, currently there are five offshore drilling facilities in Atlantic Canada, run by three companies. Right now there are no drilling operations pending in Canada's northern waters or on the west coast that our members have been aware of.

The CAODC welcomes the opportunity to provide some comments to the committee following the tragic loss of life in the Gulf of Mexico and the attendant blowout. As you heard from CAPP, the Canadian Association of Petroleum Producers, in their brief on May 13, oil and gas production sourced from offshore Canadian reserves will play a significant role in meeting this country's hydrocarbon requirements in the coming decades. Currently about 12% of Canada's crude comes from Atlantic Canada.

To speak of the role of the drilling contractor, the oil and gas company—the operator, in our parlance—is the entity with overall responsibility for offshore operations. They lease the parcel of land from governments, and prepare and submit detailed plans to the regulatory authorities, including where and how the well is to be drilled, cased, cemented, and completed, based on their interpretation of proprietary data. Once the plans are approved and all the permits are in place, the operators—

The Chair: Excuse me, Mr. Herring. We have a point of order.

Madame Brunelle.

[*Translation*]

Ms. Paule Brunelle: The interpreter said the text is being read too quickly. They do not have the text. They are not able to interpret it.

[*English*]

The Chair: The comment was, as you heard, Mr. Herring, that you're going a little too fast. I know you're under time constraints, but the interpreter can't keep up. Could you just slow it down a bit?

Mr. Don Herring: Certainly, Mr. Chairman.

Again, the operator—the oil and gas company—is the general manager for the activity. Among their tasks, they select the drilling contractor, and we provide a drilling rig and a crew. The operator also arranges for all the other subcontractors who provide specialized services, including cementing, casing, that sort of thing. Generally speaking, the role of the drilling contractor is to just drill, to circulate the drill string or pipe into the ocean floor, based on what the oil company tells us to do. We use a sophisticated rig and a trained crew.

The Chair: We were just having some troubles with interpretation, but I think we have them straightened out. Continue, please.

Mr. Don Herring: In terms of training the drilling crew, drilling contractors in Canada emphasize training and competency assurance programs that have been developed and put in place effectively to mitigate against risk. The crew is trained in well-controlled procedures, using certified well-controlled facilities in Atlantic Canada or the equivalent in Norway, the United Kingdom, or the U. S.

In particular for Canada, our facilities are certified by Enform, which is the safety association for the upstream oil and gas industry. The exacting standards from Enform were established and continue to be maintained at the world-class facility located in Nisku, Alberta. What's unique about that facility is that it's one of the few live well simulators located anywhere in the world. Canadian contractors in Atlantic Canada have had 40 years of operating jointly with the oil company and the regulator. As contractors, we work diligently to identify and understand risk.

In terms of spill response, rig crews are trained in accordance with shipboard oil pollution response procedures and an environmental management system. The program focuses on spills that are onboard the drilling rig itself. They include drills that are undertaken every 90 days for familiarization with the equipment, including high-risk containment and shut-off valves, and system specification.

Drilling crews are included in the oil company's contingency plan along with other subcontractors, and they have to have a contract in place with an approved spill response organization, such as the Eastern Canada Response Corporation. There are three levels of spill response, and I'm sure my colleagues from the Eastern Canada Response Corporation will get into those kinds of detail. Basically, level one is monitored offshore; level two is shore-based, and that includes the Canada Response Corporation, operating to the Norwegian standard, I'm told; level three is an international program like the oil response program from Southampton, England. The detail on these can be made available to you from CAPP, from the operators, or from the contractors who are involved in this.

In terms of a conclusion, the Canadian drilling contractors are part of an offshore team. We work with all operators and regulators to mitigate the risk of a spill or an accident. The record in Canada over the last 50 years reveals very few drilling incidents. These results stem from an effective regulation combined with advances in technology and the implementation of good management and operating practices.

Thank you, Chairman.

● (1025)

The Chair: Thank you very much, Mr. Herring, for keeping it under the allotted time.

We go now to the next witness, from the Eastern Canada Response Corporation: James Carson, president and general manager.

Go ahead, please, Mr. Carson.

Mr. James Carson (President and General Manager, Eastern Canada Response Corporation): Thank you very much, Mr. Chairman.

Good morning. As the chairman mentioned, my name is Jim Carson and I'm president and general manager of ECRC.

This morning I would like to give you a brief overview of Canada's oil spill response regime, and in particular ECRC.

The present network of four private sector funded and operated response organizations significantly improves Canada’s marine oil spill response capabilities. This network was the result of extensive consultations and negotiations among the petroleum and shipping industries, environmental groups, the Canadian Coast Guard, and Environment Canada.

The regime in place provides an improved response capability by having full-time employees, trained contractors, state-of-the-art response equipment, predetermined response strategies developed in partnership with government agencies, and prepositioned equipment in response centres.

Each response centre can achieve increased response capability through the use of its inventory and the cascading of additional equipment and response personnel from our other response centres. Response contractors supply additional response personnel, services, and equipment as needed.

The network of four certified response organizations is funded and operated by the private sector. The costs are borne by the petroleum and shipping industries that require the services of a response organization.

ECRC is one of four response organizations certified by Transport Canada's marine safety division as a response organization under the Canada Shipping Act. As a certified response organization, ECRC can provide arrangements to ships and oil handling facilities that require arrangements under the Canadian law.

Our mission is to maintain a state of marine oil spill response preparedness that is consistent with the legislation and capable of providing a real response at an affordable cost to our members. We also seek to provide value-added preparedness services to all our members, and assume a leadership role in preparedness to oil spill response within the community at large.

ECRC is a privately owned company whose role is to provide marine spill response services, when requested, to a responsible party, the Canadian Coast Guard, or any other government lead agency. These response services include operational management, specialized response equipment, and operational personnel.

ECRC uses a version of the incident command system called the spill management system as a tool for managing its spill response activities. SMS is designed to meet the response requirements within the Canadian legislative context. It allows ECRC's spill management team to manage the operational response from an emergency mode to a project mode of operations. The SMS is a structured process allowing the spill management team to fulfill its initial response and tactical phase responsibilities, while focusing on a movement toward the strategic or project phase of the response.

ECRC's geographic area of response covers all navigable waters south of the 60th parallel of latitude for all of the provinces of Canada, with the exception of British Columbia and the ports of Saint John, New Brunswick, and Point Tupper, Nova Scotia. ECRC is headquartered in Ottawa and operates six fully staffed response centres in Sarnia, Ontario; Montreal, Quebec; Quebec City; Sept-Îles; and Halifax. The average size of our warehouse is 16,000 square feet; and our largest warehouse is in St. John's, Newfoundland, at 36,000 square feet.

The corporation has developed a standard format and completed 32 area response plans for ECRC's geographic area of response. Each of our three regions has developed a schedule to review and update these area response plans on a three-year cycle.

ECRC owns specialized oil spill response equipment and maintains contracts with spill response contractors, consultants, and specialists. ECRC has also established mutual aid support agreements with the two response organizations on the east coast, as well as the one in British Columbia on the west coast.

ECRC is also a member of the Global Response Network, a collaboration of seven major international oil industry-funded oil spill response organizations, whose mission is to harness cooperation and maximize the effectiveness of spill response services worldwide.

● (1030)

ECRC has 38 full-time employees and maintains a complement of approximately 520 response contractors and advisors, of which 470 are trained annually. In the Great Lakes we have approximately 70 contractors and 20 regional advisors. In the Quebec and Maritimes region we have approximately 260 contractors with 30 advisers. In Newfoundland we have approximately 70 contractors and 10 regional advisers. We also have 10 advisers at the national level.

The company conducts a number of mandatory operational and table-top exercises on an annual basis, as required under its response plans submitted to Transport Canada for certification purposes. Equipment maintained in a state of preparedness includes the following: oil containment boom—60,000 metres or 200,000 feet; skimmers—we have in excess of 100 different types; boats—in excess of 100 different types; on-water storage—16,000 tonnes; and then, of course, we have the miscellaneous and ancillary equipment to support the above.

In conclusion, ECRC was established in 1995 as a result of the changes to the Canada Shipping Act following the Brander-Smith report. The result is an example of government and industry working together to achieve success in the development and implementation of an oil spill preparedness regime in Canada that is cost-effective, has worked well, and has met the needs of Canadians for the last 15 years.

I've also included a map of Canada showing the location of ECRC's six response centres, as well as those of the other three response centres.

Thank you very much, Mr. Chairman.

The Chair: Thank you very much, Mr. Carson, for being within the timeline, and for your very helpful presentation.

We have, as the final witness today, Mr. Craig Stewart, director of the Arctic program with the World Wildlife Fund of Canada.

Please go ahead, Mr. Stewart, for up to seven minutes.

[*Translation*]

Mr. Craig Stewart (Director, Arctic Program, World Wildlife Fund (Canada)): Ladies and gentlemen, thank you for the opportunity to present this morning. The BP Deepwater Horizon rig, which exploded and sank in the Gulf of Mexico on April 20, was an exploratory drilling platform.

[*English*]

If there is any good news about the ensuing oil spill, it is that emergency responders had a full month to contain the oil before it washed ashore in the environmentally sensitive marshes and wildlife sanctuaries of Louisiana. Of course, they failed. However, the only reason they had any grace was due to a full regulatory process informing whether to drill, where to drill, and how to drill. The lease did not directly occupy an environmentally sensitive area.

Please refer to chart number 1 in the package I have distributed. In the Arctic, Greenland, Norway, and the U.S. all have regulatory processes governing both the leasing stage, which decides whether to allow a drilling program and where to allow it, and the exploration stage, which decides how to drill. The NEB's regulatory process kicks in only halfway through, at the exploration stage.

[*Translation*]

Two weeks ago, committee members asked witnesses how Canada's regulatory process differs from that in the U.S. Please allow me to answer that question.

● (1035)

[*English*]

If you refer to map 1 in the package you can see Shell's leases in the U.S. Beaufort and BP's recent leases in the Canadian Beaufort. These leases are about 400 kilometres apart in distance, but light years apart in the regulatory process guiding their placement and exploration.

I'm going to talk not about the development stage here, but only exploration, because that is the risky phase the *Deepwater Horizon* was in when it exploded. The American process that led to Shell's permit is fully regulated pursuant to the national environmental protection act.

This process started in 2003 when the Minerals Management Service, or MMS, probed whether to open up portions of the Beaufort coast to exploratory drilling. The agency completed this four-volume regional environmental impact statement that established whether leasing should occur at all; which leasing alternative would be preferable from an environmental and socio-cultural perspective; the environmental consequences of leasing; and the likely trajectory of an oil spill, given currents, prevailing winds, and landforms.

The MMS also completed this comprehensive risk analysis that detailed the probability and implications of an oil spill in the Beaufort. The MMS had decided at this point whether and where to allow drilling. They designed lease number 195 the following year and refined its environmental assessment to the local scale, producing this document.

Shell purchased the rights to an array of very specific parcels in 2005—you can see the specific parcels on your map—and submitted an exploration plan dealing with how it proposed to drill, accompanied by this further operational environmental assessment customized to its proposed activities in 2007.

Shell then filed a regional exploration oil discharge prevention and contingency plan in 2007 and a full oil spill response plan in 2009. All of the American processes are transparent, with opportunity for full public consultation, and the resulting documents are in the public domain.

Now, you should note that all of Shell's regulatory submissions were informed by, streamlined, and benefited from this stack of environmental information compiled by MMS in 2003 and 2004.

Now for the Canadian side: the Canadian process that led to BP's exploration licence started in the spring of 2007 with a nomination process initiated by staff at Indian and Northern Affairs Canada. Using maps generated from previous industry nominations, they consulted local Inuvialuit communities and other government departments. Based upon these results, they issued a call for industry nominations for lease areas in autumn 2007.

Once industry nominates which areas they're interested in, INAC refers to an innovative petroleum and environment management tool that contains maps of habitat for species such as the polar bear, the ringed seal, and the bowhead whale, and their sensitivity to oil spills, as well as the geologic potential to determine whether the likely economic opportunity outweighs the environmental risk. It appears to always do so. The process is not documented, so I'll actually use the user guide to that system to stand in for the documentation.

Requests for bids were developed and posted in February 2008. Four months later in early June, the sealed bids were opened and the lease awarded to BP, the highest bidder. The entire Canadian leasing process, up until requests for bids are posted, is unregulated and subject to ministerial discretion.

On this basis, BP is granted its exploration licence, a contractual relationship whereby the company commits to spend its bid amount, $1.2 billion, within five years to drill its first exploratory well. At this point, the key decision on whether to allow drilling and where to generally allow it has been taken.

Now the NEB process kicks in, governing how exploration takes place.

To be fair, BP hasn't had the time to go through the full NEB process, so I will use materials from Devon Corporation to represent BP's filings. Devon was a company that searched for gas in the offshore Beaufort and instead struck oil in 2007.

The NEB requires a checklist of approvals and authorizations laid out as their drilling program authorizations under the Canadian Oil and Gas Operations Act. These requirements include development of a safety plan, an oil spill response plan, and an environmental protection plan. The NEB also conducts an environmental screening. Of all these, the most extensive requirement was the comprehensive environmental assessment like this one, prepared by Devon.

Inuvialuit also administers a separate environmental screening process, and Devon's submission to that process was simply a scaled-down version of this. Although this comprehensive assessment is similar to the 2007 Shell document, Devon's is the last of its kind. This is no longer required in Canada.

BP will develop an oil spill response plan. I would use Devon's plan to stand in for this; however, in Canada, these plans are confidential and not open to public scrutiny. We do know that Devon's worst-case scenario was a blowout lasting seven days before being capped.

● (1040)

The Chair: Mr. Stewart, you're almost at seven minutes. You're going to have to summarize in thirty seconds, please, so we can get to questions. Thank you.

Mr. Craig Stewart: Okay.

This deficiency is well recognized by the federal bureaucracy. Over the past three years, they have designed a process called a Beaufort regional environmental assessment, which would be analogous to and even better than what the MMS did in 2003. The Inuvialuit supported it; industry supported it; we supported it; federal departments supported it; and the government killed it in budget 2010.

WWF does not believe an NEB inquiry alone can address these issues, which stretch beyond its present jurisdiction. The NEB is placed in a potentially untenable position when a $1.2-billion contract, which requires a well, results from an unregulated process before their regulatory administration even begins.

Canada needs a consistent set of regulations that safeguard our environment, our coastal communities, and our industries. If the NEB cannot choreograph such a nationally inclusive process, then a time-limited commission of inquiry should be struck with the purpose of raising Canada's oversight of offshore oil and gas management at least to standards set by the Arctic Council in 2009. As we have seen, the American regulatory process has proven inadequate to prevent a significant disaster, and our regulatory process is weaker than that of the Americans.

The Chair: Thank you very much to all of you for your presentations.

We will now get directly to questions and comments. We have about four minutes each, starting with Mr. Regan, and Mr. Tonks if there's time left.

Go ahead, Mr. Regan.

Hon. Geoff Regan: Just on that point, Mr. Chair, I don't think that's what the rules say. We should go back to that perhaps at the next meeting and discuss what we decided in terms of the time and how it's allocated.

To the witnesses, thank you very much for being here today.

Mr. Adams, first of all, did you mention in your comments what you found in terms of reflectivity? You had a different word for that. Secondly, based upon research you've done, what could you say in a couple of sentences about what you think the impact would be of a major oil spill—or, as you call it, a leak or blowout—in these waters?

Dr. William Adams: First of all, the presence of oil and the presence of biological activity make the ice much less reflective, and there's a lot more energy absorbed from the sun, so the melting processes are enhanced by the presence of oil.

Secondly, the main conclusion of our work with regard to an oil spill would be that should there be a major blowout somewhat similar to the one in the gulf, which independent people are estimating at as high as 70,000 barrels per day—our analysis was based on a 1,000-barrel-per-day blowout—because of the conditions in the Beaufort Sea, it would not likely be stoppable for at least a year, and possibly more than a year if we couldn't get a relief well in because of ice conditions in the second year.

Basically, if there were a blowout in the Beaufort Sea or in the Arctic, particularly in the moving pack ice area, we do not have a base of knowledge to be able to predict what would happen. On the other hand, from what we've seen in terms of the albedo changes, it's possible that a major blowout could have severe impacts on the stability of the sea ice, and that could have major climatic impact.

The Chair: Mr. Tonks, go ahead. You have two minutes.

Mr. Alan Tonks (York South—Weston, Lib.): Thank you, Mr. Chairman.

I get a queasiness with respect to the regulatory framework, which, as you have pointed out, Mr. Stewart, is not sufficiently comprehensive along the lines of those of the United States, Norway, and others. We don't have to explore that at the moment, other than to say that even with the stringent regimes in place, we have that terrible catastrophe in the gulf.

In talking about response, Mr. Herring, you talk about 200,000 feet of boom in the United States. They're talking miles and miles of boom. This situation is just running rampant. The bottom line on all of this is that from my perspective, the public is looking for us to make the right decisions on their behalf. In retrospect, would it be your position that when drilling is allowed at the outset, the legislative and response regimes should provide for the simultaneous development of a relief drilling rig so that if blowout preventers did not work—and they haven't worked in spite of that regime in the United States—there would always be a parallel simultaneous fail-safe in place?

In terms of cost, in the present situation the costs are abhorrently out of perspective from what would have been projected before the gulf experience took place. My question is whether you would accept a simultaneous relief well after a decision has been made to allow drilling in the first place as an appropriate governmental first step.

Maybe Mr. Herring or anybody could answer that.

● (1045)

The Chair: Mr. Herring, go ahead.

Mr. Don Herring: I think, sir, what we would like to see are the results of what took place in the gulf before we make decisions about what we should be doing here. I think there are some important learnings, obviously, that we can gather from that exercise.

You heard the previous panel talking about what takes place in Newfoundland and Nova Scotia. Certainly that's where most of our experiences have been recently in the past 40 years, and we think that both the regulation and the operating procedures have stood the test of time very well.

The Chair: Thank you, Mr. Tonks.

We now go to Madame Brunelle for a round of four minutes.

Go ahead.

[*Translation*]

Ms. Paule Brunelle: Thank you, Mr. Chair.

Good morning, gentlemen.

Mr. Stewart, you mention "opening of a new area for petroleum activities" and "exploration" in the chart, which you submitted to us, entitled "comparison of offshore drilling regulatory requirements related to environmental assessment in Canada, U.S., Greenland and Norway". In your opinion, is one of those countries a model that we should follow?

[*English*]

Mr. Craig Stewart: The strongest of the four is Norway. However, there are guidelines that were put together by the Arctic Council and published last year, and none of the countries actually meet the standards set by the Arctic Council. Canada's regulation is among the weakest; Norway's is the strongest.

I would suggest that Norway would likely be a case example to follow, but we need to set the bar higher, given the possibility of a disaster in the Arctic and the implications of the disaster. We need to set the bar higher.

[*Translation*]

Ms. Paule Brunelle: It seems to me that, environmentally, Canada is definitely weak. There is no environmental assessment when a new area is opened.

Is that related to what you told us: "The entire Canadian leasing process up until bid requests are posted is unregulated and subject to ministerial discretion." and "... the key decision on whether to allow drilling and where to generally allow it has been taken."?

Is there a link between those two things?

[*English*]

Mr. Craig Stewart: *Merci pour la question*.

We believe the link between the unregulated front end of the process and the subsequent risk is strong. If you look at map 2—I didn't get to it, but it was handed out in the package—you will see that oil and gas leases are very broad compared with the specific leases in the United States, and that these leases directly overlap with environmentally sensitive areas.

The result is that should an explosion happen there, and a spill, you would have almost no time to clean it up before ecological harm occurred, unlike what happened in the gulf where they had a month. We believe that the fact that there is ministerial discretion and there is no body of...or documentation done at the front end to make sure that leases are placed in appropriate areas, that does directly result in more leases being given out without the due diligence that would otherwise be required.

● (1050)

[*Translation*]

Ms. Paule Brunelle: Thank you.

Mr. Adams, I appreciate your work and I will certainly have the pleasure of reading it.

You are studying the effects of spills on ice. I get the impression that we cannot anticipate the effects and the extent of all that, and that is why you are telling us that we must assess the degree of risk and introduce a moratorium in the meantime.

In your opinion, what stage is the research at? Should it be a long moratorium? Is research only in its early stages? Are there a number of you doing this type of research?

[*English*]

Dr. William Adams: Thank you for your question.

To clarify, I am not actively doing research now. I'm reporting the greatest spill that was ever done experimentally and some of the results from the 1970s. There is work being done now in Canada, but it's actually at a lower level than what was done for the Beaufort Sea work.

I do believe there should be a moratorium, because if you look at the oil leasing that has gone on in the Beaufort Sea, it certainly includes and extends out into the moving pack ice. I believe drilling in that area would be extremely risky. I don't agree, though, that the moratorium should include the landfast ice, where drilling has been done safely for many years. There are techniques to drill safely in that region, but I don't believe it would be safe, or worth risking what could potentially be quite catastrophic should there be a blowout in the moving-ice gyre, in the Beaufort Sea.

I agree very much with one of the other intervenors at the committee here, in terms of the process. But there are programs going on now in Norway. I think they are bragging about the fact that they're spending $10 million. We spent something like $50 million in this program in the seventies, in present-day dollars, so it was a very large program. It did not continue after about 1978, unfortunately, although Bedford Institute does have an arctic oil program of research. They're having great difficulty even being able to spill a few barrels of oil. We spilled a lot of oil in our tests, and probably something similar should be done, and continued. I believe that's a very important process to understand the oil-ice regime before we can assess the risk.

The Chair: Thank you, Mr. Adams.

Merci, Madame Brunelle.

Mr. Cullen, go ahead, please.

Mr. Nathan Cullen: Thank you, Chair.

Thank you to our witnesses.

I want to get to this Beaufort Sea partnership. This was between industry, Inuvialuit, and yourselves. It was submitted more than a year ago to the government, so here's the alignment: we have Inuit, environment groups, and the industry all saying this is what we need to go ahead with.

What has happened to it since, Mr. Stewart?

Mr. Craig Stewart: The Beaufort Sea partnership is a partnership between the Inuvialuit, the Department of Fisheries and Oceans, and involves a number of other federal departments, also the governments of the Yukon and the Northwest Territories, and includes CAPP and WWF.

We all agreed that a stronger process was needed and that, even though it's still soft in the absence of a regulatory process, there needed to be much more diligence at the front end. So we developed an integrated management plan for the Beaufort Sea in partnership. That document was approved by all the departments, all the participants, tabled last June of 2009, and it presently remains unfunded and unauthorized. It's sitting with the Minister of Fisheries and Oceans and hasn't gone anywhere.

Mr. Nathan Cullen: So that's where the ball is right now just in terms of the development of this: it's with government.

I want to get into this notion of one of the criticisms of what's happened in the gulf, which is that British Petroleum was given a pass on certain environmental standards, that they were allowed to sort of skate through this, that it was an exploratory well. They did, and now, I think, the U.S. is certainly sitting with some regret.

In Canada in 2005, we moved from a more intensive environmental assessment of exploratory wells to a screening process. Is that not simply applying the BP lesson for the entire industry in Canada? What am I wrong about in that statement?

● (1055)

Mr. Craig Stewart: No, you're correct. In 2005 we had a regulation that required, under the Canadian Environmental Assessment Act, a comprehensive environmental assessment. That was similar to what Shell did in 2007 and it's similar to what BP omitted to do—was given a pass on—in the Gulf of Mexico. The controversy that erupted from BP getting that free pass in the Gulf of Mexico is in part what led to the splitting up of the Minerals Management Service, as announced by Secretary Salazar.

Ironically, in 2005 we removed that entire requirement for the entire industry for the entire country. That's what Devon had to go through. We no longer require that step at all.

Mr. Nathan Cullen: This is a curiosity to me, then, because of this competition of who has the better regulatory environment. We hear from the regulators that Canada is stronger than the U.S. It may be the strongest in the world.

But when a company goes forward to do an exploratory well, which has consequences and risks that we all appreciate, they have a lower standard than they required in 2005 even though we're drilling deeper and riskier wells. I think that's the trend we're trying to understand.

I want to go to Mr. Herring for a second. I think it was in questioning that you said you want to see what happened in the Gulf before we make decisions here. Industry says "don't overregulate us, don't overreact". That's been one of the calls from industry.

We don't yet know what happened in the gulf, as you said. Would it not be wise in terms of workers' safety and environmental stewardship to first find out what happened in the gulf before we issue more leases, before we allow deepwater drilling to go on? Does that not follow with your statement? We don't know what happened, so let's be prudent and let's be "precautious", as it's termed.

The Chair: A very short answer, Mr. Herring, if you could, please.

Mr. Don Herring: Is your question directed at the Arctic or the east coast? Because I think they are different.

Mr. Nathan Cullen: Just to be specific, then, Chair, let's go to the east coast first, since it was most prevalent.

You said that we don't know what happened yet, that we don't want to make decisions before that happens. But right now we're drilling an even deeper well with even more pressure. Would it not be prudent to take a look at what happened in the gulf, at what the error was—faulty equipment or whatnot—before we continue with the project?

Mr. Don Herring: Well, certainly, the particular well in question is ongoing or is under way. The procedures in place and the experience we've seen to date indicate that we can drill in Canada safely and effectively. I guess if we're going to start looking at other areas, particularly areas in a completely different environment, as suggested by the open water in the Beaufort Sea, that may be a different issue that we have to bring to the table.

Certainly there will be learning from what takes place in the Gulf of Mexico. Importantly, though, if we have in place procedures that we know work—because we test them effectively and we know they work—then one has to ask the question: what are we stopping? It was a tragic accident. We don't know if they followed the procedures they were supposed to follow. If they did, I'm not really... And I don't want to go much further than that, because I just don't know what happened.

The Chair: Thank you, Mr. Herring and Mr. Cullen.

Mr. Anderson, go ahead, please.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): Thank you, Mr. Chair.

I would like to focus on the cleanup. In the United States, there seems to be a bit of a bureaucratic mess, to put it mildly, about the cleanup. In terms of that, how is our system different? If you find yourself in a situation like that, how do you fit into the equation here? Where do you come in? How do you deal with the bureaucracy and those kinds of things?

Mr. James Carson: Thank you for the question.

ECRC, as I mentioned, is a management company, but we do have the specialized equipment and we have the trained operators who can deploy and operate the equipment. In a spill situation, we work directly for the responsible party—in other words, the polluter.

We would assign a spill response manager and a spill management team. Based on assessments, we would apply to the spill whatever equipment and resources would be required. All throughout the spill, as I say, command and control remain with the polluter.

Mr. David Anderson: Just this morning we heard that the regulators have the opportunity or the right to take over at a particular point. They're discussing that in the States.

● (1100)

Mr. James Carson: That's correct.

Mr. David Anderson: You would continue to work for whoever is in charge of the operations?

Mr. James Carson: That's correct.

Mr. David Anderson: I don't think we have much more time, so I'll stop.

The Chair: Thank you very much, Mr. Anderson.

Thank you all for coming today. The information you've given and the answering to the questions, brief though it was, has been very helpful. The committee will decide where to go with this from now at another time.

Thank you all very much.

The meeting is adjourned.

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