

<b>REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF NEWFOUNDLAND AND LABRADOR</b> <b>Engagement Activity / Meeting Notes</b> Date finalized : November 15, 2019			
<b>Date and Time / Duration</b>	Wednesday, October 23, 2019 11:00 a.m. – 1:00 p.m. NDT		
<b>Location</b>	Impact Assessment Agency of Canada Office, St. John’s, NL and teleconference		
<b>Organization(s)</b>	<ul style="list-style-type: none"> <li>• Canadian Association of Oilwell Drilling Contractors (CAODC)</li> <li>• Seadrill Canada Limited (Seadrill)</li> <li>• Transocean Canada Drilling Services Limited (Transocean)</li> </ul>		
<b>Participants (External)</b>	<table border="0"> <tr> <td style="vertical-align: top;"> <u>In-person:</u>            Russell Nibogie, CAODC            James Nunnery, Seadrill            Mark A. Scholz, CAODC            Mark Stephen, Transocean         </td> <td style="vertical-align: top;"> <u>Teleconference:</u>            N/A         </td> </tr> </table>	<u>In-person:</u> Russell Nibogie, CAODC James Nunnery, Seadrill Mark A. Scholz, CAODC Mark Stephen, Transocean	<u>Teleconference:</u> N/A
<u>In-person:</u> Russell Nibogie, CAODC James Nunnery, Seadrill Mark A. Scholz, CAODC Mark Stephen, Transocean	<u>Teleconference:</u> N/A		
<b>Participants (Internal)</b>	<table border="0"> <tr> <td style="vertical-align: top;"> <u>Committee Members:</u>            Gerald Anderson            Garth Bangay (phone)            Wes Foote            Keith Storey         </td> <td style="vertical-align: top;"> <u>Regional Assessment Task Team:</u>  <i>Impact Assessment Agency of Canada</i>            Erin Stapleton         </td> </tr> </table>	<u>Committee Members:</u> Gerald Anderson Garth Bangay (phone) Wes Foote Keith Storey	<u>Regional Assessment Task Team:</u> <i>Impact Assessment Agency of Canada</i> Erin Stapleton
<u>Committee Members:</u> Gerald Anderson Garth Bangay (phone) Wes Foote Keith Storey	<u>Regional Assessment Task Team:</u> <i>Impact Assessment Agency of Canada</i> Erin Stapleton		
<b>Record of Discussion</b>	<p><b>Timeline and process</b></p> <ol style="list-style-type: none"> <li>1. Each Committee member gave a short introduction, covering their backgrounds and experience.</li> <li>2. The Committee received their appointment letters in March 2019, and the appointment of the Committee was publicly announced on April 15, 2019.</li> <li>3. The Agreement for the Regional Assessment provided the Study Area, specified that the report had to be completed by “Fall 2019” (which is up to December 21, 2019), and requested the Committee consider the feasibility of utilizing a GIS tool.</li> <li>4. From their appointment, the Committee was concerned regarding the timeline specified in the Agreement, and notified the Ministers of this concern.</li> <li>5. The Committee can request clarifications on the Agreement from the Minister of Environment and Climate Change Canada (ECCC), and must also provide updates to the Ministers on Regional Assessment progress.</li> <li>6. The Committee conducted Phase 1 engagement with Indigenous and stakeholder groups May 2019 through August 2019.</li> <li>7. The next update to the Ministers will be provided after the election, and once Federal Ministers are appointed.</li> </ol> <p><b>Lighting and Independent Observers</b></p> <ol style="list-style-type: none"> <li>1. Transocean’s Henry Goodridge is getting an LED lighting upgrade, but unsure if that lighting is bird-friendly.</li> <li>2. The Committee asked if there are specific lighting requirements (focused on minimizing impact to birds, including turning off lights) in other jurisdictions. Transocean was unsure but will check.</li> <li>3. Seadrill’s West Aquarius was in Bay Bulls, 2 years ago for maintenance. They turned off as many lights including the derrick as they could at night (some must</li> </ol>		

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF  
NEWFOUNDLAND AND LABRADOR**

**Engagement Activity / Meeting Notes**

Date finalized : November 15, 2019

- stay on for operational and safety reasons) while in the bay. Once at sea, and operational, regular lighting as per standards. .
4. The Committee asked who sets the rules for the lighting on the rigs. Attendees replied that once operational, this would be the C-NLOPB through application of the regulations
  5. There are people on board for handling stranded birds, but that person has other responsibilities. The environmental observers report to the operator, conduct counts and handle stranded birds in preparation for shipment to shore. The environmental observers are outside the scope of the rig owners
  6. In response to a question on utilization of Marine Mammal Observers (MMOs), it was noted that MMOs are on board during vertical seismic profiling operations. MMOs are independent contractors, and are a full-time position (depending on season).
  7. In terms of both the lighting issue and the observer/training issues, communications go through the operator. The drilling contractor has limited scope.
  8. Rigs are equipped with rig staff and operator staff. As an example, the Henry Goodridge has 120-135 on board at any one time - 60 are Transocean employees, remaining are operator employees/operator contractors. Generally, a 50/50 or 60/40 split between rig staff/operator staff or contractor. The rig owners have a minimum number of staff they must have.
  9. The Committee asked if space on board these rigs is an issue. There was full agreement space on board is always a challenge. More bed space is needed, especially during completion and well-testing.
  10. When queried on who makes the call on personnel on board , it was noted that while under contract, outside the minimum required by the drilling contractor, who needs to be on board and when is the operators' decision. In-between scopes of work for operators, the rig owners have more say.
  11. Flaring was raised as an issue for birds during recent Technical Advisory Group (TAG) meetings, but rig owner representatives stated they have never seen a bird death from flaring (directly – not sure what the effect is at longer distances). Flaring is very noisy and likely keeps birds away.
  12. Use of water curtains is often cited as a measure to mitigate the potential impact of flaring on birds, but it wasn't developed with this intention. Flaring generates heat and the water curtain reduces hot spots on the rig.
  13. A rig owner representative mentioned he has never discussed migratory/marine birds in other jurisdictions, though marine mammals are frequently discussed.

**Economic information**

1. A lot of economic/financial information is proprietary and isn't publicly available. The Committee is finding it challenging to obtain information specific to exploration (and it usually includes seismic, which isn't with the scope of the Regional Assessment).
2. A rig owner representative gave a range of \$60 million to \$120 million per well, right now it costs approximately \$275,000 USD/day for a rig. Two to three years

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF  
NEWFOUNDLAND AND LABRADOR**

**Engagement Activity / Meeting Notes**

Date finalized : November 15, 2019

ago, it was \$600,000 USD/day. Right now it is cheaper to drill, but it is still the most expensive item for an operator. The cost from well to well can change.

3. In terms of employment, there is a certain percentage of the crew that must be local. When a rig first comes to an area, there may be more non-local crew, but that transitions to more local crew over time. Local crew in more senior positions may then move with the rig to other jurisdictions. A rig owner representative mentioned their current crew is 100% Canadian and 95% Newfoundland/Labrador.
4. As more rigs move into Newfoundland and Labrador, it will be a challenge to meet the local hiring target, but that can be overcome.
5. In terms of gender/diversity in the workforce, catering crew is mostly female, other positions are still largely occupied by males, though the environment is changing. The rig companies report gender/diversity employment statistics to the Department of Labour. The C-NLOPB doesn't require gender/diversity reporting (only the local content piece).

**Cumulative Effects**

1. The Committee is conducting some scenario modelling, using high, medium and low development situations, and are using historical data to help formulate those scenarios.
2. The highest number of rigs off Newfoundland at any one time was 9 or 10. It was suggested the Committee look at the North Sea, west of the Shetlands, which is of similar distance and conditions as Newfoundland.
3. A rig owner representative believes there is plenty of potential in the province, capable of having 15 to 20 rigs offshore in terms of the required infrastructure and support services. However, the question the Committee should consider in developing scenarios is how many operators are willing to come to the province? Some feel it is difficult to operate here from a regulatory perspective. The representative has worked in Australia and United Kingdom and has found that Newfoundland and Labrador is more heavily regulated.
4. For the scenarios, the Committee should also consider the timeframe for getting the rig here and ready to work. That window of time will dictate how many wells could realistically be operating offshore at any given time.

**Regulatory environment**

1. Some feel the province's Advance 2030 goals are ambitious, but not achievable. The regulatory environment is at odds with the development goal.
2. A rig owner representative mentioned that compared to other jurisdictions where he has worked, this province is the only jurisdiction where the rig owner does not have a voice with the board.
3. The Committee was asked if they considered retaining an independent consultant to review and compare regulatory regimes in other jurisdictions. The Committee responded this is outside the scope of the Regional Assessment, and more like a recommendation the Committee could make to the Minister.

**REGIONAL ASSESSMENT OF OFFSHORE OIL AND GAS EXPLORATORY DRILLING EAST OF  
NEWFOUNDLAND AND LABRADOR**

**Engagement Activity / Meeting Notes**

Date finalized : November 15, 2019

<b>Follow-up / Action Items</b>	<ol style="list-style-type: none"><li>1. Task Team to send attendees link to Regional Assessment Registry page, where the Committee bios, Agreement, etc. can be found.</li><li>2. Transocean to check if they have information on if their LED upgrades are “bird-friendly.”</li><li>3. Transocean to check if they had to comply with specific lighting requirements (focused on minimizing impact to birds, including turning off lights) in other jurisdictions.</li></ol>
<b>Prepared By:</b>	Erin Stapleton