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March 18, 2020 (VIA EMAIL)

RE: Comments on West Flemish Pass Exploration Drilling Project Environmental Impact Statement (Reference Number 80161)

WWF-Canada thanks Chevron and the Impact Assessment Agency of Canada (IAAC) for the opportunity to provide comments on the West Flemish Pass Exploration Drilling Project Environmental Impact Statement (reference number 80161).

World Wildlife Fund (WWF) is one of the largest independent conservation organizations in the world, with projects in more than 100 countries. WWF-Canada creates solutions to the environmental challenges that matter most for Canadians. We work in places that are unique and ecologically important, so that wildlife, nature and people thrive together.

WWF-Canada believes healthy coastal communities depend on healthy oceans. We are working in partnership with coastal communities, Indigenous peoples and other groups to advocate for marine protected areas and sustainable oceans management, and to ensure the rules governing offshore oil and gas activities are consistent with international best practices for safety, accountability and environmental protection.

WWF-Canada supports the impact assessment process and has reviewed both the Environmental Impact Statement (EIS) Summary, and the associated EIS documents. We will provide further comments below.

Minimizing Impacts from Seismic Testing

The noise from seismic testing can travel thousands of kilometers under the right conditions and have wide-spread impacts on marine life.[1] To date 130 species have been documented to be impacted by human-caused underwater noise pollution, including species present in the Project

[1] Nieukirk, S.L., Mellinger, D.K., Moore, S.E., Klinck, K., Dziak, R.P. and Goslin, J., 2012. Sounds from airguns and fin whales recorded in the mid-Atlantic Ocean, 1999–2009. *The Journal of the Acoustical Society of America*, *131*(2), pp.1102-1112.

Area such as plankton, benthic organisms, whales and other marine mammals, invertebrates, some fish species, squid and shrimp, although more research is needed for these and many other species.[2]

The EIS recommends business as usual mitigations to reduce the impacts of noise from exploration drilling related activities. It should be noted that the options that currently exist are largely unproven in their effectiveness. For instance, most whales are rarely visible at the surface, especially the deep divers, such as Northern bottlenose whales, and especially in anything but perfect visibility. Quantitative analysis has shown that mitigation monitoring detects fewer than 2 per cent of beaked whales even if the animals are directly in the path of the ship.[3] Other species might be slightly easier to sight, but again monitoring cannot be relied upon to be satisfactorily effective. Marine Mammal Observers are often not sufficiently trained (specifically in the use of Passive Acoustic Monitoring) nor suitably rested, nor are they necessarily listened to when they claim to have sighted a marine mammal.[4]

In addition, ramp-ups or soft starts do not appear to be consistently and reliably effective in causing humpback whales to move away from the source vessel, a species that is found within the Project Area.[5][6] There is large variation in whale behavior, with some groups swimming away from the sound source whereas others approached even relatively loud noise levels.[7] Moreover, when animals have a strong motivation not to move away from their current location, ramp-ups are unlikely to be effective.

The EIS notes that advice on how to mitigate noise impacts come from the 2007 Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment. WWF-Canada recommends that the proponent use the most up to date advice on how to mitigate noise impacts on marine species using the recently released Canadian Science Advisory Secretariat Science Advisory Report "Review of the Statement of Canadian Practice with Respect to the Mitigation of Seismic Sound in the Marine Environment."[8] This report documents new modifications and additions that should be incorporated into the Mitigation of Seismic Sound in the Marine Environment Statement of Canadian Practice based on the most updated scientific information. As this report states, business as usual mitigations are not sufficient to avoid unnecessary impacts on marine species and outlines ways to minimize negative effects.

Protected and Sensitive Areas

Canada, as a signatory to the Convention on Biological Diversity, committed to protecting 10 per cent of ocean and coastal spaces by 2020. Canada has additionally committed to protecting 25 per cent of its ocean by 2025, and 30 per cent by 2030, as outlined by Prime Minister Trudeau in his

[2] Weilgart, L., 2018. The impact of ocean noise pollution on fish and invertebrates. *Report for OceanCare, Switzerland. https://www.oceancare.org/wp-content/uploads/2017/10/OceanNoise_FishInvertebrates_May2018.pdf*
[3] Barlow, J. and Gisiner, R. 2006. Mitigating, monitoring and assessing the effects of anthropogenic sound on beaked whales. *Journal of Cetacean Research and Management*, *7*(3), pp.239-249.
[4] DFO. 2010. Guidance Related to the Efficacy of Measures Used to Mitigate Potential Impacts of Seismic Sound on Marine Mammals. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2010/043. http://www.dfo-mpo.gc.ca/Library/341565.pdf
[5] Dunlop, R.A. et al. 2017. Response of humpback whales to ramp-up of a small experimental airgun array. *Marine Pollution Bulletin*. 103: 1-2.
[6] Wensveen et al. 2017. Lack of behavioural responses of humpback whales indicate limited effectiveness of sonar mitigation. Journal of Experimental Biology. 220(22): 4150-4161.
[7] Ibid.
[8] http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2020/2020_005-eng.pdf

mandate letter to Honourable Bernadette Jordan, Minister of Fisheries, Oceans and the Canadian Coast Guard.[9]

The International Union for Conservation of Nature (IUCN), which creates guidance for protected area practitioners that is used globally, states that management of marine protected areas and other effective-area based conservation measures (which have been renamed marine refuges in Canada) should not have environmentally-damaging industrial activities and infrastructure development occurring in them.[10] This includes activities such as oil and gas extraction, consistent with IUCN Recommendation 102 adopted at the 2016 World Conservation Congress, based on scientific evidence that this type of industrial activity and infrastructure development has adverse impacts on biodiversity and is never compatible with conservation.[11]

In 2019 the Minister of Fisheries, Oceans and the Canadian Coast Guard announced that all new federal marine protected areas would prohibit oil and gas activities in order to strengthen the conservation of our oceans.[12] While this minimum standard does not currently apply to marine refuges, WWF-Canada attests these areas cannot count toward international protected area targets if oil and gas activities occur within them. As an example, the Northeast Newfoundland Slope Marine Refuge is 55,353 km^2 and represents almost 1 per cent of what Canada reports as protected to the CBD.[13] Parts of this marine refuge, a site which fish harvesters voluntarily agreed to stop fishing in to protect important fish habitat, has had oil and gas leases awarded within it since its creation in 2017. That means that while the entire area remains off limits to fishermen, it is open for oil and gas development, which is not acceptable.

Allowing oil and gas activities to occur within this and other sensitive protected areas will make the path to 25 per cent by 2025 and 30 per cent protection by 2030 much more difficult, as the sites currently protected will no longer be able to count towards international targets. WWF-Canada has repeatedly requested, based on the best available scientific advice and in line with international guidance for the protection of biodiversity, that oil and gas activities not be permitted within marine refuges. The EIS notes that the Northeast Newfoundland Slope Closure marine refuge only overlaps with 0.47 per cent of the Project Area. WWF-Canada recommends that the proponent set aside this small portion of their Project Area from exploration drilling in order to help conserve biodiversity and uphold Canada's commitments to protecting the environment.

In addition to protected areas, there are sensitive deep-sea ecosystems that are present in the Project Area, including deep sea coral and sponge assemblages that play an important ecological role as complex habitat, and that they are particularly sensitive to the effect of offshore oil and gas exploratory drilling. It was noted in the EIS that Remotely Operated Vehicle surveys will be conducted prior to drilling, and if environmental sensitivities are found, such as the presence of corals and sponges, Chevron will discuss with the Canada-Newfoundland and Labrador Offshore Petroleum Board the appropriate course of action. It was also noted that actions could involve

[9] https://pm.gc.ca/en/mandate-letters/2019/12/13/minister-fisheries-oceans-and-canadian-coast-guard-mandate-letter
[10] https://portals.iucn.org/library/sites/library/files/documents/PATRS-003-En.pdf
[11] https://portals.iucn.org/library/sites/library/files/resrecfiles/wcc_2016_rec_102_en.pdf
[12] https://www.canada.ca/en/fisheries-oceans/news/2019/04/backgrounder-new-standards-to-protect-canadas-oceans.html
[13] http://www.dfo-mpo.gc.ca/oceans/oeabcm-amcepz/refuges/northeastnewfoundlandslope-talusnordestdeterreneuve-eng.html

moving the well. WWF-Canada agrees with this course of action and feel that owing to their ecological sensitivity that these important benthic species be avoided.

It is important to note that current mitigation for sensitive benthic areas is based on knowledge and best practices from Norwegian oil and gas exploration and production activities, which are not appropriate in the Canadian context. For example, *Lophelia* is a coral indicator species in Norway and has been applied to oil and gas activities in parts of Canada, but it is not a good indicator in Canadian waters. Norwegian guidelines also characterize coral aggregations as 5 colonies greater than 30 cm, which excludes Canadian sea pen fields. To provide regionally appropriate guidance, regionally relevant guidelines similar to those provided by the Norwegian Oil and Gas Authority must be developed, including development of a regionally appropriate species list and criteria for setback distances. Until that time, the significance of impacts and related mitigation for oil and gas exploration activities should be carefully determined using the precautionary approach and on a case-by-case basis to account for site-specific ecology and environmental conditions.

It should also be noted that a Canadian Science Advisory Secretariat (CSAS) Science Advisory Process to determine Coral and Sponge Mitigations in Relation to Exploratory Drilling Programs in the Newfoundland and Labrador Region occurred from January 28-30, 2020, and the findings of this process should be implemented during future exploratory drill programs.[14] While the CSAS report will not be available for some months, WWF-Canada requests that a rapid technical advisory be given to the Impact Assessment Agency, and that this information be incorporated into mitigation measures for use by the proponent. This review will form the basis of specific guidance for the protection of corals and sponges, and sufficient time should be taken prior to moving forward to ensure the most appropriate mitigation measures are put in place.

Climate Change

In the face of the climate crisis, WWF-Canada feels the EIS inadequately addresses the potential impacts the project could have on Canada's ability to meet our climate change commitments. In 2015, Canada and 194 other nations committed to the Paris Climate Agreement. The signatories agreed to a substantial decline and a near phase-out out of fossil fuels within 3 decades in an effort to limit global warming below 2 degrees Celsius (above pre-industrial levels) to substantially reduce the risks and effects of climate change.[15] Further to that, the Intergovernmental Panel on Climate Change (IPCC) released a report in 2018, stating that the 2 degree target is insufficient, and that 1.5 degrees above pre-industrial levels is the desired goal to achieve clearer benefits for people and natural ecosystems.[16] The Government of Canada also committed to achieve net-zero emissions by 2050 as outlined in the Ministerial Mandate Letter provided to the Honourable Jonathan Wilkinson, Minister of Environment and Climate Change Canada in December, 2019.[17]

WWF-Canada feels that the EIS gives inadequate treatment to the full implications of an exploratory drilling program on national and provincial carbon reduction commitments. Viewed

[14] http://www.dfo-mpo.gc.ca/csas-sccs/Schedule-Horraire/2020/01_28-30-eng.html
[15] https://unfccc.int/sites/default/files/english_paris_agreement.pdf
[16] https://www.ipcc.ch/sr15/
[17] https://pm.gc.ca/en/mandate-letters/minister-environment-and-climate-change-mandate-letter

through this narrow lens of only looking at exploration drilling and not downstream impacts, it is reasonable to conclude that the greenhouse gas emissions contributions from this proposed exploratory drilling program are low and insignificant in comparison to Canada's greenhouse gas (GHG) targets, and that any individual drilling program would have virtually no effect on current estimates of future global climate change. At the same time, the purpose of an exploratory drilling program is to discover new commercially significant resources that can be developed into full production operations. When justifying whether or not to approve a new exploration drilling program, a climate lens should be placed on the project. At what point of discovery of oil and gas resource will more exploration be permitted?

Moreover, it is important to note that while the proponent inadequately characterized the climate impacts of potential oil production activities in the future, there appears to be no such objection with considering the current and potential economic benefits of future oil production. If economic benefits of future oil and gas production can be included in the analysis, so to can the potential climate impacts from downstream emissions related to the production of any oil reserves that are discovered.

Oil Spills and other Unplanned Events

Recent dangerous incidents highlight the risks of drilling in extreme northern environments, and that incidents have been occurring with alarming frequency. In November 2018 an estimated 250,000 litres of oil was spilled from the Huskey Energy's SeaRose Platform, the largest spill in the province's history. Some experts estimated that a "horrendous" number of sea birds, possibly over 100,000, may have been killed due to the spill.[18] This was the second serious incident by Husky Energy's SeaRose floating, production, storage and offloading vessel over a relatively short time span. In May 2017, an iceberg came within 180 metres of the same vessel, so close that the crew were told to "brace for impact," yet oil production was not halted. Two additional spills happened from the Hibernia platform in the summer of 2019, totaling over 14,000 litres. The frequency of such events is extremely concerning and highlights the hazards common in extreme environments. It also showcases the need for a higher level of caution with regards to avoiding sensitive areas and the need for more stringent regulation of the offshore oil and gas industry.

In terms of mitigating the risk of oil spills, it is worth noting that some of the conditions that can increase the risk of a well blowout are present in the Newfoundland-Labrador offshore such as deep water, extreme weather and the need for a significant amount of exploration drilling. It has been reported that of all the phases of offshore operations, exploration drilling entails the highest risk of blowout.[19] While the EIS does list a capping stack as a standard mitigation measure for stopping well blowouts, there is not one present in the region. Documents filed to the Canadian Environmental Assessment Agency in relation to drilling projects in the Flemish Pass indicate that, if there were a well blowout, the capping stack would have to be shipped from Norway or Brazil, a process that could take between 14 and 36 days.[20] Similarly, the Canada Nova Scotia

[18] Stokes, C. Think few reported oiled seabirds is good news? Not so fast, says MUN biologist. *CBC News.* https://www.cbc.ca/news/canada/newfoundland-labrador/searose-spill-seabird-threat-1.4914730

[19] Officer of the Watch. August 6, 2013. *The Probability of an Offshore Accident. https://officerofthewatch.com/2013/08/06/the-probability-of-an-offshore-accident/*

[20] CBC News Staff. Weeks to cap a subsea oil leak? It's industry standard, says official. https://www.cbc.ca/news/canada/newfoundland-labrador/oil-capping-timelines-nl-1.4933106

Offshore Petroleum Board allowed British Petroleum to keep a capping stack in Norway for its drilling operations in the Scotian Basin.[21] We recommend that a capping stack be a necessary safety measure that is in place prior to further exploration drilling programs, especially given the desire by the province of Newfoundland and Labrador to ramp up activity in this sector.

It is extremely difficult to clean up oil offshore or determine whether wildlife has been harmed. Oil spills, the most hazardous of all environmental risks associated with the offshore oil and gas industry, can be catastrophic for marine habitats and the whales, birds and fish that call them home. This is an unacceptable risk to take within sensitive areas, especially those counting towards or commitments to the Convention on Biological Diversity, further highlighting the need to avoid exploration drilling in marine refuges.

Cumulative Effects Assessment

It was noted in the EIS that Indigenous groups brought forward concerns during engagement sessions about the lack of a comprehensive approach to analyzing, understanding and addressing the potential for cumulative impacts of so many proposed projects in the region. WWF-Canada echoes these concerns, and notes that cumulative effects assessments are often done poorly at the site-specific level.

It was also noted in the EIS that Chevron participated in the Regional Assessment (RA) for Offshore Oil and Gas Exploration Drilling East of Newfoundland and Labrador, and that during this process a more regional and multi-faceted approach to examine cumulative effects was being undertaken, and that these learnings would be applied to this exploration drilling project. It is important to note that while we do agree that the RA offered an invaluable opportunity to consider cumulative effects in a holistic manner, the Committee conducting the RA declined to do a full cumulative effects assessment due to "difficulties in modelling cumulative effects and their ecological outcomes" and because it had "neither the time nor the capacity to evaluate cumulative effects in a predictive/quantitative sense."[22]

We agree that cumulative effects are inherently difficult to assess and manage, especially at the project specific level, which is why they should be understood at the regional level. The EIS does note numerous other projects occurring in the area, and that residual environmental effects from the Project may potentially combine with residual effects from one or more other physical activities resulting in cumulative environmental effects on fish and fish habitat, marine and migratory birds, and marine mammals and sea turtles. However, the proponent concludes that impacts would be short term and low magnitude. It is important to note that the proponent aims to drill 8 wells from 2021-2025, with approximately 180 drilling days per well. This would equal 1,440 drilling days out of a possible 1,825 drilling days over that five-year period, which would mean near constant drilling over that time period. Coupled with that is the BHP exploration drilling project,[23] which aims to drill 20 wells over the same time period adjacent to the West

[21] The Chronicle Herald. March 17, 2018. Opponents of ultra-deep BP well of NS coast speaking at SMU. http://thechronicleherald.ca/novascotia/1553818-opponents-of-ultra-deep-bp-well-of-n.s.-coast-speaking-at-smu
[22] https://iaac-aeic.gc.ca/050/evaluations/proj/80156
[23] https://iaac-aeic.gc.ca/050/documents/p80174/134066E.pdf

Flemish Pass exploration drilling area, meaning that impacts could be both widespread and long-term.

We thank you for the opportunity to provide comments.

Sincerely,

<original signed by>

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WWF-Canada