



November 20, 2018

**SENT VIA EMAIL AND REGULAR MAIL**

**Office of the Regulator of Oil and Gas Operations**

Government of the Northwest Territories  
P.O. Box 1320  
Yellowknife NT  
X1A 2L9

**CANADIAN NATURAL RESOURCES LIMITED  
OPERATIONS AUTHORIZATION APPLICATION(S) AND,  
WELL(S) SUSPENSION REQUIREMENTS EXTENSION REQUEST**

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Dear Sir/Madam:

Canadian Natural Resources Limited (Canadian Natural) is applying for Operations Authorization (OA) approval(s) to the Office of the Regulator of Oil and Gas Operations (OROGO) for 13 wells located in the North West Territory.

Canadian Natural is also requesting an extension to the downhole Suspension Requirements for the 9 wells identified in the Aug 31, 2017 OROGO Suspended Well Review, which would have otherwise been required prior to Aug 31, 2019. With the well abandonment execution plan as proposed in the OA, Canadian Natural requests the downhole suspension requirements be waived in order to plan and execute the abandonment work efficiently. The wells will continue to be inspected as per the annual inspection requirements. Under the proposed Operations Authorization, Canadian Natural will complete the abandonment activities by 2023.

If you have any questions, please contact the undersigned at [arly.castillo@cnrl.com](mailto:arly.castillo@cnrl.com) or at (403) 514-7637.

Yours truly,  
**CANADIAN NATURAL RESOURCES LIMITED**

A handwritten signature in purple ink that reads "Arly Castillo".

Arly Castillo  
Regulatory Coordinator



**A. Obligations to consult with existing/asserted Aboriginal rights holders.**

Canadian Natural has previously consulted with the Aboriginal rights holders with respect to these 13 wells as part of the Land Use Permit application(s) submitted to the Mackenzie Valley Land and Water Board (MVLWB) in 2015 and 2017.

Figure 1: List of Aboriginal rights holders notified by Canadian Natural in 2015 and 2017

Organization	Contact Information
<b>Fort Liard Métis Local #67</b> PO Box 81 Fort Liard, NT X0G 0A0 Phone 867-770-3265 Fax 867-770-4573	Attn: President Ernie McLeod Fax: 867-770-4573
<b>Hamlet of Fort Liard</b> General Delivery Fort Liard, NT X0G 0A0 Phone 867-770-4104 Fax 867-770-4004	Mike Rudkin, Senior Administrative Officer (SAO) <a href="mailto:sao@fortliard.com">sao@fortliard.com</a>
<b>Nahanni Butte First Nation</b> General Delivery Nahanni Butte, NT X0E 0N0 Phone 867-602-2900 Fax 867-602-2910	Chief Peter Marcellais <a href="mailto:chief.nbdb@gmail.com">chief.nbdb@gmail.com</a> Mark Pocklington, Band Manager & SAO <a href="mailto:manager.nbdb@gmail.com">manager.nbdb@gmail.com</a>
<b>Sambaa K'e First Nation</b> PO Box 10 Trout Lake, NT X0E 1Z0 Phone 867-206-2800 Fax 867-206-2828	Chief Dolphus Jumbo <a href="mailto:chief@sambaakefn.com">chief@sambaakefn.com</a> Jessica Jumbo <a href="mailto:environment@sambaakefn.com">environment@sambaakefn.com</a>
<b>Sambaa K'e Development Corporation</b> PO Box 29 Trout Lake, NT X0E 1Z0 Phone 867-206-2025 Fax 867-206-2032	Ruby Jumbo <a href="mailto:skdcorp@yahoo.ca">skdcorp@yahoo.ca</a>
<b>Mackenzie Valley Land and Water Board</b> 7 <sup>th</sup> Floor, 4910 50 <sup>th</sup> Avenue Yellowknife, NT X1A 2P6	Angela Love <a href="mailto:angela.love@mvlwb.com">angela.love@mvlwb.com</a>
<b>Government of the Northwest Territories,                      Department of Lands – Deh Cho Region</b> P.O. Box 150 Fort Simpson, NT X0E 0N0	Kyle Christiansen <a href="mailto:Kyle.Christiansen@gov.nt.ca">Kyle.Christiansen@gov.nt.ca</a>



**Canadian Natural**

Organization	Contact Information
<p><b>Acho Dene Koe First Nation</b>                      General Delivery                      Fort Liard, NT X0E 0A0                      Phone 867-770-4571                      Fax 867-770-4573</p>	<p>Attn: Chief Gene Hope                      Fax: 867-770-4573</p>
<p><b>Acho Dene Koe Band Land Services</b>                      General Delivery                      Fort Liard, NT X0G 0A0                      Phone 867-770-4571                      Fax 867-770-4573</p>	<p>Alex Fanni, Lands Coordinator  <a href="mailto:Achodenekoe.fanni@adkfirstnation.ca">Achodenekoe.fanni@adkfirstnation.ca</a>                      Kayly Deneron, Lands Coordinator  <a href="mailto:Achodenekoe.kdeneron@northwestel.net">Achodenekoe.kdeneron@northwestel.net</a></p>
<p><b>Dehcho Land Use Planning Committee</b>                      PO Box 199                      Fort Providence, NT X0E 0L0                      Phone 867-699-3162                      Fax 867-699-3166</p>	<p>Joachim Bonnetrouge, Chair  <a href="mailto:joachimb@dehcholands.org">joachimb@dehcholands.org</a>                      Sophie Bonnetrouge, Office Manager  <a href="mailto:sophieb@dehcholands.org">sophieb@dehcholands.org</a></p>
<p><b>Dehcho First Nations</b>                      PO Box 89                      Fort Simpson, NT X0E 0N0                      Phone 867-695-2355                      Fax 867-695-2038</p>	<p>Dahti Tsetso, Resource Management Coordinator  <a href="mailto:Dahti_tsetso@dehcho.org">Dahti_tsetso@dehcho.org</a></p>
<p><b>Dene Nation</b>                      5120 – 49<sup>th</sup> Street                      PO Box 2338                      Yellowknife, NT X1A 2P7                      Phone 867-873-4081                      Fax 867-920-2254</p>	<p>Rolland Pangowish, Lands and Environment Director  <a href="mailto:lands@denenation.com">lands@denenation.com</a></p>
<p><b>Dene Tha' First Nation</b>                      PO Box 958                      High Level, AB T0H 1Z0                      Phone 780-926-2422                      Fax 780-926-2475</p>	<p>Baptiste Metchooyeah, Lands &amp; Resources Technical Advisor  <a href="mailto:baptiste.metchooyeah@denetha.ca">baptiste.metchooyeah@denetha.ca</a></p>



Canadian Natural has also notified the Aboriginal rights holder with respect to this submission.

***See attachment #1***

**B. The Operations Authorizations (OA) form.**

Canadian Natural is providing the OA form as required.

***See attachment #2***

**C. Land Use Plan**

Canadian Natural has obtained the required Land Use Permit for these wells; MV2015X0005, MV2017X0034.

**D. OGOA-Sections 10-17 and Section 64**

**1. Development Plan relating to the pool and field.**

Not applicable to Canadian Natural's well abandonment project.

**2. A declaration with respect to all equipment and installation to be used in the form approved by the Regulator.**

Canadian Natural will provide the specific equipment to be used and the Declaration by Operator form closer to the time of the planned activities.

**3. A certificate issued by a certifying authority with respect to the equipment or installation, in the form approved by the Regulator.**

Not applicable to Canadian Natural's well abandonment project.

**4. Benefit Plan**

Canadian Natural has submitted a Benefit Plan letter to the Petroleum Resources Division of the Department of Industry, Tourism and Investment (ITI) in parallel to this application to OROGO.

***Attachment #3***

**5. Financial Responsibility**

Canadian Natural believes that the information provided below reflects on the company's Proof of Financial Responsibility.

Canadian Natural maintains strong financial stability and liquidity represented by cash balances, and committed and demand bank credit facilities. At September 30, 2018 the Company had approximately \$5,350 million of available liquidity, including cash and cash equivalents, an increase of approximately \$550 million from Q2/18.



In Q3/18, Moody's Investors Service, Inc. upgraded the Company's senior unsecured rating to Baa2 from Baa3 and its short term rating to P-2 from P-3 with a stable outlook.

**E. OGDPR- Sections 5-9**

**1. Management System**

Canadian Natural Resources Limited has several management systems in place to integrate operations and technical systems with the management of financial and human resources. These include, but are not limited to, a Safety Management System and Emergency Management, Asset Integrity, Security, Technical Safety and Environmental Protection programs. Teams work closely to assess hazards, mitigate risk and ensure that the effects from an emergency are minimized through the activation of Emergency Response Plans and spill preparedness programs.

**2. Project Scope**

**a. SCHEDULE AND EXECUTION PLAN-**

Given the remote nature of the existing wells, the schedule will be evaluated annually, with the objective of having operations complete by 2023. Annual review will include review with other operator activity, with a focus on sharing services such as access equipment, camps and major equipment to perform the downhole abandonment operations. Annual inactive well inspections will be completed until the time the wells are abandoned.

Subject to submission and approval of the Well Authorization plan, Year 1 activity may include fall access via heli-portable equipment. This operation will focus on configuration of downhole plugging in the tubulars to prepare for future downhole plugging operations. Downhole operations will be conducted in Year 2 (and potentially Year 3). These operations will consist of major rigwork including the final closure of the wells and removal of the wellheads.

In the event that well conditions do not allow for the timelines proposed to be achieved, OROGO will be consulted and appropriate modifications to the execution plan will be proposed.

**b. SAFETY PLAN**

Canadian Natural Resources Limited operates under a defined safety management system. Site specific activity is conducted under supervision of a Canadian Natural's wellsite Supervisor. Canadian Natural's supervisors meet or exceed the training requirements identified in IRP 7 (Energy Safety Canada). In addition to site supervision, operations conducted on a Canadian Natural's leases are done under our 4-pillar program which



## Canadian Natural

include; Orientation for all individuals, Site specific Hazard Assessment, verification of service providers Hazard Assessment and job Procedures, and a Transportation of Injured Worker plan.

Canadian Natural maintains an approved vendor list which validates appropriate compliance with worker compensation standing, insurance, safety programs including appropriate incident frequency limits.

Canadian Natural maintains hazard response procedures that outline measures to be taken in the event of a range of diverse hazardous situations, including those outside of oil and gas activity such as severe weather or security related emergencies.

**c. ENVIRONMENTAL PROTECTION PLAN**

Canadian Natural's proposed activities are limited to the abandonment of existing infrastructure. Activities will be limited to within existing lease boundaries and on pre-existing road accesses. Any expected operation are not anticipated to have a material effect of the environment.

**d. FLARING AND VENTING INFORMATION**

Subject to application and approval of the Operations Authorization, activities resulting in flaring or venting of gas will be kept to a minimum. Execution of the proposed abandonment operations will not include provisions for well testing. Flaring and venting will be limited to purging of surface equipment, well kill operations, and in the event of well control operations.

**e. BURNING OF OIL**

There are no activities planned that would result in the burning of oil.

**f. DRILLING AND WELL CONTROL EQUIPMENT**

Risk of well control issues are low as the wells have been drilled, cased and appropriate wellheads installed. Well servicing well control equipment will be selected based on well specific conditions including, but not limited to:

- Reservoir Pressure
- H<sub>2</sub>S Concentration
- Wellhead Flange Rating
- Based on the well conditions, well control equipment will be selected to comply with Alberta Energy Directive 37- Well Control and Well Blowout Prevention Training. Specific equipment requirements will be described within the Well Authorization application.



**g. POOL INFORMATION**

The wells being executed have already been drilled and cased. Specific pool information will be addressed in the Well Authorization application.

**h. EMERGENCY RESPONSE PROCEDURE**

Canadian Natural has a comprehensive corporate Emergency Management program in place to ensure that the company is properly prepared for the safe and well-coordinated response to potential accidents and incidents. This program includes but is not limited to, an Incident Command System, detailed emergency response procedures, resources, training and exercises necessary for reliable and effective emergency response. Emergency Response Plans (ERPs) ensure immediate initial response and efficient management of the situation until it has been resolved or until other resources can be mobilized to the site.

Company ERPs meet regulatory requirements for all assets that fall under OROGO jurisdiction and are compliant to Canadian industry standard CSA Z246-2-14.

All emergency operations will be conducted as per protocols, policies and procedures as set forth in the company's Corporate and area specific ERP.

**i. DESCRIPTION OF DECOMMISSIONING AND ABANDONMENT OF THE SITE, INCLUDING RESTORATION**

Well abandonment activities will be conducted as approved in the Well Authorization plan. Activities will include removal of downhole equipment (as appropriate), plugging of completed zones, confirmation of hydraulic isolation of zones via existing primary cement, confirmation and protection of casing integrity, and removal of the wellhead.

**3. Production Installation**

Not applicable to Canadian Natural's well abandonment project.

**4. Safety Plan**

Canadian Natural Resources Limited operates under a defined safety management system. Site specific activity is conducted under supervision of a Canadian Natural's wellsite Supervisor. Canadian Natural's supervisors meet or exceed the training requirements identified in IRP 7 (Energy Safety Canada). In addition to site supervision, operations conducted on a Canadian Natural's leases are done under our 4-pillar program, which include: Orientation for all individuals, Site specific Hazard Assessment, verification of service providers Hazard Assessment and job Procedures, and a Transportation of Injured Worker plan.



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Canadian Natural maintains an approved vendor list which validates appropriate compliance with worker compensation standing, insurance, safety programs including appropriate incident frequency limits.

Canadian Natural maintains hazard response procedures that outline measures to be taken in the event of a range of diverse hazardous situations, including those outside of oil and gas activity such as severe weather or security related emergencies.

### **5. Environmental Protection Plan**

Canadian Natural is submitting two environmental protection plans for all 13 wells. These environmental plans are associated with Land Use Permit MV2015X0005 (2015) and Land Use Plan MV2017X0034 (2017).

***Attachment # 4***

### **F. Information Disclosure Form**

Canadian Natural submits the signed Information Disclosure Form

***Attachment # 5***

### **G. Land Use Permits and Water Licenses**

Canadian Natural received the Land Use Permit from the Mackenzie Valley Land and Water Board on May 7, 2015 and March 29, 2018.

Canadian Natural will pursue a Water License for this project 12 months in advance of the well abandonments.

### **H. Applications to Alter the Condition of a Well (ACW).**

Canadian Natural will submit the ACW applications for each well that it plans to abandoned at a later date closer to the abandonment operations.

### **I. Preliminary Screening (Environmental Impact Assessment).**

Canadian Natural is submitting two Preliminary Screening Reports; MV2009X0007 from 2009 and MV2015X0005 from 2015 for your review.

***Attachment# 6***



**Attachments**

- Attachment 1: Aboriginal rights holder notification letter(s)**
- Attachment 2: Operations Authorization form and list of wells**
- Attachment 3: Benefit Plan Letter**
- Attachment 4: Environmental Protection Plan(s)**
- Attachment 5: Information Disclosure Plan**
- Attachment 6: Preliminary Screening(s)**