



Energy, Mines and Resources

**Oil and Gas Resources Branch**

Department of Energy, Mines and Resources, Government of Yukon  
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**WELL OPERATION APPROVAL**

No.	879-WOA-20170804-001
Amendment No.	

*Oil and Gas Act* • Oil and Gas Licence Administration Regulations (OGLAR) • Oil and Gas Drilling and Production Regulations (OGDPR)

Pursuant to the *Oil and Gas Act* and the regulations enacted under it, a Well Operation Approval is hereby granted to:

Licensee:	Apache Canada Ltd.
Identification Code of Licensee:	634157
Main Address:	Suite 2800, 421 - 7th Avenue S.W., Calgary, Alberta. T2P 4K9
Main Phone Number:	403 261 1200

Well Name	Apache et al Kotaneelee I-48		
Well Licence #	879		
Unique Well ID	300I486010124002		
Surface Location	LAT. <u>60</u> ° <u>07</u> ' <u>34</u> . <u>97</u> " N	LONG. <u>124</u> ° <u>07</u> ' <u>36</u> . <u>90</u> " W	
Field	Kotaneelee		
Area	Liard Basin		
Type of Well	<input type="checkbox"/> Disposal	<input type="checkbox"/> Injection	<input checked="" type="checkbox"/> Production <input type="checkbox"/> Experimental
	<input type="checkbox"/> Observation	<input type="checkbox"/> Storage	<input type="checkbox"/> Other
Type of Activity	<input checked="" type="checkbox"/> Abandonment	<input type="checkbox"/> Suspension	<input type="checkbox"/> Workover <input type="checkbox"/> Change of Service
	<input type="checkbox"/> Re-abandonment	<input type="checkbox"/> Completion	<input type="checkbox"/> Re-Completion
Description	Abandonment of Kotaneelee I-48 gas well.		
Sour Well?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Maximum H2S concentration	<u>25</u> mol/kmol
		Emergency planning radius	<u>0.265</u> km

This Well Operation Approval is subject to the *Oil and Gas Act* and all regulations enacted under it. The Licensee must act in accordance with their Well Operation Approval application, comply with the terms of the conditions included in this Well Operation Approval (Appendix A), and comply with any orders or directions issued by the Chief Operations Officer.

Pursuant to section 103 of the *Oil and Gas Act*, all information obtained under this Well Operation Approval is confidential.

John Fox   
Name and Signature of the Chief Operations Officer

August 9, 2017  
Date

## **APPENDIX A – TERMS AND CONDITIONS**

1. The Licensee's obligations under this Approval survive the expiry, surrender, or cancellation of this Well Operation Approval.
2. This Well Operation Approval is valid from the date of issue and expires 120 days after the date of issue if the well operation has not commenced.
3. The Licensee must comply with all applicable federal, territorial, and municipal laws.
4. The contractor and equipment identified in the application for the Well Operation Approval must be used in the operation.
5. Blowout Prevention for the well operation must comply with the Yukon Oil and Gas Drilling and Production Regulations including any variation of well classification as approved by the Chief Operations Officer. The Licensee must submit satisfactory proof of certification of the blowout preventer to the Chief Operations Officer before commencement of well operations.
6. The Licensee must submit a casing inspection log and cement integrity evaluation for the well performed during well operations.
7. The Licensee shall test for gas migration at surface, between 6 and 18 months after surface abandonment, during a period when the ground is not frozen. A sensitive detection method such as an infrared detector must be used.
8. The Licensee shall provide records of well operations (tour sheets, daily reports, all wireline logs) including a sketch illustrating the final condition of the well. The record must be signed and dated by a professional engineer employed or engaged by the licensee.
9. The Licensee shall provide records of daily volumes of fluids produced from, disposed of or injected into the well, fluid transferred from the well, and gas flared or vented during the well operation to the Chief Operations Officer.
10. The Licensee shall provide and implement, once approved, a detailed attractant management plan that outlines how human-bear conflicts will be minimized. All attractants, including garbage, kitchen waste and strained solids from grey water, shall be stored in a container that prevents access by bears and other wildlife, until properly disposed according to the Solid Waste Regulation or burned daily to ash by forced air and fuel fired incineration according to the Air Emissions Regulations.
11. Field Level Assessments must be performed prior to the field facility abandonment and reports shall be provided to the Chief Operations Officer.
12. Site assessment results for the well site (environmental site assessment Phases 1 & 2) shall be submitted prior to commencement of site remediation and reclamation activities in accordance with the approved Plan of Restoration for the well site.
13. The Licensee shall submit to the Chief Operations Officer, within sixty (60) days of completed reclamation, a post-activity reclamation report that includes, but may not be limited to, the following:
  - Results of environmental wildlife monitor inspection of program area after all activities are completed
  - Results of monitoring by operations personnel of areas affected by the project and reclamation success
14. A Pipeline Abandonment Plan shall be provided to the Chief Operations Officer and approved prior to commencement of pipeline abandonment activities. At minimum, the Pipeline Abandonment Plan shall address methods for cleaning and purging, cutting and capping, managing pipeline waste, and any post-abandonment monitoring.
15. A copy of the Well Operations Approval must be posted on the drilling rig or at the licensee's field office.
16. The well deposit referred to in section 8 of the Oil and Gas Drilling and Production Regulations must be in place.