



NWT OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS

Office of the Regulator of Oil and Gas Operations

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Tony Berthelet
President and CEO
Strategic Oil and Gas Ltd.
1100, 645 – 7TH AVENUE SW
CALGARY AB T2P 4G8

December 12, 2018

Dear Tony Berthelet:

**Information Request No. 2:
Strategic Oil and Gas Ltd. Application
for an Operations Authorization for the Cameron Hills Project (OA-2018-003)**

On November 21, 2018, the Office of the Regulator of Oil and Gas Operations (OROGO) received a complete application from Strategic Oil and Gas Ltd. (SOG) for an Operations Authorization for the continued operation of the Cameron Hills Project. In order to review SOG's application, OROGO requires additional information, as set out in the attached Information Request No. 2.

Please send your written responses and any associated correspondence to Mr. James Fulford, Chief Conservation Officer, OROGO, by email at oroogo@gov.nt.ca or through OROGO's secure file transfer site.

Please submit your response on or before 4:00 p.m. on January 7, 2019. If you are unable to respond within this timeframe or have any questions, please contact me at 867-767-9097 Ext: 78003 or by email at Pauline.dejong@gov.nt.ca.

Sincerely,

Pauline de Jong
Senior Advisor, Legislation and Policy

Attachment

c. Michael Bolianatz, Regulatory Compliance Officer, Strategic Oil and Gas Ltd.

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BUREAU DE L'ORGANISME DE RÉGULATION DES OPÉRATIONS PÉTROLIÈRES ET GAZIÈRES DESTINO

Strategic Oil and Gas Ltd. (SOG)
Application for an Operations Authorization (OA-2018-003)
Information Request No. 2

Consultation and Engagement

2.1 Stakeholder Listing

Preamble: Page 4 of SOG's Engagement Plan (Revision 1.0) indicates that "a listing of all stakeholders is included as Appendix A to this document."

Appendix A contains out of date contact information for some organizations listed.

Request: Please provide a revised Engagement Plan with current contact information for SOG's stakeholders associated with the Cameron Hills Project.

2.2 Detailed Engagement Log

Preamble: Page 5 of SOG's Engagement Plan (Revision 1.0) indicates SOG will "maintain a detailed engagement log documenting the type of engagement, who was engaged, what issues or concerns were raised, proposed mitigation strategies to address issues and concerns and details as to whether an issue or concern remains outstanding" for all engagement activities.

OROGO requires information on consultation activities carried out by SOG to assess whether adequate consultation has occurred. In particular, OROGO requires information on the concerns and issues raised during consultation and any mitigations SOG committed to.

Request: Please provide SOG's up to date detailed engagement log.

Hazard Identification and Incident Response

2.3 Regulatory and Incident Reporting Requirements

Preamble: Section 2.6 of the HSE Assurance Plan provides the regulatory reporting framework for reporting incidents, spills and events associated with SOG's operation in the Cameron Hills area.

Section 2.12.1 of the HSE Assurance Plan does not identify some of the relevant legislation (i.e. the *Oil and Gas Drilling and Production Regulations (OGDPR)*, *Environmental Protection Act*, *Waters Act*, *Mackenzie Valley Resource Management Act*) or the associated regulatory agencies (i.e. OROGO, Department of Lands, Department of Environment and Natural Resources,

Workers Safety and Compensation Commission).

While it is understood that this project spans multiple Federal, Provincial and Territorial jurisdictions, the list of regulatory reporting requirements identified in this section does not correctly identify all the appropriate regulatory agencies reporting requirements.

Request: Please provide updated sections 2.6 and 2.12.1 of the HSE Plan, including correct references to all regulatory authorities and legislation.

2.4 Contingency Plans and Emergency Response Procedures

Preamble: Section 6(j) of the OGDPR states that an application must include contingency plans, including emergency response procedures, to mitigate the effects of any reasonably foreseeable event that might compromise safety or environmental protection.

Section 3.3 of the HSE Assurance Plan provides only a summary of the Emergency Response Plans. The HSE Assurance Plan refers to multiple documents that are intended to support emergency preparedness, specifically the Strategic Corporate Emergency Response Plan, the Cameron Hills Site Specific Emergency Response Plan and the Spill Contingency Plan for the Cameron Hills Operation.

While OROGO has received a copy of an Emergency Response Plan (ERP) from SOG, it was not provided with the OA application.

More information is required in order to assess the purpose of, and the linkages between, the various documents that SOG has referenced and how they will be used to create and support the implementation of its ERPs. The documents also do not provide clarity as to which organization is to be contacted during incidents and incorrectly identifies regulatory reporting agencies and reporting requirements.

Request: Please provide updated copies of the current Strategic Corporate Emergency Response Plan, the Cameron Hills Site Specific Emergency Response Plan and the Spill Contingency Plan for the Cameron Hills Operation, as well as the proposed site-specific Drilling and Completion ERPs referred to in Section 3 of the HSE Assurance Plan.

A description of how these documents relate to each other should also be provided. Appropriate reporting requirements and regulatory authorities should be clearly identified for their jurisdictional mandate.

2.5 Incident Response Coordination

Preamble: Section 6(j) of the OGDPR states that contingency plans and ERPs must provide for coordination measures with any relevant municipal, provincial, territorial or federal emergency response plan.

Section 3.0 of the HSE Assurance Plan does not include any reference for emergency response coordination with the relevant authorities, outside of notifications.

Request: Please provide a description of how SOG will ensure interoperability among the various companies and government personnel that will be working at the Incident Command Post and the various Emergency Operations Centres. Include information on how SOG's ERPs coordinate with the ERPs of other authorities, such as the Government of the Northwest Territories.

Proposed Technical Program

2.6 Slick Line Suspensions

Preamble: Table 1.2 and Section 1.2.4 of the HSE Assurance Plan propose the use of slick line operations for the suspension for wells J-62, A-03, I-73, C-75, A-05, I16, B-08, C-19, D-49 H-58. No operational detail was provided regarding the proposed slick line suspensions.

It is unclear whether SOG is proposing that section 10(2) of the *Oil and Gas Drilling and Production Regulations* (OGDPR) would apply to these suspensions and therefore that no well approval is required.

OROGO requires additional information from SOG in order to determine whether section 10(2) of the OGDPR applies to these proposed suspensions.

Request: Please provide a detailed program identifying the proposed equipment and operating procedures, as well as the qualifications of the person(s) who will be conducting the slick line operations, and explain how this information supports an exemption from well approval under section 10(2) of the OGDPR. This includes, but is not limited to, providing current well bore status, current well bore schematics, pressure testing procedures and safe operations procedures.

2.7 Abandonment Program

Preamble: The Development, Production and Field Data Acquisition Plan (DPFDAP) incorrectly states that well abandonment will be done in a manner that satisfies the *Canada Oil and Gas Drilling and Production Regulations* (COGDPR), a federal regulation. The COGDPR have no application to the Cameron Hills Project. These activities should instead be conducted to satisfy the requirements of the OGDPR.

Request: Please submit an updated DPFDAF that references the correct legislation.

2.8 Anticipated Loss of Circulation

Preamble: The DPFDAF states that, based on data from offset wells, severe to total loss of circulation has been previously encountered in the section of the Wabamun formation from below 500 mKb to 700 mKB. As this section has been shown to be non-productive, SOG proposes to drill this section blind without returns to surface.

Request: Please provide a contingency plan in the event that the proposed Right Angle Set operations are not effective and the lost circulation zones are not sealed.

2.9 Liner Cementing

Preamble: The DPFDAF states that SOG is not proposing to cement the liner and instead is proposing the use of a liner hanger and packers to isolate the zone of interest.

Request: Please provide further information clarifying why the use of an uncemented liner is proposed, under which conditions this technique may be proposed and how it meets best industry practices for isolation of zones of interest in both horizontal and vertical well bores.

2.10 Hazard Identification and Well Control Equipment

Preamble: The DPFDAF states that the wells that would be a target for being drilled as development wells in the Cameron Hills Project are Sulphur Point dolomite oil (3 – 4% H₂S in the associated solution gas). It also states in several sections that producing zones will contain up to 3.4% H₂S.

The DPFDAF further states that the BOP stack will consist of one annular preventer, two ram type preventers (one with blind rams and one with pipe rams), and a choke/kill spool with a hydraulic remote control valve. It is not clear if the proposed BOP has shear

sealing capability.

Appendix 6 of the HSE Assurance Plan states that the risk associated with blow-out prevention and related systems is low.

Section 5(2)(c) of the OGDPR requires that the management system include the processes for identifying hazards and for evaluating and managing the associated risks.

Section 36(2) of OGDPR requires that after setting the surface casing, the operator ensures that at least two independent and tested well barriers are in place during all well operations.

Request: Please provide:

- a) An overview of the processes involved in hazard identification and evaluation and the management of associated risks for the Cameron Hills Project, as well as additional details regarding selection of well control equipment based on hazard identification, risk evaluation and management for blow-out prevention and related systems
- b) Demonstration that the proposed well control equipment meets the requirement of section 36(2) of the OGDPR.

2.11 Safety and Environmental Protection of Suspended Wells and Infrastructure

Preamble: Table 1.2 and Section 1.2.4 of the HSE Assurance Plan identify that SOG plans on suspending 18 wells between 2019 and 2023.

The DPFDA Plan provides limited information on how SOG plans to ensure monitoring, safety and environmental protection requirements for suspended wells are met.

Request: Please provide detailed information on how the well suspension operations will address monitoring, safety and environmental protection requirements for suspended wells and support infrastructure.

This information must include, but not be limited to:

- Maintaining, securing and monitoring suspended wells;
- Draining, purging and integrity protection of pipes, tanks and pressure vessels;
- Identification/signage requirements for suspended and/or out-of-service infrastructure;
- Maintenance of all season safe access and egress;
- Maintenance of all safety equipment; and
- Identification and management of all other hazards to ensure human safety and protection of the environment.

Management Systems

2.12 Management Systems

Preamble: Section 5 of the OGDPR requires a summary of and references to the management system that demonstrate how it will be applied to the proposed work or activity and how the duties set out in these regulations will be fulfilled.

Appendix 12 of the HSE Assurance Plan provides SOG's Regulatory Framework Summary of the NT Regulations. This Appendix contains several omissions and inaccuracies, including:

- a) Omitting OROGO as a regulator;
- b) Omitting the role of the Petroleum Resources Division in the Department of Industry, Tourism and Investment of the Government of Northwest Territories;
- c) References (including in concordance tables) to the *Canada Oil Gas and Operations Act* versus the *Oil and Gas Operations Act*; and
- d) References to the National Energy Board instead of the Office of the Regulator of Oil and Gas Operations.

Request: Please submit a revised Appendix 12 that reflects SOG's current regulatory framework and the requirements of the OGDPR.

Protection of the Environment

2.13 Environmental Protection Plan

Preamble: Section 5.0 of the HSE Assurance Plan includes a section on Operational Controls: Environmental Protection. A site specific Environmental Protection Plan (EPP) was not provided as part of the Operations Authorization (OA) application as required by section 6(d) of the OGDPR.

Request: OROGO requests that SOG provide a site specific EPP that meets the requirements of section 6(d) and section 9 of the OGDPR.

2.14 Environmental Studies

Preamble: Section 9(b) of the OGDPR requires a summary of the studies undertaken to identify and evaluate environmental hazards and to evaluate environmental risk relating to the proposed work or activity.

Section 5.1 of the HSE Assurance Plan states that the land use permit submission was made referencing a number of environmental studies. It further states that a copy of the summary

document prepared for the MVLWB Land Use Permit application is included as Appendix 8.

Appendix 8 does not contain this information.

Request: Please provide a summary of the studies undertaken to identify environmental hazards and to evaluate environmental risks relating to the proposed work or activity that address the regulatory requirements of the OGDPR.

2.15 Environmental Hazard Mitigation

Preamble: The OGDPR requires a description of the hazards that were identified and the results of the risk evaluation, as well as a summary of the measures to avoid, prevent, reduce and manage environmental risk.

The *Environmental Protection Plan Guidelines* (March 31, 2011) define a hazard as "a possible source of an adverse environmental effect".

Section 2.2 of the HSE Assurance Plan does not contain any information on hazards in the environmental context. Section 5.2.3 of this document also states that a summary of fundamental mitigations along with a summary of operations-specific mitigations are included in Appendix 8. Information on these mitigations cannot be found in Appendix 8.

Request: Please provide a description of the hazards (a possible source of an adverse environmental effect) that were identified and the results of the risk evaluation that address the regulatory requirements of the OGDPR.

Additionally, please provide a summary of the measures to avoid, prevent, reduce or manage environmental risks that address the regulatory requirements of the OGDPR.

Production and Other Future Planned Activity

2.16 Processing Facility Information

Preamble: In its November 9, 2018 Supplemental Information Submission, SOG provides a figure titled "Cameron Hills H03 Facility Process Flow" and indicates that the figure meets the requirements of sections 6(h) and 7 of the OGDPR.

Request: Please provide a detailed description of the processing facilities, control systems, flow system, flow calculation and flow allocation procedures, including process flow diagrams.

2.17 Future Activities for Suspended Wells


Preamble: Table 1.2 and Section 1.2.4 of the HSE Assurance Plan indicate that SOG plans on suspending 18 wells.

The DPFADP acknowledges the possibility of renewed field development as per the HSE Assurance Plan and indicates that SOG would like to include new and recompleted wells in their field data acquisition program.

Section 14 of the OGDPR sets out the requirements for Development Plan approval.

Request: Please provide either:

- a) Confirmation that development beyond the currently approved Development Plan is not planned; or
- b) An amended Development Plan for approval.

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