

Order Designating a Special Project in the Kiskatinaw Seismic Monitoring and Mitigation Area

Order #25-90-001

1. Definitions

1.1. The following definitions apply in this Order:

“**hydraulic fracturing operations**” means hydraulic fracturing operations involving horizontal, multi-stage fracturing in a well targeting the Montney Formation and located wholly within the KSMMA as defined in this Order;

“**induced seismicity pre-assessment**” means a document that provides an outline of hydraulic fracturing operations, target formations, well trajectories, seismic history, seismic monitoring plan and mitigation plan, in the form published by the Regulator, as replaced or amended from time to time;

“**innovative method**” means hydraulic fracturing operations as defined in this Order;

“**Kiskatinaw Seismic Monitoring and Mitigation Area**” or “**KSMMA**” means the area identified in Appendix I of this Order;

“**magnitude**” means the magnitude of a seismic event as recorded by a well permit holder or reported to the well permit holder by any source available including the Regulator, and in the event of any difference, means the magnitude reported to the well permit holder by the Regulator;

“**notice of operation**” means a notice of operation that includes hydraulic fracturing operations as defined in this Order;

“**Regulator**” means the British Columbia Energy Regulator;

“**well permit holder**” means a holder of a permit that includes permission to drill or operate a well wholly located within the KSMMA as defined in this Order.

2. Designation

2.1. As of February 13, 2025, this Order cancels and replaces Order 18-90-001 issued on May 28, 2018 as amended on April 16, 2021.

2.2. The Regulator makes this Order designating an innovative method of carrying out certain energy resource activities and related activities as a special project under section 75(1)(c) of the Energy Resource Activities Act in the area identified in Appendix I of this Order, subject to conditions stated in section 3 of this Order.

3. Conditions

3.1. Under section 75(2) of the Energy Resource Activities Act, the Regulator specifies the following.

3.2. Pre-Operation Requirements

3.2.1. Prior to conducting hydraulic fracturing operations on or after February 13, 2025, a well permit holder must:

- (a) prepare and submit to the Regulator an induced seismicity pre-assessment with each notice of operation;
- (b) notify individuals in accordance with the requirements set out in Appendix II of this Order; and
- (c) notify the Regulator via email not less than 24 hours and not more than 72 hours before hydraulic fracturing operations begin on a common drilling pad.

3.3. Active Hydraulic Fracturing Operations Requirements

- 3.3.1. During hydraulic fracturing operations, a well permit holder must, in accordance with applicable guidance published by the Regulator and as amended or replaced from time to time:
 - (a) ensure that ground motion monitoring is conducted within 5km of the well bore trajectories from the common drilling pad;
 - (b) ensure that continuous monitoring is conducted using a seismic array providing real-time seismicity readings; and
 - (c) maintain complete records of seismic events and ground motion monitoring data, for production on request by the Regulator.
- 3.4. Seismic Thresholds During Hydraulic Fracturing Operations
 - 3.4.1. If a seismic event with a magnitude of 1.50 or greater is identified within a 5 km radius of the well bore trajectory, the well permit holder must notify the Regulator via email as soon as practicable and in any event, within 24 hours.
 - 3.4.2. If a seismic event with a magnitude of 2.00 to 2.99 is identified within a 5 km radius of the well bore trajectory and hydraulic fracturing operations at the common drilling pad are identified as responsible for the seismic event, the well permit holder must initiate its mitigation plan as outlined in its induced seismicity pre-assessment and take action accordingly.
 - 3.4.3. If a seismic event with a magnitude of 3.00 or greater is identified within a 5 km radius of the well bore trajectory, the well permit holder must immediately suspend hydraulic fracturing operations on the common drilling pad and notify the Regulator immediately via phone.
 - 3.4.4. Hydraulic fracturing operations suspended under 3.4.3 may continue once the well permit holder has received written permission from the Regulator to resume hydraulic fracturing operations.
 - 3.4.5. If a well permit holder resumes hydraulic fracturing operations pursuant to 3.4.4 and a seismic event with a magnitude of 2.70 or greater is subsequently identified within a 5 km radius of the well bore trajectory, the well permit holder must immediately suspend hydraulic fracturing operations on the common drilling pad and notify the Regulator immediately via phone.
 - 3.4.6. Hydraulic fracturing operations suspended under 3.4.5 may continue once the well permit holder has received written permission from the Regulator to resume hydraulic fracturing operations.
 - 3.4.7. The well permit holder must ensure that any operations to reduce reservoir pressure during the applicable suspension period(s) in 3.4.3 or 3.4.5 are not undertaken except with written permission from the Regulator.
- 3.5. Post-Operation Requirements
 - 3.5.1. Within 30 days of concluding hydraulic fracturing operations, a well permit holder must submit to the Regulator a ground motion monitoring report in accordance with the Regulator's published Guidance for Ground Motion Monitoring and Submission, or its equivalent, as replaced or amended from time to time.

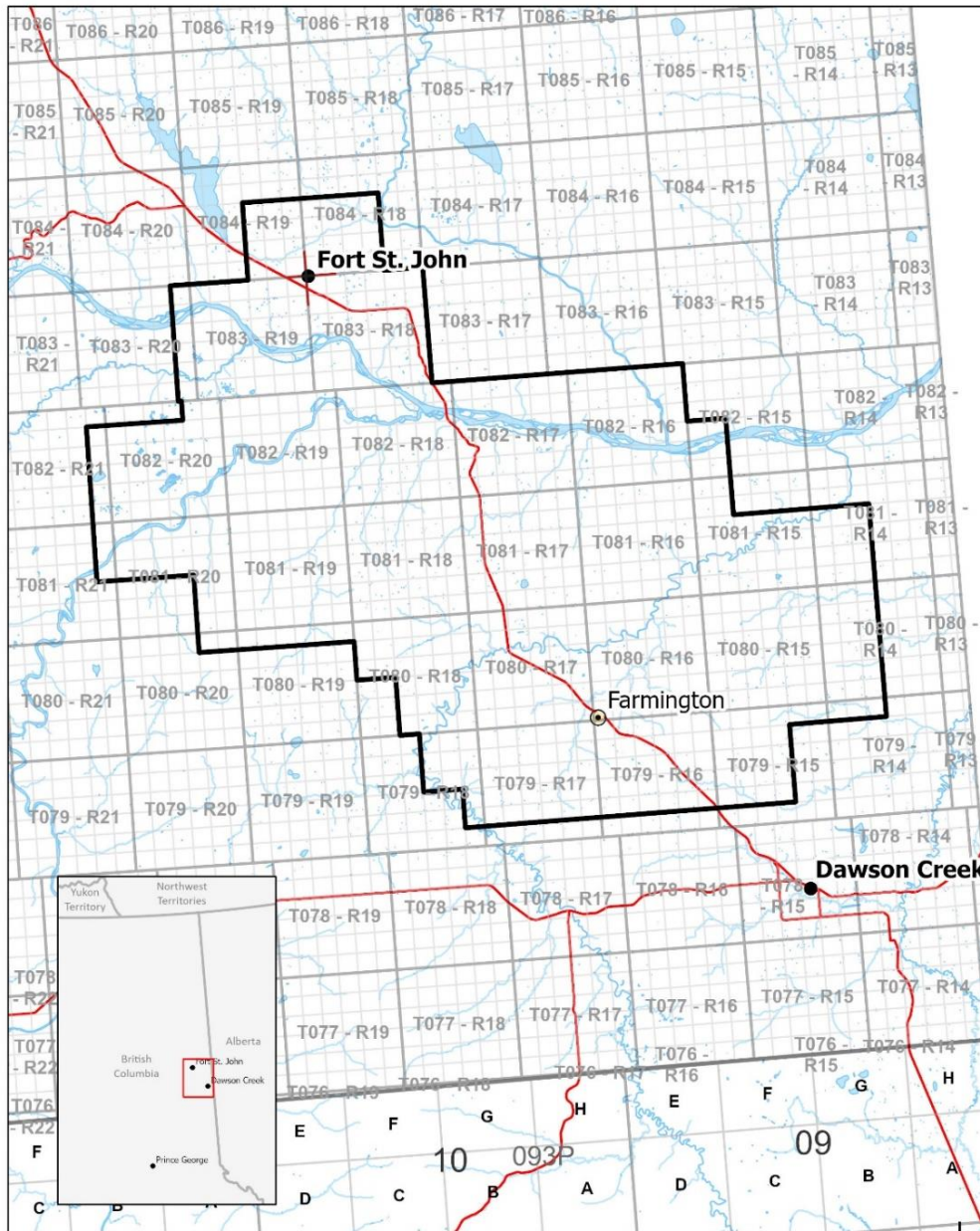


Richard Slocomb
Vice President, Environmental & Subsurface Resource Management
BC Energy Regulator

DATED AT the City of Victoria, in the Province of British Columbia, this 13th day of February, 2025

Appendix I

Kiskatinaw Seismic Monitoring and Mitigation Area (KSMMA) Map The KSMMA is located in the Farmington and Tower Lake areas of northeast British Columbia as outlined on the map below and identified in the schedule following.



Map Legend: Kiskatinaw Seismic Monitoring and Mitigation Area (KSMMA) Outline

KSMMA Schedule:

In this schedule "TWP " refers to "township ", "RGE " refers to "range ", "SEC " refers to "section " and "W6M" refers to "west of the sixth meridian.

TWP 079 RGE 14 W6M	SEC 31-33
TWP 079 RGE 15 W6M	SEC 07-10, 15-22, 27-36
TWP 079 RGE 16 W6M	SEC 07-36,
TWP 079 RGE 17 W6M	SEC 07-36,
TWP 079 RGE 18 W6M	SEC 12, 13, 22-27, 34-36
TWP 080 RGE 14 W6M	SEC 04-09, 16-21, 28-33
TWP 080 RGE 15 W6M	SEC 01-36
TWP 080 RGE 16 W6M	SEC 01-36
TWP 080 RGE 17 W6M	SEC 01-36
TWP 080 RGE 18 W6M	SEC 01-04, 09-16, 19-36
TWP 080 RGE 19 W6M	SEC 31-36
TWP 080 RGE 20 W6M	SEC 35, 36
TWP 081 RGE 14 W6M	SEC 04-09, 16-21
TWP 081 RGE 15 W6M	SEC 01-24, 29-32
TWP 081 RGE 16 W6M	SEC 01-36
TWP 081 RGE 17 W6M	SEC 01-36
TWP 081 RGE 18 W6M	SEC 01-36
TWP 081 RGE 19 W6M	SEC 01-36
TWP 081 RGE 20 W6M	SEC 01, 02, 11-14, 19-36
TWP 081 RGE 21 W6M	SEC 24, 25, 36
TWP 082 RGE 15 W6M	SEC 05-08, 17, 18
TWP 082 RGE 16 W6M	SEC 01-36
TWP 082 RGE 17 W6M	SEC 01-36
TWP 082 RGE 18 W6M	SEC 01-36
TWP 082 RGE 19 W6M	SEC 01-36
TWP 082 RGE 20 W6M	SEC 01-30, 35, 36
TWP 082 RGE 21 W6M	SEC 01, 12, 13, 24, 25
TWP 083 RGE 18 W6M	SEC 01-36
TWP 083 RGE 19 W6M	SEC 01-36
TWP 083 RGE 20 W6M	SEC 01, 12, 13, 24, 25, 36
TWP 084 RGE 19 W6M	SEC 03-10, 15-2
TWP 084 RGE 19 W6M	SEC 01-03, 10-15, 22-24

Appendix II

- (1) A well permit holder must provide a notice, in writing, containing the information set out in section (2), no less than two days prior to initiating hydraulic fracturing operations, to each individual residing within 3 km of a well bore trajectory.
- (2) The notice under section (1) must include:
 - (a) a description of the planned activities, including location and date(s);
 - (b) an explanation that the activities may induce seismic events;
 - (c) a description of the nature of induced seismic events and potential resulting impacts;
 - (d) contact information for the well permit holder;
 - (e) contact information for the Regulator;
 - (f) a copy of this Order or alternatively, direction to an online copy of this Order; and
 - (g) a summary of the submitted induced seismicity pre-assessment
- (3) The notice under section (1) must be provided as follows:
 - (a) by leaving a copy with the individual or an agent of the individual;
 - (b) by leaving a copy in a mailbox or mail slot for the address at which that individual resides; or
 - (c) by attaching a copy to a door or other conspicuous place at the address at which that individual resides.