

July 29, 2021 2940-7400-59240-16

Ben Cress Regulatory Specialist Keyera Energy Ltd. Suite 200, 144 – 4th Ave SW Calgary, AB T2P 3N4

Dear Ben Cress:

RE: ACID GAS DISPOSAL APPROVAL AMENDMENT #2
KEYERA ET AL CARIBOU a-A30-G/94-G-7; WA# 10585
CARIBOU FIELD – DEBOLT FORMATION

The Commission has reviewed the state of the suspended acid gas disposal well a-A30-G. The subject well was drilled in October of 1997 and approved for acid gas disposal March 1998. Disposal operations occurred from June 1998 until November 2015. A total volume of 185,506 e³m³ has been disposed into the Debolt. On February 5, 2021, the Commission provided a letter to Keyera Energy Ltd. (Keyera) requesting clarification of intended future use of this well. Keyera response on March 16, 2021indicated a potential future use within 2 years.

As part of the Commission's assessment and amendment process for all disposal wells, active and inactive, a number of new conditions have been applied to the well. The subject well will require increased monitoring and reporting, as outlined in the attached Order #98-16-001 Amendment #2. For the inspection requirement of Order condition 2b), please arrange via email to OGCPipelines.Facilities@bcogc.ca.

Prior to returning this well to active disposal, an application to amend this Order is required, with supporting well test and logging information.

If you have any questions, please contact Michelle Gaucher at michelle.gaucher@bcogc.ca or 250-419-4482, or Ron Stefik at mon.stefik@bcogc.ca or 250-419-4430.

Sincerely,

Ron Stefik, P.L.Eng.

Supervisor, Reservoir Engineering

Oil and Gas Commission



ORDER 98-16-001 AMENDMENT #2

1 Under Section 75(1)(d) of the *Oil and Gas Activities Act*, the Commission designates the operation and use of a storage reservoir for the disposal of acid gas in the Caribou field – Debolt formation as a special project in the following area:

NTS 94-G-7: Block F - units 11 and 21

Block G - units 20 and 30

2 Under section 75(2) of the *Oil and Gas Activities Act*, the special project designation in this Order is subject to the following conditions. The Permit Holder shall:

Operating Limits

a) Maintain the well in a suspended state.

Monitoring

- b) Schedule an OGC technical inspection to be completed on or before October 1st, 2021.
- c) Install and maintain H₂S detection and alarming capable of immediate notification to Keyera Emergency Response staff.
- d) Calibrate H₂S detection as per manufacturers recommended practice (or quarterly, whichever is more frequent).
- e) Complete quarter-annual site inspection visits, recording pressure measurements of the tubing and the casing annulus and eSubmit a Suspended Well Inspection report via eSubmission, as described in eSubmission User Guide.
- f) Once annually, conduct a positive pressure test to 7MPa for 10 minutes on the annulus and tubing and report via eSubmission through the Suspended well report.

Wellbore Integrity

- g) Ensure a Subsurface Safety Valve (SSSV) is installed to operate "fail-safe".
- h) Implement appropriate corrosion and freeze protection measures in the casing-tubing annulus.
- i) Maintain a barricade around the wellhead that is capable of withstanding vehicle collision.
- j) Submit a Progress Report for a Suspended Acid Gas Well to the Commission annually. The Progress Report must be filed within 60 days after the end of the year and must contain the information specified in the Acid Gas Progress Report Requirements document found on the OGC website here: http://www.bcogc.ca/industry-zone/documentation/Subsurface-Disposal.
- k) Prior to abandonment of the disposal zone or well, conduct a reservoir pressure test on the formation in the subject well, with a shut-in period of sufficient length to provide data for calculation of the reservoir pressure and submit a report of the test within 60 days of the end of the test.



ORDER 98-16-001 AMENDMENT #2

PAGE 2

I) Do not remove the packer in the subject well unless approved to do so by the Commission.

Ron Stefik, P.L.Eng.

Supervisor, Reservoir Engineering

Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 29th day of July, 2021.