BC Oil & Gas COMMISSION

November 6, 2019 8157-2800-32640-02

Mark Piercey
Reservoir Operations Specialist, TRD and Caverns
Tervita Corporation
1600, 140 – 10th Avenue SE
Calgary, AB T2G 0R1

Dear Mr. Piercey:

RE: PRODUCED WATER AND NON-HAZARDOUS WASTE DISPOSAL
SPECIAL PROJECT APPROVAL
HYDRAULIC FRACTURE STIMULATION
TERVITA TOWER A08-31-81-17 W6M; WA# 30428
TOWER LAKE FIELD – CADOMIN FORMATION

Approval for disposal of produced water, Order 14-02-012 as a Special Project under section 75 of the *Oil and Gas Activities Act* (OGAA), was issued for the subject well, Cadomin formation, on November 21, 2014, with a subsequent amendment on October 16, 2017.

An application was received via email, dated October 31, 2019, to fracture stimulate the well to increase injectivity.

Condition 2 l) of Order 14-02-012 Amendment #1 states,

> l) Not conduct a hydraulic fracture stimulation on any formation in the subject well without prior Commission approval.

Simulation results of two hydraulic fracture program options (full completion interval or selective porous interval), indicate that resulting fractures should remain contained within the Cadomin formation.

The Commission hereby approves a maximum fracture stimulation size of 50T, executed approximately as per the program submitted as an attachment to the email dated October 31, 2019 from Tervita Corporation. This approval is conditional upon the requirement that a hydraulic isolation temperature log be conducted following fracture stimulation and prior to the resumption of disposal operation. A limited volume may be injected as required to provide diagnostic results for the temperature log. Log results and interpretation must be submitted to the Commission once available.

Note that an outcome of loss of formation isolation can result in cancelation of the disposal approval, under OGAA section 75(2)(b)(iv), and where a risk to the environment, safety or resource recovery may result, the Commission may issue an order necessitating remedial actions, which can include formation fluid flowback to reduce pressure.

Should you have any questions, please contact the undersigned at (250) 419-4430.

Sincerely,

Ron Stefik, Eng.L.
Supervisor, Reservoir Engineering
Oil and Gas Commission

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