

December 11, 2013

5600-4540-32640-02

Tannis Gibson,
VP Geology and Geophysics
Saguaro Resources Ltd.
3000, 500 - 4th Ave S.W.
Calgary Alberta T2P 2V6

Dear Ms. Gibson:

**RE: PROPOSED DISPOSAL WELL
SAGUARO LAPRISE b-014-H/094-G-08; WA #18199
LAPRISE – COPLIN “B” POOL**

Commission staff has reviewed your request November 26, 2013, seeking comment on a proposed disposal well in depleted Coplin pools in the Laprise area.

Approval to dispose of produced water from Montney hydraulic fracturing operations may be granted for depleted hydrocarbon reservoirs. Depleted oil reservoirs, such as the Coplin, are favorable disposal candidates over saline aquifers given there is already considerable knowledge on the size and extent of the reservoir and demonstrated ability to contain fluid. Water injection may also result in favorable pressure support to enhance remaining hydrocarbon recovery.

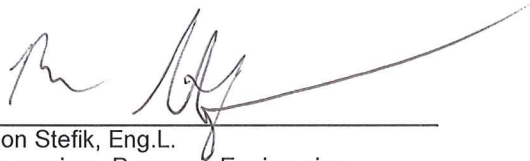
We concur that the Coplin formation at the proposed location, well Saguaro Laprise b-014-H/094-G-08 (WA #18199), may be prospective for deep disposal, within the depleted Laprise – Coplin “B” oil pool. A possible permeability barrier is noted between the north and south of the Coplin “B” pool from preliminary review of pressure and production history. Also, there is considerable heterogeneity in reservoir pressures in the southern portion of the pool in and around the b-14-H disposal candidate, suggesting compartmentalization, similar to Sanguaro’ observations – *“Based on the pressure data taken from the wells in pool B, at initial time of completion, it would suggest that the Coplin is broken in to several individual pools by the complex structure in the area.”* Such compartmentalization may limit disposal capacity and rates at b-14-H. It is noted that there is poor confidence in the lower than expected initial pressure at the proposed disposal site, well b-14-H, due to a short flow period and upward slope in late time Horner plot. A current reservoir pressure test in the proposed disposal well is highly recommended.

Disposal approval as an OGAA Section 75 Special Project may be granted once the well is tested to ensure suitability of disposal operation. A key value will be the reservoir pressure encountered, to confirm the current local reservoir conditions and determine future storage capacity. Other key information is a recent cement bond log to ensure containment above and below the injection perfs and injectivity testing to prove the ability to accept fluid. It is noted that the subject well was fractured with 10 tonnes of gelled oil in 2004. Current “post frac” attempts to evaluate ISIP for determination of maximum wellhead injection pressure is not recommended and considered inaccurate. Please include available data from the 2004 detailed frac report in a disposal well application to determine fracture gradient.

A disposal well permit holder is required have registered ownership, or consent from the owner, of subsurface tenure of the disposal formation. In the Dominion Land Survey this is an area of ¼ Section, in the National Topographic System of survey this area is one unit of land. Notification of disposal application will be posted on the Commission’s website for 21 days to allow objections from offset title holders. Consent from offsetting tenure holders, particularly those with interests in nearby producing Coplin oil production, is highly recommended.

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

Sincerely,



Ron Stefik, Eng.L.
Supervisor, Reservoir Engineering