

November 27, 2008 5300-7400-32640-02

Stefan Merkle, P. Eng. Sr. Reservoir Engineer Nexen Inc. 801–7th Avenue S.W. Calgary, Alberta T2P 3P7

Dear Mr. Merkle:

RE: SALT WATER DISPOSAL APPROVAL NEXEN INC. KOMIE D-A094-A/094-O-08 (WA# 24240); DEBOLT FORMATION

Commission staff have reviewed the information submitted November 14, 2008, in support of your application, dated August 29, 2008, requesting permission to dispose of produced water into the Debolt formation of the subject well.

The subject well was drilled in September, 2008 in support of Experimental Scheme #07-15-008 (Nexen Shale Project #4) for shale gas production. The Debolt formation was completed and stimulated with an acid squeeze. The zone was found to be water bearing with no commercial hydrocarbon potential. An injection fall off test, (approved September 16, 2008), flow and build up and fluid compatibility test were conducted to determine the potential for disposal and/or source water in the Debolt. The results indicated there is limited potential for source water.

We concur that the subject well appears to be a good candidate for salt water disposal in the Debolt formation. Notice of your application was posted on the OGC website and no objections were received.

Attached is Approval 08-02-010 for the application, granted under Part 8, Division 3, Section 94 of the *Drilling and Production Regulation*.

Section 7(1) of the *Oil and Gas Waste Regulation* under the Environmental Management Act states, in part: "... the operators of equipment or facilities are authorized to discharge **produced water or recovered fluids from a well completion or workover** to an underground formation in accordance with section 94 of the *Drilling and Production Regulation* ..." Therefore no additional permits are required for subsurface disposal of the proposed fluids.

Should you have any questions, please contact the undersigned or Kelly Okuszko, at (250) 952-0325.

Sincerely,

Richard Slocomb, P.Eng.

Supervisor, Reservoir Engineering

Resource Conservation

Attachment

APPROVAL 08-02-010

THE PROVINCE OF BRITISH COLUMBIA PETROLEUM AND NATURAL GAS ACT DRILLING AND PRODUCTION REGULATION OIL AND GAS COMMISSION

IN THE MATTER of a scheme of Nexen Inc. (Nexen) for Salt Water and Recovered Fluids Disposal in the Komie field Debolt formation in the well NEXEN INC. KOMIE D-A094-A/094-O-08 (WA# 24240).

NOW, THEREFORE, pursuant to Part 8, Division 3, Section 94 of the *Drilling and Production Regulation*, the scheme is hereby approved, as such scheme is described in

an application from Nexen to the Commission received August 29, 2008 and related submissions.

- 1. The disposal interval must be in the Debolt formation.
- 2. A record of volume of salt water disposed of through this well must be included on a Monthly Injection/Disposal Statement, in the prescribed form (BC-S18), which must be submitted to the Oil and Gas Commission not later than the 25th day of the month following the reported month.
- 3. The disposal/injection pressure at the sandface must not exceed the formation fracture pressure.
- 4. The Commission must be notified in writing of the date of commencement of disposal.
- 5. This approval may be modified or rescinded if deemed appropriate through a change in circumstances.

Richard Slocomb

Supervisor, Reservoir Engineering

Resource Conservation

Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 27th day of November 2008.