



**Science, Technology, Energy and Mines**

Petroleum Branch

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8 September 2011

Andrew Taylor  
Tundra Oil & Gas Partnership  
1000- 715 5th Ave SW  
Calgary, Alberta T2P 2X6

Dear Mr. Taylor:

**RE: Sinclair Unit No. 8 - Unit and Waterflood EOR Application**

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The Branch has completed a preliminary review of your application to create Sinclair Unit No. 8 and implement within a waterflood EOR operation. Notice of the application has been published on our website.

The application as submitted is not complete. The following items are outstanding:

- Names and addresses of owners in the project area and within 0.5 km of the project area.
- A copy of the notice, and proof of service of the notice, to the surface owners in the project area and to the mineral owners within 0.5 km advising of the proposed project of enhanced recovery.
- Land Titles of Mineral Ownership
- A copy of the proposed Unit Agreement for review.

Notice of the application has not yet been processed and will wait on the receipt on the above noted items.

The Branch also requires additional information on the following subjects:

- Tundra based their primary and secondary waterflood performance predictions on recent engineering studies conducted by Tundra and an external consultant. Please provide the Branch a copy of it.
- Aside from temperature, what other conditions and parameters is the mixed produced water from Three Forks and Bakken has been subjected to? Was it mixed and tested also with the expected concentration of inhibitors and any chemicals to be used?
- Tundra has an extensive experience in water injection but how did Tundra forecast and mathematically estimate the 95-220 bbl WPD horizontal water injection well rates? What

are the references?

- Tundra has a viable waterflood surveillance and management system. What are the precautionary details employed for an out-of-zone migration?
- Tundra proposes to use chemical tracers to track WF responses, what is the chemical composition of this, the volumes to be used and for how long?
- Tundra proposes to drill inter-unit producers/injectors. Production allocation agreements will be required to be signed by all parties from each unit consenting to the development of these wells prior to approval of these wells being drilled. Another production allocation agreement will be required between Units 1 and 8.

The Unit Agreement is not yet received. As per previous Unit Agreements of Units 6 & 7, please be reminded that the paragraph which states that, "*The Working Interest Owners are also granted the right to drill horizontal injector wells within 50 meters of the boundary....*", must not be included in drafting the UA for Unit 8.

The Branch finds the tracts and the formula suggested for the proposed Unit to be acceptable.

Please submit the required information in both paper and electronic (pdfs are fine) formats to the undersigned. If you have any questions in respect of this matter please contact me directly at (204) 945-6570.

Yours truly,



Leonardo Leonen  
Technical Engineering Officer

Cc: Virden Office  
Brad Thiessen, Tundra Oil & Gas, Winnipeg