



Science, Technology, Energy and Mines

Petroleum Branch
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27 February 2013

Tristan Willson
Fort Calgary Resources Ltd.
4301 400 3rd Avenue SW
Calgary, AB T2P 4H2

BY E-MAIL

Dear Tristan:

RE: East Manson Unit No. 1 - Unit and Pilot Waterflood EOR Application (2nd Review)

The Branch has completed a second review of your application to create East Manson Unit No. 1 and implement within a pilot waterflood EOR operation. Notice of the application has been published on our website and newspapers. The deadline for public comment and intervention will be on March 1, 2013.

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

- 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.

The Branch also requires additional information on the following subjects:

- FC used Kola Unit 1 (KU1) as analogy for EMU1. KU1 has been in waterflood operation since 1993 and yet the actual recovery factor is relatively low at 7.3% as of December 2011 and the trend suggests it is still declining. What makes FC projected that the incremental RF of EMU 1 will be 14% (*with prim. + sec. RF of 28%*) and not around the vicinity of KU1's 7.3%? Is there an error? Is it not too liberal?
- These protruding wells are still in the works or pending according to our database. All of them were not listed in the application as part of the development plan. What are FC's plans on the below listed wells?
 1. 100/15-28-13-28
 2. 100/13-28-13-28
 3. 103/15-30-13-28
 4. 102/15-30-13-28
 5. 100/03-32-13-28

6. 102/1-28-13-28

- Will the protruding wells not affect the isolation, control and behaviour of the unit acting and functioning as a 'pilot'? How will FC control it, i.e., there might be, in one of many possibilities, that a protruding horizontal well, in trying to maintain its pressure distribution equilibrium along its drainage area, some perforations not in the unit are actually absorbing oil instead of producing (or the other way around)? What if there is unequal plugging, proppant problems and scaling in some perfs in a 'protruding' hz well?
- EMU1 has three source water for injection and FC mentioned clay swelling is not an issue, what about precipitates and scaling tendencies? FC mentioned that it will conduct a compatibility study, is this pre or post approval of waterflood? It's in the best interest of FC to do it in pre-approval to quantify and assess the compatability (or incompatibility) to avoid costly intervention, production disruption and workovers.
- The production of EMU1 is still peaking. Most EOR projects start their waterflooding after significant drop in production, what makes FC starting WF at this "peaking" stage will be viable and profitable in the long run?
- Why FC chose this particular spot as pilot and why not other areas?
- Please explain why FC opted not to use a third party OOIP evaluator.

The proposed unit agreement and the tract factors are still under review.

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