

March 21, 2005

EUB Staff Submission Group  
640 – 5<sup>th</sup> Avenue SW  
Calgary, Alberta T2P 3G4

Attention: J.P. Mousseau

Dear Mr. Mousseau:

**RE: PROCEEDING NO. 1347905  
BITUMEN CONSERVATION REQUIREMENTS  
ATHABASCA, WABISKAW-MCMURRAY  
PHASE 3 FINAL HEARING**

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Please find enclosed information requests made by the Board staff to the EUB Staff Submission Group with respect to its submission filed in the Phase 3 proceedings.

Yours truly,

*Original signed by*

Gary D. Perkins  
Board Counsel

Cc: List of Participating Parties  
List of Counsel

**Board Staff Information Requests for the EUB Staff Submission Group (SSG)**

1. On page 4 of its submission, regarding the process the SSG used to determine where depletion may have occurred prior to gas production from a pool, the SSG states that the first step of the process was to determine the expected virgin pressure for an area. Explain how this was done.

Supplemental: In the second step, the SSG states that wells with a depleted pressure were identified where the pressure was about 100 kPa less than the expected virgin pressure. What is the basis for this criterion?

2. With respect to section 4.6 of the submission, Hangingstone McMurray DDD, McMurray ZZ and McMurray RRR Pools, clarify why the McMurray ZZ Pool was included in the title of this section since the SSG did not comment on this pool in the text of the section.

Supplemental: Should the McMurray ZZ Pool be allowed to continue to produce?

3. With respect to section 4.7 of the submission, Hangingstone McMurray Y Pool, the EUB does not have any record of perforations or deliverability data for the McMurray Channel zone (454.0-455.0 m) in the 7-15 well. What is the basis on which the SSG has assigned proven gas pay to this interval?
4. With respect to section 4.9 of the submission, Leismer McMurray I4I and McMurray J4J Pools, the SSG indicates the base of gas for the B1 Channel in the 9-18-79-7W4 well is at 315.2 m. There appears to be some cross-over on the density-neutron logs at about 319 m. Does the SSG agree there may be gas at that depth?
5. With respect to section 4.10 of the submission, Thornbury McMurray M5M, McMurray W4W and McMurray X4X Pools, the SSG states it reinterpreted the fluid contacts in these pools. Elaborate on the basis for these reinterpretations.
6. With respect to section 5.1 of the submission, Kirby Upper Mannville I Pool, the SSG is recommending that wells 12-36-74-7W4M, 11-5-75-6W4M and 7-1-75-7W4M be considered part of the Kirby Upper Mannville I Pool and not be allowed to produce. In Decision 2004-045, these wells along with wells 11-29, 12-32, 11-33, 10-34-74-7W4M and 9-4-75-7W4M were allowed to produce. Why does the SSG not put these eight wells in a common pool?
7. With respect to section 5.5 of the submission, Hangingstone Wabiskaw-McMurray D, McMurray K3K, and McMurray B2B Pools, explain the rationale for applying the gas/bitumen contact tolerance of  $\pm 5$ m from the RGS to gas pay porosity bases.

8. With respect to wells 11-35-82-8W4M and 7-2-83-8W4M in the Hangingstone Wabiskaw A Pool, which are wells #11 and #12 in Appendix 1:
- a) What is the basis for the SSG revising its original recommendation for the Wabiskaw C sand for these two wells from produce to shut-in?
  - b) Why has the SSG recommended shut-in of only these two wells for what is understood to be a 5-well pool?
9. With respect to section 6.2 of the Submission, Core-based Study:
- a) What criteria were used to differentiate the Wabiskaw C shale from the Wabiskaw D shale in core?
  - b) What is the vertical resolution of the gamma ray log, the resistivity logs, the neutron log and the density log?
  - c) Provide a copy of the core analysis, the core gamma ray log and the equivalent open hole gamma ray log, neutron/density log and resistivity log of the cored intervals used to determine the capability of well logs to indicate the presence and thickness of the Wabiskaw C and/or D shale.  
  
Supplemental: Indicate on the open hole logs the interpreted top and base of the Wabiskaw C and/or D shale interval.
  - d) Do the core gamma ray log thicknesses of the Wabiskaw C and/or D shale match the open hole gamma ray log thicknesses?  
  
Supplemental: If no, provide your interpretation of why this occurs.
  - e) When a core gamma log was not run, how was the core correlated to the open hole logs (i.e., what criteria or method was used)?
  - f) From the cross-plot of core vs. log thickness values included on the CD, it appears there are many instances where the RGS interpreted log values were less than the core measured values. Explain why this would occur.  
  
Supplemental: How was the slope of the line on the cross-plot determined?
  - g) Are there any processes that could occur during coring operations which would cause a poor recovery of the Wabiskaw C and/or D shale and result in a discrepancy between core thickness and log thickness?
  - h) Why is there a good core to log match in some wells and not in others?

10. In section 7 of the submission, Interim Directive 99-1 Applications, the SSG states that it believes it would be helpful for the Board to clarify whether an application and approval are still required under ID 99-1 prior to production from intervals that may be given a production status of produce as a result of this proceeding but without an ID 99-1 application. What is the SSG's view on this question (i.e. should an ID 99-1 application be required) and what is the basis for the SSG's view.
  
11. In section 8 of the submission, Pressure Monitoring at Producing Wells, the SSG states that it believes it would be prudent to perform pressure testing in those wells where one interval has been allowed to produce and another interval was required to be shut in. Elaborate on the kind of pressure testing the SSG believes should be done.

Supplemental: Comment on whether and how this testing would be different from the zonal segregation tests that are required under section 11.150(1) and (2) of the Oil and Gas Conservation Regulations.