May 20, 2005

PARAMOUNT
ENERGY TRUST

Field LLP
1900 First Canadian Centre
350 7th Avenue S.W.
Calgary, Alberta, Canada T2P 3N9

Attn: W.T. Corbett, Q.C.

Dear Sir:

Re: GENERAL BULLETIN 2003-28 (GB 2003-28)
BITUMEN CONSERVATION REQUIREMENTS
ATHABASCA, WABISKAW – MCMURRAY
PHASE 3 FINAL PROCEEDING NO. 1347905
PEOC REPLY TO RESPONSE SUBMISSION FILED BY PETRO-CANADA

With respect to Petro-Canada's response submission filed on May 9, 2005, Paramount Energy Operating Corp. (PEOC) notes that Petro-Canada has identified issues with:

1. The quality of the 3D history match and,
2. 2D numerical models that do not permit communication,
3. PEOC Reservoir evidence of A1, channel gas and bitumen communication,
4. Isolated A1 sequence in the Corner C Pool and,
5. Actual production data from Hangingstone Project contradicts PEOC conclusions.

Petro-Canada's assertions and conclusions regarding PEOC's submission are underlined, with PEOC's reply below.

- **Quality of the 3D History Match**

Reservoir calibration efforts were performed to demonstrate the viability of the geostatistical model. As stated in PEOC's February 14, 2005 submissions for the Corner C and G, Hangingstone X and KKK Pools an "adequate representation" of pressure response was obtained for each pool considering "suitability and accuracy of measured data".

Exact or perfectly accurate calibration of a single geostatistical reality was considered unnecessary and inappropriate considing past RGS[1] conclusions where "The quantity and quality of historical pressure data is limited" and concluded that any pressure calibration effort would consider or include suspect data, eventually discrediting the calibration. Petro-Canada's May 9, 2005 discussion on the accuracy of Well 02/3-34-80-10W4 piezometer data reinforces this point.

[1] Alberta Energy and Utilities Board, "Athabaska Wabiskaw-McMurray Regional Geological Study", December 31,2003, Page 161

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The history match changes that were needed to provide a reasonable match were minor and global, and common for this type of flow simulation study. These minor changes validate the geological model that was built, increasing the confidence in the geostatistical description. Volume modifications were typically uniform adjustments to the connate water saturation of the gas intervals or a gross pore volume exaggeration of the perimeter cells of the gas zone. Both pore volume modifications inflate gas in place volumes to the appropriate level necessary to support actual gas produced. These modifications do not emphasize, focus or exaggerate the relative performance of individual wells. Transmissibility modifications were also installed in a global or areal sense usually to improve calculated pressure response.

- **2D numerical models that do not permit communication**

With respect to the Hangingstone X Pool, the extended gas pool boundary compensates for the arbitrary RGS Pool Boundary and the imposed local and global transmissibility modifiers create discrete pressure responses for the A1 gas zone and McMurray channel gas which yielded marginally better representation of available pressure measurements. As indicated in Figures 33 and 34 the A1 gas zone depletes independently from the underlying strata with the channel gas production yielding pressure gradients throughout the McMurray channel strata.

Although the discrete A1 Gas Zone yields a marginally better history match, PEOC elected to discard and forego the A1 transmissibility barrier in the 2D SAGD flow simulations. Foregoing the A1 transmissibility barrier ensured that the basic tenets of the geostatistical model (that no vertical barrier would be created) as described in the PEOC Executive Summary were not violated. To illustrate vertical continuity, the following figures depict the initial pressure distribution of the 11-19 2D SAGD flow simulation and pressure information after the depletion of the gas interval immediately prior to SAGD operations.

Hangingstone X , 11-19 , 600 kPa , original reservoir
Pressure at initial and start SAGD

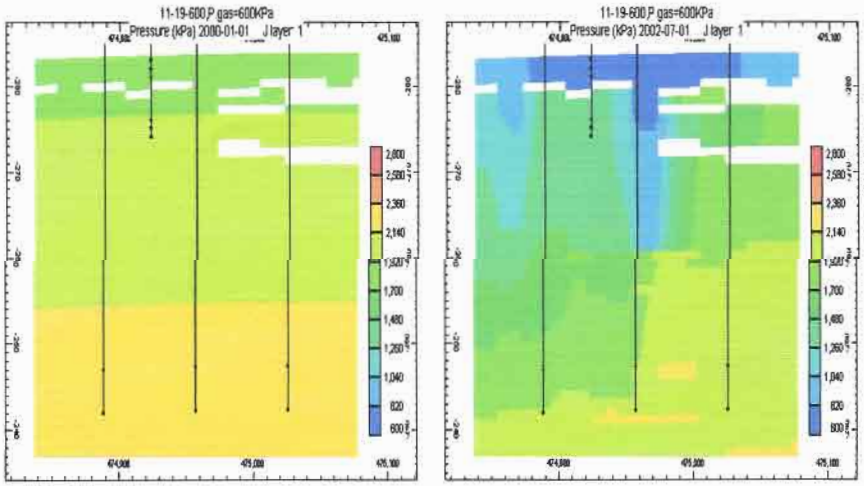

Figure 1: Well 11-19 Pressure Distribution

Initially, pressure monotonically increases from the gas zone (i.e. 283~275 metres in 11-19)

through to the base of the bitumen interval at 237 metres. After six months of gas production; pressure of the gas zone is approximately 600 kPa and pressure throughout the underlying bitumen column has been correspondingly depleted. Similar pressure distributions extracted from the Corner G and C Pool 2D models and the Top Gas sensitivity models follow.

Corner G , 04-15, 600 kPa, Original Reservoir
Pressure at initial and start SAGD

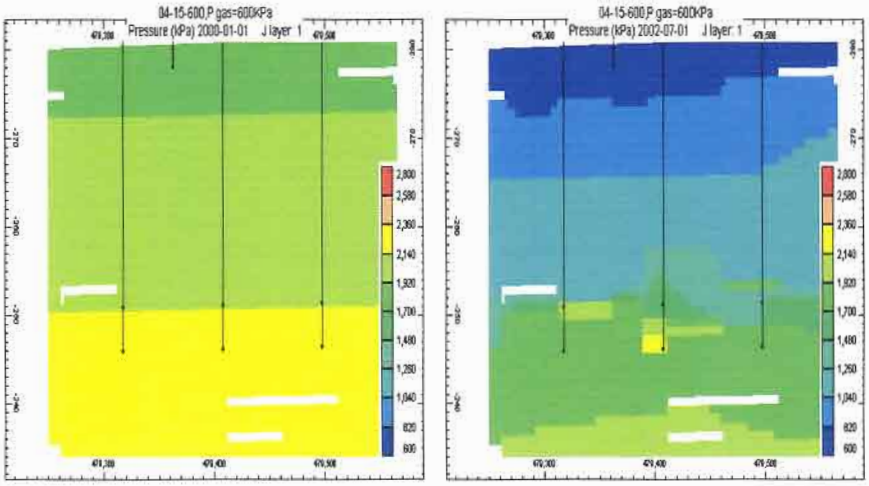

Figure 2: Well 04-15 Pressure Distribution

Corner C , 03-34, 600 kPa , original reservoir
Pressure at initial and start SAGD

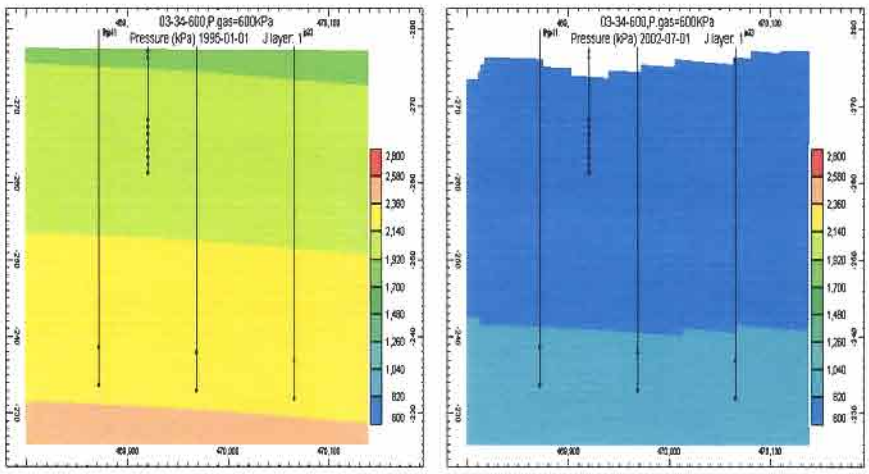

Figure 3: Well 03-34 Pressure Distribution

Top Sand Sensitivity Model , Run 3.2B-600
Pressure at initial and start SAGD

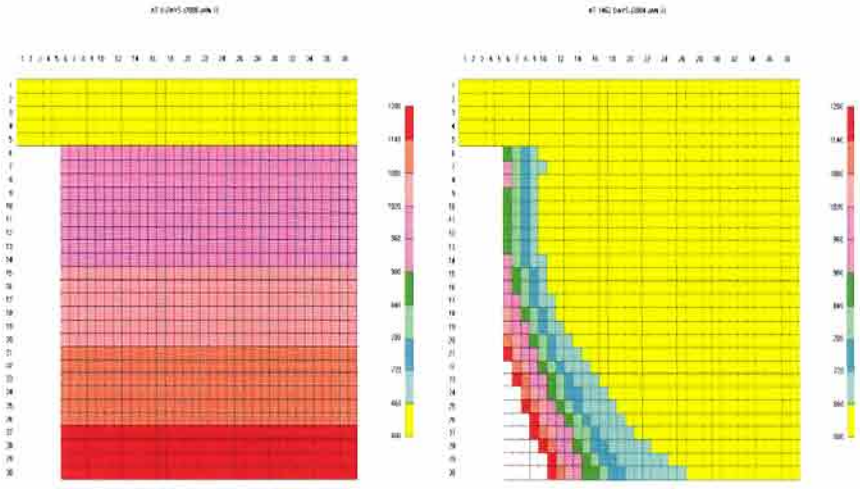

Figure 4: Top Sand Case3.2B-600 Pressure Distribution

- **<u>Isolated A1 sequence in the Corner C Pool</u>**

With respect to isolation of the A1 sequence, Paramount noted the 02/03-34-080-10W4M piezometer response and the marine mudstone identified by core analysis. However, consistent

with the theme of not creating vertical barriers, no vertical transmissibility barrier was included.

- **Hangingstone Project Data Contradicts PEOC Conclusions**

In its response, Petro-Canada's notes that PEOC's statement "SAGD performance can be greatly impacted by the geology and associated reservoir quality that is penetrated by a project's horizontal wells" (pages 73-74, Corner McMurray C Pool report). Petro-Canada goes on to say that "The complex geology of the McMurray formation guarantees that the geology will vary along the length of a horizontal well pair, and will vary from one well pair to another over a SAGD project area. This is demonstrated by the extreme variation in geology over a very short distance between the Hangingstone "F" and "H" SAGD well pairs."

The following table and map (compiled from public document ER0507 JACOS Hangingstone) shows the Reservoir Performance Statistics of the JACOS Hangingstone Project as of December 31st, 2004 and the JACOS Net Pay distribution for the Demo Project.

Figure 5: JACOS Net Pay distribution for the Demo Project.

Reservoir Performance Statistics JACOS Hangingstone (Dec 31, 2004)							
Well Pair	Months on Production (months)	Cum. Steam Injected (m3)	Cum. Bitumen Produced (m3)	Cum. Water Produced (m3)	Cum. SOR (m3/m3)	Cum. WOR (m3/m3)	Bitumen Rate (m3/month)
Phase 1							
A	70	609,533	246,870	714,970	2.47	2.90	3,527
B	70	824,655	187,530	666,956	4.40	3.56	2,679
Phase 2							
C	53	327,666	88,775	283,582	3.69	3.19	1,675
D	61	298,712	73,538	262,095	4.06	3.56	1,206
E	61	452,831	148,127	411,588	3.06	2.78	2,428
Phase 3							
F	13	46,219	3,434	21,822	13.46	6.35	264
H	38	424,532	150,147	383,465	2.83	2.55	3,951
I	38	474,430	168,524	441,120	2.82	2.62	4,435
J	19	183,707	65,744	167,622	2.79	2.55	3,460
K	19	167,862	59,482	157,378	2.82	2.65	3,131
L	7	40,955	14,706	37,437	2.78	2.55	2,101
M	8	55,186	32,895	48,354	1.68	1.47	4,112
N	7	22,268	8,139	20,515	2.74	2.52	1,163
Field Total	464	3,928,556	1,247,911	3,616,904	3.15	2.90	2,689

Table 1: JACOS Hangingstone Reservoir Performance

Of the thirteen well pairs currently in operation, all but one well pair (F) has a bitumen rate that is greater than 265m3/month. According to JACOS November 19, 2003 presentation entitled "Abandonment of F well pair at Hangingstone" the local geology of the injector well was justification for poor performance. JACOS sited "low permeability facies", "little to no reservoir above the injector" and "barriers would also prevent mobilized bitumen from draining to the producer" as reasons for the suspect performance. JACOS also stated "clearly F pair is uneconomic" and supports their contention with break even SOR criterion of 3.7 and 5.0 while the F pair cumulative SOR was 8.6.

Well pairs C, D and F had the lowest bitumen rate (less than 1675m3/month), and each of these wells encountered net pay along its wellbore that was less than 15 meters (continuous) in thickness (see map above). The cumulative SOR of these well pairs varied from 3.69 to a high of 13.46. All of the remaining well pairs within the JACOS project according to the ER0507 did not encounter net pay of less than 15 meters (continuous). The JACOS project may be "robust" as described by Petro-Canada, however the field performance of the well pairs C, D and F compared to the well pairs M, A, H and I clearly show that "SAGD performance can be greatly impacted by the geology and associated reservoir quality that is penetrated by a project's horizontal wells".

Those horizontal wells within the JACOS Hangingstone Project that have encountered net pay of less than 15 meters (continuous) clearly do not perform as well as and have higher cumulative SOR's than those well pairs that have penetrated net pays of 15 meters (continuous) and greater.

The Hangingstone Pilot results, rather than contradicting PEOC's study results, are very much consistent with PEOC's conclusions, namely that good or bad SAGD performance is dominantly controlled by the inherent geology encountered by the well pair, not by overlying gas pressures.

PEOC's integrated approach to numerical flow simulation incorporates the inherent geological character of the McMurray Formation in the Corner McMurray C, Corner McMurray G, Hangingstone McMurray X, and Hangingstone McMurray KKK Pools and preserves the heterogeneity of the strata. PEOC contends that its numerical models are well founded and sufficiently accurate to provide a realistic forecast to assess the impact that depleted overlying gas zones has on ultimate bitumen recovery.

Should you have any questions, please contact the undersigned at 269-4419.

Yours truly,

PARAMOUNT ENERGY OPERATING CORP.

Original signed by

Brett Norris
Vice President, New Ventures & Geoscience

cc: Interested Parties