



December 22, 2006

7250-2400/2600/2700-59070-20

James R. Jackson. P.Eng. CFA  
Exploitation Engineer  
Temple Energy Inc.  
1300, 530 8<sup>th</sup> Avenue SW  
Calgary, Alberta T2P 3S8

Dear Mr. Jackson:

**RE: AREA BASED COMMINGLED PRODUCTION APPROVAL  
PICKELL AREA – NOTIKEWIN, BLUESKY AND GETHING FORMATIONS**

Commission staff have reviewed your application, dated August 28, 2006, for approval to commingle gas production from the Notikewin, Bluesky and Gething formations in the Pickell area of Northeast BC.

The Notikewin is considered a shallow resource play in the area under application and is anticipated to be found in most wells drilled within the immediate area of the pool as defined by the OGC. Notikewin wells drilled within the area of application have shown low productivity. The Bluesky and Gething pools appear to be limited in aerial extent with low to moderate productivity. Commingled production approval is expected to maximize production and reserve recovery.

We wish to advise you that your application to commingle production is hereby granted approval, under the authority of Section 41 of the *Drilling and Production Regulation*, subject to the following conditions:

1. The area of the approval shall consist of:

094-A-14:

Block I – units 52, 53, 58-60, 62, 63, 68-73, 78, 79, 81-83, 88, 89, 91, 100

Block J – units 32, 33, 42, 43, 51-53, 61-63, 72, 73, 82, 83, 91-95

094-A-15:

Block L – units 58, 59, 68, 69, 78-80, 88-90, 98-100

094-H-02:

Block D – units 8-10

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**RESOURCE CONSERVATION BRANCH**

PO Box 9329 Stn Prov Gov't, Victoria BC V8W 9N3 Tel: (250) 952-0302 Fax: (250) 952-0301  
Location: 6<sup>th</sup> Flr 1810 Blanshard St. Victoria BC

094-H-03:

Block A – units 1, 10, 12, 13, 16-20, 22, 23, 26-30, 36-40, 46-50, 58-60, 68-70, 74-77, 84-87, 94-99

Block B – units 1-5, 11-19, 21-29, 31-39, 41-49, 51-70, 72-80, 82-90, 92, 93, 100

Block C – units 51, 61, 71, 81, 91-93

Block F – units 1-3

Block G – units 2, 3, 10, 11, 21, 31-33, 41-43

Block H – units 4-9, 14-20, 24-30, 38-40, 48-50, 56-59, 66-69.

2. Production from the Notikewin, Bluesky, and Gething formations may be commingled.
3. A production test must be completed to establish the AOF and initial reservoir pressure for all productive zones, and reports filed as per the requirements of Sections 84 and 95 of the *Regulation*.
4. Zones must be comprised of sweet gas only, non-associated with any oil pool. However, it is recognized that the Bluesky and Gething zones although generally sweet have the potential for small quantities of H<sub>2</sub>S within the approval area. If the H<sub>2</sub>S level exceed 1000 ppm in any zone encountered, authorization from the Commission is required *prior* to continuing with commingling operations.
5. A “notification” must be submitted to the OGC for each commingled well, within 30-days of final completion operations, and must include;
  - A schematic diagram of the wellbore completion
  - Flow data summary
  - Production allocation factors for each of the commingled zones
6. Royalties will be based on the total production from all commingled zones in a well drilled under this area based commingling approval. Eligibility criteria for the marginal, ultramarginal and low productivity royalty programs will likewise be based on the total production from all commingled zones in a well.
7. Gas, water and condensate production from a commingled well must be reported on the Ministry of Small Business and Revenue BC S-1 and BC S-2 forms to the deepest (measured depth) active well event (UWI) of the commingled group of zones in the wellbore.
8. BC-11 forms must be submitted individually for each zone in a commingled well bore (all completed zones regardless of productivity).

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9. The production allocation formula is based on a weighting of reserves and the initial production rate;  
hydrocarbon pore volume,  $HPV = h * \phi * (1-S_w)$ , 20 %  
Normalized Inflow Capacity,  $NIC = q * P_{si}^2 / (P_{si}^2 - P_{wf}^2)$ , 80%.  
 $P_{si}$  – Shut-in reservoir pressure.  
 $P_{wf}$  – Bottom hole flowing pressure, flexibility to use flowing wellhead pressure and extrapolate to BH conditions.  
Note that the NIC must be calculated post-stimulation (minimum flow period is 4 hours).

**Allocation Formula**

Zone 1  $HPV_1 / (HPV_1 + HPV_2) * 20 + NIC_1 / (NIC_1 + NIC_2) * 80 =$  Allocation Percentage<sub>1</sub>

Zone 2  $HPV_2 / (HPV_1 + HPV_2) * 20 + NIC_2 / (NIC_1 + NIC_2) * 80 =$  Allocation Percentage<sub>2</sub>

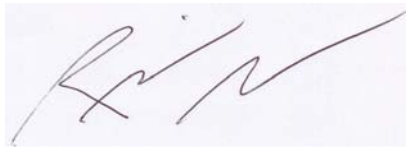
Note: Allocation Percentage to be rounded to the nearest whole number.

10. Should productivity from any zone exceed a normalized inflow capability of 60.0  $10^3 m^3/d$ , segregated production of the anomalous zone will be required.
11. An annual report will be required and shall be submitted by August 1, 2007. Reports will include a listing of commingled wells, zones commingled in each well, NIC,  $P_i$ , summary of results, map showing locations of wells commingled, etc.
12. This approval may be modified at a later date if deemed appropriate through a change in circumstances.

Normal gas well spacing and target restrictions specified under Section 10 of the *Regulation* continue to apply, unless otherwise approved under a Good Engineering Practice project approval granted under Section 101.

Should you have any questions, please contact the undersigned at (250) 952-0366.

Sincerely,



Richard Slocomb, P.Eng.  
Supervising Reservoir Engineer