

January 11, 2013 (Updated December 2023)

Commingled Production Approval – Order 13-20-001 Plains & Northern Foothills Areas

The attached Order 13-20-001 is intended to facilitate commingled production to capture additional reserves in well-developed and understood areas. Operators are expected to use discretion in obtaining data above the minimum requirements specified, including segregated production, where that information will provide essential knowledge for continued development.

Pools containing sour gas may be commingled with pools containing sweet gas. It is the permit holder's responsibility to ensure that commingled production will not detrimentally affect the gas quality or operations by other well permit holders in the same pool.

Production is reported to the single deepest (measured depth) UWI in the well for royalty consideration. Eligibility criteria for targeted royalty programs are likewise based on total well production.

Normal gas well spacing and target restrictions specified under Section 7 of the Drilling and Production Regulation continue to apply, unless;

- The well and pool is located within an Other Than Normal Spacing approval under Section 65.1(2) of the Petroleum and Natural Gas Act (generally issued in association with a Good Engineering Practice Special Project Order under Section 75 of the Energy Resource Activities Act), or
- Contained within Unconventional Zones listed in Schedule 2 of the Regulation.

This approval replaces the previous similarly titled Order 09-20-001 which expired in 2012. Previously commingled wells remaining valid under the current Order.

Additional information on commingling production is available in the <u>Commingling Production Guide</u>, which also provides guidance for consideration of wells that do not meet the conditions of this Order.

IN THE MATTER of commingled production of Cretaceous and Triassic aged reservoirs within the **Plains & Northern Foothills** areas of Northeast BC.

ORDER 13-20-001

The Regulator, pursuant to Section 75 of the Energy Resource Activities Act, hereby designates to be a special project the commingled production of natural gas from pools in a field within the area described in the attached schedule, that satisfy all of the following:

- 1. The pool is within a formation from the top of the Cretaceous to the base of the Triassic period;
- 2. The pool contains only natural gas and associated by-products;
- 3. The pool top of pay is greater than 400 metres below ground level; and
- 4. The pool has been produced from another well within 7 km of the well to be completed for commingled production under this Order.

A well permit holder is authorized under this Order for the purposes of Section 23 of the Drilling and Production Regulation, to complete a well for commingled production subject to the following:

- (a) The well must not be subject to an off-target production penalty under Section 7(3) of the Drilling and Production Regulation.
- (b) The reservoir pressure of a pool does not exceed 90 per cent of the fracture pressure of another pool proposed for commingled production in the same well;
- (c) The permit holder must ensure that commingled production operations will not detrimentally affect the gas quality or operations in the commingled pools.
- (d) Sour gas may be commingled with sweet gas.
- (e) For **new wells** completed for initial production in a commingled manner under this Order, if the average commingled well flow rate⁽¹⁾ is greater than 50 e³m³/d, the permit holder must;
 - segregate production from a pool capable of producing at a rate greater than 30 e³m³/d, and
 - within 30 days after beginning segregated, measure and record the static reservoir pressure, and obtain a gas analysis from that pool.
 - ¹ average of the last 30 days of the initial 90 producing days.
- (f) If a well is re-completed to **add one new pool** for commingled production under this Order, and the average increase in gas flow rate⁽²⁾ from the new pool after commingling is determined to be greater than 30 e³m³/d, the permit holder must;
 - > segregate production from the pool capable of producing at a rate greater than 30 e³m³/d, and
 - within 30 days after beginning segregated, measure and record the static reservoir pressure, and obtain a gas analysis from that pool.

- ² average of the last 30 days of the initial 90 producing days following re-completion, compared to average rate over 2 month period preceding re-completion.
- (g) For a well re-completed to **add two or more new pools** for commingled production under this Order, if the average increase in gas flow rate⁽³⁾ from the new pools after commingling is greater than 50 e³m³/d, the permit holder must;
 - segregate production from a pool capable of producing at a rate greater than 30 e³m³/d, and
 - within 30 days after beginning segregated, measure and record the static reservoir pressure, and obtain a gas analysis from that pool.
 - ³ average of the last 30 days of the initial 90 producing days following re-completion, compared to average rate over 2 month period preceding re-completion.
- (h) For a well previously **producing multiple pools in a segregated manner**, under this Order the permit holder may commingle a pool that is being or has been produced in a segregated manner with an average gas rate over 60 producing days of less than or equal to 30 e³m³/d, with another pool in the same well that either;
 - produces at an average gas rate of less than or equal to 30 e³m³/d over 60 producing days, or
 - produces at an average gas rate greater than 30 e³m³/d, has a minimum 6 month production history, and a second reservoir pressure test.
- (i) A permit holder must assign a zero per cent (0%) production allocation factor to a pool that does not result in measurable flow after commingling with another pool in a well.
- (j) A permit holder may determine the initial production allocation for a pool with no production data on the weighted basis of reserves (50%) and estimated current gas rate (50%).
- (k) A permit holder must segregate or abandon a pool which produces water that may reduce the ultimate recovery of gas from another commingled pool in a well.
- (I) A permit holder must report each completion event commingled in a well bore via Petrinex, regardless of productivity, by the 20th day of the month following the month the status change occurs.
- (m) A permit holder must submit to the Regulator via email at reservoir@bc-er.ca the form "Notification of Commingled Well Production" for each commingled grouping of formations in a well, by the 20th day of the month following the month of initial or amended commingled production.
- (n) Total gas, water and condensate production from a commingled well must be reported to the deepest (measured depth) active well event (UWI) of the commingled group of pools in the well bore.

- (o) The permit holder must obtain a representative commingled gas sample from a well within 6 months of initial date of commingled production and submit a report of the component analyses of the natural gas and liquids to the Regulator within 60 days of the sampling.
- (p) The permit holder must submit a report of the analyses of any additional gas samples obtained to the Regulator within 60 days after the date on which sampling occurred.
- (q) The permit holder must submit a report of any reservoir pressure tests conducted to the Regulator within 60 days after the date of the tests.

Exemptions

A well permit holder authorized under this Order is exempt from the following provisions of the Drilling and Production Regulation:

- 1. Section 63 (1), gas well deliverability tests, pursuant to Section 4 (1) (v) of the Regulation,
- 2. Section 67 (1), individual formation gas production analyses, pursuant to Section 4 (1) (x) of the Regulation; and
- 3. Section 73 (1) and (2), initial and annual reservoir pressure measurements, pursuant to Section 4 (1) (z) of the Regulation.

For further information, please email Reservoir@bc-er.ca

SCHEDULE

Plains & Northern Foothills Area Commingle Approval Area

DLS		NTS	
Township	Range (W6M)	Мар	Block
76	13 – 18	94-A-5	D, E, L
77	13 – 19	94-A-9	J-L
78	13 – 19	94-A-10	I-L
79	13 – 19	94-A-11	I-L
80	13 – 19	94-A-12	D, E, I -,L
81	13 -19, 22	94-A-13	A - K (L excluded)
82	13 – 23	94-A-14	A - L
83	13 – 22	94-A-15	A - L
84	13 – 22	94-A-16	B - G, I - L
85	13 – 23	94-B-8	A, B, G- J
86	13 – 23, 25, 26	94-B-9	A, B, G - J
87	13 – 25	94-B-16	A, B, F - K
88	13 – 25	94-G-1	A - L
		94-G-7	G- J
		94-G-8	A - L
		94-G-9	A - L
		94-G-10	A, B, G, H, I
		94-G-15	A
		94-G-16	A
		94-H -1	A - L
		94-H-2	A - L
		94-H-3	A- L
		94-H-4	A - L
		94-H-5	A - L
		94-H-6	A - L
		94-H-7	A - L
		94-H-8	A - L
		94-H-9	C-L
		94-H-10	A - L
		94-H-11	A - L
		94-H-12	A - H, L
		94-H-13	D
		94-H-14	A
		94-H-15	A - D, F - K
		94-H-16	A - L
		94-I-1	C, D
		94-1-2	C,D
		94-1-3	A, G, H

