

## COMMINGLING Order No. MU8733

MADE at the City of Calgary, in the Province of Alberta, on

Y.P. Shong

Walle

2nd day of June 2015.

ALBERTA ENERGY REGULATOR

The Alberta Energy Regulator (AER) pursuant to the *Oil and Gas Conservation Act*, chapter O-6 of the Revised Statutes of Alberta, 2000, orders as follows:

## 1) The following table shows

• the specified pools and wells in the **COUNTESS Field** wherein production may be commingled in the wellbore, and

• the allocation factors to prorate the commingled production to the specified pools:

Pools	Wells (Unique Identifier)	Allocation Percentage
a) <sup>1</sup> COUNTESS COLORADO J, COUNTESS COLORADO RR, COUNTESS COLORADO SS, COUNTESS COLORADO TT, COUNTESS FIRST WHITE SPECKS I, COUNTESS FIRST WHITE SPECKS RR, COUNTESS FISH SCALE A, COUNTESS FISH SCALE D, COUNTESS FISH SCALE D, COUNTESS FISH SCALE S, COUNTESS FISH SCALE S, COUNTESS FISH SCALE T, COUNTESS FISH SCALE U, COUNTESS FISH SCALE Y, COUNTESS FISH SCALE Y, COUNTESS FISH SCALE Y, COUNTESS FISH SCALE RR, COUNTESS FISH SCALE RR, COUNTESS BOW ISLAND I, COUNTESS BOW ISLAND I, COUNTESS BOW ISLAND MM, COUNTESS BOW ISLAND MM, COUNTESS BOW ISLAND DO, COUNTESS BOW ISLAND DO, COUNTESS BOW ISLAND DVV, COUNTESS BOW ISLAND VV, COUNTESS BOW ISLAND DVX, COUNTESS BOW ISLAND T2T, COUNTESS BOW ISLAND M2M, COUNTESS BOW ISLAND M2M, COUNTESS BOW ISLAND M2M, COUNTESS BOW ISLAND M3M, COUNTESS BOW ISLAND L3L, COUNTESS BOW ISLAND M3M, COUNTESS BOW ISLAND M3M,	AI	None

Allocation

COUNTESS BOW ISLAND V3V. COUNTESS BOW ISLAND W3W. COUNTESS BOW ISLAND X3X, COUNTESS BOW ISLAND Y3Y, COUNTESS BOW ISLAND B4B, COUNTESS BOW ISLAND H4H, COUNTESS BOW ISLAND 141, COUNTESS BOW ISLAND J4J, COUNTESS BOW ISLAND M4M, COUNTESS BOW ISLAND S4S. COUNTESS BOW ISLAND D5D. COUNTESS BOW ISLAND E5E, COUNTESS BOW ISLAND 151, COUNTESS BOW ISLAND J5J, COUNTESS BOW ISLAND K6K, COUNTESS BOW ISLAND J10J, COUNTESS BOW ISLAND K10K, COUNTESS BOW ISLAND N10N, COUNTESS BOW ISLAND P10P. COUNTESS BOW ISLAND R10R, COUNTESS BOW ISLAND S10S, COUNTESS BOW ISLAND V10V, COUNTESS VIKING A, COUNTESS VIKING B, COUNTESS VIKING C. COUNTESS VIKING F, COUNTESS VIKING G. COUNTESS VIKING H, COUNTESS VIKING I, COUNTESS VIKING J. COUNTESS VIKING L. COUNTESS VIKING N. COUNTESS VIKING O. COUNTESS VIKING S. COUNTESS VIKING T, COUNTESS VIKING Y, COUNTESS VIKING DD, COUNTESS BASAL COLORADO A, COUNTESS BASAL COLORADO B, COUNTESS BASAL COLORADO F, COUNTESS BASAL COLORADO G, COUNTESS BASAL COLORADO I, COUNTESS BASAL COLORADO J. COUNTESS UPPER MANNVILLE JJJ. COUNTESS UPPER MANNVILLE QQQ, COUNTESS UPPER MANNVILLE RRR, COUNTESS UPPER MANNVILLE ZZZ. COUNTESS UPPER MANNVILLE E2E, COUNTESS UPPER MANNVILLE L2L, COUNTESS UPPER MANNVILLE M2M, COUNTESS UPPER MANNVILLE O2O, COUNTESS UPPER MANNVILLE P2P, COUNTESS UPPER MANNVILLE C3C, COUNTESS UPPER MANNVILLE Z3Z, COUNTESS UPPER MANNVILLE P4P, COUNTESS UPPER MANNVILLE C5C, COUNTESS UPPER MANNVILLE O5O, COUNTESS UPPER MANNVILLE B6B. COUNTESS UPPER MANNVILLE E6E, COUNTESS UPPER MANNVILLE 161,

COUNTESS UPPER MANNVILLE P6P. COUNTESS UPPER MANNVILLE Q6Q. COUNTESS UPPER MANNVILLE R6R, COUNTESS UPPER MANNVILLE S6S, COUNTESS UPPER MANNVILLE T6T, COUNTESS UPPER MANNVILLE U6U, COUNTESS UPPER MANNVILLE V6V, COUNTESS UPPER MANNVILLE W6W, COUNTESS UPPER MANNVILLE Y6Y, COUNTESS UPPER MANNVILLE Z6Z, COUNTESS UPPER MANNVILLE B7B. COUNTESS UPPER MANNVILLE K7K, COUNTESS UPPER MANNVILLE L7L. COUNTESS UPPER MANNVILLE 070, COUNTESS UPPER MANNVILLE P7P. COUNTESS UPPER MANNVILLE Q7Q, COUNTESS UPPER MANNVILLE R7R, COUNTESS UPPER MANNVILLE S7S, COUNTESS UPPER MANNVILLE T7T, COUNTESS UPPER MANNVILLE U7U, COUNTESS UPPER MANNVILLE X7X, COUNTESS UPPER MANNVILLE A8A, COUNTESS UPPER MANNVILLE B8B, COUNTESS UPPER MANNVILLE D8D, COUNTESS UPPER MANNVILLE T8T, COUNTESS UPPER MANNVILLE U8U, COUNTESS UPPER MANNVILLE V8V, COUNTESS UPPER MANNVILLE A9A, COUNTESS UPPER MANNVILLE B9B, COUNTESS UPPER MANNVILLE C9C. COUNTESS UPPER MANNVILLE M9M, COUNTESS UPPER MANNVILLE T9T. COUNTESS UPPER MANNVILLE 1101, COUNTESS UPPER MANNVILLE T10T, COUNTESS UPPER MANNVILLE U10U, COUNTESS UPPER MANNVILLE W10W, COUNTESS UPPER MANNVILLE Y10Y, COUNTESS UPPER MANNVILLE A11A, COUNTESS UPPER MANNVILLE E11E, COUNTESS UPPER MANNVILLE G11G, COUNTESS UPPER MANNVILLE H11H, COUNTESS UPPER MANNVILLE 1111, COUNTESS UPPER MANNVILLE T11T, COUNTESS UPPER MANNVILLE C12C. COUNTESS UPPER MANNVILLE E12E, COUNTESS UPPER MANNVILLE Z17Z, COUNTESS UPPER MANNVILLE A18A. COUNTESS UPPER MANNVILLE E19E, COUNTESS UPPER MANNVILLE H19H, COUNTESS UPPER MANNVILLE K19K, COUNTESS UPPER MANNVILLE L19L, COUNTESS UPPER MANNVILLE 1201, COUNTESS UPPER MANNVILLE S20S, COUNTESS UPPER MANNVILLE Y20Y, COUNTESS UPPER MANNVILLE F21F, COUNTESS UPPER MANNVILLE G21G, COUNTESS UPPER MANNVILLE P21P, COUNTESS UPPER MANNVILLE Q21Q, COUNTESS UPPER MANNVILLE N22N, COUNTESS UPPER MANNVILLE Q22Q,

COUNTESS UPPER MANNVILLE R22R, COUNTESS UPPER MANNVILLE V22V. COUNTESS UPPER MANNVILLE B23B, COUNTESS UPPER MANNVILLE Y23Y, COUNTESS UPPER MANNVILLE W24W, COUNTESS UPPER MANNVILLE Y24Y, COUNTESS UPPER MANNVILLE B25B, COUNTESS UPPER MANNVILLE E25E, COUNTESS UPPER MANNVILLE G25G, COUNTESS UPPER MANNVILLE H25H, COUNTESS UPPER MANNVILLE J25J, COUNTESS UPPER MANNVILLE K25K, COUNTESS UPPER MANNVILLE L25L, COUNTESS UPPER MANNVILLE R25R, COUNTESS UPPER MANNVILLE X25X, COUNTESS UPPER MANNVILLE Z25Z, COUNTESS UPPER MANNVILLE A26A, COUNTESS UPPER MANNVILLE D26D, COUNTESS UPPER MANNVILLE F26F, COUNTESS UPPER MANNVILLE 1261, COUNTESS UPPER MANNVILLE J26J, COUNTESS UPPER MANNVILLE N26N, COUNTESS UPPER MANNVILLE B27B, COUNTESS UPPER MANNVILLE E27E. COUNTESS UPPER MANNVILLE P27P. COUNTESS UPPER MANNVILLE U27U, COUNTESS GLAUCONITIC NNN, COUNTESS LOWER MANNVILLE R, COUNTESS LOWER MANNVILLE Y, COUNTESS LOWER MANNVILLE DD, COUNTESS LOWER MANNVILLE HH, COUNTESS LOWER MANNVILLE ZZ. COUNTESS LOWER MANNVILLE GGG. COUNTESS LOWER MANNVILLE YYY, COUNTESS LOWER MANNVILLE D2D, COUNTESS LOWER MANNVILLE G2G. COUNTESS LOWER MANNVILLE U2U, COUNTESS LOWER MANNVILLE C3C, COUNTESS LOWER MANNVILLE 141, COUNTESS LOWER MANNVILLE K4K, COUNTESS LOWER MANNVILLE Q4Q, COUNTESS LOWER MANNVILLE F5F, COUNTESS LOWER MANNVILLE N5N, COUNTESS LOWER MANNVILLE Q5Q. COUNTESS LOWER MANNVILLE R5R, COUNTESS LOWER MANNVILLE W5W, COUNTESS LOWER MANNVILLE Y5Y, COUNTESS LOWER MANNVILLE A6A, COUNTESS LOWER MANNVILLE T6T, COUNTESS PEKISKO D, COUNTESS PEKISKO QQ, COUNTESS MFP8501 MILK RIVER, COUNTESS MFP8502 MED HAT, COUNTESS MFP8505 2WS, COUNTESS MFP8506 BELLY RIVER, COUNTESS MFP8513 BOW ISLAND, COUNTESS MFP8519 GLAUCONITIC. COUNTESS MFP8543 BSL BELLY RIV, COUNTESS MFP8544 1WS, COUNTESS MFP8545 BSL BELLY RIV,

	COUNTESS MFP8550 BELLY RIVER, COUNTESS MFP8561 UPPER MANN, COUNTESS MFP8584 UPPER MANN, and COUNTESS MFP8598 BSL BELLY RIV		
b)	COUNTESS BOW ISLAND E, COUNTESS BOW ISLAND QQQ, COUNTESS UPPER MANNVILLE PPP, COUNTESS UPPER MANNVILLE YYY, and COUNTESS UPPER MANNVILLE G9G	All	None
c)	COUNTESS BOW ISLAND F and COUNTESS BOW ISLAND G	All	None
d)	COUNTESS BOW ISLAND QQ and COUNTESS BOW ISLAND RR	All	None
e)	COUNTESS BOW ISLAND XX, COUNTESS BOW ISLAND GGG, and COUNTESS BOW ISLAND HHH	All	None
f)	COUNTESS BOW ISLAND DDD and COUNTESS BOW ISLAND JJJ	All	None
g)	COUNTESS BOW ISLAND KKK and COUNTESS BOW ISLAND N2N	All	None
h)	COUNTESS BOW ISLAND OOO and COUNTESS BOW ISLAND PPP	All	None
i)	COUNTESS BOW ISLAND TTT and COUNTESS BOW ISLAND K2K	All	None
j)	COUNTESS BOW ISLAND UUU and COUNTESS BOW ISLAND VVV	All	None
k)	COUNTESS BOW ISLAND R2R and COUNTESS BOW ISLAND S2S	All	None
I)	COUNTESS BOW ISLAND C3C and COUNTESS BASAL COLORADO D	All	None
m)	COUNTESS BOW ISLAND L4L and COUNTESS UPPER MANNVILLE R9R	All	None
n)	COUNTESS BOW ISLAND W4W, COUNTESS BOW ISLAND R6R, and COUNTESS UPPER MANNVILLE B10B	All	None
o)	COUNTESS BOW ISLAND G5G and COUNTESS UPPER MANNVILLE U11U	All	None
p)	COUNTESS BOW ISLAND G10G and COUNTESS BOW ISLAND 1101	All	None
q)	COUNTESS VIKING D, COUNTESS VIKING E, COUNTESS UPPER MANNVILLE D7D, and COUNTESS LOWER MANNVILLE HHH	All	None

r)	HUSSAR VIKING E and COUNTESS UPPER MANNVILLE E19E	00/06-02-024-19W4/0 00/06-02-024-19W4/0	25 75
s)	COUNTESS BASAL COLORADO H and COUNTESS UPPER MANNVILLE W5W	All	None
t)	COUNTESS BASAL COLORADO M and COUNTESS UPPER MANNVILLE N9N	All	None
u)	COUNTESS BASAL COLORADO O and COUNTESS UPPER MANNVILLE M10M	All	None
v)	COUNTESS BASAL COLORADO P and COUNTESS UPPER MANNVILLE K12K	All	None
w)	COUNTESS UPPER MANNVILLE PP and COUNTESS LOWER MANNVILLE S	All	None
x)	COUNTESS UPPER MANNVILLE F3F and COUNTESS UPPER MANNVILLE U3U	All	None
у)	COUNTESS UPPER MANNVILLE M6M and COUNTESS UPPER MANNVILLE Z8Z	All	None
z)	COUNTESS UPPER MANNVILLE E7E, COUNTESS UPPER MANNVILLE F7F, and COUNTESS LOWER MANNVILLE ZZZ	All	None
aa)	COUNTESS UPPER MANNVILLE J7J, COUNTESS LOWER MANNVILLE E2E, and COUNTESS LOWER MANNVILLE F2F	All	None
bb)	COUNTESS UPPER MANNVILLE V7V and COUNTESS UPPER MANNVILLE W7W	All	None
cc)	COUNTESS UPPER MANNVILLE Y7Y and COUNTESS OSTRACOD K	All	None
dd)	COUNTESS UPPER MANNVILLE C11C and COUNTESS UPPER MANNVILLE D11D	All	None
ee)	COUNTESS UPPER MANNVILLE R11R and COUNTESS UPPER MANNVILLE S11S	All	None
ff)	COUNTESS UPPER MANNVILLE V11V, COUNTESS UPPER MANNVILLE Z11Z, and COUNTESS UPPER MANNVILLE A12A	All	None
gg)	COUNTESS UPPER MANNVILLE X11X and COUNTESS UPPER MANNVILLE Y11Y	All	None
hh)	COUNTESS UPPER MANNVILLE C19C and COUNTESS UPPER MANNVILLE D19D	All	None
ii)	COUNTESS UPPER MANNVILLE P19P and COUNTESS UPPER MANNVILLE Q19Q	All	None
jj)	<sup>1</sup> COUNTESS UPPER MANNVILLE D25D, COUNTESS UPPER MANNVILLE G26G, and COUNTESS LOWER MANNVILLE X5X	All	None

kk)	COUNTESS UPPER MANNVILLE S25S and COUNTESS UPPER MANNVILLE M26M	All	None
II)	COUNTESS LOWER MANNVILLE QQ and COUNTESS LOWER MANNVILLE FFF	All	None
mm)	COUNTESS OSTRACOD D and COUNTESS OSTRACOD L	All	None
nn)	COUNTESS OSTRACOD E and COUNTESS BASAL QUARTZ B	All	None

2) Non associated gas and shale gas production from the BELLY RIVER GRP, PAKOWKI, MILK RIVER FM, COLORADO GRP, and MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 22, RANGE 16, WEST OF THE 4th MERIDIAN: Sections 1-5, 8-12, 15-22, 26-29, 32 (see clause 7 and 8)

3) Non associated gas production from the BOW ISLAND FM, VIKING FM, BASAL COLORADO SD, and MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 21, RANGE 17, WEST OF THE 4th MERIDIAN: Section 36

IN TOWNSHIP 22, RANGE 16, WEST OF THE 4th MERIDIAN: Sections 6, 30-31

IN TOWNSHIP 22, RANGE 17, WEST OF THE 4th MERIDIAN: Sections 1-4, 9-11, 14-17, 21-23, 25-28, 34-36

IN TOWNSHIP 23, RANGE 17, WEST OF THE 4th MERIDIAN: Sections 1 and 2

4) Non associated gas production from the BOW ISLAND FM, VIKING FM, and MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 21, RANGE 14, WEST OF THE 4th MERIDIAN: Section 7

IN TOWNSHIP 21, RANGE 15, WEST OF THE 4th MERIDIAN: Sections 16 and 17

5) Non associated gas production from the MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 23, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 1-18, 20-24 (see clause 6)

- 6) Operators shall conduct segregated initial pressure and deliverability tests on each new completion in any of the subject Mannville Group pools outlined in clause 5.
- 7) Operators shall conduct a segregated initial pressure test on the first new Mannville completion in each section outlined in clause 2 if no such prior test exists. Operators shall also conduct an initial production test on one well per section for the Mannville to confirm the zone's productivity. The production test may be, but is not limited to being, a spinner survey.

- 8) Commingling of gas from the Belly River Group and Mannville Formation for the area specified in clause 2 shall only occur if the pressure of the Mannville does not exceed 90% of the fracture pressure of the Belly River in the well.
- 9) AER Order No. MU8724 is rescinded.

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