

COMMINGLING Order No. MU8738

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

6th day of July 2015.

Y.P. Shong

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 **WAYNE-ROSEDALE 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) 1 WAYNE-ROSEDALE VIKING A, WAYNE-ROSEDALE VIKING X, WAYNE-ROSEDALE VIKING X2X, WAYNE-ROSEDALE VIKING F3F, WAYNE-ROSEDALE BASAL COLORADO F, WAYNE-ROSEDALE MANNVILLE EE, WAYNE-ROSEDALE MANNVILLE FF, WAYNE-ROSEDALE UPPER MANNVILLE YYY, WAYNE-ROSEDALE UPPER MANNVILLE A2A, WAYNE-ROSEDALE UPPER MANNVILLE Q2Q, WAYNE-ROSEDALE UPPER MANNVILLE C3C, WAYNE-ROSEDALE UPPER MANNVILLE C3C, WAYNE-ROSEDALE UPPER MANNVILLE D3D, WAYNE-ROSEDALE UPPER MANNVILLE D3D, WAYNE-ROSEDALE UPPER MANNVILLE O5O, WAYNE-ROSEDALE UPPER MANNVILLE O5O, WAYNE-ROSEDALE UPPER MANNVILLE V5V, WAYNE-ROSEDALE UPPER MANNVILLE Z5Z, WAYNE-ROSEDALE UPPER MANNVILLE Z5Z, WAYNE-ROSEDALE UPPER MANNVILLE Z5Z, WAYNE-ROSEDALE GLAUCONITIC D, WAYNE-ROSEDALE GLAUCONITIC T, WAYNE-ROSEDALE GLAUCONITIC AA, WAYNE-ROSEDALE GLAUCONITIC NNN, WAYNE-ROSEDALE GLAUCONITIC RRR, WAYNE-ROSEDALE GLAUCONITIC RRR, WAYNE-ROSEDALE GLAUCONITIC C3C, WAYNE-ROSEDALE GLAUCONITIC C3L, WAYNE-ROSEDALE GLAUCONITIC S3L, WAYNE-ROSEDALE LOWER MANNVILLE S5, WAYNE-ROSEDALE LOWER MANNVILLE LLL, WAYNE-ROSEDALE LOWER MANNVILLE D4D, WAYNE-ROSEDALE LOWER MANNVILLE F4F,	All	None

	WAYNE-ROSEDALE LOWER MANNVILLE LAL, WAYNE-ROSEDALE LOWER MANNVILLE P4P, WAYNE-ROSEDALE LOWER MANNVILLE T4T, WAYNE-ROSEDALE OSTRACOD E, WAYNE-ROSEDALE BASAL QUARTZ SS, WAYNE-ROSEDALE BASAL QUARTZ ZZ, WAYNE-ROSEDALE BASAL QUARTZ KKK, WAYNE-ROSEDALE BASAL QUARTZ C3C, WAYNE-ROSEDALE ELLERSLIE H, WAYNE-ROSEDALE ELLERSLIE I, WAYNE-ROSEDALE ELLERSLIE L, WAYNE-ROSEDALE PEKISKO D, WAYNE-ROSEDALE PEKISKO H, WAYNE-ROSEDALE PEKISKO Q, WAYNE-ROSEDALE MFP8502 MED HAT, WAYNE-ROSEDALE MFP8506 BELLY RIVER, and WAYNE-ROSEDALE MFP8543 BSL BELLY RIV		
b)	WAYNE-ROSEDALE VIKING A, WAYNE-ROSEDALE VIKING Y, WAYNE-ROSEDALE GLAUCONITIC LLL, and WAYNE-ROSEDALE GLAUCONITIC MMM	00/08-04-027-19W4/0	None
c)	WAYNE-ROSEDALE VIKING A, WAYNE-ROSEDALE VIKING JJ, and WAYNE-ROSEDALE GLAUCONITIC XXX	00/06-28-026-19W4/0 00/16-28-026-19W4/0	None
d)	WAYNE-ROSEDALE VIKING A and WAYNE-ROSEDALE GLAUCONITIC XXX	00/04-33-026-19W4/0 00/08-15-026-19W4/0	None
e)	1 WAYNE-ROSEDALE VIKING A, WAYNE-ROSEDALE ELLERSLIE E, WAYNE-ROSEDALE VIKING A, WAYNE-ROSEDALE ELLERSLIE E, WAYNE-ROSEDALE VIKING A, and WAYNE-ROSEDALE ELLERSLIE E	02/07-06-029-21W4/0 02/07-06-029-21W4/0 00/04-07-029-21W4/0 00/04-07-029-21W4/0 00/06-18-029-21W4/0 00/06-18-029-21W4/0	50 50 50 50 50 50
f)	WAYNE-ROSEDALE VIKING B and WAYNE-ROSEDALE GLAUCONITIC XXX	02/06-30-026-19W4/0	None
g)	WAYNE-ROSEDALE VIKING B, WAYNE-ROSEDALE GLAUCONITIC V2V, WAYNE-ROSEDALE GLAUCONITIC X2X, WAYNE-ROSEDALE OSTRACOD I, WAYNE-ROSEDALE BASAL QUARTZ SSS, and WAYNE-ROSEDALE BASAL QUARTZ L3L	All	None
h)	WAYNE-ROSEDALE VIKING LL and WAYNE-ROSEDALE GLAUCONITIC P2P	All	None
i)	WAYNE-ROSEDALE VIKING MM, WAYNE-ROSEDALE GLAUCONITIC VVV, WAYNE-ROSEDALE GLAUCONITIC WWW, WAYNE-ROSEDALE GLAUCONITIC XXX, WAYNE-ROSEDALE GLAUCONITIC G2G, WAYNE-ROSEDALE GLAUCONITIC H2H, WAYNE-ROSEDALE GLAUCONITIC I2I, and WAYNE-ROSEDALE OSTRACOD W	All	None

WAYNE-ROSEDALE LOWER MANNVILLE L4L,

j)	WAYNE-ROSEDALE VIKING UU and WAYNE-ROSEDALE GLAUCONITIC D3D	All	None
k)	WAYNE-ROSEDALE VIKING X2X and WAYNE-ROSEDALE LOWER MANNVILLE H (see clause 15)	00/02-14-028-19W4/0	None
I)	WAYNE-ROSEDALE VIKING A3A, WAYNE-ROSEDALE UPPER MANNVILLE HHH, and WAYNE-ROSEDALE UPPER MANNVILLE Y2Y	All	None
m)	WAYNE-ROSEDALE VIKING G3G and WAYNE-ROSEDALE UPPER MANNVILLE I3I	All	None
n)	WAYNE-ROSEDALE MANNVILLE F and WAYNE-ROSEDALE MANNVILLE J	00/04-23-030-20W4/0	None
o)	WAYNE-ROSEDALE MANNVILLE K and WAYNE-ROSEDALE MANNVILLE KK	All	None
p)	WAYNE-ROSEDALE MANNVILLE M and WAYNE-ROSEDALE UPPER MANNVILLE A3A	All	None
q)	WAYNE-ROSEDALE MANNVILLE W and WAYNE-ROSEDALE UPPER MANNVILLE T2T	All	None
r)	WAYNE-ROSEDALE UPPER MANNVILLE UU and WAYNE-ROSEDALE LOWER MANNVILLE I	All	None
s)	WAYNE-ROSEDALE UPPER MANNVILLE XX, WAYNE-ROSEDALE UPPER MANNVILLE O2O, and WAYNE-ROSEDALE LOWER MANNVILLE LL	All	None
t)	WAYNE-ROSEDALE UPPER MANNVILLE AAA, WAYNE-ROSEDALE UPPER MANNVILLE CCC, and WAYNE-ROSEDALE BANFF H	All	None
u)	WAYNE-ROSEDALE UPPER MANNVILLE MMM, WAYNE-ROSEDALE UPPER MANNVILLE M5M, WAYNE-ROSEDALE LOWER MANNVILLE Z, and WAYNE-ROSEDALE MFP8540 BSL BELLY RIV	All	None
v)	WAYNE-ROSEDALE UPPER MANNVILLE VVV and WAYNE-ROSEDALE LOWER MANNVILLE KK	All	None
w)	WAYNE-ROSEDALE UPPER MANNVILLE L5L and WAYNE-ROSEDALE LOWER MANNVILLE O3O	All	None
x)	WAYNE-ROSEDALE GLAUCONITIC HH and WAYNE-ROSEDALE GLAUCONITIC G3G	All	None
y)	WAYNE-ROSEDALE GLAUCONITIC JJJ and WAYNE-ROSEDALE BASAL QUARTZ B2B	All	None
z)	WAYNE-ROSEDALE GLAUCONITIC SSS and WAYNE-ROSEDALE OSTRACOD V	All	None

aa)	WAYNE-ROSEDALE GLAUCONITIC XXX, WAYNE-ROSEDALE OSTRACOD E, WAYNE-ROSEDALE GLAUCONITIC XXX, WAYNE-ROSEDALE OSTRACOD E, WAYNE-ROSEDALE GLAUCONITIC XXX, and WAYNE-ROSEDALE OSTRACOD E	00/06-12-026-19W4/0 00/06-12-026-19W4/0 00/08-14-026-19W4/0 00/08-14-026-19W4/0 00/08-22-026-19W4/0	65 35 60 40 60 40
bb)	WAYNE-ROSEDALE GLAUCONITIC XXX and WAYNE-ROSEDALE OSTRACOD H	02/08-02-026-19W4/0 02/08-02-026-19W4/0	60 40
cc)	WAYNE-ROSEDALE GLAUCONITIC C2C and WAYNE-ROSEDALE GLAUCONITIC F2F	00/14-13-026-20W4/0 00/14-13-026-20W4/0	75 25
dd)	WAYNE-ROSEDALE GLAUCONITIC K2K and WAYNE-ROSEDALE OSTRACOD AA	All	None
ee)	WAYNE-ROSEDALE GLAUCONITIC L2L, WAYNE-ROSEDALE GLAUCONITIC K3K, and WAYNE-ROSEDALE BASAL QUARTZ I2I	All	None
ff)	WAYNE-ROSEDALE GLAUCONITIC W2W and WAYNE-ROSEDALE BASAL QUARTZ Y	All	None
gg)	WAYNE-ROSEDALE GLAUCONITIC M3M and WAYNE-ROSEDALE BASAL QUARTZ C	All	None
hh)	¹ WAYNE-ROSEDALE GLAUCONITIC U5U and WAYNE-ROSEDALE GLAUCONITIC Y5Y	All	None
ii)	¹ WAYNE-ROSEDALE GLAUCONITIC V5V and WAYNE-ROSEDALE MFP8535 BSL BELLY RIV	All	None
jj)	¹ WAYNE-ROSEDALE GLAUCONITIC A6A and WAYNE-ROSEDALE ELLERSLIE D	All	None
kk)	WAYNE-ROSEDALE BASAL QUARTZ F2F and WAYNE-ROSEDALE PEKISKO A	All	None
II)	WAYNE-ROSEDALE MFP8506 BELLY RIVER and WAYNE-ROSEDALE MFP8540 BSL BELLY RIV	00/04-16-031-19W4/0	None
mm)	WAYNE-ROSEDALE MFP8506 BELLY RIVER and WAYNE-ROSEDALE MFP8540 BSL BELLY RIV	00/13-10-031-19W4/0	None

^{2) &}lt;sup>1</sup> Coalbed methane and non associated gas production from the EDMONTON GRP, HORSESHOE CANYON FM, and LETHBRIDGE may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 28, RANGE 23, WEST OF THE 4th MERIDIAN: Sections 27-28, 33-34

IN TOWNSHIP 31, RANGE 20, WEST OF THE 4th MERIDIAN: Section 14

3) Coalbed methane and non associated gas production from the EDMONTON GRP, HORSESHOE CANYON FM, LETHBRIDGE, RIBSTONE CREEK MBR, VICTORIA MBR, BROSSEAU MBR, and TABER SD may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 31, RANGE 19, WEST OF THE 4th MERIDIAN: Section 19

4) ¹Non associated gas production from the EDMONTON GRP, BELLY RIVER GRP, MILK RIVER FM, COLORADO SHALE, FIRST WHITE SPECKS, MEDICINE HAT SD, SECOND WHITE SPECKS, FISH SCALE MEMBER, VIKING FM, and MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 28, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 18 and 19

IN TOWNSHIP 28, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 6 and 24

IN TOWNSHIP 28, RANGE 21, WEST OF THE 4th MERIDIAN: Sections 1-5, 9-11

IN TOWNSHIP 28, RANGE 22, WEST OF THE 4th MERIDIAN: Sections 1-3, 9-16

IN TOWNSHIP 28, RANGE 23, WEST OF THE 4th MERIDIAN: Sections 15, 25-26, 34-35

5) ¹ Non associated gas production from the EDMONTON GRP, BELLY RIVER GRP, MEDICINE HAT SD, VIKING FM, and MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 27, RANGE 21, WEST OF THE 4th MERIDIAN: Sections 31-33

IN TOWNSHIP 28, RANGE 19, WEST OF THE 4th MERIDIAN: Section 7

IN TOWNSHIP 28, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 7-8, 12-13, 18-19, 29-32

IN TOWNSHIP 28, RANGE 21, WEST OF THE 4th MERIDIAN: Sections 5-8, 12-36

IN TOWNSHIP 28, RANGE 22, WEST OF THE 4th MERIDIAN: Sections 18-36

IN TOWNSHIP 28, RANGE 23, WEST OF THE 4th MERIDIAN: Sections 13-14, 24 (see clause 19)

6) Coalbed methane production from the HORSESHOE CANYON FM and LETHBRIDGE may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 31, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 10 and 15

7) Non associated gas production from the BELLY RIVER GRP and BASAL BELLY RIVER SD may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 31, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 2, 4, 6, 8-9, 11, 14, 16, 18, 20, 22

IN TOWNSHIP 31, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 15 and 16

8) Non associated gas and oil production from the BELLY RIVER GRP, MEDICINE HAT SD, VIKING FM, MANNVILLE GRP, and BASAL QUARTZ SD may be taken without segregation in the wellbore from wells in the

following areas:

IN TOWNSHIP 27, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 15 and 21 (see clause 18)

9) Non associated gas production from the BASAL BELLY RIVER SD may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 31, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 1 and 3

10) Non associated gas production from the MEDICINE HAT SD, VIKING SANDSTONE, and MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 26, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 27-28, 34

IN TOWNSHIP 27, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 4, 9, 11

11) Non associated gas and oil production from the MEDICINE HAT SD and BASAL QUARTZ SD may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 27, RANGE 19, WEST OF THE 4th MERIDIAN: Section 16 (see clause 17)

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

IN TOWNSHIP 27, RANGE 17, WEST OF THE 4th MERIDIAN: Section 19

IN TOWNSHIP 27, RANGE 18, WEST OF THE 4th MERIDIAN: Sections 23-28, 32-36

IN TOWNSHIP 28, RANGE 18, WEST OF THE 4th MERIDIAN: Sections 2-5, 7-11, 14, 18-22, 27-34

IN TOWNSHIP 28, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 12-14, 23

13) Associated gas, non associated gas, and oil production from the MANNVILLE GRP may be taken without segregation in the wellbore from wells in the following areas:

IN TOWNSHIP 27, RANGE 17, WEST OF THE 4th MERIDIAN: Section 7

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

IN TOWNSHIP 25, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 31-36

IN TOWNSHIP 25, RANGE 20, WEST OF THE 4th MERIDIAN: Section 36

IN TOWNSHIP 26, RANGE 18, WEST OF THE 4th MERIDIAN: Sections 32-35

IN TOWNSHIP 26, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 1-12, 14-23, 29-36

IN TOWNSHIP 26, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 1, 12-14, 23-27, 34-35

IN TOWNSHIP 27, RANGE 17, WEST OF THE 4th MERIDIAN: Sections 17-21, 28-30, 32-33

IN TOWNSHIP 27, RANGE 18, WEST OF THE 4th MERIDIAN: Sections 1-5, 7-36

IN TOWNSHIP 27, RANGE 19, WEST OF THE 4th MERIDIAN: Sections 1-5, 8-16, 21-36

IN TOWNSHIP 27, RANGE 20, WEST OF THE 4th MERIDIAN: Sections 25, 35-36

IN TOWNSHIP 28, RANGE 17, WEST OF THE 4th MERIDIAN: Sections 6-7, 17-19

IN TOWNSHIP 28, RANGE 18, WEST OF THE 4th MERIDIAN: Sections 1-6, 9-14, 24-25

- 15) Allocation is for gas only. All oil production to be allocated to the Lower Mannville H
- 16) Commingling of the Edmonton Group and Mannville Formation shall only occur if the pressure of the Mannville Formation does not exceed 90% of the fracture pressure of the Edmonton Group.
- 17) Non-associated gas production from pools in the Medicine Hat Sand and oil production from the Basal Quartz Formation may be taken without segregation in the wellbore.
- 18) Non-associated gas production from pools in the Belly River Group, Medicine Hat Sand, Viking Formation, and Mannville Group and oil production from the Basal Quartz Formation may be taken without segregation in the wellbore.
- 19) Commingling of the Edmonton Group and Mannville Group shall only occur if the pressure of the Mannville Group does not exceed 90% of the fracture pressure of the Edmonton Group.
- 20) AER Order No. MU8736 is rescinded.

END OF DOCUMENT