

## Justification for Allocation of Future Production

Stonewall EP State No.1, F-30-20s-28E, Eddy Co.

Morrow Completion, Pts 11250-11258 KB

Cum. Prod. 1,595,072 mcf + 15,181 BO;  $g = 0.636$ ,  $P_c = 673$ ,  $T_c = 368^\circ R$

Orig. BHP: 4698.2 psia;  $P_r = 6.98$ ,  $T_r = 1.79$ ,  $Z_o = 0.985$

Pres. BHP: 1433.2 psia;  $P_r = 2.13$ ,  $T_r = 1.79$ ,  $Z_i = 0.9125$

then orig  $\frac{P_r}{Z_o} = \frac{4698.2}{0.985} = 4769.7$  psia; pres.  $\frac{P_r}{Z_i} = \frac{1433.2}{0.9125} = 1570.6$  psia.

Abandonment Pressure assumed @ 286.2 psia;

$P_{r_2} = .425$ ,  $T_{r_2} = 1.79$ , then  $Z_a = .9785$  and  $P_{a/2a} = \frac{286.2}{.9785} = 292.5$  psia

Remaining Recoverable Gas Reserves =

$$\frac{\frac{P_{r_i}}{Z_o} - \frac{P_{a/2a}}{Z_a}}{\frac{P_{r_i}}{Z_o} - \frac{P_r}{Z_o}} \times \text{Cum. Prod} = \frac{4769.7 - 292.5}{4769.7 - 1570.6} \times 1,595,072 = 637,260 \text{ mcf.}$$

Remaining Recoverable Oil Reserves =  $\frac{1}{2} \left( \frac{15181}{1,595,072} \right) 637,260 = 3032 \text{ BO.}$

Wolfcamp Completion; Pts 8880-8908 KB

Cum. Prod. 170,275 mcf + 10,050 BO;  $g = 0.686$ ,  $P_c = 672.5$ ,  $T_c = 386^\circ R$

Orig. BHP: 4205.2 psia;  $P_r = 6.25$ ,  $T_r = 1.565$ , then  $Z_o = 0.894$

Pres. BHP: 1634.2 psia;  $P_r = 2.43$ ,  $T_r = 1.565$ , then  $Z_i = 0.825$

then orig.  $\frac{P_r}{Z_o} = \frac{4205.2}{0.894} = 4703.8$  psia; and pres.  $\frac{P_r}{Z_i} = \frac{1634.2}{0.825} = 1980.8$  psia

Abandonment Pressure assumed @ 286.2 psia;

$P_{r_2} = .425$ ,  $T_{r_2} = 1.565$ , then  $Z_a = 0.9625$  and  $P_{a/2a} = \frac{286.2}{0.9625} = 297.4$  psia.

Remaining Recoverable Gas Reserves =

$$\frac{4703.8 - 297.4}{4703.8 - 1980.8} \times 170,275 = 105,270 \text{ mcf}$$

Remaining Recoverable Oil Reserves =  $\frac{1}{2} \left( \frac{10,050}{170,275} \right) 105,270 = 3106 \text{ BO.}$

Allocation of future Production:

Burton Flat Morrow: Gas - 637,260 mcf = 86% Oil - 3032 bbl = 49%

N. Burton Flat Wolfcamp: Gas - 105,270 mcf = 14% Oil - 3106 bbl = 51%

742,530 mcf

6138 bbl

30-015-21578

Ogrod - 25575

Prop - 12801

Pool - 84412

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