

Sovereign Oil Company
Sovereign 32-6 #1
1730' FNL 900' FWL
Sec. 9, T32N, R6W

Based on the data from the Eastman Whipstock report:

1. The Measured Depth at the True Vertical Depth of 2752 feet is interpolated to be 2775 feet as follows:

$$\begin{array}{rcl} 2752.00 - 2713.67 = 38.33 & \frac{38.33}{61.15} & = .6268 \\ 2774.82 - 2713.67 = 61.15 & & \end{array}$$

$$2798 - 2736 = 62 \quad 62 \times .6268 = 38.86 \quad 2736 + 38.86 = 2774.86 \text{ or } \underline{\underline{2775' \text{ MD}}}$$

2. The bottomhole location at 2752' TVD is calculated as follows:

$$\begin{array}{rcl} 2775 - 2736 = 36 & \frac{36}{62} & = .629 \\ 2798 - 2736 = 62 & & \end{array}$$

$$250.82 - 241.04 = 9.78 \quad 9.78 \times .629 = 6.15 \quad 1730 - 241.04 - 6.15 = \underline{\underline{1482.81' \text{ FNL}}}$$

$$64.63 - 61.64 = 2.99 \quad 2.99 \times .629 = 1.88 \quad 900 - 61.64 - 1.88 = \underline{\underline{836.48' \text{ FWL}}}$$

3. The Measured Depth at the True Vertical Depth of 3020 feet is interpolated to be 3046 feet as follows:

$$\begin{array}{rcl} 3020.00 - 2897.18 = 122.82 & \frac{122.82}{123.51} & = .9944 \\ 3020.69 - 2897.18 = 123.51 & & \end{array}$$

$$3047 - 2922 = 125 \quad 125 \times .9944 = 124.3 \quad 2922 + 124.3 = 3046.3 \text{ or } \underline{\underline{3046' \text{ MD}}}$$

4. The bottomhole location at 3020' TVD is calculated as follows:

$$\begin{array}{rcl} 3046 - 2922 = 124 & \frac{124}{125} & = .992 \\ 3047 - 2922 = 125 & & \end{array}$$

$$288.64 - 270.11 = 18.53 \quad 18.53 \times .992 = 18.38 \quad 1730 - 270.11 - 18.38 = \underline{\underline{1441.51' \text{ FNL}}}$$

$$75.48 - 70.16 = 5.32 \quad 5.32 \times .992 = 5.28 \quad 900 - 70.16 - 5.28 = \underline{\underline{824.56' \text{ FWL}}}$$

BEFORE EXAMINER STAMETS OIL CONSERVATION DIVISION	
Sovereign	EXHIBIT NO. <u>3</u>
CASE NO.	<u>7919</u>
Submitted by	<u>Kendrick</u>
Hearing Date	<u>7/20/83</u>