

**STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY,  
MINERALS AND NATURAL  
RESOURCES  
OIL CONSERVATION DIVISION**

**Case No. 14300**

**EXHIBIT**

**13**

CHESAPEAKE OPERATING INC  
MOSAIC 34 FEDERAL 3H  
SECTION 34-T24S-R28E  
EDDY COUNTY, NEW MEXICO

DATA :

|                                  |                  |
|----------------------------------|------------------|
| Reservoir Pressure (Est)         | 2,100 psia       |
| Reservoir Temperature (Est)      | 110 degrees F    |
| Oil Gravity                      | 39.9 degrees API |
| Gas Gravity                      | 0.86             |
| Boi                              | 1.332 rb/stb     |
| Porosity                         | 0.15             |
| Water Saturation                 | 0.61             |
| h                                | 174 ft           |
| Recovery Factor                  | 0.18             |
| Maximum Over Production (Volume) | 14,074 bbl       |

CALCULATION :

$$A = (\text{Volume} / (7,758 \text{ bbl/ac-ft} \times h \times \text{Porosity} \times (1 - \text{Water Saturation}) \times 1/\text{Boi} \times \text{Recovery Factor}))$$

$$A = (14,074 \text{ bbl}) / (7,758 \text{ bbl/ac-ft} \times 174 \text{ ft} \times 0.15 \times (1 - 0.61) \times 1/1.332 \text{ rb/stb} \times 0.18)$$

$$A = 1.3 \text{ ac}$$

Before the Oil Conservation Division  
Chesapeake Energy Corp.  
Hearing June 2, 2009  
Case 14300  
Exhibit No. 172