

**ATP Oil & Gas Corporation  
Mississippi Canyon Block 942  
OCS-G 24130 Well No. A-3**

**BOTTOM HOLE PRESSURE CALCULATIONS**

**“S” Sand:**

**Measured BHP in the Shell MC 942 OCS-G 24130 #1 was 11,345 psi at 16,982' TVD. Calculated gradient is 0.6681 psi/ft or 12.846 ppg EMW. The top perforation of the 'S' sand in the ATP MC 942 A-3 (Formerly#2 ST01 BP00) is estimated to be 17,022' tvd with the proposed mid point perforation at 17,043'. The calculated Bottom Hole Pressure at mid point perforation is:**

$$\text{BHP} = (0.6681)(17,043) = 11,386 \text{ psi}$$

**ATP Oil & Gas Corporation**  
**Mississippi Canyon Block 942**  
**OCS-G 24130 Well No. A-3**

**BOP TEST PRESSURE CALCULATIONS**  
***Completion and Production Operations***

**I. Maximum Anticipated Surface Pressure (MASP)**

Measured BHP in MC 942 OCS-G 24130 #1 "S" Sand was 11,345 psi at 16,982' TVD with an oil gradient of 0.33 psi/ft. The calculated BHP gradient is 0.6681 psi/ft or 12.846 ppg EMW pore pressure. MASP calculations are based upon the well having a 100% oil column of 0.33 psi/ft in the wellbore. MASP at the proposed perforation mid point of **17,043'** is:

$$\text{MASP} = (0.052)(12.846)(17,043) - (0.33)(17,043)$$

$$\text{MASP} = 5760 \text{ psi (At the Wellhead)}$$

**II. BOEMRE BOP Test Pressure**

MASP = 5,760 psi  
MASP + 500 psi = 6,260 psi  
BOP Working Pressure Rating = 10,000 psi  
**BOP Test Pressure = 6,260 psi**

**III. Proposed BOP Test Pressure (BOPTP)**

$$\text{BOPTP} = 6,300 \text{ psi}$$

**ATP Oil & Gas Corporation**  
**Mississippi Canyon Block 942**  
**OCS-G 24130 Well No. A-3**

**CASING TEST PRESSURE CALCULATIONS**  
*Completion and Production Operations*

**IV. Maximum Anticipated Surface Pressure (MASP)**

Assumptions:

- 1) Midpoint Perforation of "S" Sand (**17,043'** TVD)
- 2) Estimated BHP to be 12.846 ppg EMW
- 3) Complete evacuation of mud to oil in casing
- 4) Measured Oil/Gas gradient to surface of 0.33 psi/ft

$$\text{MASP} = 0.052(\text{Equivalent Mud Weight})(\text{TVD}) - (\text{Gas Grad})(\text{TVD})$$

$$\text{MASP} = 0.052(12.846 \text{ lb/gal})(\mathbf{17,043}) - (.33)(\mathbf{17,043})$$

$$\text{MASP} = \mathbf{5,760 \text{ psi (At the Wellhead)}}$$

**V. BOEMRE Casing Test Pressure (CTP)**

7 5/8", 39#, C-95, Casing  
100% Burst Rating = 10,900 psi  
CTP = 0.70(Burst Rating)  
CTP = 0.70(10,900 psi)  
CTP = **7,630 psi**

13-5/8", 88.2#, HCQ-125 Casing  
100% Burst Rating = 10,030 psi  
CTP = 0.70(Burst Rating)  
CTP = 0.70(10,030 psi)  
CTP = **7,021 psi**

**VI. Proposed Casing Test Pressure (PCTP)**

$$\text{MASP} + 100 \text{ psi} = 5760 + 100 = 5860 \text{ psi}$$

$$\text{PCTP} = \mathbf{5900 \text{ psi}}$$