| | | |
|---|---|---|
| **Operator Name/Number:** | OXY USA WTP LP | 192463 |
| **Lease Name/Number:** | Anderson 35 #2H | Fee |
| **Pool Name/Number:** | Red Tank Bone Spring | 51683 |
| **Surface Location:** | 660 FSL 150 FWL M Sec 35 T21S R32E | |
| **Penetration Point:** | 660 FSL 330 FWL M Sec 35 T21S R32E | |
| **Bottom Hole Location:** | 660 FSL 330 FEL P Sec 35 T21S R32E | |

30-025-41498

**C-102 Plats:** 3/21/13 6/7/13 11/5/13 **Elevation:** 3687.9' GL **Objective:** 2nd Bone Spring

**Proposed TD:** Pilot Hole 11900' TVD Horizontal Lateral 10822' TVD 15315' TMD

**SL - Lat:** 32.4297114 **Long:** 103.6530867 X=709885.6 Y=520711.1 NAD - 1927

**PP - Lat:** 32.4297137 **Long:** 103.6525033 X=710065.6 Y=520713.1 NAD - 1927

**BH - Lat:** 32.42977149 **Long:** 103.6375271 X=714686.4 Y=520764.0 NAD - 1927

**Casing Program:**

| Hole Size | Interval | OD Csg | Weight | Collar | Grade | Condition | Collapse Design Factor | Burst Design Factor | Tension Design Factor |
|---|---|---|---|---|---|---|---|---|---|
| 14-3/4" | 0-1000' | 11-3/4" | 47 | BT&C | J55 | New | 3.8 | 1.42 | 5.26 |
| | | | | Hole filled with 8.5# Mud | | | 1514# | 3072# | |
| 10-5/8" | 0-4800' | 8-5/8" | 32 | LT&C | J-55 | New | 1.59 | 1.24 | 1.82 |
| | | | | Hole filled with 10.2# Mud | | | 2533# | 3928# | |
| 7-7/8" | 0-15315' | 5-1/2" | 17 | BT&C | P-110 | New | 1.45 | 1.22 | 2.11 |
| | | | | Hole filled with 9.2# Mud | | | 7480# | 10640# | |

Collapse and burst loads calculated using Stress Check with anticipated loads

**Cement Program:**

a. 11-3/4" Surface — Circulate cement to surface w/ 400sx PPC cmt w/ 1% CaCl2 + 4% Bentonite + .125#/sx Poly-E-Flake, 13.5ppg 1.73 yield 888# 24hr CS 125% Excess followed by 220sx PPC cmt w/ 1% CaCl2, 14.8ppg 1.34 yield 1416# 24hr CS 125% Excess

b. 8-5/8" Intermediate — Circulate cement to surface w/ 920sx HES Light PPC cmt w/ 5% salt + .25% HR-800, 12.9ppg 1.85 yield 771# 24hr CS 105% Excess followed by 170sx PPC cmt, 14.8ppg 1.33 yield 1779# 24hr CS 105% Excess

c. Pilot Hole Plug — Plug #1 cement w/ 580sx PPC cmt w/ .3% HR-601, 14.4ppg 1.23 yield 724# 24hr CS 50% Excess from 11900' to +/-10500'
Plug #2 cement w/ 290sx PPC cmt w/ .85% CFR-3 + .25 HR-601, 18.0ppg .90 yield 657# 24hr CS 50% excess from 10500' to +/-10000'.

d. 5-1/2" Production — Cement w/ 990sx PP cmt w/ 14.8#/sx Silicalite 50/50 Blend + 15#/sx Scotchlite HGS-6000 + 3#/sx Kol-Seal + .125#/sx Poly-E-Flake + .25#/sx HR-800, 10.2ppg 2.95 yield 947# 24hr CS 100% Excess followed by 710sx Super H cmt w/ 3#/sx salt + .4% CFR-3 + .5% Halad-344 + .3% HR-800 + .125#/sx Poly-E-Flake, 13.2ppg 1.66 yield 615# 24hr CS 40% Excess. Calc TOC-Surface

**Description of Cement Additives:** Calcium Chloride, Salt (Accelerator); Silicalite (Additive Material); CFR-3 (Dispersant); Bentonite, Schotchlite HGS-6000 (Light Weight Additive); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-601, HR-800 (Retarder)

The above cement volumes could be revised pending the caliper measurement.

**Proposed Mud Circulation System:**

| Depth | Mud Wt. ppg | Visc sec | Fluid Loss | Type System |
|---|---|---|---|---|
| 0 - 1000' | 8.5 | 28-38 | NC | Fresh Water/Spud Mud |
| 1000 - 4800' | 10.2 | 28-32 | NC | Fresh water/NaCl Brine |
| 4800 - 11900' (Pilot Hole) | 9.2 | 28-34 | NC | Cut Brine/Sweeps |
| 10000 - 15315' (Curve-Lateral) | 9.2 | 32-50 | <18 | Duo Vis/Salt Gel/Starch/PAC |

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

**BOP Program:**

Surface — None

Intermediate/Production — 13-5/8" 10M three ram stack w/ 5M annular preventer, 5M Choke Manifold

**Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

| Geological Marker | Depth | Type |
|---|---|---|
| a. Rustler | 978' | Formation |
| b. Top Salt | 1333' | Formation |
| c. Bottom Salt | 4383' | Formation |
| d. Delaware | 4753' | Formation |
| e. Delaware-Bell Canyon | 4863' | Oil/Gas |
| f. Delaware-Cherry Canyon | 5713' | Oil/Gas |
| g. Delaware-Brushy Canyon | 6913' | Oil/Gas |
| h. 1st Bone Spring | 8743' | Oil/Gas |
| i. 2nd Bone Spring | 10393' | Oil/Gas |
| j. 3rd Bone Spring | 11313 | Oil/Gas |
| k. Wolfcamp | 11913 | Oil/Gas |

Fresh water may be present above the Rustler formation. Surface casing will be set below the top of the Rustler, which will cover potential fresh water sources.

A closed loop system will be utilized consisting of above ground steel tanks and haul-off bins. Disposal of liquids, drilling fluids and cuttings will be disposed of at an approved facility.

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