



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/14/2018  
 Invoice #: 300130  
 API#: 05-123-46444  
 Foreman: JASON KELEHER

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** GRACIE 24-15HZ

County: Weld  
 State: Colorado  
 Sec: 24  
 Twp: 2N  
 Range: 66W

Consultant: BRYAN  
 Rig Name & Number: CARTEL 88  
 Distance To Location: 31  
 Units On Location: 4044-3106, 4030-3215  
 Time Requested: 730  
 Time Arrived On Location: 630  
 Time Left Location: 1230

| WELL DATA                        | Cement Data                    |
|----------------------------------|--------------------------------|
| Casing Size OD (in) : 9.625      | Cement Name: BFN III           |
| Casing Weight (lb) : 36.00       | Cement Density (lb/gal) : 14.2 |
| Casing Depth (ft.) : 1,865       | Cement Yield (cuft) : 1.48     |
| Total Depth (ft) : 1874          | Gallons Per Sack: 7.48         |
| Open Hole Diameter (in.) : 12.25 | % Excess: 20%                  |
| Conductor Length (ft) : 80       | Displacement Fluid lb/gal: 8.3 |
| Conductor ID : 15.25             | BBL to Pit: 16.0               |
| Shoe Joint Length (ft) : 43      | Fluid Ahead (bbls): 30.0       |
| Landing Joint (ft) : 8           | H2O Wash Up (bbls): 10.0       |
| Max Rate: 8                      | Spacer Ahead Makeup            |
| Max Pressure: 2000               | 30 BBL WATER, DYE IN 2ND 10    |

| Calculated Results  | Pressure of cement in annulus  |
|---|--|
| Casing ID: 8.921<br>Casing Grade: J-55 only used  | <b>Displacement: 141.44 bbls</b><br>(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint) |
| <b>cuft of Shoe 18.78 cuft</b><br>(Casing ID Squared) X (.005454) X (Shoe Joint ft)   | <b>Pressure of cement in annulus</b>   |
| <b>cuft of Conductor 61.05 cuft</b><br>(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)  | <b>Hydrostatic Pressure: 1375.71 PSI</b>   |
| <b>cuft of Casing 670.78 cuft</b><br>(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length ) | <b>Pressure of the fluids inside casing</b>  |
| <b>Total Slurry Volume 750.60 cuft</b><br>(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)                               | <b>Displacement: 785.44 psi</b>  |
| <b>bbls of Slurry 133.68 bbls</b><br>(Total Slurry Volume) X (.1781)  | <b>Shoe Joint: 31.91 psi</b>   |
| <b>Sacks Needed 507 sk</b><br>(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  | <b>Total 817.35 psi</b>  |
| <b>Mix Water 90.32 bbls</b><br>(Sacks Needed) X (Gallons Per Sack) ÷ 42   | <b>Differential Pressure: 558.35 psi</b>   |
|   | <b>Collapse PSI: 2020.00 psi</b>   |
|   | <b>Burst PSI: 3520.00 psi</b>  |
|   | <b>Total Water Needed: 271.77 bbls</b>   |

X   
 Authorization To Proceed



# GRACIE 24-15HZ SURFACE

