





# Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12769  
API#  
Foreman: JH

Customer: BILL BARRETT  
Well Name: 70 RANCH 4-63-3-#2/ 3225CH

County: Weld County  
State: Colorado  
Sec: 28  
Twp: 3N  
Range: 68W

Consultant: CASEY  
Rig Name & Number: MAJOR  
Distance To Location: 60 MIN  
Units On Location: 31,044,017,119  
Time Requested: 10:30  
Time Arrived On Location: 10:20  
Time Left Location: 1:30

## WELL DATA

Casing Size OD (in) : 9.6250  
Casing Weight (lb) : 36  
Casing Depth (ft.) : 816  
Total Depth (ft) : 820  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 0  
Conductor ID : 0  
Shoe Joint Length (ft) : 43  
Landing Joint (ft) : 0  
  
Max Rate:  
Max Pressure:

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.27  
Gallons Per Sack: 5.89  
% Excess: 0%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls):  
H2O Wash Up (bbls): 20.0  
  
Spacer Ahead Makeup  
10, 10 DYE, 40

Casing ID	8.921	Casing Grade	J-55 only used
<b>Calculated Results</b>		<b>Displacement: 59.71 bbls</b> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
<b>cuft of Shoe</b>	<b>18.75 cuft</b>	<b>Pressure of cement in annulus</b>	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		<b>Hydrostatic Pressure: 644.00 PSI</b>	
<b>cuft of Conductor</b>	<b>0.00 cuft</b>	<b>Pressure of the fluids inside casing</b>	
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		<b>Displacement: 333.04 psi</b>	
<b>cuft of Casing</b>	<b>398.61 cuft</b>	<b>Shoe Joint: 34.11 psi</b>	
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		<b>Total 367.15 psi</b>	
<b>Total Slurry Volume</b>	<b>417.36 cuft</b>	<b>Differential Pressure: 276.84 psi</b>	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		<b>Collapse PSI: 2020.00 psi</b>	
<b>bbls of Slurry</b>	<b>74.33 bbls</b>	<b>Burst PSI: 3520.00 psi</b>	
(Total Slurry Volume) X (.1781) X (% Excess Cement)		<b>Total Water Needed: 66.09 bbls</b>	
<b>Sacks Needed</b>	<b>329 sk</b>		
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
<b>Mix Water</b>	<b>46.09 bbls</b>		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

X Casey  
Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.