



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/21/2014  
Invoice # 12081  
API# 05-123-37984  
Foreman: Calvin Reimers

Customer: Noble  
Well Name: Sater CC 18-73-1HN

County: Weld  
State: Colorado

Sec: 18  
Twp: 4N  
Range: 63W

Consultant: Martin  
Rig Name & Number: H&P 315  
Distance To Location: 16 Miles  
Units On Location: 3104/3211  
Time Requested: 930am  
Time Arrived On Location: 830am  
Time Left Location: 215pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 601  
Total Depth (ft) : 631  
Open Hole Diameter (in.) : 13.75  
Conductor Length (ft) : 100  
Conductor ID : 16  
Shoe Joint Length (ft) : 43  
Landing Joint (ft) : 30

Max Rate: 7  
Max Pressure: 2500

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.27  
Gallons Per Sack: 5.89  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit: 17.0  
Fluid Ahead (bbls): 50.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup  
50bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 18.77 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
cuft of Conductor 89.10 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
cuft of Casing 263.51 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
Total Slurry Volume 371.38 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
bbls of Slurry 76.06 bbls  
(Total Slurry Volume) X (.1781) X (% Excess Cement)  
Sacks Needed 336 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
Mix Water 47.16 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.45 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

Hydrostatic Pressure: 474.61 PSI

## Pressure of the fluids inside casing

Displacement: 240.53 psi

Shoe Joint: 34.14 psi

Total 274.67 psi

Differential Pressure: 199.94 psi

Collapse PSI: #N/A psi

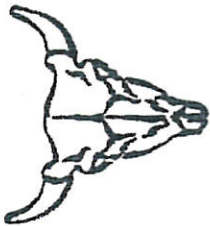
Burst PSI: #N/A psi

Total Water Needed: 162.61 bbls

X   
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.





Bison Oil Well Cementing  
Single Cement Surface Pipe

INVOICE #  
LOCATION  
FOREMAN  
Date

12081  
Weld  
Calvin Reimers  
3/21/2014

Customer  
Well Name

Noble  
Sater CC 18-73-1HN

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DESCRIPTION OF JOB EVENTS

	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI
Safety Meeting	144an														
MIRU	1105am														
CIRCULATE	1231pm														
Drop Plug															
100pm															
M & P															
Time	Sacks														
1240pm	336														
1257pm															
% Excess	15%														
Mixed bbls	47.16														
Total Sacks	336														
bbl Returns	17														
Water Temp	40.8														

Notes:

The day

Float Held

1/2 bbl back on bleed off

Casing PSI Test 116pm 1090psi to 131pm 1100psi

X

Work Performed

X

Title

X

3-21-2014

Date