



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 3/25/2014  
Invoice # 12346  
API#  
Foreman: kirk

Customer: noble  
Well Name: wells ranch ae 30-64hnc

County: weld  
State: Colorado  
Sec: 29  
Twp: 6n  
Range: 62w

Consultant: jim t  
Rig Name & Number: h&p 321  
Distance To Location:  
Units On Location: 3103-3210  
Time Requested: 1030 am  
Time Arrived On Location: 915 am  
Time Left Location: 1:45pm

## WELL DATA

Casing Size OD (in.) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 606  
Total Depth (ft) : 645  
Open Hole Diameter (in.) : 13.75  
Conductor Length (ft) : 100  
Conductor ID : 15.5  
Shoe Joint Length (ft) : 43  
Landing Joint (ft) : 29

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: 30%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 40.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 18.49 cuft

(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 80.51 cuft

(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 266.10 cuft

(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 365.09 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 84.53 bbls

(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 374 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 52.41 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.80 bbls

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

## Pressure of cement in annulus

Hydrostatic Pressure: 478.50 PSI

## Pressure of the fluids inside casing

Displacement: 242.93 psi

Shoe Joint: 33.64 psi

Total 276.56 psi

Differential Pressure: 201.93 psi

Collapse PSI: #N/A psi

Burst PSI: #N/A psi

Total Water Needed: 158.21 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

Customer  
Well Name

noble  
wells ranch ae 30-64hnc

INVOICE #  
LOCATION  
FOREMAN  
Date

12346  
weld  
kirk  
3/25/2014

Treatment Report Page 2

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	1156am															
MIRU	1106am															
CIRCULATE	1218pm	0	1248pm	10	0			0			0			0		
Drop Plug		10	1251pm	70	10			10			10			10		
1248 pm		20	1252pm	150	20			20			20			20		
		30	1254pm	210	30			30			30			30		
		40	1257pm	220	40			40			40			40		
M & P		50			50			50			50			50		
Time	Sacks	60			60			60			60			60		
1227 pm	357	70			70			70			70			70		
1245 pm stop		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	24%	120			120			120			120			120		
Mixed bbls	50	130			130			130			130			130		
Total Sacks	357	140			140			140			140			140		
bbl Returns	19	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 101 pm 400 psi 80.7 bbls slurry  
casing test 1000 psi for 15 min

X  
Work Performed

X WSS  
Title

X 3-25-14  
Date