



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/8/2014  
Invoice #: 35033  
API#: Kirk Kallhoff  
Foreman:

Customer: Anadarko Petroleum Corporation  
Well Name: hansen state 26c-36hz

County: Weld  
State: Colorado

Sec: 35  
Twp: 3n  
Range: 68w

Consultant: randy  
Rig Name & Number: major 29  
Distance To Location: 20  
Units On Location: 4030-3103/4024-3203  
Time Requested: 700 am  
Time Arrived On Location: 600 am  
Time Left Location: 10:00 am

## WELL DATA

Casing Size OD (in): 9.625  
Casing Weight (lb): 36.00  
Casing Depth (ft): 1,109  
Total Depth (ft): 1127  
Open Hole Diameter (in.): 13.50  
Conductor Length (ft):  
Conductor ID:  
Shoe Joint Length (ft): 42  
Landing Joint (ft): 8

Max Rate:  
Max Pressure:

## Cement Data

Cement Name: BFN III  
Cement Density (lb/gal): 14.2  
Cement Yield (cuft): 1.49  
Gallons Per Sack: 7.48  
% Excess: 21%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 18.23 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 0.00 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 655.82 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 674.05 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 120.05 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 452 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 80.57 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 83.11 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 818.11 PSI

## Pressure of the fluids inside casing

**Displacement:** 460.07 psi

**Shoe Joint:** 30.98 psi

**Total** 491.05 psi

**Differential Pressure:** 327.06 psi

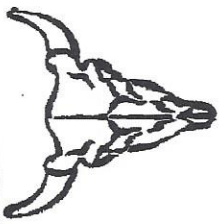
**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 213.67 bbls

X *Randy Case*  
Authorization To Proceed





**Bison Oil Well Cementing  
Single Cement Surface Pipe**

INVOICE #  
LOCATION  
FOREMAN  
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35033  
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Customer  
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hansen state 26c-36hz

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**DESCRIPTION OF JOB EVENTS**

	751am 650am 812am	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		0	848am	10	0			0			0			0		
MIRU		10	850am	20	10			10			10			10		
CIRCULATE		20	853am	30	20			20			20			20		
Drop Plug		30	855am	100	30			30			30			30		
848 am		40	857am	140	40			40			40			40		
		50	859am	210	50			50			50			50		
M & P		60	901am	280	60			60			60			60		
Time	Sacks	70	903am	350	70			70			70			70		
818 am	452	80	906am	370	80			80			80			80		
845 am stop		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	21%	120			120			120			120			120		
Mixed bbls	80.5	130			130			130			130			130		
Total Sacks	452	140			140			140			140			140		
bbl Returns	8	150			150			150			150			150		
Water Temp																

Notes:

bumped plug at 83.2 bbls at 908 am 1350 psi

floats held

120 bbls slurry

*X Raybald*  
Work Preformer

X *APC Consultant*  
Title

X *9-8-14*  
Date

# M/D TOTCO 2000 SERIES

