



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/28/2014

Invoice #: 65034

API#: 05-123-40555

Foreman: Lee Sharp

Customer: Anadarko Petroleum Corporation

Well Name: Thomsen 4N-31HZ

County: Weld

State: Colorado

Sec: 7

Twp: 2N

Range: 65W

Consultant: Randy

Rig Name & Number: Major 29

Distance To Location: 19

Units On Location: 4031-3104;4024-3203

Time Requested: 5:15

Time Arrived On Location:

Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
 Casing Weight (lb) : 38.00  
 Casing Depth (ft.) : 1,345  
 Total Depth (ft) : 1355  
 Open Hole Diameter (in.) : 13.50  
 Conductor Length (ft) : 0  
 Conductor ID : 0  
 Shoe Joint Length (ft) : 40  
 Landing Joint (ft) : 0

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: 15%  
 Displacement Fluid lb/gal: 8.3  
 BBL to Pit:  
 Fluid Ahead (bbls): 15.0  
 H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 17.33 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** 753.31 cuft  
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 770.64 cuft  
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 137.25 bbls  
 (Total Slurry Volume) X (.1781)

**Sacks Needed** 517 sk  
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 92.11 bbls  
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 100.89 bbls  
 (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 992.21 PSI

## Pressure of the fluids inside casing

**Displacement:** 562.73 psi

**Shoe Joint:** 29.45 psi

**Total** 592.17 psi

**Differential Pressure:** 400.03 psi

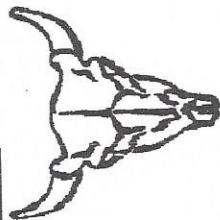
**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 228.01 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 # 13098  
 LOCATION Weld  
 FOREMAN Lee Sharp  
 Date 11/29/2014

Customer Anadarko Petroleum Corporation  
 Well Name Thomsen 4N-31HZ

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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	9:00														
MIRU	9:20														
CIRCULATE	10:00														
Drop Plug		10:42	50	0			0			0			0		
10:43		10:44	40	10			10			10			10		
		10:47	40	20			20			20			20		
		10:49	40	30			30			30			30		
		10:51	190	40			40			40			40		
		10:53	250	50			50			50			50		
M & P		10:55	300	60			60			60			60		
Time		10:58	350	70			70			70			70		
10:08-10:41		11:00	320	80			80			80			80		
		11:05	360	90			90			90			90		
		11:06	1350	100			100			100			100		
				110			110			110			110		
				120			120			120			120		
				130			130			130			130		
				140			140			140			140		
				150			150			150			150		
% Excess			15%												
Mixed bbls			92.1												
Total Sacks			517												
bbl Returns			34												
Water Temp			55												

Notes:

The day

Job Went with issues

Plug landed on calculated 11:06 1350 psi Released @ 11:09 1360 psi

Casing test 11:11 1510 psi Released @ 11:22 1510 psi

X \_\_\_\_\_ X \_\_\_\_\_ X \_\_\_\_\_  
 Title Title Title  
 X \_\_\_\_\_ X \_\_\_\_\_ X \_\_\_\_\_  
 Date Date Date

# M/D TOTCO 2000 SERIES

