



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/19/2014  
 Invoice # 45019  
 API# 05-123-39505  
 Foreman: JASON KELEHER

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** DOUTHIT 1N-27HZ

County: Weld Consultant: ELLIS  
 State: Colorado Rig Name & Number: MAJORS 29  
 Distance To Location: 17  
 Sec: 26 Units On Location: 4031-3106/ 4024-3203  
 Twp: 3N Time Requested: 430  
 Range: 68W Time Arrived On Location: 230  
 Time Left Location: 800

WELL DATA	Cement Data
Casing Size OD (in) : <u>9.625</u>	Cement Name: <u>BFN III</u>
Casing Weight (lb) : <u>36.00</u>	Cement Density (lb/gal) : <u>14.2</u>
Casing Depth (ft.) : <u>1,214</u>	Cement Yield (cuft) : <u>1.49</u>
Total Depth (ft) : <u>1224</u>	Gallons Per Sack: <u>7.48</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>26%</u>
Conductor Length (ft) : <u>        </u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>        </u>	BBL to Pit: <u>10.0</u>
Shoe Joint Length (ft) : <u>42</u>	Fluid Ahead (bbls): <u>30.0</u>
Landing Joint (ft) : <u>6</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u>7</u>	Spacer Ahead Makeup
Max Pressure: <u>2500</u>	<u>30BBL H2O W/KCL, Dye in 2nd 10</u>

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> <u>18.20</u> <b>cuft</b> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> <u>91.04</u> <b>bbls</b> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> <u>0.00</u> <b>cuft</b> (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> <u>895.24</u> <b>PSI</b>
<b>cuft of Casing</b> <u>745.53</u> <b>cuft</b> (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	<b>Pressure of the fluids inside casing</b>
<b>Total Slurry Volume</b> <u>763.73</u> <b>cuft</b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> <u>505.18</u> <b>psi</b>
<b>bbls of Slurry</b> <u>136.02</u> <b>bbls</b> (Total Slurry Volume) X (.1781)	<b>Shoe Joint:</b> <u>30.93</u> <b>psi</b>
<b>Sacks Needed</b> <u>513</u> <b>sk</b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Total</b> <u>536.12</u> <b>psi</b>
<b>Mix Water</b> <u>91.29</u> <b>bbls</b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Differential Pressure:</b> <u>359.13</u> <b>psi</b>
	<b>Collapse PSI:</b> <u>2020.00</u> <b>psi</b>
	<b>Burst PSI:</b> <u>3520.00</u> <b>psi</b>
	<b>Total Water Needed:</b> <u>232.33</u> <b>bbls</b>

*X Ellis James Majors 29*  
 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

Anadarko Petroleum Corporation  
DOUTHIT 1N-27HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

45019  
Weld  
JASON KELEHER  
8/19/2014

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	415															
MIRU	300															
CIRCULATE	440	0	515	0	0			0			0			0		
Drop Plug		10	517	70	10			10			10			10		
515		20	520	60	20			20			20			20		
		30	522	110	30			30			30			30		
		40	524	160	40			40			40			40		
M & P		50	526	220	50			50			50			50		
Time	Sacks	60	528	280	60			60			60			60		
0447-0511	475	70	530	350	70			70			70			70		
0626-0650	38	80	532	370	80			80			80			80		
		90	535	390	90			90			90			90		
		100	536	390	100			100			100			100		
		110	BUMP	1400	110			110			110			110		
% Excess	26%	120			120			120			120			120		
Mixed bbls	91.29	130			130			130			130			130		
Total Sacks	513	140			140			140			140			140		
bbl Returns	10	150			150			150			150			150		
Water Temp	72															

Notes:

The day  
 PRESSURE TESTED TO 2000 PSI AT 0435, PUMPED 30 BBL WATER 2ND 10 HAVING DYE AT 0440, MIXED AND PUMPED 475 SKS AT 14.2, 126 BBL AT 0447  
 SHUT DOWN AT 0511, DROPPED PLUG AT 0515, STARTED DISPLACEMENT AT 0515, PUMPED 91 BBL LANDING AT 390 PSI AND PRESSURED UP TO 1400  
 PSI AT 0536, RELEASED PRESSURE AFTER HOLDING FOR 2 MINUTES AND CHECK FLOATS GOT .5 BBL BACK, REPRESSURED WELL AT 0536 TO 1000 PSI FOR  
 2 MINUTES AND RELEASED,  
 TOP OUT WELL  
 MIXED AND PUMPED 38 SKS AT 14.2, 10 BBL AT 0626 DISPLACED .5 BBL AT 0650, SHUT DOWN AT 0652

X *Edith Hoover* Major 29  
 Work Performed

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

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

# DOUTHIT 1N-27HZ

