



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

Date: 11/19/2014  
 Invoice # 65028  
 API# 05-123-38366  
 Foreman: Lee Sharp

Customer: Noble Energy Inc.

Well Name: Burton K25 67-1HN

County: Weld  
 State: Colorado  
 Sec: 25  
 Twp: 4N  
 Range: 66W

Consultant: Tyler B. Hule  
 Rig Name & Number: PD 828  
 Distance To Location: 5  
 Units On Location: 4015 & 4022  
 Time Requested: 11:00  
 Time Arrived On Location: 10:10  
 Time Left Location: \_\_\_\_\_

WELL DATA	Cement Data
Casing Size OD (in) :	Cement Name:
Casing Weight (lb) :	Cement Density (lb/gal) :
Casing Depth (ft.) :	Cement Yield (cuft) :
Total Depth (ft) : 674	Gallons Per Sack: 3.69
Open Hole Diameter (in.) :	% Excess: 10
Conductor Length (ft) :	Displacement Fluid lb/gal: 8.3
Conductor ID :	BBL to Pit:
Shoe Joint Length (ft) :	Fluid Ahead (bbls): 3.72
Landing Joint (ft) :	H2O Wash Up (bbls): 21.0
Max Rate:	Spacer Ahead Makeup
Max Pressure:	10F+10D+20F=40 bbl

Casing ID 8.921 Casing Grade J-55 only used

<b>Calculated Results</b>	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
(Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of cement in annulus
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of the fluids inside casing
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	
(Total Slurry Volume) X (.1781)	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	
(Sacks Needed) X (Gallons Per Sack) ÷ 42	

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.



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Single Cement Surface Pipe**

Customer  
Well Name

Noble Energy Inc.  
Burton K25-67-1HN

INVOICE #  
LOCATION  
FOREMAN  
Date

65028  
Weld  
Lee Sharp  
11/19/2014

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**DESCRIPTION OF JOB EVENTS**

	Time	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI												
Safety Meeting	2:05															
MIRU	12:20															
CIRCULATE	2:48	0	3:16		0			0			0			0		
Drop Plug		10	3:20	40	10			10			10			10		
	3:16	20	3:24	80	20			20			20			20		
		30	3:29	170	30			30			30			30		
		40	3:32	260	40			40			40			40		
M & P		50	LAND	970	50			50			50			50		
Time		60			60			60			60			60		
Sacks	3:03	322			70			70			70			70		
					80			80			80			80		
					90			90			90			90		
					100			100			100			100		
					110			110			110			110		
% Excess					120			120			120			120		
Mixed bbls	45				130			130			130			130		
Total Sacks					140			140			140			140		
bbl Returns	10				150			150			150			150		
Water Temp	70															

Notes:

The day

Job went smoothly, and with no issues.

Plug landed 1/2 bbl early

Weather condition warranted expedited casing test.

X

Work Performed

X

Title

Well Site Supervisor

X

Date

11-19-14