



# BISON

## Invoice

Bison Oil Well Cementing Inc.  
 1547 Gaylord Street  
 Denver, CO 80206  
 303-296-3010

Date	Invoice #
7/4/2014	25017

Bill To
Noble Energy Inc. Attn: Accounting 1625 Broadway Ste 2000 Denver, CO 80202

Location	Well Name & No.	Terms	Job Type		
Weld CO	Eagle E14-62-1HN	Net 30	Surface Pipe		
Item	Description	Qty	U/M	Rate	Amount
Pump surface	PUMP Charge-surface pipe	1			
Discount 15%	Discount 15%				
MILEAGE	Mileage charge	360			
Discount 15%	Discount 15%				
Data Acquisition ...	Data Acquisition Charge	1			
Discount 15%	Discount 15%				
Service Charge	Casing Test	1			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	356	Sack		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	4	qt		
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	16	oz		
Discount 15%	Discount 15%				
	Subtotal of Materials				

Please Remit Payment To:

Bison Oil Well Cementing, Inc.  
 P.O. Box 29671  
 Thornton, CO 80229

Subtotal	
Sales Tax	
Total	
Balance	



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 7/4/2014  
 Invoice # 25017  
 API# 05-123-38867  
 Foreman: Calvin Reimers

Customer: Noble Energy Inc.  
 Well Name: Eagle E 14-62-1HN

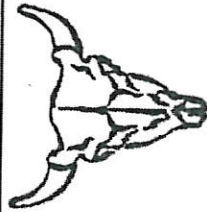
County: Weld Consultant: Roger  
 State: Colorado Rig Name & Number: PD 829  
 Distance To Location: 18 Miles  
 Sec: 14 Units On Location: 4023-3104/4007-3210  
 Twp: 6N Time Requested: 1100am  
 Range: 65W Time Arrived On Location: 900am  
 Time Left Location: 145pm

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>15.2</u>
Casing Depth (ft) : <u>645</u>	Cement Yield (cuft) : <u>1.27</u>
Total Depth (ft) : <u>671</u>	Gallons Per Sack: <u>5.89</u>
Open Hole Diameter (in.) : <u>13.75</u>	% Excess: <u>20%</u>
Conductor Length (ft) : <u>100</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>16</u>	BBL to Pit: <u>12.0</u>
Shoe Joint Length (ft) : <u>44</u>	Fluid Ahead (bbls): <u>40.0</u>
Landing Joint (ft) : <u>19</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u>7</u>	Spacer Ahead Makeup
Max Pressure: <u>2500</u>	<u>10bbls H2O+KCL+Dye in 2nd 10bbls</u>

Calculated Results	Pressure of cement in annulus
Displacement: <u>47.93 bbls</u> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: <u>509.31 PSI</u>
Pressure of cement in annulus	Pressure of the fluids inside casing
Pressure of cement in annulus	Displacement: <u>259.36 psi</u>
Hydrostatic Pressure: <u>509.31 PSI</u>	Shoe Joint: <u>34.36 psi</u>
Pressure of the fluids inside casing	Total: <u>293.72 psi</u>
Displacement: <u>47.93 bbls</u>	Differential Pressure: <u>215.59 psi</u>
Pressure of cement in annulus	Collapse PSI: <u>2020.00 psi</u>
Hydrostatic Pressure: <u>509.31 PSI</u>	Burst PSI: <u>3520.00 psi</u>
Pressure of the fluids inside casing	Total Water Needed: <u>157.84 bbls</u>
Displacement: <u>47.93 bbls</u>	
Shoe Joint: <u>34.36 psi</u>	
Total: <u>293.72 psi</u>	
Differential Pressure: <u>215.59 psi</u>	
Collapse PSI: <u>2020.00 psi</u>	
Burst PSI: <u>3520.00 psi</u>	
Total Water Needed: <u>157.84 bbls</u>	

*[Signature]*  
 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 Energy Inc.  
Eagle E 14-62-1HN

INVOICE # 25017  
LOCATION Weld  
FOREMAN Calvin Reimers  
Date 7/4/2014

Treatment Report Page 2

**DESCRIPTION OF JOB EVENTS**

	Time	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI
Safety Meeting	1132am															
MIRU	1100am															
CIRCULATE	1155am	0	1232pm	110	0			0			0			0		
Drop Plug		10	1235pm	40	10			10			10			10		
1231pm		20	1237pm	130	20			20			20			20		
		30	1239pm	220	30			30			30			30		
		40	1241pm	240	40			40			40			40		
M & P		50	1245pm	240	50			50			50			50		
Time		60	Bump	430	60			60			60			60		
1204pm		70			70			70			70			70		
1228pm		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess		120			120			120			120			120		
Mixed bbls		130			130			130			130			130		
Total Sacks		140			140			140			140			140		
bbl Returns		150			150			150			150			150		
Water Temp		78.1														

Notes:

The day

1/2 bbl Back on Bleed off

Casing PSI Test 1245pm 1030psi to 100pm 1060psi

X *[Signature]*  
Work Prepared

X *[Signature]*  
Title

X *[Signature]*  
Date 7/4/14