



# BISON

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

## Invoice

Date	Invoice #
9/22/2014	45042

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

*Rohn State HD03-62-1HN*

Location	Well Name & No.	Terms	Job Type		
Weld CO	<del>MAHALO STATE AA09-72</del>	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	486			
Discount 15%	Discount 15%				
Data Acquisition ...	Data Acquisition Charge	1			
Discount 15%	Discount 15%				
HOURS	Wait Time	4.5			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	459	Sack		
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	16	oz		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	4	qt		
Discount 15%	Discount 15%				
	Subtotal of Materials				

Please Remit Payment To:

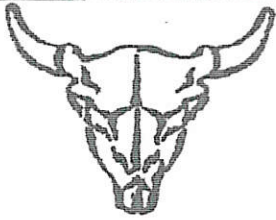
Bison Oil Well Cementing, Inc.  
P.O. Box 29671  
Thornton, CO 80229

Subtotal

Sales Tax

Total

Balance Due



Bison Oil Well Cementing  
1547 Gaylord Street  
Denver, CO 80206

FIELD INVOICE #

45042

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
ROHN STATE LD03-62-1HN	Weld	Colorado	9/22/2014	H&P 273
CHARGE TO	WELL LOCATION			
Noble Energy Inc.	Section	TWP	RANGE	
	4	9N	58W	
Attn: Accounting	DELIVERED TO		LOCATION 1	CODE
	CR 127 & CR 110		SHOP	
1625 Broadway Ste 2000	SHIPPED VIA		LOCATION 2	CODE
	4031-3106/ 4019-3213		127 & 110	
Denver, CO 80202	TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
	SURFACE		SHOP	
			WELL TYPE	CODE

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					
SURFACE		1	ea		
MILEAGE CHARGE					
Pickup	\$1.50 per Mile	486	mile		
CEMENT CHARGE:					
BFN III		459	sack		
	H&P 273				
ADDITIVES CHARGE:					
Liquid Dye Rhodamine	ROHN STATE LD03-62-1HN	16	oz		
KCL	200314	4	oz		
	DRLG				
FLOAT EQUIPMENT:					
	320-10-0017				
	\$13,014.13				
	Sub 9-22-14				
OTHER CHARGES:					
DATA ACQUISITION FEE	KARA ENGLISH	1	ea		
Wait Time		4.5	hour		

If this account is not paid within 30 days of invoice date a FINANCE CHARGE will be made. Computed at a single monthly rate of 1 1/2% which is equal to an ANNUAL PERCENTAGE RATE OF 18%.

TAX

SUBJECT TO CORRECTION

Customer or Agent

Bison Oil Well Cementing, Inc. Representative

Customers hereby acknowledges and specifically agrees to the terms and conditions on this work order, including, without limitation, the provisions on the reverse hereof which include the release and indemnity.



**Bison Oil Well Cementing  
Tail & Lead**

Customer: NOBLE  
Well Name: ROHN STATE LD03-62-1HN

Date: 9/22/2014  
Invoice # 45042  
API# 05-123-37452  
Foreman: JASON KELEHER

County: Weld  
State: Colorado  
Sec: 4  
Twp: 9N  
Range: 58W

Consultant: DAVE  
Rig Name & Number: H&P 273  
Distance To Location: 80  
Units On Location: 3  
Time Requested: 700  
Time Arrived On Location: 630  
Time Left Location: 1530

**WELL DATA**

Casing Size (in) : 9 625  
Casing Weight (lb) : 36  
Casing Depth (ft) : 1,187  
Total Depth (ft) : 1221  
Open Hole Diameter (in) : 13.50  
Conductor Length (ft) : 100  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 43  
Landing Joint (ft) : 29

Sacks of Tail Requested 100  
HOC Tail (ft):

One or the other, cannot have quantity in both

Max Rate: 7  
Max Pressure: 2000

**Cement Data**

**Lead**

Cement Name: BFN III  
Cement Density (lb/gal) : 13.1  
Cement Yield (cuft) : 1.69  
Gallons Per Sack 8.64  
% Excess 25%

**Tail**

Cement Name: BFN III  
Cement Density (lb/gal) : 15.2  
Cement Yield (cuft) : 1.27  
Gallons Per Sack: 5.89  
% Excess:

Fluid Ahead (bbls) 40.0  
H2O Wash Up (bbls) 20.0

**Spacer Ahead Makeup**

40 BBL WATER W/KCL, 2ND 10 W/DYE

Casing ID

8.921

Casing Grade

J-55 only used

**Lead Calculated Results**

HOC of Lead 836.96 ft  
Casing Depth - HOC Tail  
Volume of Lead Cement 409.05 cuft  
HOC of Lead X Open Hole Ann  
Volume of Conductor 76.31 cuft  
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
Total Volume of Lead Cement 485.36 cuft  
(cuft of Lead Cement) + (Cuft of Conductor)  
bbls of Lead Cement 108.05 bbls  
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)  
Sacks of Lead Cement 359.00 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
bbls of Lead Mix Water 73.85 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42  
Displacement 90.68 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)  
Total Water Needed: 238.56 bbls

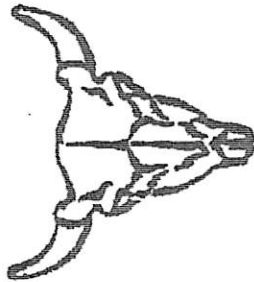
**Tail Calculated Results**

Tail Cement Volume In Ann 127.00 cuft  
(HOC Tail) X (OH Ann)  
Total Volume of Tail Cement 108.22 Cuft  
(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)  
bbls of Tail Cement 22.62 bbls  
(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)  
HOC Tail 221.44 ft  
(Tail Cement Volume) ÷ (OH Ann)  
Sacks of Tail Cement 100.00 sk  
(Total Volume of Tail Cement) ÷ (Cement Yield)  
bbls of Tail Mix Water 14.02 bbls  
(Sacks of Tail Cement X Gallons Per Sack) ÷ 42  
Pressure of cement in annulus  
Hydrostatic Pressure 808.03 PSI  
  
Collapse PSI: 2020.00 psi  
Burst PSI: 3520.00 psi

X   
Authorization To Proceed

Customers hereby acknowledge 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  
Two Cement Surface Pipe

Date 9/22/2014  
INVOICE # 45042  
LOCATION Weld  
FOREMAN JASON KELEHER

Customer NOBLE  
Well Name ROHN STATE LD03-62-1HN

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	1310 1215 1333	Displace 1		Displace 2		Displace 3		Displace 4		Displace 5	
		BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	BBLs	Time
Safety Meeting		0	1413	0	0			0		0	
MIRU		10	1416	40	10			10		10	
CIRCULATE		20	1418	50	20			20		20	
Drop Plug		30	1421	50	30			30		30	
1412		40	1423	120	40			40		40	
		50	1424	180	50			50		50	
M & P		60	1426	240	60			60		60	
Time		70	1428	300	70			70		70	
1343-1404	Sacks 359	80	1430	350	80			80		80	
1404-1409	100	90	1434	340	90			90		90	
		100	BUMP	840	100			100		100	
		110			110			110		110	
		120			120			120		120	
Lead mixed bbls	73.8	130			130			130		130	
Lead % Excess	25%	140			140			140		140	
Lead Sacks	359	150			150			150		150	

Notes:

PERFORMED PRESSURE TEST TO 1500 PSI AT 1330, PUMPED 40 BBL WATER WITH DYE IN THE 2ND 10 AT 1333, MIXED AND PUMPED 359 SKS AT 13.1,  
108 BBLs AT 1343, MIXED AND PUMPED 100 SKS AT 15.2, 22.6 BBL AT 1404, SHUT DOWN AT 1409, DROPPED PLUG AT 1412, STARTED  
DISPLACEMENT AT 1413, LANDED PLUG AT 340 PSI AT 1434 AND PRESSURE UP 840 PSI AND HELD FOR 2 MINUTES, RELEASED PRESSURE AND GOT  
.75 BBLs BACK

Total Sacks 459  
Water Temp 69  
bbl Returns 17

X *Jason Keleher*

X CO MAN

X 9/22-14

Work Performed