



BISON

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

Invoice

Date	Invoice #
11/17/2014	13044

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	Oscar Y10-74-IHC	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	Winterization Charge	1			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	476	Sack		
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

Subtot

Sales T

Total

Balance

BISON OIL WELL CEMENTING, INC.

1547 Gaylord Street
Denver, Colorado 80206
Phone: 303-296-3010
Fax: 303-298-8143
E-mail: bisonoil1@qwestoffice.net



SERVICE INVOICE

Nº 13044

WELL NO. AND FARM OSCAR Y10-74-1HC		COUNTY Weld	STATE Colo	DATE 11-17-14
CHARGE TO Noble		WELL LOCATION SEC. 10 TWP. 2N RANGE 64W		CONTRACTOR H&P 315
		DELIVERED TO WCR 18+5.5		LOCATION 1 Shop
		SHIPPED VIA 4023-3104/4020-3212		LOCATION 2 18+5.5
		TYPE AND PURPOSE OF JOB SURFACE PIPE		LOCATION 3 Shop
				WELL TYPE Oil

PRICE REFERENCE	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
	Pump Charge	1	EA.		
	BENTON 3% BCCA-1.25/16" BFLA-1	476	SK		
	Mileage 1.50 mi. to 60 mile min. Round Trip	3	EA.		
	Pink Dye	16	OZ.		
	DATA INT.	1	EA.		
	WINTERIZATION	1	EA.		

RIG NAME & NUMBER H&P 315
WELL NAME & NUMBER OSCAR Y10-74-1HC
APE NUMBER 200199
TASK (CIR) COMP. YMD, P&A 11/17/14
EXP. TYPE Cement
ACTG CODE 320.10.0017
DOLLAR TOTAL BEING APPROVED 12234.60
FIELD APPROVAL S. Record 11/17/14
ROUTE TO APPROVER Beta with this
MAIL WEIGHT/LE ENEM/BOING
ATTN ACCOUNTS PAYABLE 1625 BROADWAY, SUITE 2200 DENVER, CO 80202 NO INVOICE WILL BE AND NO ALL ATTACHED SIGNED FIELD TICKETS

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 REFERENCES
Calvin

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

TOTAL

SUBJECT TO CORRECTION

Steve [Signature]

Customer or His Agent

Calvin [Signature]

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 side hereof which include the release and indemnity.



**Bison Oil Well Cementing
Tail & Lead**

Customer: Noble Energy
Well Name: Oscar Y 10-74-1HC

Date: 11/17/2014
Invoice # 13044
API# 05-123-38204
Foreman: Calvin Reimers

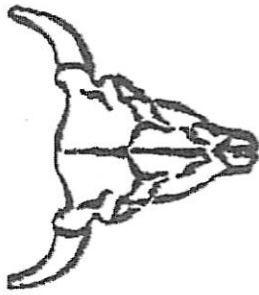
County: Weld
State: Colorado
Sec: 10
Twp: 2N
Range: 64W

Consultant: John T
Rig Name & Number: H&P 315
Distance To Location: 26 Miles
Units On Location: 4023-3104/4020-3212
Time Requested: 100am
Time Arrived On Location: 1145pm
Time Left Location: 7:30am

WELL DATA	Cement Data
<p>Casing Size (in) : <u>9.625</u> Casing Weight (lb) : <u>36</u> Casing Depth (ft) : <u>1,152</u> Total Depth (ft) : <u>1181</u> Open Hole Diameter (in) : <u>13.50</u> Conductor Length (ft) : <u>100</u> Conductor ID : <u>16</u> Shoe Joint Length (ft) : <u>44</u> Landing Joint (ft) : <u>30</u></p> <p>Sacks of Tail Requested <u>100</u> HOC Tail (ft): <u>0</u></p> <p>One or the other, cannot have quantity in both</p> <p>Max Rate: <u>7</u> Max Pressure: <u>2500</u></p>	<p>Lead</p> <p>Cement Name: <u>BFN III</u> Cement Density (lb/gal) : <u>13.1</u> Cement Yield (cuft) : <u>1.69</u> Gallons Per Sack <u>8.64</u> % Excess <u>32%</u></p> <p>Tail</p> <p>Cement Name: <u>BFN III</u> Cement Density (lb/gal) : <u>15.2</u> Cement Yield (cuft) : <u>1.27</u> Gallons Per Sack: <u>5.89</u> % Excess: <u>0%</u></p> <p>Fluid Ahead (bbls) <u>88.0</u> H2O Wash Up (bbls) <u>20.0</u></p> <p>Spacer Ahead Makeup <u>50 bbls H2O+Dye in 2nd 10 bbls</u></p>

Lead Calculated Results	Tail Calculated Results
HOC of Lead <u>801.12 ft</u>	Tail Cement Volume In Ann <u>127.00 cuft</u> (HOC Tail) X (OH Ann)
Casing Depth - HOC Tail	Total Volume of Tail Cement <u>107.90 Cuft</u> (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
Volume of Lead Cement <u>391.53 cuft</u>	bbls of Tail Cement <u>22.62 bbls</u> (HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
HOC of Lead X Open Hole Ann	HOC Tail <u>220.78 ft</u> (Tail Cement Volume) ÷ (OH Ann)
Volume of Conductor <u>89.10 cuft</u> (Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Sacks of Tail Cement <u>100.00 sk</u> (Total Volume of Tail Cement) ÷ (Cement Yield)
Total Volume of Lead Cement <u>480.63 cuft</u> (cuft of Lead Cement) + (Cuft of Conductor)	bbls of Tail Mix Water <u>14.02 bbls</u> (Sacks of Tail Cement X Gallons Per Sack) ÷ 42
bbls of Lead Cement <u>113.17 bbls</u> (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	Pressure of cement in annulus
Sacks of Lead Cement <u>376.00 sk</u> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Hydrostatic Pressure <u>783.94 PSI</u>
bbls of Lead Mix Water <u>77.70 bbls</u> (Sacks Needed) X (Gallons Per Sack) ÷ 42	Collapse PSI: <u>2020.00 psi</u> Burst PSI: <u>3520.00 psi</u>
Displacement <u>87.98 bbls</u> (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	
Total Water Needed: <u>287.32 bbls</u>	

Authorization To Proceed



Bison Oil Well Cementing
Two Cement Surface Pipe

Date 11/17/2014
INVOICE # 13044
LOCATION Weld
FOREMAN Calvin Reimers

Customer Noble Energy
Well Name Oscar Y 10-74-1HC

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	414am 330am 524am	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		0	559am	60	0			0			0			0		
MIRU		10	602am	110	10			10			10			10		
CIRCULATE		20	603am	120	20			20			20			20		
Drop Plug		30	605am	170	30			30			30			30		
558am		40	606am	190	40			40			40			40		
		50	608am	270	50			50			50			50		
M & P		60	610am	320	60			60			60			60		
Time	Sacks	70	612am	400	70			70			70			70		
533am	476	80	613am	360	80			80			80			80		
554am		90	617am	310	90			90			90			90		
		100	Bump	480	100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
Lead mixed bbls	77.35	130			130			130			130			130		
Lead % Excess	32%	140			140			140			140			140		
Lead Sacks	376	150			150			150			150			150		

Notes:

Tail mixed bbls	14.02	1/2 bbl back on bleed off
Tail % Excess	0%	
Tail Sacks	100	
Total Sacks	476	
Water Temp	63.9	
bbl Returns	18	

X *Calvin Reimers*

X *W.S.S.*

X *11-17-14*

Work Performed