



BISON

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

Invoice

Date	Invoice #
10/12/2014	12184a

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	Oscar Y10-75-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	Casing Test	1			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	477	Sack		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	3	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 Due

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



Nº 12184

WELL NO. AND FARM Oscar 410-75-1HL		COUNTY Weld	STATE CO	DATE 10-12-14
CHARGE TO note		WELL LOCATION SEC. 10 TWP. 2N RANGE 64W		CONTRACTOR HEP315
		DELIVERED TO 20-55	LOCATION 1 shed	CODE
		SHIPPED VIA 4030-3103/15106-9210	LOCATION 2 20-55	CODE
		TYPE AND PURPOSE OF JOB Surface Pipe	LOCATION 3 shed	CODE
			WELL TYPE GAS	CODE

PRICE REFERENCE	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
	Pump charge	1	per hr		
	BFA @ 34% BCLA-1 .25 lbs per sk BFLY-1	477	sk/s		
	mileage 1 st per mile 60 miles round trip	3	per hr		
	BCLA-1	3	sk/s		
	Rod Dye	16	oz		
	Data Acc	1	per hr		
	Casing test	1	per hr		

RIG NAME & NUMBER:
HLP 315

WELL NAME & NUMBER:
OSCAR 410-751 HC

DATE:
200202

TASK (URL, COMP, W/O, P&A):
DRS

EXP TYPE:

CTG CODE:
320.10 001.7

DOLLAR TOTAL BEING APPVD:
\$12,276.70

FIELD APPROVAL DATE:
10/12/14

ROUTE TO APPROVER:
Baxter Whittington

MAIL TO: NOBLE ENERGY INC.
ATTN: ACCOUNTS PAYABLE
16 ROADWAY, SUITE 2200
VERMONT, VT 05401

Total Weight: **1.00** Ton
Miles: **1.00** Miles

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 1/4% which is equal to an ANNUAL PERCENTAGE RATE OF 18%.

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

TOTAL

SUBJECT TO CORRECTION

Customer or His Agent

Elson 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 y10-75-1hc

Date: 10/12/2014
Invoice # 12184
API# _____
Foreman: kirk

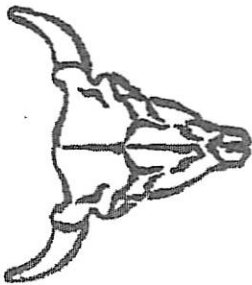
County: Weld
State: Colorado
Sec: 10
Twp: 2n
Range: 64w

Consultant: mike
Rig Name & Number: h&p 315
Distance To Location: _____
Units On Location: 4030-3103/3106-3210
Time Requested: 230 am
Time Arrived On Location: 100 am
Time Left Location: 5:30 pm

WELL DATA	Cement Data
Casing Size (in) : 9.625	Lead
Casing Weight (lb) : 36	Cement Name: bfn III 3%
Casing Depth (ft) : 1,158	Cement Density (lb/gal) : 13.1
Total Depth (ft) : 1200	Cement Yield (cuft) : 1.69
Open Hole Diameter (in) : 13.50	Gallons Per Sack 8.64
Conductor Length (ft) : 100	% Excess 33%
Conductor ID : 16	
Shoe Joint Length (ft) : 39	Tail
Landing Joint (ft) : 35	Cement Name: bfn III 3%
	Cement Density (lb/gal) : 15.2
	Cement Yield (cuft) : 1.27
	Gallons Per Sack: 5.89
	% Excess: 0%
Sacks of Tail Requested 100	Fluid Ahead (bbls) 30.0
HOC Tail (ft): 0	H2O Wash Up (bbls) 20.0
One or the other, cannot have quantity in both	
Max Rate:	Spacer Ahead Makeup
Max Pressure:	

Casing ID 8.921	Casing Grade J-55 only used
Lead Calculated Results	Tail Calculated Results
HOC of Lead 797.78 ft	Tail Cement Volume In Ann 127.00 cuft
Casing Depth - HOC Tail	(HOC Tail) X (OH Ann)
Volume of Lead Cement 389.90 cuft	Total Volume of Tail Cement 110.07 Cuft
HOC of Lead X Open Hole Ann	(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
Volume of Conductor 89.10 cuft	bbls of Tail Cement 22.62 bbls
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
Total Volume of Lead Cement 478.99 cuft	HOC Tail 225.22 ft
(cuft of Lead Cement) + (Cuft of Conductor)	(Tail Cement Volume) ÷ (OH Ann)
bbls of Lead Cement 113.46 bbls	Sacks of Tail Cement 100.00 sk
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	(Total Volume of Tail Cement) ÷ (Cement Yield)
Sacks of Lead Cement 376.96 sk	bbls of Tail Mix Water 14.02 bbls
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	(Sacks of Tail Cement X Gallons Per Sack) ÷ 42
bbls of Lead Mix Water 77.55 bbls	Pressure of cement in annulus
(Sacks Needed) X (Gallons Per Sack) ÷ 42	Hydrostatic Pressure 788.02 PSI
Displacement 89.20 bbls	
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	Collapse PSI: 2020.00 psi
Total Water Needed: 127.55 bbls	Burst PSI: 3520.00 psi

Authorization To Proceed



Bison Oil Well Cementing
Two Cement Surface Pipe

Customer
Well Name

Noble Energy
oscar y10-75-1hc

Date
INVOICE #
LOCATION
FOREMAN

10/12/2014
12184
Weld
kirk

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	253am 210am 332am	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	411am	10	0			0			0			0		
MIRU		10	414am	80	10			10			10			10		
CIRCULATE		20	416am	80	20			20			20			20		
Drop Plug		30	418am	80	30			30			30			30		
411 am		40	420am	120	40			40			40			40		
		50	422am	170	50			50			50			50		
M & P		60	424am	240	60			60			60			60		
Time		70	426am	310	70			70			70			70		
339 am	Sacks	80	428am	350	80			80			80			80		
407 am stop		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
		130			130			130			130			130		
		140			140			140			140			140		
		150			150			150			150			150		
Lead mixed bbls	77.5															
Lead % Excess	33%															
Lead Sacks	377															

Notes:

BUMPED PLUG at 433 am 510 PSI 113.4 bbls slurry lead 22.6 bbls slurry tail.

casing test 1000 psi 15 min

Tail mixed bbls 14

Tail % Excess 0%

Tail Sacks 100

Total Sacks 477

bbl Returns 15

X *mmQ* *head*

X *WSS*

Title

X *10-12-14*

Date

Work Performed