



BISON

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

Invoice

Date	Invoice #
11/18/2013	12585

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	Timbro State LD16-68-11HN	Net 30	Surface Pipe		
Item	Description	Qty	U/M	Rate	Amount
Pump surface	PUMP Charge-surface pipe	1		1,400.00	1,400.00
Discount 15%	Discount 15%			-15.00%	-210.00
MILEAGE	Mileage charge	480		1.50	720.00
Discount 15%	Discount 15%			-15.00%	-108.00
Data Acquisition ...	Data Acquisition Charge	1		225.00	225.00
Discount 15%	Discount 15%			-15.00%	-33.75
	Subtotal of Services				1,993.25
BFN III Summer ...	BFN III Blend	516	Sack	19.10	9,741.00T
Discount 15%	Discount 15%			-15.00%	-1,461.15
KCL Mud Flush	(BHS 117)	4	qt	7.50	30.00T
Discount 15%	Discount 15%			-15.00%	-4.50
Dye - 4880	Dye (Hot Pink 4880)	16	oz	15.00	240.00T
Discount 15%	Discount 15%			-15.00%	-36.00
	Subtotal of Materials				8,509.35
					10,502.60

Please Remit Payment To:

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

Subtotal	\$10,502.60
Sales Tax (2.9%)	\$246.77
Total	\$10,749.37
Balance Due	\$10,749.37



Bison Oil Well Cementing Tail & Lead

Customer: Noble Energy
Well Name: Timbro State LD16-68-1HN

Date: 11/18/2013
Invoice #: 12585
API#: 05-123-37493
Foreman: Calvin Reimers

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

Consultant: Dave / Justin *Mif*
Rig Name & Number: H&P 273
Distance To Location: 80 Miles
Units On Location: 3106/3203
Time Requested: 145am
Time Arrived On Location: 145am
Time Left Location:

WELL DATA

Casing Size (in) 9.625
Casing Weight (lb) 36
Casing Depth (ft.) 1,232
Total Depth (ft) 1265
Open Hole Diameter (in) 13.75
Conductor Length (ft) 100
Conductor ID 16
Shoe Joint Length (ft) 45
Landing Joint (ft) 29

Sacks of Tail Requested 100
HOC Tail (ft): 0

One or the other, cannot have quantity in both

Max Rate: 7
Max Pressure: 2500

Cement Data

Lead

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

Tail

Cement Name:
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 0%

Fluid Ahead (bbls) 94.0
H2O Wash Up (bbls) 20.0

Spacer Ahead Makeup

40bbls H2O With KCL+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J 55 only used

Lead Calculated Results

HOC of Lead 898.57 ft
Casing Depth - HOC Tail
Volume of Lead Cement 472.55 cuft
HOC of Lead X Open Hole Ann
Volume of Conductor 89.10 cuft
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
Total Volume of Lead Cement 561.64 cuft
(cuft of Lead Cement) + (Cuft of Conductor)
bbls of Lead Cement 125.04 bbls
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)
Sacks of Lead Cement 415.42 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
bbls of Lead Mix Water 85.46 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42
Displacement 93.97 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)
Total Water Needed: 199.43 bbls

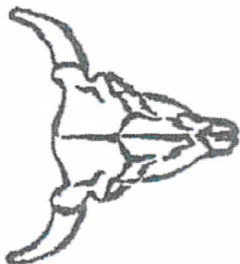
Tail Calculated Results

Tail Cement Volume in Ann 127.00 cuft
(HOC Tail) X (OH Ann)
Total Volume of Tail Cement 107.42 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 204.26 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 838.26 PSI
Collapse PSI: 2020.00 psi
Burst PSI: 3520.00 psi

X *[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
Two Cement Surface Pipe

Date 11/18/2013
INVOICE # 12585
LOCATION Weld
FOREMAN Calvin Reimers

Customer Noble Energy
Well Name Timbro State LD16-68-1HN

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	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	1040am	40	0			0			0			0		
MIRU	10	1043am	80	10			10			10			10		
CIRCULATE	20	1045am	80	20			20			20			20		
Drop Plug	30	1047am	80	30			30			30			30		
	40	1048am	120	40			40			40			40		
	50	1050am	180	50			50			50			50		
	60	1052am	260	60			60			60			60		
M & P	70	1053am	330	70			70			70			70		
Time	80	1055am	390	80			80			80			80		
1008am	90	1057am	400	90			90			90			90		
1036am	100	1059am	350	100			100			100			100		
	110	Bump	520	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 85.57
Lead % Excess 25%
Lead Sacks 416

Notes:

Tail mixed bbls	14.02	Float Held
Tail % Excess	0%	
Tail Sacks	100	
Total Sacks	516	
bbl Returns	20	

X *Don* Title X *CO-MAN* Date X 11-18-2013

Work Performed