



BISON

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

Invoice

Date	Invoice #
10/9/2014	45049

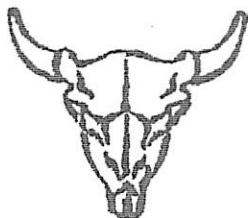
Bill To
Noble Energy Inc. Attn: Accounting 1625 Broadway Ste 2000 Denver, CO 80202

Location	Well Name & No.	Terms	Job Type		
Weld CO	Rohn State LD10-63HN	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	480			
Discount 15%	Discount 15%				
Data Acquisition ...	Data Acquisition Charge	1			
Discount 15%	Discount 15%				
HOURS	Wait Time	3			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	467	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 Due



**Bison Oil Well Cementing
Tail & Lead**

Customer: NOBLE
Well Name: ROHN STATE LD10-63HN

Date: 10/8/2014
Invoice #: 45049
API#: 05-123-37617
Foreman: JASON KELEHER

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

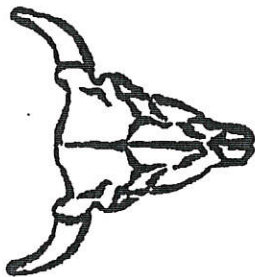
Consultant: MIKE P
Rig Name & Number: H&P 273
Distance To Location: 80
Units On Location: 3
Time Requested: 2030
Time Arrived On Location: 2000
Time Left Location: 330

WELL DATA	Cement Data
<p>Casing Size (in) : 9.625 Casing Weight (lb) : 36 Casing Depth (ft) : 1,211 Total Depth (ft) : 1245 Open Hole Diameter (in) : 13.50 Conductor Length (ft) : 100 Conductor ID : 15.25 Shoe Joint Length (ft) : 45 Landing Joint (ft) : 29</p> <p>Sacks of Tail Requested : 100 HOC Tail (ft): One or the other, cannot have quantity in both</p> <p>Max Rate: 7 Max Pressure: 2000</p>	<p>Lead Cement Name: BFN III Cement Density (lb/gal) : 13.1 Cement Yield (cuft) : 1.69 Gallons Per Sack : 8.64 % Excess : 25%</p> <p>Tail Cement Name: BFN III Cement Density (lb/gal) : 15.2 Cement Yield (cuft) : 1.27 Gallons Per Sack: 5.89 % Excess:</p> <p>Fluid Ahead (bbls) : 40.0 H2O Wash Up (bbls) : 20.0</p> <p>Spacer Ahead Makeup 40 BBL WATER W/KCL, 2ND 10 W/DYE</p>

Casing ID 8.921	Casing Grade J-55 only used
Lead Calculated Results HOC of Lead : 862.19 ft Casing Depth - HOC Tail Volume of Lead Cement : 421.38 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 : 497.69 cuft (cuft of Lead Cement) + (Cuft of Conductor) bbls of Lead Cement : 110.62 bbls (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess) Sacks of Lead Cement : 367.53 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement) bbls of Lead Mix Water : 75.61 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42 Displacement : 92.37 bbls (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length) Total Water Needed: 242.00 bbls	Tail Calculated Results Tail Cement Volume In Ann : 127.00 cuft (HOC Tail) X (OH Ann) Total Volume of Tail Cement : 107.43 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 : 219.81 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 : 824.09 PSI Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi

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**

Customer
Well Name

NOBLE
ROHN STATE LD10-63HN

Date
INVOICE #
LOCATION
FOREMAN

10/8/2014
45049
Weld
JASON KELEHER

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	110 1230 124	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	202	0	0			0			0			0		
MIRU		10	205	20	10			10			10			10		
CIRCULATE		20	208	40	20			20			20			20		
Drop Plug		30	210	70	30			30			30			30		
		40	212	140	40			40			40			40		
		50	214	190	50			50			50			50		
M & P		60	216	270	60			60			60			60		
Time		70	218	330	70			70			70			70		
0134-0154	Sacks	80	220	390	80			80			80			80		
0154-0159		90	223	360	90			90			90			90		
		100	225	360	100			100			100			100		
		110	BUMP	880	110			110			110			110		
		120			120			120			120			120		
Lead mixed bbls	75.5	130			130			130			130			130		
Lead % Excess	25%	140			140			140			140			140		
Lead Sacks	367	150			150			150			150			150		

Notes:

Tail mixed bbls	14.02	PERFORMED PRESSURE TEST TO 1500 PSI AT 0121, PUMPED 40 BBL WATER WITH DYE IN THE 2ND 10 AT 0124, MIXED AND PUMPED 367 SKS AT 13.1,
Tail % Excess	0%	110.5 BBLs AT 0134, MIXED AND PUMPED 100 SKS AT 15.2, 22.6 BBL AT 0154, SHUT DOWN AT 0159, DROPPED PLUG AT 0202, STARTED
Tail Sacks	100	DISPLACEMENT AT 0202, LANDED PLUG AT 360 PSI AT 0225 AND PRESSURE UP 880 PSI AND HELD FOR 2 MINUTES, RELEASED PRESSURE AND GOT
		.5 BBLs BACK

Total Sacks	467
Water Temp	60
bbl Returns	23

X	22	X	WJ	X	
Work Performed	Title	Date			