



BISON

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

Invoice

Date	Invoice #
6/22/2014	12074a

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	Eagle E14-64-IHN	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	321	Sack		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	5	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 Single Cement Surface Pipe

Date: 6/23/2014

Invoice # 12074

API# 05-123-38097

Foreman: JASON

Customer: NOBLE

Well Name: EAGLE E14-64-1HN

County: Weld County

State: Colorado

Sec: 14

Twp: 6N

Range: 65W

Consultant: JERRY

Rig Name & Number: H&P 330

Distance To Location: 19

Units On Location: 4024-3106, 4022-3205

Time Requested: 2330

Time Arrived On Location: 2300

Time Left Location: 300

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 607
Total Depth (ft) : 647
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 15.25
Shoe Joint Length (ft) : 46
Landing Joint (ft) : 30

Max Rate: 7
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 17%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 10.0
Fluid Ahead (bbls): 45.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
45 BBL H2O+KCL+DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.86 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)
cuft of Conductor 76.31 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)
cuft of Casing 311.95 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 408.12 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 74.1 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)
Sacks Needed 321 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 45.07 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.71 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 479.29 PSI

Pressure of the fluids inside casing

Displacement: 242.00 psi

Shoe Joint: 36.12 psi

Total 278.12 psi

Differential Pressure: 201.16 psi

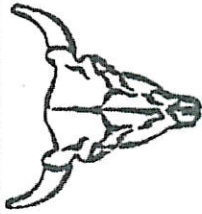
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 155.77 bbls

X
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
Single Cement Surface Pipe

INVOICE # 12074
LOCATION Weld County
FOREMAN JASON
Date 6/23/2014

Customer NOBLE
Well Name EAGLE E14-64-1HN

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	45	Displace 1		Displace 2		Displace 3		Displace 4		Displace 5	
		BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	Time
Safety Meeting	5	0	141	0	0			0			
MIRU		10	143	60	10			10			
CIRCULATE		20	145	130	20			20			
Drop Plug		30	147	250	30			30			
		40	149	270	40			40			
M & P		50	152	240	50			50			
Time		60	BUMP	500	60			60			
0120-0137		70			70			70			
		80			80			80			
		90			90			90			
		100			100			100			
		110			110			110			
% Excess	17.8%	120			120			120			
Mixed bbls	45	130			130			130			
Total Sacks	321	140			140			140			
bbl Returns	10	150			150			150			
Water Temp	73										

Notes:

The day

PUMPED 50 BBL H2O AHEAD, 2ND 10 WITH DYE, MIX AND PUMP 321 SKS AT 15.2, 74.1 BBLs OF SLURRY, PERFORMED CASING TEST 1000 PSI FOR 15

MINUTES, RELEASE PRESSURE AND .5 BBLs BACK

X *[Signature]*
Work Performed

X *[Signature]*
Title

X 6/23/14
Date