



BISON

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

Invoice

Date	Invoice #
8/24/2014	35023

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

Location	Well Name & No.	Terms	Job Type		
Weld CO	Heartland C30-79-1HN	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	PSI Test	1			
	Subtotal of Services				
BFN III Summer ...	BFN III Blend	335	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:

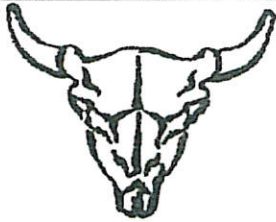
Bison Oil Well Cementing, Inc.
P.O. Box 29671
Thornton, CO 80229

Subtotal

Sales Tax

Total

Balance Due



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

35023

FIELD INVOICE

WELL NO. AND FARM		COUNTY	STATE	DATE	Contractor
heartland c30-79-1hn		Weld	Colorado	8/24/2014	pd 828
CHARGE TO		WELL LOCATION			
Noble Energy Inc.		Section	TWP	RANGE	
		25	4n	65w	
Attn: Accounting		DELIVERED TO		LOCATION 1	CODE
1625 Broadway Ste 2000		49-40		shop	
Denver, CO 80202		SHIPPED VIA		LOCATION 2	CODE
		4030-3103/4019-3213		49-40	
		TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
		SURFACE		shop	
				WELL TYPE	CODE
				gas	
ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	AMOUNT
PUMP CHARGE					
SURFACE		1	ea	\$ 1,400.00	\$ 1,400.00
MILLEAGE CHARGE					
Pickup	\$1.50 per Mile	360	ea	\$ 1.50	\$ 540.00
CEMENT CHARGE:					
BFN III	RIG NAME & NUMBER PD 828	335	sack	\$ 19.60	\$ 6,566.00
	WELL NAME & NUMBER Heartland C30-79-1HN				
ADDITIVES CHARGE:					
Red Dye	AFE NUMBER 200371	16	oz	\$ 15.00	\$ 240.00
KCL	TASK NAME (W/O PAA) Dye	5	qts	\$ 7.50	\$ 37.50
FLOAT EQUIPMENT:					
	320,10.0007				
	97067/100				
	FIELD APPROVAL DATE Erik Cousins 8-24-14				
	ROUTE TO APPROVER Bry Dear				
OTHER CHARGES:					
PSI Test	MAIL TO: NOBLE ENERGY INC. ATTN: ACCOUNTS PAYABLE 1625 BROADWAY, SUITE 2200 DENVER, CO 80202	1	ea	\$ 500.00	\$ 500.00
DATA ACQUISITION FEE	NO INVOICE WILL BE PAID W/O ALL ATTACHED SIGNED FIELD TICKETS	1	ea	\$ 225.00	\$ 225.00

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%.

SUB TOTAL	\$ 9,508.50
TAX 2.90%	\$ 198.46
TOTAL	\$ 9,706.96

SUBJECT TO CORRECTION

Erik K Cousins
Customer or Agent

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 hereof which include the release and indemnity.



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/23/2014
Invoice #: 35023
API#:
Foreman: Kirk Kallhoff

Customer: Noble Energy Inc.

Well Name: heartland c30-79-1hn

County: Weld
State: Colorado
Sec: 25
Twp: 4n
Range: 65w

Consultant: bo
Rig Name & Number: pd 828
Distance To Location: 15
Units On Location: 4030-3103/4019-3213
Time Requested: 930pm
Time Arrived On Location: 830pm
Time Left Location: 2:15pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 687
Total Depth (ft) : 717
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 20

Max Rate:
Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 50.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.66 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 89.10 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 401.30 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 509.06 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 90.66 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 401 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 56.21 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 51.33 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 542.46 PSI

Pressure of the fluids inside casing

Displacement: 277.68 psi

Shoe Joint: 33.95 psi

Total 311.63 psi

Differential Pressure: 230.82 psi

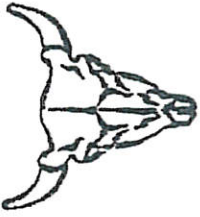
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 177.55 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 # 35023
LOCATION Weld
FOREMAN Kirk Kallhoff
Date 8/24/2014

Customer Noble Energy Inc.
Well Name heartland c30-79-1hn

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI
Safety Meeting	1204am														
MIRU	1136am														
CIRCULATE	1235am														
Drop Plug															
113 am															
M & P															
Time	Sacks														
1246 am	335														
110 am stop															
% Excess	9%														
Mixed bbls	47														
Total Sacks	335														
bbl Returns	13														
Water Temp															

Notes:

bumped plug at 130 am 440 psi

75.7 bbls slurry

casing test 1500 psi 15 min

X Eric K. Casper
Work Performed

X W.S.S.
Title

X 8-24-14
Date