



BISON

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

Invoice

Date	Invoice #
4/25/2014	12185

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

WR AA35-62-1 B4NC

Location	Well Name & No.	Terms	Job Type		
Weld CO	RHL-11 PAD	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	328	Sack		
Discount 15%	Discount 15%				
KCL Mud Flush	(BHS 117)	4	qt		
Discount 15%	Discount 15%				
Dye - 4880	Dye (Hot Pink 4880)	10	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



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/25/2014
Invoice # 12185
API#
Foreman: kirk

Customer: noble

Well Name: wells ranch aa 35-62-1bhc

County: weld
State: Colorado

Sec: 36
Twp: 6n
Range: 63w

Consultant: robert
Rig Name & Number: h&p 277
Distance To Location:
Units On Location: 3104-3211
Time Requested: 4:00 am
Time Arrived On Location: 4:30 am
Time Left Location: 7:00 am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 599
Total Depth (ft) : 634
Open Hole Diameter (in.) : 13.75
Conductor Length (ft) : 100
Conductor ID : 15.5
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 28

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): 40.0
H2O Wash Up (bbls): 15.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.23 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 80.51 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 262.42 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 361.15 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 83.62 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 370 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 51.84 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.23 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 472.97 PSI

Pressure of the fluids inside casing

Displacement: 240.17 psi

Shoe Joint: 33.16 psi

Total 273.33 psi

Differential Pressure: 199.64 psi

Collapse PSI: #N/A psi

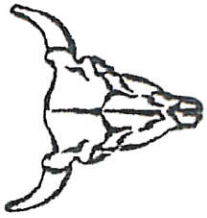
Burst PSI: #N/A psi

Total Water Needed: 152.07 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 # 12185
LOCATION weld
FOREMAN kirk
Date 4/25/2014

Customer noble
Well Name wells ranch aa 35-62-1bhnc

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	457am														
MIRU	419am														
CIRCULATE	517am														
Drop Plug															
543 am															
M & P															
Time															
524 am															
539 am stop															
% Excess	15%														
Mixed bbls	46														
Total Sacks	328														
bbl Returns	12														
Water Temp															

Notes:

bumped plug at 555 am 400 psi 74.1 bbls slurry

casing test 1000 psi for 15 min

X *[Signature]*
Work Performed

X WSS
Title

X 4-25-14
Date