



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

80453

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor	
Wells Ranch AE 32-685	Weld	Colorado	10/11/2015	H&P 343	
CHARGE TO	WELL LOCATION				
Noble Energy Inc.	Section	TWP	RANGE		
Attn: Accounting	32	6N	62W		
1625 Broadway Ste 2000	DELIVERED TO		LOCATION 1	CODE	
Denver, CO 80202	Wells Ranch		Shop		
	SHIPPED VIA		LOCATION 2	CODE	
	4023-3104/4033-3212		Wells Ranch		
	TYPE AND PURPOSE OF JOB		LOCATION 3	CODE	
	SURFACE		Shop		
			WELL TYPE	CODE	
			Oil		
ITEM	DESCRIPTION	QTY.	MEAS.	UNIT PRICE	AMOUNT
PUMP CHARGE					\$ -
SURFACE		1		\$ 1,400.00	\$ 1,400.00
MILLEAGE CHARGE					\$ -
Pickup	\$1.50 per Mile	120		\$ 1.50	\$ 180.00
Truck/Equipment	\$1.50 per Mile	120		\$ 1.50	\$ 180.00
Truck/Equipment	\$1.50 per Mile	120		\$ 1.50	\$ 180.00
CEMENT CHARGE:					\$ -
BFN III		283		\$ 19.60	\$ 5,546.80
ADDITIVES CHARGE:					\$ -
Liquid Dye Rhodamine		16		\$ 15.00	\$ 240.00
KCL		4		\$ 7.50	\$ 30.00
Calcium Chloride				\$ 26.00	\$ -
Salt				\$ 12.00	\$ -
FLOAT EQUIPMENT:					\$ -
OTHER CHARGES:					\$ -
DATA ACQUISITION FEE		1		\$ 225.00	\$ 225.00
Winterization				\$ 500.00	\$ -
PSI Test		1		\$ 500.00	\$ 500.00
Wait Time		0.75		\$ 250.00	\$ 187.50

THANKS CALVIN

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 \$ 8,669.30
TAX 2.90% \$ 168.69
TOTAL \$ 8,837.99

SUBJECT TO CORRECTION

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: 10/11/2015
Invoice #: 80453
API#: 05-123-41733
Foreman: Calvin Reimers

Customer: Noble Energy Inc.
Well Name: Wells Ranch AE 32-685

County: Weld
State: Colorado
Sec: 32
Twp: 6N
Range: 62W

Consultant: Josh
Rig Name & Number: H&P 343
Distance To Location: 23 Miles
Units On Location: 4023-3104/4033-3212
Time Requested: 200am
Time Arrived On Location: 1210am
Time Left Location: 645am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 596
Total Depth (ft) : 630
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 41
Landing Joint (ft) : 29

Max Rate: 7
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 30%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 17.0
Fluid Ahead (bbls): 40.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup
40 bbls H2O+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.76 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 315.22 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 422.08 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 75.17 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 283 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 50.45 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.13 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 439.77 PSI

Pressure of the fluids inside casing

Displacement: 239.40 psi

Shoe Joint: 30.19 psi

Total 269.59 psi

Differential Pressure: 170.19 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 145.58 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

Customer
Well Name

Noble Energy Inc.
Wells Ranch AE 32-685

INVOICE #
LOCATION
FOREMAN
Date

80453
Weld
Calvin Reimers
10/11/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

[illegible]

X Cont Surface CS
Work Performed

X WSS
Title

X 10-11-15
Date



Bison Oil Well Cementing Single Cement Surface Pipe

Cementing Customer Satisfaction Survey

Service Date	10/11/2015
Well Name	Wells Ranch AE 32-685
County	Weld
State	Colorado
SEC	32
TWP	6N
RNG	62W

Invoice Number	80453
API #	05-123-41733
Job Type	Single Cement Surface Pipe
Company Name	Noble Energy Inc.

Customer Representative Josh

Supervisor Name Calvin Reimers

Employee Name (Including Supervisor)	Exposure Hours (Per Employee)
Calvin R	6.5
Eric R	6.5
Jason K	6.5

Total Exposure Hours

19.5

Did we encounter any problems on this job?

☐ Yes

☒ No

To Be Completed By Customer

Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
 - 4 - Exceeded Expectation (Provided more than what was required/expected)
 - 3 - Met Expectations (Did what was expected)
 - 2 - Below Expectations (Job problems/failures occurred - *Recovery made)
 - 1 - Poor Performance (Job problems/failures occurred - *Some recovery made)
- *Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING	CATEGORY
4	Personnel -
4	Equipment -
4	Job Design -
4	Product/Material -
4	Health & Safety -
4	Environmental -
4	Timeliness -
4	Condition/Appearance -
4	Communication -

CUSTOMER SATISFACTION RATING

- Did our personnel perform to your satisfaction?
- Did our equipment perform to your satisfaction?
- Did we perform the job to the agreed upon design?
- Did our products and materials perform as you expected?
- Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc.)?
- Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc.)?
- Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
- Did the equipment condition and appearance meet your expectations?
- How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

- Yes ☒ No Did an accident or injury occur?
- Yes ☒ No Did an injury requiring medical treatment occur?
- Yes ☒ No Did a first-aid injury occur?
- Yes ☒ No Did a vehicle accident occur?
- Yes ☒ No Was a post-job safety meeting held?

Please Circle:

- ☒ Yes No Was a pre-job safety meeting held?
- ☒ Yes No Was a job safety analysis completed?
- ☒ Yes No Were emergency services discussed?
- Yes ☒ No Did environmental incident occur?
- Yes ☒ No Did any near misses occur?

Additional Comments:

THE INFORMATION HEREIN IS CORRECT -

X

Customer Representative's Signature

DATE:

10-11-15

Any additional Customer Comments or HSE concerns should be described on the back of this form

SERIES 2000

