

BISON OIL WELL CEMENTING, INC.

1738 Wynkoop St., Ste. 102
Denver, Colorado 80202
Phone: 303-296-3010
Fax: 303-290-8143
E-mail: bisonoil1@qwestoffice.net



SERVICE INVOICE

Nº 12592

| | | | |
|--|---|--------------------------------------|-------------------------|
| WELL NO. AND FARM Cockcroft B11-62-1HN | COUNTY Weld | STATE Colo. | DATE 11-28-13 |
| CHARGE TO Noble | WELL LOCATION SEC. 11 TWP. 5N RANGE 64W | CONTRACTOR H&P Rig 315 | |
| DELIVERED TO WCR 388+55.5 | | LOCATION 1 Shop | CODE |
| SHIPPED VIA 3106/3212 | | LOCATION 2 388+55.5 | CODE |
| TYPE AND PURPOSE OF JOB SURFACE PIPE | | LOCATION 3 Shop | CODE |
| | | WELL TYPE Gas+Oil | CODE |

| PRICE REFERENCE | DESCRIPTION | UNITS | | UNIT PRICE | AMOUNT |
|-----------------|---|-------|-------|------------|--------|
| | | QTY. | MEAS. | | |
| | Pump Charge | 1 | EA. | | |
| | BFN JIL 3% BCCA-1, 25 1/2" SK BFLA-1 | 351 | SK | | |
| | BCLY-1 | 5 | QT. | | |
| | Pink Dye | 16 | OZ. | | |
| | Mileage 150 mile 60 mile min Round Trip | 3 | EA. | | |
| | Data Int. | 1 | EA. | | |
| | Casing Psi Test | 1 | EA. | | |

| | |
|---|---|
| RIG NAME & NUMBER: H&P WELL NAME & NUMBER: Cockcroft B11-62-1HN AFE NUMBER: 136857 TASK (DRL, COAP, WOOD, etc.): DRL EXP. TYPE: ACTG CODE: 011 0017 DOLLAR TOTAL BEING APPLIED: 9646.60 FIELD APPROVAL ROUTE TO APPROVER MAIL TO NOBLE ENERGY ATTN: ACCOUNTS PAYABLE 1625 BROADWAY, SUITE 1100 DENVER, CO 80202 NO INVOICE WILL BE PAID UNTIL ATTACHED SIGNED FIELD T | DATE 11/29/13 TAX REFERENCES 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%.

"TAXES WILL BE ADDED AT CORPORATE OFFICE"

SUBJECT TO CORRECTION

Customer or His 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 side hereof which include the release and indemnity.



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/28/2013
Invoice #: 12592
API#: 05-123-37202-00
Foreman: Calvin Reimers

Customer: Noble
Well Name: Cockroft B11-G2-1HN

County: Weld
State: Colorado
Sec: 11
Twp: 5N
Range: 64W

Consultant: Martin / Mike
Rig Name & Number: H&P 315
Distance To Location: 19 Miles
Units On Location: 3106/3212
Time Requested: 700pm
Time Arrived On Location: 530pm
Time Left Location: 600am

WELL DATA

Casing Size OD (in): 9.6250
Casing Weight (lb): 36
Casing Depth (ft): 603
Total Depth (ft): 632
Open Hole Diameter (in.): 13.75
Conductor Length (ft): 100
Conductor ID: 16
Shoe Joint Length (ft): 43
Landing Joint (ft): 29

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: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 15.0
Fluid Ahead (bbls):
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
Is H2O with KCL+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

1-55 only used

Calculated Results

cuft of Shoe 18.49 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 264.31 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 371.89 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 79.48 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)
Sacks Needed 351 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 49.28 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 45.54 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 475.81 PSI

Pressure of the fluids inside casing

Displacement: 241.47 psi

Shoe Joint: 33.63 psi

Total 275.09 psi

Differential Pressure: 200.72 psi

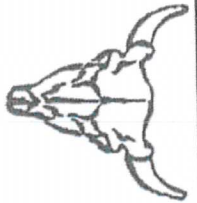
Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 69.28 bbls

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
Cockroft B11-62-1HN

INVOICE #
LOCATION
FOREMAN
Date

12592
Weld
Calvin Reimers
11/28/2013

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 | 400am | | | | | | | | | | | | | | | |
| MIRU | 845pm | | | | | | | | | | | | | | | |
| CIRCULATE | 409am | 0 | 444am | 50 | 0 | | | 0 | | | 0 | | | 0 | | |
| Drop Plug | | 10 | 446am | 160 | 10 | | | 10 | | | 10 | | | 10 | | |
| | | 20 | 447am | 220 | 20 | | | 20 | | | 20 | | | 20 | | |
| | | 30 | 449am | 280 | 30 | | | 30 | | | 30 | | | 30 | | |
| | | 40 | 451am | 300 | 40 | | | 40 | | | 40 | | | 40 | | |
| | | 50 | 454am | 230 | 50 | | | 50 | | | 50 | | | 50 | | |
| M & P | | 60 | 454am | 500 | 60 | | | 60 | | | 60 | | | 60 | | |
| Time | Sacks | 70 | Bump | | 70 | | | 70 | | | 70 | | | 70 | | |
| 420am | 351 | 80 | | | 80 | | | 80 | | | 80 | | | 80 | | |
| 437am | | 90 | | | 90 | | | 90 | | | 90 | | | 90 | | |
| | | 100 | | | 100 | | | 100 | | | 100 | | | 100 | | |
| | | 110 | | | 110 | | | 110 | | | 110 | | | 110 | | |
| | | 120 | | | 120 | | | 120 | | | 120 | | | 120 | | |
| % Excess | 20% | 130 | | | 130 | | | 130 | | | 130 | | | 130 | | |
| Mixed bbls | 49.28 | 140 | | | 140 | | | 140 | | | 140 | | | 140 | | |
| Total Sacks | 351 | 150 | | | 150 | | | 150 | | | 150 | | | 150 | | |
| bbl Returns | 15 | | | | | | | | | | | | | | | |

Notes:

The day

PSI Test 455am

1020 psi to 510am

1010psi Float Held

X *Hand Done*

X *WSS*

X *11/29/13*

Work Performed

Title

Date



Bison Oil Well Cementing Single Cement Surface Pipe

Cementing Customer Satisfaction Survey

| | |
|--------------|---------------------|
| Service Date | 11/28/2013 |
| Well Name | Cockroft B11-62-1HN |
| County | Weld |
| State | Colorado |
| SEC | 11 |
| TWP | 5N |
| RNG | 64W |

| | |
|----------------|----------------------------|
| Invoice Number | 20511 |
| API # | 05-123-37202-00 |
| Job Type | Single Cement Surface Pipe |
| Company Name | Noble |

Customer Representative Martin / Mike

Supervisor Name Calvin Reimers

Employee Name (Including Supervisor)

| |
|----------------|
| Calvin Reimers |
| Pablo S |
| Kurt C |
| |
| |

Exposure Hours (Per Employee)

| |
|----|
| 12 |
| 12 |
| 12 |
| |
| |
| 36 |

Total Exposure Hours

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

| | |
|----------|------------------------|
| <u>5</u> | Personnel - |
| <u>5</u> | Equipment - |
| <u>3</u> | Job Design - |
| <u>5</u> | Product/Material - |
| <u>5</u> | Health & Safety - |
| <u>5</u> | Environmental - |
| <u>5</u> | Timeliness - |
| <u>4</u> | Condition/Appearance - |
| <u>5</u> | 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 m. O'Hara
Customer Representative's Signature

DATE: 11/29/13

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