



# BISON

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

## Invoice

| Date      | Invoice # |
|-----------|-----------|
| 5/19/2014 | 12258     |

| Bill To   |
|---|
| Noble Energy Inc.<br>Attn: Accounting<br>1625 Broadway Ste 2000<br>Denver, CO 80202 |

| Location             | Well Name & No.          | Terms  | Job Type     |      |        |
|----------------------|--------------------------|--------|--------------|------|--------|
| Weld CO              | Resolute E25-63HC        | 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 PSI test          | 1      |              |      |        |
|                      | Subtotal of Services     |        |              |      |        |
| BFN III Summer ...   | BFN III Blend            | 448    | Sack         |      |        |
| Discount 15%         | Discount 15%             |        |              |      |        |
| KCL Mud Flush        | (BHS 117)                | 4      | qt           |      |        |
| Discount 15%         | Discount 15%             |        |              |      |        |
| Dye - 4880           | Dye (Hot Pink 4880)      | 16     | oz           |      |        |
| Discount 15%         | Discount 15%             |        |              |      |        |
| Rubber Plug 9 5/8    | Rubber plug 9 5/8        | 1      |              |      |        |
|                      | 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: 5/19/2014  
Invoice #: 12258  
API#:   
Foreman: monte

Customer: noble  
Well Name: resolute e25-63hc

County: weld  
State: colorado  
Sec: 26  
Twp: 6n  
Range: 65w  
Consultant: devin  
Rig Name & Number: percision 828  
Distance To Location: 20.9  
Units On Location: 4028-3202/4007-3205  
Time Requested: 7:00am  
Time Arrived On Location: 5:00am  
Time Left Location:

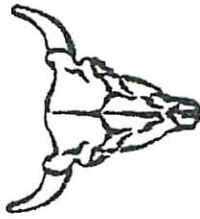
| WELL DATA                        | Cement Data                    |
|----------------------------------|--------------------------------|
| Casing Size OD (in) : 9.625      | Cement Name: BFN III           |
| Casing Weight (lb) : 36.00       | Cement Density (lb/gal) : 15.2 |
| Casing Depth (ft) : 608          | Cement Yield (cuft) : 1.27     |
| Total Depth (ft) : 640           | Gallons Per Sack: 5.89         |
| Open Hole Diameter (in.) : 13.75 | % Excess: 75%                  |
| Conductor Length (ft) : 100      | Displacement Fluid lb/gal: 8.3 |
| Conductor ID : 15.6              | BBL to Pit: 0.0                |
| Shoe Joint Length (ft) : 45      | Fluid Ahead (bbls): 40.0       |
| Landing Joint (ft) : 23          | H2O Wash Up (bbls): 20.0       |
| Max Rate:                        | Spacer Ahead Makeup            |
| Max Pressure:                    | 10 fresh 10 dye 20 fresh       |

|   |               |   |   |
|---|---------------|---|---|
| Casing ID   | 8.921         | Casing Grade  | J-55 only used                              |
| <b>Calculated Results</b>   |               | <b>Displacement: 45.30 bbls</b><br>(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint) |   |
| <b>cuft of Shoe</b>   | <b>19.53</b>  | <b>cuft</b>   | <b>Pressure of cement in annulus</b>        |
| (Casing ID Squared) X (.005454) X (Shoe Joint ft)   |               |   | <b>Hydrostatic Pressure: 480.08 PSI</b>     |
| <b>cuft of Conductor</b>  | <b>82.20</b>  | <b>cuft</b>   | <b>Pressure of the fluids inside casing</b> |
| (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)    |               |   | <b>Displacement: 242.75 psi</b>             |
| <b>cuft of Casing</b>   | <b>467.51</b> | <b>cuft</b>   | <b>Shoe Joint: 35.53 psi</b>                |
| (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length) |               |   | <b>Total 278.29 psi</b>                     |
| <b>Total Slurry Volume</b>  | <b>569.25</b> | <b>cuft</b>   | <b>Differential Pressure: 201.79 psi</b>    |
| (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)                                     |               |   | <b>Collapse PSI: 2020.00 psi</b>            |
| <b>bbls of Slurry</b>   | <b>101.38</b> | <b>bbls</b>   | <b>Burst PSI: 3520.00 psi</b>               |
| (Total Slurry Volume) X (.1781)   |               |   | <b>Total Water Needed: 168.16 bbls</b>      |
| <b>Sacks Needed</b>   | <b>448</b>    | <b>sk</b>   |   |
| (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)                                  |               |   |   |
| <b>Mix Water</b>  | <b>62.86</b>  | <b>bbls</b>   |   |
| (Sacks Needed) X (Gallons Per Sack) ÷ 42  |               |   |   |

X 1a Bowman  
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  
resolute e25-63hc

INVOICE #  
LOCATION  
FOREMAN  
Date

12258  
weld  
monte  
5/19/2014

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 | 6:45       |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| MIRU           | 6:10       |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| CIRCULATE      | 7:08       |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| Drop Plug      |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| 9:05           |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
|                |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
|                |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| M & P          |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| Time           | Sacks      |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| 7:20-7:43      | 448        |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
|                |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
|                |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
|                |            |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| % Excess       | 0%         |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| Mixed bbls     | 62.86      |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| Total Sacks    | 448        |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| bbl Returns    | 35         |      |     |            |      |     |            |      |     |            |      |     |            |      |     |
| Water Temp     | 58         |      |     |            |      |     |            |      |     |            |      |     |            |      |     |

Notes:

safety meeting, miru, pressure test per company man, mix and pump 448 sks cement at 15.2 at 75% excess, drop plug and displace 45.3 bbls h2o

bump plug at 7:58am at 530 psi 35 bbls back

*Ken Bonner*

X *WSS*

X *5/19/14*  
Date

Work Performed