



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

80547

FIELD INVOICE

| WELL NO. AND FARM | | COUNTY | STATE | DATE | Contractor |
|--------------------------------------|----------------------|-------------------------|----------|------------|------------|
| cook 27n-16hz | | Weld | Colorado | 10/19/2015 | noble 2 |
| CHARGE TO | | WELL LOCATION | | | |
| Anadarko Petroleum Corporation | | Section | TWP | RANGE | |
| PO Box 4995 | | 33 | 2n | 66w | |
| The Woodlands, TX 77387 | | DELIVERED TO | | LOCATION 1 | CODE |
| | | I-25-38 | | shop | |
| | | SHIPPED VIA | | LOCATION 2 | CODE |
| | | 4029-3106/4035-3203 | | I-25 - 38 | |
| | | TYPE AND PURPOSE OF JOB | | LOCATION 3 | CODE |
| | | SURFACE | | shop | |
| | | | | WELL TYPE | CODE |
| | | | | gas | |
| ITEM | DESCRIPTION | UNITS | | UNIT PRICE | AMOUNT |
| | | QTY. | MEAS. | | |
| PUMP CHARGE | | | | | |
| | SURFACE | 1 | ea | | \$ - |
| MILLEAGE CHARGE | | | | | |
| | Pickup | 60 | mile | | |
| | Truck/Equipment | 60 | mile | | |
| | Truck/Equipment | 60 | mile | | |
| | Truck/Equipment | 60 | mile | | |
| CEMENT CHARGE: | | | | | |
| | BFN III | 757 | sacks | | |
| ADDITIVES CHARGE: | | | | | |
| | KCL | 3 | qt | | |
| | Liquid Dye Rhodamine | 15 | oz | | |
| | Sugar | | lbs | | |
| FLOAT EQUIPMENT: | | | | | |
| COOK 27N-16HZ NOBLE 2 | | | | | |
| FRANK KINNEY USER ID: CU0741 | | | | | |
| CONSULTANT: <i>BBW / Bryan Brown</i> | | | | | |
| AFE# 2111712 DATE: <i>10/19/15</i> | | | | | |
| GL CODE: 800 <i>120910</i> | | | | | |
| OTHER CHARGES: | | | | | |
| | DATA ACQUISITION FEE | 1 | ea | | |
| | Containment | 1 | ea | | |

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%.

TAX

SUBJECT TO CORRECTION

BBW / Bryan Brown
Customer or Agent

[Signature]
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: 10/19/2015
Invoice #: 80547
API#
Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: cook 27n-16hz

County: Weld
State: Colorado
Sec: 33
Twp: 2n
Range: 66w
Consultant: hayden
Rig Name & Number: noble 2
Distance To Location: 30
Units On Location: 4029-3106/4035-3203
Time Requested: 430 am
Time Arrived On Location: 300 am
Time Left Location: 7:00 am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,881
Total Depth (ft) : 1891
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 15.25
Shoe Joint Length (ft) : 41
Landing Joint (ft) : 10

Max Rate:
Max Pressure:

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 20%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.80 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 30.53 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 1079.70 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1128.02 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 200.90 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 757 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 134.83 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 143.02 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1387.61 PSI

Pressure of the fluids inside casing

Displacement: 793.37 psi

Shoe Joint: 30.25 psi

Total 823.62 psi

Differential Pressure: 563.99 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 317.85 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.

X 10-19-15
Date

M/D TOTCO 2000 SERIES

