



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #

80605

FIELD INVOICE

| | | | | |
|--------------------------------|-------------------------|----------|------------|------------|
| WELL NO. AND FARM | COUNTY | STATE | DATE | Contractor |
| jzm 30n-3hz | Weld | Colorado | 10/7/2016 | extrem 22 |
| CHARGE TO | WELL LOCATION | | | |
| Anadarko Petroleum Corporation | Section | TWP | RANGE | |
| PO Box 4995 | 10 | 1n | 67w | |
| The Woodlands, TX 77387 | DELIVERED TO | | LOCATION 1 | CODE |
| | 19-10 | | shop | |
| | SHIPPED VIA | | LOCATION 2 | CODE |
| | 3106-3213-3215 | | 19-10 | |
| | TYPE AND PURPOSE OF JOB | | LOCATION 3 | CODE |
| | SURFACE | | shop | |
| | | | WELL TYPE | CODE |
| | | | gas | |

| ITEM | DESCRIPTION | UNITS | |
|---|-------------|-------|-------|
| | | QTY. | MEAS. |
| PUMP CHARGE | | | |
| SURFACE | | 1 | |
| MILLEAGE CHARGE | | | |
| Pickup | | 120 | |
| Truck/Equipment | | 360 | |
| CEMENT CHARGE: | | | |
| BFN III | | 828 | |
| ADDITIVES CHARGE: | | | |
| Sugar | | 100 | lbs |
| FLOAT EQUIPMENT: | | | |
| JZM 30N-3HZ RIG X22 KIETH J. / TRAVIS B. USER ID CU0741 CONSULTANT NAME: <i>Luke Rains</i> GL CODE: <i>80012090</i> AFE# 2116025-DRL DATE: _____ SIGNATURE: <i>Luke Rains</i> | | | |
| OTHER CHARGES: | | | |
| DATA ACQUISITION FEE | | 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%.

SUBJECT TO CORRECTION

Luke Rains
 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 riverside hereof which include the release and indemnity.



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 11/24/2016

Invoice #: 80605

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: jzm 30n-3hz

County: Weld

State: Colorado

Sec: 10

Twp: 1n

Range: 67w

Consultant: luke

Rig Name & Number: extream 22

Distance To Location: 35

Units On Location: 310,632,053,215

Time Requested: 1200 am

Time Arrived On Location: 1030 pm

Time Left Location: 4:30 PM

| WELL DATA | Cement Data |
|----------------------------------|--------------------------------|
| Casing Size OD (in) : 9.625 | Cement Name: BFN III |
| Casing Weight (lb) : 36.00 | Cement Density (lb/gal) : 14.2 |
| Casing Depth (ft.) : 2,207 | Cement Yield (cuft) : 1.48 |
| Total Depth (ft) : 2243 | Gallons Per Sack: 7.40 |
| Open Hole Diameter (in.) : 13.50 | % Excess: 10% |
| Conductor Length (ft) : 80 | Displacement Fluid lb/gal: 8.3 |
| Conductor ID : 15.5 | Fluid Ahead (bbls): 30.0 |
| Shoe Joint Length (ft) : 40 | H2O Wash Up (bbls): 10.0 |
| Landing Joint (ft) : 25 | Spacer Ahead Makeup: h2o |
| Max Rate: 7 | |
| Max Pressure: 1500 | |

| Calculated Results | Pressure of cement in annulus |
|---|---|
| Displacement: 169.46 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint) | Hydrostatic Pressure: 1628.10 PSI |
| cuft of Shoe 17.36 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft) | Pressure of the fluids inside casing |
| cuft of Conductor 64.40 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft) | Displacement: 934.37 psi |
| cuft of Casing 1143.48 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length) | Shoe Joint: 29.51 psi |
| Total Slurry Volume 1225.25 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing) | Total 963.88 psi |
| bbls of Slurry 218.22 bbls (Total Slurry Volume) X (.1781) | Differential Pressure: 664.23 psi |
| Sacks Needed 828 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement) | Collapse PSI: 2020.00 psi |
| Mix Water 145.86 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42 | Burst PSI: 3520.00 psi |
| | Total Water Needed: 355.32 bbls |

X Luke Paris
Authorization To Proceed

SERIES 2000

