



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #
 80550

FIELD INVOICE

WELL NO. AND FARM whisper rock 1c-25hz	COUNTY Weld	STATE Colorado	DATE 10/25/2015	Contractor noble 2
CHARGE TO Anadarko Petroleum Corporation PO Box 4995 The Woodlands, TX 77387	WELL LOCATION			
	Section 26	TWP 4n	RANGE 68w	
	DELIVERED TO I-25-38		LOCATION 1 shop	CODE
	SHIPPED VIA 4029-3106/4035-3203		LOCATION 2 I-25 - 38	CODE
	TYPE AND PURPOSE OF JOB SURFACE		LOCATION 3 shop	CODE
			WELL TYPE gas	CODE

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		752	sacks		
ADDITIVES CHARGE:					
KCL		3	qt		
Liquid Dye Rhodamine		15	oz		
Sugar			lbs		
FLOAT EQUIPMENT:					
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

WHISPER ROCK 1C-25HZ NOBLE 2
 FRANK KINNEY USER ID: CU0741
 CONSULTANT: Sean Giddings
 AFE#2104406 DATE: 10/25/15
 GL CODE: 800/2090

SUBJECT TO CORRECTION

Sean Giddings
 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: 10/25/2015
 Invoice #: 80550
 API#:
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
 Well Name: whisper rock 1c-25hz

County: Weld
 State: Colorado
 Sec: 26
 Twp: 4n
 Range: 68w
 Consultant: sean
 Rig Name & Number: noble 2
 Distance To Location: 30
 Units On Location: 4029-3106/4035-3203
 Time Requested: 1030 am
 Time Arrived On Location: 900 am
 Time Left Location: 12:30pm

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.) : 1,870	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1880	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 20%
Conductor Length (ft) : 40	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit:
Shoe Joint Length (ft) : 39	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 10	H2O Wash Up (bbls): 10.0
Max Rate: 250 g	Spacer Ahead Makeup
Max Pressure: 1250	

Calculated Results	Pressure of cement in annulus
cuft of Shoe 16.93 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 142.32 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 30.53 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Hydrostatic Pressure: 1379.50 PSI
cuft of Casing 1073.25 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 1120.70 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 789.49 psi
bbls of Slurry 199.60 bbls (Total Slurry Volume) X (.1781)	Shoe Joint: 28.77 psi
Sacks Needed 752 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total 818.26 psi
Mix Water 133.95 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: 561.24 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 316.28 bbls

X Sean Kelly
 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.

M/D TOTCO 2000 SERIES

