



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #
 80552

FIELD INVOICE

WELL NO. AND FARM whisper rock 2c-25hz	COUNTY Weld	STATE Colorado	DATE 10/28/2015	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		707	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		

WHISPER ROCK 2C-25HZ NOBLE 2
 If this is to an Agent: FRANK KINNEY USER ID: CU0741
 CONSULTANT: *[Signature]*
 AFE#2104410 DATE: 10-28-15
 GL CODE: 800 12090

ade. Computed at a single monthly rate of 1 1/2% which is equal

TAX

SUBJECT TO CORRECTION

[Signature]
 Bison Oil Well Cementing, Inc. Representative



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/28/2015
 Invoice #: 80552
 API#:
 Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation
Well Name: whisper rock 2c-25hz

County: Weld
 State: Colorado
 Sec: 26
 Twp: 4n
 Range: 68w

Consultant: chris
 Rig Name & Number: noble 2
 Distance To Location: 30
 Units On Location: 4029-3106/4035-3203
 Time Requested: 200 am
 Time Arrived On Location: 1200 am
 Time Left Location: 5:00pm

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,828
 Total Depth (ft) : 1838
 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: 8
 Max Pressure: 2500

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 14.2
 Cement Yield (cuft) : 1.49
 Gallons Per Sack: 7.48
 % Excess: 15%
 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 1004.93 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1053.25 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 187.58 bbls
 (Total Slurry Volume) X (.1781)

Sacks Needed 707 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 125.89 bbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 138.92 bbls
 (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1348.52 PSI

Pressure of the fluids inside casing

Displacement: 770.52 psi

Shoe Joint: 30.25 psi

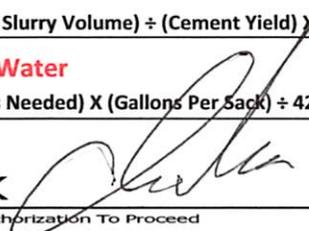
Total 800.77 psi

Differential Pressure: 547.75 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 304.81 bbls

X 
 Authorization To Proceed

M/D TOTCO 2000 SERIES

— PSI — Barrels / Minute — Barrels — Lbs / Gallon — Stage Volume

