



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #

80458

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
Whisper Rock 4N-25HZ	Weld	Colorado	10/27/2015	Noble 2
CHARGE TO	WELL LOCATION			
Anadarko Petroleum Corporation	Section	TWP	RANGE	
	26	4N	68W	
PO Box 4995	DELIVERED TO		LOCATION 1	CODE
	I25+38		Shop	
The Woodlands, TX 77387	SHIPPED VIA		LOCATION 2	CODE
	4023-3204/4034-3203		I25+38	
	TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
	SURFACE		Shop	
			WELL TYPE	CODE
			Oil	

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	sack		
ADDITIVES CHARGE:					
	KCL	3	qt		
	Liquid Dye Rhodamine	16	oz		
	Sugar		lb		
FLOAT EQUIPMENT:					
	RUBBER PLUG - 9 5/8"		ea		
OTHER CHARGES:					
	DATA ACQUISITION FEE	1	ea		
	Containment	1	ea		
	Winterization		ea		
	Wait Time		hour		
	PSI Test		ea		

Thanks Calvin

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 4N-25HZ NOBLE 2
 FRANK KINNEY USER ID: CU0741
 CONSULTANT: *Sean Giddings*
 AFE#2104407 DATE: *10/27/15*
 GL CODE: 800 *12090*

SUBJECT TO CORRECTION

Sean Giddings
 Customer or Agent

Calvin D. D.
 Bison Oil Well Cementing, Inc. Representative



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/27/2015
 Invoice #: 80458
 API#: 05-123-41297
 Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Whisper Rock 4N-25HZ

County: Weld
 State: Colorado
 Consultant: Sean / Chris
 Rig Name & Number: Noble 2
 Distance To Location: 30 Miles
 Sec: 26
 Twp: 4N
 Range: 68W
 Units On Location: 4023-3204/4034-3203
 Time Requested: 930am
 Time Arrived On Location: 820am
 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.) : 1,827	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1844	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 15%
Conductor Length (ft) : 40	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit: 18
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 10	H2O Wash Up (bbls): 15.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 1250	30bbls+Dye in 2nd 10bbls

Calculated Results	Pressure of cement in annulus
cuft of Shoe 19.28 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 138.54 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: 1347.42 PSI
cuft of Casing 1004.09 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 1053.89 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 768.40 psi
bbls of Slurry 187.70 bbls (Total Slurry Volume) X (.1781)	Shoe Joint: 32.77 psi
Sacks Needed 707 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total 801.17 psi
Mix Water 125.97 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: 546.24 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 309.51 bbls

X *Sean Reimers*
 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.

SERIES 2000

