



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #
 80546

FIELD INVOICE

WELL NO. AND FARM		COUNTY	STATE	DATE	Contractor
whisper rock 10n-25hz		Weld	Colorado	10/17/2015	noble 2
CHARGE TO		WELL LOCATION			
Anadarko Petroleum Corporation		Section	TWP	RANGE	
PO Box 4995		26	4n	68w	
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		710	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 10N-25HZ NOBLE 2
 FRANK KINNEY USER ID: CU0741
 CONSULTANT: *Hayden Stone*
 AFE# 2104179 DATE: 10-17-15
 GL CODE: 800/2080

Hayden Stone
 Customer or Agent

SUBJECT TO CORRECTION
[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 hereof which include the release and indemnity.



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/16/2015

Invoice # 80546

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: whisper rock 10n-25hz

County: Weld

State: Colorado

Sec: 26

Twp: 4n

Range: 68w

Consultant: hayden

Rig Name & Number: noble 2

Distance To Location: 30

Units On Location: 4029-3106/4035-3203


Time Requested: 1200 am

Time Arrived On Location: 1030 pm

Time Left Location: 2:00pm

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.) :	1,837	Cement Yield (cuft) :	1.49
Total Depth (ft) :	1847	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:	
Shoe Joint Length (ft) :	40	Fluid Ahead (bbls):	30.0
Landing Joint (ft) :	10	H2O Wash Up (bbls):	10.0
Max Rate:		Spacer Ahead Makeup	
Max Pressure:			

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 139.70 bbls	
cuft of Shoe 17.36 cuft		(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		Pressure of cement in annulus	
cuft of Conductor 30.53 cuft		Hydrostatic Pressure: 1355.15 PSI	
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing 1009.98 cuft		Displacement: 774.83 psi	
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint: 29.51 psi	
Total Slurry Volume 1057.87 cuft		Total 804.34 psi	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure: 550.81 psi	
bbls of Slurry 188.41 bbls		Collapse PSI: 2020.00 psi	
(Total Slurry Volume) X (.1781)		Burst PSI: 3520.00 psi	
Sacks Needed 710 sk		Total Water Needed: 306.14 bbls	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
Mix Water 126.44 bbls			
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

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.

M/D TOTCO 2000 SERIES

