



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #

80467

FIELD INVOICE

WELL NO. AND FARM Alvin 27G-29HZ	COUNTY Weld	STATE Colorado	DATE 11/14/2015	Contractor Noble 2
CHARGE TO Anadarko Petroleum Corporation	WELL LOCATION			
PO Box 4995	Section 29	TWP 2N	RANGE 65W	
The Woodlands, TX 77387	DELIVERED TO 125+38		LOCATION 1 Shop	CODE
	SHIPPED VIA 4023-3104/4030-3203		LOCATION 2 125+38	CODE
	TYPE AND PURPOSE OF JOB SURFACE		LOCATION 3 Shop	CODE
			WELL TYPE Oil	CODE

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					
SURFACE		1	ea		
MILLEAGE CHARGE					
Pickup		62	mile		
Truck/Equipment		62	mile		
Truck/Equipment		62	mile		
Truck/Equipment		62	mile		
CEMENT CHARGE:					
BFN III		770	sack		
ADDITIVES CHARGE:					
KCL		3	qt		
Dye Hot Pink		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 equal to an ANNUAL PERCENTAGE RATE OF 18%.

ALVIN 27G-29HZ NOBLE 2
 FRANK KINNEY USER ID: CU0741
 CONSULTANT: *Hayden Stone*
 AFE# 2109774 DATE: 11-14-15
 GL CODE: 800/2090

Hayden Stone
 Customer or Agent

TAX
 SUBJECT TO CORRECTION
Calvin P.
 Bison Oil Well Cementing, Inc. Representative

Customers hereby acknowledge 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: 11/14/2015
 Invoice #: 80467
 API#: 05-123-42209
 Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Alvin 27G-29HZ

County: Weld
 State: Colorado
 Sec: 29
 Twp: 2N
 Range: 65W

Consultant: Hayden / Bryan
 Rig Name & Number: Noble 2
 Distance To Location: 31 Miles
 Units On Location: 4023-3104/4030-3203
 Time Requested: 230pm
 Time Arrived On Location: 1245pm
 Time Left Location: 5:30pm

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.) :	1,904	Cement Yield (cuft) :	1.49
Total Depth (ft) :	1921	Gallons Per Sack:	7.48
Open Hole Diameter (in.) :	13.50	% Excess:	20%
Conductor Length (ft) :	60	Displacement Fluid lb/gal:	8.3
Conductor ID :	15.25	BBL to Pit:	26
Shoe Joint Length (ft) :	46	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	Displacement: 144.38 bbls
cuft of Shoe 20.12 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 45.79 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus Hydrostatic Pressure: 1404.58 PSI
cuft of Casing 1081.46 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing Displacement: 800.98 psi Shoe Joint: 34.20 psi Total 835.18 psi
Total Slurry Volume 1147.37 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Differential Pressure: 569.40 psi
bbls of Slurry 204.35 bbls (Total Slurry Volume) X (.1781)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi
Sacks Needed 770 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total Water Needed: 326.53 bbls
Mix Water 137.14 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	

[Signature]
 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

