



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #

80454

FIELD INVOICE

WELL NO. AND FARM Wilson Ranch 33C-27HZ	COUNTY Weld	STATE Colorado	DATE 10/14/2015	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 WCR 41+24		LOCATION 1 Shop	CODE
	SHIPPED VIA 4023-3104/4034-3103		LOCATION 2 41+24	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		50	mile		
Truck/Equipment		50	mile		
Truck/Equipment		50	mile		
Truck/Equipment		50	mile		
CEMENT CHARGE:					
BFN III		741	sack		
ADDITIVES CHARGE:					
KCL		5	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

WILSON RANCH 33C-27HZ NOBLE 2
 FRANK KINNEY USER ID: CU0741
 CONSULTANT: *Henry Stone*
 AFE# 2097556 DATE: 10-14-15
 GL CODE: 800/2090

SUBJECT TO CORRECTION

Frank Kinney
 Customer or Agent

Calvin J. P.
 Bison Oil Well Cementing, Inc. Representative



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/13/2015
 Invoice #: 80454
 API#: 05-123-41052
 Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation

Well Name: Wilson Ranch 33C-27HZ

County: Weld
 State: Colorado
 Sec: 26
 Twp: 4N
 Range: 68W

Consultant: Hayden / Bryan
 Rig Name & Number: Noble 2
 Distance To Location: 25 Miles
 Units On Location: 4023-3104/4034-3103
 Time Requested: 1130pm
 Time Arrived On Location: 935pm
 Time Left Location: 1:00 PM

WELL DATA

Casing Size OD (in) : 9.625
 Casing Weight (lb) : 36.00
 Casing Depth (ft.) : 1,838
 Total Depth (ft) : 1854
 Open Hole Diameter (in.) : 13.50
 Conductor Length (ft) : 40
 Conductor ID : 15.25
 Shoe Joint Length (ft) : 44
 Landing Joint (ft) : 10
 Max Rate: 8
 Max Pressure: 1250

Cement Data

Cement Name: BFN III
 Cement Density (lb/gal) : 14.2
 Cement Yield (cuft) : 1.49
 Gallons Per Sack: 7.48
 % Excess: 20%
 Displacement Fluid lb/gal: 8.3
 BBL to Pit: 25
 Fluid Ahead (bbls): 50.0
 H2O Wash Up (bbls): 15.0

Spacer Ahead Makeup

50 bbls H2O + Dye in last 10 bbls

Casing ID: 8.921 Casing Grade: J-55 only used

Calculated Results

cuft of Shoe 19.29 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 1054.25 cuft
 (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1104.07 cuft
 (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 196.64 bbls
 (Total Slurry Volume) X (.1781)

Sacks Needed 741 sk
 (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 131.97 bbls
 (Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 139.40 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1355.60 PSI

Pressure of the fluids inside casing

Displacement: 773.18 psi

Shoe Joint: 32.79 psi

Total 805.97 psi

Differential Pressure: 549.64 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 336.37 bbls

X 
 Authorization To Proceed

SERIES 2000

