



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #
80656

FIELD INVOICE

WELL NO. AND FARM		COUNTY	STATE	DATE	Contractor
ALVIN 26C-29HZ		Weld	Colorado	11/17/2015	NOBLE 2
CHARGE TO		WELL LOCATION			
Anadarko Petroleum Corporation		Section	TWP	RANGE	
PO Box 4995		29	2N	65W	
The Woodlands, TX 77387		DELIVERED TO		LOCATION 1	CODE
		CR 41 & CR 16		SHOP	
		SHIPPED VIA		LOCATION 2	CODE
		4023-3104/ 4030-3203		41 & 16	
		TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
		SURFACE		SHOP	
				WELL TYPE	CODE

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					
SURFACE		1	ea		
MILLEAGE CHARGE					
Pickup		62	ea		
Truck/Equipment		62	ea		
Truck/Equipment		62	ea		
Truck/Equipment		62	ea		
CEMENT CHARGE:					
TYPE 3 NEAT		741	sack		
ADDITIVES CHARGE:					
Liquid Dye Rhodamine		32	oz		
FLOAT EQUIPMENT:					
OTHER CHARGES:					
DATA ACQUISITION FEE		1	ea		
Containment		1	ea		
Wait Time		3	hour		

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

ALVIN 26C-29HZ NOBLE 2
FRANK KINNEY USER ID: CU0741
CONSULTANT: *Hydram Stone*
AFE# 2109776 DATE: *11-17-15*
GL CODE: 800 *12090*

SUBJECT TO CORRECTION

[Signature]
Customer or Agent

[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: 11/17/2015
 Invoice #: 80656
 API#: 05-123-42206
 Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation
Well Name: ALVIN 26C-29HZ

County: Weld
 State: Colorado
 Sec: 29
 Twp: 2N
 Range: 65W
 Consultant: HAYDEN
 Rig Name & Number: NOBLE 2
 Distance To Location: 31
 Units On Location: 4023-3104/ 4030-3203
 Time Requested: 430
 Time Arrived On Location: 300
 Time Left Location: 1200

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.) : 1,909	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1919	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 15%
Conductor Length (ft) : 60	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit: 56.0
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 50.0
Landing Joint (ft) : 7	H2O Wash Up (bbls): 20.0
Max Rate: 7	Spacer Ahead Makeup
Max Pressure: 1250	50BBL WATER/ DYE IN 2ND 10

Calculated Results	Pressure of cement in annulus
cuft of Shoe 19.20 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 144.69 bbls (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)	Hydrostatic Pressure: 1408.16 PSI
cuft of Casing 1039.13 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume 1104.11 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: 803.99 psi Shoe Joint: 32.63 psi Total 836.62 psi
bbls of Slurry 196.64 bbls (Total Slurry Volume) X (.1781)	Differential Pressure: 571.54 psi
Sacks Needed 741 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi
Mix Water 131.97 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total Water Needed: 346.66 bbls

[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.

ALVIN 26C-29HZ SURFACE

