



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

80467

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor	
Alvin 27G-29HZ	Weld	Colorado	11/14/2015	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			
	125+38	Shop			
	SHIPPED VIA	LOCATION 2 CODE			
	4023-3104/4030-3203	125+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		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		

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%.

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

TAX

SUBJECT TO CORRECTION

Bison Oil Well Cementing, Inc. Representative

Customers hereby acknowledge and specifically agree 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

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,904
Total Depth (ft) : 1921
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 60
Conductor ID : 15.25
Shoe Joint Length (ft) : 46
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: 26
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 15.0

Spacer Ahead Makeup

30bbls+Dye in 2nd 10bbls

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 20.12 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 45.79 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 1081.46 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1147.37 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 204.35 bbls
(Total Slurry Volume) X (.1781)

Sacks Needed 770 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 137.14 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 144.38 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1404.58 PSI

Pressure of the fluids inside casing

Displacement: 800.98 psi

Shoe Joint: 34.20 psi

Total 835.18 psi

Differential Pressure: 569.40 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 326.53 bbls

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.



Anadarko Petroleum Corporation
Alvin 27G-29HZ

INVOICE #
LOCATION
FOREMAN
Date

80467
Weld
Calvin Reimers
11/14/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X

Work Performed

X

Title

X

Date _____

SERIES 2000

