



Bison Oil Well Cementing
1547 Gaylord Street
Denver, CO 80206

FIELD INVOICE #

80648

FIELD INVOICE

WELL NO. AND FARM		COUNTY	STATE	DATE	Contractor
WILSON RANCH 12C-27HZ		Weld	Colorado	11/7/2015	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
		CR 38 & EAST FRONTAGE RD		SHOP	
		SHIPPED VIA		LOCATION 2	CODE
		4028-3102/ 4034-3203		38 & E. FRONT	
		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		70	ea		
Truck/Equipment		70	ea		
Truck/Equipment		70	ea		
Truck/Equipment		70	ea		
CEMENT CHARGE:					
TYPE 3 NEAT		715	sack		
ADDITIVES CHARGE:					
Liquid Dye Rhodamine		32	oz		
FLOAT EQUIPMENT:					
WILSON RANCH 12C-27HZ NOBLE 2					
FRANK KINNEY USER ID: CU0741					
CONSULTANT: <i>BBW Bryan Brown</i>					
AFE#2097552 DATE: <i>11/7/15</i>					
GL CODE: 800 <i>12090</i>					
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

SUBJECT TO CORRECTION

BBW Bryan Brown
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: 11/7/2015
Invoice #: 80648
API#: 05-123-41313
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: WILSON RANCH 12C-27HZ

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

Consultant: BRYAN
Rig Name & Number: NOBLE 2
Distance To Location: 35
Units On Location: 4028-3102/ 4034-3203
Time Requested: 100
Time Arrived On Location: 2330
Time Left Location: 530

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,848
Total Depth (ft) : 1857
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 15.25
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 7

Max Rate: 7
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: 15%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 29.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

30BBL WATER/ DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 19.65 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 1015.89 cuft

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

Total Slurry Volume 1066.06 cuft

(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 189.87 bbls

(Total Slurry Volume) X (.1781)

Sacks Needed 715 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 127.42 bbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 139.87 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1362.90 PSI

Pressure of the fluids inside casing

Displacement: 777.08 psi

Shoe Joint: 33.40 psi

Total 810.49 psi

Differential Pressure: 552.41 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 317.29 bbls

X

Authorization To Proceed

Bryan Brown

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
WILSON RANCH 12C-27HZ

INVOICE #
LOCATION
FOREMAN
Date

80648
Weld
JASON KELEHER
11/7/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X Bryan Brown
Customer Signature

X Co Man
Title

X 11/7/15
Date

WILSON RANCH 12C-27HZ SURFACE

