



Bison Oil Well Cementing  
1547 Gaylord Street  
Denver, CO 80206

FIELD INVOICE #

666112

FIELD INVOICE

WELL NO. AND FARM		COUNTY	STATE	DATE	Contractor
Babcock 13E-33HZ		Weld	Colorado	4/19/2017	WMO 252
CHARGE TO		WELL LOCATION			
Anadarko Petroleum Corporation		Section	TWP	RANGE	
PO Box 4995		4	2N	67W	
The Woodlands, TX 77387		DELIVERED TO		LOCATION 1	CODE
		cr. 24 & cr. 19		Greeley	
		SHIPPED VIA		LOCATION 2	CODE
		4023/4024/4030		Plateville	
		TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
		SURFACE		Greeley	
				WELL TYPE	CODE
ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
PUMP CHARGE					
	SURFACE	1		\$ 952.00	\$ 952.00
MILLEAGE CHARGE					
	Pickup	54		\$ 1.22	\$ 65.88
	Truck/Equipment	54		\$ 3.23	\$ 174.42
	Truck/Equipment	54		\$ 3.23	\$ 174.42
	Truck/Equipment	54		\$ 3.23	\$ 174.42
CEMENT CHARGE:					
	BFN III	711		\$ 14.69	\$ 10,444.59
ADDITIVES CHARGE:					
	Red Dye	16	oz	\$ 15.00	\$ 240.00
FLOAT EQUIPMENT:					
OTHER CHARGES:					
	Wait Time		hour	\$ 250.00	\$ -

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%.

BABCOCK 13E-33HZ RIG: WhiteMtn 252

CRYSTAL AGUILA. USER ID ZCMK6

CONSULTANT NAME: Sean Gorkhling  
GL CODE: 800/2090 AFE#2121895.DRL

DATE: 4/19/17 SIGNATURE: [Signature]

SUB TOTAL	\$ 12,225.73
TAX	\$ -
TOTAL	\$ 12,225.73

SUBJECT TO CORRECTION

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: 4/19/2017  
Invoice #: 666112  
API#: 05-123-43807  
Foreman: Nick Vigil

Customer: Anadarko Petroleum Corporation

Well Name: Babcock 13E-33HZ

County: Weld  
State: Colorado  
Sec: 4  
Twp: 2N  
Range: 67W

Consultant: Sean  
Rig Name & Number: WMO 252  
Distance To Location: 26 Miles  
Units On Location: 4023/4019/4030  
Time Requested: 20:30  
Time Arrived On Location: 19:40  
Time Left Location:

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,821  
Total Depth (ft) : 1831  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 44  
Landing Joint (ft) : 10

Max Rate:  
Max Pressure:

## 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:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 19.10 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

**cuft of Conductor** 61.05 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

**cuft of Casing** 978.51 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1058.66 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 188.55 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 711 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 126.54 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 138.15 bbls

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

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1343.35 PSI

## Pressure of the fluids inside casing

**Displacement:** 766.21 psi

**Shoe Joint:** 32.46 psi

**Total** 798.67 psi

**Differential Pressure:** 544.68 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 314.69 bbls

X   
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.

x 4/19/17  
Date



# Bison Oil Well Cementing Single Cement Surface Pipe

## Cementing Customer Satisfaction Survey

Service Date 4/19/2017  
Well Name Babcock 13E-33HZ  
County Weld  
State Colorado  
SEC 4  
TWP 2N  
RNG 67W

Invoice Number 666112  
API # 05-123-43807  
Job Type Single Cement Surface Pipe  
Company Name Anadarko Petroleum Corporation

Customer Representative Sean

Supervisor Name Nick Vigil

Employee Name (Including Supervisor)
Nick
Aaron
Alan
Nash
Bobby

Exposure Hours (Per Employee)
4.25
4.25
4.25
4.25
4.25
21.25

Total Exposure Hours

Did we encounter any problems on this job? ☐ Yes ☐ No

### To Be Completed By Customer

#### Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
  - 4 - Exceeded Expectation (Provided more than what was required/expected)
  - 3 - Met Expectations (Did what was expected)
  - 2 - Below Expectations (Job problems/failures occurred - \*Recovery made)
  - 1 - Poor Performance (Job problems/failures occurred - \*Some recovery made)
- \*Recovery: resolved issue(s) on jobsite in a timely and professional manner

#### RATING CATEGORY

Personnel -  
Equipment -  
Job Design -  
Product/Material -  
Health & Safety -  
Environmental -  
Timeliness -  
Condition/Appearance -  
Communication -

#### CUSTOMER SATISFACTION RATING

Did our personnel perform to your satisfaction?  
Did our equipment perform to your satisfaction?  
Did we perform the job to the agreed upon design?  
Did our products and materials perform as you expected?  
Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc.)?  
Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc.)?  
Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?  
Did the equipment condition and appearance meet your expectations?  
How well did our personnel communicate during mobilization, rig up and job execution?

#### Please Circle:

Yes No Did an accident or injury occur?  
Yes No Did an injury requiring medical treatment occur?  
Yes No Did a first-aid injury occur?  
Yes No Did a vehicle accident occur?  
Yes No Was a post-job safety meeting held?

#### Please Circle:

Yes No Was a pre-job safety meeting held?  
Yes No Was a job safety analysis completed?  
Yes No Were emergency services discussed?  
Yes No Did environmental incident occur?  
Yes No Did any near misses occur?

#### Additional Comments:

THE INFORMATION HEREIN IS CORRECT -

X *Sean P. 4/19/17*

Customer Representative's Signature

DATE:

4/19/17

Any additional Customer Comments or HSE concerns should be described on the back of this form

# Babcock 13E-33HZ

