



Bison Oil Well Cementing  
1547 Gaylord Street  
Denver, CO 80206

FIELD INVOICE #

80531

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor	
Sunflower 40N-17HZ	Weld	Colorado	9/19/2015	noble 2	
CHARGE TO	WELL LOCATION				
Anadarko Petroleum Corporation	Section	TWP	RANGE		
PO Box 4995	8	2n	65w		
The Woodlands, TX 77387	DELIVERED TO	LOCATION 1		CODE	
	41-24	shop			
	SHIPPED VIA	LOCATION 2		CODE	
	4029-3106/4024-3203	41-24			
	TYPE AND PURPOSE OF JOB	LOCATION 3		CODE	
	SURFACE	shop			
		WELL TYPE		CODE	
		gas			
ITEM	DESCRIPTION	QTY.	MEAS.	UNIT PRICE	AMOUNT
<b>PUMP CHARGE</b>					
	SURFACE	1	ea		
<b>MILLEAGE CHARGE</b>					
	Pickup	56	mile		
	Truck/Equipment	56	mile		
	Truck/Equipment	56	mile		
	Truck/Equipment	56	mile		
<b>CEMENT CHARGE:</b>					
	BFN III	729	sacks		
<b>ADDITIVES CHARGE:</b>					
	KCL	3	qt		
	Liquid Dye Rhodamine	15	oz		
	Sugar		lbs		
<b>FLOAT EQUIPMENT:</b>					
<b>OTHER CHARGES:</b>					
	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

SUNFLOWER 40N-17HZ NOBLE 2  
FRANK KINNEY USER ID: CU0741  
CONSULTANT: *Hayden Stone*  
AFE# 2113378 DATE: 9-19-15  
GL CODE: 800 12090

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: 9/19/2015

Invoice # 80531

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: Sunflower 40N-17HZ

County: Weld

State: Colorado

Sec: 8

Twp: 2n

Range: 65w

Consultant: hayden

Rig Name & Number: noble 2

Distance To Location: 28

Units On Location: 4029-3106/4024-3203

Time Requested: 730 am

Time Arrived On Location: 600 am

Time Left Location: 12:30 pm

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft) : 1,880  
Total Depth (ft) : 1890  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 60  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 41  
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): 10.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

**cuft of Shoe** 17.80 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** 1022.91 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

**Total Slurry Volume** 1086.50 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

**bbls of Slurry** 193.50 bbls  
(Total Slurry Volume) X (.1781)

**Sacks Needed** 729 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

**Mix Water** 129.87 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

**Displacement:** 142.94 bbls  
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

**Hydrostatic Pressure:** 1386.88 PSI

## Pressure of the fluids inside casing

**Displacement:** 792.94 psi

**Shoe Joint:** 30.25 psi

**Total** 823.19 psi

**Differential Pressure:** 563.69 psi

**Collapse PSI:** 2020.00 psi

**Burst PSI:** 3520.00 psi

**Total Water Needed:** 312.81 bbls

X

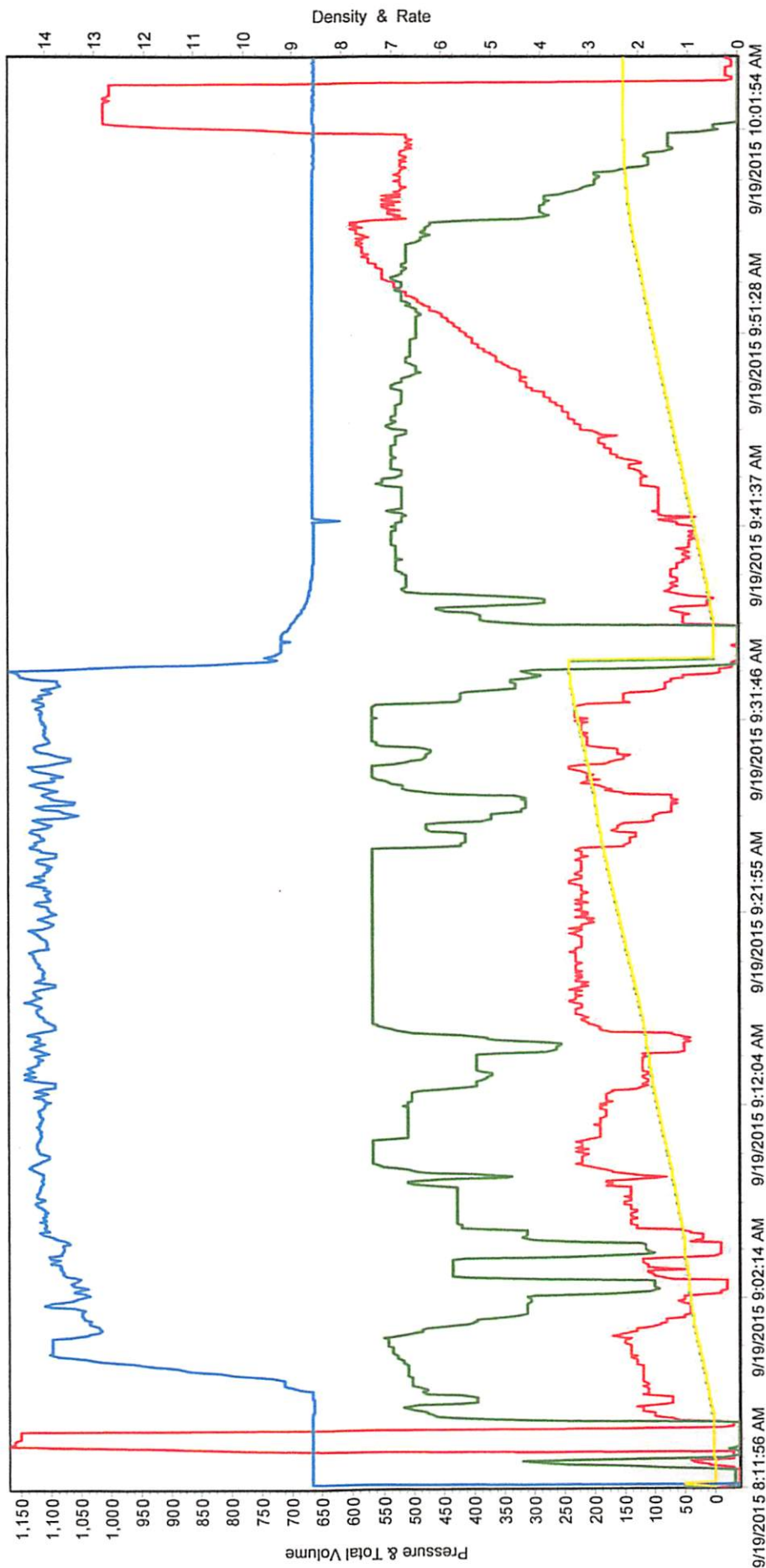
Authorization to Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.

Date \_\_\_\_\_



# M/D TOTCO 2000 SERIES



## **Release and Indemnification**

Customer acknowledges and assumes the risks associated with oil well drilling, cementing and acidizing, including, without limitation, destabilization, loss of production, contamination, fracturing and loss of well control. Customer agrees to release Bison Oil Well Cementing, Inc., Bison Energy Services, Inc., its agents, employees and assigns, from any and all liability for any and all damages whatsoever to property of any kind owned by, in the possession of, or leased by customer and those persons or entities customer has the ability to bind by contract. Customer also agrees to indemnify and hold harmless Bison Oil Well Cementing, Inc., Bison Energy Services, Inc., its agents, employees and assigns, from and against any and all liability, claims, costs, expenses, attorneys fees and damages whatsoever for claims, costs, expenses, attorneys fees and damages whatsoever for personal injury, illness, death, property damage and loss resulting from: loss or reduction of production, destabilization loss of oil well control, failure of or contamination by acid stimulation, hydraulic fracturing, cementing, pumping services, incompatible fluid or other processes to stimulate, complete or end production, and/or any other condition. Customer's release, indemnity and hold harmless obligation shall apply even if the liability and claims are caused by the sole, concurrent, active or passive negligence, fault, or strict liability of Bison Oil Well Cementing, Inc. and/or Bison Energy Services, Inc. or any defect in the data, products, supplies, materials or equipment furnished by Bison Oil Well Cementing, Inc. whether in the design, manufacturing, maintenance, or marketing thereof or from failure to warn of such defect. In the event that any portion of this release and indemnity is found by a court of competent jurisdiction to be inoperable or unenforceable, the remaining portions and provisions shall apply, and customer agrees that the contract price herein shall be the limit of Bison Oil Well Cementing, Inc.'s liability, if any.