



Bison Oil Well Cementing  
 1547 Gaylord Street  
 Denver, CO 80206

FIELD INVOICE #

80573

**FIELD INVOICE**

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
docheff 32n-15hz	Weld	Colorado	3/8/2016	pd 461

CHARGE TO	WELL LOCATION		
	Section	TWP	RANGE
Anadarko Petroleum Corporation	14	3n	68w
PO Box 4995	DELIVERED TO	LOCATION 1	CODE
		Sep-32 shop	
The Woodlands, TX 77387	SHIPPED VIA	LOCATION 2	CODE
	4028-3106-4034-3203	Sep-32	
	TYPE AND PURPOSE OF JOB	LOCATION 3	CODE
	SURFACE	shop	
		WELL TYPE	CODE
		gas	

ITEM	DESCRIPTION	UNITS		UNIT PRICE	AMOUNT
		QTY.	MEAS.		
<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		697	sacks		
<b>ADDITIVES CHARGE:</b>					
KCL		3	qt		
Liquid Dye Rhodamine		15	oz		
Sugar		100	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 added to an ANNUAL PERCENTAGE RATE OF 18%.

DOCHEFF 32N-15HZ RIG #PD 461  
 FRANK KINNEY USER ID CU0741  
 CONSULTANT NAME: *Jamey Cuba*  
 GL CODE: 80012090 AFE# 2070389.DRL  
 DATE: *3/8* SIGNATURE: *[Signature]*

TAX

SUBJECT TO CORRECTION

Customer or Agent

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: 3/8/2016  
 Invoice # 80573  
 API# \_\_\_\_\_  
 Foreman: Kirk Kallhoff

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** docheff 32n-15hz

County: Weld  
 State: Colorado  
 Sec: 14  
 Twp: 3n  
 Range: 68w

Consultant: james  
 Rig Name & Number: pd 46  
 Distance To Location: 28  
 Units On Location: 4028-3106-4034-3203  
 Time Requested: 630 am  
 Time Arrived On Location: 530 am  
 Time Left Location: 10:00 am

WELL DATA		Cement Data	
Casing Size OD (in) :	<u>9.625</u>	Cement Name:	<u>BFN III</u>
Casing Weight (lb) :	<u>36.00</u>	Cement Density (lb/gal) :	<u>14.2</u>
Casing Depth (ft.) :	<u>1,870</u>	Cement Yield (cuft) :	<u>1.49</u>
Total Depth (ft) :	<u>1915</u>	Gallons Per Sack:	<u>7.48</u>
Open Hole Diameter (in.) :	<u>13.50</u>	% Excess:	<u>10%</u>
Conductor Length (ft) :	<u>40</u>	Displacement Fluid lb/gal:	<u>8.3</u>
Conductor ID :	<u>16</u>	BBL to Pit:	
Shoe Joint Length (ft) :	<u>44</u>	Fluid Ahead (bbls):	<u>30.0</u>
Landing Joint (ft) :	<u>35</u>	H2O Wash Up (bbls):	<u>10.0</u>
Max Rate:	<u>8</u>	Spacer Ahead Makeup	
Max Pressure:	<u>2500</u>		

Casing ID	8.921	Casing Grade	J-55 only used
<b>Calculated Results</b>		<b>Displacement:</b>	<b>143.87 bbls</b>
<b>cuft of Shoe</b> <u>19.10</u> <b>cuft</b>		(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		<b>Pressure of cement in annulus</b>	
<b>cuft of Conductor</b> <u>35.64</u> <b>cuft</b>		<b>Hydrostatic Pressure:</b>	<b>1379.50 PSI</b>
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		<b>Pressure of the fluids inside casing</b>	
<b>cuft of Casing</b> <u>983.81</u> <b>cuft</b>		<b>Displacement:</b>	<b>787.34 psi</b>
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )		<b>Shoe Joint:</b>	<b>32.46 psi</b>
<b>Total Slurry Volume</b> <u>1038.55</u> <b>cuft</b>		<b>Total</b>	<b>819.80 psi</b>
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		<b>Differential Pressure:</b>	<b>559.70 psi</b>
<b>bbls of Slurry</b> <u>184.97</u> <b>bbls</b>		<b>Collapse PSI:</b>	<b>2020.00 psi</b>
(Total Slurry Volume) X (.1781)		<b>Burst PSI:</b>	<b>3520.00 psi</b>
<b>Sacks Needed</b> <u>697</u> <b>sk</b>		<b>Total Water Needed:</b>	<b>308.01 bbls</b>
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
<b>Mix Water</b> <u>124.13</u> <b>bbls</b>			
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

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.



# M/D TOTCO 2000 SERIES

