



Bison Oil Well Cementing
 1547 Gaylord Street
 Denver, CO 80206

FIELD INVOICE #

900041

FIELD INVOICE

WELL NO. AND FARM	COUNTY	STATE	DATE	Contractor
GUEST 29N-12HZ	Weld	Colorado	2/4/2017	WM 252
CHARGE TO	WELL LOCATION			
Anadarko Petroleum Corporation	Section	TWP	RANGE	
	13	2N	65W	
PO Box 4995	DELIVERED TO		LOCATION 1	CODE
	CR 49 & CR 22		SHOP	
The Woodlands, TX 77387	SHIPPED VIA		LOCATION 2	CODE
	4027-3103,4033-3213,4024-3205		LOCATION	
	TYPE AND PURPOSE OF JOB		LOCATION 3	CODE
	SURFACE		SHOP	
		WELL TYPE	CODE	

ITEM	DESCRIPTION	UNITS	
		QTY.	MEAS.
PUMP CHARGE			
SURFACE		1	
MILLEAGE CHARGE			
Pickup		54	mile
Truck/Equipment		162	mile
CEMENT CHARGE:			
BFN III		723	sack
ADDITIVES CHARGE:			
Dye Hot Pink		16	oz
FLOAT EQUIPMENT:			
OTHER CHARGES:			
Wait Time		1.5	hour

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

GUEST 29N-12HZ RIG: WhiteMtn 252
 KIETH J. / FRANK K. USER ID CU0741
 CONSULTANT NAME: Lane F
 GL CODE: 80012090 AFE#2105327.DRL
 DATE: 2.4.17 SIGNATURE: [Signature]

SUBJECT TO CORRECTION

Bison Oil Well Cementing, Inc. Representative

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: 2/4/2017
 Invoice # 900041
 API# 05-123-42458
 Foreman: JASON

Customer: Anadarko Petroleum Corporation
Well Name: GUEST 29N-12HZ

County: Weld
 State: Colorado
 Sec: 13
 Twp: 2N
 Range: 65W

Consultant: SEAN
 Rig Name & Number: WM 252
 Distance To Location: 27
 Units On Location: 4027-3103,4033-3213,4024-3205
 Time Requested: 1200
 Time Arrived On Location: 1100
 Time Left Location: 1830

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>1,840</u>	Cement Yield (cuft) :	<u>1.48</u>
Total Depth (ft) :	<u>1857</u>	Gallons Per Sack:	<u>7.49</u>
Open Hole Diameter (in.) :	<u>13.50</u>	% Excess:	<u>15%</u>
Conductor Length (ft) :	<u>80</u>	Displacement Fluid lb/gal:	<u>8.3</u>
Conductor ID :	<u>15.25</u>	BBL to Pit:	<u>10.0</u>
Shoe Joint Length (ft) :	<u>44</u>	Fluid Ahead (bbls):	<u>30.0</u>
Landing Joint (ft) :	<u>15</u>	H2O Wash Up (bbls):	<u>20.0</u>
Max Rate:	<u>8</u>	Spacer Ahead Makeup	
Max Pressure:	<u>2000</u>	<u>30 BBL WATER DYE IN 2ND 10</u>	

Calculated Results	Displacement:	140.00 bbls
cuft of Shoe <u>19.31</u> cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Conductor <u>61.05</u> cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus	
cuft of Casing <u>989.44</u> cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure:	<u>1357.70</u> PSI
Total Slurry Volume <u>1069.80</u> cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing	
bbls of Slurry <u>190.53</u> bbls (Total Slurry Volume) X (.1781)	Displacement:	<u>774.39</u> psi
Sacks Needed <u>723</u> sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint:	<u>32.81</u> psi
Mix Water <u>128.91</u> bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total	<u>807.20</u> psi
	Differential Pressure:	<u>550.50</u> psi
	Collapse PSI:	<u>2020.00</u> psi
	Burst PSI:	<u>3520.00</u> psi
	Total Water Needed:	<u>318.91</u> bbls

X
 Authorization to Proceed

GUEST 29N-12HZ SURFACE

