

Bison Oil Well Cementing 1547 Gaylord Street Denver, CO 80206

FIELD INVOICE #

90043

FIELD INVOICE

VELL NO. AND FARM		COUNTY	STATE	DATE	Contractor
Thermo 38N-3	3HZ	Weld	Colorado	9/26/2015	Noble 2
HARGE TO		WELL LOCATION			
I		Section	TWP	RANGE	-
Anadarko Petroleum	Corporation	33	2N	66W LOCATION 1	_
		DELIVERED TO	DELIVERED TO		CODE
PO Box 4995		cr. 31 & cr. 16		Greeley	
		SHIPPED VIA		LOCATION 2	CODE
The Woodlands, TX 77387		4024/3210/4007/3106	5/3105/3204	cr. 31 & cr. 16	
		TYPE AND PURPOSE O	F JOB	LOCATION 3	CODE
	=			Greeley	
		SURFA	CE	WELL TYPE	CODE
				Oil	
ITEM	DESCRIPTION	UNITS			
	DESCRIPTION	QTY.	MEAS.	UNIT PRICE	AMOUNT
UMP CHARGE					+
SURFACE		1	-	+	<u> </u>
				4	
MILLEAGE CHARGE	1			4	
Pickup		50	mile	4	
Truck/Equipment		50	mile	4	
Truck/Equipment		50	mile	1	
				1	<u> </u>
EMENT CHARGE:				1	
BFN III		755	sack	1	<u> </u>
				1	
				1	L
				Ι	
DDITIVES CHARGE:				T	Γ
Red Dye		16	oz	T	3
				†	
				†	
				†	
				†	
				Ť	
LOAT EQUIPMENT:				Ť	
RUBBER PLUG - 9 5/8"				†	
				†	
				†	
				†	-
			1	†	F
	<u> </u>		1	†	
			1	†	
THER CHARGES:			1	†	-
DATA ACQUISITION FEE	<u> </u>	1	†	†	
Containment	<u> </u>	1	1	†	F
Wait Time		3.5	hour	†	
			110ur	1	Ť
				 	†
				SUB TOTAL	†
			, TAX		F
this account is not paid within 30 days of invoice date a FINANCE an ANNUAL PERCENTAGE RATE OF 18%.	CHARGE will be made. Computed at a single	monthly rate of 1 1/2% which is equ	al IAA	TOTAL	F
				IOIAL	
THERMO 38N-33HZ NOBLE 2				SUBJECT TO CORREC	TION C
FRANK KINNEY USER ID: CUOT	41			JUDIECI IU CUKREC	LIION
CONSULTANT: Chila —AFE# 2111702 DATE: 9-26 GL CODE: 800 12090				2	=
-AFE# 2111702 DATE: 0 - 26	-15			11	
GI CODE: SOO DAGO	10		bison	Oil Well Cementing, Ir	nc. Representative
OL CODE, OUU IZOU					



Bison Oil Well Cementing Single Cement Surface Pipe

 Date:
 9/26/2015

 Invoice #
 90043

 API#
 05-123-42097

 Supervisor
 Nick

Customer: Anadarko Petroleum Corporation

Well Name: Thermo 38N-33HZ

County: Weld
State: Colorado

Sec: 33 Twp: 2N Range: 66W
 Consultant:
 Sean/Chris

 Rig Name & Number:
 Noble 2

 Distance To Location:
 25

 Units On Location:
 024/3210/4007/3106/3105/32

Units On Location: 024/3210/4007/3106/3105/320
Time Requested: 8:30
Time Arrived On Location: 7:30
Time Left Location: 16:00

WELL DATA Cement Data Casing Size OD (in): **Cement Name: BFN III** 9.625 Casing Weight (lb): Cement Density (lb/gal): 36.00 14.2 Cement Yield (cuft): 1.49 Casing Depth (ft.): 1,874 Total Depth (ft): Gallons Per Sack: 1884 7.48 Open Hole Diameter (in.): 13.50 % Excess: 20% Displacement Fluid lb/gal: Conductor Length (ft): 40 8.3 Conductor ID: **BBL** to Pit: 15.25 14.0 Shoe Joint Length (ft): Fluid Ahead (bbls): 50.0 44 Landing Joint (ft): H20 Wash Up (bbls): 20.0 10 Max Rate: 7 Spacer Ahead Makeup Max Pressure: 1250 30 bbl dye in second 10

Casing ID	8	.921	Casing Grade	J-55 only used
Calculated Results	19.29	cuft	Displacement: (Casing ID Squared) X (.0009714) X (Casing Joint)	142.21 bbls Depth + Landing Joint - Shoe
(Casing ID Squared) X (.005454) X	(Shoe Joint ft)		Pressure of cement in annulus	i
cuft of Conductor	30.53	cuft	Hydrostatic Pressure:	1382.45 PSI
(Conductor Width Squared) -(Casi (Conductor Length ft)	ng Size OD Squared)	X (.005454) X	Pressure of the fluids inside ca	asing
cuft of Casing	1075.60	cuft	Displacement:	788.87 psi
(Open Hole Squared)-(Casing Size Depth - Conductor Length)	Squared) X (.005454	X (Casing	Shoe Joint:	32.79 psi
Total Slurry Volume	1125.41	cuft	Total	821.66 psi
(cuft of Shoe) + (cuft of Conductor	r) + (cuft of Casing)		1	
bbls of Slurry	200.44	bbls	Differential Pressure:	560.79 psi
(Total Slurry Volume) X (.1781)				
Sacks Needed	755	sk	Collapse PSI:	2020.00 psi
(Total Slurry Volume) ÷ (Cement Y	rield) X (% Excess Cen	nent)	Burst PSI:	3520.00 psi
Mix Water	134.52	bbls		
(Sacks Needed) X Gallons Per Sac	k) ÷ 42		Total Water Needed:	346.73 bbls

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.



Bison Oil Well Cementing Single Cement Surface Pipe

Customer Well Name Anadarko Petroleum Corporation Thermo 38N-33HZ INVOICE # LOCATION Supervisor Date 90043 Weld Nick 9/26/2015

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

			DESCRIPTION	OI JOB EVENTS			
Amount Pumped		Time/Date Event Description		Rate	BBLs	Pressur	
% Excess	20%	7:30 AM	Arrive on location	Well site assesment, Hazard hunt			
Mixed bbls	200.4	7:30 AM	Other	Rig was getting rigged up to run casing.			
Total Sacks	755	8:00 AM	Rig up	Spotted and rigged up equipment.			
bbl Returns	14	2:00 PM	Pre job JSA	Held JSA with all personell involved in job.			
Water Temp	68	2:10 PM	Test lines	Pressure tested lines to 1500 psi.			
		2:12 PM	Pump spacer	Water spacer, dye in second 10	7.5	50	150
Notes:		2:18 PM	Pump cement	14.2 ppg Cement	7.5	200.2	200
		2:54 PM	Shut down				
		2:55 PM	Drop plug	Plug was pre loaded.			
		2:56 PM	Pump displacement	Displaced with fresh water.	7	70	300
		3:22 PM	Bump plug	Bumped plug 500 psi over final lift.	2	142.2	570
		3:25 PM	Check floats	Floats held (flowed back .5 bbl)			
		3:26 PM	End job	Rig down safety meeting.			
		3:30 PM	Rig down	Rig down and wash up equipment.			
		4:00 PM	Crew left location				
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						-	-
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Date	

