



**Bison Oil Well Cementing  
Single Cement Surface Pipe**

Date: 1/20/2015  
 Invoice # 65059  
 API# AFE 2101690  
 Foreman: Lee Sharp

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** Hunziker 26-28HZ

County: Weld Consultant: Randy  
 State: Colorado Rig Name & Number: A D RIG 10  
 Distance To Location: 20  
 Sec: 28 Units On Location: 4027-3106/ 4030-3203  
 Twp: 2N Time Requested: 11:30 PM  
 Range: 67W Time Arrived On Location: 8:15AM  
 Time Left Location: 4:00 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>1,300</u>	Cement Yield (cuft) : <u>1.49</u>
Total Depth (ft) : <u>1315</u>	Gallons Per Sack: <u>7.48</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>15%</u>
Conductor Length (ft) : <u>45</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>15.325</u>	BBL to Pit: <u>7.0</u>
Shoe Joint Length (ft) : <u>40</u>	Fluid Ahead (bbls): <u>30.0</u>
Landing Joint (ft) : <u>0</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u></u>	Spacer Ahead Makeup
Max Pressure: <u></u>	<u>10F 10D 10F</u>

Calculated Results	Pressure of cement in annulus
<b>cuft of Shoe</b> <u>17.15</u> <b>cuft</b> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Displacement:</b> <u>97.45</u> <b>bbls</b> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> <u>34.90</u> <b>cuft</b> (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> <u>959.01</u> <b>PSI</b>
<b>cuft of Casing</b> <u>708.36</u> <b>cuft</b> (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	<b>Pressure of the fluids inside casing</b>
<b>Total Slurry Volume</b> <u>760.41</u> <b>cuft</b> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> <u>543.50</u> <b>psi</b>
<b>bbls of Slurry</b> <u>135.43</u> <b>bbls</b> (Total Slurry Volume) X (.1781)	<b>Shoe Joint:</b> <u>29.14</u> <b>psi</b>
<b>Sacks Needed</b> <u>510</u> <b>sk</b> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Total</b> <u>572.64</u> <b>psi</b>
<b>Mix Water</b> <u>90.89</u> <b>bbls</b> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Differential Pressure:</b> <u>386.37</u> <b>psi</b>
	<b>Collapse PSI:</b> <u>2020.00</u> <b>psi</b>
	<b>Burst PSI:</b> <u>3520.00</u> <b>psi</b>
	<b>Total Water Needed:</b> <u>238.34</u> <b>bbls</b>

**X**  
 Authorization To Proceed



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Customer **Anadarko Petroleum Corporation**  
Well Name **Hunziker 26-28HZ**

INVOICE # **65059**  
LOCATION **Weld**  
FOREMAN **Lee Sharp**  
Date **1/20/2015**

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**DESCRIPTION OF JOB EVENTS**

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
Safety Meeting	110															
MIRU	12:00 AM															
CIRCULATE	157	0	241		0			0			0			0		
Drop Plug		10	244	-70	10			10			10			10		
243		20	246	80	20			20			20			20		
		30	249	80	30			30			30			30		
		40	251	150	40			40			40			40		
M & P		50	252	210	50			50			50			50		
Time	Sacks	60	254	270	60			60			60			60		
0210-0238	511	70	256	270	70			70			70			70		
		80	259	380	80			80			80			80		
		90	300	430	90			90			90			90		
		100	Landed	1530	100			100			100			100		
		110			110			110			110			110		
% Excess	16%	120			120			120			120			120		
Mixed bbls	91	130			130			130			130			130		
Total Sacks	511	140			140			140			140			140		
bbl Returns	7	150			150			150			150			150		
Water Temp	100															

Notes:

The day

Job complete with no issues.

plug landed at 3:02 1530 psi

floats checked 3:04 passed

Casing test complete 3:12 passed

X

Work Performed

X

Title

X

Date