



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/17/2018  
 Invoice # 900298  
 API# 05-123-46588  
 Foreman: Corey Barras

**Customer:** Anadarko Petroleum Corporation  
**Well Name:** English Farms 8-12HZ

County: Weld Consultant: Matt  
 State: Colorado Rig Name & Number: Cartel 88  
 Distance To Location: 38  
 Sec: 8 Units On Location: 4027-3103/4039-3214/4035-3213  
 Twp: 1N Time Requested: 2100  
 Range: 65W Time Arrived On Location: 2000  
 Time Left Location: \_\_\_\_\_

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>1,831</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1841</u>	Gallons Per Sack: <u>7.40</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:
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 with Die in 2nd 10</u>

Calculated Results	Displacement: <u>139.31 bbls</u>
<b>cuft of Shoe</b> <u>19.10 cuft</u> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
<b>cuft of Conductor</b> <u>61.05 cuft</u> (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Pressure of cement in annulus</b>
<b>cuft of Casing</b> <u>984.13 cuft</u> (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Hydrostatic Pressure:</b> <u>1350.73 PSI</u>
<b>Total Slurry Volume</b> <u>1064.28 cuft</u> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Pressure of the fluids inside casing</b>
<b>bbls of Slurry</b> <u>189.55 bbls</u> (Total Slurry Volume) X (.1781)	<b>Displacement:</b> <u>770.52 psi</u>
<b>Sacks Needed</b> <u>719 sk</u> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Shoe Joint:</b> <u>32.46 PSI</u>
<b>Mix Water</b> <u>126.70 bbls</u> (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Total</b> <u>802.98 psi</u>
	<b>Differential Pressure:</b> <u>547.75 psi</u>
	<b>Collapse PSI:</b> <u>2020.00 psi</u>
	<b>Burst PSI:</b> <u>3520.00 psi</u>
	<b>Total Water Needed:</b> <u>316.01 bbls</u>

  
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 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
English Farms 8-12HZ

INVOICE #  
LOCATION  
FOREMAN  
Date

900298
Weld
Corey Barras
5/17/2018

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**DESCRIPTION OF JOB EVENTS**

Amount Pumped		Event	Description	Rate	BBLs	Pressure
% Excess 15%	2000	What rig is doing upon Bison Arrival	Running Casing			
Mixed bbls 126.7	2015	JSA	Bison Crew			
Total Sacks 719						
bbl Returns 17	2135	Safety Meeting	Bison and Rig crew			
Water Temp 54	2150	Start Job				
	2152	Pressure Test				
Notes:						
	2154	Spacer Ahead	2nd 10 with die	7	30	110
	2202	Lead Cement	14.2 ppg	7	189	90
	2230	Shutdown				
	2232	Drop Plug	Preloaded in plug container			
	2234	Start Displacement		7	90	360
	2258	Bump Plug	500 over final lift (1160 PSI)	2	139	540
	2300	Floats Held	Held for 2 MIN with .5 bll back			
	2310	End Job				
	2315	Rig Down				
	1200	Leave Location				

X

Work Performed

X

Title

X

Date

# English Farms 8-12HZ

