



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/20/2017
 Invoice # 900195
 API# 05-123-45226
 Foreman: Corey B.

Customer: Anadarko Petroleum Corporation
Well Name: Burough 17N-17HZ

County: Weld
 State: Colorado
 Sec: 17
 Twp: 1N
 Range: 66W

Consultant: Matt
 Rig Name & Number: Cartel 88
 Distance To Location: 32
 Units On Location: 1027/3103-4033/3212-4020/321
 Time Requested: 630
 Time Arrived On Location: 530
 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>1,879</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1889</u>	Gallons Per Sack: <u>7.40</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>10%</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	Pressure of cement in annulus
cuft of Shoe <u>19.10</u> cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: <u>143.02</u> bbls (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)	Hydrostatic Pressure: <u>1386.14</u> PSI
cuft of Casing <u>967.15</u> cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing
Total Slurry Volume <u>1047.30</u> cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Displacement: <u>791.22</u> psi
bbls of Slurry <u>186.52</u> bbls (Total Slurry Volume) X (.1781)	Shoe Joint: <u>32.46</u> psi
Sacks Needed <u>708</u> sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total <u>823.68</u> psi
Mix Water <u>124.68</u> bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Differential Pressure: <u>562.46</u> psi
	Collapse PSI: <u>2020.00</u> psi
	Burst PSI: <u>3520.00</u> psi
	Total Water Needed: <u>317.70</u> bbls

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.



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

Customer
Well Name

Anadarko Petroleum Corporation
Borough 17N-17HZ

INVOICE #
LOCATION
FOREMAN
Date

900195
Weld
Corey B.
10/20/2017

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DESCRIPTION OF JOB EVENTS

Amount Pumped		Time	Event	Description	Rate	BBLs	Pressure
% Excess	10%	530	What rig is doing upon Bison Arrival	Running Casing			
Mixed bbls	124.68	540	JSA	Bison Crew			
Total Sacks	708	550	Rig up				
bbl Returns	15	700	Safety Meeting	Bison and Rig crew			
Water Temp	63	740	Start Job				
		742	Pressure Test				
Notes:							
		744	Spacer Ahead	2nd 10 with die	5	30	80
		750	Lead Cement	14.2 ppg	6	186	60
		825	Shutdown				
		827	Drop Plug	Preloaded in plug container			
		829	Start Displacement		7	90	320
		855	Bump Plug	500 over final lift 1050 psi	2	143	500
		857	Floats Held	Held for 2 MIN with .5 bll back			
		900	End Job				
		910	Rig Down				
		930	Leave Location				

X _____
Work Performed

X _____
Title

X _____
Date

Borough 17N-17HZ

