



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/11/2017
 Invoice # 900078
 API# 05-123-44409
 Foreman: Corey B.

Customer: Anadarko Petroleum Corporation
Well Name: BUTTERBALL 25C-34HZ

County: Weld Consultant: Matt
 State: Colorado Rig Name & Number: 252
 Distance To Location: 36
 Sec: 10 Units On Location: 1027-3103/4020-3212/4019-321
 Twp: 2N Time Requested: 1100
 Range: 67W Time Arrived On Location: 1015
 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>1,833</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1843</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:
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>8bm</u>	Spacer Ahead Makeup
Max Pressure: <u>2000</u>	<u>30 bbl /2nd 10 BBL with Die</u>

Calculated Results	Pressure of cement in annulus
Displacement: <u>139.46 bbls</u> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: <u>1352.20 PSI</u>
cuft of Shoe <u>19.10</u> cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of the fluids inside casing
cuft of Conductor <u>61.05</u> cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: <u>771.38 psi</u>
cuft of Casing <u>985.25</u> cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Shoe Joint: <u>32.46 psi</u>
Total Slurry Volume <u>1065.40</u> cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Total <u>803.84 psi</u>
bbls of Slurry <u>189.75</u> bbls (Total Slurry Volume) X (.1781)	Differential Pressure: <u>548.36 psi</u>
Sacks Needed <u>720</u> sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: <u>2020.00 psi</u>
Mix Water <u>128.38</u> bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Burst PSI: <u>3520.00 psi</u>
	Total Water Needed: <u>317.84 bbls</u>

X BBB
 Authorization To Proceed



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

Customer
Well Name

Anadarko Petroleum Corporation
BUTTERBALL 25C-34HZ

INVOICE #
LOCATION
FOREMAN
Date

900078
Weld
Corey B.
4/11/2017

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DESCRIPTION OF JOB EVENTS

Amount Pumped	Time/Date	Event	Description	Rate	BBLs	Pressure
% Excess 15%						
Mixed bbls 128.38						
Total Sacks 720	1015	What rig is doing upon Bison Arrival	Running Casing			
bbl Returns 19	1020	JSA	Bison Crew			
Water Temp 62	10302	Rig up				
	1245	Safety Meeting	Bison and Rig crew			
Notes:	1315	Start Job				
	1317	Pressure Test				
	1319	Spacer Ahead	2nd 10 with die	5	30	80
	1325	Lead Cement	14.2 ppg	6	190	150
	1400	Shutdown				
	1402	Drop Plug	Preloaded in plug container			
	1405	Start Displacement		7	90	400
	1427	Bump Plug	500 psi over final lift (1110psi)	2	139	530
	1430	Floats Held	Held for 3 min			
	1432	End Job				
	1440	Rig Down				
	1515	Leave Location				

X B. B. B.
Work Performed

X Co. Man
Title

X 4-11-17
Date

Butterball 25C-34HZ

