



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/15/2017
 Invoice # 900191
 API# 05-123-45246
 Foreman: Corey B.

Customer: Anadarko Petroleum Corporation
Well Name: Robin 9-18HZ

County: Weld Consultant: Matt
 State: Colorado Rig Name & Number: Cartel 88
 Distance To Location: 39
 Sec: 9 Units On Location: 1027/3103-4033/3212-4020/321
 Twp: 1N Time Requested: 1100
 Range: 65W Time Arrived On Location: 1010
 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>1,838</u>	Cement Yield (cuft) : <u>1.48</u>
Total Depth (ft) : <u>1848</u>	Gallons Per Sack: <u>7.40</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>20%</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 @nd 10</u>

Calculated Results	Displacement: 139.85 bbls
cuft of Shoe 19.10 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)
cuft of Conductor 61.05 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus
cuft of Casing 1031.02 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 1355.89 PSI
Total Slurry Volume 1111.17 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing
bbls of Slurry 197.90 bbls (Total Slurry Volume) X (.1781)	Displacement: 773.54 psi
Sacks Needed 751 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 32.46 psi
Mix Water 132.28 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 806.00 psi
	Differential Pressure: 549.89 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 322.13 bbls

X Sean Bell
 Authorization To Proceed



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

Customer
Well Name

Anadarko Petroleum Corporation
Robin 9-18HZ

INVOICE #
LOCATION
FOREMAN
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Weld
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DESCRIPTION OF JOB EVENTS

Amount Pumped	Time	Event	Description	Rate	BBLs	Pressure
% Excess 20%	1010	What rig is doing upon Bison Arrival	Running Casing			
Mixed bbls 132.28	1020	JSA	Bison Crew			
Total Sacks 751	1030	Rig up				
bbl Returns 30	1245	Safety Meeting	Bison and Rig crew			
Water Temp 60	1320	Start Job				
	1323	Pressure Test				
Notes:						
	1325	Spacer Ahead	2nd 10 with die	5	30	40
	1330	Lead Cement	14.2 ppg	5	197	60
	1420	Shutdown				
	1422	Drop Plug	Preloaded in plug container			
	1424	Start Displacement		7	90	360
	1505	Bump Plug	500 over final lift 1080 psi	2	140	520
	1508	Floats Held	Held for 2 MIN with 1.5 bll back			
	1510	End Job				
	1515	Rig Down				
	1545	Leave Location				

X Spencer Ad 1/6
Work/Preformed

X WSC
Title

X 10/15/17
Date

Robin 9-18HZ

