



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/28/2015
 Invoice # 25137
 API# 05-123-40888
 Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Hunziker 26C-4HZ

County: Weld Consultant: Randy/Sam
 State: Colorado Rig Name & Number: Advanced 10
 Distance To Location: 20 Miles
 Sec: 28 Units On Location: 4023-3104/4024-3203
 Twp: 2N Time Requested: 100am
 Range: 67W Time Arrived On Location: 1050pm
 Time Left Location: 5:45 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>1,307</u>	Cement Yield (cuft) : <u>1.49</u>
Total Depth (ft) : <u>1322</u>	Gallons Per Sack: <u>7.48</u>
Open Hole Diameter (in.) : <u>13.50</u>	% Excess: <u>20%</u>
Conductor Length (ft) : <u>46</u>	Displacement Fluid lb/gal: <u>8.3</u>
Conductor ID : <u>16</u>	BBL to Pit: <u>20</u>
Shoe Joint Length (ft) : <u>44</u>	Fluid Ahead (bbls): <u>30.0</u>
Landing Joint (ft) : <u>8</u>	H2O Wash Up (bbls): <u>20.0</u>
Max Rate: <u>5</u>	Spacer Ahead Makeup
Max Pressure: <u>2500</u>	<u>30bbls H2O+Dye in 2nd 10bbls</u>

Calculated Results	Pressure of cement in annulus
Displacement: <u>98.29 bbls</u> (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	Hydrostatic Pressure: <u>964.21 PSI</u>
cuft of Shoe <u>18.96 cuft</u> (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Pressure of the fluids inside casing
cuft of Conductor <u>40.98 cuft</u> (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Displacement: <u>544.74 psi</u>
cuft of Casing <u>739.57 cuft</u> (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Shoe Joint: <u>32.23 psi</u>
Total Slurry Volume <u>799.52 cuft</u> (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Total <u>576.97 psi</u>
bbls of Slurry <u>142.40 bbls</u> (Total Slurry Volume) X (.1781)	Differential Pressure: <u>387.24 psi</u>
Sacks Needed <u>537 sk</u> (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Collapse PSI: <u>2020.00 psi</u>
Mix Water <u>95.56 bbls</u> (Sacks Needed) X (Gallons Per Sack) ÷ 42	Burst PSI: <u>3520.00 psi</u>
	Total Water Needed: <u>243.85 bbls</u>

X Randy Case
 Authorization To Proceed



Displacement Cementing
Single Cement Surface Pipe

Customer
 Well Name

Anadarko Petroleum Corporation
 Hunziker 26C-4HZ

INVOICE #
 LOCATION
 FOREMAN
 Date

25137
 Weld
 Calvin Reimers
 1/28/2015

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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	245am															
MIRU	1130pm															
CIRCULATE	321am	0	357am	80	0			0			0			0		
Drop Plug		10	400am	50	10			10			10			10		
356am		20	402am	50	20			20			20			20		
		30	404am	70	30			30			30			30		
		40	406am	200	40			40			40			40		
M & P		50	408am	250	50			50			50			50		
Time	Sacks	60	409am	320	60			60			60			60		
327am	537	70	411am	370	70			70			70			70		
354am		80	413am	410	80			80			80			80		
Top Offs	40	90	414am	440	90			90			90			90		
		100	417am	370	100			100			100			100		
		110	Bump	1350	110	419am		110			110			110		
% Excess	20%	120	Bump	1010	120	421am		120			120			120		
Mixed bbls	95.56	130			130			130			130			130		
Total Sacks	537	140			140			140			140			140		
bbl Returns	20	150			150			150			150			150		
Water Temp	52.1															

Notes:

The day

1/2 bbl Back on Bleed Off

Top Offs 40 sacks 10.61 bbls Slurry

x Randy Case
 Work Performed

x Randy Case
 Title

x 01/28/2015
 Date

SERIES 2000

