



Anadarko Petroleum Corporation
Windsock 21-9HZ

900457
Weld
Corey Barras
12/12/2019

Treatment Report Page 2

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X

Authorized signature

x

Title

x

Date _____



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/12/2019
Invoice #: 900457
AFE #
Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation
Well Name: Windsock 21-9HZ

County: Weld
State: Colorado
Sec: 21
Twp: 1n
Range: 68w
Consultant: Dave
Rig Name & Number: CARTEL 88
Distance To Location: 42
Units On Location: 4028/3103-4024/3214-4032/3312
Time Requested: 1000
Time Arrived On Location: 930
Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft.) : 1,893	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1903	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 10%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit:
Shoe Joint Length (ft) : 42	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 8	H2O Wash Up (bbls): 20.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	30 BBL WATER, DYE IN 2ND 10

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement:	143.72 bbls
cuft of Shoe	18.23 cuft	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		Pressure of cement in annulus	
cuft of Conductor	61.05 cuft	Hydrostatic Pressure:	1396.47 PSI
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing	974.67 cuft	Displacement:	798.12 psi
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint:	30.98 psi
Total Slurry Volume	1053.95 cuft	Total	829.10 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure:	567.37 psi
bbls of Slurry	187.71 bbls		
(Total Slurry Volume) X (.1781)		Collapse PSI:	2020.00 psi
Sacks Needed	712 sk	Burst PSI:	3520.00 psi
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		Total Water Needed:	320.54 bbls
Mix Water	126.83 bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

X 
Authorization To Proceed

Windsock 21-9HZ

