



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/19/2015
Invoice #: 80434
API#: 05-123-41905
Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
Well Name: Powers 14C-22HZ

County: Weld
State: Colorado
Sec: 22
Twp: 2N
Range: 65W
Consultant: Bryan / Hayden
Rig Name & Number: Noble 2
Distance To Location: 40 Miles
Units On Location: 4023-3104/4024-3203
Time Requested: 200pm
Time Arrived On Location: 1215pm
Time Left Location: 6:00pm

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.) : 1,865	Cement Yield (cuft) : 1.49
Total Depth (ft) : 1872	Gallons Per Sack: 7.48
Open Hole Diameter (in.) : 13.50	% Excess: 15%
Conductor Length (ft) : 60	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.5	BBL to Pit: 23
Shoe Joint Length (ft) : 43	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 10	H2O Wash Up (bbls): 15.0
Max Rate: 6	Spacer Ahead Makeup
Max Pressure: 1750	30 bbls With Dye in 2nd 10 bbls

Casing ID 8.921	Casing Grade J-55 only used
Calculated Results	Displacement: 141.68 bbls
cuft of Shoe 18.47 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 48.30 cuft (Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus
cuft of Casing 1014.62 cuft (Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 1375.99 PSI
Total Slurry Volume 1081.39 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing
bbls of Slurry 192.60 bbls (Total Slurry Volume) X (.1781)	Displacement: 785.91 psi
Sacks Needed 726 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 31.39 psi
Mix Water 129.26 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 817.30 psi
	Differential Pressure: 558.69 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 315.94 bbls

X
Authorization To Proceed



Anadarko Petroleum Corporation
Powers 14C-22HZ

INVOICE #
LOCATION
FOREMAN
Date

80434
Weld
Calvin Reimers
8/19/2015

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DESCRIPTION OF JOB EVENTS

X 
Work Performed

X
Title

X
Date

SERIES 2000

