



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/1/2018
Invoice #: 300200
API #: 05-123-47725
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: CASTLE PINES 19-18HZ

County: Weld
State: Colorado
Sec: 19
Twp: 2N
Range: 66W
Consultant: LEVI
Rig Name & Number: CARTEL 88
Distance To Location: 25
Units On Location: 1028-3106, 4024-3212, 4035-3213
Time Requested: 1330
Time Arrived On Location: 1300
Time Left Location: 1830

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.) : 1,874	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1884	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: 12.0
Shoe Joint Length (ft) : 44	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 5	H2O Wash Up (bbls): 10.0
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:	141.87 bbls
cuft of Shoe	18.99 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:	1382.35 PSI
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing	964.39 cuft	Displacement:	789.11 psi
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint:	32.28 psi
Total Slurry Volume	1044.43 cuft	Total	821.39 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure:	560.96 psi
bbls of Slurry	186.01 bbls		
(Total Slurry Volume) X (.1781)		Collapse PSI:	2020.00 psi
Sacks Needed	706 sk	Burst PSI:	3520.00 psi
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		Total Water Needed:	307.55 bbls
Mix Water	125.68 bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

X
Authorization To Proceed

x 10-1-18
Date

CASTLE PINES 19-18HZ SURFACE

