



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 5/29/2015
 Invoice #: 80044
 API#: 05-123-41342
 Foreman: Calvin Reimers

Customer: Anadarko Petroleum Corporation
 Well Name: Iceman State 12N-16HZ

County: Weld
 State: Colorado
 Consultant: Ricky / Sam
 Rig Name & Number: Pinnenergy 4
 Distance To Location: 17 Miles
 Sec: 15
 Twp: 3N
 Range: 67W
 Units On Location: 4023-3104/4030-3203
 Time Requested: 630pm
 Time Arrived On Location: 450pm
 Time Left Location: 3:45am

WELL DATA	
Casing Size OD (in) :	9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,625
Total Depth (ft) :	1649
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	60
Conductor ID :	16
Shoe Joint Length (ft) :	40
Landing Joint (ft) :	10
Max Rate:	6
Max Pressure:	1750

Cement Data	
Cement Name:	BFN III
Cement Density (lb/gal) :	14.2
Cement Yield (cuft) :	1.49
Gallons Per Sack:	7.48
% Excess:	20%
Displacement Fluid lb/gal:	8.3
BBL to Pit:	23
Fluid Ahead (bbls):	30.0
H2O Wash Up (bbls):	10.0
Spacer Ahead Makeup	
30 bbls With Dye in 2nd 10 bbls	

Casing ID: 8.921 Casing Grade: J-55 only used

Calculated Results		
cuft of Shoe	17.40	cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		
cuft of Conductor	53.46	cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		
cuft of Casing	919.99	cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		
Total Slurry Volume	990.85	cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		
bbls of Slurry	176.47	bbls
(Total Slurry Volume) X (.1781)		
Sacks Needed		
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)		
Mix Water		
(Sacks Needed) X (Gallons Per Sack) ÷ 42		

Displacement:	123.32 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
Pressure of cement in annulus	
Hydrostatic Pressure:	1198.92 PSI
Pressure of the fluids inside casing	
Displacement:	683.48 psi
Shoe Joint:	29.57 psi
Total	713.05 psi
Differential Pressure:	485.87 psi
Collapse PSI:	2020.00 psi
Burst PSI:	3520.00 psi
Mix Water Needed:	281.75 bbls

Sumner J. Taylor
 Authorization To Proceed

Customers hereby acknowledges and specifically agrees to the terms and condition on this work order, including, without limitation, the provisions on this work order.

SERIES 2000

