



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/12/2019
 Invoice #: 900419
 API#: 05-069-50517
 Foreman: Corey Barras

Customer: Anadarko Petroleum Corporation
Well Name: Mae J 8-11HZ

County: Weld
 State: Colorado
 Sec: 25
 Twp: 5n
 Range: 68w

Consultant: Tyler
 Rig Name & Number: CARTEL 88
 Distance To Location: 39
 Units On Location: 4028/3103-4024/3214-4044/3205
 Time Requested: 500
 Time Arrived On Location: 400
 Time Left Location:

WELL DATA	
Casing Size OD (in) :	9.625
Casing Weight (lb) :	36.00
Casing Depth (ft.) :	1,912
Total Depth (ft) :	1921
Open Hole Diameter (in.) :	13.50
Conductor Length (ft) :	80
Conductor ID :	15.25
Shoe Joint Length (ft) :	42
Landing Joint (ft) :	8
Max Rate:	8
Max Pressure:	2000

Cement Data	
Cement Name:	BFN III
Cement Density (lb/gal) :	14.2
Cement Yield (cuft) :	1.48
Gallons Per Sack:	7.48
% Excess:	10%
Displacement Fluid lb/gal:	8.3
BBL to Pit:	
Fluid Ahead (bbls):	30.0
H2O Wash Up (bbls):	20.0
Spacer Ahead Makeup 30 BBL WATER, DYE IN 2ND 10	

Calculated Results	Casing ID	8.921	Casing Grade	J-55 only used
cuft of Shoe 18.23 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 145.18 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)			
cuft of Conductor 61.05 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus			
cuft of Casing 984.89 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 1410.48 PSI			
Total Slurry Volume 1064.17 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing			
bbls of Slurry 189.53 bbls (Total Slurry Volume) X (.1781)	Displacement: 806.31 psi			
Sacks Needed 719 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 30.98 psi			
Mix Water 128.06 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 837.29 psi			
	Differential Pressure: 573.19 psi			
	Collapse PSI: 2020.00 psi			
	Burst PSI: 3520.00 psi			
	Total Water Needed: 323.24 bbls			

X *[Signature]*
 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.

Mae J 8-11HZ

