



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 4/9/2015

Invoice # 80124

API# 05-123-41309

Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: BANE 2N3-9HZ

County: Weld
State: Colorado

Sec: 9
Twp: 1N
Range: 65W

Consultant: BRYAN

Rig Name & Number: ADVANCED 10

Distance To Location: 26

Units On Location: 4031-3107/ 4030-3203

Time Requested: 100

Time Arrived On Location: 2330

Time Left Location: 400

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.) :	1,577	Cement Yield (cuft) :	1.49
Total Depth (ft) :	1592	Gallons Per Sack:	7.48
Open Hole Diameter (in.) :	13.50	% Excess:	20%
Conductor Length (ft) :	40	Displacement Fluid lb/gal:	8.3
Conductor ID :	15.25	BBL to Pit:	26.0
Shoe Joint Length (ft) :	44	Fluid Ahead (bbls):	30.0
Landing Joint (ft) :	5	H2O Wash Up (bbls):	20.0
Max Rate:	6	Spacer Ahead Makeup	
Max Pressure:	1000	30BBL WATER/ DYE IN 2ND 10	

Calculated Results	Displacement:	118.92 bbls
cuft of Shoe 19.01 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 30.53 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus Hydrostatic Pressure: 1163.40 PSI	
cuft of Casing 901.45 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Pressure of the fluids inside casing Displacement: 661.12 psi Shoe Joint: 32.30 psi Total: 693.43 psi	
Total Slurry Volume 950.99 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Differential Pressure: 469.98 psi	
bbls of Slurry 169.37 bbls (Total Slurry Volume) X (.1781)	Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi	
Sacks Needed 638 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Total Water Needed: 282.59 bbls	
Mix Water 113.67 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42		

X Bryan Brown
 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.

BANE 2N3-9HZ SURFACE

