



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 10/9/2019

Invoice # 200521

API#

Foreman: Kirk Kallhoff

Customer: Anadarko Petroleum Corporation

Well Name: mae j 8-8hz

County: Weld

State: Colorado

Sec: 12

Twp: 1n

Range: 68w

Consultant: bryan

Rig Name & Number: Cartel 88

Distance To Location: 39

Units On Location: 4047/4032/4039

Time Requested: 530 pm

Time Arrived On Location: 300 pm

Time Left Location: 9:30pm

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.) : 1,906	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1916	Gallons Per Sack: 7.40
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:
Shoe Joint Length (ft) : 39	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 8	H2O Wash Up (bbls): 10.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	30 bbl with Die in 2nd 10

Casing ID 8.921 Casing Grade J-55 only used

Calculated Results	Pressure Calculations
cuft of Shoe 16.93 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	Displacement: 144.95 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 981.66 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: 1406.06 PSI
Total Slurry Volume 1059.64 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing
bbls of Slurry 188.72 bbls (Total Slurry Volume) X (.1781)	Displacement: 805.02 psi
Sacks Needed 716 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: 28.77 PSI
Mix Water 126.15 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total 833.79 psi
	Differential Pressure: 572.27 psi
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi
	Total Water Needed: 311.10 bbls

X
 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

