



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/16/2018  
Invoice #: 200307  
API#  
Foreman: KirkKallhoff

Customer: Anadarko Petroleum Corporation  
Well Name: cowboy 21-1hz

County: Weld  
State: Colorado  
Sec: 24  
Twp: 2N  
Range: 66W

Consultant: bryan  
Rig Name & Number: Cartel 88  
Distance To Location: 30  
Units On Location: 4028/4039/4035  
Time Requested: 500 am  
Time Arrived On Location: 230 am  
Time Left Location: 8:30 am

## WELL DATA

Casing Size OD (in) : 9.625  
Casing Weight (lb) : 36.00  
Casing Depth (ft.) : 1,864  
Total Depth (ft) : 1874  
Open Hole Diameter (in.) : 13.50  
Conductor Length (ft) : 80  
Conductor ID : 15.25  
Shoe Joint Length (ft) : 40  
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: 7.40  
% Excess: 15%  
Displacement Fluid lb/gal: 8.3  
BBL to Pit:  
Fluid Ahead (bbls): 30.0  
H2O Wash Up (bbls): 10.0  
  
Spacer Ahead Makeup  
30 bbl with Die in 2nd 10

Casing ID

8.921

Casing Grade

J-55 only used

## Calculated Results

cuft of Shoe 17.36 cuft  
(Casing ID Squared) X (.005454) X (Shoe Joint ft)  
  
cuft of Conductor 61.05 cuft  
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)  
  
cuft of Casing 1002.68 cuft  
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)  
  
Total Slurry Volume 1081.09 cuft  
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)  
  
bbls of Slurry 192.54 bbls  
(Total Slurry Volume) X (.1781)  
  
Sacks Needed 730 sk  
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)  
  
Mix Water 128.70 bbls  
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.63 bbls

(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

## Pressure of cement in annulus

Hydrostatic Pressure: 1375.07 PSI

## Pressure of the fluids inside casing

Displacement: 786.47 psi

Shoe Joint: 29.51 PSI

Total 815.98 psi

Differential Pressure: 559.09 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 310.33 bbls

X Kallhoff  
Authorization To Proceed



Anadarko Petroleum Corporation  
cowboy 21-1hz

200307  
Weld  
KirkKallhoff  
8/16/2018

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## DESCRIPTION OF JOB EVENTS

X *[Signature]*  
Work Performed

X
Title

X 8-16-18  
Date

SERIES 2000

