



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 9/21/2018
Invoice #: 300193
API#: 05-123-47722
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation

Well Name: CASTLE PINE 19-4HZ

County: Weld

State: Colorado

Sec: 19

Twp: 2N

Range: 66W

Consultant: LEVI

Rig Name & Number: CARTEL 88

Distance To Location: 25

Units On Location: 4028-3106,4039-3214,4030-3214

Time Requested: 1400

Time Arrived On Location: 1300

Time Left Location: 2000

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,876
Total Depth (ft) : 1882
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
Shoe Joint Length (ft) : 43
Landing Joint (ft) : 5

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: 8.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 10.0

Spacer Ahead Makeup
30 BBL WATER, DYE IN 2ND 10

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.56 cuft
(Casing ID Squared) X (.0009714) 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 965.47 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 1045.08 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 186.13 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 706 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 125.76 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 142.10 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1383.84 PSI

Pressure of the fluids inside casing

Displacement: 790.42 psi

Shoe Joint: 31.54 psi

Total 821.95 psi

Differential Pressure: 561.89 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 307.86 bbls

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.

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CASTLE PINE 19-4HZ SURFACE

PSI Barrels / Minute Barrels Lbs / Gallon Stage Volume

