



Bison Oil Well Cementing Single Cement Surface Pipe

Invoice # 12497
API# AFE 18469 D
Foreman: RANDY LYNCH

Customer: BILL BARRETT
Well Name: MERRITT 6 - 66 - 9 - 0857CH

County: Weld County
State: Colorado
Sec: 9
Twp: 6N
Range: 66W

Consultant:
Rig Name & Number: NABORS M 22
Distance To Location: 21
Units On Location: 3106 / 3203
Time Requested: 8:00 PM
Time Arrived On Location: 7:00 PM
Time Left Location: 4:00 AM

WELL DATA

Casing Size OD (in) : 9.6250
Casing Weight (lb) : 36
Casing Depth (ft.) : 846
Total Depth (ft) : 840
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 100
Conductor ID : 16
Shoe Joint Length (ft) : 40
Landing Joint (ft) : 0

Max Rate: 7
Max Pressure: 2500

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 25%
Displacement Fluid lb/gal: 8.3
BBL to Pit:
Fluid Ahead (bbls):
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
60

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 17.23 cuft
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 89.10 cuft
(Conductor Width Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 364.46 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 470.78 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 104.81 bbls
(Total Slurry Volume) X (.1781) X (% Excess Cement)

Sacks Needed 463 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 64.98 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 62.31 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 667.78 PSI

Pressure of the fluids inside casing

Displacement: 347.54 psi

Shoe Joint: 31.34 psi

Total 378.88 psi

Differential Pressure: 288.90 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 84.98 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.