



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/19/2016
Invoice #: 80520
API#: 05-123-40818
Foreman: Matthew Rosales

Customer: Noble Energy Inc.
Well Name: Reagen LD06-685

County: Weld
State: Colorado
Sec: NENE 5
Twp: 9N
Range: 58W

Consultant:
Rig Name & Number: H&P 517
Distance To Location: 70
Units On Location:
Time Requested: 8/19/2016 7:00am
Time Arrived On Location: 6:30am
Time Left Location:

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,914
Total Depth (ft) : 1918
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
Shoe Joint Length (ft) : 40
Landing Joint (ft) : 3

Max Rate: 8
Max Pressure: 1700

Cement Data

Cement Name: BFN III
Cement Density (lb/gal) : 14.2
Cement Yield (cuft) : 1.49
Gallons Per Sack: 7.48
% Excess: 15%
Displacement Fluid lb/gal: 8.3
Fluid Ahead (bbls): 50.0
H2O Wash Up (bbls): 20.0

Spacer Ahead Makeup
40h2o, 10 dye h2o

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.00 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 880.00 cuft
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing
Depth - Conductor Length)
Total Slurry Volume 1091.00 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 194.00 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 733 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 132.00 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 143.60 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1411.59 PSI

Pressure of the fluids inside casing

Displacement: 807.72 psi

Shoe Joint: 29.67 psi

Total 837.39 psi

Differential Pressure: 574.20 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 300.00 bbls

Authorization To Proceed

Bison Oil Well Cementing Single Cement Surface Pipe

Customer
Well Name

Noble Energy Inc.

Reagen LD06-685

INVOICE #

80520

LOCATION

Weld

FOREMAN

Matthew Rosales

Date _____

7/28/2016

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DESCRIPTION OF JOB EVENTS

[illegible]

X

Work Preformed

X

Title

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Date _____