

Bison Oil Well Cementing Single Cement Surface Pipe

Customer
Well Name

Anadarko Petroleum Corporation
Windsock 21-2HZ

INVOICE #
LOCATION
FOREMAN
Date

200548
Weld
Terry Richey
12/7/2019

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

[illegible]

|x

Work Preformed

X

Title

X

Date _____



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 12/7/2019
Invoice # 200548
API#
Foreman: Terry Richey

Customer: Anadarko Petroleum Corporation

Well Name: Windsock 21-2HZ

County: Weld
State: Colorado
Sec: 21
Twp: 1n
Range: 68w
Consultant: Levi
Rig Name & Number: Cartel 88
Distance To Location: 84
Units On Location: 4047/4024/4020
Time Requested: 8:30: PM
Time Arrived On Location: 7:30: PM
Time Left Location: 12:30am

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,883
Total Depth (ft) : 1893
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
Shoe Joint Length (ft) : 41
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: 10%
Displacement Fluid lb/gal: 8.3
BBL to Pit: 15.0
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 17.80 cuft
(Casing ID Squared) X (.0009714) X (Shoe Joint ft)
cuft of Conductor 61.05 cuft
(Conductor Width Squared) -(Casing Size OD Squared) X (.0009714) X (Conductor Length ft)
cuft of Casing 969.30 cuft
(Open Hole Squared)-(Casing Size Squared) X (.0009714) X (Casing Depth - Conductor Length)
Total Slurry Volume 1048.14 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 186.67 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 708 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 124.78 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 143.02 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1389.09 PSI

Pressure of the fluids inside casing

Displacement: 794.24 psi

Shoe Joint: 30.25 PSI

Total 824.48 psi

Differential Pressure: 564.61 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 307.80 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.

Windsock 21-2HZ

