



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/18/2018
Invoice #: 200310
API#
Foreman: KirkKallhoff

Customer: Anadarko Petroleum Corporation
Well Name: cowboy 21-4hz

County: Weld
State: Colorado
Sec: 24
Twp: 2N
Range: 6 W

Consultant: levi
Rig Name & Number: Cartel 88
Distance To Location: 30
Units On Location: 4028/4040/4030
Time Requested: 1030 am
Time Arrived On Location: 830 am
Time Left Location: 1:00 pm

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft.) : 1,862
Total Depth (ft) : 1872
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: 10%
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 958.01 cuft
(Open Hole Squared) - (Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)
Total Slurry Volume 1036.42 cuft
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)
bbls of Slurry 184.59 bbls
(Total Slurry Volume) X (.1781)
Sacks Needed 700 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
Mix Water 123.38 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 141.47 bbls

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

Pressure of cement in annulus

Hydrostatic Pressure: 1373.60 PSI

Pressure of the fluids inside casing

Displacement: 785.61 psi

Shoe Joint: 29.51 PSI

Total 815.12 psi

Differential Pressure: 558.48 psi

Collapse PSI: 2020.00 psi

Burst PSI: 3520.00 psi

Total Water Needed: 304.86 bbls

X *[Signature]*
Authorization To Proceed



Bison Oil Well Cementing
Single Cement Surface Pipe

Customer
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cowboy 21-4hz

INVOICE #
LOCATION
FOREMAN
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Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Amount Pumped		Event	Description	Rate	BBLs	Pressure
% Excess	10%	830 am	What rig is doing upon Bison Arrival			
Mixed bbls	123.3	845 am	JSA			
Total Sacks	700					
bbl Returns	12	1110 am	Safety Meeting			
Water Temp	65	1126 am	Start Job			
		1126 am	Pressure Test			
Notes:						
		1128 am	Spacer Ahead			
		1133 am	Lead Cement			
		1208 pm	Shutdown			
		1210 pm	Drop Plug			
		1210 pm	Start Displacement			
		1236 pm	Bump Plug			
		1237 pm	Floater Held			
		1238 pm	End Job			
		1245 pm	Rig Down			
		100 pm	Leave Location			

X

Work performed

X

Title

X

Date

SERIES 2000

PSI Barrels / Minute Barrels Lbs / Gallon

