



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 8/24/2015
Invoice #: 80629
API#: 05-123-41952
Foreman: JASON KELEHER

Customer: Anadarko Petroleum Corporation
Well Name: POWERS 1C-27HZ

County: Weld
State: Colorado
Sec: 22
Twp: 2N
Range: 65W
Consultant: BRYAN
Rig Name & Number: NOBLE 2
Distance To Location: 39
Units On Location: 4031-3106/ 4034-3203
Time Requested: 600
Time Arrived On Location: 500
Time Left Location: 930

WELL DATA

Casing Size OD (in) : 9.625
Casing Weight (lb) : 36.00
Casing Depth (ft) : 1,838
Total Depth (ft) : 1848
Open Hole Diameter (in.) : 13.50
Conductor Length (ft) : 40
Conductor ID : 15.25
Shoe Joint Length (ft) : 42
Landing Joint (ft) : 7

Max Rate: 6
Max Pressure: 1250

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
BBL to Pit: 27.0
Fluid Ahead (bbls): 30.0
H2O Wash Up (bbls): 20.0

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

Casing ID

8.921

Casing Grade

J-55 only used

Calculated Results

cuft of Shoe 18.36 **cuft**
(Casing ID Squared) X (.005454) X (Shoe Joint ft)

cuft of Conductor 30.53 **cuft**
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)

cuft of Casing 1010.55 **cuft**
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)

Total Slurry Volume 1059.43 **cuft**
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)

bbls of Slurry 188.68 **bbls**
(Total Slurry Volume) X (.1781)

Sacks Needed 711 **sk**
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

Mix Water 126.63 **bbls**
(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement: 139.36 **bbls**
(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)

Pressure of cement in annulus

Hydrostatic Pressure: 1355.89 **PSI**

Pressure of the fluids inside casing

Displacement: 774.27 **psi**

Shoe Joint: 31.20 **psi**

Total 805.48 **psi**

Differential Pressure: 550.42 **psi**

Collapse PSI: 2020.00 **psi**

Burst PSI: 3520.00 **psi**

Total Water Needed: 315.99 **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.



Customer
Well Name

Anadarko Petroleum Corporation
POWERS 1C-27HZ

INVOICE #
LOCATION
FOREMAN
Date

80629
Weld
JASON KELEHER
8/24/2015

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DESCRIPTION OF JOB EVENTS

X	<u>Bryan Brown</u>	X	<u>Car Man</u>	X	<u>8/24/15</u>
Customer Signature		Title		Date	

POWERS 1C-27HZ SURFACE

