



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/14/2021
 Invoice # 200661
 API# _____
 Foreman: kirk

Customer: Occidental Petroleum
Well Name: nelson 35-17 hz

County: Weld
 State: Colorado
 Sec: 25
 Twp: 2n
 Range: 68w

Consultant: jeremy
 Rig Name & Number: icon
 Distance To Location: 35
 Units On Location: 4028 4032 4033
 Time Requested: 1230 am
 Time Arrived On Location: 1000 pm
 Time Left Location: _____

WELL DATA		Cement Data	
Casing Size OD (in) :	<u>9.625</u>	Cement Name:	<u>BFN III</u>
Casing Weight (lb) :	<u>36.00</u>	Cement Density (lb/gal) :	<u>14.2</u>
Casing Depth (ft.) :	<u>1,852</u>	Cement Yield (cuft) :	<u>1.48</u>
Total Depth (ft) :	<u>1862</u>	Gallons Per Sack:	<u>7.40</u>
Open Hole Diameter (in.) :	<u>13.50</u>	% Excess:	<u>15%</u>
Conductor Length (ft) :	<u>80</u>	Displacement Fluid lb/gal:	<u>8.3</u>
Conductor ID :	<u>15.25</u>	BBL to Pit:	_____
Shoe Joint Length (ft) :	<u>41</u>	Fluid Ahead (bbls):	<u>30.0</u>
Landing Joint (ft) :	<u>8</u>	H2O Wash Up (bbls):	<u>5.0</u>
Max Rate:	<u>8</u>	Spacer Ahead Makeup	_____
Max Pressure:	<u>2000</u>	<u>10 fresh 10 dye 10 fresh</u>	_____

Calculated Results	Displacement:	140.62 bbls
cuft of Shoe <u>17.80</u> cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Conductor <u>61.05</u> cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	Pressure of cement in annulus	
cuft of Casing <u>995.93</u> cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)	Hydrostatic Pressure: <u>1366.22 PSI</u>	
Total Slurry Volume <u>1074.78</u> cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	Pressure of the fluids inside casing	
bbls of Slurry <u>191.42</u> bbls (Total Slurry Volume) X (.1781)	Displacement: <u>780.87 psi</u>	
Sacks Needed <u>726</u> sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	Shoe Joint: <u>30.25 psi</u>	
Mix Water <u>127.95</u> bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	Total <u>811.11 psi</u>	
	Differential Pressure: <u>555.11 psi</u>	
	Collapse PSI: <u>2020.00 psi</u>	
	Burst PSI: <u>3520.00 psi</u>	
	Total Water Needed: <u>303.57 bbls</u>	

X Jeremy White
 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.