



# Bison Oil Well Cementing Single Cement Surface Pipe

Date: 1/14/2021

Invoice # 2006 60

API#

Foreman: kirk

Customer: Occidental Petroleum

Well Name: nelson 35-19 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: 300 am

Time Arrived On Location: 100 am

Time Left Location:

WELL DATA	Cement Data
Casing Size OD (in) : 9.625	Cement Name: BFN III
Casing Weight (lb) : 36.00	Cement Density (lb/gal) : 14.2
Casing Depth (ft.) : 1,855	Cement Yield (cuft) : 1.48
Total Depth (ft) : 1865	Gallons Per Sack: 7.40
Open Hole Diameter (in.) : 13.50	% Excess: 15%
Conductor Length (ft) : 80	Displacement Fluid lb/gal: 8.3
Conductor ID : 15.25	BBL to Pit:
Shoe Joint Length (ft) : 41	Fluid Ahead (bbls): 30.0
Landing Joint (ft) : 8	H2O Wash Up (bbls): 5.0
Max Rate: 8	Spacer Ahead Makeup
Max Pressure: 2000	10 fresh 10 dye 10 fresh

Calculated Results	Pressure of cement in annulus
<b>Displacement:</b> 140.86 bbls (Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
<b>cuft of Shoe</b> 17.80 cuft (Casing ID Squared) X (.005454) X (Shoe Joint ft)	<b>Pressure of cement in annulus</b>
<b>cuft of Conductor</b> 61.05 cuft (Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	<b>Hydrostatic Pressure:</b> 1368.43 PSI
<b>cuft of Casing</b> 997.62 cuft (Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length )	<b>Pressure of the fluids inside casing</b>
<b>Total Slurry Volume</b> 1076.47 cuft (cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)	<b>Displacement:</b> 782.16 psi <b>Shoe Joint:</b> 30.25 psi <b>Total</b> 812.41 psi
<b>bbls of Slurry</b> 191.72 bbls (Total Slurry Volume) X (.1781)	<b>Differential Pressure:</b> 556.03 psi
<b>Sacks Needed</b> 727 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	<b>Collapse PSI:</b> 2020.00 psi <b>Burst PSI:</b> 3520.00 psi
<b>Mix Water</b> 128.15 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42	<b>Total Water Needed:</b> 304.01 bbls

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.