



Bison Oil Well Cementing Tail & Lead

Customer: Noble Energy Inc.
Well Name: Reveille A35-783

Date: 12/31/2020
Invoice #: 900497
AFE #: 208299
Foreman: Corey Barras
05-123-50799

County: Weld
State: Colorado

Sec: 35
Twp: 6N
Range: 64W

Consultant: Dave
Rig Name & Number: H&P 517
Distance To Location: 10
Units On Location: 4028/3103-4020/3203 4025/3214
Time Requested: 1230
Time Arrived On Location: 1200
Time Left Location:

WELL DATA	Cement Data
<p>Casing Size (in) : 9.625 Casing Weight (lb) : 36 Casing Depth (ft.) : 1,903 Total Depth (ft) : 1944 Open Hole Diameter (in) : 13.50 Conductor Length (ft) : 80 Conductor ID : 15.25 Shoe Joint Length (ft) : 42 Landing Joint (ft) : 0</p> <p>Sacks of Tail Requested 100 HOC Tail (ft): 0</p> <p>One or the other, cannot have quantity in both</p> <p>Max Rate: 8 Max Pressure: 1500</p>	<p>Lead</p> <p>Cement Name: Cement Density (lb/gal) : 13.5 Cement Yield (cuft) : 1.7 Gallons Per Sack 9.00 % Excess 10%</p> <p>Tail</p> <p>Cement Name: Cement Density (lb/gal) : 15.2 Cement Yield (cuft) : 1.27 Gallons Per Sack: 5.89 % Excess: 0%</p> <p>Fluid Ahead (bbls) 30.0 H2O Wash Up (bbls) 20.0</p> <p>Spacer Ahead Makeup 30BBL WATER DYE IN 2ND 10</p>

Lead Calculated Results	Tail Calculated Results
<p>HOC of Lead 1600.44 ft Casing Depth - HOC Tail Volume of Lead Cement 782.18 cuft HOC of Lead X Open Hole Ann Volume of Conductor 61.05 cuft (Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft) Total Volume of Lead Cement 843.23 cuft (cuft of Lead Cement) + (Cuft of Conductor) bbls of Lead Cement 165.20 bbls (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess) Sacks of Lead Cement 545.62 sk (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement) bbls of Lead Mix Water 116.92 bbls (Sacks Needed) X (Gallons Per Sack) ÷ 42 Displacement 143.86 bbls (Casing ID Squared) X (.0009714) X (Casing Depth) - (Shoe Length) Total Water Needed: 324.80 bbls</p>	<p>Tail Cement Volume In Ann 127.00 cuft (HOC Tail) X (OH Ann) Total Volume of Tail Cement 108.77 Cuft (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann) bbls of Tail Cement 22.62 bbls (HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess) HOC Tail 222.56 ft (Tail Cement Volume) ÷ (OH Ann) Sacks of Tail Cement 100.00 sk (Total Volume of Tail Cement) ÷ (Cement Yield) bbls of Tail Mix Water 14.02 bbls (Sacks of Tail Cement X Gallons Per Sack) ÷ 42 Pressure of cement in annulus Hydrostatic Pressure 585.23 PSI Collapse PSI: 2020.00 psi Burst PSI: 3520.00 psi</p>

X
Authorization To Proceed

17 Centralizers

Reveille A35-783

