



Bison Oil Well Cementing Tail & Lead

Date: 6/7/2018
Invoice # 300148
API# 05-123-46766
Foreman: JASON KELEHER

Customer: Noble Energy Inc.
Well Name: HURLEY H26-768

County: Weld
State: Colorado

Sec: 26
Twp: 3N
Range: 65W

Consultant: TIM
Rig Name & Number: H&P 517
Distance To Location: 23
Units On Location: 4044-3103,4032-3203
Time Requested: 230
Time Arrived On Location: 1230
Time Left Location: 700

WELL DATA	Cement Data
<p>Casing Size (in) : 9.625</p> <p>Casing Weight (lb) : 36</p> <p>Casing Depth (ft.) : 1,932</p> <p>Total Depth (ft) : 1943</p> <p>Open Hole Diameter (in) : 13.50</p> <p>Conductor Length (ft) : 80</p> <p>Conductor ID : 15.25</p> <p>Shoe Joint Length (ft) : 44</p> <p>Landing Joint (ft) : 5</p> <p>Sacks of Tail Requested 100</p> <p>HOC Tail (ft): 0</p> <p>One or the other, cannot have quantity in both</p> <p>Max Rate: 8</p> <p>Max Pressure: 1500</p>	<p>Lead</p> <p>Cement Name:</p> <p>Cement Density (lb/gal) : 13.5</p> <p>Cement Yield (cuft) : 1.7</p> <p>Gallons Per Sack 9.00</p> <p>% Excess 15%</p> <p>Tail</p> <p>Cement Name:</p> <p>Cement Density (lb/gal) : 15.2</p> <p>Cement Yield (cuft) : 1.27</p> <p>Gallons Per Sack: 5.89</p> <p>% Excess: 0%</p> <p>Fluid Ahead (bbls) 30.0</p> <p>H2O Wash Up (bbls) 20.0</p> <p>Spacer Ahead Makeup</p> <p>30BBL WATER DYE IN 2ND 10</p>

Casing ID 8.921	Casing Grade J-55 only used
Lead Calculated Results	Tail Calculated Results
HOC of Lead 1824.20 ft	Tail Cement Volume In Ann 107.80 cuft
Casing Depth - HOC Tail	(HOC Tail) X (OH Ann)
Volume of Lead Cement 980.25 cuft	Total Volume of Tail Cement 127.00 Cuft
HOC of Lead X Open Hole Ann	(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
Volume of Conductor 60.64 cuft	bbls of Tail Cement 22.62 bbls
(Conductor ID Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)	(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
Total Volume of Lead Cement 1042.00 cuft	HOC Tail 220.69 ft
(cuft of Lead Cement) + (Cuft of Conductor)	(Tail Cement Volume) ÷ (OH Ann)
bbls of Lead Cement 185.50 bbls	Sacks of Tail Cement 100.00 sk
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	(Total Volume of Tail Cement) ÷ (Cement Yield)
Sacks of Lead Cement 613.00 sk	bbls of Tail Mix Water 14.02 bbls
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	(Sacks of Tail Cement X Gallons Per Sack) ÷ 42
bbls of Lead Mix Water 131.36 bbls	Pressure of cement in annulus
(Sacks Needed) X (Gallons Per Sack) ÷ 42	Hydrostatic Pressure 585.23 PSI
Displacement 146.30 bbls	
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	
Total Water Needed: 196.00 bbls	
	Collapse PSI: 2020.00 psi
	Burst PSI: 3520.00 psi

X *James Steplaton*
Authorization To Proceed



Customer
Well Name

Noble Energy Inc.
HURLEY H26-768

Date _____

6/7/2018

INVOICE #

300148

LOCATION

Weld

FOREMAN

JASON KELEHER

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

X Mary Stophor
Signature

X WSS
Title

X 6-7-18
Date

HURELY H26-768 SURFACE

