



Bison Oil Well Cementing Tail & Lead

Customer: Noble Energy Inc.
Well Name: hurley h26-750

Date: 5/23/2018
Invoice #: 200289
API#:
Foreman: Kirk Kallhoff

County: Weld Rig Name & Number: H&P 517
State: Colorado Distance To Location: 23
Units On Location: 1
Sec: 27 Time Requested: 130 pm
Twp: 3n Time Arrived On Location: 1200 pm
Range: 65w Time Left Location: 6:30pm

WELL DATA	Cement Data
Casing Size (in) : <u>9.625</u> Casing Weight (lb) : <u>36</u> Casing Depth (ft.) : <u>1,900</u> Total Depth (ft) : <u>1945</u> Open Hole Diameter (in) : <u>13.50</u> Conductor Length (ft) : <u>110</u> Conductor ID : <u>16</u> Shoe Joint Length (ft) : <u>44</u> Landing Joint (ft) : <u>35</u>	Lead Cement Name: <u></u> Cement Density (lb/gal) : <u>13.5</u> Cement Yield (cuft) : <u>1.7</u> Gallons Per Sack : <u>9.00</u> % Excess : <u>15%</u>
Sacks of Tail Requested : <u>100</u> HOC Tail (ft): <u>0</u> One or the other, cannot have quantity in both	Tail Cement Name: <u></u> Cement Density (lb/gal) : <u>15.2</u> Cement Yield (cuft) : <u>1.27</u> Gallons Per Sack: <u>5.89</u> % Excess: <u>0%</u>
Max Rate: <u>8</u> Max Pressure: <u>1500</u>	Fluid Ahead (bbls) : <u>30.0</u> H2O Wash Up (bbls) : <u>20.0</u>
	Spacer Ahead Makeup <u>50 BBL WATER DYE IN 2ND 10</u>

Casing ID	8.921	Casing Grade	J-55 only used
Lead Calculated Results		Tail Calculated Results	
HOC of Lead	1534.22 ft	Tail Cement Volume In Ann	127.00 cuft
Casing Depth - HOC Tail		(HOC Tail) X (OH Ann)	
Volume of Lead Cement	749.82 cuft	Total Volume of Tail Cement	107.90 Cuft
HOC of Lead X Open Hole Ann		(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)	
Volume of Conductor	98.01 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	847.82 cuft	HOC Tail	220.78 ft
(cuft of Lead Cement) + (Cuft of Conductor)		(Tail Cement Volume) ÷ (OH Ann)	
bbls of Lead Cement	173.65 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	573.53 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	122.90 bbls	Pressure of cement in annulus	
(Sacks Needed) X (Gallons Per Sack) ÷ 42		Hydrostatic Pressure	585.23 PSI
Displacement	146.17 bbls		
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)		Collapse PSI:	2020.00 psi
Total Water Needed:	333.10 bbls	Burst PSI:	3520.00 psi

Authorization To Proceed

Bison Oil Well Cementing Two Cement Surface Pipe

Customer
Well Name

Noble Energy Inc.
hurley h26-750

Date _____

5/23/2018

INVOICE #

200289

LOCATION

Weld

FOREMAN

Kirk Kallhoff

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DESCRIPTION OF JOB EVENTS

[illegible]

X

Work Performed	
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x

Title

2

Date _____

5-23-18

SERIES 2000

