



Bison Oil Well Cementing Tail & Lead

Customer: Noble Energy Inc.
Well Name: HURLEY H26-762

Date: 6/1/2018
Invoice # 300146
API# 05-123-46767
Foreman: JASON KELEHER

County: Weld Consultant: GARY
State: Colorado Rig Name & Number: H&P 517
Distance To Location: 23
Units On Location: 4044-3107,4032-3203
Time Requested: 1830
Time Arrived On Location: 1730
Time Left Location: 2300
Sec: 26
Twp: 3N
Range: 65W

WELL DATA	Cement Data
<p>Casing Size (in) : <u>9.625</u> Casing Weight (lb) : <u>36</u> Casing Depth (ft.) : <u>1,925</u> Total Depth (ft) : <u>1935</u> Open Hole Diameter (in) : <u>13.50</u> Conductor Length (ft) : <u>80</u> Conductor ID : <u>15.25</u> Shoe Joint Length (ft) : <u>44</u> Landing Joint (ft) : <u>5</u></p> <p>Sacks of Tail Requested <u>100</u> HOC Tail (ft): <u>0</u></p> <p>One or the other, cannot have quantity in both</p> <p>Max Rate: <u>8</u> Max Pressure: <u>1500</u></p>	<p>Lead Cement Name: 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></p> <p>Tail Cement Name: 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></p> <p>Fluid Ahead (bbls) <u>30.0</u> H2O Wash Up (bbls) <u>20.0</u></p> <p>Spacer Ahead Makeup <u>30BBL WATER DYE IN 2ND 10</u></p>

Casing ID	8.921	Casing Grade	J-55 only used
Lead Calculated Results		Tail Calculated Results	
HOC of Lead	1704.31 ft	Tail Cement Volume In Ann	107.80 cuft
Casing Depth - HOC Tail		(HOC Tail) X (OH Ann)	
Volume of Lead Cement	912.87 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	973.45 cuft	HOC Tail	220.69 ft
(cuft of Lead Cement) + (Cuft of Conductor)		(Tail Cement Volume) ÷ (OH Ann)	
bbls of Lead Cement	173.40 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	573.00 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	122.79 bbls	Pressure of cement in annulus	
(Sacks Needed) X (Gallons Per Sack) ÷ 42		Hydrostatic Pressure	585.23 PSI
Displacement	145.70 bbls		
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)			
Total Water Needed:	332.51 bbls	Collapse PSI:	2020.00 psi
		Burst PSI:	3520.00 psi

X [Signature]
Authorization To Proceed



Bison Oil Well Cementing Tail & Lead

Cementing Customer Satisfaction Survey

Service Date 6/1/2018
Well Name HURLEY H26-762
County Weld
State Colorado
SEC 26
TWP 3N
RNG 65W

Invoice Number 300146
API # 05-123-46767
Job Type Two Cement
Company Name Noble Energy Inc.

Customer Representative CHRIS

Supervisor Name JASON KELEHER

Employee Name (Including Supervisor)	Exposure Hours (Per Employee)
JASON	5.5
JESSE	5.5
CHRIS	5.5
AMANDA	5.5
Total Exposure Hours	22

Did we encounter any problems on this job? ☒ Yes ☐ No

To Be Completed By Customer

Rating/Description

- 5 - Superior Performance (Established new quality/performance standards)
 - 4 - Exceeded Expectation (Provided more than what was required/expected)
 - 3 - Met Expectations (Did what was expected)
 - 2 - Below Expectations (Job problems/failures occurred - *Recovery made)
 - 1 - Poor Performance (Job problems/failures occurred - *Some recovery made)
- *Recovery: resolved issue(s) on jobsite in a timely and professional manner

RATING	CATEGORY	CUSTOMER SATISFACTION RATING
3	Personnel -	Did our personnel perform to your satisfaction?
2	Equipment -	Did our equipment perform to your satisfaction?
3	Job Design -	Did we perform the job to the agreed upon design?
1	Product/Material -	Did our products and materials perform as you expected?
1	Health & Safety -	Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc..)?
1	Environmental -	Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc..)?
1	Timeliness -	Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
1	Condition/Appearance -	Did the equipment condition and appearance meet your expectations?
1	Communication -	How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

Yes No Did an accident or injury occur?
Yes No Did an injury requiring medical treatment occur?
Yes No Did a first-aid injury occur?
Yes No Did a vehicle accident occur?
Yes No Was a post-job safety meeting held?

Please Circle:

Yes No Was a pre-job safety meeting held?
Yes No Was a job safety analysis completed?
Yes No Were emergency services discussed?
Yes No Did environmental incident occur?
Yes No Did any near misses occur?

Additional Comments:

1/2 HR NPT due to motor problems

THE INFORMATION HEREIN IS CORRECT -

X [Signature]
Customer Representative's Signature

DATE:

6-1-18

HURLEY H26-762 SURFACE

