



Bison Oil Well Cementing Tail & Lead

Date: 7/16/2018

Invoice # 666337

API# 05-123-46762

Supervisor: Nick Vigil

Customer: Noble Energy Inc.

Well Name: Hurley H26-736

County: Weld

State: Colorado

Sec: 19

Twp: 6N

Range: 63W

Consultant:

Tim

Rig Name & Number:

H&P 517

Distance To Location:

23 miles

Units On Location:

4023/4032

Time Requested:

1:30

Time Arrived On Location:

0:00

Time Left Location:

WELL DATA

Casing Size (in) : 9.625
Casing Weight (lb) : 36
Casing Depth (ft.) : 1,930
Total Depth (ft) : 1940
Open Hole Diameter (in) : 13.50
Conductor Length (ft) : 80
Conductor ID : 15.25
Shoe Joint Length (ft) : 45
Landing Joint (ft) :

Sacks of Tail Requested 100
HOC Tail (ft): 0

One or the other, cannot have quantity in both

Max Rate: 8
Max Pressure: 2000

Cement Data

Lead

Cement Name:
Cement Density (lb/gal) : 13.5
Cement Yield (cuft) : 1.7
Gallons Per Sack 9.00
% Excess 15%

Tail

Cement Name:
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.89
% Excess: 0%

Fluid Ahead (bbls) 30.0
H2O Wash Up (bbls) 20.0

Spacer Ahead Makeup

Dye in second 10 bbl

Casing ID

8.921

Casing Grade

J-55 only used

Lead Calculated Results

HOC of Lead 1621.11 ft
Casing Depth - HOC Tail
Volume of Lead Cement 792.28 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 853.33 cuft
(cuft of Lead Cement) + (Cuft of Conductor)
bbls of Lead Cement 174.78 bbls
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)
Sacks of Lead Cement 577.26 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
bbls of Lead Mix Water 123.70 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42
Displacement 146.41 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)
Total Water Needed: 334.13 bbls

Tail Calculated Results

Tail Cement Volume In Ann 127.00 cuft
(HOC Tail) X (OH Ann)
Total Volume of Tail Cement 107.47 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 219.89 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

Authorization To Proceed



Bison Oil Well Cementing Tail & Lead

Cementing Customer Satisfaction Survey

Service Date	7/16/2018
Well Name	Hurley H26-736
County	Weld
State	Colorado
SEC	19
TWP	6N
RNG	63W

Invoice Number	666337
API #	05-123-46762
Job Type	Surface Pipe
Company Name	Noble Energy Inc.

Customer Representative Tim

Supervisor Name Nick Vigil

Employee Name (Including Supervisor)
Nick V.
Belino M.
Jose R.
Aaron C.
Bryon R.

Exposure Hours (Per Employee)
4
4
4
4
4
20

Total Exposure Hours

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

3.5 Personnel -
3.5 Equipment -
3.5 Job Design -
3.5 Product/Material -
3.5 Health & Safety -
3.5 Environmental -
3.5 Timeliness -
3.5 Condition/Appearance -
3.5 Communication -

CUSTOMER SATISFACTION RATING

Did our personnel perform to your satisfaction?
Did our equipment perform to your satisfaction?
Did we perform the job to the agreed upon design?
Did our products and materials perform as you expected?
Did we perform in a safe and careful manner (Pre/post mtgs, PPE, TSMR, etc.)?
Did we perform in an environmentally sound manner (spills, leaks, cleanup, etc.)?
Was job performed as scheduled (On time to site, accessible to customers, completed when expected)?
Did the equipment condition and appearance meet your expectations?
How well did our personnel communicate during mobilization, rig up and job execution?

Please Circle:

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

Please Circle:

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

Additional Comments:

Good job as usual !!

THE INFORMATION HEREIN IS CORRECT -

X

Tim Vigil

Customer Representative's Signature

DATE:

7/16/18

Any additional Customer Comments or HSE concerns should be described on the back of this form

Hurley H26-736

