



Bison Oil Well Cementing Tail & Lead

Customer: Noble Energy
Well Name: Oscar Y10-72-HN

Date: 10/19/2014
Invoice #: 13064
API#: _____
Foreman: Monte Bedeaux

County: Weld Consultant: Kevin
State: Colorado Rig Name & Number: H&P 277
Sec: 10 Distance To Location: 26
Twp: 2n Units On Location: 4028/3102 4022-3213
Range: 64w Time Requested: 1:00pm
Time Arrived On Location: 12:45pm
Time Left Location: _____

WELL DATA

Casing Size (in) : 9.625
Casing Weight (lb) : 36
Casing Depth (ft) : 1127
Total Depth (ft) : 1156
Open Hole Diameter (in) : 13.50
Conductor Length (ft) : 124
Conductor ID : 15.6
Shoe Joint Length (ft) : 45
Landing Joint (ft) : 24

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

One or the other, cannot have quantity in both

Max Rate: 4.5
Max Pressure: 2000

Cement Data

Lead

Cement Name: _____
Cement Density (lb/gal) : 13.1
Cement Yield (cuft) : 1.69
Gallons Per Sack : 8.64
% Excess : 25%

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
10 fresh 10 dye 10 fresh

Casing ID : 8.921 Casing Grade : J-55 only used

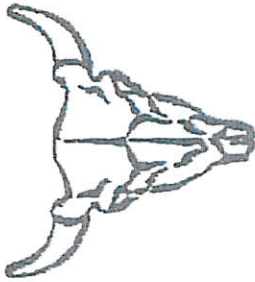
Lead Calculated Results

HOC of Lead : 759.11 ft
Casing Depth - HOC Tail
Volume of Lead Cement : 371.00 cuft
HOC of Lead X Open Hole Ann
Volume of Conductor : 101.93 cuft
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X
(Conductor Length ft)
Total Volume of Lead Cement : 472.93 cuft
(cuft of Lead Cement) + (Cuft of Conductor)
bbls of Lead Cement : 105.29 bbls
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)
Sacks of Lead Cement : 349.80 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
bbls of Lead Mix Water : 71.96 bbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42
Displacement : 85.49 bbls
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)
Total Water Needed : 221.48 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 : 766.92 PSI
Collapse PSI: 2020.00 psi
Burst PSI: 3520.00 psi

X Kevin Bedeaux
Authorization To Proceed



Bison Oil Well Cementing
Two Cement Surface Pipe

Customer
Well Name

Noble Energy
Oscar Y10-72-HN

Date
10/19/2014
INVOICE #
13064
LOCATION
Weld
FOREMAN
Monte Bedeaux
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DESCRIPTION OF JOB EVENTS

	6:30	Displace 1		Displace 2		Displace 3		Displace 4		Displace 5	
		BBLs	Time	PSI	BBLs	Time	PSI	BBLs	Time	PSI	BBLs
Safety Meeting	6:00	0	7:36	0	0			0			0
MIRU	6:57	10	7:40	10	10			10			10
CIRCULATE		20	7:48	80	20			20			20
Drop Plug		30	7:50	180	30			30			30
		40	7:52	140	40			40			40
		50	7:54	230	50			50			50
		60	7:56	260	60			60			60
		70	7:58	330	70			70			70
		80	8:00	380	80			80			80
		90	8:02	960	90			90			90
		100			100			100			100
		110			110			110			110
		120			120			120			120
		130			130			130			130
		140			140			140			140
		150			150			150			150
Lead mixed bbls	71.96										
Lead % Excess	25%										
Lead Sacks	350										

Notes:

14.02 safety meeting, miru, pressure test per company man, circulate 30 bbls ahead with dye in 2nd 10, mix and pump 350 sks lead, 13.1, 1.69 yield, 8.64 h2o
0% mix and pump 100 sks tail at 15.2, 1.27, 5.89. drop plug and displace 85.49 bbls h2o. Bump plug at 8:02 pm at 960 psi, 26 back
100 casing test 1500 psi 15 min

Total Sacks 450
Water Temp 45.5
bbl Returns

X *Kevin Padgett* X Title Date