



Bison Oil Well Cementing Two Cement Surface Pipe

Customer
Well Name

Noble Energy
oscar y 10-79hn

Date
INVOICE #
LOCATION
FOREMAN

3/30/2014
12351
Weld
kirk

Treatment Report Page 2

DESCRIPTION OF JOB EVENTS

Safety Meeting		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
MIRU		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
CIRCULATE	156 pm	0	307pm	10	0			0			0			0		
Drop Plug	124 pm	10	309pm	50	10			10			10			10		
	228 pm	20	311pm	50	20			20			20			20		
		30	313pm	110	30			30			30			30		
		40	315pm	170	40			40			40			40		
		50	317pm	230	50			50			50			50		
M & P		60	319pm	260	60			60			60			60		
Time	Sacks	70	321pm	300	70			70			70			70		
234 pm	488	80	329pm	330	80			80			80			80		
304 pm stop		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
		120			120			120			120			120		
Lead mixed bbls	80	130			130			130			130			130		
Lead % Excess	35%	140			140			140			140			140		
Lead Sacks	389	150			150			150			150			150		
Notes:																
Tail mixed bbls	14	BUMPED PLUG at 329 pm 410 PSI 116.6 bbls slurry lead 22.6 bbls slurry tail														
Tail % Excess	0%	casing test 1000 psi 15 min														
Tail Sacks	100	cpu cable came unplugged at the end wasn't able to save cement chart														
Total Sacks	489															
bbl Returns	38															

X

Work Performed

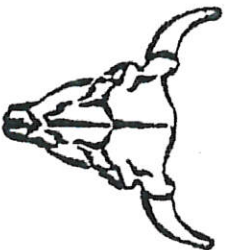
X

Title

X

Date

3-30-14



Bison Oil Well Cementing Tail & Lead

Date: 3/30/2014

Invoice # 12351

API#

Foreman: kirk

Customer: Noble Energy

Well Name: oscar y 10-79hn

Consultant:

hucy

Rig Name & Number:

h&p 330

County: Weld

Distance To Location:

State: Colorado

Units On Location:

Sec: 10

Time Requested:

Twp: 2n

Time Arrived On Location:

Range: 64w

Time Left Location:

WELL DATA

Casing Size (in) 9.625
Casing Weight (lb) 38
Casing Depth (ft) 1,111
Total Depth (ft) 1,153
Open Hole Diameter (in) 13.75
Conductor Length (ft) 100
Conductor ID 15.5
Shoe Joint Length (ft) 39
Landing Joint (ft) 32

Sacks of Tail Requested 100
HOC Tail (ft) 0

One or the other, cannot have quantity in both

Max Rate:

Max Pressure:

Cement Data

Lead

Cement Name:
Cement Density (lb/gal) : 13.1
Cement Yield (cuft) : 1.69
Gallons Per Sack 8.64
% Excess 35%

Tail

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

Fluid Ahead (bbbls) 85.3
H2O Wash Up (bbbls) 20.0

Spacer Ahead Makeup

Casing ID

8.921

Casing Grade

J-55 only used

Lead Calculated Results

HOC of Lead

769.69 ft

Casing Depth - HOC Tail

Volume of Lead Cement

404.77 cuft

HOC of Lead X Open Hole Ann

Volume of Conductor

80.51 cuft

(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)

Total Volume of Lead Cement

485.28 cuft

(cuft of Lead Cement) + (cuft of Conductor)

bbbls of Lead Cement

116.68 bbbls

(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)

Sacks of Lead Cement

387.65 sk

(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)

bbbls of Lead Mix Water

79.74 bbbls

(Sacks Needed) X (Gallons Per Sack) ÷ 42

Displacement

85.34 bbbls

(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)

Total Water Needed:

185.08 bbbls

Tail Calculated Results

Tail Cement Volume In Ann

127.00 cuft

(HOC Tail) X (OH Ann)

Total Volume of Tail Cement

110.07 Cuft

(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)

bbbls of Tail Cement

22.62 bbbls

(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)

HOC Tail

209.31 ft

(Tail Cement Volume) ÷ (OH Ann)

Sacks of Tail Cement

100.00 sk

(Total Volume of Tail Cement) ÷ (Cement Yield)

bbbls of Tail Mix Water

14.02 bbbls

(Sacks of Tail Cement X Gallons Per Sack) ÷ 42

Pressure of cement in annulus

Hydrostatic Pressure

756.04 PSI

Collapse PSI:

2020.00 psi

Burst PSI:

3520.00 psi

X

Authorization To Proceed

Customers hereby acknowledge and specifically agree to the terms and condition on this work order, including, without limitation, the provisions on this work order.