



**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

		Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
		BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
Safety Meeting	156 pm															
MIRU	124 pm															
CIRCULATE	228 pm	0	307pm	10	0			0			0			0		
Drop Plug		10	309pm	50	10			10			10			10		
	307 pm	20	311pm	50	20			20			20			20		
		30	313pm	110	30			30			30			30		
		40	315pm	170	40			40			40			40		
	M & P	50	317pm	230	50			50			50			50		
	Time	60	319pm	260	60			60			60			60		
	Sacks	70	321pm	300	70			70			70			70		
	234 pm	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

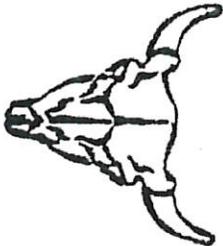
X

Title

X

Date

3-30-14



**Bison Oil Well Cementing
Tail & Lead**

Customer: Noble Energy
Well Name: oscar y 10-79hn

Date: 3/30/2014
Invoice # 12351
API#
Foreman: kirk

Consultant: Huey
Rig Name & Number: h&p 330
Distance To Location:
Units On Location: 3103-3203
Time Requested: 1100 am
Time Arrived On Location: 1045 am
Time Left Location:

WELL DATA

Casing Size (in)	9.625
Casing Weight (lb)	38
Casing Depth (ft)	1111
Total Depth (ft)	1153
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 1.55 only used	
Lead Calculated Results			
HOC of Lead	769.69 ft	Tail Calculated Results	
Casing Depth - HOC Tail		Tail Cement Volume In Ann (HOC Tail) X (OH Ann)	127.00 cuft
Volume of Lead Cement	404.77 cuft	Total Volume of Tail Cement (HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)	110.07 cuft
HOC of Lead X Open Hole Ann		bbbls of Tail Cement	22.62 bbbls
Volume of Conductor (Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X (Conductor Length ft)	80.51 cuft	HOC Tail	209.31 ft
Total Volume of Lead Cement (cuft of Lead Cement) + (Cuft of Conductor)	485.28 cuft	Sacks of Tail Cement (Tail Cement Volume) ÷ (OH Ann)	100.00 sk
bbbls of Lead Cement (Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)	116.68 bbbls	bbbls of Tail Mix Water (Sacks of Tail Cement X Gallons Per Sack) ÷ 42	14.02 bbbls
Sacks of Lead Cement (Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)	387.65 sk	Pressure of cement in annulus	756.04 PSI
bbbls of Lead Mix Water (Sacks Needed) X (Gallons Per Sack) ÷ 42	79.74 bbbls	Hydrostatic Pressure	
Displacement (Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)	85.34 bbbls	Collapse PSI:	2020.00 psi
Total Water Needed:	185.08 bbbls	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.