



Bisc Oil Well Cementing Single Cement Surface Pipe

Date: 2/22/2015
Invoice #: 25149
API#: 05-123-40916
Foreman: Calvin Reimers

Customer: Noble Energy Inc.
Well Name: Colt A 13-618

County: Weld
State: Colorado
Sec: 17
Twp: 6N
Range: 63W
Consultant: Jim B. Clifford K.
Rig Name & Number: H&P 343
Distance To Location: 27 Miles
Units On Location: 4023-3104/4034-3211
Time Requested: 830am
Time Arrived On Location: 330am
Time Left Location:

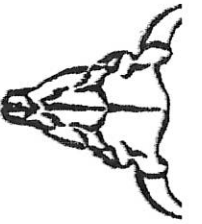
WELL DATA		Cement Data	
Casing Size OD (in) :	9.625	Cement Name:	BFN III
Casing Weight (lb) :	36.00	Cement Density (lb/gal) :	14.2
Casing Depth (ft.) :	881	Cement Yield (cuft) :	1.49
Total Depth (ft) :	910	Gallons Per Sack:	7.48
Open Hole Diameter (in.) :	13.50	% Excess:	0%
Conductor Length (ft) :	100	Displacement Fluid lb/gal:	8.3
Conductor ID :	16	BBL to Pit:	
Shoe Joint Length (ft) :	44	Fluid Ahead (bbls):	60.0
Landing Joint (ft) :	29	H2O Wash Up (bbls):	20.0
Max Rate:	7	Spacer Ahead Makeup	
Max Pressure:	2500	60bbls H2O+Dye in 2nd 10bbls	

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 66.87 bbls	
cuft of Shoe	19.11 cuft	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
(Casing ID Squared) X (.005454) X (Shoe Joint ft)		Pressure of cement in annulus	
cuft of Conductor	89.10 cuft	Hydrostatic Pressure: 649.55 PSI	
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing	381.46 cuft	Displacement: 360.67 psi	
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint: 32.48 psi	
Total Slurry Volume	489.67 cuft	Total 393.16 psi	
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure: 256.40 psi	
bbls of Slurry	87.21 bbls	Collapse PSI: 2020.00 psi	
(Total Slurry Volume) X (.1781)		Burst PSI: 3520.00 psi	
Sacks Needed	329 sk	Total Water Needed: 205.40 bbls	
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
Mix Water	58.53 bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			

X

Authorization To Proceed

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



DISCOUNT WELL CONCRETING
Single Cement Surface Pipe

Customer
Well Name

Noble Energy Inc.
Colt A 13-618

INVOICE #
LOCATION
FOREMAN
Date

2014
Weld
Calvin Reimers
2/22/2015

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DESCRIPTION OF JOB EVENTS

Safety Meeting	1134am	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	1045am	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI	BBLS	Time	PSI
MIRU	1218pm	0	1247pm	70	0			0			0			0		
CIRCULATE		10	1250pm	80	10			10			10			10		
Drop Plug		20	1251pm	90	20			20			20			20		
		30	1253pm	160	30			30			30			30		
1246pm		40	1255pm	240	40			40			40			40		
		50	1257pm	270	50			50			50			50		
M & P		60	100pm	300	60			60			60			60		
Time	Sacks	70	105pm	250	70			70			70			70		
1230pm	354	80	Bump	420	80			80			80			80		
1243pm		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	10%	120			120			120			120			120		
Mixed bbls	63.02	130			130			130			130			130		
Total Sacks	354	140			140			140			140			140		
bbl Returns	16	150			150			150			150			150		
Water Temp	54.2															

Notes:

ie day

1/2 bbl Back on Bleed Off

Casing PSI Test 106pm 1000psi to 121pm 970psi

X
Work Performed

X
Title

X
Date