



Bisor Oil Well Cementing Single Cement Surface Pipe

Invoice # 12693
API# 05-123-37203-00
Foreman: Calvin Reimers

Customer: Noble
Well Name: Cockcroft B15-69-1HNM

County: Weld County
State: Colorado
Sec: 14
Twp: 5N
Range: 64W
Consultant: Martin / John
Rig Name & Number: H&P 315
Distance To Location: 21
Units On Location: 3103/3211
Time Requested: 200am
Time Arrived On Location: 120am
Time Left Location:

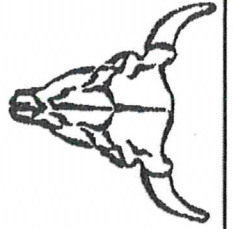
WELL DATA		Cement Data	
Casing Size OD (in) :	9.6250	Cement Name:	BFN III
Casing Weight (lb) :	36	Cement Density (lb/gal) :	15.2
Casing Depth (ft.) :	610	Cement Yield (cuft) :	1.27
Total Depth (ft) :	640	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	13.75	% Excess:	0%
Conductor Length (ft) :	100	Displacement Fluid lb/gal:	8.3
Conductor ID :	16	BBL to Pit:	
Shoe Joint Length (ft) :	45	Fluid Ahead (bbls):	
Landing Joint (ft) :	29	H2O Wash Up (bbls):	20.0
Max Rate:	7	Spacer Ahead Makeup	
Max Pressure:	2500	50bbls with Dye in 2nd 10bbls	

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 45.94 bbls	
cuft of Shoe	19.58 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:	481.99 PSI
(Conductor Width Squared) -(Casing Size OD Squared) X (.005454) X (Conductor Length ft)		Pressure of the fluids inside casing	
cuft of Casing	268.42 cuft	Displacement:	243.75 psi
(Open Hole Squared)-(Casing Size Squared) X (.005454) X (Casing Depth - Conductor Length)		Shoe Joint:	35.63 psi
Total Slurry Volume	377.10 cuft	Total	279.37 psi
(cuft of Shoe) + (cuft of Conductor) + (cuft of Casing)		Differential Pressure:	202.61 psi
bbls of Slurry	67.16 bbls	Collapse PSI:	2020.00 psi
(Total Slurry Volume) X (.1781) X (% Excess Cement)		Burst PSI:	3520.00 psi
Sacks Needed	297 sk	Total Water Needed:	61.64 bbls
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)			
Mix Water	41.64 bbls		
(Sacks Needed) X (Gallons Per Sack) ÷ 42			



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.



Bison Oil Well Cementing
Single Cement Surface Pipe

Customer
Well Name

Noble
Cockroft B15-69-1HNM

INVOICE #
LOCATION
FOREMAN

12693
Weld County
Calvin Reimers

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DESCRIPTION OF JOB EVENTS

Safety Meeting	340am	Displace 1			Displace 2			Displace 3			Displace 4			Displace 5		
	MIRU 310am CIRCULATE 428am Drop Plug 500am	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI	BBS	Time	PSI
M & P		0	501am	50	0			0			0			0		
		10	504am	70	10			10			10			10		
		20	506am	160	20			20			20			20		
		30	507am	240	30			30			30			30		
		40	510am	240	40			40			40			40		
Time		50	514am	220	50			50			50			50		
Sacks		60	Bump	460	60			60			60			60		
438am		70			70			70			70			70		
458am		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess		120			120			120			120			120		
Mixed bbls		130			130			130			130			130		
Total Sacks		140			140			140			140			140		
		150			150			150			150			150		
bbl Returns		15			150			150			150			150		

Notes:

The day

Casing PSI test 516am 1000 Psi to 531am 950 Psi

15 bbls Slurry back to surface

X
Work Performed

X
Title

X
Date