



Bison Oil Well Cementing Single Cement Surface Pipe

Date: 6/10/2014
Invoice #: 12066
API#: 05-123-38618
Foreman: JASON

Customer: NOBLE
Well Name: TINA LC 29-73-1HNA

County: Weld County
State: Colorado
Sec: 29
Twp: 9N
Range: 59W
Consultant: GARY
Rig Name & Number: H&P 326
Distance To Location: 67
Units On Location: 4027-3106, 4022-3212
Time Requested: 1900
Time Arrived On Location: 1800
Time Left Location: 2300

WELL DATA		Cement Data	
Casing Size OD (in) :	9.625	Cement Name:	BFN III
Casing Weight (lb) :	36.00	Cement Density (lb/gal) :	15.2
Casing Depth (ft) :	605	Cement Yield (cuft) :	1.27
Total Depth (ft) :	645	Gallons Per Sack:	5.89
Open Hole Diameter (in.) :	13.75	% Excess:	15%
Conductor Length (ft) :	100	Displacement Fluid lb/gal:	8.3
Conductor ID :	15.25	BBL to Pit:	13.0
Shoe Joint Length (ft) :	45	Fluid Ahead (bbls):	50.0
Landing Joint (ft) :	35	H2O Wash Up (bbls):	20.0
Max Rate:	7	Spacer Ahead Makeup	
Max Pressure:	2500	50 BBL H2O+KCL+DYE IN 2ND 10	

Casing ID	8.921	Casing Grade	J-55 only used
Calculated Results		Displacement: 45.99 bbls	
cuft of Shoe	19.38 cuft	(Casing ID Squared) X (.0009714) X (Casing Depth + Landing Joint - Shoe Joint)	
cuft of Conductor	76.31 cuft	Pressure of cement in annulus	
cuft of Casing	305.41 cuft	Hydrostatic Pressure:	477.71 PSI
Total Slurry Volume	401.10 cuft	Pressure of the fluids inside casing	
bbls of Slurry	82.15 bbls	Displacement:	241.62 psi
Sacks Needed	316 sk	Shoe Joint:	35.25 psi
Mix Water	44.29 bbls	Total	276.86 psi
		Differential Pressure:	200.84 psi
		Collapse PSI:	2020.00 psi
		Burst PSI:	3520.00 psi
		Total Water Needed:	160.28 bbls

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.



Bison Oil Well Cementing
Single Cement Surface Pipe

Customer
Well Name

NOBLE
TINA LC 29-73-1HNA

INVOICE #
LOCATION
FOREMAN
Date

12066
Weld County
JASON
6/10/2014

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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	2045															
MIRU	1930															
CIRCULATE		0	2201	0	0			0			0			0		
Drop Plug		10	220	70	10			10			10			10		
2200		20	2205	140	20			20			20			20		
		30	2208	290	30			30			30			30		
		40	2210	250	40			40			40			40		
M & P		50	2213	240	50			50			50			50		
Time	Sacks	60	BUMP	420	60			60			60			60		
2117-2157	316	70			70			70			70			70		
		80			80			80			80			80		
		90			90			90			90			90		
		100			100			100			100			100		
		110			110			110			110			110		
% Excess	0%	120			120			120			120			120		
Mixed bbls	44.3	130			130			130			130			130		
Total Sacks	316	140			140			140			140			140		
bbl Returns	13	150			150			150			150			150		
Water Temp	76															

Notes:

The day

PUMPED 50 BBL H2O AHEAD, SECOND 10 WITH DYE, MIX AND PUMP 316 SKS AT 15.2, 71.4 BBLs OF SLURRY, RELEASED PRESSURE AND GOT .5 BBLs

BACK

X WSS
Work Performed

X WSS
Title

X June 10, 2014
Date