



Cement

Well Name: Bernhardt Farms 13S-203

Cement

Surface Casing Cement, Casing, 5/2/2015 23:45

Type Casing	String Surface, 923.0ftKB	Start Date 5/2/2015	Cementing End Date 5/3/2015	Wellbore Original Hole	Job Drilling - original, 5/1/2015 23:00	Cementing Company Cementers Well Service Inc	Cement Objective	Eval Method Returns to Surface
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Cement Stages

Stg # 1	Description Surface Casing Cement				Objective			Top Depth (ftKB) 13.0	Bottom Depth (ftKB) 923.0	Pump Start Date 5/2/2015		Pump End Date 5/3/2015		Top Plug? No	Btm Plug? Yes				
Initial Pump Rate (bbl/min) 4		Final Pump Rate (bbl/min) 5		Avg Pump Rate (bbl/min) 5		Final Pump Pressure (psi) 400.0		Plug Bump Pressure (psi) 900.0		Pressure Held (psi) 900.0		Pressure Release Date 5/3/2015		Full Return? Yes	Vol Cement Ret (bbl) 7.0		Volume Lost (bbl)		
Recip? No	Stroke (ft)	Recip Rate (...)		Rotat... No	RPM (rpm)		Pipe Movement Note			MD Tagged...	Tag Method		Tag Wt (100...	Prop... No	Depth Plug...	Tag Cement Date		Drill Out Date	Drill Out Dia (...)

Cement Fluids

Fluid	Est Top (ftKB)	Est Btm (ftKB)	Pump Start Date	Pump End Date	Class	Amount (sacks)	Mix H2O Ratio (gal/sack)	Yield (ft³/sack)	Vol Pumped (bbl)	Excess (%)	Dens (lb/gal)
Tail	13.0	923.0	5/2/2015	5/3/2015	G	770	5.20	1.18	161.8		15.20

Intermediate Casing Cement, Casing, 5/7/2015 09:00

Type Casing	String Intermediate, 7,383.6ftKB	Start Date 5/7/2015	Cementing End Date 5/7/2015	Wellbore Original Hole	Job Drilling - original, 5/1/2015 23:00	Cementing Company Sanjel (USA) Inc	Cement Objective	Eval Method Returns to Surface
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Cement Stages

Stg # 1		Description Intermediate Casing Cement				Objective			Top Depth (ftKB) 13.0		Bottom Depth (ftKB) 7,383.6		Pump Start Date 5/7/2015			Pump End Date 5/7/2015			Top Plug? No		Btm Plug? No										
Initial Pump Rate (bbl/min) 3			Final Pump Rate (bbl/min) 7			Avg Pump Rate (bbl/min) 5			Final Pump Pressure (psi) 1,700.0		Plug Bump Pressure (psi) 1,700.0		Pressure Held (psi) 1,700.0		Pressure Release Date 5/7/2015			Full Return? Yes		Vol Cement Ret (bbl) 20.0			Volume Lost (bbl)								
Recip? No		Stroke (ft)		Recip Rate (...)		Rotat... No		RPM (rpm)		Pipe Movement Note				MD Tagged...		Tag Method				Tag Wt (100...		Prop... No		Depth Plug...		Tag Cement Date		Drill Out Date		Drill Out Dia (...)	

Cement Fluids

Fluid	Est Top (ftKB)	Est Btm (ftKB)	Pump Start Date	Pump End Date	Class	Amount (sacks)	Mix H2O Ratio (gal/sack)	Yield (ft³/sack)	Vol Pumped (bbl)	Excess (%)	Dens (lb/gal)
Lead	13.0	5,000.0	5/7/2015	5/7/2015	50/50 poz	455	10.88	1.95	158.0		12.00
Tail	5,000.0	7,383.6	5/7/2015	5/7/2015	Type I/II	340	5.93	1.42	86.0		14.60

Liner Cement, Casing, 5/12/2015 17:00

Type Casing	String Liner, 14,320.0ftKB	Start Date 5/12/2015	Cementing End Date 5/12/2015	Wellbore Original Hole	Job Drilling - original, 5/1/2015 23:00	Cementing Company Sanjel (USA) Inc	Cement Objective	Eval Method Returns to Surface
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Cement Stages

Stg # 1	Description Liner Cement				Objective			Top Depth (ftKB) 6,595.0	Bottom Depth (ftKB) 14,320.0	Pump Start Date 5/12/2015			Pump End Date 5/12/2015		Top Plug? Yes	Btm Plug? No					
Initial Pump Rate (bbl/min) 4		Final Pump Rate (bbl/min) 8		Avg Pump Rate (bbl/min) 6		Final Pump Pressure (psi) 1,650.0		Plug Bump Pressure (psi) 1,650.0		Pressure Held (psi) 2,800.0		Pressure Release Date 5/12/2015			Full Return? Yes	Vol Cement Ret (bbl) 25.0		Volume Lost (bbl) 0.0			
Recip? No	Stroke (ft)	Recip Rate (...)		Rotat... No	RPM (rpm)		Pipe Movement Note			MD Tagged...	Tag Method			Tag Wt (100...	Prop... No	Depth Plug...	Tag Cement Date		Drill Out Date		Drill Out Dia (...)

Cement Fluids

Fluid	Est Top (ftKB)	Est Btm (ftKB)	Pump Start Date	Pump End Date	Class	Amount (sacks)	Mix H2O Ratio (gal/sack)	Yield (ft³/sack)	Vol Pumped (bbl)	Excess (%)	Dens (lb/gal)
Tail	6,595.0	14,320.0	5/12/2015	5/12/2015	Type I/II	695	6.19	1.25	154.7		13.50