



Cement

Well Name: Rieder 18Q-321

Cement

Surface Casing Cement, Casing, 5/20/2015 05:00

Type Casing	String Surface, 921.0ftKB	Start Date 5/20/2015	Cementing End Date 5/20/2015	Wellbore Original Hole	Job Drilling - original, 5/19/2015 06:00	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) 921.0		Pump Start Date 5/20/2015			Pump End Date 5/20/2015			Top Plug? Yes		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) 700.0			Pressure Held (psi) 700.0			Pressure Release Date 5/20/2015			Full Return? Yes		Vol Cement Ret (bbl) 8.0			Volume Lost (bbl)								
Recip? No		Stroke (ft)		Recip Rate (...)		Rotat... No		RPM (rpm)		Pipe Movement Note					MD Tagged... 876.0		Tag Method Drill Bit					Tag Wt (100... 5		Prop... No		Depth Plug... 930.0		Tag Cement Date 5/20/2015			Drill Out Date 5/20/2015		Drill Out Dia (...) 8 3/4	

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	921.0	5/20/2015	5/20/2015	G	770	5.30	1.18	161.8		15.20

Intermediate Casing Cement, Casing, 5/23/2015 22:00

Type Casing	String Intermediate, 7,550.0ftKB	Start Date 5/23/2015	Cementing End Date 5/23/2015	Wellbore Original Hole	Job Drilling - original, 5/19/2015 06:00	Cementing Company Sanjel (USA) Inc	Cement Objective	Eval Method Returns to Surface
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Cement Stages

Stg # 1	Description INTERMEDIATE CEMENT				Objective		Top Depth (ftKB) 13.0	Bottom Depth (ftKB) 7,550.0	Pump Start Date 5/23/2015		Pump End Date 5/24/2015		Top Plug? No	Btm Plug? No			
Initial Pump Rate (bbl/min) 4		Final Pump Rate (bbl/min) 4		Avg Pump Rate (bbl/min) 4		Final Pump Pressure (psi) 1,200.0		Plug Bump Pressure (psi) 1,700.0		Pressure Held (psi)		Pressure Release Date 5/24/2015		Full Return? No	Vol Cement Ret (bbl) 17.0	Volume Lost (bbl)	
Recip? No	Stroke (ft)	Recip Rate (...)	Rotat... No	RPM (rpm)	Pipe Movement Note			MD Tagged... 7,482.0	Tag Method Drill Bit		Tag Wt (100... 5	Prop... No	Depth Plug... 7,560.0	Tag Cement Date 5/24/2015		Drill Out Date 5/24/2015	Drill Out Dia (...) 6 1/8

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	4,800.0	5/23/2015	5/24/2015	1-1-0 poz type 111	455	10.88	1.95	158.0		12.00
Tail	4,800.0	7,550.0	5/24/2015	5/24/2015	1-1-2-POZ G	330	83.00	1.42	83.0		14.60