



Cement

Well Name: Thornton 14K-441

Cement

Surface Casing Cement, Casing, 10/6/2014 11:45

Type Casing	String Surface, 935.0ftKB	Start Date 10/6/2014	Cementing End Date 10/6/2014	Wellbore Original Hole	Job Drilling - original, 10/5/2014 21:45	Cementing Company Cementers Energy	Cement Objective	Eval Method Returns to Surface
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Cement Stages

Stg # 1	Description Surface Casing Cement					Objective			Top Depth (ftKB) 15.0	Bottom Depth (ftKB) 935.0	Pump Start Date 10/6/2014		Pump End Date 10/6/2014		Top Plug? Yes	Btm Plug? No									
Initial Pump Rate (bbl/min) 4		Final Pump Rate (bbl/min) 3		Avg Pump Rate (bbl/min) 4		Final Pump Pressure (psi) 600.0		Plug Bump Pressure (psi) 0.0		Pressure Held (psi) 0.0		Pressure Release Date		Full Return? Yes		Vol Cement Ret (bbl) 6.0		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	15.0	935.0	10/6/2014	10/6/2014	G	840		1.18	176.5	100.0	15.20

Intermediate Casing Cement, Casing, 10/11/2014 00:30

Type Casing	String Intermediate, 7,932.0ftKB	Start Date 10/11/2014	Cementing End Date 10/11/2014	Wellbore Original Hole	Job Drilling - original, 10/5/2014 21:45	Cementing Company Sanjel (USA) Inc	Cement Objective	Eval Method Cement Bond Log
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Cement Stages

Stg # 1	Description Intermediate Casing Cement				Objective			Top Depth (ftKB) 15.0	Bottom Depth (ftKB) 7,932.0	Pump Start Date 10/11/2014		Pump End Date 10/11/2014		Top Plug? No	Btm Plug? No									
Initial Pump Rate (bbl/min)		Final Pump Rate (bbl/min)		Avg Pump Rate (bbl/min)		Final Pump Pressure (psi)		Plug Bump Pressure (psi)		Pressure Held (psi) 0.0		Pressure Release Date		Full Return? Yes	Vol Cement Ret (bbl) 26.0		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	15.0	5,600.0	10/11/2014	10/11/2014	1:1:0 POZ III	400		2.33	166.0		11.60
Tail	5,600.0	7,932.0	10/11/2014	10/11/2014	1:1:2 G	300		1.42	75.9		14.60