



Cement

Well Name: Dillard 20T-221

Cement

Surface Casing Cement, Casing, 10/31/2013 15:30

Type Casing	String Surface, 927.0ftKB	Start Date 10/31/2013	Cementing End Date 10/31/2013	Wellbore Original Hole	Job Drilling - original, 10/30/2013 07:00	Cementing Company Cementers	Cement Objective	Eval Method Returns to Surface
----------------	------------------------------	--------------------------	----------------------------------	---------------------------	--	--------------------------------	------------------	-----------------------------------

Cement Stages

Stg # 1	Description Surface Casing Cement				Objective		Top Depth (ftKB) 15.0	Bottom Depth (ftKB) 927.0	Pump Start Date 10/31/2013		Pump End Date 10/31/2013		Top Plug? Yes	Btm Plug? No						
Initial Pump Rate (bbl/min) 4		Final Pump Rate (bbl/min) 3		Avg Pump Rate (bbl/min) 5		Final Pump Pressure (psi) 800.0		Plug Bump Pressure (psi) 520.0		Pressure Held (psi)		Pressure Release Date		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 (...)			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	927.0			G	830		1.18	174.4	100.0	15.20

Intermediate Casing Cement, Casing, 11/5/2013 16:00

Type Casing	String Intermediate, 7,464.0ftKB	Start Date 11/5/2013	Cementing End Date 11/5/2013	Wellbore Original Hole	Job Drilling - original, 10/30/2013 07:00	Cementing Company Baker Hughes	Cement Objective	Eval Method Returns to Surface
----------------	-------------------------------------	-------------------------	---------------------------------	---------------------------	--	-----------------------------------	------------------	-----------------------------------

Cement Stages

Stg # 1	Description Intermediate Casing Cement				Objective			Top Depth (ftKB) 15.0	Bottom Depth (ftKB) 7,464.0	Pump Start Date 11/5/2013			Pump End Date 11/5/2013		Top Plug? Yes	Btm Plug? No							
Initial Pump Rate (bbl/min) 7		Final Pump Rate (bbl/min) 4		Avg Pump Rate (bbl/min)		Final Pump Pressure (psi) 1,410.0		Plug Bump Pressure (psi) 2,148.0		Pressure Held (psi) 0.0		Pressure Release Date			Full Return? Yes	Vol Cement Ret (bbl) 1.0		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	170.0	5,000.0			Prem Lite	300		2.99	159.8		11.20
Tail	5,000.0	7,464.0			50/50 Poz	310		1.38	76.2		14.60