



## Cement

Well Name: Spaur 31V-214

### Cement

#### Surface Casing Cement, Casing, 7/24/2012 15:00

Type Casing	String Surface, 932.0ftKB	Start Date 7/24/2012	Cementing End Date 7/24/2012	Wellbore Original Hole	Job Drilling - original, 7/23/2012 07:00	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) 932.0	Pump Start Date 7/24/2012			Pump End Date 7/24/2012		Top Plug? Yes	Btm Plug? No							
Initial Pump Rate (bbl/min) 4		Final Pump Rate (bbl/min) 5		Avg Pump Rate (bbl/min)		Final Pump Pressure (psi) 905.0		Plug Bump Pressure (psi)		Pressure Held (psi)		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	932.0	7/24/2012	7/24/2012	G	840		1.18	176.5	100.0	15.20

#### Intermediate Casing Cement, Casing, 7/29/2012 04:00

Type Casing	String Intermediate, 7,198.0ftKB	Start Date 7/29/2012	Cementing End Date 7/29/2012	Wellbore Original Hole	Job Drilling - original, 7/23/2012 07:00	Cementing Company BJ Services Company	Cement Objective	Eval Method Returns to Surface
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#### Cement Stages

Stg # 1	Description Intermediate Casing Cement					Objective			Top Depth (ftKB) 15.0	Bottom Depth (ftKB) 7,198.0	Pump Start Date 7/29/2012			Pump End Date 7/29/2012		Top Plug? Yes	Btm Plug? No							
Initial Pump Rate (bbl/min) 7		Final Pump Rate (bbl/min) 7		Avg Pump Rate (bbl/min)		Final Pump Pressure (psi) 1,010.0		Plug Bump Pressure (psi) 1,521.0		Pressure Held (psi) 0.0		Pressure Release Date			Full Return? Yes		Vol Cement Ret (bbl) 0.0		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	5,500.0		7/29/2012	Premium Lite	250		2.99	133.1		11.20
Tail	5,500.0	7,198.0	7/29/2012	7/29/2012	50/50 Poz G	211		1.38	51.9		14.60