



## Cement Jobs by Well

Well Name: Apache Canyon 18-06

Surface Casing Cement

API/UWI 05071083910000	Location T34S-R67W-S18	Field Name Purgatoire River	Permit Number 2005162	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 8,027.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 6/11/2005 00:00	Rig Release Date 6/13/2005 00:00

### Surface Casing Cement, 6/11/2005 00:00

Type Casing	Cementing Start Date 6/11/2005	Cementing End Date 6/11/2005	Wellbore Original Hole	String Surface, 743.8ftKB
Cementing Company Halliburton Energy Services	Evaluation Method Returns to Surface	Cement Evaluation Results		

Comment  
Circ 50 bbls cmt to surf.

### 1, 0.0-746.0ftKB

Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 746.0	Full Return? No	Vol Cement Ret (bbl)	Top Plug? No	Bottom 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)
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date

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Fluid Type	Fluid Description	Amount (sacks) 324	Class	Volume Pumped (bbl)
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

### Cement Fluid Additives

Add	Type	Conc

### Conductor Casing Cement, 6/11/2005 00:00

Type Casing	Cementing Start Date 6/11/2005	Cementing End Date 6/11/2005	Wellbore Original Hole	String Conductor, 22.0ftKB
Cementing Company Halliburton Energy Services	Evaluation Method	Cement Evaluation Results		

Comment

### <stagenum>, 0.0-22.0ftKB

Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 22.0	Full Return? No	Vol Cement Ret (bbl)	Top Plug? No	Bottom 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)
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date

### <typ>

Fluid Type	Fluid Description	Amount (sacks)	Class	Volume Pumped (bbl)
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal)	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

### Cement Fluid Additives

Add	Type	Conc

### Production Casing Cement, 6/13/2005 00:00

Type Casing	Cementing Start Date 6/13/2005	Cementing End Date 6/13/2005	Wellbore Original Hole	String Production, 2,460.4ftKB
Cementing Company Halliburton Energy Services	Evaluation Method Cement Bond Log	Cement Evaluation Results		

Comment  
Circ 5 bbls off DV tl. Circ 30 bbls cmt to surf fr/2nd stage.

### 1, 1,708.0-2,460.0ftKB

Top Depth (ftKB) 1,708.0	Bottom Depth (ftKB) 2,460.0	Full Return? No	Vol Cement Ret (bbl) 5.0	Top Plug? No	Bottom 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)
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB) 2,416.0	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date



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Gr Elev (ft) 8,027.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 6/11/2005 00:00	Rig Release Date 6/13/2005 00:00

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Fluid Type	Fluid Description	Amount (sacks) 130	Class Midcon II	Volume Pumped (bbl)	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal)	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add		Type		Conc	

2, 0.0-1,708.0ftKB					
Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 1,708.0	Full Return? No	Vol Cement Ret (bbl) 30.0	Top Plug? No	Bottom 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)
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date

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Fluid Type	Fluid Description	Amount (sacks) 250	Class Midcon II	Volume Pumped (bbl)	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal)	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add		Type		Conc	