

API/UWI 05071087890000	Location T34S-R67W-S06	Field Name Purgatoire River	Permit Number 20061404	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 8,149.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 7/20/2006 16:30	Rig Release Date 7/23/2006 14:15

Conductor Casing Cement, 7/20/2006 17:45

Type Casing	Cementing Start Date 7/20/2006	Cementing End Date 7/20/2006	Wellbore Original Hole	String Conductor, 23.0ftKB
Cementing Company Redi- Crete	Evaluation Method	Cement Evaluation Results		

Comment
Cmt'd w/ 11 sks Redi-Crete

1, 3.0-23.0ftKB

Top Depth (ftKB) 3.0	Bottom Depth (ftKB) 23.0	Full Return? Yes	Vol Cement Ret (bbl) 0.0	Top Plug? No	Bottom Plug? No
Initial Pump Rate (bbl/min) 1	Final Pump Rate (bbl/min) 1	Avg Pump Rate (bbl/min) 1		Final Pump Pressure (psi) 0.0	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

Cement

Fluid Type Cement	Fluid Description 12.6	Amount (sacks) 11	Class A	Volume Pumped (bbl)
Estimated Top (ftKB) 3.0	Estimated Bottom Depth (ftKB) 23.0	Percent Excess Pumped (%)	Yield (ft³/sack) 1.00	Mix H2O Ratio (gal/sack) 1.00
Free Water (%)	Density (lb/gal) 12.60	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Surface Casing Cement, 7/21/2006 07:15

Type Casing	Cementing Start Date 7/21/2006	Cementing End Date 7/21/2006	Wellbore Original Hole	String Surface, 617.9ftKB
Cementing Company Halliburton Energy Services	Evaluation Method	Cement Evaluation Results		

Comment
Cmt,d w/ 281 sks, circ 135 sksto pit

1, 0.0-623.0ftKB

Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 623.0	Full Return? Yes	Vol Cement Ret (bbl) 40.0	Top Plug? No	Bottom Plug? No
Initial Pump Rate (bbl/min) 3	Final Pump Rate (bbl/min) 2	Avg Pump Rate (bbl/min) 2		Final Pump Pressure (psi) 225.0	Plug Bump Pressure (psi) 0.0
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

Spacer

Fluid Type Spacer	Fluid Description 8.33	Amount (sacks)	Class	Volume Pumped (bbl) 70.0
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 623.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.33	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Cement

Fluid Type Cement	Fluid Description 14.0	Amount (sacks) 281	Class G	Volume Pumped (bbl) 83.0
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 623.0	Percent Excess Pumped (%)	Yield (ft³/sack) 1.66	Mix H2O Ratio (gal/sack) 7.76
Free Water (%)	Density (lb/gal) 14.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Displacement

Fluid Type Displacement	Fluid Description 8.33	Amount (sacks)	Class	Volume Pumped (bbl) 36.0
Estimated Top (ftKB) 623.0	Estimated Bottom Depth (ftKB) 571.8	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.33	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

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Cement Fluid Additives		
Add	Type	Conc
Trinidad Surf Blend		100.0

Production Casing Cement, 7/23/2006 14:15				
Type Casing	Cementing Start Date 7/23/2006	Cementing End Date 7/23/2006	Wellbore Original Hole	String Production, 2,625.5ftKB
Cementing Company Halliburton Energy Services	Evaluation Method	Cement Evaluation Results		

Comment
Cmt'd w/ 130 & 320 sks, circ 6 bbls/17 sks & 39 bbls/107 sks to pit

1, 1,915.8-2,665.0ftKB					
Top Depth (ftKB) 1,915.8	Bottom Depth (ftKB) 2,665.0	Full Return? Yes	Vol Cement Ret (bbl) 6.0	Top Plug? Yes	Bottom Plug? No
Initial Pump Rate (bbl/min) 3	Final Pump Rate (bbl/min) 3	Avg Pump Rate (bbl/min) 3		Final Pump Pressure (psi) 450.0	Plug Bump Pressure (psi) 1,150.0
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)		Pipe Rotated? No	Pipe RPM (rpm)
Tagged Depth (ftKB) 2,579.0	Tag Method	Depth Plug Drilled Out To (ftKB)		Drill Out Diameter (in)	Drill Out Date

Spacer				
Fluid Type Spacer	Fluid Description 8.33	Amount (sacks)	Class	Volume Pumped (bbl) 67.7
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 2,665.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.33	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

LCM				
Fluid Type LCM	Fluid Description 9.00	Amount (sacks)	Class	Volume Pumped (bbl) 60.0
Estimated Top (ftKB) 1,000.0	Estimated Bottom Depth (ftKB) 2,665.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 9.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

1st Stage Cmt				
Fluid Type 1st Stage Cmt	Fluid Description 13.0	Amount (sacks) 130	Class Midcon II	Volume Pumped (bbl) 47.0
Estimated Top (ftKB) 1,915.0	Estimated Bottom Depth (ftKB) 2,665.0	Percent Excess Pumped (%)	Yield (ft³/sack) 2.04	Mix H2O Ratio (gal/sack) 10.58
Free Water (%)	Density (lb/gal) 13.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc
Trinidad Prod Blend		

Displacement				
Fluid Type Displacement	Fluid Description 8.33	Amount (sacks)	Class	Volume Pumped (bbl) 61.4
Estimated Top (ftKB) 2,665.0	Estimated Bottom Depth (ftKB) 2,665.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.33	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

2, 130.0-1,906.8ftKB					
Top Depth (ftKB) 130.0	Bottom Depth (ftKB) 1,906.8	Full Return? Yes	Vol Cement Ret (bbl) 39.0	Top Plug? Yes	Bottom Plug? Yes
Initial Pump Rate (bbl/min) 3	Final Pump Rate (bbl/min) 3	Avg Pump Rate (bbl/min) 3		Final Pump Pressure (psi) 540.0	Plug Bump Pressure (psi) 2,100.0
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

Well Name: Apache Canyon 06-02

Conductor Casing Cement

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Spacer					
Fluid Type Spacer	Fluid Description 8.33	Amount (sacks)	Class	Volume Pumped (bbl) 10.0	
Estimated Top (ftKB) 1,500.0	Estimated Bottom Depth (ftKB) 1,907.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.33	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc

LCM					
Fluid Type LCM	Fluid Description 9.00	Amount (sacks)	Class	Volume Pumped (bbl) 40.0	
Estimated Top (ftKB) 500.0	Estimated Bottom Depth (ftKB) 1,907.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 9.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc

2nd Stage Cmt					
Fluid Type 2nd Stage Cmt	Fluid Description 13.0	Amount (sacks) 320	Class Midcon II	Volume Pumped (bbl) 116.0	
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 1,907.0	Percent Excess Pumped (%)	Yield (ft³/sack) 2.04	Mix H2O Ratio (gal/sack) 10.58	
Free Water (%)	Density (lb/gal) 13.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc
Trinidad Prod Blend		

Displacement					
Fluid Type Displacement	Fluid Description 8.33	Amount (sacks)	Class	Volume Pumped (bbl) 45.4	
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 1,907.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.33	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc