

API/UWI 05071092120000	Location T33S-R67W-S35	Field Name Purgatoire River	Permit Number 20070314	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 6,943.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 4/24/2007 15:45	Rig Release Date 4/26/2007 23:30

Conductor Casing Cement, 4/24/2007 18:30

Type Casing	Cementing Start Date 4/24/2007	Cementing End Date 4/24/2007	Wellbore Original Hole	String Conductor, 49.1ftKB
Cementing Company Halliburton Energy Services	Evaluation Method	Cement Evaluation Results		

Comment
Cmt'd cond w/ 87 sks MIDCON II Trinidad Surface Blend mixed @ 14.0 ppg & circ 14 bbls cmt to pit

1, 3.0-52.0ftKB

Top Depth (ftKB) 3.0	Bottom Depth (ftKB) 52.0	Full Return? Yes	Vol Cement Ret (bbl) 14.0	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) 45.0	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 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 20.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	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) 87	Class Midcon II	Volume Pumped (bbl) 26.0
Estimated Top (ftKB) 3.0	Estimated Bottom Depth (ftKB) 52.0	Percent Excess Pumped (%)	Yield (ft ³ /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 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 7.0
Estimated Top (ftKB) 3.0	Estimated Bottom Depth (ftKB) 40.0	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives

Add	Type	Conc

Surface Casing Cement, 4/25/2007 12:15

Type Casing	Cementing Start Date 4/25/2007	Cementing End Date 4/25/2007	Wellbore Original Hole	String Surface, 495.8ftKB
Cementing Company Halliburton Energy Services	Evaluation Method	Cement Evaluation Results		

Comment
Cmt'd surf csg w/ 233 sks MIDCON II Trinidad Surface Blend mixed @ 14.0 ppg

1, 2.5-500.0ftKB

Top Depth (ftKB) 2.5	Bottom Depth (ftKB) 500.0	Full Return? Yes	Vol Cement Ret (bbl) 35.0	Top Plug? Yes	Bottom Plug? No
Initial Pump Rate (bbl/min) 4	Final Pump Rate (bbl/min) 4	Avg Pump Rate (bbl/min) 4		Final Pump Pressure (psi) 175.0	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 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 35.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

API/UWI 05071092120000	Location T33S-R67W-S35	Field Name Purgatoire River	Permit Number 20070314	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 6,943.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 4/24/2007 15:45	Rig Release Date 4/26/2007 23:30

Cement Fluid Additives		
Add	Type	Conc

Cement				
Fluid Type Cement	Fluid Description 14.0	Amount (sacks) 233	Class Midcon II	Volume Pumped (bbl) 69.0
Estimated Top (ftKB) 2.5	Estimated Bottom Depth (ftKB) 500.0	Percent Excess Pumped (%)	Yield (ft ³ /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 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 28.0
Estimated Top (ftKB) 2.5	Estimated Bottom Depth (ftKB) 440.0	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

Production Casing Cement, 4/27/2007 03:15				
Type Casing	Cementing Start Date 4/27/2007	Cementing End Date 4/27/2007	Wellbore Original Hole	String Production, 1,843.4ftKB
Cementing Company Halliburton Energy Services	Evaluation Method	Cement Evaluation Results		

Comment
Cmt'd surf csg w/ 176 sks MIDCON II Trinidad Prod Blend 1st Stage mixed @ 13.0 ppg f/b 70 sks 2nd Stage LEAD mixed @ 12.0 ppg f/b 90 sks TAIL mixed @ 13.0 ppg and circ 34 bbls 1st Stage & 23 bbls 2nd stage cmt to pit @ 05:35 hrs 4/27/2007

1, 947.0-1,930.0ftKB					
Top Depth (ftKB) 947.0	Bottom Depth (ftKB) 1,930.0	Full Return? Yes	Vol Cement Ret (bbl) 34.0	Top Plug? Yes	Bottom Plug? No
Initial Pump Rate (bbl/min) 4	Final Pump Rate (bbl/min) 4	Avg Pump Rate (bbl/min) 4	Final Pump Pressure (psi) 550.0	Plug Bump Pressure (psi) 1,250.0	
Pipe Reciprocated? No	Reciprocation Stroke Length (ft)	Reciprocation Rate (spm)	Pipe Rotated? No	Pipe RPM (rpm)	
Tagged Depth (ftKB) 1,798.0	Tag Method	Depth Plug Drilled Out To (ftKB)	Drill Out Diameter (in)	Drill Out Date	

Spacer				
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 50.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

LCM spacer				
Fluid Type LCM spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 100.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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

Spacer				
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 10.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

Well Name: Apache Canyon 35-10

Conductor Casing Cement

API/UWI 05071092120000	Location T33S-R67W-S35	Field Name Purgatoire River	Permit Number 20070314	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 6,943.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 4/24/2007 15:45	Rig Release Date 4/26/2007 23:30

Spacer				
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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

Spacer				
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

Spacer				
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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

Spacer				
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

Spacer				
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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

Spacer				
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)

Cement Fluid Additives		
Add	Type	Conc

Spacer				
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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

API/UWI 05071092120000	Location T33S-R67W-S35	Field Name Purgatoire River	Permit Number 20070314	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 6,943.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 4/24/2007 15:45	Rig Release Date 4/26/2007 23:30

Spacer					
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc

Spacer					
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	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

Spacer					
Fluid Type Spacer	Fluid Description 8.8	Amount (sacks)	Class	Volume Pumped (bbl) 4.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc

Cement					
Fluid Type Cement	Fluid Description 13.0	Amount (sacks) 176	Class Midcon II	Volume Pumped (bbl) 64.0	
Estimated Top (ftKB) 947.0	Estimated Bottom Depth (ftKB) 1,930.0	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

Displacement					
Fluid Type Displacement	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 43.0	
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 1,798.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc

2, 0.0-947.0ftKB					
Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 947.0	Full Return? No	Vol Cement Ret (bbl) 23.0	Top Plug? Yes	Bottom Plug? Yes
Initial Pump Rate (bbl/min) 4	Final Pump Rate (bbl/min) 4	Avg Pump Rate (bbl/min) 4	Final Pump Pressure (psi) 320.0	Plug Bump Pressure (psi) 1,900.0	
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 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	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

Well Name: Apache Canyon 35-10

Conductor Casing Cement

API/UWI 05071092120000	Location T33S-R67W-S35	Field Name Purgatoire River	Permit Number 20070314	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 6,943.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 4/24/2007 15:45	Rig Release Date 4/26/2007 23:30

Spacer					
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add	Type			Conc	

Spacer					
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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	

Spacer					
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add	Type			Conc	

Spacer					
Fluid Type Spacer	Fluid Description 9.0	Amount (sacks)	Class	Volume Pumped (bbl) 10.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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	

Spacer					
Fluid Type Spacer	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 4.0	
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add	Type			Conc	

Lead Cement					
Fluid Type Lead Cement	Fluid Description 12.0	Amount (sacks) 70	Class Midcon II	Volume Pumped (bbl) 32.0	
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 447.0	Percent Excess Pumped (%)	Yield (ft ³ /sack) 2.56	Mix H2O Ratio (gal/sack) 14.50	
Free Water (%)	Density (lb/gal) 12.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add	Type			Conc	

Tail Cement					
Fluid Type Tail Cement	Fluid Description 13.0	Amount (sacks) 90	Class Midcon II	Volume Pumped (bbl) 33.0	
Estimated Top (ftKB) 447.0	Estimated Bottom Depth (ftKB) 947.0	Percent Excess Pumped (%)	Yield (ft ³ /sack) 2.04	Mix H2O Ratio (gal/sack) 10.68	
Free Water (%)	Density (lb/gal) 13.00	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives					
Add	Type			Conc	

Well Name: Apache Canyon 35-10

API/UWI 05071092120000	Location T33S-R67W-S35	Field Name Purgatoire River	Permit Number 20070314	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 6,943.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 4/24/2007 15:45	Rig Release Date 4/26/2007 23:30

Displacement					
Fluid Type Displacement	Fluid Description 8.4	Amount (sacks)	Class	Volume Pumped (bbl) 23.0	
Estimated Top (ftKB) 0.0	Estimated Bottom Depth (ftKB) 947.0	Percent Excess Pumped (%)	Yield (ft³/sack)	Mix H2O Ratio (gal/sack)	
Free Water (%)	Density (lb/gal) 8.40	Plastic Viscosity (cP)	Thickening Time (hr)	1st Compressive Strength (psi)	

Cement Fluid Additives		
Add	Type	Conc