

Well Name: Apache Canyon 01-12

Conductor Casing Cement

API/UWI 05071094750000	Location T34S-R68W-S01	Field Name Purgatoire River	Permit Number 20076439	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 8,109.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 3/7/2008 15:00	Rig Release Date 3/10/2008 12:00

Conductor Casing Cement, 3/7/2008 19:15

Type Casing	Cementing Start Date 3/7/2008	Cementing End Date 3/7/2008	Wellbore Original Hole	String Conductor, 46.3ftKB
Cementing Company Halliburton Energy Services	Evaluation Method Returns to Surface	Cement Evaluation Results		

Comment
Pumped 98 sks of Trinidad surface blend. Circulated 7 Bbl. to surface

1, 3.0-55.0ftKB

Top Depth (ftKB) 3.0	Bottom Depth (ftKB) 55.0	Full Return? No	Vol Cement Ret (bbl) 7.0	Top Plug? Yes	Bottom Plug? No
Initial Pump Rate (bbl/min) 3	Final Pump Rate (bbl/min) 2	Avg Pump Rate (bbl/min) 3		Final Pump Pressure (psi) 20.0	Plug Bump Pressure (psi) 20.0
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) 11	Drill Out Date

Conductor cmt

Fluid Type Conductor cmt	Fluid Description 14.0	Amount (sacks) 98	Class Midcon II	Volume Pumped (bbl) 29.0
Estimated Top (ftKB) 3.0	Estimated Bottom Depth (ftKB) 55.0	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

Conductor Top Off

Fluid Type Conductor Top Off	Fluid Description Top off to surface	Amount (sacks) 10	Class Quickcrete	Volume Pumped (bbl)
Estimated Top (ftKB)	Estimated Bottom Depth (ftKB)	Percent Excess Pumped (%)	Yield (ft ³ /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

Surface Casing Cement, 3/8/2008 18:00

Type Casing	Cementing Start Date 3/8/2008	Cementing End Date 3/8/2008	Wellbore Original Hole	String Surface, 452.1ftKB
Cementing Company Halliburton Energy Services	Evaluation Method Returns to Surface	Cement Evaluation Results		

Comment
Pumped 230 sx Of Trinidad surface blend. Circulated 31 Bbl. to surface. Cement fell back 7' and was topped off W/ 17 sks of cement.

1, 10.0-460.0ftKB

Top Depth (ftKB) 10.0	Bottom Depth (ftKB) 460.0	Full Return? Yes	Vol Cement Ret (bbl) 31.0	Top Plug? No	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) 165.0	Plug Bump Pressure (psi) 165.0
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

Surface Cement

Fluid Type Surface Cement	Fluid Description 14.0	Amount (sacks) 230	Class Midcon II	Volume Pumped (bbl) 68.0
Estimated Top (ftKB) 10.0	Estimated Bottom Depth (ftKB) 460.0	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

API/UWI 05071094750000	Location T34S-R68W-S01	Field Name Purgatoire River	Permit Number 20076439	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 8,109.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 3/7/2008 15:00	Rig Release Date 3/10/2008 12:00

2, 3.0-10.0ftKB					
Top Depth (ftKB) 3.0	Bottom Depth (ftKB) 10.0	Full Return? No	Vol Cement Ret (bbl) 3.0	Top Plug? No	Bottom Plug? No
Initial Pump Rate (bbl/min) 2	Final Pump Rate (bbl/min) 2	Avg Pump Rate (bbl/min) 2		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

Surface Cement					
Fluid Type Surface Cement	Fluid Description 14.0	Amount (sacks) 17	Class Midcon II	Volume Pumped (bbl) 5.0	
Estimated Top (ftKB) 3.0	Estimated Bottom Depth (ftKB) 10.0	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	

Production Casing Cement, 3/10/2008 12:00					
Type Casing	Cementing Start Date 3/10/2008	Cementing End Date 3/10/2008	Wellbore Original Hole	String Production, 2,192.6ftKB	
Cementing Company Halliburton Energy Services	Evaluation Method Returns to Surface	Cement Evaluation Results			

Comment
Pumped 108 sks of spherelite on the 1st stage and circulated 5 Bbl. to surface. Pumped 192 sks of spherelite on the 2nd stage and circulated 20 bbl. to surface

1, 1,424.0-2,235.0ftKB					
Top Depth (ftKB) 1,424.0	Bottom Depth (ftKB) 2,235.0	Full Return? No	Vol Cement Ret (bbl) 5.0	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) 0.0	Plug Bump Pressure (psi) 680.0
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

Production Cement					
Fluid Type Production Cement	Fluid Description	Amount (sacks) 108	Class Midcon II	Volume Pumped (bbl) 49.0	
Estimated Top (ftKB) 1,424.0	Estimated Bottom Depth (ftKB) 2,235.0	Percent Excess Pumped (%)	Yield (ft³/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	

2, 3.0-1,424.0ftKB					
Top Depth (ftKB) 3.0	Bottom Depth (ftKB) 1,424.0	Full Return? No	Vol Cement Ret (bbl) 20.0	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) 330.0	Plug Bump Pressure (psi) 1,845.0
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

Production Cement					
Fluid Type Production Cement	Fluid Description	Amount (sacks) 192	Class Midcon II	Volume Pumped (bbl) 85.0	
Estimated Top (ftKB) 3.0	Estimated Bottom Depth (ftKB) 1,424.0	Percent Excess Pumped (%)	Yield (ft³/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	