



Cement Jobs by Well

Well Name: Apache Canyon 23-16

Surface Casing Cement

API/UWI 05071086860000	Location T34S-R68W-S23	Field Name Purgatoire River	Permit Number 20054824	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 7,704.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 3/5/2006 00:00	Rig Release Date 3/7/2006 00:00

Surface Casing Cement, 3/5/2006 00:00

Type Casing	Cementing Start Date 3/5/2006	Cementing End Date	Wellbore Original Hole	String Surface, 229.0ftKB
Cementing Company	Evaluation Method	Cement Evaluation Results		

Comment

1, 0.0-229.0ftKB

Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 229.0	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) 152	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, 3/5/2006 00:00

Type Casing	Cementing Start Date 3/5/2006	Cementing End Date	Wellbore Original Hole	String Conductor, 23.0ftKB
Cementing Company	Evaluation Method	Cement Evaluation Results		

Comment

1, 0.0-23.0ftKB

Top Depth (ftKB) 0.0	Bottom Depth (ftKB) 23.0	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) 9	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, 3/6/2006 00:00

Type Casing	Cementing Start Date 3/6/2006	Cementing End Date	Wellbore Original Hole	String Production, 1,688.0ftKB
Cementing Company	Evaluation Method	Cement Evaluation Results		

Comment

1, 1,044.0-1,688.0ftKB

Top Depth (ftKB) 1,044.0	Bottom Depth (ftKB) 1,688.0	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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API/UWI 05071086860000	Location T34S-R68W-S23	Field Name Purgatoire River	Permit Number 20054824	State/Province Colorado	Well Configuration Type Vertical
Gr Elev (ft) 7,704.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 0.00	KB-Casing Flange Distance (ft)	Spud Date 3/5/2006 00:00	Rig Release Date 3/7/2006 00:00

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Fluid Type	Fluid Description	Amount (sacks) 120	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, 38.0-1,044.0ftKB					
Top Depth (ftKB) 38.0	Bottom Depth (ftKB) 1,044.0	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) 170	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	