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MAY 04 2011

COGCC



Cement

Well Name: Petersburg 11-3H

Surface Cement

API/UWI 05-081-07380-0000	Surface Legal Location	Field Name LAY CREEK	License/Lease Number	State COLORADO	Well Profile HORIZONTAL
Ground Elevation (ft) 6,866.00	Casing Flange Elevation (ft)	KB-Ground Distance (ft) 11.00	KB-CF (ft)	Spud Date 7/10/2007 02:00	TD Date Drilling Rig Release Date

Cement Details			
Description Surface Cement	Cementing Start Date 7/16/2007 15:30	Cementing End Date 7/16/2007 19:28	Wellbore Name Original Hole
Comment			

Cement Stages									
Stage # 1									
Description Surface Cement	Objective/WD Type Shoe integrity	Top (ftKB) 1,089.0	Bottom (ftKB) 2,038.0	Full Return? Yes	Cmnt Rtn (bbl) 50.0	Top Plug? Yes	Bottom Plug? No		
Q (start) (bbl/min) 5	Q (end) (bbl/min) 2	Q (avg) (bbl/min) 3	P (final) (psi) 340.0	P (bump) (psi) 850.0	Recip? No	Stroke (ft)	Rotated? No	Pipe RPM (rpm)	
Depth tagged (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)			Drill Out Diameter (in)				

Comment
Pumped 20 bbl fresh water preflush, pressure tested lines to 4000psi.
Pumped 205sx, 108.8bbl Rockies LT-SBM, 11.5 lb/gal Class G lead cement blended with 0.25lb/sx Kwik Seal SK, 0.25lb/sx Poly-e-Flake, 3.0b/sk Pheno Seal & 0.2% Steel Seal cement additives. Pumped 150sx, 31.3bbl, 15.8lb/gal Class G cement blended w/ 2% CaCl2 & 0.125 lb/sk Poly-e-Flake cement additives. Dropped plug w/ preflush at surface & displaced w/ 191.0 bbl fresh water. Plug down 16:43hrs, bumped plug 500psi over FCP. Inflated packer w/ 1200 psi CP and shut in 12 min. Bleed off pressure and dropped bomb pressured to 670psi to open DV tool. Pumped drilling fluid between stages & prepared to pump second stage.

Cement Fluids & Additives						
Fluid						
Fluid Type Lead Cement	Fluid Description	Estimated Top (ftKB) 1,089.0	Estimated Bottom (ftKB) 1,839.0	Amount (sacks) 205	Class G	Volume Pumped (bbl) 108.8
Yield (ft ³ /sack) 2.98	Mix H2O Ratio (gal/sack) 17.83	Free Water (%)	Density (lb/gal) 11.50	Plastic Viscosity (cp)	Thickening Time (hrs)	CmprStr 1 (psi)

Additives			
Additive Kwik Seal	Type LCM	Concentration 0.25	Conc Unit label lb/sk
Additive Pheno Seal	Type LCM	Concentration 3.0	Conc Unit label lb/sk
Additive Pol-e-flake	Type LCM	Concentration 0.25	Conc Unit label lb/sk
Additive Steel Seal	Type LCM	Concentration 0.2	Conc Unit label %

Fluid						
Fluid Type Tail Cement	Fluid Description	Estimated Top (ftKB) 1,839.0	Estimated Bottom (ftKB) 2,038.0	Amount (sacks) 150	Class G	Volume Pumped (bbl) 31.3
Yield (ft ³ /sack) 1.17	Mix H2O Ratio (gal/sack) 5.00	Free Water (%)	Density (lb/gal) 15.80	Plastic Viscosity (cp)	Thickening Time (hrs)	CmprStr 1 (psi)

Additives			
Additive CaCl2	Type Accelerator	Concentration 2.0	Conc Unit label %
Additive Poly-e-Flake	Type LCM	Concentration 0.125	Conc Unit label lb/sk

Stage # 2									
Description Surface Cement	Objective/WD Type Zonal Isolation	Top (ftKB) 11.0	Bottom (ftKB) 1,089.0	Full Return? Yes	Cmnt Rtn (bbl) 25.0	Top Plug? Yes	Bottom Plug? No		
Q (start) (bbl/min) 5	Q (end) (bbl/min) 2	Q (avg) (bbl/min) 3	P (final) (psi) 250.0	P (bump) (psi) 1,900.0	Recip? No	Stroke (ft)	Rotated? No	Pipe RPM (rpm)	
Depth tagged (ftKB)	Tag Method	Depth Plug Drilled Out To (ftKB)			Drill Out Diameter (in)				

Comment
Pumped 20 bbl fresh water preflush, pressure tested lines to 4000psi.
Pumped 250sx, 130.9bbl Rockies LT-SBM, 11.5 lb/gal Class G lead cement blended with 0.25lb/sx Kwik Seal SK, 0.125lb/sx Poly-e-Flake cement additives. Pumped 50sx, 10.42bbl, 15.6lb/gal Class G tail cement blended w/ 2% CaCl2 cement additive. Dropped plug w/ preflush at surface & displaced w/ 106.0 bbl fresh water. Plug down 19:28hrs, bumped plug 1650psi over to close DV tool. FCP 250psi. Had 25 bbl good cement returns at surface, annulus stabil.

Cement Fluids & Additives						
Fluid						
Fluid Type	Fluid Description	Estimated Top (ftKB)	Estimated Bottom (ftKB)	Amount (sacks)	Class	Volume Pumped (bbl)
Yield (ft ³ /sack)	Mix H2O Ratio (gal/sack)	Free Water (%)	Density (lb/gal)	Plastic Viscosity (cp)	Thickening Time (hrs)	CmprStr 1 (psi)

Additives			
Additive	Type	Concentration	Conc Unit label