



# XTO - Wellbore Diagram

Well Name: Hill Ranch 09-03R

API/UWI	E/W Dist (ft)	E/W Ref	N/S Dist (ft)	N/S Ref	Location	Field Name	County	State
05071071920000	1,499.0	FWL	746.0	FNL	T35S-R67W-S09	Purgatoire River	Las Animas	Colorado
Well Configuration Type	XTO ID B	Orig KB Elev (ft)	Gr Elev (ft)	KB-Grd (ft)	Spud Date	PBTD (All) (ftKB)	Total Depth (ftKB)	Method Of Production
Vertical	94666	8,191.00	8,191.00	0.00	8/12/2001	Original Hole - 2255.0	2,266.0	PCP

Well Config: Vertical - Original Hole, 5/10/2013 9:56:13 AM

Schematic - Actual		Incl	ftKB (TVD)	ftKB (MD)	Zones									
					Zone		Top (ftKB)		Btm (ftKB)					
<p>Top (MD):766, Des:Raton</p> <p>PBTD, 2,255 TD, 2,266</p>				0	Raton									
				16	Casing Strings									
				422	Casing Description	OD (in)	Wt (lbs/ft)	String Grade	Top Connection	Set Depth (ftKB)				
				766	Surface	8 5/8	24.00	J-55	ST&C	422.0				
				766	Casing Description	OD (in)	Wt (lbs/ft)	String Grade	Top Connection	Set Depth (ftKB)				
				768	Production	5 1/2	15.50	J-55	LT&C	2,255.0				
				843	Cement									
				845	Description	Type	String							
				865	Surface Casing Cement	casing	Surface, 422.0ftKB							
				867	Comment									
				927	Cmtd w/115 sx midcon ii cmt w/trinidad surf blend mixed at 14 ppg. Circ 12 bbls to surf.									
				929	Description	Type	String							
				944	Production Casing Cement	casing	Production, 2,255.0ftKB							
				946	Comment									
				952	Cmtd w/325 sx of midcon ii w/trinidad prod blend mixed at 13 ppg. Circ 16 bbls cmt to surf.									
				954										
				971	Perforations									
				973										
				1,042	Date	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Hole Diameter (in)	Phasing (°)	Curr... Status	Zone		
				1,044	4/29/2005	766.0	768.0	4.0	0.400	120		Raton		
				1,065	4/29/2005	843.0	845.0	4.0	0.400	120		Raton		
				1,067	4/29/2005	865.0	867.0	4.0	0.400	120		Raton		
				1,096	4/29/2005	927.0	929.0	4.0	0.400	120		Raton		
				1,098	4/29/2005	944.0	946.0	4.0	0.400	120		Raton		
				1,181	4/29/2005	952.0	954.0	4.0	0.400	120		Raton		
				1,183	4/29/2005	971.0	973.0	4.0	0.400	120		Raton		
				1,227	4/29/2005	1,042.0	1,044.0	4.0	0.400	120		Raton		
				1,229	4/29/2005	1,065.0	1,067.0	4.0	0.400	120		Raton		
				1,268	4/29/2005	1,096.0	1,098.0	4.0	0.400	120		Raton		
				1,270	4/28/2005	1,181.0	1,183.0	4.0	0.400	120		Raton		
				1,324	4/28/2005	1,227.0	1,229.0	4.0	0.400	120		Raton		
				1,326	4/28/2005	1,268.0	1,270.0	4.0	0.400	120		Raton		
				1,396	4/28/2005	1,324.0	1,326.0	3.0				Raton		
				1,398	4/28/2005	1,396.0	1,398.0	3.0	0.400	120		Raton		
				1,462	4/28/2005	1,462.0	1,464.0	3.0	0.400	120		Raton		
				1,464	4/28/2005	1,500.0	1,502.0	3.0	0.400	120		Raton		
				1,500	10/8/2001	2,066.0	2,083.0					Raton		
				1,502	10/8/2001	2,090.0	2,096.0					Raton		
				2,066	10/8/2001	2,098.0	2,102.0					Raton		
				2,083	10/8/2001	2,104.0	2,106.0					Raton		
				2,090	10/8/2001	2,108.0	2,111.0					Raton		
				2,096	10/8/2001	2,115.0	2,122.0					Raton		
				2,098	10/8/2001	2,124.0	2,160.0					Raton		
				2,102										
				2,104	Tubing Strings									
				2,106	Tubing Description			Run Date			Set Depth (ftKB)			
				2,108	Tubing - Production			1/17/2013			2,170.6			
				2,111	Tubing Components									
				2,115	Item Description	Jts	Model	OD (in)	Wt (lbs/...	Gra...	Top Thread	Len (ft)	Top (ftKB)	Btm (ftKB)
				2,122	Tubing	69	T&C Upset	2 7/8	6.50	J-55		2,153.49	0.0	2,153.5
				2,124										
				2,154	Tubing Sub	1		2 7/8	6.50	J-55		4.15	2,153.5	2,157.6
				2,157	Stator	1	30S0...	2 3/4				11.43	2,157.6	2,169.1
				2,160	No Turn Tool	1		5 1/2				1.05	2,169.1	2,170.1
				2,161	Notched Collar	1		2 7/8				0.44	2,170.1	2,170.6
				2,169										
				2,170	Rods									
				2,171	Rod Description			Run Date			String Length (ft)		Set Depth (ftKB)	
				2,172	Rod - Rotor			1/17/2013			2,172.33		2,172.3	
				2,255	Rod Components									
				2,266	Item Description	Jts	Model	OD (in)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)		
			Polished Rod	1		1 1/4		16.00	0.0	16.0				

PBTD,  
2,255  
TD, 2,266

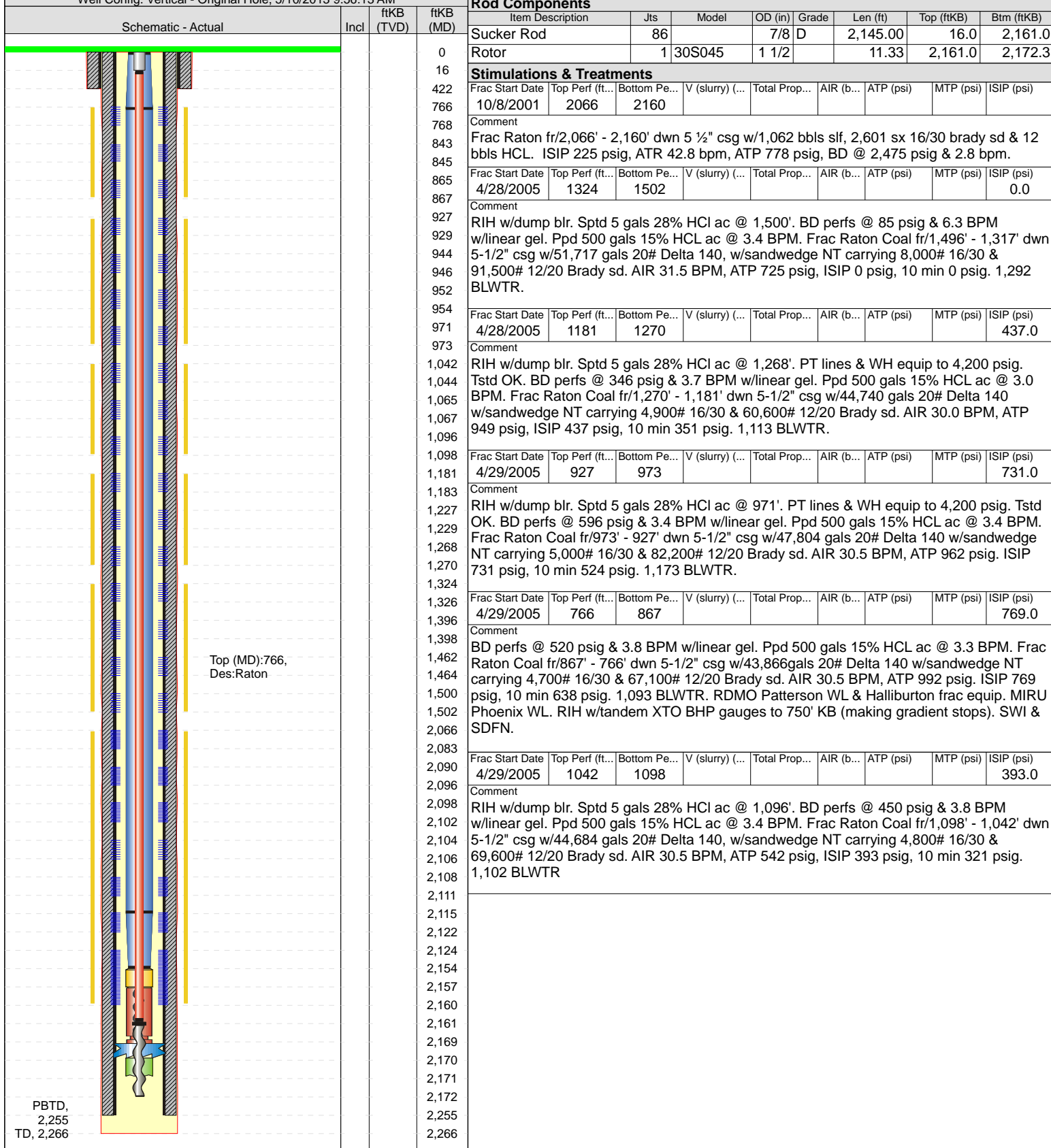


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Well Config: Vertical - Original Hole, 5/10/2013 9:56:13 AM



### Rod Components

Item Description	Jts	Model	OD (in)	Grade	Len (ft)	Top (ftKB)	Btm (ftKB)
Sucker Rod	86		7/8	D	2,145.00	16.0	2,161.0
Rotor	1	30S045	1 1/2		11.33	2,161.0	2,172.3

### Stimulations & Treatments

Frac Start Date	Top Perf (ft...)	Bottom Pe...	V (slurry) (...)	Total Prop...	AIR (b...	ATP (psi)	MTP (psi)	ISIP (psi)
10/8/2001	2066	2160						

#### Comment

Frac Raton fr/2,066' - 2,160' dwn 5 1/2" csg w/1,062 bbls slf, 2,601 sx 16/30 brady sd & 12 bbls HCL. ISIP 225 psig, ATR 42.8 bpm, ATP 778 psig, BD @ 2,475 psig & 2.8 bpm.

Frac Start Date	Top Perf (ft...)	Bottom Pe...	V (slurry) (...)	Total Prop...	AIR (b...	ATP (psi)	MTP (psi)	ISIP (psi)
4/28/2005	1324	1502						0.0

#### Comment

RIH w/dump blr. Sptd 5 gals 28% HCL ac @ 1,500'. BD perfs @ 85 psig & 6.3 BPM w/linear gel. Ppd 500 gals 15% HCL ac @ 3.4 BPM. Frac Raton Coal fr/1,496' - 1,317' dwn 5-1/2" csg w/51,717 gals 20# Delta 140, w/sandwedge NT carrying 8,000# 16/30 & 91,500# 12/20 Brady sd. AIR 31.5 BPM, ATP 725 psig, ISIP 0 psig, 10 min 0 psig. 1,292 BLWTR.

Frac Start Date	Top Perf (ft...)	Bottom Pe...	V (slurry) (...)	Total Prop...	AIR (b...	ATP (psi)	MTP (psi)	ISIP (psi)
4/28/2005	1181	1270						437.0

#### Comment

RIH w/dump blr. Sptd 5 gals 28% HCL ac @ 1,268'. PT lines & WH equip to 4,200 psig. Tstd OK. BD perfs @ 346 psig & 3.7 BPM w/linear gel. Ppd 500 gals 15% HCL ac @ 3.0 BPM. Frac Raton Coal fr/1,270' - 1,181' dwn 5-1/2" csg w/44,740 gals 20# Delta 140 w/sandwedge NT carrying 4,900# 16/30 & 60,600# 12/20 Brady sd. AIR 30.0 BPM, ATP 949 psig, ISIP 437 psig, 10 min 351 psig. 1,113 BLWTR.

Frac Start Date	Top Perf (ft...)	Bottom Pe...	V (slurry) (...)	Total Prop...	AIR (b...	ATP (psi)	MTP (psi)	ISIP (psi)
4/29/2005	927	973						731.0

#### Comment

RIH w/dump blr. Sptd 5 gals 28% HCL ac @ 971'. PT lines & WH equip to 4,200 psig. Tstd OK. BD perfs @ 596 psig & 3.4 BPM w/linear gel. Ppd 500 gals 15% HCL ac @ 3.4 BPM. Frac Raton Coal fr/973' - 927' dwn 5-1/2" csg w/47,804 gals 20# Delta 140 w/sandwedge NT carrying 5,000# 16/30 & 82,200# 12/20 Brady sd. AIR 30.5 BPM, ATP 962 psig. ISIP 731 psig, 10 min 524 psig. 1,173 BLWTR.

Frac Start Date	Top Perf (ft...)	Bottom Pe...	V (slurry) (...)	Total Prop...	AIR (b...	ATP (psi)	MTP (psi)	ISIP (psi)
4/29/2005	766	867						769.0

#### Comment

BD perfs @ 520 psig & 3.8 BPM w/linear gel. Ppd 500 gals 15% HCL ac @ 3.3 BPM. Frac Raton Coal fr/867' - 766' dwn 5-1/2" csg w/43,866gals 20# Delta 140 w/sandwedge NT carrying 4,700# 16/30 & 67,100# 12/20 Brady sd. AIR 30.5 BPM, ATP 992 psig. ISIP 769 psig, 10 min 638 psig. 1,093 BLWTR. RDMO Patterson WL & Halliburton frac equip. MIRU Phoenix WL. RIH w/tandem XTO BHP gauges to 750' KB (making gradient stops). SWI & SDFN.

Frac Start Date	Top Perf (ft...)	Bottom Pe...	V (slurry) (...)	Total Prop...	AIR (b...	ATP (psi)	MTP (psi)	ISIP (psi)
4/29/2005	1042	1098						393.0

#### Comment

RIH w/dump blr. Sptd 5 gals 28% HCL ac @ 1,096'. BD perfs @ 450 psig & 3.8 BPM w/linear gel. Ppd 500 gals 15% HCL ac @ 3.4 BPM. Frac Raton Coal fr/1,098' - 1,042' dwn 5-1/2" csg w/44,684 gals 20# Delta 140, w/sandwedge NT carrying 4,800# 16/30 & 69,600# 12/20 Brady sd. AIR 30.5 BPM, ATP 542 psig, ISIP 393 psig, 10 min 321 psig. 1,102 BLWTR