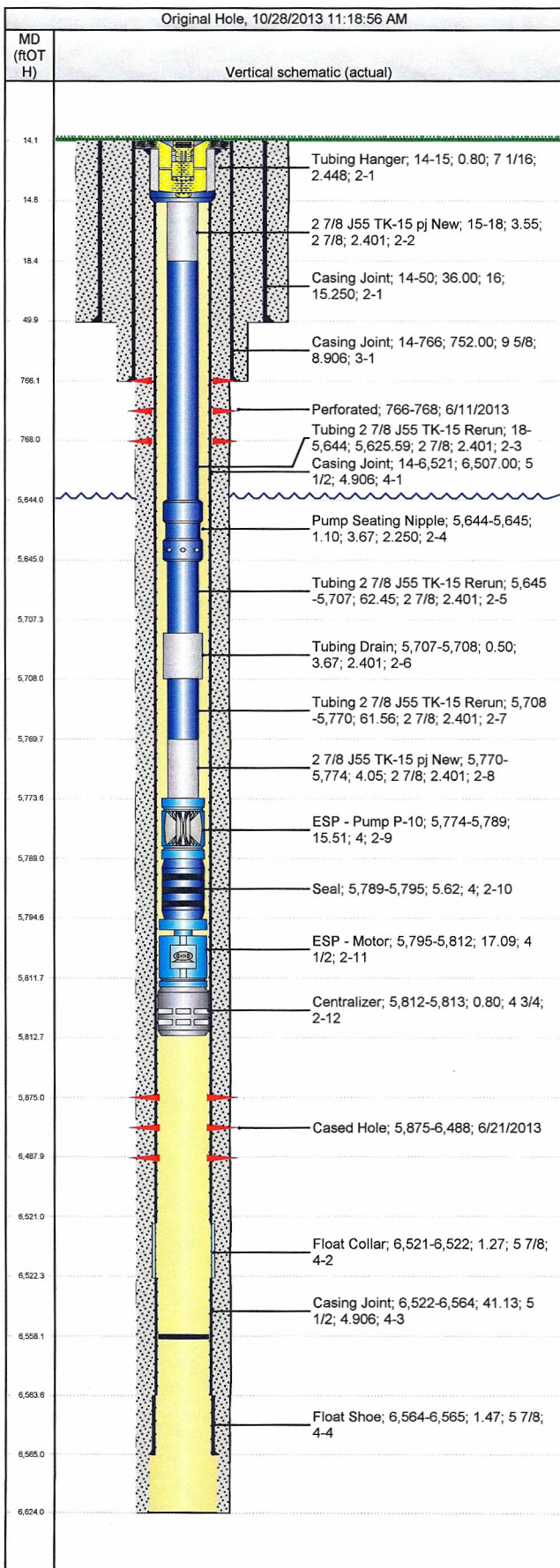




Wellbore Schematic

Well Name Emerald 77X	Lease Emerald	Field Name Rangely	Business Unit Mid-Continent
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Job Details						
Job Category			Start Date		Release Date	
Major Rig Work Over (MRWO)			5/16/2013		6/28/2013	
Casing Strings						
Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top Thread	Set Depth (MD) (ftOTH)	
Conductor	16	65.00	H-40		50	
Surface	9 5/8	36.00	K-55		766	
Production Liner 1	5 1/2	17.00	L-80		6,565	
Production Casing	7	23.00	K-55		6,624	
Tubing Strings						
Tubing - Production set at 5,812.6ftOTH on 6/28/2013 14:00						
Tubing Description		Run Date		String Length (ft)	Set Depth (MD) (ftO	
Tubing - Production		6/28/2013		5,798.62	5,812.6	
Item Des	Jts	OD (in)	Wt (lb/ft)	Grade	Len (ft)	Btm (ftOTH)
Tubing Hanger		7 1/16			0.80	14.8
2 7/8 J55 TK-15 pj New		2 7/8	6.50	J55	3.55	18.3
Tubing 2 7/8 J55 TK-15 Rerun	181	2 7/8	6.50	J-55	5,625.59	5,643.9
Pump Seating Nipple		3.668			1.10	5,645.0
Tubing 2 7/8 J55 TK-15 Rerun	2	2 7/8	6.50	J-55	62.45	5,707.5
Tubing Drain		3.668			0.50	5,708.0
Tubing 2 7/8 J55 TK-15 Rerun	2	2 7/8	6.50	J-55	61.56	5,769.6
2 7/8 J55 TK-15 pj New		2 7/8			4.05	5,773.6
ESP - Pump P-10		4			15.51	5,789.1
Seal		4			5.62	5,794.7
ESP - Motor		4 1/2			17.09	5,811.8
Centralizer		4 3/4			0.80	5,812.6
Landed @		4 3/4				5,812.6

Perforations					
Date	Top (ftOTH)	Btm (ftOTH)	Shot Dens (shots/ft)	Entered Shot Total	Zone & Completion
6/11/2013	766.0	768.0	4.0	8	
6/21/2013	5,875.0	6,488.0	3.0	567	

Other Strings			
Run Date	Pull Date	Set Depth (ftOTH)	Com