

ConocoPhillips SJB

**San Juan Basin - Colorado
Southern Ute Wells (32N7W)
Southern Ute #701H**

**Southern Ute 701H
APD Plan**

Anticollision Summary Report

13 May, 2014

ConocoPhillips

Anticollision Summary Report

Company:	ConocoPhillips SJBU	Local Co-ordinate Reference:	Well Southern Ute #701H
Project:	San Juan Basin - Colorado	TVD Reference:	rkbL @ 6311.0usft (Original Well Elev)
Reference Site:	Southern Ute Wells (32N7W)	MD Reference:	rkbL @ 6311.0usft (Original Well Elev)
Site Error:	30.0 usft	North Reference:	Grid
Reference Well:	Southern Ute #701H	Survey Calculation Method:	Minimum Curvature
Well Error:	2.5 usft	Output errors are at	2.00 sigma
Reference Wellbore	Southern Ute 701H	Database:	EDM Central Planning
Reference Design:	APD Plan	Offset TVD Reference:	Offset Datum

Reference	APD Plan		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,030.4 usft	Error Surface:	Combined Covariances
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	5/13/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	500.0	APD Plan (Southern Ute 701H)	INCLINOMETER	Inclination Only : < 3 degrees	
500.0	8,422.0	APD Plan (Southern Ute 701H)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Southern Ute Wells (32N7W)						
Southern Ute #1X (Samson) - Wellbore #1 - Estimated (n	5,189.7	3,316.5	307.9	140.0	1.834	Caution - Monitor Closely, C
Southern Ute #1X (Samson) - Wellbore #1 - Estimated (n	5,200.0	3,316.5	308.0	139.6	1.829	Caution - Monitor Closely, E
Southern Ute #701 (COP) - Wellbore #1 - Actual Surveys	7,313.5	2,800.0	636.9	416.9	2.895	Normal Operations, CC, ES,
Southern Ute #9 (Samson) - Wellbore #1 - Actual Survey	7,181.2	2,991.1	622.1	391.9	2.703	Normal Operations, CC
Southern Ute #9 (Samson) - Wellbore #1 - Actual Survey	7,200.0	2,990.8	622.4	391.6	2.696	Normal Operations, ES, SF

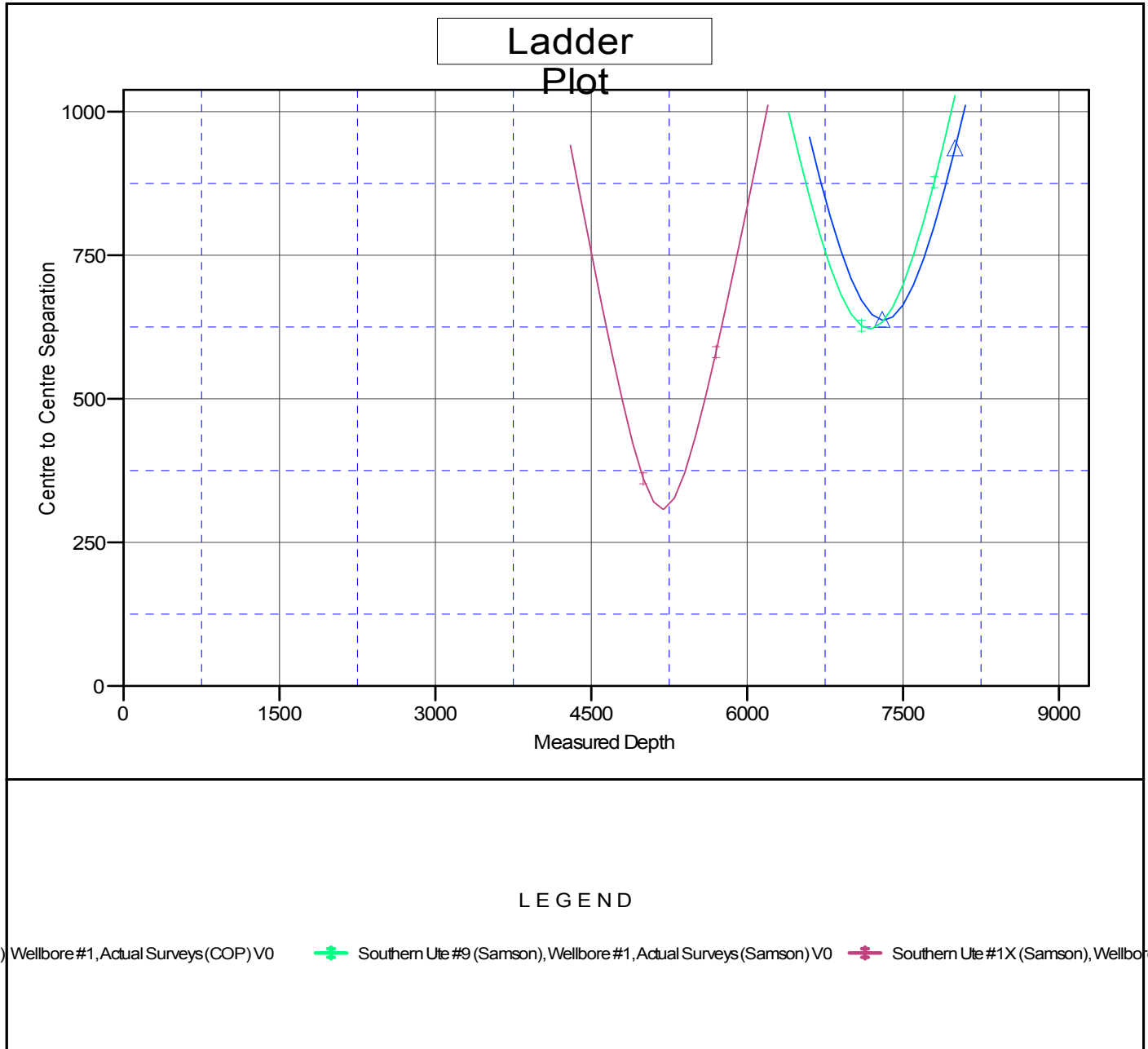
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Reference Depths are relative to rkbL @ 6311.0usft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Southern Ute #701H
Coordinate System is US State Plane 1983, Colorado Southern Zone
Grid Convergence at Surface is: -1.28°



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