

Hilcorp Energy Company

Farmington, NM

San Juan Basin

Southern Ute 703H

Lateral No.2

WP3

Anticollision Report

05 April, 2023

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Reference	WP3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 25.0usft	Error Model:	ISCWSA
Depth Range:	3,080.0 to 6,808.4usft	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 3,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Through Borehole Radius

Survey Tool Program	Date	4/5/2023			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	3,080.0	WP3 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination correction only	
3,080.0	6,808.4	WP3 (Lateral No.2)	3_MWD+HRGM	B001Mb: HRGM declination correction only	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
San Juan Basin						
Southern Ute 004 - ST00 - ST00	4,273.3	2,900.7	511.0	-1,549.6	0.248	Collision RiskProcedures Req'd
Southern Ute 004 - ST00 - ST00	4,280.0	2,900.8	511.1	-1,549.8	0.248	Collision RiskProcedures Req'd
Southern Ute 004 - ST00 - ST00	4,300.0	2,900.9	511.7	-1,549.8	0.248	Collision RiskProcedures Req'd
Southern Ute 004E - ST00 - ST00	3,307.4	2,872.1	410.9	-1,613.5	0.203	Collision RiskProcedures Req'd
Southern Ute 004E - ST00 - ST00	3,330.0	2,876.6	411.5	-1,616.6	0.203	Collision RiskProcedures Req'd
Southern Ute 004E - ST00 - ST00	3,355.0	2,881.0	413.5	-1,618.2	0.204	Collision RiskProcedures Req'd
Southern Ute 703H - Lateral No.1 - WP3	3,082.2	3,082.2	0.0	-2.3	0.001	Collision RiskProcedures Req'd
Southern Ute 703H - Lateral No.1 - WP3	3,105.0	3,105.0	0.3	-2.5	0.094	Collision RiskProcedures Req'd
Southern Ute 703H - Pilot Hole - WP3	3,082.2	3,082.2	0.0	-2.3	0.001	Collision RiskProcedures Req'd
Southern Ute 703H - Pilot Hole - WP3	3,105.0	3,105.0	0.3	-2.6	0.091	Collision RiskProcedures Req'd

Offset Design:	San Juan Basin - Southern Ute 004 - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program:	5600-3_Blind												Offset Well Error:	1.0 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
3,080.0	2,800.6	2,800.6	2,800.6	14.8	1,955.2	41.87	-1,056.4	-1,607.8	1,285.6	-682.7	1,968.25	0.653	Collision RiskProcedures Req'd	
3,100.0	2,809.0	2,809.0	2,809.0	15.0	1,961.0	42.96	-1,056.4	-1,607.8	1,268.6	-706.1	1,974.74	0.642	Collision RiskProcedures Req'd	
3,105.0	2,811.1	2,811.1	2,811.1	15.1	1,962.5	32.92	-1,056.4	-1,607.8	1,264.3	-711.9	1,976.21	0.640	Collision RiskProcedures Req'd	
3,130.0	2,821.8	2,821.8	2,821.8	15.2	1,970.0	-30.46	-1,056.4	-1,607.8	1,242.0	-741.7	1,983.70	0.626	Collision RiskProcedures Req'd	
3,139.6	2,825.0	2,825.0	2,825.0	15.3	1,972.2	-48.96	-1,056.4	-1,607.8	1,234.8	-751.1	1,985.95	0.622	Collision RiskProcedures Req'd	
3,150.0	2,829.0	2,829.0	2,829.0	15.4	1,975.0	-49.99	-1,056.4	-1,607.8	1,226.2	-762.6	1,988.74	0.617	Collision RiskProcedures Req'd	
3,155.0	2,830.9	2,830.9	2,830.9	15.4	1,976.3	-50.50	-1,056.4	-1,607.8	1,221.9	-768.1	1,990.06	0.614	Collision RiskProcedures Req'd	
3,180.0	2,840.1	2,840.1	2,840.1	15.6	1,982.7	-53.11	-1,056.4	-1,607.8	1,200.8	-795.6	1,996.39	0.602	Collision RiskProcedures Req'd	
3,200.0	2,846.9	2,846.9	2,846.9	15.7	1,987.5	-55.30	-1,056.4	-1,607.8	1,183.8	-817.3	2,001.12	0.592	Collision RiskProcedures Req'd	
3,205.0	2,848.5	2,848.5	2,848.5	15.7	1,988.6	-55.85	-1,056.4	-1,607.8	1,179.6	-822.7	2,002.25	0.589	Collision RiskProcedures Req'd	
3,230.0	2,856.3	2,856.3	2,856.3	15.9	1,994.1	-58.71	-1,056.4	-1,607.8	1,158.2	-849.5	2,007.66	0.577	Collision RiskProcedures Req'd	
3,250.0	2,862.0	2,862.0	2,862.0	16.1	1,998.1	-61.06	-1,056.4	-1,607.8	1,141.0	-870.6	2,011.65	0.567	Collision RiskProcedures Req'd	
3,255.0	2,863.4	2,863.4	2,863.4	16.1	1,999.0	-61.65	-1,056.4	-1,607.8	1,136.7	-875.9	2,012.60	0.565	Collision RiskProcedures Req'd	
3,280.0	2,869.8	2,869.8	2,869.8	16.3	2,003.5	-64.68	-1,056.4	-1,607.8	1,115.2	-901.9	2,017.07	0.553	Collision RiskProcedures Req'd	
3,300.0	2,874.5	2,874.5	2,874.5	16.5	2,006.7	-67.13	-1,056.4	-1,607.8	1,097.9	-922.4	2,020.31	0.543	Collision RiskProcedures Req'd	
3,305.0	2,875.6	2,875.6	2,875.6	16.5	2,007.5	-67.75	-1,056.4	-1,607.8	1,093.6	-927.5	2,021.07	0.541	Collision RiskProcedures Req'd	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton
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Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004 - ST00 - ST00													Offset Site Error: 5.0 usft
Survey Program: 5600-3_Blind													Offset Well Error: 1.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
3,330.0	2,880.6	2,880.6	2,880.6	16.7	2,011.0	-70.85	-1,056.4	-1,607.8	1,072.0	-952.6	2,024.60	0.529	Collision RiskProcedures Req'd
3,350.0	2,884.2	2,884.2	2,884.2	16.9	2,013.5	-73.32	-1,056.4	-1,607.8	1,054.7	-972.3	2,027.08	0.520	Collision RiskProcedures Req'd
3,355.0	2,885.0	2,885.0	2,885.0	17.0	2,014.1	-73.94	-1,056.4	-1,607.8	1,050.4	-977.2	2,027.66	0.518	Collision RiskProcedures Req'd
3,380.0	2,888.6	2,888.6	2,888.6	17.3	2,016.6	-76.99	-1,056.4	-1,607.8	1,028.9	-1,001.4	2,030.24	0.507	Collision RiskProcedures Req'd
3,400.0	2,891.0	2,891.0	2,891.0	17.5	2,018.3	-79.39	-1,056.4	-1,607.8	1,011.7	-1,020.3	2,031.96	0.498	Collision RiskProcedures Req'd
3,405.0	2,891.6	2,891.6	2,891.6	17.5	2,018.7	-79.98	-1,056.4	-1,607.8	1,007.4	-1,024.9	2,032.35	0.496	Collision RiskProcedures Req'd
3,430.0	2,893.8	2,893.8	2,893.8	17.9	2,020.2	-82.88	-1,056.4	-1,607.8	986.0	-1,048.0	2,033.99	0.485	Collision RiskProcedures Req'd
3,450.0	2,895.1	2,895.1	2,895.1	18.1	2,021.1	-85.12	-1,056.4	-1,607.8	969.0	-1,065.9	2,034.95	0.476	Collision RiskProcedures Req'd
3,455.0	2,895.4	2,895.4	2,895.4	18.2	2,021.3	-85.66	-1,056.4	-1,607.8	964.8	-1,070.4	2,035.15	0.474	Collision RiskProcedures Req'd
3,480.0	2,896.2	2,896.2	2,896.2	18.5	2,021.9	-88.31	-1,056.4	-1,607.8	943.7	-1,092.2	2,035.84	0.464	Collision RiskProcedures Req'd
3,491.8	2,896.3	2,896.3	2,896.3	18.7	2,022.0	-89.51	-1,056.4	-1,607.8	933.8	-1,102.2	2,036.00	0.459	Collision RiskProcedures Req'd
3,500.0	2,896.4	2,896.4	2,896.4	18.8	2,022.0	-89.51	-1,056.4	-1,607.8	926.9	-1,109.2	2,036.08	0.455	Collision RiskProcedures Req'd
3,505.0	2,896.4	2,896.4	2,896.4	18.8	2,022.1	-89.52	-1,056.4	-1,607.8	922.8	-1,113.4	2,036.13	0.453	Collision RiskProcedures Req'd
3,530.0	2,896.5	2,896.5	2,896.5	19.2	2,022.2	-89.53	-1,056.4	-1,607.8	902.0	-1,134.4	2,036.40	0.443	Collision RiskProcedures Req'd
3,555.0	2,896.7	2,896.7	2,896.7	19.6	2,022.3	-89.55	-1,056.4	-1,607.8	881.6	-1,155.1	2,036.70	0.433	Collision RiskProcedures Req'd
3,580.0	2,896.8	2,896.8	2,896.8	20.0	2,022.3	-89.56	-1,056.4	-1,607.8	861.3	-1,175.7	2,037.02	0.423	Collision RiskProcedures Req'd
3,600.0	2,896.9	2,896.9	2,896.9	20.3	2,022.4	-89.58	-1,056.4	-1,607.8	845.3	-1,192.0	2,037.30	0.415	Collision RiskProcedures Req'd
3,605.0	2,897.0	2,897.0	2,897.0	20.4	2,022.4	-89.58	-1,056.4	-1,607.8	841.3	-1,196.1	2,037.38	0.413	Collision RiskProcedures Req'd
3,630.0	2,897.1	2,897.1	2,897.1	20.8	2,022.5	-89.59	-1,056.4	-1,607.8	821.6	-1,216.2	2,037.79	0.403	Collision RiskProcedures Req'd
3,655.0	2,897.3	2,897.3	2,897.3	21.2	2,022.6	-89.61	-1,056.4	-1,607.8	802.2	-1,236.1	2,038.23	0.394	Collision RiskProcedures Req'd
3,680.0	2,897.4	2,897.4	2,897.4	21.7	2,022.7	-89.63	-1,056.4	-1,607.8	783.1	-1,255.6	2,038.71	0.384	Collision RiskProcedures Req'd
3,700.0	2,897.5	2,897.5	2,897.5	22.0	2,022.8	-89.64	-1,056.4	-1,607.8	768.0	-1,271.1	2,039.12	0.377	Collision RiskProcedures Req'd
3,705.0	2,897.5	2,897.5	2,897.5	22.1	2,022.8	-89.64	-1,056.4	-1,607.8	764.3	-1,274.9	2,039.23	0.375	Collision RiskProcedures Req'd
3,730.0	2,897.7	2,897.7	2,897.7	22.6	2,022.9	-89.66	-1,056.4	-1,607.8	745.9	-1,293.9	2,039.81	0.366	Collision RiskProcedures Req'd
3,755.0	2,897.8	2,897.8	2,897.8	23.0	2,023.0	-89.67	-1,056.4	-1,607.8	727.9	-1,312.5	2,040.43	0.357	Collision RiskProcedures Req'd
3,780.0	2,898.0	2,898.0	2,898.0	23.5	2,023.1	-89.69	-1,056.4	-1,607.8	710.3	-1,330.8	2,041.09	0.348	Collision RiskProcedures Req'd
3,800.0	2,898.1	2,898.1	2,898.1	23.9	2,023.2	-89.70	-1,056.4	-1,607.8	696.6	-1,345.1	2,041.65	0.341	Collision RiskProcedures Req'd
3,805.0	2,898.1	2,898.1	2,898.1	24.0	2,023.2	-89.70	-1,056.4	-1,607.8	693.2	-1,348.6	2,041.80	0.339	Collision RiskProcedures Req'd
3,830.0	2,898.2	2,898.2	2,898.2	24.4	2,023.3	-89.72	-1,056.4	-1,607.8	676.5	-1,366.0	2,042.57	0.331	Collision RiskProcedures Req'd
3,855.0	2,898.4	2,898.4	2,898.4	24.9	2,023.4	-89.74	-1,056.4	-1,607.8	660.4	-1,383.0	2,043.38	0.323	Collision RiskProcedures Req'd
3,880.0	2,898.5	2,898.5	2,898.5	25.4	2,023.5	-89.75	-1,056.4	-1,607.8	644.9	-1,399.4	2,044.24	0.315	Collision RiskProcedures Req'd
3,900.0	2,898.6	2,898.6	2,898.6	25.8	2,023.6	-89.76	-1,056.4	-1,607.8	632.9	-1,412.1	2,044.96	0.309	Collision RiskProcedures Req'd
3,905.0	2,898.7	2,898.7	2,898.7	25.9	2,023.6	-89.77	-1,056.4	-1,607.8	629.9	-1,415.2	2,045.14	0.308	Collision RiskProcedures Req'd
3,930.0	2,898.8	2,898.8	2,898.8	26.4	2,023.7	-89.78	-1,056.4	-1,607.8	615.7	-1,430.4	2,046.10	0.301	Collision RiskProcedures Req'd
3,955.0	2,898.9	2,898.9	2,898.9	26.9	2,023.8	-89.80	-1,056.4	-1,607.8	602.1	-1,445.0	2,047.09	0.294	Collision RiskProcedures Req'd
3,980.0	2,899.1	2,899.1	2,899.1	27.4	2,023.9	-89.81	-1,056.4	-1,607.8	589.2	-1,458.9	2,048.12	0.288	Collision RiskProcedures Req'd
4,000.0	2,899.2	2,899.2	2,899.2	27.9	2,024.0	-89.83	-1,056.4	-1,607.8	579.5	-1,469.4	2,048.97	0.283	Collision RiskProcedures Req'd
4,005.0	2,899.2	2,899.2	2,899.2	28.0	2,024.0	-89.83	-1,056.4	-1,607.8	577.2	-1,472.0	2,049.18	0.282	Collision RiskProcedures Req'd
4,030.0	2,899.4	2,899.4	2,899.4	28.5	2,024.1	-89.85	-1,056.4	-1,607.8	566.0	-1,484.3	2,050.28	0.276	Collision RiskProcedures Req'd
4,055.0	2,899.5	2,899.5	2,899.5	29.0	2,024.2	-89.86	-1,056.4	-1,607.8	555.7	-1,495.7	2,051.39	0.271	Collision RiskProcedures Req'd
4,080.0	2,899.6	2,899.6	2,899.6	29.5	2,024.3	-89.88	-1,056.4	-1,607.8	546.4	-1,506.1	2,052.52	0.266	Collision RiskProcedures Req'd
4,100.0	2,899.8	2,899.8	2,899.8	30.0	2,024.4	-89.89	-1,056.4	-1,607.8	539.6	-1,513.8	2,053.42	0.263	Collision RiskProcedures Req'd
4,105.0	2,899.8	2,899.8	2,899.8	30.1	2,024.4	-89.89	-1,056.4	-1,607.8	538.0	-1,515.6	2,053.65	0.262	Collision RiskProcedures Req'd
4,130.0	2,899.9	2,899.9	2,899.9	30.6	2,024.5	-89.91	-1,056.4	-1,607.8	530.7	-1,524.0	2,054.78	0.258	Collision RiskProcedures Req'd
4,155.0	2,900.1	2,900.1	2,900.1	31.2	2,024.6	-89.93	-1,056.4	-1,607.8	524.5	-1,531.3	2,055.90	0.255	Collision RiskProcedures Req'd
4,180.0	2,900.2	2,900.2	2,900.2	31.7	2,024.7	-89.94	-1,056.4	-1,607.8	519.5	-1,537.5	2,056.98	0.253	Collision RiskProcedures Req'd
4,200.0	2,900.3	2,900.3	2,900.3	32.1	2,024.8	-89.95	-1,056.4	-1,607.8	516.3	-1,541.6	2,057.83	0.251	Collision RiskProcedures Req'd
4,205.0	2,900.3	2,900.3	2,900.3	32.2	2,024.8	-89.96	-1,056.4	-1,607.8	515.6	-1,542.5	2,058.04	0.251	Collision RiskProcedures Req'd
4,230.0	2,900.5	2,900.5	2,900.5	32.8	2,024.9	-89.97	-1,056.4	-1,607.8	512.9	-1,546.2	2,059.05	0.249	Collision RiskProcedures Req'd
4,255.0	2,900.6	2,900.6	2,900.6	33.3	2,025.0	-89.99	-1,056.4	-1,607.8	511.4	-1,548.7	2,060.00	0.248	Collision RiskProcedures Req'd
4,273.3	2,900.7	2,900.7	2,900.7	33.7	2,025.1	-90.00	-1,056.4	-1,607.8	511.0	-1,549.6	2,060.66	0.248	Collision RiskProcedures Req'd, CC
4,280.0	2,900.8	2,900.8	2,900.8	33.9	2,025.1	-90.00	-1,056.4	-1,607.8	511.1	-1,549.8	2,060.89	0.248	Collision RiskProcedures Req'd, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Offset Design: San Juan Basin - Southern Ute 004 - ST00 - ST00													Offset Site Error: 5.0 usft
Survey Program: 5600-3_Blind													Offset Well Error: 1.0 usft
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Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,300.0	2,900.9	2,900.9	2,900.9	34.3	2,025.2	-90.02	-1,056.4	-1,607.8	511.7	-1,549.8	2,061.56	0.248	Collision RiskProcedures Req'd, ES
4,305.0	2,900.9	2,900.9	2,900.9	34.4	2,025.2	-90.02	-1,056.4	-1,607.8	512.0	-1,549.7	2,061.72	0.248	Collision RiskProcedures Req'd
4,330.0	2,901.1	2,901.1	2,901.1	35.0	2,025.3	-90.04	-1,056.4	-1,607.8	514.2	-1,548.3	2,062.47	0.249	Collision RiskProcedures Req'd
4,355.0	2,901.2	2,901.2	2,901.2	35.5	2,025.4	-90.05	-1,056.4	-1,607.8	517.5	-1,545.6	2,063.14	0.251	Collision RiskProcedures Req'd
4,380.0	2,901.3	2,901.3	2,901.3	36.1	2,025.5	-90.07	-1,056.4	-1,607.8	522.0	-1,541.7	2,063.73	0.253	Collision RiskProcedures Req'd
4,400.0	2,901.4	2,901.4	2,901.4	36.6	2,025.6	-90.08	-1,056.4	-1,607.8	526.5	-1,537.7	2,064.14	0.255	Collision RiskProcedures Req'd
4,405.0	2,901.5	2,901.5	2,901.5	36.7	2,025.6	-90.08	-1,056.4	-1,607.8	527.7	-1,536.5	2,064.24	0.256	Collision RiskProcedures Req'd
4,430.0	2,901.6	2,901.6	2,901.6	37.2	2,025.7	-90.10	-1,056.4	-1,607.8	534.5	-1,530.2	2,064.68	0.259	Collision RiskProcedures Req'd
4,455.0	2,901.8	2,901.8	2,901.8	37.8	2,025.8	-90.11	-1,056.4	-1,607.8	542.4	-1,522.7	2,065.04	0.263	Collision RiskProcedures Req'd
4,480.0	2,901.9	2,901.9	2,901.9	38.4	2,025.9	-90.13	-1,056.4	-1,607.8	551.2	-1,514.1	2,065.33	0.267	Collision RiskProcedures Req'd
4,500.0	2,902.0	2,902.0	2,902.0	38.8	2,026.0	-90.14	-1,056.4	-1,607.8	559.0	-1,506.5	2,065.52	0.271	Collision RiskProcedures Req'd
4,505.0	2,902.0	2,902.0	2,902.0	38.9	2,026.0	-90.15	-1,056.4	-1,607.8	561.1	-1,504.5	2,065.56	0.272	Collision RiskProcedures Req'd
4,530.0	2,902.2	2,902.2	2,902.2	39.5	2,026.1	-90.16	-1,056.4	-1,607.8	571.9	-1,493.9	2,065.73	0.277	Collision RiskProcedures Req'd
4,555.0	2,902.3	2,902.3	2,902.3	40.1	2,026.2	-90.18	-1,056.4	-1,607.8	583.5	-1,482.3	2,065.84	0.282	Collision RiskProcedures Req'd
4,580.0	2,902.5	2,902.5	2,902.5	40.6	2,026.3	-90.19	-1,056.4	-1,607.8	596.0	-1,469.9	2,065.91	0.288	Collision RiskProcedures Req'd
4,600.0	2,902.6	2,902.6	2,902.6	41.1	2,026.4	-90.21	-1,056.4	-1,607.8	606.5	-1,459.4	2,065.93	0.294	Collision RiskProcedures Req'd
4,605.0	2,902.6	2,902.6	2,902.6	41.2	2,026.4	-90.21	-1,056.4	-1,607.8	609.2	-1,456.7	2,065.94	0.295	Collision RiskProcedures Req'd
4,630.0	2,902.7	2,902.7	2,902.7	41.8	2,026.5	-90.23	-1,056.4	-1,607.8	623.2	-1,442.8	2,065.93	0.302	Collision RiskProcedures Req'd
4,655.0	2,902.9	2,902.9	2,902.9	42.3	2,026.6	-90.24	-1,056.4	-1,607.8	637.8	-1,428.1	2,065.89	0.309	Collision RiskProcedures Req'd
4,680.0	2,903.0	2,903.0	2,903.0	42.9	2,026.7	-90.26	-1,056.4	-1,607.8	653.1	-1,412.7	2,065.83	0.316	Collision RiskProcedures Req'd
4,700.0	2,903.1	2,903.1	2,903.1	43.4	2,026.8	-90.27	-1,056.4	-1,607.8	665.7	-1,400.0	2,065.76	0.322	Collision RiskProcedures Req'd
4,705.0	2,903.2	2,903.2	2,903.2	43.5	2,026.8	-90.27	-1,056.4	-1,607.8	668.9	-1,396.8	2,065.74	0.324	Collision RiskProcedures Req'd
4,730.0	2,903.3	2,903.3	2,903.3	44.1	2,026.9	-90.29	-1,056.4	-1,607.8	685.3	-1,380.3	2,065.64	0.332	Collision RiskProcedures Req'd
4,755.0	2,903.4	2,903.4	2,903.4	44.6	2,027.0	-90.30	-1,056.4	-1,607.8	702.2	-1,363.3	2,065.52	0.340	Collision RiskProcedures Req'd
4,780.0	2,903.6	2,903.6	2,903.6	45.2	2,027.1	-90.32	-1,056.4	-1,607.8	719.6	-1,345.8	2,065.39	0.348	Collision RiskProcedures Req'd
4,800.0	2,903.7	2,903.7	2,903.7	45.7	2,027.1	-90.33	-1,056.4	-1,607.8	733.8	-1,331.5	2,065.29	0.355	Collision RiskProcedures Req'd
4,805.0	2,903.7	2,903.7	2,903.7	45.8	2,027.2	-90.34	-1,056.4	-1,607.8	737.4	-1,327.8	2,065.26	0.357	Collision RiskProcedures Req'd
4,830.0	2,903.9	2,903.9	2,903.9	46.4	2,027.3	-90.35	-1,056.4	-1,607.8	755.6	-1,309.5	2,065.12	0.366	Collision RiskProcedures Req'd
4,855.0	2,904.0	2,904.0	2,904.0	47.0	2,027.4	-90.37	-1,056.4	-1,607.8	774.2	-1,290.7	2,064.97	0.375	Collision RiskProcedures Req'd
4,880.0	2,904.1	2,904.1	2,904.1	47.5	2,027.5	-90.38	-1,056.4	-1,607.8	793.2	-1,271.6	2,064.83	0.384	Collision RiskProcedures Req'd
4,900.0	2,904.3	2,904.3	2,904.3	48.0	2,027.5	-90.40	-1,056.4	-1,607.8	808.6	-1,256.1	2,064.71	0.392	Collision RiskProcedures Req'd
4,905.0	2,904.3	2,904.3	2,904.3	48.1	2,027.6	-90.40	-1,056.4	-1,607.8	812.5	-1,252.2	2,064.68	0.394	Collision RiskProcedures Req'd
4,930.0	2,904.4	2,904.4	2,904.4	48.7	2,027.7	-90.41	-1,056.4	-1,607.8	832.1	-1,232.5	2,064.53	0.403	Collision RiskProcedures Req'd
4,955.0	2,904.6	2,904.6	2,904.6	49.3	2,027.8	-90.43	-1,056.4	-1,607.8	851.9	-1,212.5	2,064.39	0.413	Collision RiskProcedures Req'd
4,980.0	2,904.7	2,904.7	2,904.7	49.9	2,027.9	-90.45	-1,056.4	-1,607.8	872.1	-1,192.2	2,064.25	0.422	Collision RiskProcedures Req'd
5,000.0	2,904.8	2,904.8	2,904.8	50.3	2,027.9	-90.46	-1,056.4	-1,607.8	888.3	-1,175.8	2,064.14	0.430	Collision RiskProcedures Req'd
5,005.0	2,904.8	2,904.8	2,904.8	50.5	2,027.9	-90.46	-1,056.4	-1,607.8	892.4	-1,171.7	2,064.11	0.432	Collision RiskProcedures Req'd
5,030.0	2,905.0	2,905.0	2,905.0	51.0	2,028.0	-90.48	-1,056.4	-1,607.8	913.0	-1,150.9	2,063.97	0.442	Collision RiskProcedures Req'd
5,055.0	2,905.1	2,905.1	2,905.1	51.6	2,028.1	-90.49	-1,056.4	-1,607.8	933.9	-1,130.0	2,063.84	0.452	Collision RiskProcedures Req'd
5,080.0	2,905.3	2,905.3	2,905.3	52.2	2,028.2	-90.51	-1,056.4	-1,607.8	954.9	-1,108.8	2,063.71	0.463	Collision RiskProcedures Req'd
5,100.0	2,905.4	2,905.4	2,905.4	52.7	2,028.3	-90.52	-1,056.4	-1,607.8	971.8	-1,091.8	2,063.62	0.471	Collision RiskProcedures Req'd
5,105.0	2,905.4	2,905.4	2,905.4	52.8	2,028.3	-90.52	-1,056.4	-1,607.8	976.1	-1,087.5	2,063.59	0.473	Collision RiskProcedures Req'd
5,130.0	2,905.6	2,905.6	2,905.6	53.4	2,028.4	-90.54	-1,056.4	-1,607.8	997.5	-1,066.0	2,063.48	0.483	Collision RiskProcedures Req'd
5,155.0	2,905.7	2,905.7	2,905.7	54.0	2,028.5	-90.56	-1,056.4	-1,607.8	1,019.0	-1,044.3	2,063.36	0.494	Collision RiskProcedures Req'd
5,180.0	2,905.8	2,905.8	2,905.8	54.6	2,028.6	-90.57	-1,056.4	-1,607.8	1,040.7	-1,022.5	2,063.26	0.504	Collision RiskProcedures Req'd
5,200.0	2,905.9	2,905.9	2,905.9	55.0	2,028.7	-90.58	-1,056.4	-1,607.8	1,058.2	-1,005.0	2,063.17	0.513	Collision RiskProcedures Req'd
5,205.0	2,906.0	2,906.0	2,906.0	55.2	2,028.7	-90.59	-1,056.4	-1,607.8	1,062.6	-1,000.6	2,063.15	0.515	Collision RiskProcedures Req'd
5,230.0	2,906.1	2,906.1	2,906.1	55.7	2,028.8	-90.60	-1,056.4	-1,607.8	1,084.6	-978.5	2,063.06	0.526	Collision RiskProcedures Req'd
5,255.0	2,906.3	2,906.3	2,906.3	56.3	2,028.9	-90.62	-1,056.4	-1,607.8	1,106.7	-956.3	2,062.96	0.536	Collision RiskProcedures Req'd
5,280.0	2,906.4	2,906.4	2,906.4	56.9	2,029.0	-90.64	-1,056.4	-1,607.8	1,128.9	-934.0	2,062.88	0.547	Collision RiskProcedures Req'd
5,300.0	2,906.5	2,906.5	2,906.5	57.4	2,029.1	-90.65	-1,056.4	-1,607.8	1,146.8	-916.0	2,062.81	0.556	Collision RiskProcedures Req'd
5,305.0	2,906.5	2,906.5	2,906.5	57.5	2,029.1	-90.65	-1,056.4	-1,607.8	1,151.3	-911.5	2,062.79	0.558	Collision RiskProcedures Req'd

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004 - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program: 5600-3_Blind												Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,330.0	2,906.7	2,906.7	2,906.7	58.1	2,029.2	-90.67	-1,056.4	-1,607.8	1,173.7	-889.0	2,062.72	0.569	Collision RiskProcedures Req'd
5,355.0	2,906.8	2,906.8	2,906.8	58.7	2,029.3	-90.68	-1,056.4	-1,607.8	1,196.3	-866.4	2,062.64	0.580	Collision RiskProcedures Req'd
5,380.0	2,907.0	2,907.0	2,907.0	59.3	2,029.4	-90.70	-1,056.4	-1,607.8	1,218.9	-843.6	2,062.58	0.591	Collision RiskProcedures Req'd
5,400.0	2,907.1	2,907.1	2,907.1	59.8	2,029.5	-90.71	-1,056.4	-1,607.8	1,237.1	-825.4	2,062.53	0.600	Collision RiskProcedures Req'd
5,405.0	2,907.1	2,907.1	2,907.1	59.9	2,029.5	-90.71	-1,056.4	-1,607.8	1,241.7	-820.8	2,062.51	0.602	Collision RiskProcedures Req'd
5,430.0	2,907.2	2,907.2	2,907.2	60.5	2,029.6	-90.73	-1,056.4	-1,607.8	1,264.5	-798.0	2,062.45	0.613	Collision RiskProcedures Req'd
5,455.0	2,907.4	2,907.4	2,907.4	61.1	2,029.7	-90.75	-1,056.4	-1,607.8	1,287.4	-775.0	2,062.40	0.624	Collision RiskProcedures Req'd
5,480.0	2,907.5	2,907.5	2,907.5	61.6	2,029.8	-90.76	-1,056.4	-1,607.8	1,310.4	-752.0	2,062.35	0.635	Collision RiskProcedures Req'd
5,500.0	2,907.6	2,907.6	2,907.6	62.1	2,029.9	-90.77	-1,056.4	-1,607.8	1,328.8	-733.5	2,062.31	0.644	Collision RiskProcedures Req'd
5,505.0	2,907.7	2,907.7	2,907.7	62.2	2,029.9	-90.78	-1,056.4	-1,607.8	1,333.4	-728.9	2,062.30	0.647	Collision RiskProcedures Req'd
5,530.0	2,907.8	2,907.8	2,907.8	62.8	2,030.0	-90.79	-1,056.4	-1,607.8	1,356.6	-705.7	2,062.26	0.658	Collision RiskProcedures Req'd
5,555.0	2,907.9	2,907.9	2,907.9	63.4	2,030.1	-90.81	-1,056.4	-1,607.8	1,379.8	-682.5	2,062.22	0.669	Collision RiskProcedures Req'd
5,580.0	2,908.1	2,908.1	2,908.1	64.0	2,030.2	-90.82	-1,056.4	-1,607.8	1,403.0	-659.2	2,062.19	0.680	Collision RiskProcedures Req'd
5,600.0	2,908.2	2,908.2	2,908.2	64.5	2,030.3	-90.84	-1,056.4	-1,607.8	1,421.7	-640.5	2,062.16	0.689	Collision RiskProcedures Req'd
5,605.0	2,908.2	2,908.2	2,908.2	64.6	2,030.3	-90.84	-1,056.4	-1,607.8	1,426.3	-635.8	2,062.16	0.692	Collision RiskProcedures Req'd
5,630.0	2,908.4	2,908.4	2,908.4	65.2	2,030.4	-90.86	-1,056.4	-1,607.8	1,449.7	-612.4	2,062.13	0.703	Collision RiskProcedures Req'd
5,655.0	2,908.5	2,908.5	2,908.5	65.8	2,030.5	-90.87	-1,056.4	-1,607.8	1,473.1	-589.0	2,062.11	0.714	Collision RiskProcedures Req'd
5,680.0	2,908.6	2,908.6	2,908.6	66.4	2,030.6	-90.89	-1,056.4	-1,607.8	1,496.6	-565.5	2,062.09	0.726	Collision RiskProcedures Req'd
5,700.0	2,908.8	2,908.8	2,908.8	66.9	2,030.7	-90.90	-1,056.4	-1,607.8	1,515.4	-546.7	2,062.07	0.735	Collision RiskProcedures Req'd
5,705.0	2,908.8	2,908.8	2,908.8	67.0	2,030.7	-90.90	-1,056.4	-1,607.8	1,520.1	-542.0	2,062.07	0.737	Collision RiskProcedures Req'd
5,730.0	2,908.9	2,908.9	2,908.9	67.6	2,030.8	-90.92	-1,056.4	-1,607.8	1,543.7	-518.4	2,062.06	0.749	Collision RiskProcedures Req'd
5,755.0	2,909.1	2,909.1	2,909.1	68.2	2,030.9	-90.93	-1,056.4	-1,607.8	1,567.3	-494.8	2,062.05	0.760	Collision RiskProcedures Req'd
5,780.0	2,909.2	2,909.2	2,909.2	68.8	2,031.0	-90.95	-1,056.4	-1,607.8	1,590.9	-471.1	2,062.04	0.772	Collision RiskProcedures Req'd
5,800.0	2,909.3	2,909.3	2,909.3	69.3	2,031.1	-90.96	-1,056.4	-1,607.8	1,609.9	-452.1	2,062.03	0.781	Collision RiskProcedures Req'd
5,805.0	2,909.4	2,909.4	2,909.4	69.4	2,031.1	-90.97	-1,056.4	-1,607.8	1,614.6	-447.4	2,062.03	0.783	Collision RiskProcedures Req'd
5,830.0	2,909.5	2,909.5	2,909.5	70.0	2,031.2	-90.98	-1,056.4	-1,607.8	1,638.4	-423.7	2,062.03	0.795	Collision RiskProcedures Req'd
5,855.0	2,909.6	2,909.6	2,909.6	70.6	2,031.3	-91.00	-1,056.4	-1,607.8	1,662.1	-399.9	2,062.03	0.806	Collision RiskProcedures Req'd
5,880.0	2,909.8	2,909.8	2,909.8	71.2	2,031.4	-91.01	-1,056.4	-1,607.8	1,685.9	-376.1	2,062.03	0.818	Collision RiskProcedures Req'd
5,900.0	2,909.9	2,909.9	2,909.9	71.6	2,031.5	-91.03	-1,056.4	-1,607.8	1,705.0	-357.0	2,062.04	0.827	Collision RiskProcedures Req'd
5,905.0	2,909.9	2,909.9	2,909.9	71.8	2,031.5	-91.03	-1,056.4	-1,607.8	1,709.8	-352.3	2,062.04	0.829	Collision RiskProcedures Req'd
5,930.0	2,910.1	2,910.1	2,910.1	72.4	2,031.6	-91.05	-1,056.4	-1,607.8	1,733.7	-328.4	2,062.05	0.841	Collision RiskProcedures Req'd
5,955.0	2,910.2	2,910.2	2,910.2	73.0	2,031.7	-91.06	-1,056.4	-1,607.8	1,757.6	-304.5	2,062.06	0.852	Collision RiskProcedures Req'd
5,980.0	2,910.3	2,910.3	2,910.3	73.6	2,031.8	-91.08	-1,056.4	-1,607.8	1,781.5	-280.6	2,062.07	0.864	Collision RiskProcedures Req'd
6,000.0	2,910.4	2,910.4	2,910.4	74.0	2,031.9	-91.09	-1,056.4	-1,607.8	1,800.7	-261.4	2,062.08	0.873	Collision RiskProcedures Req'd
6,005.0	2,910.5	2,910.5	2,910.5	74.1	2,031.9	-91.09	-1,056.4	-1,607.8	1,805.5	-256.6	2,062.09	0.876	Collision RiskProcedures Req'd
6,030.0	2,910.6	2,910.6	2,910.6	74.7	2,032.0	-91.11	-1,056.4	-1,607.8	1,829.5	-232.7	2,062.10	0.887	Collision RiskProcedures Req'd
6,055.0	2,910.8	2,910.8	2,910.8	75.3	2,032.1	-91.12	-1,056.4	-1,607.8	1,853.5	-208.7	2,062.12	0.899	Collision RiskProcedures Req'd
6,080.0	2,910.9	2,910.9	2,910.9	75.9	2,032.2	-91.14	-1,056.4	-1,607.8	1,877.5	-184.6	2,062.14	0.910	Collision RiskProcedures Req'd
6,100.0	2,911.0	2,911.0	2,911.0	76.4	2,032.3	-91.15	-1,056.4	-1,607.8	1,896.8	-165.4	2,062.16	0.920	Collision RiskProcedures Req'd
6,105.0	2,911.0	2,911.0	2,911.0	76.5	2,032.3	-91.16	-1,056.4	-1,607.8	1,901.6	-160.6	2,062.17	0.922	Collision RiskProcedures Req'd
6,130.0	2,911.2	2,911.2	2,911.2	77.1	2,032.4	-91.17	-1,056.4	-1,607.8	1,925.7	-136.5	2,062.19	0.934	Collision RiskProcedures Req'd
6,155.0	2,911.3	2,911.3	2,911.3	77.7	2,032.5	-91.19	-1,056.4	-1,607.8	1,949.8	-112.4	2,062.22	0.945	Collision RiskProcedures Req'd
6,180.0	2,911.5	2,911.5	2,911.5	78.3	2,032.6	-91.20	-1,056.4	-1,607.8	1,973.9	-88.3	2,062.25	0.957	Collision RiskProcedures Req'd
6,200.0	2,911.6	2,911.6	2,911.6	78.8	2,032.6	-91.22	-1,056.4	-1,607.8	1,993.2	-69.0	2,062.27	0.967	Collision RiskProcedures Req'd
6,205.0	2,911.6	2,911.6	2,911.6	78.9	2,032.7	-91.22	-1,056.4	-1,607.8	1,998.1	-64.2	2,062.28	0.969	Collision RiskProcedures Req'd
6,230.0	2,911.7	2,911.7	2,911.7	79.5	2,032.8	-91.23	-1,056.4	-1,607.8	2,022.3	-40.0	2,062.31	0.981	Collision RiskProcedures Req'd
6,255.0	2,911.9	2,911.9	2,911.9	80.1	2,032.9	-91.25	-1,056.4	-1,607.8	2,046.5	-15.9	2,062.34	0.992	Collision RiskProcedures Req'd
6,280.0	2,912.0	2,912.0	2,912.0	80.7	2,033.0	-91.27	-1,056.4	-1,607.8	2,070.7	8.3	2,062.38	1.004	Collision RiskProcedures Req'd
6,300.0	2,912.1	2,912.1	2,912.1	81.2	2,033.0	-91.28	-1,056.4	-1,607.8	2,090.1	27.7	2,062.41	1.013	Collision RiskProcedures Req'd
6,305.0	2,912.2	2,912.2	2,912.2	81.3	2,033.1	-91.28	-1,056.4	-1,607.8	2,094.9	32.5	2,062.41	1.016	Collision RiskProcedures Req'd
6,330.0	2,912.3	2,912.3	2,912.3	81.9	2,033.2	-91.30	-1,056.4	-1,607.8	2,119.2	56.7	2,062.45	1.027	Collision RiskProcedures Req'd
6,355.0	2,912.4	2,912.4	2,912.4	82.5	2,033.3	-91.31	-1,056.4	-1,607.8	2,143.4	80.9	2,062.49	1.039	Collision RiskProcedures Req'd

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004 - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program: 5600-3_Blind												Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,380.0	2,912.6	2,912.6	2,912.6	83.1	2,033.4	-91.33	-1,056.4	-1,607.8	2,167.7	105.2	2,062.53	1.051	Collision RiskProcedures Req'd
6,400.0	2,912.7	2,912.7	2,912.7	83.6	2,033.4	-91.34	-1,056.4	-1,607.8	2,187.2	124.6	2,062.57	1.060	Collision RiskProcedures Req'd
6,405.0	2,912.7	2,912.7	2,912.7	83.7	2,033.4	-91.34	-1,056.4	-1,607.8	2,192.0	129.4	2,062.57	1.063	Collision RiskProcedures Req'd
6,430.0	2,912.9	2,912.9	2,912.9	84.3	2,033.5	-91.36	-1,056.4	-1,607.8	2,216.3	153.7	2,062.62	1.075	Collision RiskProcedures Req'd
6,455.0	2,913.0	2,913.0	2,913.0	84.9	2,033.6	-91.38	-1,056.4	-1,607.8	2,240.7	178.0	2,062.66	1.086	Collision RiskProcedures Req'd
6,480.0	2,913.2	2,913.2	2,913.2	85.5	2,033.7	-91.39	-1,056.4	-1,607.8	2,265.0	202.3	2,062.71	1.098	Collision RiskProcedures Req'd
6,500.0	2,913.3	2,913.3	2,913.3	86.0	2,033.8	-91.40	-1,056.4	-1,607.8	2,284.5	221.8	2,062.75	1.108	Collision RiskProcedures Req'd
6,505.0	2,913.3	2,913.3	2,913.3	86.1	2,033.8	-91.41	-1,056.4	-1,607.8	2,289.4	226.6	2,062.76	1.110	Collision RiskProcedures Req'd
6,530.0	2,913.4	2,913.4	2,913.4	86.7	2,033.9	-91.42	-1,056.4	-1,607.8	2,313.8	251.0	2,062.81	1.122	Collision RiskProcedures Req'd
6,555.0	2,913.6	2,913.6	2,913.6	87.3	2,034.0	-91.44	-1,056.4	-1,607.8	2,338.1	275.3	2,062.86	1.133	Collision RiskProcedures Req'd
6,580.0	2,913.7	2,913.7	2,913.7	87.9	2,034.1	-91.46	-1,056.4	-1,607.8	2,362.6	299.6	2,062.91	1.145	Collision RiskProcedures Req'd
6,600.0	2,913.8	2,913.8	2,913.8	88.4	2,034.2	-91.47	-1,056.4	-1,607.8	2,382.1	319.1	2,062.95	1.155	Collision RiskProcedures Req'd
6,605.0	2,913.9	2,913.9	2,913.9	88.5	2,034.2	-91.47	-1,056.4	-1,607.8	2,387.0	324.0	2,062.96	1.157	Collision RiskProcedures Req'd
6,630.0	2,914.0	2,914.0	2,914.0	89.1	2,034.3	-91.49	-1,056.4	-1,607.8	2,411.4	348.4	2,063.01	1.169	Collision RiskProcedures Req'd
6,655.0	2,914.1	2,914.1	2,914.1	89.7	2,034.4	-91.50	-1,056.4	-1,607.8	2,435.8	372.8	2,063.07	1.181	Collision RiskProcedures Req'd
6,680.0	2,914.3	2,914.3	2,914.3	90.3	2,034.5	-91.52	-1,056.4	-1,607.8	2,460.3	397.2	2,063.12	1.193	Collision RiskProcedures Req'd
6,700.0	2,914.4	2,914.4	2,914.4	90.8	2,034.6	-91.53	-1,056.4	-1,607.8	2,479.8	416.7	2,063.17	1.202	Collision RiskProcedures Req'd
6,705.0	2,914.4	2,914.4	2,914.4	90.9	2,034.6	-91.53	-1,056.4	-1,607.8	2,484.7	421.6	2,063.18	1.204	Collision RiskProcedures Req'd
6,730.0	2,914.6	2,914.6	2,914.6	91.5	2,034.7	-91.55	-1,056.4	-1,607.8	2,509.2	446.0	2,063.23	1.216	Collision RiskProcedures Req'd
6,755.0	2,914.7	2,914.7	2,914.7	92.1	2,034.8	-91.57	-1,056.4	-1,607.8	2,533.7	470.4	2,063.29	1.228	Collision RiskProcedures Req'd
6,780.0	2,914.8	2,914.8	2,914.8	92.7	2,034.9	-91.58	-1,056.4	-1,607.8	2,558.2	494.8	2,063.35	1.240	Collision RiskProcedures Req'd
6,805.0	2,915.0	2,915.0	2,915.0	93.3	2,035.0	-91.60	-1,056.4	-1,607.8	2,582.7	519.3	2,063.41	1.252	Collision RiskProcedures Req'd
6,808.4	2,915.0	2,915.0	2,915.0	93.4	2,035.0	-91.60	-1,056.4	-1,607.8	2,586.0	522.6	2,063.42	1.253	Collision RiskProcedures Req'd

Halliburton
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004E - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program: 7874-3_Blind												Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
3,080.0	2,800.6	2,796.6	2,796.6	14.8	1,954.7	-41.16	-941.1	-644.6	491.5	-1,476.3	1,967.75	0.250	Collision RiskProcedures Req'd
3,100.0	2,809.0	2,805.0	2,805.0	15.0	1,960.5	-42.96	-941.1	-644.6	474.5	-1,499.8	1,974.27	0.240	Collision RiskProcedures Req'd
3,105.0	2,811.1	2,807.1	2,807.1	15.1	1,962.0	-50.33	-941.1	-644.6	470.3	-1,505.4	1,975.75	0.238	Collision RiskProcedures Req'd
3,130.0	2,821.8	2,817.8	2,817.8	15.2	1,969.5	-75.37	-941.1	-644.6	453.9	-1,529.5	1,983.38	0.229	Collision RiskProcedures Req'd
3,139.6	2,825.0	2,821.0	2,821.0	15.3	1,971.7	-81.28	-941.1	-644.6	440.8	-1,544.8	1,985.58	0.222	Collision RiskProcedures Req'd
3,150.0	2,829.0	2,825.0	2,825.0	15.4	1,974.5	-82.02	-941.1	-644.6	437.4	-1,551.0	1,988.48	0.220	Collision RiskProcedures Req'd
3,155.0	2,830.9	2,826.9	2,826.9	15.4	1,975.8	-82.36	-941.1	-644.6	435.9	-1,554.0	1,989.88	0.219	Collision RiskProcedures Req'd
3,180.0	2,840.1	2,836.1	2,836.1	15.6	1,982.2	-84.02	-941.1	-644.6	428.7	-1,568.0	1,996.61	0.215	Collision RiskProcedures Req'd
3,200.0	2,846.9	2,842.9	2,842.9	15.7	1,987.0	-85.24	-941.1	-644.6	423.7	-1,578.0	2,001.69	0.212	Collision RiskProcedures Req'd
3,205.0	2,848.5	2,844.5	2,844.5	15.7	1,988.1	-85.53	-941.1	-644.6	422.5	-1,580.4	2,002.93	0.211	Collision RiskProcedures Req'd
3,230.0	2,856.3	2,852.3	2,852.3	15.9	1,993.6	-86.89	-941.1	-644.6	417.6	-1,591.2	2,008.84	0.208	Collision RiskProcedures Req'd
3,250.0	2,862.0	2,858.0	2,858.0	16.1	1,997.6	-87.85	-941.1	-644.6	414.6	-1,598.6	2,013.26	0.206	Collision RiskProcedures Req'd
3,255.0	2,863.4	2,859.4	2,859.4	16.1	1,998.5	-88.08	-941.1	-644.6	414.0	-1,600.3	2,014.32	0.206	Collision RiskProcedures Req'd
3,280.0	2,869.8	2,865.8	2,865.8	16.3	2,003.0	-89.09	-941.1	-644.6	411.7	-1,607.6	2,019.37	0.204	Collision RiskProcedures Req'd
3,300.0	2,874.5	2,870.5	2,870.5	16.5	2,006.3	-89.78	-941.1	-644.6	410.9	-1,612.1	2,023.07	0.203	Collision RiskProcedures Req'd
3,305.0	2,875.6	2,871.6	2,871.6	16.5	2,007.0	-89.93	-941.1	-644.6	410.9	-1,613.1	2,023.96	0.203	Collision RiskProcedures Req'd
3,307.4	2,876.1	2,872.1	2,872.1	16.5	2,007.4	-90.00	-941.1	-644.6	410.9	-1,613.5	2,024.37	0.203	Collision RiskProcedures Req'd, CC
3,330.0	2,880.6	2,876.6	2,876.6	16.7	2,010.6	-90.58	-941.1	-644.6	411.5	-1,616.6	2,028.08	0.203	Collision RiskProcedures Req'd, SF
3,350.0	2,884.2	2,880.2	2,880.2	16.9	2,013.0	-90.97	-941.1	-644.6	413.0	-1,618.0	2,031.01	0.203	Collision RiskProcedures Req'd
3,355.0	2,885.0	2,881.0	2,881.0	17.0	2,013.6	-91.05	-941.1	-644.6	413.5	-1,618.2	2,031.70	0.204	Collision RiskProcedures Req'd, ES
3,380.0	2,888.6	2,884.6	2,884.6	17.3	2,016.2	-91.32	-941.1	-644.6	417.1	-1,617.8	2,034.83	0.205	Collision RiskProcedures Req'd
3,400.0	2,891.0	2,887.0	2,887.0	17.5	2,017.9	-91.40	-941.1	-644.6	420.9	-1,616.0	2,036.96	0.207	Collision RiskProcedures Req'd
3,405.0	2,891.6	2,887.6	2,887.6	17.5	2,018.2	-91.40	-941.1	-644.6	422.0	-1,615.4	2,037.44	0.207	Collision RiskProcedures Req'd
3,430.0	2,893.8	2,889.8	2,889.8	17.9	2,019.8	-91.28	-941.1	-644.6	428.4	-1,611.1	2,039.53	0.210	Collision RiskProcedures Req'd
3,450.0	2,895.1	2,891.1	2,891.1	18.1	2,020.7	-91.05	-941.1	-644.6	434.5	-1,606.3	2,040.81	0.213	Collision RiskProcedures Req'd
3,455.0	2,895.4	2,891.4	2,891.4	18.2	2,020.9	-90.97	-941.1	-644.6	436.1	-1,604.9	2,041.08	0.214	Collision RiskProcedures Req'd
3,480.0	2,896.2	2,892.2	2,892.2	18.5	2,021.4	-90.45	-941.1	-644.6	445.2	-1,596.9	2,042.10	0.218	Collision RiskProcedures Req'd
3,491.8	2,896.3	2,892.3	2,892.3	18.7	2,021.5	-90.14	-941.1	-644.6	449.8	-1,592.6	2,042.39	0.220	Collision RiskProcedures Req'd
3,500.0	2,896.4	2,892.4	2,892.4	18.8	2,021.6	-90.15	-941.1	-644.6	453.2	-1,589.3	2,042.55	0.222	Collision RiskProcedures Req'd
3,505.0	2,896.4	2,892.4	2,892.4	18.8	2,021.6	-90.15	-941.1	-644.6	455.4	-1,587.3	2,042.64	0.223	Collision RiskProcedures Req'd
3,530.0	2,896.5	2,892.5	2,892.5	19.2	2,021.7	-90.17	-941.1	-644.6	466.7	-1,576.4	2,043.10	0.228	Collision RiskProcedures Req'd
3,555.0	2,896.7	2,892.7	2,892.7	19.6	2,021.8	-90.19	-941.1	-644.6	479.1	-1,564.4	2,043.51	0.234	Collision RiskProcedures Req'd
3,580.0	2,896.8	2,892.8	2,892.8	20.0	2,021.9	-90.21	-941.1	-644.6	492.4	-1,551.5	2,043.88	0.241	Collision RiskProcedures Req'd
3,600.0	2,896.9	2,892.9	2,892.9	20.3	2,022.0	-90.23	-941.1	-644.6	503.7	-1,540.4	2,044.14	0.246	Collision RiskProcedures Req'd
3,605.0	2,897.0	2,893.0	2,893.0	20.4	2,022.0	-90.23	-941.1	-644.6	506.6	-1,537.6	2,044.20	0.248	Collision RiskProcedures Req'd
3,630.0	2,897.1	2,893.1	2,893.1	20.8	2,022.1	-90.25	-941.1	-644.6	521.7	-1,522.9	2,044.51	0.255	Collision RiskProcedures Req'd
3,655.0	2,897.3	2,893.3	2,893.3	21.2	2,022.2	-90.27	-941.1	-644.6	537.4	-1,507.3	2,044.77	0.263	Collision RiskProcedures Req'd
3,680.0	2,897.4	2,893.4	2,893.4	21.7	2,022.3	-90.29	-941.1	-644.6	553.9	-1,491.1	2,045.01	0.271	Collision RiskProcedures Req'd
3,700.0	2,897.5	2,893.5	2,893.5	22.0	2,022.4	-90.31	-941.1	-644.6	567.5	-1,477.7	2,045.19	0.277	Collision RiskProcedures Req'd
3,705.0	2,897.5	2,893.5	2,893.5	22.1	2,022.4	-90.31	-941.1	-644.6	570.9	-1,474.3	2,045.23	0.279	Collision RiskProcedures Req'd
3,730.0	2,897.7	2,893.7	2,893.7	22.6	2,022.5	-90.33	-941.1	-644.6	588.6	-1,456.8	2,045.43	0.288	Collision RiskProcedures Req'd
3,755.0	2,897.8	2,893.8	2,893.8	23.0	2,022.6	-90.35	-941.1	-644.6	606.7	-1,438.9	2,045.61	0.297	Collision RiskProcedures Req'd
3,780.0	2,898.0	2,894.0	2,894.0	23.5	2,022.7	-90.37	-941.1	-644.6	625.4	-1,420.4	2,045.77	0.306	Collision RiskProcedures Req'd
3,800.0	2,898.1	2,894.1	2,894.1	23.9	2,022.8	-90.39	-941.1	-644.6	640.6	-1,405.3	2,045.89	0.313	Collision RiskProcedures Req'd
3,805.0	2,898.1	2,894.1	2,894.1	24.0	2,022.8	-90.39	-941.1	-644.6	644.4	-1,401.5	2,045.92	0.315	Collision RiskProcedures Req'd
3,830.0	2,898.2	2,894.2	2,894.2	24.4	2,022.9	-90.41	-941.1	-644.6	663.9	-1,382.2	2,046.06	0.324	Collision RiskProcedures Req'd
3,855.0	2,898.4	2,894.4	2,894.4	24.9	2,023.0	-90.43	-941.1	-644.6	683.7	-1,362.5	2,046.19	0.334	Collision RiskProcedures Req'd
3,880.0	2,898.5	2,894.5	2,894.5	25.4	2,023.1	-90.45	-941.1	-644.6	703.8	-1,342.5	2,046.31	0.344	Collision RiskProcedures Req'd
3,900.0	2,898.6	2,894.6	2,894.6	25.8	2,023.2	-90.46	-941.1	-644.6	720.2	-1,326.2	2,046.40	0.352	Collision RiskProcedures Req'd
3,905.0	2,898.7	2,894.7	2,894.7	25.9	2,023.2	-90.47	-941.1	-644.6	724.3	-1,322.1	2,046.42	0.354	Collision RiskProcedures Req'd
3,930.0	2,898.8	2,894.8	2,894.8	26.4	2,023.3	-90.49	-941.1	-644.6	745.0	-1,301.5	2,046.53	0.364	Collision RiskProcedures Req'd
3,955.0	2,898.9	2,894.9	2,894.9	26.9	2,023.4	-90.51	-941.1	-644.6	766.0	-1,280.6	2,046.63	0.374	Collision RiskProcedures Req'd

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004E - ST00 - ST00											Offset Site Error:	5.0 usft
Survey Program: 7874-3_Blind											Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
3,980.0	2,899.1	2,895.1	2,895.1	27.4	2,023.5	-90.53	-941.1	-644.6	787.2	-1,259.5	2,046.73	0.385 Collision RiskProcedures Req'd
4,000.0	2,899.2	2,895.2	2,895.2	27.9	2,023.5	-90.54	-941.1	-644.6	804.3	-1,242.5	2,046.81	0.393 Collision RiskProcedures Req'd
4,005.0	2,899.2	2,895.2	2,895.2	28.0	2,023.6	-90.55	-941.1	-644.6	808.6	-1,238.2	2,046.82	0.395 Collision RiskProcedures Req'd
4,030.0	2,899.4	2,895.4	2,895.4	28.5	2,023.7	-90.57	-941.1	-644.6	830.3	-1,216.7	2,046.92	0.406 Collision RiskProcedures Req'd
4,055.0	2,899.5	2,895.5	2,895.5	29.0	2,023.8	-90.59	-941.1	-644.6	852.1	-1,194.9	2,047.00	0.416 Collision RiskProcedures Req'd
4,080.0	2,899.6	2,895.6	2,895.6	29.5	2,023.9	-90.61	-941.1	-644.6	874.1	-1,173.0	2,047.09	0.427 Collision RiskProcedures Req'd
4,100.0	2,899.8	2,895.8	2,895.8	30.0	2,023.9	-90.62	-941.1	-644.6	891.8	-1,155.4	2,047.16	0.436 Collision RiskProcedures Req'd
4,105.0	2,899.8	2,895.8	2,895.8	30.1	2,024.0	-90.63	-941.1	-644.6	896.2	-1,151.0	2,047.17	0.438 Collision RiskProcedures Req'd
4,130.0	2,899.9	2,895.9	2,895.9	30.6	2,024.1	-90.64	-941.1	-644.6	918.5	-1,128.8	2,047.26	0.449 Collision RiskProcedures Req'd
4,155.0	2,900.1	2,896.1	2,896.1	31.2	2,024.2	-90.66	-941.1	-644.6	940.9	-1,106.4	2,047.34	0.460 Collision RiskProcedures Req'd
4,180.0	2,900.2	2,896.2	2,896.2	31.7	2,024.3	-90.68	-941.1	-644.6	963.5	-1,083.9	2,047.42	0.471 Collision RiskProcedures Req'd
4,200.0	2,900.3	2,896.3	2,896.3	32.1	2,024.3	-90.70	-941.1	-644.6	981.6	-1,065.9	2,047.49	0.479 Collision RiskProcedures Req'd
4,205.0	2,900.3	2,896.3	2,896.3	32.2	2,024.4	-90.70	-941.1	-644.6	986.1	-1,061.4	2,047.50	0.482 Collision RiskProcedures Req'd
4,230.0	2,900.5	2,896.5	2,896.5	32.8	2,024.5	-90.72	-941.1	-644.6	1,008.9	-1,038.7	2,047.58	0.493 Collision RiskProcedures Req'd
4,255.0	2,900.6	2,896.6	2,896.6	33.3	2,024.6	-90.74	-941.1	-644.6	1,031.8	-1,015.8	2,047.66	0.504 Collision RiskProcedures Req'd
4,280.0	2,900.8	2,896.8	2,896.8	33.9	2,024.6	-90.76	-941.1	-644.6	1,054.8	-992.9	2,047.74	0.515 Collision RiskProcedures Req'd
4,300.0	2,900.9	2,896.9	2,896.9	34.3	2,024.7	-90.78	-941.1	-644.6	1,073.2	-974.6	2,047.80	0.524 Collision RiskProcedures Req'd
4,305.0	2,900.9	2,896.9	2,896.9	34.4	2,024.7	-90.78	-941.1	-644.6	1,077.9	-970.0	2,047.82	0.526 Collision RiskProcedures Req'd
4,330.0	2,901.1	2,897.1	2,897.1	35.0	2,024.8	-90.80	-941.1	-644.6	1,101.0	-946.9	2,047.90	0.538 Collision RiskProcedures Req'd
4,355.0	2,901.2	2,897.2	2,897.2	35.5	2,024.9	-90.82	-941.1	-644.6	1,124.3	-923.7	2,047.98	0.549 Collision RiskProcedures Req'd
4,380.0	2,901.3	2,897.3	2,897.3	36.1	2,025.0	-90.84	-941.1	-644.6	1,147.6	-900.5	2,048.06	0.560 Collision RiskProcedures Req'd
4,400.0	2,901.4	2,897.4	2,897.4	36.6	2,025.1	-90.86	-941.1	-644.6	1,166.3	-881.9	2,048.12	0.569 Collision RiskProcedures Req'd
4,405.0	2,901.5	2,897.5	2,897.5	36.7	2,025.1	-90.86	-941.1	-644.6	1,170.9	-877.2	2,048.14	0.572 Collision RiskProcedures Req'd
4,430.0	2,901.6	2,897.6	2,897.6	37.2	2,025.2	-90.88	-941.1	-644.6	1,194.4	-853.8	2,048.22	0.583 Collision RiskProcedures Req'd
4,455.0	2,901.8	2,897.8	2,897.8	37.8	2,025.3	-90.90	-941.1	-644.6	1,217.9	-830.4	2,048.30	0.595 Collision RiskProcedures Req'd
4,480.0	2,901.9	2,897.9	2,897.9	38.4	2,025.4	-90.92	-941.1	-644.6	1,241.4	-806.9	2,048.38	0.606 Collision RiskProcedures Req'd
4,500.0	2,902.0	2,898.0	2,898.0	38.8	2,025.5	-90.94	-941.1	-644.6	1,260.3	-788.1	2,048.44	0.615 Collision RiskProcedures Req'd
4,505.0	2,902.0	2,898.0	2,898.0	38.9	2,025.5	-90.94	-941.1	-644.6	1,265.1	-783.4	2,048.46	0.618 Collision RiskProcedures Req'd
4,530.0	2,902.2	2,898.2	2,898.2	39.5	2,025.6	-90.96	-941.1	-644.6	1,288.7	-759.8	2,048.54	0.629 Collision RiskProcedures Req'd
4,555.0	2,902.3	2,898.3	2,898.3	40.1	2,025.7	-90.98	-941.1	-644.6	1,312.5	-736.2	2,048.62	0.641 Collision RiskProcedures Req'd
4,580.0	2,902.5	2,898.5	2,898.5	40.6	2,025.8	-91.00	-941.1	-644.6	1,336.2	-712.5	2,048.70	0.652 Collision RiskProcedures Req'd
4,600.0	2,902.6	2,898.6	2,898.6	41.1	2,025.9	-91.01	-941.1	-644.6	1,355.3	-693.5	2,048.77	0.662 Collision RiskProcedures Req'd
4,605.0	2,902.6	2,898.6	2,898.6	41.2	2,025.9	-91.02	-941.1	-644.6	1,360.0	-688.8	2,048.78	0.664 Collision RiskProcedures Req'd
4,630.0	2,902.7	2,898.7	2,898.7	41.8	2,026.0	-91.04	-941.1	-644.6	1,383.9	-665.0	2,048.87	0.675 Collision RiskProcedures Req'd
4,655.0	2,902.9	2,898.9	2,898.9	42.3	2,026.1	-91.06	-941.1	-644.6	1,407.8	-641.2	2,048.95	0.687 Collision RiskProcedures Req'd
4,680.0	2,903.0	2,899.0	2,899.0	42.9	2,026.2	-91.08	-941.1	-644.6	1,431.7	-617.3	2,049.03	0.699 Collision RiskProcedures Req'd
4,700.0	2,903.1	2,899.1	2,899.1	43.4	2,026.3	-91.09	-941.1	-644.6	1,450.9	-598.2	2,049.10	0.708 Collision RiskProcedures Req'd
4,705.0	2,903.2	2,899.2	2,899.2	43.5	2,026.3	-91.10	-941.1	-644.6	1,455.7	-593.4	2,049.12	0.710 Collision RiskProcedures Req'd
4,730.0	2,903.3	2,899.3	2,899.3	44.1	2,026.4	-91.12	-941.1	-644.6	1,479.7	-569.5	2,049.20	0.722 Collision RiskProcedures Req'd
4,755.0	2,903.4	2,899.4	2,899.4	44.6	2,026.5	-91.14	-941.1	-644.6	1,503.7	-545.6	2,049.28	0.734 Collision RiskProcedures Req'd
4,780.0	2,903.6	2,899.6	2,899.6	45.2	2,026.6	-91.16	-941.1	-644.6	1,527.8	-521.6	2,049.37	0.745 Collision RiskProcedures Req'd
4,800.0	2,903.7	2,899.7	2,899.7	45.7	2,026.7	-91.17	-941.1	-644.6	1,547.0	-502.4	2,049.44	0.755 Collision RiskProcedures Req'd
4,805.0	2,903.7	2,899.7	2,899.7	45.8	2,026.7	-91.17	-941.1	-644.6	1,551.9	-497.6	2,049.45	0.757 Collision RiskProcedures Req'd
4,830.0	2,903.9	2,899.9	2,899.9	46.4	2,026.8	-91.19	-941.1	-644.6	1,576.0	-473.6	2,049.54	0.769 Collision RiskProcedures Req'd
4,855.0	2,904.0	2,900.0	2,900.0	47.0	2,026.9	-91.21	-941.1	-644.6	1,600.1	-449.5	2,049.63	0.781 Collision RiskProcedures Req'd
4,880.0	2,904.1	2,900.1	2,900.1	47.5	2,027.0	-91.23	-941.1	-644.6	1,624.3	-425.4	2,049.71	0.792 Collision RiskProcedures Req'd
4,900.0	2,904.3	2,900.3	2,900.3	48.0	2,027.1	-91.25	-941.1	-644.6	1,643.7	-406.1	2,049.78	0.802 Collision RiskProcedures Req'd
4,905.0	2,904.3	2,900.3	2,900.3	48.1	2,027.1	-91.25	-941.1	-644.6	1,648.5	-401.3	2,049.80	0.804 Collision RiskProcedures Req'd
4,930.0	2,904.4	2,900.4	2,900.4	48.7	2,027.2	-91.27	-941.1	-644.6	1,672.7	-377.2	2,049.89	0.816 Collision RiskProcedures Req'd
4,955.0	2,904.6	2,900.6	2,900.6	49.3	2,027.3	-91.29	-941.1	-644.6	1,697.0	-353.0	2,049.97	0.828 Collision RiskProcedures Req'd
4,980.0	2,904.7	2,900.7	2,900.7	49.9	2,027.4	-91.31	-941.1	-644.6	1,721.2	-328.8	2,050.06	0.840 Collision RiskProcedures Req'd
5,000.0	2,904.8	2,900.8	2,900.8	50.3	2,027.5	-91.33	-941.1	-644.6	1,740.7	-309.5	2,050.13	0.849 Collision RiskProcedures Req'd

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004E - ST00 - ST00													Offset Site Error: 5.0 usft
Survey Program: 7874-3_Blind													Offset Well Error: 1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,005.0	2,904.8	2,900.8	2,900.8	50.5	2,027.5	-91.33	-941.1	-644.6	1,745.5	-304.6	2,050.15	0.851	Collision RiskProcedures Req'd
5,030.0	2,905.0	2,901.0	2,901.0	51.0	2,027.6	-91.35	-941.1	-644.6	1,769.8	-280.4	2,050.24	0.863	Collision RiskProcedures Req'd
5,055.0	2,905.1	2,901.1	2,901.1	51.6	2,027.7	-91.37	-941.1	-644.6	1,794.2	-256.2	2,050.33	0.875	Collision RiskProcedures Req'd
5,080.0	2,905.3	2,901.3	2,901.3	52.2	2,027.8	-91.39	-941.1	-644.6	1,818.5	-231.9	2,050.42	0.887	Collision RiskProcedures Req'd
5,100.0	2,905.4	2,901.4	2,901.4	52.7	2,027.9	-91.41	-941.1	-644.6	1,838.0	-212.5	2,050.49	0.896	Collision RiskProcedures Req'd
5,105.0	2,905.4	2,901.4	2,901.4	52.8	2,027.9	-91.41	-941.1	-644.6	1,842.9	-207.6	2,050.51	0.899	Collision RiskProcedures Req'd
5,130.0	2,905.6	2,901.6	2,901.6	53.4	2,028.0	-91.43	-941.1	-644.6	1,867.2	-183.3	2,050.60	0.911	Collision RiskProcedures Req'd
5,155.0	2,905.7	2,901.7	2,901.7	54.0	2,028.1	-91.45	-941.1	-644.6	1,891.6	-159.0	2,050.69	0.922	Collision RiskProcedures Req'd
5,180.0	2,905.8	2,901.8	2,901.8	54.6	2,028.2	-91.47	-941.1	-644.6	1,916.1	-134.7	2,050.78	0.934	Collision RiskProcedures Req'd
5,200.0	2,905.9	2,901.9	2,901.9	55.0	2,028.3	-91.48	-941.1	-644.6	1,935.6	-115.3	2,050.85	0.944	Collision RiskProcedures Req'd
5,205.0	2,906.0	2,902.0	2,902.0	55.2	2,028.3	-91.49	-941.1	-644.6	1,940.5	-110.4	2,050.87	0.946	Collision RiskProcedures Req'd
5,230.0	2,906.1	2,902.1	2,902.1	55.7	2,028.4	-91.51	-941.1	-644.6	1,964.9	-86.0	2,050.96	0.958	Collision RiskProcedures Req'd
5,255.0	2,906.3	2,902.3	2,902.3	56.3	2,028.5	-91.53	-941.1	-644.6	1,989.4	-61.7	2,051.05	0.970	Collision RiskProcedures Req'd
5,280.0	2,906.4	2,902.4	2,902.4	56.9	2,028.6	-91.55	-941.1	-644.6	2,013.8	-37.3	2,051.15	0.982	Collision RiskProcedures Req'd
5,300.0	2,906.5	2,902.5	2,902.5	57.4	2,028.7	-91.56	-941.1	-644.6	2,033.4	-17.8	2,051.22	0.991	Collision RiskProcedures Req'd
5,305.0	2,906.5	2,902.5	2,902.5	57.5	2,028.7	-91.57	-941.1	-644.6	2,038.3	-12.9	2,051.24	0.994	Collision RiskProcedures Req'd
5,330.0	2,906.7	2,902.7	2,902.7	58.1	2,028.8	-91.59	-941.1	-644.6	2,062.8	11.5	2,051.33	1.006	Collision RiskProcedures Req'd
5,355.0	2,906.8	2,902.8	2,902.8	58.7	2,028.9	-91.61	-941.1	-644.6	2,087.3	35.9	2,051.42	1.017	Collision RiskProcedures Req'd
5,380.0	2,907.0	2,903.0	2,903.0	59.3	2,029.0	-91.63	-941.1	-644.6	2,111.8	60.3	2,051.52	1.029	Collision RiskProcedures Req'd
5,400.0	2,907.1	2,903.1	2,903.1	59.8	2,029.1	-91.64	-941.1	-644.6	2,131.5	79.9	2,051.59	1.039	Collision RiskProcedures Req'd
5,405.0	2,907.1	2,903.1	2,903.1	59.9	2,029.1	-91.65	-941.1	-644.6	2,136.4	84.8	2,051.61	1.041	Collision RiskProcedures Req'd
5,430.0	2,907.2	2,903.2	2,903.2	60.5	2,029.2	-91.67	-941.1	-644.6	2,160.9	109.2	2,051.70	1.053	Collision RiskProcedures Req'd
5,455.0	2,907.4	2,903.4	2,903.4	61.1	2,029.3	-91.68	-941.1	-644.6	2,185.5	133.7	2,051.80	1.065	Collision RiskProcedures Req'd
5,480.0	2,907.5	2,903.5	2,903.5	61.6	2,029.4	-91.70	-941.1	-644.6	2,210.0	158.1	2,051.89	1.077	Collision RiskProcedures Req'd
5,500.0	2,907.6	2,903.6	2,903.6	62.1	2,029.4	-91.72	-941.1	-644.6	2,229.7	177.7	2,051.97	1.087	Collision RiskProcedures Req'd
5,505.0	2,907.7	2,903.7	2,903.7	62.2	2,029.5	-91.72	-941.1	-644.6	2,234.6	182.6	2,051.99	1.089	Collision RiskProcedures Req'd
5,530.0	2,907.8	2,903.8	2,903.8	62.8	2,029.6	-91.74	-941.1	-644.6	2,259.2	207.1	2,052.08	1.101	Collision RiskProcedures Req'd
5,555.0	2,907.9	2,903.9	2,903.9	63.4	2,029.7	-91.76	-941.1	-644.6	2,283.7	231.6	2,052.18	1.113	Collision RiskProcedures Req'd
5,580.0	2,908.1	2,904.1	2,904.1	64.0	2,029.8	-91.78	-941.1	-644.6	2,308.3	256.1	2,052.27	1.125	Collision RiskProcedures Req'd
5,600.0	2,908.2	2,904.2	2,904.2	64.5	2,029.8	-91.80	-941.1	-644.6	2,328.0	275.7	2,052.35	1.134	Collision RiskProcedures Req'd
5,605.0	2,908.2	2,904.2	2,904.2	64.6	2,029.9	-91.80	-941.1	-644.6	2,332.9	280.6	2,052.37	1.137	Collision RiskProcedures Req'd
5,630.0	2,908.4	2,904.4	2,904.4	65.2	2,030.0	-91.82	-941.1	-644.6	2,357.6	305.1	2,052.46	1.149	Collision RiskProcedures Req'd
5,655.0	2,908.5	2,904.5	2,904.5	65.8	2,030.1	-91.84	-941.1	-644.6	2,382.2	329.6	2,052.56	1.161	Collision RiskProcedures Req'd
5,680.0	2,908.6	2,904.6	2,904.6	66.4	2,030.2	-91.86	-941.1	-644.6	2,406.8	354.2	2,052.65	1.173	Collision RiskProcedures Req'd
5,700.0	2,908.8	2,904.8	2,904.8	66.9	2,030.2	-91.88	-941.1	-644.6	2,426.5	373.8	2,052.73	1.182	Collision RiskProcedures Req'd
5,705.0	2,908.8	2,904.8	2,904.8	67.0	2,030.3	-91.88	-941.1	-644.6	2,431.4	378.7	2,052.75	1.184	Collision RiskProcedures Req'd
5,730.0	2,908.9	2,904.9	2,904.9	67.6	2,030.4	-91.90	-941.1	-644.6	2,456.1	403.2	2,052.85	1.196	Collision RiskProcedures Req'd
5,755.0	2,909.1	2,905.1	2,905.1	68.2	2,030.5	-91.92	-941.1	-644.6	2,480.7	427.8	2,052.94	1.208	Collision RiskProcedures Req'd
5,780.0	2,909.2	2,905.2	2,905.2	68.8	2,030.5	-91.94	-941.1	-644.6	2,505.4	452.4	2,053.04	1.220	Collision RiskProcedures Req'd
5,800.0	2,909.3	2,905.3	2,905.3	69.3	2,030.6	-91.96	-941.1	-644.6	2,525.1	472.0	2,053.12	1.230	Collision RiskProcedures Req'd
5,805.0	2,909.4	2,905.4	2,905.4	69.4	2,030.6	-91.96	-941.1	-644.6	2,530.1	476.9	2,053.14	1.232	Collision RiskProcedures Req'd
5,830.0	2,909.5	2,905.5	2,905.5	70.0	2,030.7	-91.98	-941.1	-644.6	2,554.7	501.5	2,053.23	1.244	Collision RiskProcedures Req'd
5,855.0	2,909.6	2,905.6	2,905.6	70.6	2,030.8	-92.00	-941.1	-644.6	2,579.4	526.1	2,053.33	1.256	Collision RiskProcedures Req'd
5,880.0	2,909.8	2,905.8	2,905.8	71.2	2,030.9	-92.02	-941.1	-644.6	2,604.1	550.7	2,053.43	1.268	Collision RiskProcedures Req'd
5,900.0	2,909.9	2,905.9	2,905.9	71.6	2,031.0	-92.03	-941.1	-644.6	2,623.8	570.3	2,053.51	1.278	Collision RiskProcedures Req'd
5,905.0	2,909.9	2,905.9	2,905.9	71.8	2,031.0	-92.04	-941.1	-644.6	2,628.8	575.3	2,053.53	1.280	Collision RiskProcedures Req'd
5,930.0	2,910.1	2,906.1	2,906.1	72.4	2,031.1	-92.06	-941.1	-644.6	2,653.5	599.9	2,053.63	1.292	Collision RiskProcedures Req'd
5,955.0	2,910.2	2,906.2	2,906.2	73.0	2,031.2	-92.08	-941.1	-644.6	2,678.2	624.5	2,053.72	1.304	Collision RiskProcedures Req'd
5,980.0	2,910.3	2,906.3	2,906.3	73.6	2,031.3	-92.10	-941.1	-644.6	2,702.9	649.1	2,053.82	1.316	Collision RiskProcedures Req'd
6,000.0	2,910.4	2,906.4	2,906.4	74.0	2,031.4	-92.11	-941.1	-644.6	2,722.7	668.8	2,053.90	1.326	Collision RiskProcedures Req'd
6,005.0	2,910.5	2,906.5	2,906.5	74.1	2,031.4	-92.12	-941.1	-644.6	2,727.6	673.7	2,053.92	1.328	Collision RiskProcedures Req'd
6,030.0	2,910.6	2,906.6	2,906.6	74.7	2,031.5	-92.14	-941.1	-644.6	2,752.3	698.3	2,054.02	1.340	Collision RiskProcedures Req'd

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 004E - ST00 - ST00												Offset Site Error:	5.0 usft
Survey Program: 7874-3_Blind												Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,055.0	2,910.8	2,906.8	2,906.8	75.3	2,031.6	-92.16	-941.1	-644.6	2,777.0	722.9	2,054.12	1.352	Collision RiskProcedures Req'd
6,080.0	2,910.9	2,906.9	2,906.9	75.9	2,031.7	-92.17	-941.1	-644.6	2,801.8	747.5	2,054.22	1.364	Collision RiskProcedures Req'd
6,100.0	2,911.0	2,907.0	2,907.0	76.4	2,031.8	-92.19	-941.1	-644.6	2,821.6	767.3	2,054.30	1.373	Collision RiskProcedures Req'd
6,105.0	2,911.0	2,907.0	2,907.0	76.5	2,031.8	-92.19	-941.1	-644.6	2,826.5	772.2	2,054.32	1.376	Collision RiskProcedures Req'd
6,130.0	2,911.2	2,907.2	2,907.2	77.1	2,031.9	-92.21	-941.1	-644.6	2,851.2	796.8	2,054.42	1.388	Collision RiskProcedures Req'd
6,155.0	2,911.3	2,907.3	2,907.3	77.7	2,032.0	-92.23	-941.1	-644.6	2,876.0	821.5	2,054.52	1.400	Collision RiskProcedures Req'd
6,180.0	2,911.5	2,907.5	2,907.5	78.3	2,032.1	-92.25	-941.1	-644.6	2,900.7	846.1	2,054.62	1.412	Collision RiskProcedures Req'd
6,200.0	2,911.6	2,907.6	2,907.6	78.8	2,032.2	-92.27	-941.1	-644.6	2,920.5	865.8	2,054.69	1.421	Collision RiskProcedures Req'd
6,205.0	2,911.6	2,907.6	2,907.6	78.9	2,032.2	-92.27	-941.1	-644.6	2,925.5	870.8	2,054.71	1.424	Collision RiskProcedures Req'd
6,230.0	2,911.7	2,907.7	2,907.7	79.5	2,032.3	-92.29	-941.1	-644.6	2,950.2	895.4	2,054.82	1.436	Collision RiskProcedures Req'd
6,255.0	2,911.9	2,907.9	2,907.9	80.1	2,032.4	-92.31	-941.1	-644.6	2,975.0	920.1	2,054.92	1.448	Collision RiskProcedures Req'd
6,280.0	2,912.0	2,908.0	2,908.0	80.7	2,032.5	-92.33	-941.1	-644.6	2,999.7	944.7	2,055.02	1.460	Collision RiskProcedures Req'd

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Lateral No.1 - WP3													Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM, 3130-3_MWD+HRGM													Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
3,082.2	2,801.6	3,082.2	2,801.6	0.4	3.2	-180.00	-489.2	-456.2	0.0	-2.3	2.27	0.001	Collision Risk	Procedures Req'd, CC, S
3,100.0	2,809.0	3,100.0	2,809.1	4.0	4.0	180.00	-501.0	-467.2	0.1	-2.2	2.35	0.045	Collision Risk	Procedures Req'd
3,105.0	2,811.1	3,105.0	2,811.2	4.0	4.0	-121.11	-504.3	-470.3	0.3	-2.5	2.75	0.094	Collision Risk	Procedures Req'd, ES
3,130.0	2,821.8	3,128.5	2,821.1	3.9	4.0	-100.10	-519.9	-484.8	8.0	4.0	4.01	2.006		
3,139.6	2,825.0	3,139.6	2,825.8	3.8	4.0	161.32	-527.3	-491.7	0.9	-2.1	3.02	0.301	Collision Risk	Procedures Req'd
3,140.1	2,825.2	3,140.0	2,826.0	3.8	4.0	176.04	-527.5	-491.9	0.9	-2.2	3.11	0.293	Collision Risk	Procedures Req'd
3,150.0	2,829.0	3,147.4	2,829.1	3.8	4.0	-111.68	-532.4	-496.6	6.8	1.6	5.19	1.308	Collision Risk	Procedures Req'd
3,155.0	2,830.9	3,151.2	2,830.6	3.8	4.0	-108.34	-534.9	-498.9	10.1	4.8	5.30	1.905	Collision Risk	Procedures Req'd
3,180.0	2,840.1	3,170.1	2,838.3	3.9	4.0	-103.87	-547.3	-510.9	26.6	20.9	5.77	4.617		
3,200.0	2,846.9	3,185.3	2,844.5	4.0	4.1	-102.82	-557.2	-520.7	39.8	33.7	6.16	6.472		
3,205.0	2,848.5	3,189.1	2,846.0	4.0	4.1	-102.65	-559.7	-523.1	43.1	36.9	6.26	6.896		
3,230.0	2,856.3	3,207.7	2,853.1	4.2	4.1	-101.73	-571.9	-535.3	59.7	52.9	6.84	8.737		
3,250.0	2,862.0	3,222.5	2,858.4	4.5	4.1	-100.93	-581.7	-545.0	73.1	65.8	7.34	9.964		
3,255.0	2,863.4	3,226.2	2,859.7	4.5	4.1	-100.72	-584.2	-547.4	76.4	69.0	7.46	10.249		
3,280.0	2,869.8	3,244.5	2,865.7	4.9	4.2	-99.67	-596.5	-559.6	93.3	85.2	8.06	11.574		
3,300.0	2,874.5	3,259.1	2,870.1	5.2	4.2	-98.81	-606.3	-569.4	106.9	98.3	8.60	12.430		
3,305.0	2,875.6	3,262.7	2,871.1	5.3	4.2	-98.59	-608.8	-571.9	110.3	101.5	8.74	12.619		
3,330.0	2,880.6	3,280.8	2,876.1	5.8	4.2	-97.49	-621.1	-584.1	127.3	117.9	9.42	13.520		
3,350.0	2,884.2	3,295.3	2,879.7	6.2	4.3	-96.60	-631.1	-594.0	141.1	131.1	9.95	14.182		
3,355.0	2,885.0	3,298.8	2,880.5	6.3	4.3	-96.38	-633.5	-596.4	144.5	134.4	10.08	14.340		
3,380.0	2,888.6	3,316.8	2,884.5	6.8	4.3	-95.25	-646.0	-608.7	161.8	150.9	10.83	14.942		
3,400.0	2,891.0	3,331.1	2,887.2	7.3	4.3	-94.35	-655.9	-618.6	175.6	164.2	11.40	15.410		
3,405.0	2,891.6	3,334.7	2,887.9	7.4	4.3	-94.12	-658.4	-621.1	179.1	167.6	11.53	15.526		
3,430.0	2,893.8	3,352.5	2,890.8	7.9	4.3	-92.98	-670.9	-633.5	196.5	184.2	12.23	16.067		
3,450.0	2,895.1	3,366.7	2,892.8	8.4	4.4	-92.07	-680.9	-643.4	210.4	197.6	12.80	16.432		
3,455.0	2,895.4	3,370.3	2,893.2	8.5	4.4	-91.84	-683.4	-645.9	213.9	201.0	12.93	16.547		
3,480.0	2,896.2	3,388.1	2,895.1	9.1	4.7	-90.70	-696.0	-658.3	231.4	217.7	13.61	16.999		
3,491.8	2,896.3	3,396.4	2,895.9	9.3	4.9	-90.16	-701.9	-664.2	239.6	225.6	14.00	17.118		
3,500.0	2,896.4	3,402.3	2,896.3	9.5	5.0	-90.30	-706.0	-668.3	245.3	231.1	14.26	17.200		
3,505.0	2,896.4	3,405.9	2,896.6	9.6	5.1	-90.37	-708.6	-670.8	248.8	234.4	14.41	17.270		
3,530.0	2,896.5	3,423.7	2,897.5	10.2	5.4	-90.61	-721.2	-683.4	266.3	251.2	15.15	17.581		
3,555.0	2,896.7	3,441.6	2,897.9	10.8	5.7	-90.67	-733.9	-695.9	283.8	267.9	15.90	17.843		
3,580.0	2,896.8	3,459.4	2,898.1	11.4	6.0	-90.65	-746.6	-708.5	301.3	284.6	16.65	18.091		
3,600.0	2,896.9	3,473.7	2,898.2	11.9	6.3	-90.63	-756.8	-718.6	315.3	298.0	17.26	18.271		
3,605.0	2,897.0	3,477.3	2,898.2	12.0	6.4	-90.63	-759.3	-721.1	318.8	301.4	17.41	18.313		
3,630.0	2,897.1	3,495.2	2,898.3	12.6	6.7	-90.61	-772.0	-733.7	336.2	318.1	18.17	18.510		
3,655.0	2,897.3	3,513.0	2,898.5	13.2	7.0	-90.59	-784.7	-746.3	353.7	334.8	18.92	18.693		
3,680.0	2,897.4	3,530.9	2,898.6	13.8	7.4	-90.57	-797.4	-758.8	371.2	351.5	19.68	18.862		
3,700.0	2,897.5	3,545.2	2,898.7	14.2	7.6	-90.56	-807.5	-768.9	385.2	364.9	20.29	18.986		
3,705.0	2,897.5	3,548.8	2,898.7	14.4	7.7	-90.56	-810.1	-771.4	388.7	368.3	20.44	19.016		
3,730.0	2,897.7	3,566.7	2,898.8	15.0	8.0	-90.55	-822.8	-784.0	406.2	385.0	21.20	19.157		
3,755.0	2,897.8	3,584.5	2,899.0	15.6	8.4	-90.54	-835.5	-796.6	423.7	401.7	21.97	19.286		
3,780.0	2,898.0	3,602.4	2,899.1	16.2	8.7	-90.52	-848.2	-809.1	441.1	418.4	22.73	19.405		
3,800.0	2,898.1	3,616.7	2,899.2	16.6	9.0	-90.52	-858.3	-819.2	455.1	431.8	23.34	19.497		
3,805.0	2,898.1	3,620.3	2,899.2	16.8	9.1	-90.51	-860.9	-821.7	458.6	435.1	23.50	19.519		
3,830.0	2,898.2	3,638.1	2,899.4	17.4	9.4	-90.50	-873.6	-834.3	476.1	451.8	24.26	19.625		
3,855.0	2,898.4	3,656.0	2,899.5	18.0	9.7	-90.50	-886.2	-846.9	493.6	468.6	25.02	19.724		
3,880.0	2,898.5	3,673.9	2,899.6	18.6	10.1	-90.49	-898.9	-859.4	511.1	485.3	25.79	19.817		
3,900.0	2,898.6	3,688.2	2,899.7	19.0	10.3	-90.48	-909.1	-869.5	525.1	498.7	26.40	19.886		
3,905.0	2,898.7	3,691.7	2,899.7	19.2	10.4	-90.48	-911.6	-872.0	528.6	502.0	26.56	19.903		
3,930.0	2,898.8	3,709.6	2,899.9	19.8	10.7	-90.47	-924.3	-884.6	546.0	518.7	27.32	19.985		
3,955.0	2,898.9	3,727.5	2,900.0	20.4	11.1	-90.47	-937.0	-897.2	563.5	535.4	28.09	20.062		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Lateral No.1 - WP3													Offset Site Error: 5.0 usft
Survey Program: 0-3_MWD+HRGM, 3130-3_MWD+HRGM								Rule Assigned:					Offset Well Error: 1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,980.0	2,899.1	3,745.4	2,900.1	21.0	11.4	-90.46	-949.7	-909.7	581.0	552.2	28.86	20.135	
4,000.0	2,899.2	3,759.7	2,900.2	21.4	11.7	-90.46	-959.9	-919.8	595.0	565.5	29.47	20.191	
4,005.0	2,899.2	3,763.2	2,900.3	21.6	11.7	-90.45	-962.4	-922.3	598.5	568.9	29.62	20.204	
4,030.0	2,899.4	3,781.1	2,900.4	22.2	12.1	-90.45	-975.1	-934.9	616.0	585.6	30.39	20.269	
4,055.0	2,899.5	3,799.0	2,900.5	22.8	12.4	-90.44	-987.8	-947.5	633.5	602.3	31.16	20.331	
4,080.0	2,899.6	3,816.8	2,900.6	23.4	12.7	-90.44	-1,000.5	-960.0	650.9	619.0	31.92	20.390	
4,100.0	2,899.8	3,831.1	2,900.7	23.9	13.0	-90.43	-1,010.7	-970.1	664.9	632.4	32.54	20.435	
4,105.0	2,899.8	3,834.7	2,900.8	24.0	13.1	-90.43	-1,013.2	-972.6	668.4	635.7	32.69	20.446	
4,130.0	2,899.9	3,852.6	2,900.9	24.6	13.4	-90.43	-1,025.9	-985.2	685.9	652.4	33.46	20.499	
4,155.0	2,900.1	3,870.4	2,901.0	25.2	13.8	-90.42	-1,038.6	-997.8	703.4	669.2	34.23	20.550	
4,180.0	2,900.2	3,888.3	2,901.1	25.8	14.1	-90.42	-1,051.3	-1,010.3	720.9	685.9	35.00	20.598	
4,200.0	2,900.3	3,902.6	2,901.3	26.3	14.4	-90.42	-1,061.4	-1,020.4	734.9	699.2	35.61	20.635	
4,205.0	2,900.3	3,906.2	2,901.3	26.4	14.4	-90.42	-1,064.0	-1,022.9	738.4	702.6	35.77	20.645	
4,230.0	2,900.5	3,924.1	2,901.4	27.0	14.8	-90.41	-1,076.7	-1,035.5	755.8	719.3	36.53	20.689	
4,255.0	2,900.6	3,941.9	2,901.5	27.6	15.1	-90.41	-1,089.4	-1,048.1	773.3	736.0	37.30	20.731	
4,280.0	2,900.8	3,959.8	2,901.7	28.2	15.4	-90.41	-1,102.1	-1,060.7	790.8	752.7	38.07	20.772	
4,300.0	2,900.9	3,974.1	2,901.8	28.7	15.7	-90.40	-1,112.2	-1,070.7	804.8	766.1	38.69	20.803	
4,305.0	2,900.9	3,977.7	2,901.8	28.8	15.8	-90.40	-1,114.8	-1,073.2	808.3	769.4	38.84	20.811	
4,330.0	2,901.1	3,995.5	2,901.9	29.4	16.1	-90.40	-1,127.5	-1,085.8	825.8	786.2	39.61	20.848	
4,355.0	2,901.2	4,013.4	2,902.0	30.0	16.4	-90.40	-1,140.1	-1,098.4	843.3	802.9	40.38	20.884	
4,380.0	2,901.3	4,031.3	2,902.2	30.6	16.8	-90.39	-1,152.8	-1,111.0	860.7	819.6	41.15	20.918	
4,400.0	2,901.4	4,045.6	2,902.3	31.1	17.0	-90.39	-1,163.0	-1,121.0	874.7	833.0	41.76	20.945	
4,405.0	2,901.5	4,049.1	2,902.3	31.2	17.1	-90.39	-1,165.5	-1,123.5	878.2	836.3	41.92	20.951	
4,430.0	2,901.6	4,067.0	2,902.4	31.8	17.5	-90.39	-1,178.2	-1,136.1	895.7	853.0	42.69	20.983	
4,455.0	2,901.8	4,084.9	2,902.6	32.4	17.8	-90.39	-1,190.9	-1,148.7	913.2	869.7	43.46	21.014	
4,480.0	2,901.9	4,102.8	2,902.7	33.0	18.1	-90.38	-1,203.6	-1,161.3	930.7	886.4	44.23	21.044	
4,500.0	2,902.0	4,117.1	2,902.8	33.5	18.4	-90.38	-1,213.8	-1,171.3	944.7	899.8	44.84	21.067	
4,505.0	2,902.0	4,120.6	2,902.8	33.6	18.5	-90.38	-1,216.3	-1,173.8	948.2	903.2	45.00	21.072	
4,530.0	2,902.2	4,138.5	2,902.9	34.3	18.8	-90.38	-1,229.0	-1,186.4	965.6	919.9	45.76	21.100	
4,555.0	2,902.3	4,156.4	2,903.1	34.9	19.1	-90.38	-1,241.7	-1,199.0	983.1	936.6	46.53	21.127	
4,580.0	2,902.5	4,174.2	2,903.2	35.5	19.5	-90.37	-1,254.4	-1,211.6	1,000.6	953.3	47.30	21.152	
4,600.0	2,902.6	4,188.5	2,903.3	36.0	19.7	-90.37	-1,264.6	-1,221.6	1,014.6	966.7	47.92	21.172	
4,605.0	2,902.6	4,192.1	2,903.3	36.1	19.8	-90.37	-1,267.1	-1,224.1	1,018.1	970.0	48.07	21.177	
4,630.0	2,902.7	4,210.0	2,903.5	36.7	20.1	-90.37	-1,279.8	-1,236.7	1,035.6	986.7	48.84	21.202	
4,655.0	2,902.9	4,227.8	2,903.6	37.3	20.5	-90.37	-1,292.5	-1,249.3	1,053.1	1,003.4	49.61	21.225	
4,680.0	2,903.0	4,245.7	2,903.7	37.9	20.8	-90.37	-1,305.2	-1,261.9	1,070.5	1,020.2	50.38	21.247	
4,700.0	2,903.1	4,260.0	2,903.8	38.4	21.1	-90.37	-1,315.3	-1,271.9	1,084.5	1,033.5	51.00	21.265	
4,705.0	2,903.2	4,263.6	2,903.8	38.5	21.2	-90.37	-1,317.9	-1,274.4	1,088.0	1,036.9	51.15	21.269	
4,730.0	2,903.3	4,281.5	2,904.0	39.1	21.5	-90.36	-1,330.6	-1,287.0	1,105.5	1,053.6	51.92	21.291	
4,755.0	2,903.4	4,301.1	2,904.1	39.7	21.9	-90.36	-1,344.5	-1,300.8	1,123.0	1,070.2	52.77	21.281	
4,780.0	2,903.6	4,371.6	2,904.6	40.3	23.2	-90.36	-1,393.4	-1,351.7	1,140.0	1,084.3	55.77	20.443	
4,800.0	2,903.7	4,370.2	2,904.6	40.8	23.2	-90.36	-1,392.0	-1,351.1	1,152.8	1,097.0	55.74	20.681	
4,805.0	2,903.7	4,373.9	2,904.6	40.9	23.3	-90.36	-1,394.5	-1,353.8	1,156.1	1,100.2	55.90	20.683	
4,830.0	2,903.9	4,469.1	2,905.3	41.5	25.1	-90.35	-1,456.4	-1,426.0	1,171.0	1,111.1	59.84	19.569	
4,855.0	2,904.0	4,566.3	2,906.0	42.1	27.0	-90.34	-1,514.9	-1,503.5	1,184.8	1,121.1	63.69	18.604	
4,880.0	2,904.1	4,720.7	2,907.1	42.7	30.2	-90.34	-1,598.0	-1,633.5	1,197.9	1,128.7	69.25	17.299	
4,900.0	2,904.3	4,804.4	2,907.7	43.2	31.9	-90.33	-1,637.2	-1,707.4	1,207.0	1,134.9	72.09	16.743	
4,905.0	2,904.3	4,765.9	2,907.4	43.3	31.1	-90.33	-1,619.0	-1,673.5	1,208.7	1,137.7	70.99	17.026	
4,930.0	2,904.4	4,867.9	2,908.1	44.0	33.2	-90.33	-1,663.5	-1,765.3	1,218.4	1,144.0	74.39	16.377	
4,955.0	2,904.6	5,057.3	2,909.4	44.6	37.2	-90.33	-1,730.0	-1,942.4	1,226.5	1,146.9	79.59	15.410	
4,980.0	2,904.7	5,181.7	2,910.2	45.2	39.8	-90.33	-1,761.2	-2,062.9	1,232.3	1,149.7	82.61	14.918	
5,000.0	2,904.8	5,284.3	2,910.9	45.6	41.9	-90.32	-1,779.4	-2,163.8	1,235.6	1,150.8	84.74	14.581	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Lateral No.1 - WP3													Offset Site Error: 5.0 usft
Survey Program: 0-3_MWD+HRGM, 3130-3_MWD+HRGM													Offset Well Error: 1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,005.0	2,904.8	5,310.3	2,911.0	45.8	42.4	-90.32	-1,782.9	-2,189.5	1,236.2	1,151.0	85.22	14.505	
5,030.0	2,905.0	5,441.4	2,911.8	46.4	45.1	-90.32	-1,794.0	-2,320.1	1,237.9	1,150.6	87.34	14.173	
5,055.0	2,905.1	5,498.7	2,912.1	47.0	46.2	-90.32	-1,795.5	-2,377.4	1,238.0	1,149.3	88.70	13.958	
5,080.0	2,905.3	5,523.7	2,912.2	47.6	46.7	-90.32	-1,795.9	-2,402.4	1,238.0	1,148.2	89.90	13.772	
5,100.0	2,905.4	5,543.7	2,912.4	48.1	47.1	-90.32	-1,796.2	-2,422.4	1,238.1	1,147.2	90.85	13.627	
5,105.0	2,905.4	5,548.7	2,912.4	48.2	47.2	-90.32	-1,796.3	-2,427.4	1,238.1	1,147.0	91.09	13.592	
5,130.0	2,905.6	5,573.7	2,912.5	48.8	47.7	-90.32	-1,796.7	-2,452.4	1,238.1	1,145.8	92.29	13.416	
5,155.0	2,905.7	5,598.7	2,912.7	49.4	48.2	-90.32	-1,797.1	-2,477.4	1,238.1	1,144.6	93.48	13.244	
5,180.0	2,905.8	5,623.7	2,912.8	50.0	48.7	-90.32	-1,797.5	-2,502.4	1,238.1	1,143.4	94.68	13.077	
5,200.0	2,905.9	5,643.7	2,912.9	50.5	49.2	-90.32	-1,797.8	-2,522.4	1,238.1	1,142.5	95.64	12.946	
5,205.0	2,906.0	5,648.7	2,912.9	50.6	49.3	-90.32	-1,797.9	-2,527.4	1,238.1	1,142.2	95.88	12.914	
5,230.0	2,906.1	5,673.7	2,913.1	51.2	49.8	-90.32	-1,798.3	-2,552.4	1,238.1	1,141.0	97.07	12.754	
5,255.0	2,906.3	5,698.7	2,913.2	51.8	50.3	-90.32	-1,798.7	-2,577.3	1,238.1	1,139.9	98.27	12.599	
5,280.0	2,906.4	5,723.7	2,913.4	52.4	50.8	-90.32	-1,799.1	-2,602.3	1,238.1	1,138.7	99.47	12.447	
5,300.0	2,906.5	5,743.7	2,913.5	52.9	51.2	-90.32	-1,799.4	-2,622.3	1,238.2	1,137.7	100.43	12.328	
5,305.0	2,906.5	5,748.7	2,913.5	53.0	51.3	-90.32	-1,799.5	-2,627.3	1,238.2	1,137.5	100.67	12.299	
5,330.0	2,906.7	5,773.7	2,913.6	53.7	51.8	-90.32	-1,799.9	-2,652.3	1,238.2	1,136.3	101.87	12.154	
5,355.0	2,906.8	5,798.7	2,913.8	54.3	52.4	-90.32	-1,800.3	-2,677.3	1,238.2	1,135.1	103.07	12.013	
5,380.0	2,907.0	5,823.7	2,913.9	54.9	52.9	-90.32	-1,800.7	-2,702.3	1,238.2	1,133.9	104.27	11.875	
5,400.0	2,907.1	5,843.7	2,914.0	55.4	53.3	-90.32	-1,801.1	-2,722.3	1,238.2	1,133.0	105.23	11.767	
5,405.0	2,907.1	5,848.7	2,914.1	55.5	53.4	-90.32	-1,801.1	-2,727.3	1,238.2	1,132.7	105.47	11.740	
5,430.0	2,907.2	5,873.7	2,914.2	56.1	54.0	-90.32	-1,801.5	-2,752.3	1,238.2	1,131.5	106.67	11.608	
5,455.0	2,907.4	5,898.7	2,914.3	56.7	54.5	-90.32	-1,801.9	-2,777.3	1,238.2	1,130.4	107.87	11.479	
5,480.0	2,907.5	5,923.7	2,914.5	57.3	55.0	-90.32	-1,802.3	-2,802.3	1,238.2	1,129.2	109.07	11.352	
5,500.0	2,907.6	5,943.7	2,914.6	57.8	55.4	-90.32	-1,802.7	-2,822.3	1,238.2	1,128.2	110.04	11.253	
5,505.0	2,907.7	5,948.7	2,914.6	57.9	55.6	-90.32	-1,802.7	-2,827.3	1,238.3	1,128.0	110.28	11.229	
5,530.0	2,907.8	5,973.7	2,914.7	58.5	56.1	-90.32	-1,803.1	-2,852.3	1,238.3	1,126.8	111.48	11.108	
5,555.0	2,907.9	5,998.7	2,914.9	59.1	56.6	-90.32	-1,803.5	-2,877.3	1,238.3	1,125.6	112.68	10.989	
5,580.0	2,908.1	6,023.7	2,915.0	59.7	57.2	-90.32	-1,804.0	-2,902.3	1,238.3	1,124.4	113.88	10.873	
5,600.0	2,908.2	6,043.7	2,915.1	60.2	57.6	-90.32	-1,804.3	-2,922.3	1,238.3	1,123.4	114.85	10.782	
5,605.0	2,908.2	6,048.7	2,915.2	60.3	57.7	-90.32	-1,804.4	-2,927.3	1,238.3	1,123.2	115.09	10.760	
5,630.0	2,908.4	6,073.7	2,915.3	60.9	58.2	-90.32	-1,804.8	-2,952.3	1,238.3	1,122.0	116.29	10.648	
5,655.0	2,908.5	6,098.7	2,915.4	61.5	58.8	-90.32	-1,805.2	-2,977.3	1,238.3	1,120.8	117.49	10.539	
5,680.0	2,908.6	6,123.7	2,915.6	62.2	59.3	-90.32	-1,805.6	-3,002.3	1,238.3	1,119.6	118.70	10.433	
5,700.0	2,908.8	6,143.7	2,915.7	62.6	59.8	-90.32	-1,805.9	-3,022.3	1,238.3	1,118.7	119.66	10.349	
5,705.0	2,908.8	6,148.7	2,915.7	62.8	59.9	-90.32	-1,806.0	-3,027.3	1,238.3	1,118.4	119.90	10.328	
5,730.0	2,908.9	6,173.7	2,915.9	63.4	60.4	-90.32	-1,806.4	-3,052.3	1,238.4	1,117.3	121.11	10.225	
5,755.0	2,909.1	6,198.7	2,916.0	64.0	61.0	-90.32	-1,806.8	-3,077.3	1,238.4	1,116.1	122.31	10.125	
5,780.0	2,909.2	6,223.7	2,916.1	64.6	61.5	-90.32	-1,807.2	-3,102.3	1,238.4	1,114.9	123.52	10.026	
5,800.0	2,909.3	6,243.7	2,916.3	65.1	62.0	-90.32	-1,807.5	-3,122.3	1,238.4	1,113.9	124.48	9.948	
5,805.0	2,909.4	6,248.7	2,916.3	65.2	62.1	-90.32	-1,807.6	-3,127.3	1,238.4	1,113.7	124.72	9.929	
5,830.0	2,909.5	6,273.7	2,916.4	65.8	62.6	-90.32	-1,808.0	-3,152.3	1,238.4	1,112.5	125.93	9.834	
5,855.0	2,909.6	6,298.7	2,916.6	66.4	63.2	-90.32	-1,808.4	-3,177.3	1,238.4	1,111.3	127.13	9.741	
5,880.0	2,909.8	6,323.7	2,916.7	67.0	63.7	-90.32	-1,808.8	-3,202.3	1,238.4	1,110.1	128.34	9.650	
5,900.0	2,909.9	6,343.7	2,916.8	67.5	64.2	-90.32	-1,809.1	-3,222.3	1,238.4	1,109.1	129.30	9.578	
5,905.0	2,909.9	6,348.7	2,916.8	67.6	64.3	-90.32	-1,809.2	-3,227.3	1,238.4	1,108.9	129.54	9.560	
5,930.0	2,910.1	6,373.7	2,917.0	68.2	64.8	-90.32	-1,809.6	-3,252.2	1,238.5	1,107.7	130.75	9.472	
5,955.0	2,910.2	6,398.7	2,917.1	68.8	65.4	-90.32	-1,810.0	-3,277.2	1,238.5	1,106.5	131.96	9.385	
5,980.0	2,910.3	6,423.7	2,917.3	69.4	65.9	-90.32	-1,810.4	-3,302.2	1,238.5	1,105.3	133.16	9.300	
6,000.0	2,910.4	6,443.7	2,917.4	69.9	66.4	-90.32	-1,810.7	-3,322.2	1,238.5	1,104.4	134.13	9.234	
6,005.0	2,910.5	6,448.7	2,917.4	70.0	66.5	-90.32	-1,810.8	-3,327.2	1,238.5	1,104.1	134.37	9.217	
6,030.0	2,910.6	6,473.7	2,917.5	70.6	67.1	-90.32	-1,811.2	-3,352.2	1,238.5	1,102.9	135.58	9.135	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Lateral No.1 - WP3													Offset Site Error: 5.0 usft
Survey Program: 0-3_MWD+HRGM, 3130-3_MWD+HRGM													Offset Well Error: 1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,055.0	2,910.8	6,498.7	2,917.7	71.3	67.6	-90.32	-1,811.6	-3,377.2	1,238.5	1,101.7	136.78	9.055	
6,080.0	2,910.9	6,523.7	2,917.8	71.9	68.2	-90.32	-1,812.0	-3,402.2	1,238.5	1,100.5	137.99	8.975	
6,100.0	2,911.0	6,543.7	2,917.9	72.3	68.6	-90.32	-1,812.3	-3,422.2	1,238.5	1,099.6	138.96	8.913	
6,105.0	2,911.0	6,548.7	2,917.9	72.5	68.7	-90.32	-1,812.4	-3,427.2	1,238.5	1,099.3	139.20	8.898	
6,130.0	2,911.2	6,573.7	2,918.1	73.1	69.3	-90.32	-1,812.8	-3,452.2	1,238.6	1,098.1	140.41	8.821	
6,155.0	2,911.3	6,598.7	2,918.2	73.7	69.9	-90.32	-1,813.2	-3,477.2	1,238.6	1,097.0	141.61	8.746	
6,180.0	2,911.5	6,623.7	2,918.4	74.3	70.4	-90.32	-1,813.6	-3,502.2	1,238.6	1,095.8	142.82	8.672	
6,200.0	2,911.6	6,643.7	2,918.5	74.8	70.9	-90.32	-1,813.9	-3,522.2	1,238.6	1,094.8	143.79	8.614	
6,205.0	2,911.6	6,648.7	2,918.5	74.9	71.0	-90.32	-1,814.0	-3,527.2	1,238.6	1,094.6	144.03	8.600	
6,230.0	2,911.7	6,673.7	2,918.6	75.5	71.6	-90.32	-1,814.4	-3,552.2	1,238.6	1,093.4	145.24	8.528	
6,255.0	2,911.9	6,698.7	2,918.8	76.1	72.1	-90.32	-1,814.8	-3,577.2	1,238.6	1,092.2	146.44	8.458	
6,280.0	2,912.0	6,723.7	2,918.9	76.7	72.7	-90.32	-1,815.2	-3,602.2	1,238.6	1,091.0	147.65	8.389	
6,300.0	2,912.1	6,743.7	2,919.0	77.2	73.1	-90.32	-1,815.6	-3,622.2	1,238.6	1,090.0	148.62	8.334	
6,305.0	2,912.2	6,748.7	2,919.1	77.3	73.3	-90.32	-1,815.6	-3,627.2	1,238.6	1,089.8	148.86	8.321	
6,330.0	2,912.3	6,773.7	2,919.2	77.9	73.8	-90.32	-1,816.0	-3,652.2	1,238.6	1,088.6	150.07	8.254	
6,355.0	2,912.4	6,798.7	2,919.3	78.5	74.4	-90.32	-1,816.4	-3,677.2	1,238.7	1,087.4	151.28	8.188	
6,380.0	2,912.6	6,823.7	2,919.5	79.1	75.0	-90.32	-1,816.8	-3,702.2	1,238.7	1,086.2	152.49	8.123	
6,400.0	2,912.7	6,843.7	2,919.6	79.6	75.4	-90.32	-1,817.2	-3,722.2	1,238.7	1,085.2	153.45	8.072	
6,405.0	2,912.7	6,848.7	2,919.6	79.8	75.5	-90.32	-1,817.2	-3,727.2	1,238.7	1,085.0	153.69	8.059	
6,430.0	2,912.9	6,873.7	2,919.8	80.4	76.1	-90.32	-1,817.6	-3,752.2	1,238.7	1,083.8	154.90	7.997	
6,455.0	2,913.0	6,898.7	2,919.9	81.0	76.7	-90.32	-1,818.0	-3,777.2	1,238.7	1,082.6	156.11	7.935	
6,480.0	2,913.2	6,923.7	2,920.0	81.6	77.2	-90.32	-1,818.5	-3,802.2	1,238.7	1,081.4	157.32	7.874	
6,500.0	2,913.3	6,943.7	2,920.1	82.1	77.7	-90.32	-1,818.8	-3,822.2	1,238.7	1,080.4	158.29	7.826	
6,505.0	2,913.3	6,948.7	2,920.2	82.2	77.8	-90.32	-1,818.9	-3,827.2	1,238.7	1,080.2	158.53	7.814	
6,530.0	2,913.4	6,973.7	2,920.3	82.8	78.4	-90.32	-1,819.3	-3,852.2	1,238.7	1,079.0	159.74	7.755	
6,555.0	2,913.6	6,998.7	2,920.5	83.4	79.0	-90.32	-1,819.7	-3,877.2	1,238.8	1,077.8	160.95	7.697	
6,580.0	2,913.7	7,023.7	2,920.6	84.0	79.5	-90.32	-1,820.1	-3,902.2	1,238.8	1,076.6	162.16	7.639	
6,600.0	2,913.8	7,043.7	2,920.7	84.5	80.0	-90.32	-1,820.4	-3,922.2	1,238.8	1,075.7	163.13	7.594	
6,605.0	2,913.9	7,048.7	2,920.7	84.6	80.1	-90.32	-1,820.5	-3,927.2	1,238.8	1,075.4	163.37	7.583	
6,630.0	2,914.0	7,073.7	2,920.9	85.2	80.7	-90.32	-1,820.9	-3,952.1	1,238.8	1,074.2	164.58	7.527	
6,655.0	2,914.1	7,098.7	2,921.0	85.8	81.3	-90.32	-1,821.3	-3,977.1	1,238.8	1,073.0	165.79	7.472	
6,680.0	2,914.3	7,123.7	2,921.1	86.4	81.8	-90.32	-1,821.7	-4,002.1	1,238.8	1,071.8	167.00	7.418	
6,700.0	2,914.4	7,143.7	2,921.3	86.9	82.3	-90.32	-1,822.0	-4,022.1	1,238.8	1,070.9	167.96	7.376	
6,705.0	2,914.4	7,148.7	2,921.3	87.0	82.4	-90.32	-1,822.1	-4,027.1	1,238.8	1,070.6	168.21	7.365	
6,730.0	2,914.6	7,173.7	2,921.4	87.7	83.0	-90.32	-1,822.5	-4,052.1	1,238.8	1,069.4	169.42	7.312	
6,755.0	2,914.7	7,198.7	2,921.6	88.3	83.6	-90.32	-1,822.9	-4,077.1	1,238.9	1,068.2	170.63	7.261	
6,780.0	2,914.8	7,223.7	2,921.7	88.9	84.1	-90.32	-1,823.3	-4,102.1	1,238.9	1,067.0	171.84	7.210	
6,805.0	2,915.0	7,248.7	2,921.8	89.5	84.7	-90.32	-1,823.7	-4,127.1	1,238.9	1,065.8	173.05	7.159	
6,808.4	2,915.0	7,252.1	2,921.9	89.6	84.8	-90.32	-1,823.7	-4,130.5	1,238.9	1,065.7	173.21	7.152	

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Pilot Hole - WP3													Offset Site Error: 5.0 usft
Survey Program: 0-3_MWD+HRGM													Offset Well Error: 1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,082.2	2,801.6	3,082.2	2,801.6	0.4	3.2	-180.00	-489.2	-456.2	0.0	-2.3	2.27	0.001	Collision RiskProcedures Req'd, CC, S
3,100.0	2,809.0	3,100.0	2,809.1	4.0	4.0	180.00	-501.0	-467.2	0.1	-2.2	2.35	0.045	Collision RiskProcedures Req'd
3,105.0	2,811.1	3,105.0	2,811.2	4.0	4.0	-121.11	-504.3	-470.3	0.3	-2.6	2.87	0.091	Collision RiskProcedures Req'd, ES
3,130.0	2,821.8	3,128.5	2,821.1	3.9	4.0	-100.10	-519.9	-484.8	8.0	3.7	4.35	1.848	Collision RiskProcedures Req'd
3,139.6	2,825.0	3,139.6	2,825.8	3.8	4.0	162.23	-527.3	-491.7	0.9	-2.2	3.13	0.297	Collision RiskProcedures Req'd
3,140.1	2,825.2	3,140.0	2,826.0	3.8	4.0	176.53	-527.5	-491.9	0.9	-2.4	3.32	0.284	Collision RiskProcedures Req'd
3,150.0	2,829.0	3,147.3	2,829.1	3.8	4.0	-112.58	-532.4	-496.4	6.9	1.4	5.51	1.247	Collision RiskProcedures Req'd
3,155.0	2,830.9	3,151.1	2,830.7	3.8	4.0	-109.25	-534.8	-498.7	10.2	4.6	5.61	1.819	Collision RiskProcedures Req'd
3,180.0	2,840.1	3,169.6	2,838.5	3.9	4.0	-105.07	-547.1	-510.2	27.0	20.9	6.06	4.454	
3,200.0	2,846.9	3,184.3	2,844.7	4.0	4.1	-104.30	-556.9	-519.3	40.5	34.1	6.43	6.301	
3,205.0	2,848.5	3,187.9	2,846.3	4.0	4.1	-104.19	-559.3	-521.5	43.9	37.4	6.53	6.728	
3,230.0	2,856.3	3,206.2	2,854.0	4.2	4.1	-103.85	-571.4	-532.8	61.0	53.9	7.09	8.606	
3,250.0	2,862.0	3,220.7	2,860.1	4.5	4.1	-103.71	-581.0	-541.8	74.8	67.1	7.65	9.779	
3,255.0	2,863.4	3,224.3	2,861.6	4.5	4.1	-103.68	-583.4	-544.0	78.2	70.5	7.78	10.053	
3,280.0	2,869.8	3,242.2	2,869.2	4.9	4.1	-103.57	-595.2	-555.1	95.6	87.2	8.43	11.346	
3,300.0	2,874.5	3,256.4	2,875.2	5.2	4.1	-103.50	-604.7	-563.8	109.6	100.7	8.92	12.287	
3,305.0	2,875.6	3,259.9	2,876.7	5.3	4.1	-103.48	-607.0	-566.0	113.1	104.1	9.04	12.510	
3,330.0	2,880.6	3,277.4	2,884.1	5.8	4.2	-103.39	-618.6	-576.9	130.8	121.2	9.63	13.582	
3,350.0	2,884.2	3,291.3	2,890.0	6.2	4.2	-103.30	-627.8	-585.4	145.1	135.0	10.09	14.381	
3,355.0	2,885.0	3,294.8	2,891.4	6.3	4.2	-103.28	-630.1	-587.6	148.6	138.4	10.20	14.573	
3,380.0	2,888.6	3,311.9	2,898.6	6.8	4.2	-103.15	-641.4	-598.1	166.7	155.8	10.88	15.311	
3,400.0	2,891.0	3,325.4	2,904.3	7.3	4.2	-103.02	-650.4	-606.5	181.2	169.8	11.40	15.892	
3,405.0	2,891.6	3,328.7	2,905.8	7.4	4.2	-102.98	-652.6	-608.6	184.8	173.3	11.52	16.045	
3,430.0	2,893.8	3,345.3	2,912.8	7.9	4.3	-102.79	-663.6	-618.8	203.2	191.1	12.05	16.864	
3,450.0	2,895.1	3,358.4	2,918.3	8.4	4.4	-102.60	-672.3	-626.9	218.0	205.5	12.45	17.508	
3,455.0	2,895.4	3,361.6	2,919.7	8.5	4.5	-102.55	-674.4	-628.9	221.7	209.1	12.56	17.654	
3,480.0	2,896.2	3,377.7	2,926.5	9.1	4.7	-102.28	-685.1	-638.8	240.4	227.3	13.12	18.321	
3,491.8	2,896.3	3,385.2	2,929.6	9.3	4.8	-102.13	-690.0	-643.4	249.3	235.9	13.40	18.598	
3,500.0	2,896.4	3,390.3	2,931.8	9.5	4.9	-102.61	-693.4	-646.7	255.5	241.9	13.61	18.780	
3,505.0	2,896.4	3,393.5	2,933.1	9.6	5.0	-102.90	-695.5	-648.6	259.3	245.6	13.73	18.885	
3,530.0	2,896.5	3,409.3	2,939.8	10.2	5.3	-104.21	-706.0	-658.3	278.2	263.9	14.32	19.436	
3,555.0	2,896.7	3,425.0	2,946.5	10.8	5.5	-105.36	-716.4	-668.1	297.2	282.4	14.87	19.987	
3,580.0	2,896.8	3,440.8	2,953.1	11.4	5.8	-106.38	-726.9	-677.8	316.3	300.9	15.43	20.494	
3,600.0	2,896.9	3,453.4	2,958.5	11.9	6.0	-107.12	-735.3	-685.6	331.6	315.7	15.89	20.871	
3,605.0	2,897.0	3,456.6	2,959.8	12.0	6.1	-107.29	-737.3	-687.6	335.4	319.4	16.00	20.961	
3,630.0	2,897.1	3,472.3	2,966.5	12.6	6.3	-108.11	-747.8	-697.3	354.5	338.0	16.57	21.394	
3,655.0	2,897.3	3,476.0	2,968.0	13.2	6.4	-108.29	-750.2	-699.6	373.9	357.2	16.69	22.395	
3,680.0	2,897.4	3,476.0	2,968.0	13.8	6.4	-108.29	-750.2	-699.6	393.8	377.2	16.67	23.622	
3,700.0	2,897.5	3,476.0	2,968.0	14.2	6.4	-108.29	-750.2	-699.6	410.2	393.6	16.65	24.639	
3,705.0	2,897.5	3,476.0	2,968.0	14.4	6.4	-108.29	-750.2	-699.6	414.4	397.7	16.64	24.897	
3,730.0	2,897.7	3,476.0	2,968.0	15.0	6.4	-108.29	-750.2	-699.6	435.4	418.7	16.61	26.212	
3,755.0	2,897.8	3,476.0	2,968.0	15.6	6.4	-108.29	-750.2	-699.6	456.7	440.2	16.57	27.562	
3,780.0	2,898.0	3,476.0	2,968.0	16.2	6.4	-108.29	-750.2	-699.6	478.5	462.0	16.53	28.941	
3,800.0	2,898.1	3,476.0	2,968.0	16.6	6.4	-108.29	-750.2	-699.6	496.1	479.6	16.50	30.063	
3,805.0	2,898.1	3,476.0	2,968.0	16.8	6.4	-108.29	-750.2	-699.6	500.5	484.0	16.49	30.346	
3,830.0	2,898.2	3,476.0	2,968.0	17.4	6.4	-108.29	-750.2	-699.6	522.8	506.4	16.46	31.773	
3,855.0	2,898.4	3,476.0	2,968.0	18.0	6.4	-108.29	-750.2	-699.6	545.4	529.0	16.42	33.218	
3,880.0	2,898.5	3,476.0	2,968.0	18.6	6.4	-108.29	-750.2	-699.6	568.1	551.8	16.38	34.679	
3,900.0	2,898.6	3,476.0	2,968.0	19.0	6.4	-108.29	-750.2	-699.6	586.5	570.1	16.36	35.859	
3,905.0	2,898.7	3,476.0	2,968.0	19.2	6.4	-108.29	-750.2	-699.6	591.1	574.7	16.35	36.155	
3,930.0	2,898.8	3,476.0	2,968.0	19.8	6.4	-108.29	-750.2	-699.6	614.2	597.9	16.32	37.642	
3,955.0	2,898.9	3,476.0	2,968.0	20.4	6.4	-108.29	-750.2	-699.6	637.4	621.1	16.29	39.140	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Pilot Hole - WP3												Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM												Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
3,980.0	2,899.1	3,476.0	2,968.0	21.0	6.4	-108.29	-750.2	-699.6	660.8	644.5	16.26	40.647	
4,000.0	2,899.2	3,476.0	2,968.0	21.4	6.4	-108.29	-750.2	-699.6	679.5	663.3	16.23	41.858	
4,005.0	2,899.2	3,476.0	2,968.0	21.6	6.4	-108.29	-750.2	-699.6	684.3	668.0	16.23	42.161	
4,030.0	2,899.4	3,476.0	2,968.0	22.2	6.4	-108.29	-750.2	-699.6	707.8	691.6	16.20	43.682	
4,055.0	2,899.5	3,476.0	2,968.0	22.8	6.4	-108.29	-750.2	-699.6	731.5	715.3	16.18	45.209	
4,080.0	2,899.6	3,476.0	2,968.0	23.4	6.4	-108.29	-750.2	-699.6	755.3	739.1	16.16	46.740	
4,100.0	2,899.8	3,476.0	2,968.0	23.9	6.4	-108.29	-750.2	-699.6	774.4	758.2	16.14	47.968	
4,105.0	2,899.8	3,476.0	2,968.0	24.0	6.4	-108.29	-750.2	-699.6	779.1	763.0	16.14	48.275	
4,130.0	2,899.9	3,476.0	2,968.0	24.6	6.4	-108.29	-750.2	-699.6	803.0	786.9	16.12	49.814	
4,155.0	2,900.1	3,476.0	2,968.0	25.2	6.4	-108.29	-750.2	-699.6	827.0	810.9	16.10	51.355	
4,180.0	2,900.2	3,476.0	2,968.0	25.8	6.4	-108.29	-750.2	-699.6	851.1	835.0	16.09	52.899	
4,200.0	2,900.3	3,476.0	2,968.0	26.3	6.4	-108.29	-750.2	-699.6	870.3	854.2	16.08	54.134	
4,205.0	2,900.3	3,476.0	2,968.0	26.4	6.4	-108.29	-750.2	-699.6	875.1	859.1	16.07	54.444	
4,230.0	2,900.5	3,476.0	2,968.0	27.0	6.4	-108.29	-750.2	-699.6	899.3	883.2	16.06	55.990	
4,255.0	2,900.6	3,476.0	2,968.0	27.6	6.4	-108.29	-750.2	-699.6	923.5	907.4	16.05	57.537	
4,280.0	2,900.8	3,476.0	2,968.0	28.2	6.4	-108.29	-750.2	-699.6	947.7	931.7	16.04	59.084	
4,300.0	2,900.9	3,476.0	2,968.0	28.7	6.4	-108.29	-750.2	-699.6	967.1	951.1	16.03	60.323	
4,305.0	2,900.9	3,476.0	2,968.0	28.8	6.4	-108.29	-750.2	-699.6	972.0	955.9	16.03	60.632	
4,330.0	2,901.1	3,476.0	2,968.0	29.4	6.4	-108.29	-750.2	-699.6	996.3	980.2	16.02	62.180	
4,355.0	2,901.2	3,476.0	2,968.0	30.0	6.4	-108.29	-750.2	-699.6	1,020.6	1,004.6	16.02	63.727	
4,380.0	2,901.3	3,476.0	2,968.0	30.6	6.4	-108.29	-750.2	-699.6	1,045.0	1,029.0	16.01	65.273	
4,400.0	2,901.4	3,476.0	2,968.0	31.1	6.4	-108.29	-750.2	-699.6	1,064.5	1,048.5	16.00	66.510	
4,405.0	2,901.5	3,476.0	2,968.0	31.2	6.4	-108.29	-750.2	-699.6	1,069.4	1,053.4	16.00	66.819	
4,430.0	2,901.6	3,476.0	2,968.0	31.8	6.4	-108.29	-750.2	-699.6	1,093.8	1,077.8	16.00	68.363	
4,455.0	2,901.8	3,476.0	2,968.0	32.4	6.4	-108.29	-750.2	-699.6	1,118.2	1,102.2	16.00	69.906	
4,480.0	2,901.9	3,476.0	2,968.0	33.0	6.4	-108.29	-750.2	-699.6	1,142.7	1,126.7	15.99	71.448	
4,500.0	2,902.0	3,476.0	2,968.0	33.5	6.4	-108.29	-750.2	-699.6	1,162.3	1,146.3	15.99	72.680	
4,505.0	2,902.0	3,476.0	2,968.0	33.6	6.4	-108.29	-750.2	-699.6	1,167.2	1,151.2	15.99	72.988	
4,530.0	2,902.2	3,476.0	2,968.0	34.3	6.4	-108.29	-750.2	-699.6	1,191.7	1,175.7	15.99	74.526	
4,555.0	2,902.3	3,476.0	2,968.0	34.9	6.4	-108.29	-750.2	-699.6	1,216.3	1,200.3	15.99	76.062	
4,580.0	2,902.5	3,476.0	2,968.0	35.5	6.4	-108.29	-750.2	-699.6	1,240.8	1,224.8	15.99	77.597	
4,600.0	2,902.6	3,476.0	2,968.0	36.0	6.4	-108.29	-750.2	-699.6	1,260.5	1,244.5	15.99	78.823	
4,605.0	2,902.6	3,476.0	2,968.0	36.1	6.4	-108.29	-750.2	-699.6	1,265.4	1,249.4	15.99	79.129	
4,630.0	2,902.7	3,476.0	2,968.0	36.7	6.4	-108.29	-750.2	-699.6	1,290.0	1,274.0	15.99	80.659	
4,655.0	2,902.9	3,476.0	2,968.0	37.3	6.4	-108.29	-750.2	-699.6	1,314.6	1,298.6	16.00	82.186	
4,680.0	2,903.0	3,476.0	2,968.0	37.9	6.4	-108.29	-750.2	-699.6	1,339.2	1,323.2	16.00	83.711	
4,700.0	2,903.1	3,476.0	2,968.0	38.4	6.4	-108.29	-750.2	-699.6	1,358.9	1,342.9	16.00	84.929	
4,705.0	2,903.2	3,476.0	2,968.0	38.5	6.4	-108.29	-750.2	-699.6	1,363.8	1,347.8	16.00	85.234	
4,730.0	2,903.3	3,476.0	2,968.0	39.1	6.4	-108.29	-750.2	-699.6	1,388.5	1,372.5	16.00	86.753	
4,755.0	2,903.4	3,476.0	2,968.0	39.7	6.4	-108.29	-750.2	-699.6	1,413.1	1,397.1	16.01	88.271	
4,780.0	2,903.6	3,476.0	2,968.0	40.3	6.4	-108.29	-750.2	-699.6	1,437.8	1,421.8	16.01	89.785	
4,800.0	2,903.7	3,476.0	2,968.0	40.8	6.4	-108.29	-750.2	-699.6	1,457.6	1,441.5	16.02	90.994	
4,805.0	2,903.7	3,476.0	2,968.0	40.9	6.4	-108.29	-750.2	-699.6	1,462.5	1,446.5	16.02	91.296	
4,830.0	2,903.9	3,476.0	2,968.0	41.5	6.4	-108.29	-750.2	-699.6	1,487.2	1,471.2	16.02	92.805	
4,855.0	2,904.0	3,476.0	2,968.0	42.1	6.4	-108.29	-750.2	-699.6	1,511.9	1,495.9	16.03	94.310	
4,880.0	2,904.1	3,476.0	2,968.0	42.7	6.4	-108.29	-750.2	-699.6	1,536.6	1,520.6	16.04	95.813	
4,900.0	2,904.3	3,476.0	2,968.0	43.2	6.4	-108.29	-750.2	-699.6	1,556.4	1,540.3	16.04	97.012	
4,905.0	2,904.3	3,476.0	2,968.0	43.3	6.4	-108.29	-750.2	-699.6	1,561.3	1,545.3	16.04	97.312	
4,930.0	2,904.4	3,476.0	2,968.0	44.0	6.4	-108.29	-750.2	-699.6	1,586.0	1,570.0	16.05	98.808	
4,955.0	2,904.6	3,476.0	2,968.0	44.6	6.4	-108.29	-750.2	-699.6	1,610.8	1,594.7	16.06	100.301	
4,980.0	2,904.7	3,476.0	2,968.0	45.2	6.4	-108.29	-750.2	-699.6	1,635.5	1,619.5	16.07	101.791	
5,000.0	2,904.8	3,476.0	2,968.0	45.6	6.4	-108.29	-750.2	-699.6	1,655.3	1,639.3	16.07	102.981	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Pilot Hole - WP3												Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM												Offset Well Error:	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,005.0	2,904.8	3,476.0	2,968.0	45.8	6.4	-108.29	-750.2	-699.6	1,660.3	1,644.2	16.08	103.278	
5,030.0	2,905.0	3,476.0	2,968.0	46.4	6.4	-108.29	-750.2	-699.6	1,685.0	1,669.0	16.08	104.761	
5,055.0	2,905.1	3,476.0	2,968.0	47.0	6.4	-108.29	-750.2	-699.6	1,709.8	1,693.7	16.09	106.241	
5,080.0	2,905.3	3,476.0	2,968.0	47.6	6.4	-108.29	-750.2	-699.6	1,734.6	1,718.5	16.10	107.717	
5,100.0	2,905.4	3,476.0	2,968.0	48.1	6.4	-108.29	-750.2	-699.6	1,754.4	1,738.3	16.11	108.896	
5,105.0	2,905.4	3,476.0	2,968.0	48.2	6.4	-108.29	-750.2	-699.6	1,759.4	1,743.3	16.11	109.190	
5,130.0	2,905.6	3,476.0	2,968.0	48.8	6.4	-108.29	-750.2	-699.6	1,784.2	1,768.0	16.12	110.660	
5,155.0	2,905.7	3,476.0	2,968.0	49.4	6.4	-108.29	-750.2	-699.6	1,808.9	1,792.8	16.13	112.126	
5,180.0	2,905.8	3,476.0	2,968.0	50.0	6.4	-108.29	-750.2	-699.6	1,833.7	1,817.6	16.14	113.589	
5,200.0	2,905.9	3,476.0	2,968.0	50.5	6.4	-108.29	-750.2	-699.6	1,853.6	1,837.4	16.15	114.756	
5,205.0	2,906.0	3,476.0	2,968.0	50.6	6.4	-108.29	-750.2	-699.6	1,858.6	1,842.4	16.15	115.048	
5,230.0	2,906.1	3,476.0	2,968.0	51.2	6.4	-108.29	-750.2	-699.6	1,883.4	1,867.2	16.17	116.503	
5,255.0	2,906.3	3,476.0	2,968.0	51.8	6.4	-108.29	-750.2	-699.6	1,908.2	1,892.0	16.18	117.955	
5,280.0	2,906.4	3,476.0	2,968.0	52.4	6.4	-108.29	-750.2	-699.6	1,933.0	1,916.8	16.19	119.404	
5,300.0	2,906.5	3,476.0	2,968.0	52.9	6.4	-108.29	-750.2	-699.6	1,952.9	1,936.7	16.20	120.560	
5,305.0	2,906.5	3,476.0	2,968.0	53.0	6.4	-108.29	-750.2	-699.6	1,957.8	1,941.6	16.20	120.848	
5,330.0	2,906.7	3,476.0	2,968.0	53.7	6.4	-108.29	-750.2	-699.6	1,982.6	1,966.4	16.21	122.290	
5,355.0	2,906.8	3,476.0	2,968.0	54.3	6.4	-108.29	-750.2	-699.6	2,007.5	1,991.3	16.23	123.727	
5,380.0	2,907.0	3,476.0	2,968.0	54.9	6.4	-108.29	-750.2	-699.6	2,032.3	2,016.1	16.24	125.161	
5,400.0	2,907.1	3,476.0	2,968.0	55.4	6.4	-108.29	-750.2	-699.6	2,052.2	2,035.9	16.25	126.305	
5,405.0	2,907.1	3,476.0	2,968.0	55.5	6.4	-108.29	-750.2	-699.6	2,057.2	2,040.9	16.25	126.591	
5,430.0	2,907.2	3,476.0	2,968.0	56.1	6.4	-108.29	-750.2	-699.6	2,082.0	2,065.7	16.26	128.017	
5,455.0	2,907.4	3,476.0	2,968.0	56.7	6.4	-108.29	-750.2	-699.6	2,106.8	2,090.6	16.28	129.440	
5,480.0	2,907.5	3,476.0	2,968.0	57.3	6.4	-108.29	-750.2	-699.6	2,131.7	2,115.4	16.29	130.859	
5,500.0	2,907.6	3,476.0	2,968.0	57.8	6.4	-108.29	-750.2	-699.6	2,151.6	2,135.3	16.30	131.991	
5,505.0	2,907.7	3,476.0	2,968.0	57.9	6.4	-108.29	-750.2	-699.6	2,156.6	2,140.2	16.30	132.274	
5,530.0	2,907.8	3,476.0	2,968.0	58.5	6.4	-108.29	-750.2	-699.6	2,181.4	2,165.1	16.32	133.685	
5,555.0	2,907.9	3,476.0	2,968.0	59.1	6.4	-108.29	-750.2	-699.6	2,206.3	2,189.9	16.33	135.093	
5,580.0	2,908.1	3,476.0	2,968.0	59.7	6.4	-108.29	-750.2	-699.6	2,231.1	2,214.8	16.35	136.497	
5,600.0	2,908.2	3,476.0	2,968.0	60.2	6.4	-108.29	-750.2	-699.6	2,251.0	2,234.7	16.36	137.618	
5,605.0	2,908.2	3,476.0	2,968.0	60.3	6.4	-108.29	-750.2	-699.6	2,256.0	2,239.6	16.36	137.897	
5,630.0	2,908.4	3,476.0	2,968.0	60.9	6.4	-108.29	-750.2	-699.6	2,280.9	2,264.5	16.37	139.294	
5,655.0	2,908.5	3,476.0	2,968.0	61.5	6.4	-108.29	-750.2	-699.6	2,305.7	2,289.4	16.39	140.686	
5,680.0	2,908.6	3,476.0	2,968.0	62.2	6.4	-108.29	-750.2	-699.6	2,330.6	2,314.2	16.40	142.075	
5,700.0	2,908.8	3,476.0	2,968.0	62.6	6.4	-108.29	-750.2	-699.6	2,350.5	2,334.1	16.42	143.183	
5,705.0	2,908.8	3,476.0	2,968.0	62.8	6.4	-108.29	-750.2	-699.6	2,355.5	2,339.1	16.42	143.460	
5,730.0	2,908.9	3,476.0	2,968.0	63.4	6.4	-108.29	-750.2	-699.6	2,380.4	2,363.9	16.43	144.841	
5,755.0	2,909.1	3,476.0	2,968.0	64.0	6.4	-108.29	-750.2	-699.6	2,405.3	2,388.8	16.45	146.218	
5,780.0	2,909.2	3,476.0	2,968.0	64.6	6.4	-108.29	-750.2	-699.6	2,430.2	2,413.7	16.47	147.592	
5,800.0	2,909.3	3,476.0	2,968.0	65.1	6.4	-108.29	-750.2	-699.6	2,450.1	2,433.6	16.48	148.688	
5,805.0	2,909.4	3,476.0	2,968.0	65.2	6.4	-108.29	-750.2	-699.6	2,455.0	2,438.6	16.48	148.961	
5,830.0	2,909.5	3,476.0	2,968.0	65.8	6.4	-108.29	-750.2	-699.6	2,479.9	2,463.4	16.50	150.327	
5,855.0	2,909.6	3,476.0	2,968.0	66.4	6.4	-108.29	-750.2	-699.6	2,504.8	2,488.3	16.51	151.689	
5,880.0	2,909.8	3,476.0	2,968.0	67.0	6.4	-108.29	-750.2	-699.6	2,529.7	2,513.2	16.53	153.047	
5,900.0	2,909.9	3,476.0	2,968.0	67.5	6.4	-108.29	-750.2	-699.6	2,549.6	2,533.1	16.54	154.131	
5,905.0	2,909.9	3,476.0	2,968.0	67.6	6.4	-108.29	-750.2	-699.6	2,554.6	2,538.1	16.55	154.402	
5,930.0	2,910.1	3,476.0	2,968.0	68.2	6.4	-108.29	-750.2	-699.6	2,579.5	2,563.0	16.56	155.752	
5,955.0	2,910.2	3,476.0	2,968.0	68.8	6.4	-108.29	-750.2	-699.6	2,604.4	2,587.8	16.58	157.099	
5,980.0	2,910.3	3,476.0	2,968.0	69.4	6.4	-108.29	-750.2	-699.6	2,629.3	2,612.7	16.59	158.441	
6,000.0	2,910.4	3,476.0	2,968.0	69.9	6.4	-108.29	-750.2	-699.6	2,649.2	2,632.6	16.61	159.513	
6,005.0	2,910.5	3,476.0	2,968.0	70.0	6.4	-108.29	-750.2	-699.6	2,654.2	2,637.6	16.61	159.780	
6,030.0	2,910.6	3,476.0	2,968.0	70.6	6.4	-108.29	-750.2	-699.6	2,679.1	2,662.5	16.63	161.115	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Halliburton

Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Offset Design: San Juan Basin - Southern Ute 703H - Pilot Hole - WP3												Offset Site Error:	5.0 usft
Survey Program: 0-3_MWD+HRGM												Offset Well Error:	1.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,055.0	2,910.8	3,476.0	2,968.0	71.3	6.4	-108.29	-750.2	-699.6	2,704.0	2,687.4	16.65	162.447	
6,080.0	2,910.9	3,476.0	2,968.0	71.9	6.4	-108.29	-750.2	-699.6	2,728.9	2,712.3	16.66	163.774	
6,100.0	2,911.0	3,476.0	2,968.0	72.3	6.4	-108.29	-750.2	-699.6	2,748.9	2,732.2	16.68	164.833	
6,105.0	2,911.0	3,476.0	2,968.0	72.5	6.4	-108.29	-750.2	-699.6	2,753.9	2,737.2	16.68	165.098	
6,130.0	2,911.2	3,476.0	2,968.0	73.1	6.4	-108.29	-750.2	-699.6	2,778.8	2,762.1	16.70	166.417	
6,155.0	2,911.3	3,476.0	2,968.0	73.7	6.4	-108.29	-750.2	-699.6	2,803.7	2,787.0	16.72	167.733	
6,180.0	2,911.5	3,476.0	2,968.0	74.3	6.4	-108.29	-750.2	-699.6	2,828.6	2,811.9	16.73	169.045	
6,200.0	2,911.6	3,476.0	2,968.0	74.8	6.4	-108.29	-750.2	-699.6	2,848.5	2,831.8	16.75	170.092	
6,205.0	2,911.6	3,476.0	2,968.0	74.9	6.4	-108.29	-750.2	-699.6	2,853.5	2,836.8	16.75	170.353	
6,230.0	2,911.7	3,476.0	2,968.0	75.5	6.4	-108.29	-750.2	-699.6	2,878.4	2,861.7	16.77	171.658	
6,255.0	2,911.9	3,476.0	2,968.0	76.1	6.4	-108.29	-750.2	-699.6	2,903.4	2,886.6	16.79	172.958	
6,280.0	2,912.0	3,476.0	2,968.0	76.7	6.4	-108.29	-750.2	-699.6	2,928.3	2,911.5	16.80	174.255	
6,300.0	2,912.1	3,476.0	2,968.0	77.2	6.4	-108.29	-750.2	-699.6	2,948.2	2,931.4	16.82	175.289	
6,305.0	2,912.2	3,476.0	2,968.0	77.3	6.4	-108.29	-750.2	-699.6	2,953.2	2,936.4	16.82	175.548	
6,330.0	2,912.3	3,476.0	2,968.0	77.9	6.4	-108.29	-750.2	-699.6	2,978.1	2,961.3	16.84	176.837	

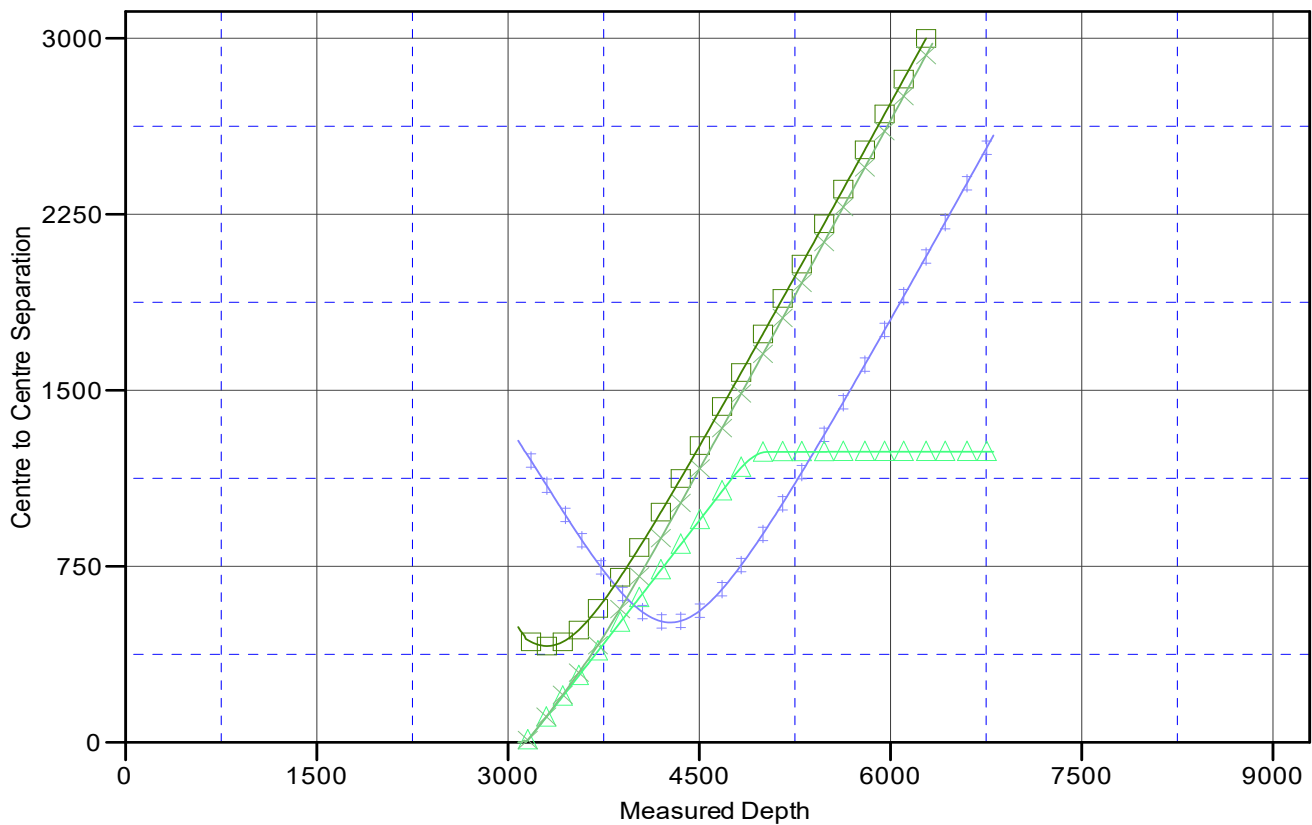
Halliburton
Anticollision Report

Company:	Hilcorp Energy Company	Local Co-ordinate Reference:	Well Southern Ute 703H
Project:	Farmington, NM	TVD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Reference Site:	San Juan Basin	MD Reference:	RKB-MSI= 6274ft @ 6274.0usft
Site Error:	5.0 usft	North Reference:	Grid
Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB-MSI= 6274ft @ 6274.0usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.833

Coordinates are relative to: Southern Ute 703H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
Grid Convergence at Surface is: 0.15°

Ladder Plot



LEGEND

- | | |
|---|---|
| <p>+ Southern Ute 004, ST00, ST00 V0</p> <p>■ Southern Ute 004E, ST00, ST00 V0</p> | <p>▲ Southern Ute 703H, Lateral No.1, WP3 V0</p> <p>✕ Southern Ute 703H, Pilot Hole, WP3 V0</p> |
|---|---|

Halliburton

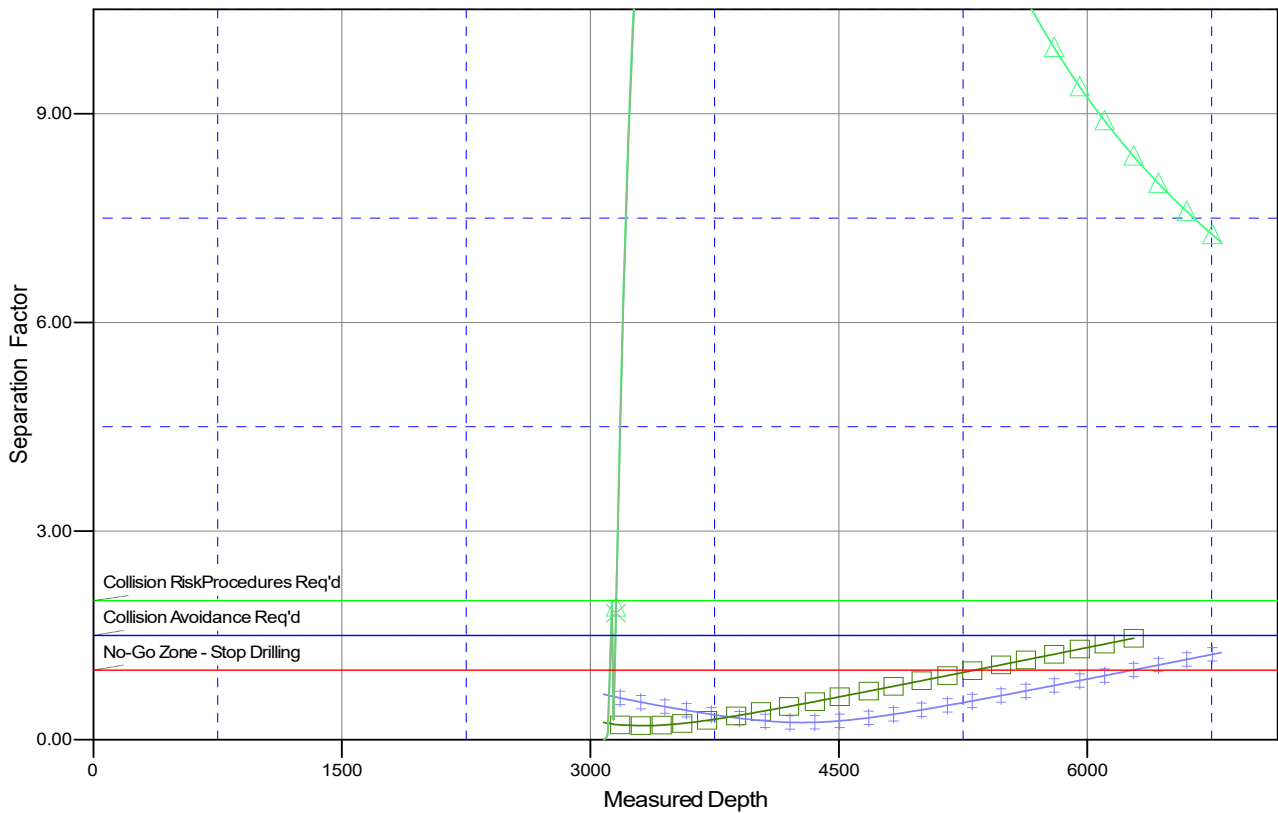
Anticollision Report

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Reference Well:	Southern Ute 703H	Survey Calculation Method:	Minimum Curvature
Well Error:	1.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral No.2	Database:	EDM 5000.17 Single User Db
Reference Design:	WP3	Offset TVD Reference:	Offset Datum

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 Offset Depths are relative to Offset Datum
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 Coordinate System is US State Plane 1927 (Exact solution), New Mexico West 30
 Grid Convergence at Surface is: 0.15°

Separation Factor Plot



LEGEND

- + Southern Ute 004, ST00, ST00 V0
- x Southern Ute 703H, Lateral No.1, WP3 V0
- Southern Ute 004E, ST00, ST00 V0
- x Southern Ute 703H, Pilot Hole, WP3 V0