

# **Hilcorp Energy Company**

**Farmington, NM**

**San Juan Basin**

**Southern Ute 703H**

**Lateral No.1**

**WP3**

## **Anticollision Report**

**05 April, 2023**

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	WP3		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 25.0usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	3,130.0 to 7,276.8usft	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum centre distance of 3,000.0usft	<b>Error Surface:</b>	Pedal Curve
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Through Borehole Radius

<b>Survey Tool Program</b>	<b>Date</b>	4/5/2023			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	3,130.0	WP3 (Pilot Hole)	3_MWD+HRGM	B001Mb: HRGM declination correction only	
3,130.0	7,276.8	WP3 (Lateral No.1)	3_MWD+HRGM	B001Mb: HRGM declination correction only	

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (usft)</b>	<b>Offset Measured Depth (usft)</b>	<b>Distance Between Centres (usft)</b>	<b>Separation Between Ellipses (usft)</b>	<b>Warning Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
San Juan Basin						
Southern Ute 004 - ST00 - ST00	4,317.7	2,904.2	420.8	-1,640.2	0.204	Collision RiskProcedures Req'd
Southern Ute 004 - ST00 - ST00	4,330.0	2,904.3	420.9	-1,640.3	0.204	Collision RiskProcedures Req'd
Southern Ute 004E - ST00 - ST00	3,552.6	2,894.7	182.2	-1,863.0	0.089	Collision RiskProcedures Req'd
Southern Ute 004E - ST00 - ST00	3,555.0	2,894.8	182.3	-1,863.0	0.089	Collision RiskProcedures Req'd
Southern Ute 703H - Pilot Hole - WP3	3,132.7	3,132.7	0.0	-2.4	0.001	Collision RiskProcedures Req'd
Southern Ute 703H - Pilot Hole - WP3	3,155.0	3,155.0	0.2	-2.4	0.083	Collision RiskProcedures Req'd

<b>Offset Design:</b>	San Juan Basin - Southern Ute 004 - ST00 - ST00										<b>Offset Site Error:</b>	5.0 usft
<b>Survey Program:</b>	5600-3_Blind										<b>Offset Well Error:</b>	1.0 usft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>		<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation</b>	<b>Separation Factor</b>	<b>Warning</b>		
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>	<b>Highside Toolface (°)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>	<b>Minimum Separation (usft)</b>	
3,130.0	2,821.8	2,821.8	2,821.8	15.5	1,970.0	42.97	-1,056.4	-1,607.8	1,243.3	-739.9	1,983.24	0.627 Collision RiskProcedures Req'd
3,155.0	2,832.2	2,832.2	2,832.2	15.7	1,977.2	43.16	-1,056.4	-1,607.8	1,222.2	-768.7	1,990.87	0.614 Collision RiskProcedures Req'd
3,180.0	2,842.3	2,842.3	2,842.3	16.0	1,984.3	43.39	-1,056.4	-1,607.8	1,200.8	-797.5	1,998.29	0.601 Collision RiskProcedures Req'd
3,189.2	2,846.0	2,846.0	2,846.0	16.1	1,986.9	43.49	-1,056.4	-1,607.8	1,192.9	-808.1	2,000.97	0.596 Collision RiskProcedures Req'd
3,200.0	2,850.2	2,850.2	2,850.2	16.2	1,989.8	44.90	-1,056.4	-1,607.8	1,183.6	-820.3	2,003.93	0.591 Collision RiskProcedures Req'd
3,205.0	2,852.1	2,852.1	2,852.1	16.2	1,991.1	45.58	-1,056.4	-1,607.8	1,179.3	-826.0	2,005.26	0.588 Collision RiskProcedures Req'd
3,230.0	2,860.9	2,860.9	2,860.9	16.4	1,997.3	49.17	-1,056.4	-1,607.8	1,157.4	-854.1	2,011.53	0.575 Collision RiskProcedures Req'd
3,250.0	2,867.4	2,867.4	2,867.4	16.5	2,001.8	52.27	-1,056.4	-1,607.8	1,139.8	-876.3	2,016.08	0.565 Collision RiskProcedures Req'd
3,255.0	2,868.9	2,868.9	2,868.9	16.6	2,002.8	53.08	-1,056.4	-1,607.8	1,135.4	-881.8	2,017.15	0.563 Collision RiskProcedures Req'd
3,280.0	2,875.9	2,875.9	2,875.9	16.8	2,007.7	57.33	-1,056.4	-1,607.8	1,113.1	-909.0	2,022.13	0.550 Collision RiskProcedures Req'd
3,300.0	2,880.8	2,880.8	2,880.8	17.0	2,011.2	60.94	-1,056.4	-1,607.8	1,095.2	-930.4	2,025.64	0.541 Collision RiskProcedures Req'd
3,305.0	2,881.9	2,881.9	2,881.9	17.0	2,012.0	61.87	-1,056.4	-1,607.8	1,090.7	-935.8	2,026.46	0.538 Collision RiskProcedures Req'd
3,330.0	2,887.0	2,887.0	2,887.0	17.3	2,015.5	66.66	-1,056.4	-1,607.8	1,068.2	-962.0	2,030.13	0.526 Collision RiskProcedures Req'd
3,350.0	2,890.4	2,890.4	2,890.4	17.4	2,017.9	70.61	-1,056.4	-1,607.8	1,050.1	-982.5	2,032.58	0.517 Collision RiskProcedures Req'd
3,355.0	2,891.2	2,891.2	2,891.2	17.5	2,018.4	71.62	-1,056.4	-1,607.8	1,045.5	-987.6	2,033.13	0.514 Collision RiskProcedures Req'd
3,380.0	2,894.3	2,894.3	2,894.3	17.8	2,020.6	76.65	-1,056.4	-1,607.8	1,022.9	-1,012.6	2,035.46	0.503 Collision RiskProcedures Req'd
3,400.0	2,896.2	2,896.2	2,896.2	18.0	2,021.9	80.67	-1,056.4	-1,607.8	1,004.8	-1,032.1	2,036.85	0.493 Collision RiskProcedures Req'd
3,405.0	2,896.5	2,896.5	2,896.5	18.0	2,022.1	81.67	-1,056.4	-1,607.8	1,000.2	-1,036.9	2,037.13	0.491 Collision RiskProcedures Req'd
3,430.0	2,897.7	2,897.7	2,897.7	18.3	2,023.0	86.56	-1,056.4	-1,607.8	977.6	-1,060.5	2,038.12	0.480 Collision RiskProcedures Req'd
3,443.7	2,898.0	2,898.0	2,898.0	18.4	2,023.1	89.15	-1,056.4	-1,607.8	965.3	-1,073.1	2,038.37	0.474 Collision RiskProcedures Req'd
3,455.0	2,898.0	2,898.0	2,898.0	18.6	2,023.2	89.16	-1,056.4	-1,607.8	955.1	-1,083.4	2,038.51	0.469 Collision RiskProcedures Req'd

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

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<b>Offset Design:</b> San Juan Basin - Southern Ute 004 - ST00 - ST00													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 5600-3_Blind													<b>Offset Well Error:</b> 1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
3,480.0	2,898.2	2,898.2	2,898.2	18.9	2,023.3	89.19	-1,056.4	-1,607.8	932.8	-1,106.0	2,038.81	0.458	Collision RiskProcedures Req'd
3,500.0	2,898.4	2,898.4	2,898.4	19.1	2,023.4	89.21	-1,056.4	-1,607.8	915.0	-1,124.1	2,039.05	0.449	Collision RiskProcedures Req'd
3,505.0	2,898.4	2,898.4	2,898.4	19.2	2,023.5	89.21	-1,056.4	-1,607.8	910.5	-1,128.6	2,039.12	0.447	Collision RiskProcedures Req'd
3,530.0	2,898.6	2,898.6	2,898.6	19.5	2,023.6	89.24	-1,056.4	-1,607.8	888.4	-1,151.0	2,039.45	0.436	Collision RiskProcedures Req'd
3,555.0	2,898.8	2,898.8	2,898.8	19.8	2,023.7	89.26	-1,056.4	-1,607.8	866.5	-1,173.3	2,039.80	0.425	Collision RiskProcedures Req'd
3,580.0	2,898.9	2,898.9	2,898.9	20.1	2,023.8	89.29	-1,056.4	-1,607.8	844.7	-1,195.4	2,040.16	0.414	Collision RiskProcedures Req'd
3,600.0	2,899.1	2,899.1	2,899.1	20.4	2,023.9	89.31	-1,056.4	-1,607.8	827.5	-1,213.0	2,040.46	0.406	Collision RiskProcedures Req'd
3,605.0	2,899.1	2,899.1	2,899.1	20.4	2,023.9	89.31	-1,056.4	-1,607.8	823.1	-1,217.4	2,040.54	0.403	Collision RiskProcedures Req'd
3,630.0	2,899.3	2,899.3	2,899.3	20.8	2,024.1	89.34	-1,056.4	-1,607.8	801.8	-1,239.2	2,040.95	0.393	Collision RiskProcedures Req'd
3,655.0	2,899.5	2,899.5	2,899.5	21.1	2,024.2	89.36	-1,056.4	-1,607.8	780.6	-1,260.8	2,041.38	0.382	Collision RiskProcedures Req'd
3,680.0	2,899.7	2,899.7	2,899.7	21.4	2,024.3	89.38	-1,056.4	-1,607.8	759.7	-1,282.2	2,041.83	0.372	Collision RiskProcedures Req'd
3,700.0	2,899.8	2,899.8	2,899.8	21.7	2,024.4	89.40	-1,056.4	-1,607.8	743.1	-1,299.1	2,042.20	0.364	Collision RiskProcedures Req'd
3,705.0	2,899.8	2,899.8	2,899.8	21.8	2,024.4	89.41	-1,056.4	-1,607.8	739.0	-1,303.3	2,042.30	0.362	Collision RiskProcedures Req'd
3,730.0	2,900.0	2,900.0	2,900.0	22.1	2,024.6	89.43	-1,056.4	-1,607.8	718.6	-1,324.2	2,042.81	0.352	Collision RiskProcedures Req'd
3,755.0	2,900.2	2,900.2	2,900.2	22.5	2,024.7	89.46	-1,056.4	-1,607.8	698.5	-1,344.9	2,043.35	0.342	Collision RiskProcedures Req'd
3,780.0	2,900.4	2,900.4	2,900.4	22.8	2,024.8	89.48	-1,056.4	-1,607.8	678.7	-1,365.2	2,043.91	0.332	Collision RiskProcedures Req'd
3,800.0	2,900.5	2,900.5	2,900.5	23.1	2,024.9	89.50	-1,056.4	-1,607.8	663.1	-1,381.3	2,044.38	0.324	Collision RiskProcedures Req'd
3,805.0	2,900.6	2,900.6	2,900.6	23.2	2,024.9	89.51	-1,056.4	-1,607.8	659.3	-1,385.2	2,044.50	0.322	Collision RiskProcedures Req'd
3,830.0	2,900.7	2,900.7	2,900.7	23.6	2,025.1	89.53	-1,056.4	-1,607.8	640.2	-1,404.9	2,045.13	0.313	Collision RiskProcedures Req'd
3,855.0	2,900.9	2,900.9	2,900.9	23.9	2,025.2	89.55	-1,056.4	-1,607.8	621.6	-1,424.2	2,045.79	0.304	Collision RiskProcedures Req'd
3,880.0	2,901.1	2,901.1	2,901.1	24.3	2,025.3	89.58	-1,056.4	-1,607.8	603.4	-1,443.1	2,046.49	0.295	Collision RiskProcedures Req'd
3,900.0	2,901.2	2,901.2	2,901.2	24.6	2,025.4	89.60	-1,056.4	-1,607.8	589.3	-1,457.8	2,047.07	0.288	Collision RiskProcedures Req'd
3,905.0	2,901.3	2,901.3	2,901.3	24.7	2,025.4	89.60	-1,056.4	-1,607.8	585.8	-1,461.4	2,047.22	0.286	Collision RiskProcedures Req'd
3,930.0	2,901.4	2,901.4	2,901.4	25.1	2,025.6	89.63	-1,056.4	-1,607.8	568.7	-1,479.3	2,047.99	0.278	Collision RiskProcedures Req'd
3,955.0	2,901.6	2,901.6	2,901.6	25.4	2,025.7	89.65	-1,056.4	-1,607.8	552.2	-1,496.6	2,048.80	0.270	Collision RiskProcedures Req'd
3,980.0	2,901.8	2,901.8	2,901.8	25.8	2,025.8	89.68	-1,056.4	-1,607.8	536.3	-1,513.3	2,049.63	0.262	Collision RiskProcedures Req'd
4,000.0	2,901.9	2,901.9	2,901.9	26.1	2,025.9	89.70	-1,056.4	-1,607.8	524.2	-1,526.2	2,050.32	0.256	Collision RiskProcedures Req'd
4,005.0	2,902.0	2,902.0	2,902.0	26.2	2,025.9	89.70	-1,056.4	-1,607.8	521.2	-1,529.3	2,050.50	0.254	Collision RiskProcedures Req'd
4,030.0	2,902.2	2,902.2	2,902.2	26.6	2,026.1	89.72	-1,056.4	-1,607.8	506.9	-1,544.5	2,051.40	0.247	Collision RiskProcedures Req'd
4,055.0	2,902.3	2,902.3	2,902.3	27.0	2,026.2	89.75	-1,056.4	-1,607.8	493.4	-1,559.0	2,052.32	0.240	Collision RiskProcedures Req'd
4,080.0	2,902.5	2,902.5	2,902.5	27.4	2,026.3	89.77	-1,056.4	-1,607.8	480.8	-1,572.5	2,053.25	0.234	Collision RiskProcedures Req'd
4,100.0	2,902.7	2,902.7	2,902.7	27.7	2,026.4	89.79	-1,056.4	-1,607.8	471.4	-1,582.6	2,054.00	0.230	Collision RiskProcedures Req'd
4,105.0	2,902.7	2,902.7	2,902.7	27.8	2,026.4	89.80	-1,056.4	-1,607.8	469.2	-1,585.0	2,054.19	0.228	Collision RiskProcedures Req'd
4,130.0	2,902.9	2,902.9	2,902.9	28.2	2,026.6	89.82	-1,056.4	-1,607.8	458.7	-1,596.4	2,055.14	0.223	Collision RiskProcedures Req'd
4,155.0	2,903.1	2,903.1	2,903.1	28.6	2,026.7	89.85	-1,056.4	-1,607.8	449.4	-1,606.7	2,056.07	0.219	Collision RiskProcedures Req'd
4,180.0	2,903.2	2,903.2	2,903.2	29.0	2,026.8	89.87	-1,056.4	-1,607.8	441.2	-1,615.8	2,056.98	0.214	Collision RiskProcedures Req'd
4,200.0	2,903.4	2,903.4	2,903.4	29.3	2,026.9	89.89	-1,056.4	-1,607.8	435.6	-1,622.0	2,057.67	0.212	Collision RiskProcedures Req'd
4,205.0	2,903.4	2,903.4	2,903.4	29.4	2,026.9	89.90	-1,056.4	-1,607.8	434.4	-1,623.5	2,057.84	0.211	Collision RiskProcedures Req'd
4,230.0	2,903.6	2,903.6	2,903.6	29.8	2,027.1	89.92	-1,056.4	-1,607.8	428.9	-1,629.8	2,058.67	0.208	Collision RiskProcedures Req'd
4,255.0	2,903.8	2,903.8	2,903.8	30.2	2,027.2	89.94	-1,056.4	-1,607.8	424.8	-1,634.6	2,059.43	0.206	Collision RiskProcedures Req'd
4,280.0	2,904.0	2,904.0	2,904.0	30.6	2,027.3	89.97	-1,056.4	-1,607.8	422.1	-1,638.0	2,060.11	0.205	Collision RiskProcedures Req'd
4,298.7	2,904.1	2,904.1	2,904.1	31.0	2,027.4	89.99	-1,056.4	-1,607.8	421.1	-1,639.5	2,060.56	0.204	Collision RiskProcedures Req'd
4,300.0	2,904.1	2,904.1	2,904.1	31.0	2,027.4	89.99	-1,056.4	-1,607.8	421.1	-1,639.5	2,060.59	0.204	Collision RiskProcedures Req'd
4,305.0	2,904.1	2,904.1	2,904.1	31.1	2,027.4	89.99	-1,056.4	-1,607.8	420.9	-1,639.8	2,060.71	0.204	Collision RiskProcedures Req'd
4,317.7	2,904.2	2,904.2	2,904.2	31.3	2,027.5	90.00	-1,056.4	-1,607.8	420.8	-1,640.2	2,060.98	0.204	Collision RiskProcedures Req'd, CC, S
4,330.0	2,904.3	2,904.3	2,904.3	31.5	2,027.6	90.01	-1,056.4	-1,607.8	420.9	-1,640.3	2,061.22	0.204	Collision RiskProcedures Req'd, ES
4,355.0	2,904.5	2,904.5	2,904.5	31.9	2,027.7	90.03	-1,056.4	-1,607.8	422.0	-1,639.6	2,061.64	0.205	Collision RiskProcedures Req'd
4,380.0	2,904.7	2,904.7	2,904.7	32.3	2,027.8	90.04	-1,056.4	-1,607.8	424.1	-1,637.8	2,061.96	0.206	Collision RiskProcedures Req'd
4,400.0	2,904.8	2,904.8	2,904.8	32.7	2,027.9	90.06	-1,056.4	-1,607.8	426.6	-1,635.6	2,062.15	0.207	Collision RiskProcedures Req'd
4,405.0	2,904.8	2,904.8	2,904.8	32.8	2,027.9	90.06	-1,056.4	-1,607.8	427.3	-1,634.9	2,062.19	0.207	Collision RiskProcedures Req'd
4,430.0	2,905.0	2,905.0	2,905.0	33.2	2,028.1	90.08	-1,056.4	-1,607.8	431.5	-1,630.8	2,062.33	0.209	Collision RiskProcedures Req'd
4,455.0	2,905.2	2,905.2	2,905.2	33.6	2,028.2	90.10	-1,056.4	-1,607.8	436.7	-1,625.7	2,062.39	0.212	Collision RiskProcedures Req'd

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

**Halliburton**  
**Anticollision Report**

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004 - ST00 - ST00													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 5600-3_Blind													<b>Offset Well Error:</b> 1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
4,480.0	2,905.4	2,905.4	2,905.4	34.1	2,028.3	90.11	-1,056.4	-1,607.8	442.9	-1,619.5	2,062.36	0.215	Collision RiskProcedures Req'd
4,500.0	2,905.5	2,905.5	2,905.5	34.4	2,028.4	90.13	-1,056.4	-1,607.8	448.5	-1,613.8	2,062.28	0.217	Collision RiskProcedures Req'd
4,505.0	2,905.6	2,905.6	2,905.6	34.5	2,028.4	90.13	-1,056.4	-1,607.8	450.0	-1,612.3	2,062.26	0.218	Collision RiskProcedures Req'd
4,530.0	2,905.7	2,905.7	2,905.7	35.0	2,028.6	90.15	-1,056.4	-1,607.8	457.9	-1,604.2	2,062.10	0.222	Collision RiskProcedures Req'd
4,555.0	2,905.9	2,905.9	2,905.9	35.4	2,028.7	90.16	-1,056.4	-1,607.8	466.7	-1,595.2	2,061.88	0.226	Collision RiskProcedures Req'd
4,580.0	2,906.1	2,906.1	2,906.1	35.9	2,028.8	90.18	-1,056.4	-1,607.8	476.2	-1,585.4	2,061.60	0.231	Collision RiskProcedures Req'd
4,600.0	2,906.2	2,906.2	2,906.2	36.2	2,028.9	90.19	-1,056.4	-1,607.8	484.4	-1,576.9	2,061.35	0.235	Collision RiskProcedures Req'd
4,605.0	2,906.3	2,906.3	2,906.3	36.3	2,028.9	90.19	-1,056.4	-1,607.8	486.5	-1,574.8	2,061.28	0.236	Collision RiskProcedures Req'd
4,630.0	2,906.5	2,906.5	2,906.5	36.8	2,029.1	90.21	-1,056.4	-1,607.8	497.5	-1,563.4	2,060.95	0.241	Collision RiskProcedures Req'd
4,655.0	2,906.6	2,906.6	2,906.6	37.2	2,029.2	90.22	-1,056.4	-1,607.8	509.1	-1,551.5	2,060.57	0.247	Collision RiskProcedures Req'd
4,680.0	2,906.8	2,906.8	2,906.8	37.7	2,029.3	90.23	-1,056.4	-1,607.8	521.3	-1,538.9	2,060.17	0.253	Collision RiskProcedures Req'd
4,700.0	2,907.0	2,907.0	2,907.0	38.1	2,029.4	90.24	-1,056.4	-1,607.8	531.4	-1,528.4	2,059.83	0.258	Collision RiskProcedures Req'd
4,705.0	2,907.0	2,907.0	2,907.0	38.2	2,029.4	90.25	-1,056.4	-1,607.8	534.0	-1,525.7	2,059.75	0.259	Collision RiskProcedures Req'd
4,730.0	2,907.2	2,907.2	2,907.2	38.6	2,029.6	90.26	-1,056.4	-1,607.8	547.3	-1,512.1	2,059.33	0.266	Collision RiskProcedures Req'd
4,755.0	2,907.3	2,907.3	2,907.3	39.1	2,029.7	90.27	-1,056.4	-1,607.8	561.0	-1,497.9	2,058.91	0.272	Collision RiskProcedures Req'd
4,780.0	2,907.5	2,907.5	2,907.5	39.6	2,029.8	90.28	-1,056.4	-1,607.8	575.1	-1,483.3	2,058.47	0.279	Collision RiskProcedures Req'd
4,800.0	2,907.7	2,907.7	2,907.7	39.9	2,029.9	90.29	-1,056.4	-1,607.8	586.7	-1,471.4	2,058.11	0.285	Collision RiskProcedures Req'd
4,805.0	2,907.7	2,907.7	2,907.7	40.0	2,029.9	90.29	-1,056.4	-1,607.8	589.7	-1,468.4	2,058.03	0.287	Collision RiskProcedures Req'd
4,830.0	2,907.9	2,907.9	2,907.9	40.5	2,030.1	90.30	-1,056.4	-1,607.8	604.5	-1,453.1	2,057.61	0.294	Collision RiskProcedures Req'd
4,855.0	2,908.0	2,908.0	2,908.0	41.0	2,030.2	90.31	-1,056.4	-1,607.8	619.8	-1,437.4	2,057.18	0.301	Collision RiskProcedures Req'd
4,880.0	2,908.2	2,908.2	2,908.2	41.4	2,030.3	90.32	-1,056.4	-1,607.8	635.3	-1,421.5	2,056.76	0.309	Collision RiskProcedures Req'd
4,900.0	2,908.4	2,908.4	2,908.4	41.8	2,030.4	90.32	-1,056.4	-1,607.8	647.9	-1,408.5	2,056.42	0.315	Collision RiskProcedures Req'd
4,905.0	2,908.4	2,908.4	2,908.4	41.9	2,030.4	90.32	-1,056.4	-1,607.8	651.1	-1,405.2	2,056.34	0.317	Collision RiskProcedures Req'd
4,930.0	2,908.6	2,908.6	2,908.6	42.4	2,030.5	90.33	-1,056.4	-1,607.8	667.2	-1,388.8	2,055.95	0.325	Collision RiskProcedures Req'd
4,955.0	2,908.7	2,908.7	2,908.7	42.9	2,030.7	90.34	-1,056.4	-1,607.8	683.5	-1,372.1	2,055.57	0.332	Collision RiskProcedures Req'd
4,980.0	2,908.9	2,908.9	2,908.9	43.4	2,030.8	90.34	-1,056.4	-1,607.8	700.0	-1,355.2	2,055.18	0.341	Collision RiskProcedures Req'd
5,000.0	2,909.0	2,909.0	2,909.0	43.7	2,030.9	90.35	-1,056.4	-1,607.8	713.3	-1,341.5	2,054.88	0.347	Collision RiskProcedures Req'd
5,005.0	2,909.1	2,909.1	2,909.1	43.8	2,030.9	90.35	-1,056.4	-1,607.8	716.7	-1,338.1	2,054.81	0.349	Collision RiskProcedures Req'd
5,030.0	2,909.2	2,909.2	2,909.2	44.3	2,031.0	90.35	-1,056.4	-1,607.8	733.6	-1,320.9	2,054.46	0.357	Collision RiskProcedures Req'd
5,055.0	2,909.4	2,909.4	2,909.4	44.8	2,031.1	90.36	-1,056.4	-1,607.8	750.6	-1,303.5	2,054.12	0.365	Collision RiskProcedures Req'd
5,080.0	2,909.6	2,909.6	2,909.6	45.3	2,031.2	90.36	-1,056.4	-1,607.8	767.8	-1,286.0	2,053.79	0.374	Collision RiskProcedures Req'd
5,100.0	2,909.7	2,909.7	2,909.7	45.7	2,031.3	90.36	-1,056.4	-1,607.8	781.6	-1,271.9	2,053.53	0.381	Collision RiskProcedures Req'd
5,105.0	2,909.7	2,909.7	2,909.7	45.8	2,031.4	90.36	-1,056.4	-1,607.8	785.1	-1,268.4	2,053.47	0.382	Collision RiskProcedures Req'd
5,130.0	2,909.9	2,909.9	2,909.9	46.2	2,031.5	90.36	-1,056.4	-1,607.8	802.5	-1,250.7	2,053.18	0.391	Collision RiskProcedures Req'd
5,155.0	2,910.0	2,910.0	2,910.0	46.7	2,031.6	90.36	-1,056.4	-1,607.8	820.1	-1,232.8	2,052.89	0.399	Collision RiskProcedures Req'd
5,180.0	2,910.2	2,910.2	2,910.2	47.2	2,031.7	90.36	-1,056.4	-1,607.8	837.7	-1,214.9	2,052.61	0.408	Collision RiskProcedures Req'd
5,200.0	2,910.3	2,910.3	2,910.3	47.6	2,031.8	90.36	-1,056.4	-1,607.8	851.8	-1,200.5	2,052.39	0.415	Collision RiskProcedures Req'd
5,205.0	2,910.4	2,910.4	2,910.4	47.7	2,031.8	90.36	-1,056.4	-1,607.8	855.4	-1,196.9	2,052.34	0.417	Collision RiskProcedures Req'd
5,230.0	2,910.5	2,910.5	2,910.5	48.1	2,031.9	90.36	-1,056.4	-1,607.8	873.2	-1,178.9	2,052.10	0.426	Collision RiskProcedures Req'd
5,255.0	2,910.7	2,910.7	2,910.7	48.6	2,032.0	90.36	-1,056.4	-1,607.8	891.0	-1,160.8	2,051.87	0.434	Collision RiskProcedures Req'd
5,280.0	2,910.8	2,910.8	2,910.8	49.1	2,032.1	90.36	-1,056.4	-1,607.8	908.9	-1,142.7	2,051.64	0.443	Collision RiskProcedures Req'd
5,300.0	2,911.0	2,911.0	2,911.0	49.5	2,032.2	90.36	-1,056.4	-1,607.8	923.3	-1,128.2	2,051.46	0.450	Collision RiskProcedures Req'd
5,305.0	2,911.0	2,911.0	2,911.0	49.6	2,032.2	90.36	-1,056.4	-1,607.8	926.9	-1,124.5	2,051.42	0.452	Collision RiskProcedures Req'd
5,330.0	2,911.1	2,911.1	2,911.1	50.0	2,032.3	90.36	-1,056.4	-1,607.8	944.9	-1,106.3	2,051.24	0.461	Collision RiskProcedures Req'd
5,355.0	2,911.3	2,911.3	2,911.3	50.5	2,032.4	90.35	-1,056.4	-1,607.8	962.9	-1,088.1	2,051.06	0.469	Collision RiskProcedures Req'd
5,380.0	2,911.4	2,911.4	2,911.4	51.0	2,032.5	90.35	-1,056.4	-1,607.8	981.0	-1,069.9	2,050.88	0.478	Collision RiskProcedures Req'd
5,400.0	2,911.5	2,911.5	2,911.5	51.4	2,032.6	90.35	-1,056.4	-1,607.8	995.5	-1,055.3	2,050.74	0.485	Collision RiskProcedures Req'd
5,405.0	2,911.6	2,911.6	2,911.6	51.4	2,032.6	90.35	-1,056.4	-1,607.8	999.1	-1,051.6	2,050.71	0.487	Collision RiskProcedures Req'd
5,430.0	2,911.7	2,911.7	2,911.7	51.9	2,032.7	90.34	-1,056.4	-1,607.8	1,017.2	-1,033.4	2,050.58	0.496	Collision RiskProcedures Req'd
5,455.0	2,911.9	2,911.9	2,911.9	52.4	2,032.8	90.34	-1,056.4	-1,607.8	1,035.3	-1,015.2	2,050.44	0.505	Collision RiskProcedures Req'd
5,480.0	2,912.0	2,912.0	2,912.0	52.8	2,032.9	90.34	-1,056.4	-1,607.8	1,053.4	-996.9	2,050.31	0.514	Collision RiskProcedures Req'd
5,481.2	2,912.0	2,912.0	2,912.0	52.9	2,032.9	90.34	-1,056.4	-1,607.8	1,054.3	-996.0	2,050.31	0.514	Collision RiskProcedures Req'd

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

**Halliburton**  
**Anticollision Report**

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004 - ST00 - ST00												<b>Offset Site Error:</b>	5.0 usft
<b>Survey Program:</b> 5600-3_Blind												<b>Offset Well Error:</b>	1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
5,500.0	2,912.1	2,912.1	2,912.1	53.2	2,033.0	90.34	-1,056.4	-1,607.8	1,068.0	-982.3	2,050.23	0.521	Collision RiskProcedures Req'd
5,505.0	2,912.1	2,912.1	2,912.1	53.3	2,033.0	90.35	-1,056.4	-1,607.8	1,071.6	-978.6	2,050.21	0.523	Collision RiskProcedures Req'd
5,530.0	2,912.3	2,912.3	2,912.3	53.8	2,033.1	90.36	-1,056.4	-1,607.8	1,090.1	-960.0	2,050.13	0.532	Collision RiskProcedures Req'd
5,555.0	2,912.4	2,912.4	2,912.4	54.2	2,033.2	90.37	-1,056.4	-1,607.8	1,108.9	-941.2	2,050.06	0.541	Collision RiskProcedures Req'd
5,580.0	2,912.6	2,912.6	2,912.6	54.7	2,033.3	90.38	-1,056.4	-1,607.8	1,127.9	-922.1	2,050.01	0.550	Collision RiskProcedures Req'd
5,600.0	2,912.7	2,912.7	2,912.7	55.1	2,033.4	90.39	-1,056.4	-1,607.8	1,143.3	-906.7	2,049.97	0.558	Collision RiskProcedures Req'd
5,605.0	2,912.7	2,912.7	2,912.7	55.2	2,033.4	90.39	-1,056.4	-1,607.8	1,147.1	-902.8	2,049.96	0.560	Collision RiskProcedures Req'd
5,630.0	2,912.8	2,912.8	2,912.8	55.7	2,033.5	90.40	-1,056.4	-1,607.8	1,166.6	-883.4	2,049.95	0.569	Collision RiskProcedures Req'd
5,655.0	2,913.0	2,913.0	2,913.0	56.1	2,033.6	90.41	-1,056.4	-1,607.8	1,186.3	-863.7	2,049.94	0.579	Collision RiskProcedures Req'd
5,680.0	2,913.1	2,913.1	2,913.1	56.6	2,033.7	90.42	-1,056.4	-1,607.8	1,206.1	-843.8	2,049.93	0.588	Collision RiskProcedures Req'd
5,700.0	2,913.2	2,913.2	2,913.2	57.0	2,033.8	90.43	-1,056.4	-1,607.8	1,222.1	-827.8	2,049.94	0.596	Collision RiskProcedures Req'd
5,705.0	2,913.3	2,913.3	2,913.3	57.1	2,033.8	90.43	-1,056.4	-1,607.8	1,226.2	-823.8	2,049.94	0.598	Collision RiskProcedures Req'd
5,730.0	2,913.4	2,913.4	2,913.4	57.6	2,033.9	90.44	-1,056.4	-1,607.8	1,246.4	-803.6	2,049.97	0.608	Collision RiskProcedures Req'd
5,755.0	2,913.5	2,913.5	2,913.5	58.1	2,034.0	90.46	-1,056.4	-1,607.8	1,266.8	-783.2	2,050.01	0.618	Collision RiskProcedures Req'd
5,780.0	2,913.7	2,913.7	2,913.7	58.6	2,034.1	90.47	-1,056.4	-1,607.8	1,287.3	-762.7	2,050.05	0.628	Collision RiskProcedures Req'd
5,800.0	2,913.8	2,913.8	2,913.8	59.0	2,034.2	90.48	-1,056.4	-1,607.8	1,303.9	-746.2	2,050.08	0.636	Collision RiskProcedures Req'd
5,805.0	2,913.8	2,913.8	2,913.8	59.1	2,034.2	90.48	-1,056.4	-1,607.8	1,308.1	-742.0	2,050.10	0.638	Collision RiskProcedures Req'd
5,830.0	2,913.9	2,913.9	2,913.9	59.5	2,034.3	90.49	-1,056.4	-1,607.8	1,328.9	-721.3	2,050.16	0.648	Collision RiskProcedures Req'd
5,855.0	2,914.1	2,914.1	2,914.1	60.0	2,034.4	90.50	-1,056.4	-1,607.8	1,349.9	-700.3	2,050.23	0.658	Collision RiskProcedures Req'd
5,880.0	2,914.2	2,914.2	2,914.2	60.5	2,034.5	90.51	-1,056.4	-1,607.8	1,371.0	-679.3	2,050.31	0.669	Collision RiskProcedures Req'd
5,900.0	2,914.3	2,914.3	2,914.3	60.9	2,034.6	90.52	-1,056.4	-1,607.8	1,388.0	-662.3	2,050.37	0.677	Collision RiskProcedures Req'd
5,905.0	2,914.4	2,914.4	2,914.4	61.0	2,034.6	90.52	-1,056.4	-1,607.8	1,392.3	-658.1	2,050.39	0.679	Collision RiskProcedures Req'd
5,930.0	2,914.5	2,914.5	2,914.5	61.5	2,034.7	90.53	-1,056.4	-1,607.8	1,413.7	-636.8	2,050.48	0.689	Collision RiskProcedures Req'd
5,955.0	2,914.6	2,914.6	2,914.6	62.0	2,034.8	90.54	-1,056.4	-1,607.8	1,435.2	-615.4	2,050.57	0.700	Collision RiskProcedures Req'd
5,980.0	2,914.8	2,914.8	2,914.8	62.5	2,034.9	90.55	-1,056.4	-1,607.8	1,456.8	-593.9	2,050.67	0.710	Collision RiskProcedures Req'd
6,000.0	2,914.9	2,914.9	2,914.9	63.0	2,035.0	90.56	-1,056.4	-1,607.8	1,474.2	-576.6	2,050.75	0.719	Collision RiskProcedures Req'd
6,005.0	2,914.9	2,914.9	2,914.9	63.1	2,035.0	90.57	-1,056.4	-1,607.8	1,478.5	-572.2	2,050.77	0.721	Collision RiskProcedures Req'd
6,030.0	2,915.1	2,915.1	2,915.1	63.6	2,035.1	90.58	-1,056.4	-1,607.8	1,500.4	-550.5	2,050.88	0.732	Collision RiskProcedures Req'd
6,055.0	2,915.2	2,915.2	2,915.2	64.1	2,035.2	90.59	-1,056.4	-1,607.8	1,522.3	-528.7	2,051.00	0.742	Collision RiskProcedures Req'd
6,080.0	2,915.3	2,915.3	2,915.3	64.6	2,035.3	90.60	-1,056.4	-1,607.8	1,544.3	-506.8	2,051.11	0.753	Collision RiskProcedures Req'd
6,100.0	2,915.5	2,915.5	2,915.5	65.0	2,035.3	90.61	-1,056.4	-1,607.8	1,562.0	-489.2	2,051.20	0.761	Collision RiskProcedures Req'd
6,105.0	2,915.5	2,915.5	2,915.5	65.1	2,035.4	90.61	-1,056.4	-1,607.8	1,566.4	-484.8	2,051.23	0.764	Collision RiskProcedures Req'd
6,130.0	2,915.6	2,915.6	2,915.6	65.6	2,035.5	90.62	-1,056.4	-1,607.8	1,588.6	-462.8	2,051.35	0.774	Collision RiskProcedures Req'd
6,155.0	2,915.8	2,915.8	2,915.8	66.1	2,035.6	90.63	-1,056.4	-1,607.8	1,610.9	-440.6	2,051.48	0.785	Collision RiskProcedures Req'd
6,180.0	2,915.9	2,915.9	2,915.9	66.7	2,035.7	90.64	-1,056.4	-1,607.8	1,633.2	-418.4	2,051.61	0.796	Collision RiskProcedures Req'd
6,200.0	2,916.0	2,916.0	2,916.0	67.1	2,035.7	90.65	-1,056.4	-1,607.8	1,651.1	-400.6	2,051.71	0.805	Collision RiskProcedures Req'd
6,205.0	2,916.0	2,916.0	2,916.0	67.2	2,035.8	90.65	-1,056.4	-1,607.8	1,655.6	-396.1	2,051.73	0.807	Collision RiskProcedures Req'd
6,230.0	2,916.2	2,916.2	2,916.2	67.7	2,035.9	90.66	-1,056.4	-1,607.8	1,678.1	-373.7	2,051.87	0.818	Collision RiskProcedures Req'd
6,255.0	2,916.3	2,916.3	2,916.3	68.2	2,036.0	90.67	-1,056.4	-1,607.8	1,700.7	-351.3	2,052.00	0.829	Collision RiskProcedures Req'd
6,280.0	2,916.5	2,916.5	2,916.5	68.7	2,036.0	90.69	-1,056.4	-1,607.8	1,723.3	-328.8	2,052.14	0.840	Collision RiskProcedures Req'd
6,300.0	2,916.6	2,916.6	2,916.6	69.2	2,036.1	90.69	-1,056.4	-1,607.8	1,741.5	-310.7	2,052.24	0.849	Collision RiskProcedures Req'd
6,305.0	2,916.6	2,916.6	2,916.6	69.3	2,036.1	90.70	-1,056.4	-1,607.8	1,746.0	-306.2	2,052.27	0.851	Collision RiskProcedures Req'd
6,330.0	2,916.7	2,916.7	2,916.7	69.8	2,036.2	90.71	-1,056.4	-1,607.8	1,768.8	-283.6	2,052.41	0.862	Collision RiskProcedures Req'd
6,355.0	2,916.9	2,916.9	2,916.9	70.3	2,036.3	90.72	-1,056.4	-1,607.8	1,791.6	-260.9	2,052.55	0.873	Collision RiskProcedures Req'd
6,380.0	2,917.0	2,917.0	2,917.0	70.9	2,036.4	90.73	-1,056.4	-1,607.8	1,814.5	-238.2	2,052.69	0.884	Collision RiskProcedures Req'd
6,400.0	2,917.1	2,917.1	2,917.1	71.3	2,036.5	90.74	-1,056.4	-1,607.8	1,832.8	-220.0	2,052.80	0.893	Collision RiskProcedures Req'd
6,405.0	2,917.1	2,917.1	2,917.1	71.4	2,036.5	90.74	-1,056.4	-1,607.8	1,837.4	-215.4	2,052.83	0.895	Collision RiskProcedures Req'd
6,430.0	2,917.3	2,917.3	2,917.3	71.9	2,036.6	90.75	-1,056.4	-1,607.8	1,860.4	-192.5	2,052.97	0.906	Collision RiskProcedures Req'd
6,455.0	2,917.4	2,917.4	2,917.4	72.5	2,036.7	90.76	-1,056.4	-1,607.8	1,883.5	-169.7	2,053.12	0.917	Collision RiskProcedures Req'd
6,480.0	2,917.6	2,917.6	2,917.6	73.0	2,036.8	90.77	-1,056.4	-1,607.8	1,906.6	-146.7	2,053.26	0.929	Collision RiskProcedures Req'd
6,500.0	2,917.7	2,917.7	2,917.7	73.4	2,036.9	90.78	-1,056.4	-1,607.8	1,925.1	-128.3	2,053.37	0.938	Collision RiskProcedures Req'd
6,505.0	2,917.7	2,917.7	2,917.7	73.5	2,036.9	90.78	-1,056.4	-1,607.8	1,929.7	-123.7	2,053.40	0.940	Collision RiskProcedures Req'd

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

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004 - ST00 - ST00													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 5600-3_Blind													<b>Offset Well Error:</b> 1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
6,530.0	2,917.8	2,917.8	2,917.8	74.1	2,037.0	90.80	-1,056.4	-1,607.8	1,952.9	-100.7	2,053.55	0.951	Collision RiskProcedures Req'd
6,555.0	2,918.0	2,918.0	2,918.0	74.6	2,037.1	90.81	-1,056.4	-1,607.8	1,976.1	-77.6	2,053.69	0.962	Collision RiskProcedures Req'd
6,580.0	2,918.1	2,918.1	2,918.1	75.1	2,037.2	90.82	-1,056.4	-1,607.8	1,999.4	-54.5	2,053.84	0.973	Collision RiskProcedures Req'd
6,600.0	2,918.2	2,918.2	2,918.2	75.6	2,037.3	90.83	-1,056.4	-1,607.8	2,018.0	-35.9	2,053.95	0.983	Collision RiskProcedures Req'd
6,605.0	2,918.3	2,918.3	2,918.3	75.7	2,037.3	90.83	-1,056.4	-1,607.8	2,022.7	-31.3	2,053.98	0.985	Collision RiskProcedures Req'd
6,630.0	2,918.4	2,918.4	2,918.4	76.2	2,037.4	90.84	-1,056.4	-1,607.8	2,046.0	-8.1	2,054.13	0.996	Collision RiskProcedures Req'd
6,655.0	2,918.5	2,918.5	2,918.5	76.8	2,037.5	90.85	-1,056.4	-1,607.8	2,069.4	15.1	2,054.27	1.007	Collision RiskProcedures Req'd
6,680.0	2,918.7	2,918.7	2,918.7	77.3	2,037.6	90.86	-1,056.4	-1,607.8	2,092.8	38.4	2,054.42	1.019	Collision RiskProcedures Req'd
6,700.0	2,918.8	2,918.8	2,918.8	77.8	2,037.7	90.87	-1,056.4	-1,607.8	2,111.6	57.1	2,054.53	1.028	Collision RiskProcedures Req'd
6,705.0	2,918.8	2,918.8	2,918.8	77.9	2,037.7	90.87	-1,056.4	-1,607.8	2,116.3	61.7	2,054.56	1.030	Collision RiskProcedures Req'd
6,730.0	2,919.0	2,919.0	2,919.0	78.4	2,037.8	90.88	-1,056.4	-1,607.8	2,139.8	85.1	2,054.71	1.041	Collision RiskProcedures Req'd
6,755.0	2,919.1	2,919.1	2,919.1	79.0	2,037.9	90.89	-1,056.4	-1,607.8	2,163.3	108.5	2,054.85	1.053	Collision RiskProcedures Req'd
6,780.0	2,919.2	2,919.2	2,919.2	79.5	2,038.0	90.91	-1,056.4	-1,607.8	2,186.9	131.9	2,055.00	1.064	Collision RiskProcedures Req'd
6,800.0	2,919.3	2,919.3	2,919.3	79.9	2,038.1	90.91	-1,056.4	-1,607.8	2,205.8	150.7	2,055.11	1.073	Collision RiskProcedures Req'd
6,805.0	2,919.4	2,919.4	2,919.4	80.0	2,038.1	90.92	-1,056.4	-1,607.8	2,210.5	155.4	2,055.14	1.076	Collision RiskProcedures Req'd
6,830.0	2,919.5	2,919.5	2,919.5	80.6	2,038.2	90.93	-1,056.4	-1,607.8	2,234.1	178.8	2,055.29	1.087	Collision RiskProcedures Req'd
6,855.0	2,919.7	2,919.7	2,919.7	81.1	2,038.3	90.94	-1,056.4	-1,607.8	2,257.8	202.3	2,055.43	1.098	Collision RiskProcedures Req'd
6,880.0	2,919.8	2,919.8	2,919.8	81.7	2,038.4	90.95	-1,056.4	-1,607.8	2,281.5	225.9	2,055.58	1.110	Collision RiskProcedures Req'd
6,900.0	2,919.9	2,919.9	2,919.9	82.1	2,038.5	90.96	-1,056.4	-1,607.8	2,300.4	244.7	2,055.69	1.119	Collision RiskProcedures Req'd
6,905.0	2,919.9	2,919.9	2,919.9	82.3	2,038.5	90.96	-1,056.4	-1,607.8	2,305.2	249.4	2,055.72	1.121	Collision RiskProcedures Req'd
6,930.0	2,920.1	2,920.1	2,920.1	82.8	2,038.6	90.97	-1,056.4	-1,607.8	2,328.9	273.0	2,055.87	1.133	Collision RiskProcedures Req'd
6,955.0	2,920.2	2,920.2	2,920.2	83.4	2,038.7	90.98	-1,056.4	-1,607.8	2,352.7	296.7	2,056.01	1.144	Collision RiskProcedures Req'd
6,980.0	2,920.3	2,920.3	2,920.3	83.9	2,038.8	90.99	-1,056.4	-1,607.8	2,376.5	320.3	2,056.15	1.156	Collision RiskProcedures Req'd
7,000.0	2,920.5	2,920.5	2,920.5	84.4	2,038.8	91.00	-1,056.4	-1,607.8	2,395.5	339.2	2,056.27	1.165	Collision RiskProcedures Req'd
7,005.0	2,920.5	2,920.5	2,920.5	84.5	2,038.9	91.00	-1,056.4	-1,607.8	2,400.3	344.0	2,056.30	1.167	Collision RiskProcedures Req'd
7,030.0	2,920.6	2,920.6	2,920.6	85.0	2,039.0	91.01	-1,056.4	-1,607.8	2,424.1	367.7	2,056.44	1.179	Collision RiskProcedures Req'd
7,055.0	2,920.8	2,920.8	2,920.8	85.6	2,039.1	91.03	-1,056.4	-1,607.8	2,448.0	391.4	2,056.59	1.190	Collision RiskProcedures Req'd
7,080.0	2,920.9	2,920.9	2,920.9	86.1	2,039.2	91.04	-1,056.4	-1,607.8	2,471.9	415.1	2,056.73	1.202	Collision RiskProcedures Req'd
7,100.0	2,921.0	2,921.0	2,921.0	86.6	2,039.2	91.05	-1,056.4	-1,607.8	2,491.0	434.1	2,056.84	1.211	Collision RiskProcedures Req'd
7,105.0	2,921.0	2,921.0	2,921.0	86.7	2,039.3	91.05	-1,056.4	-1,607.8	2,495.8	438.9	2,056.87	1.213	Collision RiskProcedures Req'd
7,130.0	2,921.2	2,921.2	2,921.2	87.3	2,039.4	91.06	-1,056.4	-1,607.8	2,519.7	462.7	2,057.01	1.225	Collision RiskProcedures Req'd
7,155.0	2,921.3	2,921.3	2,921.3	87.8	2,039.4	91.07	-1,056.4	-1,607.8	2,543.6	486.5	2,057.16	1.236	Collision RiskProcedures Req'd
7,180.0	2,921.5	2,921.5	2,921.5	88.4	2,039.5	91.08	-1,056.4	-1,607.8	2,567.6	510.3	2,057.30	1.248	Collision RiskProcedures Req'd
7,200.0	2,921.6	2,921.6	2,921.6	88.8	2,039.6	91.09	-1,056.4	-1,607.8	2,586.8	529.4	2,057.41	1.257	Collision RiskProcedures Req'd
7,205.0	2,921.6	2,921.6	2,921.6	88.9	2,039.6	91.09	-1,056.4	-1,607.8	2,591.6	534.2	2,057.44	1.260	Collision RiskProcedures Req'd
7,230.0	2,921.7	2,921.7	2,921.7	89.5	2,039.7	91.10	-1,056.4	-1,607.8	2,615.6	558.0	2,057.58	1.271	Collision RiskProcedures Req'd
7,255.0	2,921.9	2,921.9	2,921.9	90.1	2,039.8	91.11	-1,056.4	-1,607.8	2,639.6	581.9	2,057.72	1.283	Collision RiskProcedures Req'd
7,276.8	2,922.0	2,922.0	2,922.0	90.5	2,039.9	91.12	-1,056.4	-1,607.8	2,660.6	602.7	2,057.84	1.293	Collision RiskProcedures Req'd

**Halliburton**  
**Anticollision Report**

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004E - ST00 - ST00													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 7874-3_Blind													<b>Offset Well Error:</b> 1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>			<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Rule Assigned:</b>		<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>	<b>Highside Toolface (°)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>	<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	
3,130.0	2,821.8	2,817.8	2,817.8	15.5	1,969.4	-44.12	-941.1	-644.6	449.2	-1,533.6	1,982.84	0.227	Collision RiskProcedures Req'd
3,155.0	2,832.2	2,828.2	2,828.2	15.7	1,976.7	-47.57	-941.1	-644.6	428.4	-1,562.2	1,990.53	0.215	Collision RiskProcedures Req'd
3,180.0	2,842.3	2,838.3	2,838.3	16.0	1,983.8	-51.06	-941.1	-644.6	407.7	-1,590.3	1,998.02	0.204	Collision RiskProcedures Req'd
3,189.2	2,846.0	2,842.0	2,842.0	16.1	1,986.4	-52.34	-941.1	-644.6	400.2	-1,600.6	2,000.73	0.200	Collision RiskProcedures Req'd
3,200.0	2,850.2	2,846.2	2,846.2	16.2	1,989.3	-54.23	-941.1	-644.6	391.3	-1,612.4	2,003.74	0.195	Collision RiskProcedures Req'd
3,205.0	2,852.1	2,848.1	2,848.1	16.2	1,990.6	-55.11	-941.1	-644.6	387.2	-1,617.9	2,005.09	0.193	Collision RiskProcedures Req'd
3,230.0	2,860.9	2,856.9	2,856.9	16.4	1,996.8	-59.63	-941.1	-644.6	366.8	-1,644.7	2,011.49	0.182	Collision RiskProcedures Req'd
3,250.0	2,867.4	2,863.4	2,863.4	16.5	2,001.3	-63.32	-941.1	-644.6	350.5	-1,665.7	2,016.18	0.174	Collision RiskProcedures Req'd
3,255.0	2,868.9	2,864.9	2,864.9	16.6	2,002.4	-64.25	-941.1	-644.6	346.4	-1,670.9	2,017.29	0.172	Collision RiskProcedures Req'd
3,280.0	2,875.9	2,871.9	2,871.9	16.8	2,007.3	-68.83	-941.1	-644.6	326.3	-1,696.2	2,022.48	0.161	Collision RiskProcedures Req'd
3,300.0	2,880.8	2,876.8	2,876.8	17.0	2,010.7	-72.37	-941.1	-644.6	310.4	-1,715.8	2,026.19	0.153	Collision RiskProcedures Req'd
3,305.0	2,881.9	2,877.9	2,877.9	17.0	2,011.5	-73.23	-941.1	-644.6	306.5	-1,720.6	2,027.06	0.151	Collision RiskProcedures Req'd
3,330.0	2,887.0	2,883.0	2,883.0	17.3	2,015.0	-77.34	-941.1	-644.6	287.2	-1,743.9	2,031.05	0.141	Collision RiskProcedures Req'd
3,350.0	2,890.4	2,886.4	2,886.4	17.4	2,017.4	-80.33	-941.1	-644.6	272.2	-1,761.6	2,033.80	0.134	Collision RiskProcedures Req'd
3,355.0	2,891.2	2,887.2	2,887.2	17.5	2,017.9	-81.03	-941.1	-644.6	268.6	-1,765.9	2,034.43	0.132	Collision RiskProcedures Req'd
3,380.0	2,894.3	2,890.3	2,890.3	17.8	2,020.1	-84.22	-941.1	-644.6	250.9	-1,786.3	2,037.23	0.123	Collision RiskProcedures Req'd
3,400.0	2,896.2	2,892.2	2,892.2	18.0	2,021.4	-86.37	-941.1	-644.6	237.7	-1,801.3	2,039.03	0.117	Collision RiskProcedures Req'd
3,405.0	2,896.5	2,892.5	2,892.5	18.0	2,021.7	-86.85	-941.1	-644.6	234.5	-1,804.9	2,039.42	0.115	Collision RiskProcedures Req'd
3,430.0	2,897.7	2,893.7	2,893.7	18.3	2,022.5	-88.90	-941.1	-644.6	219.7	-1,821.4	2,041.02	0.108	Collision RiskProcedures Req'd
3,443.7	2,898.0	2,894.0	2,894.0	18.4	2,022.7	-89.75	-941.1	-644.6	212.3	-1,829.3	2,041.62	0.104	Collision RiskProcedures Req'd
3,455.0	2,898.0	2,894.0	2,894.0	18.6	2,022.7	-89.78	-941.1	-644.6	206.8	-1,835.3	2,042.05	0.101	Collision RiskProcedures Req'd
3,480.0	2,898.2	2,894.2	2,894.2	18.9	2,022.9	-89.84	-941.1	-644.6	196.2	-1,846.8	2,043.00	0.096	Collision RiskProcedures Req'd
3,500.0	2,898.4	2,894.4	2,894.4	19.1	2,023.0	-89.88	-941.1	-644.6	189.7	-1,854.0	2,043.72	0.093	Collision RiskProcedures Req'd
3,505.0	2,898.4	2,894.4	2,894.4	19.2	2,023.0	-89.89	-941.1	-644.6	188.4	-1,855.5	2,043.90	0.092	Collision RiskProcedures Req'd
3,530.0	2,898.6	2,894.6	2,894.6	19.5	2,023.1	-89.95	-941.1	-644.6	183.6	-1,861.0	2,044.67	0.090	Collision RiskProcedures Req'd
3,552.6	2,898.7	2,894.7	2,894.7	19.8	2,023.2	-90.00	-941.1	-644.6	182.2	-1,863.0	2,045.20	0.089	Collision RiskProcedures Req'd, CC, S
3,555.0	2,898.8	2,894.8	2,894.8	19.8	2,023.2	-90.01	-941.1	-644.6	182.3	-1,863.0	2,045.24	0.089	Collision RiskProcedures Req'd, ES
3,580.0	2,898.9	2,894.9	2,894.9	20.1	2,023.4	-90.06	-941.1	-644.6	184.3	-1,861.3	2,045.56	0.090	Collision RiskProcedures Req'd
3,600.0	2,899.1	2,895.1	2,895.1	20.4	2,023.5	-90.11	-941.1	-644.6	188.3	-1,857.3	2,045.63	0.092	Collision RiskProcedures Req'd
3,605.0	2,899.1	2,895.1	2,895.1	20.4	2,023.5	-90.12	-941.1	-644.6	189.6	-1,856.0	2,045.63	0.093	Collision RiskProcedures Req'd
3,630.0	2,899.3	2,895.3	2,895.3	20.8	2,023.6	-90.17	-941.1	-644.6	198.0	-1,847.5	2,045.52	0.097	Collision RiskProcedures Req'd
3,655.0	2,899.5	2,895.5	2,895.5	21.1	2,023.7	-90.23	-941.1	-644.6	209.0	-1,836.2	2,045.26	0.102	Collision RiskProcedures Req'd
3,680.0	2,899.7	2,895.7	2,895.7	21.4	2,023.9	-90.29	-941.1	-644.6	222.3	-1,822.6	2,044.92	0.109	Collision RiskProcedures Req'd
3,700.0	2,899.8	2,895.8	2,895.8	21.7	2,024.0	-90.33	-941.1	-644.6	234.4	-1,810.3	2,044.62	0.115	Collision RiskProcedures Req'd
3,705.0	2,899.8	2,895.8	2,895.8	21.8	2,024.0	-90.34	-941.1	-644.6	237.5	-1,807.0	2,044.55	0.116	Collision RiskProcedures Req'd
3,730.0	2,900.0	2,896.0	2,896.0	22.1	2,024.1	-90.40	-941.1	-644.6	254.3	-1,789.9	2,044.18	0.124	Collision RiskProcedures Req'd
3,755.0	2,900.2	2,896.2	2,896.2	22.5	2,024.2	-90.46	-941.1	-644.6	272.3	-1,771.5	2,043.84	0.133	Collision RiskProcedures Req'd
3,780.0	2,900.4	2,896.4	2,896.4	22.8	2,024.4	-90.51	-941.1	-644.6	291.4	-1,752.2	2,043.53	0.143	Collision RiskProcedures Req'd
3,800.0	2,900.5	2,896.5	2,896.5	23.1	2,024.5	-90.56	-941.1	-644.6	307.2	-1,736.1	2,043.31	0.150	Collision RiskProcedures Req'd
3,805.0	2,900.6	2,896.6	2,896.6	23.2	2,024.5	-90.57	-941.1	-644.6	311.3	-1,732.0	2,043.26	0.152	Collision RiskProcedures Req'd
3,830.0	2,900.7	2,896.7	2,896.7	23.6	2,024.6	-90.62	-941.1	-644.6	331.9	-1,711.2	2,043.03	0.162	Collision RiskProcedures Req'd
3,855.0	2,900.9	2,896.9	2,896.9	23.9	2,024.7	-90.68	-941.1	-644.6	353.0	-1,689.8	2,042.84	0.173	Collision RiskProcedures Req'd
3,880.0	2,901.1	2,897.1	2,897.1	24.3	2,024.9	-90.74	-941.1	-644.6	374.7	-1,668.0	2,042.68	0.183	Collision RiskProcedures Req'd
3,900.0	2,901.2	2,897.2	2,897.2	24.6	2,025.0	-90.78	-941.1	-644.6	392.3	-1,650.3	2,042.58	0.192	Collision RiskProcedures Req'd
3,905.0	2,901.3	2,897.3	2,897.3	24.7	2,025.0	-90.79	-941.1	-644.6	396.7	-1,645.9	2,042.55	0.194	Collision RiskProcedures Req'd
3,930.0	2,901.4	2,897.4	2,897.4	25.1	2,025.1	-90.85	-941.1	-644.6	419.0	-1,623.4	2,042.46	0.205	Collision RiskProcedures Req'd
3,955.0	2,901.6	2,897.6	2,897.6	25.4	2,025.2	-90.91	-941.1	-644.6	441.7	-1,600.7	2,042.38	0.216	Collision RiskProcedures Req'd
3,980.0	2,901.8	2,897.8	2,897.8	25.8	2,025.4	-90.96	-941.1	-644.6	464.6	-1,577.7	2,042.33	0.227	Collision RiskProcedures Req'd
4,000.0	2,901.9	2,897.9	2,897.9	26.1	2,025.5	-91.01	-941.1	-644.6	483.0	-1,559.3	2,042.29	0.237	Collision RiskProcedures Req'd
4,005.0	2,902.0	2,898.0	2,898.0	26.2	2,025.5	-91.02	-941.1	-644.6	487.7	-1,554.6	2,042.29	0.239	Collision RiskProcedures Req'd
4,030.0	2,902.2	2,898.2	2,898.2	26.6	2,025.6	-91.07	-941.1	-644.6	510.9	-1,531.3	2,042.27	0.250	Collision RiskProcedures Req'd
4,055.0	2,902.3	2,898.3	2,898.3	27.0	2,025.7	-91.13	-941.1	-644.6	534.4	-1,507.9	2,042.27	0.262	Collision RiskProcedures Req'd

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

**Halliburton**  
**Anticollision Report**

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004E - ST00 - ST00													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 7874-3_Blind													<b>Offset Well Error:</b> 1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
4,080.0	2,902.5	2,898.5	2,898.5	27.4	2,025.9	-91.19	-941.1	-644.6	557.9	-1,484.3	2,042.28	0.273	Collision RiskProcedures Req'd
4,100.0	2,902.7	2,898.7	2,898.7	27.7	2,026.0	-91.23	-941.1	-644.6	576.9	-1,465.4	2,042.29	0.282	Collision RiskProcedures Req'd
4,105.0	2,902.7	2,898.7	2,898.7	27.8	2,026.0	-91.24	-941.1	-644.6	581.6	-1,460.7	2,042.29	0.285	Collision RiskProcedures Req'd
4,130.0	2,902.9	2,898.9	2,898.9	28.2	2,026.1	-91.30	-941.1	-644.6	605.4	-1,436.9	2,042.33	0.296	Collision RiskProcedures Req'd
4,155.0	2,903.1	2,899.1	2,899.1	28.6	2,026.2	-91.35	-941.1	-644.6	629.3	-1,413.1	2,042.37	0.308	Collision RiskProcedures Req'd
4,180.0	2,903.2	2,899.2	2,899.2	29.0	2,026.4	-91.41	-941.1	-644.6	653.3	-1,389.1	2,042.41	0.320	Collision RiskProcedures Req'd
4,200.0	2,903.4	2,899.4	2,899.4	29.3	2,026.5	-91.46	-941.1	-644.6	672.5	-1,370.0	2,042.45	0.329	Collision RiskProcedures Req'd
4,205.0	2,903.4	2,899.4	2,899.4	29.4	2,026.5	-91.47	-941.1	-644.6	677.3	-1,365.2	2,042.47	0.332	Collision RiskProcedures Req'd
4,230.0	2,903.6	2,899.6	2,899.6	29.8	2,026.6	-91.52	-941.1	-644.6	701.4	-1,341.1	2,042.53	0.343	Collision RiskProcedures Req'd
4,255.0	2,903.8	2,899.8	2,899.8	30.2	2,026.7	-91.58	-941.1	-644.6	725.6	-1,317.0	2,042.60	0.355	Collision RiskProcedures Req'd
4,280.0	2,904.0	2,900.0	2,900.0	30.6	2,026.9	-91.64	-941.1	-644.6	749.8	-1,292.8	2,042.67	0.367	Collision RiskProcedures Req'd
4,298.7	2,904.1	2,900.1	2,900.1	31.0	2,027.0	-91.68	-941.1	-644.6	768.0	-1,274.8	2,042.72	0.376	Collision RiskProcedures Req'd
4,300.0	2,904.1	2,900.1	2,900.1	31.0	2,027.0	-91.69	-941.1	-644.6	769.2	-1,273.5	2,042.73	0.377	Collision RiskProcedures Req'd
4,305.0	2,904.1	2,900.1	2,900.1	31.1	2,027.0	-91.72	-941.1	-644.6	774.1	-1,268.6	2,042.74	0.379	Collision RiskProcedures Req'd
4,330.0	2,904.3	2,900.3	2,900.3	31.5	2,027.1	-91.92	-941.1	-644.6	798.5	-1,244.3	2,042.82	0.391	Collision RiskProcedures Req'd
4,355.0	2,904.5	2,900.5	2,900.5	31.9	2,027.2	-92.16	-941.1	-644.6	823.0	-1,219.9	2,042.91	0.403	Collision RiskProcedures Req'd
4,380.0	2,904.7	2,900.7	2,900.7	32.3	2,027.4	-92.45	-941.1	-644.6	847.6	-1,195.4	2,043.01	0.415	Collision RiskProcedures Req'd
4,400.0	2,904.8	2,900.8	2,900.8	32.7	2,027.5	-92.73	-941.1	-644.6	867.3	-1,175.8	2,043.10	0.425	Collision RiskProcedures Req'd
4,405.0	2,904.8	2,900.8	2,900.8	32.8	2,027.5	-92.81	-941.1	-644.6	872.3	-1,170.8	2,043.12	0.427	Collision RiskProcedures Req'd
4,430.0	2,905.0	2,901.0	2,901.0	33.2	2,027.6	-93.27	-941.1	-644.6	897.1	-1,146.2	2,043.23	0.439	Collision RiskProcedures Req'd
4,455.0	2,905.2	2,901.2	2,901.2	33.6	2,027.8	-93.88	-941.1	-644.6	921.9	-1,121.4	2,043.34	0.451	Collision RiskProcedures Req'd
4,480.0	2,905.4	2,901.4	2,901.4	34.1	2,027.9	-94.73	-941.1	-644.6	946.8	-1,096.7	2,043.46	0.463	Collision RiskProcedures Req'd
4,500.0	2,905.5	2,901.5	2,901.5	34.4	2,028.0	-95.69	-941.1	-644.6	966.7	-1,076.8	2,043.56	0.473	Collision RiskProcedures Req'd
4,505.0	2,905.6	2,901.6	2,901.6	34.5	2,028.0	-96.00	-941.1	-644.6	971.7	-1,071.9	2,043.59	0.475	Collision RiskProcedures Req'd
4,530.0	2,905.7	2,901.7	2,901.7	35.0	2,028.1	-98.10	-941.1	-644.6	996.7	-1,047.0	2,043.71	0.488	Collision RiskProcedures Req'd
4,555.0	2,905.9	2,901.9	2,901.9	35.4	2,028.3	-102.25	-941.1	-644.6	1,021.6	-1,022.2	2,043.84	0.500	Collision RiskProcedures Req'd
4,580.0	2,906.1	2,902.1	2,902.1	35.9	2,028.4	-114.07	-941.1	-644.6	1,046.6	-997.3	2,043.97	0.512	Collision RiskProcedures Req'd
4,600.0	2,906.2	2,902.2	2,902.2	36.2	2,028.5	-159.01	-941.1	-644.6	1,066.6	-977.5	2,044.08	0.522	Collision RiskProcedures Req'd
4,605.0	2,906.3	2,902.3	2,902.3	36.3	2,028.5	175.69	-941.1	-644.6	1,071.6	-972.5	2,044.11	0.524	Collision RiskProcedures Req'd
4,630.0	2,906.5	2,902.5	2,902.5	36.8	2,028.6	113.10	-941.1	-644.6	1,096.6	-947.6	2,044.24	0.536	Collision RiskProcedures Req'd
4,655.0	2,906.6	2,902.6	2,902.6	37.2	2,028.8	102.33	-941.1	-644.6	1,121.6	-922.8	2,044.38	0.549	Collision RiskProcedures Req'd
4,680.0	2,906.8	2,902.8	2,902.8	37.7	2,028.9	98.40	-941.1	-644.6	1,146.6	-897.9	2,044.53	0.561	Collision RiskProcedures Req'd
4,700.0	2,907.0	2,903.0	2,903.0	38.1	2,029.0	96.70	-941.1	-644.6	1,166.6	-878.1	2,044.64	0.571	Collision RiskProcedures Req'd
4,705.0	2,907.0	2,903.0	2,903.0	38.2	2,029.0	96.38	-941.1	-644.6	1,171.6	-873.1	2,044.67	0.573	Collision RiskProcedures Req'd
4,730.0	2,907.2	2,903.2	2,903.2	38.6	2,029.1	95.15	-941.1	-644.6	1,196.5	-848.3	2,044.81	0.585	Collision RiskProcedures Req'd
4,755.0	2,907.3	2,903.3	2,903.3	39.1	2,029.2	94.33	-941.1	-644.6	1,221.4	-823.6	2,044.95	0.597	Collision RiskProcedures Req'd
4,780.0	2,907.5	2,903.5	2,903.5	39.6	2,029.4	93.73	-941.1	-644.6	1,246.3	-798.8	2,045.10	0.609	Collision RiskProcedures Req'd
4,800.0	2,907.7	2,903.7	2,903.7	39.9	2,029.5	93.36	-941.1	-644.6	1,266.2	-779.1	2,045.22	0.619	Collision RiskProcedures Req'd
4,805.0	2,907.7	2,903.7	2,903.7	40.0	2,029.5	93.28	-941.1	-644.6	1,271.1	-774.1	2,045.25	0.621	Collision RiskProcedures Req'd
4,830.0	2,907.9	2,903.9	2,903.9	40.5	2,029.6	92.93	-941.1	-644.6	1,295.9	-749.5	2,045.39	0.634	Collision RiskProcedures Req'd
4,855.0	2,908.0	2,904.0	2,904.0	41.0	2,029.7	92.64	-941.1	-644.6	1,320.7	-724.9	2,045.54	0.646	Collision RiskProcedures Req'd
4,880.0	2,908.2	2,904.2	2,904.2	41.4	2,029.9	92.41	-941.1	-644.6	1,345.4	-700.3	2,045.69	0.658	Collision RiskProcedures Req'd
4,900.0	2,908.4	2,904.4	2,904.4	41.8	2,029.9	92.25	-941.1	-644.6	1,365.1	-680.7	2,045.82	0.667	Collision RiskProcedures Req'd
4,905.0	2,908.4	2,904.4	2,904.4	41.9	2,030.0	92.21	-941.1	-644.6	1,370.0	-675.8	2,045.84	0.670	Collision RiskProcedures Req'd
4,930.0	2,908.6	2,904.6	2,904.6	42.4	2,030.1	92.05	-941.1	-644.6	1,394.6	-651.4	2,045.99	0.682	Collision RiskProcedures Req'd
4,955.0	2,908.7	2,904.7	2,904.7	42.9	2,030.2	91.90	-941.1	-644.6	1,419.1	-627.0	2,046.14	0.694	Collision RiskProcedures Req'd
4,980.0	2,908.9	2,904.9	2,904.9	43.4	2,030.3	91.77	-941.1	-644.6	1,443.6	-602.7	2,046.29	0.705	Collision RiskProcedures Req'd
5,000.0	2,909.0	2,905.0	2,905.0	43.7	2,030.4	91.68	-941.1	-644.6	1,463.1	-583.3	2,046.42	0.715	Collision RiskProcedures Req'd
5,005.0	2,909.1	2,905.1	2,905.1	43.8	2,030.4	91.66	-941.1	-644.6	1,468.0	-578.5	2,046.45	0.717	Collision RiskProcedures Req'd
5,030.0	2,909.2	2,905.2	2,905.2	44.3	2,030.6	91.56	-941.1	-644.6	1,492.3	-554.3	2,046.59	0.729	Collision RiskProcedures Req'd
5,055.0	2,909.4	2,905.4	2,905.4	44.8	2,030.7	91.47	-941.1	-644.6	1,516.5	-530.2	2,046.74	0.741	Collision RiskProcedures Req'd
5,080.0	2,909.6	2,905.6	2,905.6	45.3	2,030.8	91.39	-941.1	-644.6	1,540.7	-506.2	2,046.90	0.753	Collision RiskProcedures Req'd

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

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004E - ST00 - ST00													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 7874-3_Blind													<b>Offset Well Error:</b> 1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
5,100.0	2,909.7	2,905.7	2,905.7	45.7	2,030.9	91.33	-941.1	-644.6	1,560.0	-487.0	2,047.02	0.762	Collision RiskProcedures Req'd
5,105.0	2,909.7	2,905.7	2,905.7	45.8	2,030.9	91.32	-941.1	-644.6	1,564.8	-482.2	2,047.05	0.764	Collision RiskProcedures Req'd
5,130.0	2,909.9	2,905.9	2,905.9	46.2	2,031.0	91.25	-941.1	-644.6	1,588.8	-458.4	2,047.20	0.776	Collision RiskProcedures Req'd
5,155.0	2,910.0	2,906.0	2,906.0	46.7	2,031.1	91.19	-941.1	-644.6	1,612.8	-434.6	2,047.35	0.788	Collision RiskProcedures Req'd
5,180.0	2,910.2	2,906.2	2,906.2	47.2	2,031.2	91.13	-941.1	-644.6	1,636.6	-410.9	2,047.50	0.799	Collision RiskProcedures Req'd
5,200.0	2,910.3	2,906.3	2,906.3	47.6	2,031.3	91.09	-941.1	-644.6	1,655.6	-392.0	2,047.62	0.809	Collision RiskProcedures Req'd
5,205.0	2,910.4	2,906.4	2,906.4	47.7	2,031.4	91.08	-941.1	-644.6	1,660.3	-387.3	2,047.65	0.811	Collision RiskProcedures Req'd
5,230.0	2,910.5	2,906.5	2,906.5	48.1	2,031.5	91.03	-941.1	-644.6	1,684.0	-363.8	2,047.80	0.822	Collision RiskProcedures Req'd
5,255.0	2,910.7	2,906.7	2,906.7	48.6	2,031.6	90.98	-941.1	-644.6	1,707.6	-340.4	2,047.95	0.834	Collision RiskProcedures Req'd
5,280.0	2,910.8	2,906.8	2,906.8	49.1	2,031.7	90.94	-941.1	-644.6	1,731.0	-317.0	2,048.10	0.845	Collision RiskProcedures Req'd
5,300.0	2,911.0	2,907.0	2,907.0	49.5	2,031.8	90.91	-941.1	-644.6	1,749.8	-298.5	2,048.22	0.854	Collision RiskProcedures Req'd
5,305.0	2,911.0	2,907.0	2,907.0	49.6	2,031.8	90.90	-941.1	-644.6	1,754.4	-293.8	2,048.25	0.857	Collision RiskProcedures Req'd
5,330.0	2,911.1	2,907.1	2,907.1	50.0	2,031.9	90.86	-941.1	-644.6	1,777.7	-270.7	2,048.39	0.868	Collision RiskProcedures Req'd
5,355.0	2,911.3	2,907.3	2,907.3	50.5	2,032.0	90.82	-941.1	-644.6	1,800.9	-247.7	2,048.54	0.879	Collision RiskProcedures Req'd
5,380.0	2,911.4	2,907.4	2,907.4	51.0	2,032.1	90.79	-941.1	-644.6	1,823.9	-224.8	2,048.69	0.890	Collision RiskProcedures Req'd
5,400.0	2,911.5	2,907.5	2,907.5	51.4	2,032.2	90.76	-941.1	-644.6	1,842.3	-206.5	2,048.81	0.899	Collision RiskProcedures Req'd
5,405.0	2,911.6	2,907.6	2,907.6	51.4	2,032.2	90.76	-941.1	-644.6	1,846.9	-202.0	2,048.84	0.901	Collision RiskProcedures Req'd
5,430.0	2,911.7	2,907.7	2,907.7	51.9	2,032.3	90.73	-941.1	-644.6	1,869.7	-179.3	2,048.99	0.913	Collision RiskProcedures Req'd
5,455.0	2,911.9	2,907.9	2,907.9	52.4	2,032.4	90.70	-941.1	-644.6	1,892.4	-156.7	2,049.13	0.924	Collision RiskProcedures Req'd
5,480.0	2,912.0	2,908.0	2,908.0	52.8	2,032.5	90.67	-941.1	-644.6	1,915.1	-134.2	2,049.28	0.935	Collision RiskProcedures Req'd
5,481.2	2,912.0	2,908.0	2,908.0	52.9	2,032.5	90.67	-941.1	-644.6	1,916.2	-133.1	2,049.29	0.935	Collision RiskProcedures Req'd
5,500.0	2,912.1	2,908.1	2,908.1	53.2	2,032.6	90.67	-941.1	-644.6	1,933.1	-116.3	2,049.39	0.943	Collision RiskProcedures Req'd
5,505.0	2,912.1	2,908.1	2,908.1	53.3	2,032.6	90.68	-941.1	-644.6	1,937.6	-111.8	2,049.42	0.945	Collision RiskProcedures Req'd
5,530.0	2,912.3	2,908.3	2,908.3	53.8	2,032.7	90.69	-941.1	-644.6	1,960.3	-89.3	2,049.57	0.956	Collision RiskProcedures Req'd
5,555.0	2,912.4	2,908.4	2,908.4	54.2	2,032.8	90.70	-941.1	-644.6	1,983.0	-66.7	2,049.72	0.967	Collision RiskProcedures Req'd
5,580.0	2,912.6	2,908.6	2,908.6	54.7	2,032.9	90.71	-941.1	-644.6	2,005.7	-44.1	2,049.87	0.978	Collision RiskProcedures Req'd
5,600.0	2,912.7	2,908.7	2,908.7	55.1	2,033.0	90.71	-941.1	-644.6	2,024.0	-26.0	2,049.98	0.987	Collision RiskProcedures Req'd
5,605.0	2,912.7	2,908.7	2,908.7	55.2	2,033.0	90.71	-941.1	-644.6	2,028.5	-21.5	2,050.01	0.990	Collision RiskProcedures Req'd
5,630.0	2,912.8	2,908.8	2,908.8	55.7	2,033.1	90.72	-941.1	-644.6	2,051.4	1.2	2,050.16	1.001	Collision RiskProcedures Req'd
5,655.0	2,913.0	2,909.0	2,909.0	56.1	2,033.2	90.73	-941.1	-644.6	2,074.3	24.0	2,050.30	1.012	Collision RiskProcedures Req'd
5,680.0	2,913.1	2,909.1	2,909.1	56.6	2,033.3	90.74	-941.1	-644.6	2,097.3	46.8	2,050.44	1.023	Collision RiskProcedures Req'd
5,700.0	2,913.2	2,909.2	2,909.2	57.0	2,033.4	90.75	-941.1	-644.6	2,115.7	65.1	2,050.56	1.032	Collision RiskProcedures Req'd
5,705.0	2,913.3	2,909.3	2,909.3	57.1	2,033.4	90.75	-941.1	-644.6	2,120.3	69.7	2,050.59	1.034	Collision RiskProcedures Req'd
5,730.0	2,913.4	2,909.4	2,909.4	57.6	2,033.5	90.76	-941.1	-644.6	2,143.3	92.6	2,050.73	1.045	Collision RiskProcedures Req'd
5,755.0	2,913.5	2,909.5	2,909.5	58.1	2,033.6	90.77	-941.1	-644.6	2,166.4	115.5	2,050.87	1.056	Collision RiskProcedures Req'd
5,780.0	2,913.7	2,909.7	2,909.7	58.6	2,033.7	90.78	-941.1	-644.6	2,189.5	138.5	2,051.01	1.068	Collision RiskProcedures Req'd
5,800.0	2,913.8	2,909.8	2,909.8	59.0	2,033.7	90.79	-941.1	-644.6	2,208.1	156.9	2,051.12	1.077	Collision RiskProcedures Req'd
5,805.0	2,913.8	2,909.8	2,909.8	59.1	2,033.8	90.79	-941.1	-644.6	2,212.7	161.5	2,051.15	1.079	Collision RiskProcedures Req'd
5,830.0	2,913.9	2,909.9	2,909.9	59.5	2,033.9	90.80	-941.1	-644.6	2,235.9	184.6	2,051.30	1.090	Collision RiskProcedures Req'd
5,855.0	2,914.1	2,910.1	2,910.1	60.0	2,034.0	90.81	-941.1	-644.6	2,259.2	207.7	2,051.44	1.101	Collision RiskProcedures Req'd
5,880.0	2,914.2	2,910.2	2,910.2	60.5	2,034.1	90.82	-941.1	-644.6	2,282.4	230.9	2,051.58	1.113	Collision RiskProcedures Req'd
5,900.0	2,914.3	2,910.3	2,910.3	60.9	2,034.1	90.83	-941.1	-644.6	2,301.1	249.4	2,051.68	1.122	Collision RiskProcedures Req'd
5,905.0	2,914.4	2,910.4	2,910.4	61.0	2,034.2	90.83	-941.1	-644.6	2,305.8	254.0	2,051.71	1.124	Collision RiskProcedures Req'd
5,930.0	2,914.5	2,910.5	2,910.5	61.5	2,034.2	90.84	-941.1	-644.6	2,329.1	277.3	2,051.85	1.135	Collision RiskProcedures Req'd
5,955.0	2,914.6	2,910.6	2,910.6	62.0	2,034.3	90.85	-941.1	-644.6	2,352.5	300.5	2,051.99	1.146	Collision RiskProcedures Req'd
5,980.0	2,914.8	2,910.8	2,910.8	62.5	2,034.4	90.86	-941.1	-644.6	2,375.9	323.8	2,052.13	1.158	Collision RiskProcedures Req'd
6,000.0	2,914.9	2,910.9	2,910.9	63.0	2,034.5	90.87	-941.1	-644.6	2,394.7	342.4	2,052.24	1.167	Collision RiskProcedures Req'd
6,005.0	2,914.9	2,910.9	2,910.9	63.1	2,034.5	90.87	-941.1	-644.6	2,399.4	347.1	2,052.26	1.169	Collision RiskProcedures Req'd
6,030.0	2,915.1	2,911.1	2,911.1	63.6	2,034.6	90.88	-941.1	-644.6	2,422.9	370.5	2,052.40	1.181	Collision RiskProcedures Req'd
6,055.0	2,915.2	2,911.2	2,911.2	64.1	2,034.7	90.89	-941.1	-644.6	2,446.4	393.8	2,052.54	1.192	Collision RiskProcedures Req'd
6,080.0	2,915.3	2,911.3	2,911.3	64.6	2,034.8	90.90	-941.1	-644.6	2,469.9	417.2	2,052.68	1.203	Collision RiskProcedures Req'd
6,100.0	2,915.5	2,911.5	2,911.5	65.0	2,034.9	90.91	-941.1	-644.6	2,488.8	436.0	2,052.78	1.212	Collision RiskProcedures Req'd

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

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 004E - ST00 - ST00												<b>Offset Site Error:</b>	5.0 usft
<b>Survey Program:</b> 7874-3_Blind												<b>Offset Well Error:</b>	1.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,105.0	2,915.5	2,911.5	2,911.5	65.1	2,034.9	90.91	-941.1	-644.6	2,493.5	440.7	2,052.81	1.215	Collision RiskProcedures Req'd
6,130.0	2,915.6	2,911.6	2,911.6	65.6	2,035.0	90.92	-941.1	-644.6	2,517.1	464.2	2,052.95	1.226	Collision RiskProcedures Req'd
6,155.0	2,915.8	2,911.8	2,911.8	66.1	2,035.1	90.93	-941.1	-644.6	2,540.7	487.6	2,053.08	1.238	Collision RiskProcedures Req'd
6,180.0	2,915.9	2,911.9	2,911.9	66.7	2,035.2	90.94	-941.1	-644.6	2,564.4	511.2	2,053.21	1.249	Collision RiskProcedures Req'd
6,200.0	2,916.0	2,912.0	2,912.0	67.1	2,035.3	90.94	-941.1	-644.6	2,583.3	530.0	2,053.32	1.258	Collision RiskProcedures Req'd
6,205.0	2,916.0	2,912.0	2,912.0	67.2	2,035.3	90.95	-941.1	-644.6	2,588.1	534.7	2,053.35	1.260	Collision RiskProcedures Req'd
6,230.0	2,916.2	2,912.2	2,912.2	67.7	2,035.4	90.96	-941.1	-644.6	2,611.8	558.3	2,053.48	1.272	Collision RiskProcedures Req'd
6,255.0	2,916.3	2,912.3	2,912.3	68.2	2,035.5	90.97	-941.1	-644.6	2,635.5	581.9	2,053.62	1.283	Collision RiskProcedures Req'd
6,280.0	2,916.5	2,912.5	2,912.5	68.7	2,035.6	90.98	-941.1	-644.6	2,659.2	605.5	2,053.75	1.295	Collision RiskProcedures Req'd
6,300.0	2,916.6	2,912.6	2,912.6	69.2	2,035.7	90.98	-941.1	-644.6	2,678.3	624.4	2,053.85	1.304	Collision RiskProcedures Req'd
6,305.0	2,916.6	2,912.6	2,912.6	69.3	2,035.7	90.98	-941.1	-644.6	2,683.0	629.1	2,053.88	1.306	Collision RiskProcedures Req'd
6,330.0	2,916.7	2,912.7	2,912.7	69.8	2,035.8	90.99	-941.1	-644.6	2,706.8	652.8	2,054.01	1.318	Collision RiskProcedures Req'd
6,355.0	2,916.9	2,912.9	2,912.9	70.3	2,035.9	91.00	-941.1	-644.6	2,730.6	676.5	2,054.14	1.329	Collision RiskProcedures Req'd
6,380.0	2,917.0	2,913.0	2,913.0	70.9	2,036.0	91.01	-941.1	-644.6	2,754.5	700.2	2,054.27	1.341	Collision RiskProcedures Req'd
6,400.0	2,917.1	2,913.1	2,913.1	71.3	2,036.1	91.02	-941.1	-644.6	2,773.5	719.2	2,054.38	1.350	Collision RiskProcedures Req'd
6,405.0	2,917.1	2,913.1	2,913.1	71.4	2,036.1	91.02	-941.1	-644.6	2,778.3	723.9	2,054.40	1.352	Collision RiskProcedures Req'd
6,430.0	2,917.3	2,913.3	2,913.3	71.9	2,036.2	91.03	-941.1	-644.6	2,802.2	747.7	2,054.54	1.364	Collision RiskProcedures Req'd
6,455.0	2,917.4	2,913.4	2,913.4	72.5	2,036.3	91.04	-941.1	-644.6	2,826.1	771.4	2,054.67	1.375	Collision RiskProcedures Req'd
6,480.0	2,917.6	2,913.6	2,913.6	73.0	2,036.4	91.05	-941.1	-644.6	2,850.0	795.2	2,054.80	1.387	Collision RiskProcedures Req'd
6,500.0	2,917.7	2,913.7	2,913.7	73.4	2,036.5	91.06	-941.1	-644.6	2,869.2	814.3	2,054.90	1.396	Collision RiskProcedures Req'd
6,505.0	2,917.7	2,913.7	2,913.7	73.5	2,036.5	91.06	-941.1	-644.6	2,873.9	819.0	2,054.92	1.399	Collision RiskProcedures Req'd
6,530.0	2,917.8	2,913.8	2,913.8	74.1	2,036.6	91.07	-941.1	-644.6	2,897.9	842.8	2,055.06	1.410	Collision RiskProcedures Req'd
6,555.0	2,918.0	2,914.0	2,914.0	74.6	2,036.7	91.08	-941.1	-644.6	2,921.9	866.7	2,055.18	1.422	Collision RiskProcedures Req'd
6,580.0	2,918.1	2,914.1	2,914.1	75.1	2,036.8	91.09	-941.1	-644.6	2,945.9	890.5	2,055.31	1.433	Collision RiskProcedures Req'd
6,600.0	2,918.2	2,914.2	2,914.2	75.6	2,036.9	91.10	-941.1	-644.6	2,965.1	909.6	2,055.41	1.443	Collision RiskProcedures Req'd
6,605.0	2,918.3	2,914.3	2,914.3	75.7	2,036.9	91.10	-941.1	-644.6	2,969.9	914.4	2,055.44	1.445	Collision RiskProcedures Req'd
6,630.0	2,918.4	2,914.4	2,914.4	76.2	2,037.0	91.11	-941.1	-644.6	2,993.9	938.3	2,055.57	1.456	Collision RiskProcedures Req'd

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 703H - Pilot Hole - WP3													<b>Offset Site Error:</b> 5.0 usft
<b>Survey Program:</b> 0-3_MWD+HRGM													<b>Offset Well Error:</b> 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
3,132.7	2,822.9	3,132.7	2,822.9	0.4	1.3	-135.04	-522.7	-487.4	0.0	-2.4	2.37	0.001	Collision RiskProcedures Req'd, CC, S
3,155.0	2,832.2	3,155.0	2,832.3	4.0	2.2	-135.32	-537.5	-501.2	0.2	-2.4	2.63	0.083	Collision RiskProcedures Req'd, ES
3,180.0	2,842.3	3,180.0	2,842.9	4.1	3.2	-135.63	-554.0	-516.6	0.9	-2.2	3.07	0.284	Collision RiskProcedures Req'd
3,189.2	2,846.0	3,189.2	2,846.8	4.1	3.6	-135.75	-560.1	-522.3	1.2	-2.0	3.23	0.378	Collision RiskProcedures Req'd
3,200.0	2,850.2	3,200.0	2,851.3	4.1	4.1	-137.84	-567.3	-529.0	1.7	-1.7	3.39	0.512	Collision RiskProcedures Req'd
3,205.0	2,852.1	3,205.0	2,853.5	4.1	4.1	-139.60	-570.6	-532.1	2.0	-1.5	3.55	0.569	Collision RiskProcedures Req'd
3,230.0	2,860.9	3,229.9	2,864.0	4.1	4.1	-149.04	-587.1	-547.5	3.9	-0.1	4.02	0.983	Collision RiskProcedures Req'd
3,250.0	2,867.4	3,249.8	2,872.4	4.2	4.1	-154.88	-600.3	-559.8	6.1	1.9	4.26	1.444	Collision RiskProcedures Req'd
3,255.0	2,868.9	3,254.7	2,874.5	4.2	4.1	-156.08	-603.5	-562.8	6.8	2.5	4.32	1.573	Collision RiskProcedures Req'd
3,280.0	2,875.9	3,279.4	2,884.9	4.2	4.1	-160.81	-619.9	-578.1	10.6	6.0	4.57	2.316	
3,300.0	2,880.8	3,299.0	2,893.2	4.3	4.2	-163.49	-632.9	-590.2	14.3	9.5	4.79	2.991	
3,305.0	2,881.9	3,303.9	2,895.3	4.3	4.2	-164.06	-636.2	-593.2	15.3	10.5	4.86	3.155	
3,330.0	2,887.0	3,328.3	2,905.6	4.3	4.2	-166.38	-652.3	-608.3	21.1	15.9	5.20	4.048	
3,350.0	2,890.4	3,347.5	2,913.7	4.3	4.2	-167.79	-665.1	-620.2	26.3	20.8	5.48	4.802	
3,355.0	2,891.2	3,352.3	2,915.7	4.4	4.2	-168.10	-668.3	-623.2	27.7	22.2	5.56	4.988	
3,380.0	2,894.3	3,376.1	2,925.8	4.4	4.2	-169.42	-684.0	-637.9	35.3	29.5	5.89	6.001	
3,400.0	2,896.2	3,395.0	2,933.7	4.6	4.3	-170.26	-696.5	-649.5	42.1	35.9	6.17	6.828	
3,405.0	2,896.5	3,399.6	2,935.7	4.7	4.3	-170.45	-699.6	-652.4	43.9	37.6	6.24	7.028	
3,430.0	2,897.7	3,422.8	2,945.5	5.1	4.3	-171.27	-714.9	-666.7	53.3	46.7	6.59	8.099	
3,443.7	2,898.0	3,435.3	2,950.8	5.4	4.4	-171.65	-723.2	-674.4	58.9	52.1	6.81	8.649	
3,455.0	2,898.0	3,445.5	2,955.1	5.6	4.6	-171.99	-730.0	-680.8	63.6	56.6	6.97	9.120	
3,480.0	2,898.2	3,468.3	2,964.7	6.1	5.0	-172.59	-745.1	-694.8	74.0	66.7	7.27	10.178	
3,500.0	2,898.4	3,476.0	2,968.0	6.5	5.2	-172.75	-750.2	-699.6	83.0	75.4	7.56	10.981	
3,505.0	2,898.4	3,476.0	2,968.0	6.6	5.2	-172.75	-750.2	-699.6	85.7	78.1	7.68	11.159	
3,530.0	2,898.6	3,476.0	2,968.0	7.0	5.2	-172.75	-750.2	-699.6	102.1	93.6	8.40	12.142	
3,555.0	2,898.8	3,476.0	2,968.0	7.5	5.2	-172.75	-750.2	-699.6	121.4	112.3	9.03	13.436	
3,580.0	2,898.9	3,476.0	2,968.0	8.0	5.2	-172.75	-750.2	-699.6	142.4	132.9	9.50	14.989	
3,600.0	2,899.1	3,476.0	2,968.0	8.3	5.2	-172.75	-750.2	-699.6	160.1	150.3	9.79	16.356	
3,605.0	2,899.1	3,476.0	2,968.0	8.4	5.2	-172.75	-750.2	-699.6	164.6	154.8	9.85	16.710	
3,630.0	2,899.3	3,476.0	2,968.0	8.9	5.2	-172.75	-750.2	-699.6	187.5	177.4	10.12	18.538	
3,655.0	2,899.5	3,476.0	2,968.0	9.4	5.2	-172.75	-750.2	-699.6	210.9	200.6	10.32	20.435	
3,680.0	2,899.7	3,476.0	2,968.0	9.8	5.2	-172.75	-750.2	-699.6	234.6	224.1	10.49	22.375	
3,700.0	2,899.8	3,476.0	2,968.0	10.2	5.2	-172.75	-750.2	-699.6	253.8	243.2	10.60	23.949	
3,705.0	2,899.8	3,476.0	2,968.0	10.3	5.2	-172.75	-750.2	-699.6	258.6	248.0	10.62	24.345	
3,730.0	2,900.0	3,476.0	2,968.0	10.8	5.2	-172.75	-750.2	-699.6	282.7	272.0	10.74	26.333	
3,755.0	2,900.2	3,476.0	2,968.0	11.3	5.2	-172.75	-750.2	-699.6	307.0	296.1	10.83	28.334	
3,780.0	2,900.4	3,476.0	2,968.0	11.7	5.2	-172.75	-750.2	-699.6	331.4	320.4	10.92	30.342	
3,800.0	2,900.5	3,476.0	2,968.0	12.1	5.2	-172.75	-750.2	-699.6	350.9	339.9	10.98	31.951	
3,805.0	2,900.6	3,476.0	2,968.0	12.2	5.2	-172.75	-750.2	-699.6	355.8	344.8	11.00	32.354	
3,830.0	2,900.7	3,476.0	2,968.0	12.7	5.2	-172.75	-750.2	-699.6	380.4	369.3	11.07	34.367	
3,855.0	2,900.9	3,476.0	2,968.0	13.1	5.2	-172.75	-750.2	-699.6	405.0	393.8	11.13	36.379	
3,880.0	2,901.1	3,476.0	2,968.0	13.6	5.2	-172.75	-750.2	-699.6	429.6	418.4	11.19	38.389	
3,900.0	2,901.2	3,476.0	2,968.0	14.0	5.2	-172.75	-750.2	-699.6	449.3	438.1	11.24	39.994	
3,905.0	2,901.3	3,476.0	2,968.0	14.1	5.2	-172.75	-750.2	-699.6	454.3	443.0	11.25	40.395	
3,930.0	2,901.4	3,476.0	2,968.0	14.6	5.2	-172.75	-750.2	-699.6	479.0	467.7	11.30	42.397	
3,955.0	2,901.6	3,476.0	2,968.0	15.0	5.2	-172.75	-750.2	-699.6	503.7	492.4	11.35	44.394	
3,980.0	2,901.8	3,476.0	2,968.0	15.5	5.2	-172.75	-750.2	-699.6	528.5	517.1	11.39	46.386	
4,000.0	2,901.9	3,476.0	2,968.0	15.9	5.2	-172.75	-750.2	-699.6	548.3	536.9	11.43	47.975	
4,005.0	2,902.0	3,476.0	2,968.0	16.0	5.2	-172.75	-750.2	-699.6	553.3	541.8	11.44	48.371	
4,030.0	2,902.2	3,476.0	2,968.0	16.4	5.2	-172.75	-750.2	-699.6	578.1	566.6	11.48	50.351	
4,055.0	2,902.3	3,476.0	2,968.0	16.9	5.2	-172.75	-750.2	-699.6	602.9	591.4	11.52	52.323	
4,080.0	2,902.5	3,476.0	2,968.0	17.4	5.2	-172.75	-750.2	-699.6	627.7	616.2	11.56	54.289	

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

**Halliburton**  
Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 703H - Pilot Hole - WP3												<b>Offset Site Error:</b>	5.0 usft
<b>Survey Program:</b> 0-3_MWD+HRGM												<b>Offset Well Error:</b>	1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
4,100.0	2,902.7	3,476.0	2,968.0	17.8	5.2	-172.75	-750.2	-699.6	647.6	636.0	11.59	55.856	
4,105.0	2,902.7	3,476.0	2,968.0	17.9	5.2	-172.75	-750.2	-699.6	652.6	641.0	11.60	56.247	
4,130.0	2,902.9	3,476.0	2,968.0	18.3	5.2	-172.75	-750.2	-699.6	677.5	665.8	11.64	58.198	
4,155.0	2,903.1	3,476.0	2,968.0	18.8	5.2	-172.75	-750.2	-699.6	702.3	690.6	11.68	60.142	
4,180.0	2,903.2	3,476.0	2,968.0	19.3	5.2	-172.75	-750.2	-699.6	727.2	715.5	11.71	62.078	
4,200.0	2,903.4	3,476.0	2,968.0	19.6	5.2	-172.75	-750.2	-699.6	747.1	735.4	11.74	63.621	
4,205.0	2,903.4	3,476.0	2,968.0	19.7	5.2	-172.75	-750.2	-699.6	752.1	740.3	11.75	64.006	
4,230.0	2,903.6	3,476.0	2,968.0	20.2	5.2	-172.75	-750.2	-699.6	777.0	765.2	11.79	65.927	
4,255.0	2,903.8	3,476.0	2,968.0	20.7	5.2	-172.75	-750.2	-699.6	801.9	790.1	11.82	67.839	
4,280.0	2,904.0	3,476.0	2,968.0	21.1	5.2	-172.75	-750.2	-699.6	826.8	814.9	11.85	69.744	
4,298.7	2,904.1	3,476.0	2,968.0	21.5	5.2	-172.75	-750.2	-699.6	845.4	833.5	11.88	71.164	
4,300.0	2,904.1	3,476.0	2,968.0	21.5	5.2	-173.34	-750.2	-699.6	846.7	834.8	11.88	71.263	
4,305.0	2,904.1	3,476.0	2,968.0	21.6	5.2	-175.59	-750.2	-699.6	851.7	839.8	11.89	71.641	
4,330.0	2,904.3	3,476.0	2,968.0	22.1	5.2	-172.91	-750.2	-699.6	876.6	864.7	11.92	73.530	
4,355.0	2,904.5	3,476.0	2,968.0	22.6	5.2	-161.65	-750.2	-699.6	901.5	889.6	11.95	75.411	
4,380.0	2,904.7	3,476.0	2,968.0	23.1	5.2	-151.41	-750.2	-699.6	926.4	914.5	11.99	77.285	
4,400.0	2,904.8	3,476.0	2,968.0	23.4	5.2	-144.26	-750.2	-699.6	946.4	934.4	12.01	78.778	
4,405.0	2,904.8	3,476.0	2,968.0	23.5	5.2	-142.63	-750.2	-699.6	951.3	939.3	12.02	79.152	
4,430.0	2,905.0	3,476.0	2,968.0	24.0	5.2	-135.34	-750.2	-699.6	976.2	964.2	12.05	81.007	
4,455.0	2,905.2	3,476.0	2,968.0	24.5	5.2	-129.37	-750.2	-699.6	1,001.1	989.0	12.08	82.854	
4,480.0	2,905.4	3,476.0	2,968.0	25.0	5.2	-124.51	-750.2	-699.6	1,025.9	1,013.8	12.11	84.693	
4,500.0	2,905.5	3,476.0	2,968.0	25.4	5.2	-121.26	-750.2	-699.6	1,045.8	1,033.6	12.14	86.158	
4,505.0	2,905.6	3,476.0	2,968.0	25.5	5.2	-120.52	-750.2	-699.6	1,050.7	1,038.6	12.14	86.527	
4,530.0	2,905.7	3,476.0	2,968.0	26.0	5.2	-117.23	-750.2	-699.6	1,075.5	1,063.3	12.17	88.341	
4,555.0	2,905.9	3,476.0	2,968.0	26.5	5.2	-114.48	-750.2	-699.6	1,100.2	1,088.0	12.20	90.151	
4,580.0	2,906.1	3,476.0	2,968.0	27.0	5.2	-112.17	-750.2	-699.6	1,124.9	1,112.7	12.23	91.950	
4,600.0	2,906.2	3,476.0	2,968.0	27.4	5.2	-110.57	-750.2	-699.6	1,144.6	1,132.4	12.26	93.383	
4,605.0	2,906.3	3,476.0	2,968.0	27.5	5.2	-110.20	-750.2	-699.6	1,149.5	1,137.3	12.26	93.745	
4,630.0	2,906.5	3,476.0	2,968.0	28.0	5.2	-108.50	-750.2	-699.6	1,174.1	1,161.8	12.29	95.516	
4,655.0	2,906.6	3,476.0	2,968.0	28.5	5.2	-107.04	-750.2	-699.6	1,198.7	1,186.3	12.32	97.283	
4,680.0	2,906.8	3,476.0	2,968.0	29.1	5.2	-105.76	-750.2	-699.6	1,223.1	1,210.8	12.35	99.040	
4,700.0	2,907.0	3,476.0	2,968.0	29.5	5.2	-104.84	-750.2	-699.6	1,242.7	1,230.3	12.37	100.439	
4,705.0	2,907.0	3,476.0	2,968.0	29.6	5.2	-104.63	-750.2	-699.6	1,247.5	1,235.2	12.38	100.794	
4,730.0	2,907.2	3,476.0	2,968.0	30.1	5.2	-103.63	-750.2	-699.6	1,271.9	1,259.5	12.41	102.518	
4,755.0	2,907.3	3,476.0	2,968.0	30.6	5.2	-102.75	-750.2	-699.6	1,296.2	1,283.7	12.43	104.240	
4,780.0	2,907.5	3,476.0	2,968.0	31.1	5.2	-101.95	-750.2	-699.6	1,320.4	1,307.9	12.46	105.950	
4,800.0	2,907.7	3,476.0	2,968.0	31.5	5.2	-101.38	-750.2	-699.6	1,339.7	1,327.2	12.48	107.312	
4,805.0	2,907.7	3,476.0	2,968.0	31.6	5.2	-101.24	-750.2	-699.6	1,344.5	1,332.0	12.49	107.660	
4,830.0	2,907.9	3,476.0	2,968.0	32.2	5.2	-100.59	-750.2	-699.6	1,368.6	1,356.1	12.52	109.334	
4,855.0	2,908.0	3,476.0	2,968.0	32.7	5.2	-100.01	-750.2	-699.6	1,392.6	1,380.1	12.55	111.007	
4,880.0	2,908.2	3,476.0	2,968.0	33.2	5.2	-99.47	-750.2	-699.6	1,416.5	1,403.9	12.57	112.668	
4,900.0	2,908.4	3,476.0	2,968.0	33.6	5.2	-99.08	-750.2	-699.6	1,435.6	1,423.0	12.59	113.990	
4,905.0	2,908.4	3,476.0	2,968.0	33.7	5.2	-98.99	-750.2	-699.6	1,440.4	1,427.8	12.60	114.330	
4,930.0	2,908.6	3,476.0	2,968.0	34.2	5.2	-98.54	-750.2	-699.6	1,464.1	1,451.5	12.63	115.950	
4,955.0	2,908.7	3,476.0	2,968.0	34.8	5.2	-98.13	-750.2	-699.6	1,487.8	1,475.1	12.65	117.570	
4,980.0	2,908.9	3,476.0	2,968.0	35.3	5.2	-97.75	-750.2	-699.6	1,511.4	1,498.7	12.68	119.176	
5,000.0	2,909.0	3,476.0	2,968.0	35.7	5.2	-97.46	-750.2	-699.6	1,530.2	1,517.5	12.70	120.455	
5,005.0	2,909.1	3,476.0	2,968.0	35.8	5.2	-97.39	-750.2	-699.6	1,534.8	1,522.1	12.71	120.785	
5,030.0	2,909.2	3,476.0	2,968.0	36.3	5.2	-97.07	-750.2	-699.6	1,558.2	1,545.5	12.74	122.345	
5,055.0	2,909.4	3,476.0	2,968.0	36.9	5.2	-96.76	-750.2	-699.6	1,581.6	1,568.8	12.76	123.907	
5,080.0	2,909.6	3,476.0	2,968.0	37.4	5.2	-96.48	-750.2	-699.6	1,604.8	1,592.0	12.79	125.452	
5,100.0	2,909.7	3,476.0	2,968.0	37.8	5.2	-96.27	-750.2	-699.6	1,623.3	1,610.4	12.81	126.682	

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

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 703H - Pilot Hole - WP3												<b>Offset Site Error:</b>	5.0 usft
<b>Survey Program:</b> 0-3_MWD+HRGM												<b>Offset Well Error:</b>	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)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,105.0	2,909.7	3,476.0	2,968.0	37.9	5.2	96.22	-750.2	-699.6	1,627.9	1,615.1	12.82	127.001	
5,130.0	2,909.9	3,476.0	2,968.0	38.4	5.2	95.97	-750.2	-699.6	1,650.9	1,638.0	12.85	128.495	
5,155.0	2,910.0	3,476.0	2,968.0	38.9	5.2	95.74	-750.2	-699.6	1,673.8	1,660.9	12.88	129.989	
5,180.0	2,910.2	3,476.0	2,968.0	39.5	5.2	95.52	-750.2	-699.6	1,696.6	1,683.7	12.91	131.466	
5,200.0	2,910.3	3,476.0	2,968.0	39.9	5.2	95.36	-750.2	-699.6	1,714.8	1,701.8	12.93	132.640	
5,205.0	2,910.4	3,476.0	2,968.0	40.0	5.2	95.32	-750.2	-699.6	1,719.3	1,706.4	12.93	132.946	
5,230.0	2,910.5	3,476.0	2,968.0	40.5	5.2	95.12	-750.2	-699.6	1,741.9	1,728.9	12.96	134.364	
5,255.0	2,910.7	3,476.0	2,968.0	41.0	5.2	94.94	-750.2	-699.6	1,764.4	1,751.4	12.99	135.783	
5,280.0	2,910.8	3,476.0	2,968.0	41.5	5.2	94.77	-750.2	-699.6	1,786.8	1,773.7	13.02	137.181	
5,300.0	2,911.0	3,476.0	2,968.0	41.9	5.2	94.64	-750.2	-699.6	1,804.6	1,791.5	13.05	138.291	
5,305.0	2,911.0	3,476.0	2,968.0	42.0	5.2	94.61	-750.2	-699.6	1,809.0	1,796.0	13.05	138.582	
5,330.0	2,911.1	3,476.0	2,968.0	42.6	5.2	94.45	-750.2	-699.6	1,831.2	1,818.1	13.09	139.914	
5,355.0	2,911.3	3,476.0	2,968.0	43.1	5.2	94.31	-750.2	-699.6	1,853.2	1,840.1	13.12	141.246	
5,380.0	2,911.4	3,476.0	2,968.0	43.6	5.2	94.17	-750.2	-699.6	1,875.1	1,862.0	13.15	142.554	
5,400.0	2,911.5	3,476.0	2,968.0	44.0	5.2	94.06	-750.2	-699.6	1,892.6	1,879.4	13.18	143.590	
5,405.0	2,911.6	3,476.0	2,968.0	44.1	5.2	94.04	-750.2	-699.6	1,896.9	1,883.7	13.19	143.864	
5,430.0	2,911.7	3,476.0	2,968.0	44.6	5.2	93.91	-750.2	-699.6	1,918.6	1,905.4	13.22	145.098	
5,455.0	2,911.9	3,476.0	2,968.0	45.1	5.2	93.79	-750.2	-699.6	1,940.1	1,926.9	13.26	146.331	
5,480.0	2,912.0	3,476.0	2,968.0	45.6	5.2	93.68	-750.2	-699.6	1,961.6	1,948.3	13.30	147.537	
5,481.2	2,912.0	3,476.0	2,968.0	45.6	5.2	93.67	-750.2	-699.6	1,962.6	1,949.3	13.29	147.627	
5,500.0	2,912.1	3,476.0	2,968.0	46.0	5.2	93.67	-750.2	-699.6	1,978.7	1,965.3	13.33	148.474	
5,505.0	2,912.1	3,476.0	2,968.0	46.1	5.2	93.67	-750.2	-699.6	1,983.0	1,969.6	13.34	148.700	
5,530.0	2,912.3	3,476.0	2,968.0	46.6	5.2	93.67	-750.2	-699.6	2,004.4	1,991.1	13.38	149.822	
5,555.0	2,912.4	3,476.0	2,968.0	47.1	5.2	93.67	-750.2	-699.6	2,026.0	2,012.6	13.42	150.940	
5,580.0	2,912.6	3,476.0	2,968.0	47.6	5.2	93.67	-750.2	-699.6	2,047.6	2,034.2	13.47	152.055	
5,600.0	2,912.7	3,476.0	2,968.0	48.0	5.2	93.67	-750.2	-699.6	2,065.0	2,051.5	13.50	152.945	
5,605.0	2,912.7	3,476.0	2,968.0	48.1	5.2	93.67	-750.2	-699.6	2,069.3	2,055.8	13.51	153.168	
5,630.0	2,912.8	3,476.0	2,968.0	48.6	5.2	93.67	-750.2	-699.6	2,091.1	2,077.6	13.55	154.277	
5,655.0	2,913.0	3,476.0	2,968.0	49.1	5.2	93.67	-750.2	-699.6	2,113.0	2,099.4	13.60	155.383	
5,680.0	2,913.1	3,476.0	2,968.0	49.7	5.2	93.67	-750.2	-699.6	2,134.9	2,121.3	13.64	156.486	
5,700.0	2,913.2	3,476.0	2,968.0	50.1	5.2	93.67	-750.2	-699.6	2,152.5	2,138.8	13.68	157.368	
5,705.0	2,913.3	3,476.0	2,968.0	50.2	5.2	93.67	-750.2	-699.6	2,156.9	2,143.2	13.69	157.589	
5,730.0	2,913.4	3,476.0	2,968.0	50.7	5.2	93.67	-750.2	-699.6	2,179.0	2,165.2	13.73	158.688	
5,755.0	2,913.5	3,476.0	2,968.0	51.2	5.2	93.67	-750.2	-699.6	2,201.1	2,187.3	13.78	159.785	
5,780.0	2,913.7	3,476.0	2,968.0	51.7	5.2	93.67	-750.2	-699.6	2,223.3	2,209.5	13.82	160.881	
5,800.0	2,913.8	3,476.0	2,968.0	52.2	5.2	93.67	-750.2	-699.6	2,241.1	2,227.2	13.85	161.757	
5,805.0	2,913.8	3,476.0	2,968.0	52.3	5.2	93.67	-750.2	-699.6	2,245.5	2,231.7	13.86	161.976	
5,830.0	2,913.9	3,476.0	2,968.0	52.8	5.2	93.67	-750.2	-699.6	2,267.8	2,253.9	13.91	163.068	
5,855.0	2,914.1	3,476.0	2,968.0	53.3	5.2	93.67	-750.2	-699.6	2,290.2	2,276.2	13.95	164.158	
5,880.0	2,914.2	3,476.0	2,968.0	53.9	5.2	93.67	-750.2	-699.6	2,312.6	2,298.6	13.99	165.248	
5,900.0	2,914.3	3,476.0	2,968.0	54.3	5.2	93.67	-750.2	-699.6	2,330.5	2,316.5	14.03	166.118	
5,905.0	2,914.4	3,476.0	2,968.0	54.4	5.2	93.67	-750.2	-699.6	2,335.0	2,321.0	14.04	166.336	
5,930.0	2,914.5	3,476.0	2,968.0	54.9	5.2	93.67	-750.2	-699.6	2,357.6	2,343.5	14.08	167.423	
5,955.0	2,914.6	3,476.0	2,968.0	55.5	5.2	93.67	-750.2	-699.6	2,380.1	2,366.0	14.12	168.508	
5,980.0	2,914.8	3,476.0	2,968.0	56.0	5.2	93.67	-750.2	-699.6	2,402.7	2,388.6	14.17	169.592	
6,000.0	2,914.9	3,476.0	2,968.0	56.4	5.2	93.67	-750.2	-699.6	2,420.9	2,406.6	14.20	170.459	
6,005.0	2,914.9	3,476.0	2,968.0	56.5	5.2	93.67	-750.2	-699.6	2,425.4	2,411.2	14.21	170.676	
6,030.0	2,915.1	3,476.0	2,968.0	57.1	5.2	93.67	-750.2	-699.6	2,448.1	2,433.8	14.25	171.758	
6,055.0	2,915.2	3,476.0	2,968.0	57.6	5.2	93.67	-750.2	-699.6	2,470.8	2,456.5	14.30	172.839	
6,080.0	2,915.3	3,476.0	2,968.0	58.2	5.2	93.67	-750.2	-699.6	2,493.6	2,479.3	14.34	173.919	
6,100.0	2,915.5	3,476.0	2,968.0	58.6	5.2	93.67	-750.2	-699.6	2,511.9	2,497.5	14.37	174.782	
6,105.0	2,915.5	3,476.0	2,968.0	58.7	5.2	93.67	-750.2	-699.6	2,516.5	2,502.1	14.38	174.999	

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

# Halliburton

## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design:</b> San Juan Basin - Southern Ute 703H - Pilot Hole - WP3												<b>Offset Site Error:</b>	5.0 usft
<b>Survey Program:</b> 0-3_MWD+HRGM												<b>Offset Well Error:</b>	1.0 usft
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>		<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre</b>		<b>Distance</b>		<b>Minimum Separation (usft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Measured Depth (usft)</b>	<b>Vertical Depth (usft)</b>	<b>Reference (usft)</b>	<b>Offset (usft)</b>		<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Between Centres (usft)</b>	<b>Between Ellipses (usft)</b>			
6,130.0	2,915.6	3,476.0	2,968.0	59.2	5.2	93.67	-750.2	-699.6	2,539.3	2,524.9	14.42	176.076	
6,155.0	2,915.8	3,476.0	2,968.0	59.8	5.2	93.67	-750.2	-699.6	2,562.2	2,547.8	14.46	177.153	
6,180.0	2,915.9	3,476.0	2,968.0	60.3	5.2	93.67	-750.2	-699.6	2,585.2	2,570.7	14.50	178.229	
6,200.0	2,916.0	3,476.0	2,968.0	60.8	5.2	93.67	-750.2	-699.6	2,603.6	2,589.1	14.54	179.089	
6,205.0	2,916.0	3,476.0	2,968.0	60.9	5.2	93.67	-750.2	-699.6	2,608.2	2,593.6	14.55	179.305	
6,230.0	2,916.2	3,476.0	2,968.0	61.4	5.2	93.67	-750.2	-699.6	2,631.2	2,616.6	14.59	180.379	
6,255.0	2,916.3	3,476.0	2,968.0	62.0	5.2	93.67	-750.2	-699.6	2,654.3	2,639.7	14.63	181.452	
6,280.0	2,916.5	3,476.0	2,968.0	62.5	5.2	93.67	-750.2	-699.6	2,677.4	2,662.7	14.67	182.524	
6,300.0	2,916.6	3,476.0	2,968.0	63.0	5.2	93.67	-750.2	-699.6	2,695.9	2,681.2	14.70	183.381	
6,305.0	2,916.6	3,476.0	2,968.0	63.1	5.2	93.67	-750.2	-699.6	2,700.5	2,685.8	14.71	183.595	
6,330.0	2,916.7	3,476.0	2,968.0	63.6	5.2	93.67	-750.2	-699.6	2,723.7	2,708.9	14.75	184.665	
6,355.0	2,916.9	3,476.0	2,968.0	64.2	5.2	93.67	-750.2	-699.6	2,746.9	2,732.1	14.79	185.734	
6,380.0	2,917.0	3,476.0	2,968.0	64.8	5.2	93.67	-750.2	-699.6	2,770.1	2,755.3	14.83	186.803	
6,400.0	2,917.1	3,476.0	2,968.0	65.2	5.2	93.67	-750.2	-699.6	2,788.7	2,773.8	14.86	187.657	
6,405.0	2,917.1	3,476.0	2,968.0	65.3	5.2	93.67	-750.2	-699.6	2,793.4	2,778.5	14.87	187.870	
6,430.0	2,917.3	3,476.0	2,968.0	65.9	5.2	93.67	-750.2	-699.6	2,816.6	2,801.7	14.91	188.936	
6,455.0	2,917.4	3,476.0	2,968.0	66.4	5.2	93.67	-750.2	-699.6	2,840.0	2,825.0	14.95	190.001	
6,480.0	2,917.6	3,476.0	2,968.0	67.0	5.2	93.67	-750.2	-699.6	2,863.3	2,848.3	14.99	191.065	
6,500.0	2,917.7	3,476.0	2,968.0	67.4	5.2	93.67	-750.2	-699.6	2,882.0	2,867.0	15.02	191.916	
6,505.0	2,917.7	3,476.0	2,968.0	67.6	5.2	93.67	-750.2	-699.6	2,886.7	2,871.6	15.02	192.129	
6,530.0	2,917.8	3,476.0	2,968.0	68.1	5.2	93.67	-750.2	-699.6	2,910.1	2,895.0	15.06	193.190	
6,555.0	2,918.0	3,476.0	2,968.0	68.7	5.2	93.67	-750.2	-699.6	2,933.5	2,918.4	15.10	194.251	
6,580.0	2,918.1	3,476.0	2,968.0	69.2	5.2	93.67	-750.2	-699.6	2,957.0	2,941.8	15.14	195.310	
6,600.0	2,918.2	3,476.0	2,968.0	69.7	5.2	93.67	-750.2	-699.6	2,975.7	2,960.6	15.17	196.158	
6,605.0	2,918.3	3,476.0	2,968.0	69.8	5.2	93.67	-750.2	-699.6	2,980.4	2,965.3	15.18	196.369	

# Halliburton

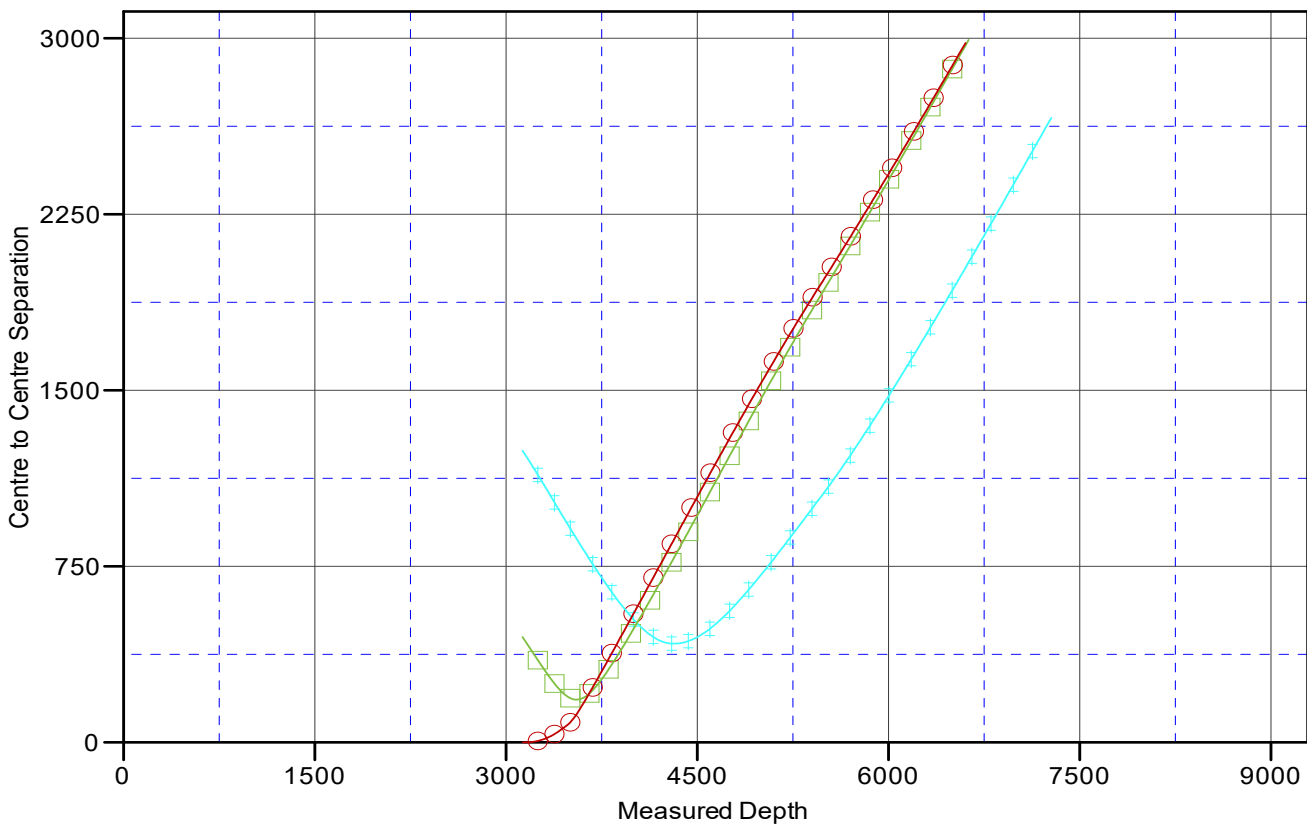
## Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	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

● Southern Ute 004, ST00, ST00 V0   
■ Southern Ute 004E, ST00, ST00 V0   
● Southern Ute 703H, Pilot Hole, WP3 V0

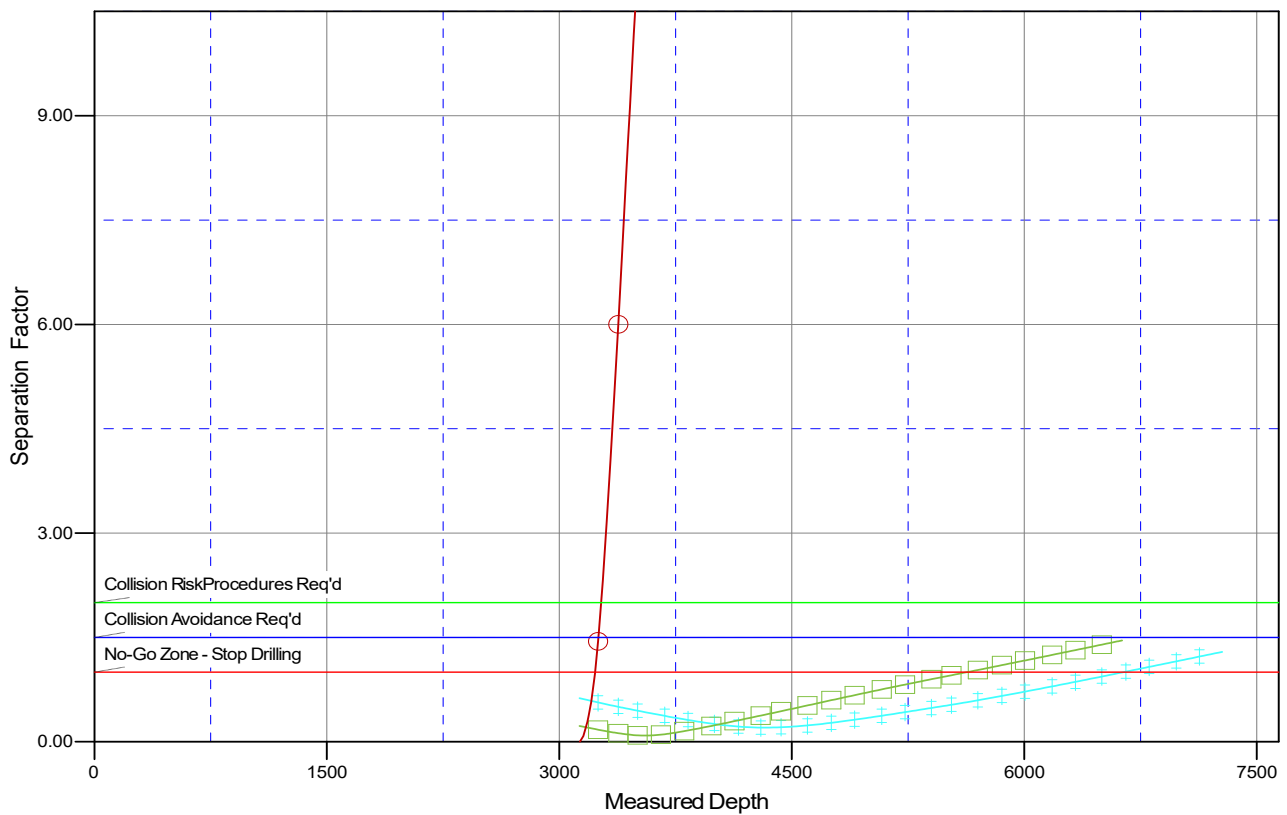
**Halliburton**  
Anticollision Report

<b>Company:</b>	Hilcorp Energy Company	<b>Local Co-ordinate Reference:</b>	Well Southern Ute 703H
<b>Project:</b>	Farmington, NM	<b>TVD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Reference Site:</b>	San Juan Basin	<b>MD Reference:</b>	RKB-MSI= 6274ft @ 6274.0usft
<b>Site Error:</b>	5.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Southern Ute 703H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	1.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Lateral No.1	<b>Database:</b>	EDM 5000.17 Single User Db
<b>Reference Design:</b>	WP3	<b>Offset TVD Reference:</b>	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°

## Separation Factor Plot



### LEGEND

Southern Ute 004, ST00, ST00 V0      Southern Ute 004E, ST00, ST00 V0      Southern Ute 703H, Pilot Hole, WP3 V0